Doc 7474

FACILITIES AND SERVICE IMPLEMENTATION DOCUMENT
AFRICA-INDIAN OCEAN REGION
VOLUME II - FASID

First Edition

2001

NOT TO BE USED FOR OPERATIONAL PURPOSES
NE PAS UTILISER POUR L'EXPLOITATION
NO DEBE USARSE PARA FINES DE OPERACIONES

INTERNATIONAL CIVIL AVIATION ORGANIZATION
ORGANISATION DE L'AVIATION CIVILE INTERNATIONALE
ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL

Doc 7474

FACILITIES AND SERVICE IMPLEMENTATION DOCUMENT
AFRICA-INDIAN OCEAN REGION
VOLUME II - FASID

FIRST EDITION
2001

NOT TO BE USED FOR OPERATIONAL PURPOSES
NE PAS UTILISER POUR L'EXPLOITATION
NO DEBE USARSE PARA FINES DE OPERACIONES

INTERNATIONAL CIVIL AVIATION ORGANIZATION
ORGANISATION DE L'AVIATION CIVILE INTERNATIONALE
ORGANIZACIÓN DE AVIACIÓN CIVIL INTERNACIONAL

Order No. 7474
Printed in ICAO

Volume II:
AFI FACILITIES AND SERVICE IMPLEMENTATION DOCUMENT (FASID)

TABLE OF CONTENTS

Part V - Air Traffic Management (ATM)

Part VI - Meteorology (MET)

Part VII - Search and Rescue (SAR)

Part VIII - Aeronautical Information Services and Charts (AIS/MAP)

1. INTRODUCTION

1.1 This second volume of the Air Navigation Plan (ANP) constitutes the AFI Facilities and Services Implementation Document (FASID) accompanies the Basic AFI ANP. The background to the publication of air navigation plans in two volumes (basic ANP and FASID) is explained in the introduction of the AFI Basic ANP. This FASID may only be amended according to the procedure approved by the ICAO Council as shown in the introductory part of the AFI Basic ANP.

1.2 This FASID contains the details of the facilities and services to be provided in order to fulfill the basic requirements of the Plan and are as agreed between the provider and user states concerned. Such agreement indicates a commitment on the part of the state(s) concerned to implement the requirement(s) specified. The elements of the FASID are kept under constant review by the AFI Planning and Implementation Regional Group (APIRG) in accordance with its schedule of management, in consultation with user and provider states, and with the assistance of the ICAO AFI and WACAF Regional Offices in Nairobi and Dakar respectively. Most of the contents of the FASID originate from recommendations of the AFI/7 Regional Air Navigation Meeting (Abuja, 1997) and earlier AFI RAN meetings, as well as from APIRG conclusions.

1.3 The Standards, Recommended Practices and Procedures to be applied and related guidance material for each Part of the FASID (i.e. GEN, AOP, CNS, ATM, MET, SAR and AIS) are as listed in the equivalent parts of the Basic ANP. The BORPC in Part I of the Basic AFI ANP is also taken into consideration in the overall planning processes for the AFI Region.

PART I - BASIC OPERATIONAL REQUIREMENTS AND PLANNING CRITERIA (BORPC)

I ère PARTIE - BESOINS FONDAMENTAUX DE L'EXPLOITATION ET DES CRITERES DE PLANIFICATION (BORPC)

PART I - BORPC (FASID)

1. The facilities and services set out in this FASID have been developed by the regional planning process referred to in the AFI basic ANP. The Basic Operational Requirements and Planning Criteria agreed by the ICAO Air Navigation Commission and for use in the AFI Region is the cornerstone of that process.

PART II - GENERAL PLANNING ASPECTS (GEN)

II ème PARTIE - ASPECTS GENERAUX DE LA PLANIFICATION (GEN)

PART II - GEN (FASID)

1. Forecasts

1.1 Traffic Forecasts in AFI Region

1.1.1 Using the methodology described in the Basic ANP, traffic forecasts for the major route groups for 1998-2012 have been developed. The forecasts developed by other organizations are also utilized as appropriate.

1.1.2 The historical trends in load factors and average seats for the areas of routing concerned as well as expectations of future load factors and trends in average seats are described in *(To be developed by the AFI TF/TF)*.

1.1.3 The traffic forecasts developed for the period 1998-2012 for each of the areas of routing are described in **paragraph 3.**

1.1.4 The assumptions developed by the AFI TF/TF for load factors, average seat capacity increases and consequent growth rates for aircraft movements are also given in (*To be developed by the AFI TF/TF)*.

1.1.5 The following paragraphs provide data extracted from the Traffic Forecast Study done by IATA in 2000 for APIRG.

1.1.6 Average aircraft size

1.1.6.1 The average number of seats per flight was stable between 1994 and 1996, but showed a significant increase in 1997, detailed in **Table 1** below.

Table 1. Average seats per flight on scheduled services to, from and within Africa

Year	Average seats per flight
1994	117.5
1995	118.5
1996	117.8
1997	122.0

Source: OAG data

1.1.6.2 Globally, average fleet size, the number of aircraft in an airline's fleet as opposed to average number of seats per flight, is expected to increase by around 0.3% per annum over the next 20 years[1]. Having reviewed current orders for jet aircraft placed by African airlines, growth in average fleet size was set to increase at an average annual rate of 0.2%, lower than the global forecast rate. Taking into account fleet retirements,

[1] Boeing Current Market Outlook 1998

which tend to be older and, on average, smaller aircraft, it is expected that average fleet size for carriers based in Africa will increase by just over 0.2% per annum.

1.1.6.3 Non-African airlines provided a larger share of seat capacity to and from Africa. These carriers are expected to have a higher increase in average fleet size than the global average. Accordingly, the overall average annual growth in fleet size for the forecast was assumed to be 0.3%.

1.1.6.4 However, this percentage was not applied across the board. Airlines usually want to offer additional frequencies rather than larger aircraft, as passengers prefer the flexibility offered by more frequent flights. On most long haul routes, airlines will tend to increase frequency to at least daily service before using larger aircraft. On short haul routes, generally more frequent services are required, although many short and medium haul routes within Africa have not yet achieved daily flights.

1.1.6.5 Therefore, on routes to, from and within Africa with fewer than 2 flights per week no increase in average aircraft size was assumed. This assumed that additional demand would be met by increased frequencies. This threshold of 2 flights per week was increased to 3 flights per week from 2002 onwards, and to 4 flights per week from 2007 onwards.

1.1.6.6 For flights over-flying Africa, average frequencies tended to be much higher, and the daily flights threshold was used for these routes.

1.1.6.7 It was assumed that those routes forecast to achieve strong growth would require larger than average growth in average aircraft size. In those instances a sliding scale was introduced. There were some routes which (usually for just one or two years) anticipated decline – for those routes no increase in aircraft size was assumed. Small growth routes had an additional 0.1% increase. This amounts to an additional 2% increase for those (few) routes that were forecast to grow by more than 50% in a year. All these adjustment were made on an annual basis.

1.1.6.8 The net effect of these adjustments was to redistribute average aircraft size growth over the various routes. This impacted the number of flights forecast to operate within each individual FIR. The average increase following the adjustments described above fluctuated between 0.2% and 0.3% for each forecast year.

1.1.6.9 Scheduled routes between Europe and the Canaries are currently operated at high frequencies. They are also flown from increasingly slot-congested airports such as Madrid and Lisbon. It was assumed that average aircraft size would grow by 1% per annum on these routes, adjusted upwards for high growth. The resulting combined average increase in aircraft size was between 1.2% and 1.5% per annum.

1.1.7 **Passenger load factors**

1.1.7.1 Passenger load factors, resulting from the optimum match of market price with demand (yield management), provides airline management with the means to influence the number of flights. The long term trend for IATA member airlines is showing a gradual increase in average passenger load factor, but this is influenced by cyclical pressures. It was assumed in the forecast that for the period 1998-1999 average passenger load factor would decrease by 1 percentage point, and for the period 2001-2002 it would increase again by 1 percentage point. Beyond 2002 it was assumed that passenger load factors would remain unchanged.

1.2 **Aircraft Movements Forecast**

1.2.1 The following aircraft movement forecast was based on the annual Passenger Traffic Forecast

produced by IATA. The passenger forecast is based on the collective opinion of around 80 airlines, other aviation organisations and IATA experts. Data is collected to establish base year passenger traffic (year 1997) between countries, and forecast growth rates for the next five years (1998-2002), and average annual growth rates for the years 2002 and 2012. The forecast contains country to region passenger forecasts, and various other aggregates and analyses.

2 Forecast results

2.1 Overall

Tables 2 to 4 below detail results for the movement forecast for flights to, from and within Africa for the period 1998-2012.

Table 2 details the scheduled movements forecast. As well as the movement forecast for traffic to, from and within Africa, this table includes details of the two major scheduled traffic flows which over-fly Africa, Europe to South America and Europe to the Canaries**.**

Table 3 details charter movements from Western Europe to Africa and over-flying traffic to and from the Canaries.

Table 4 shows details of all commercial flight movements to, from and within Africa including the over-flying traffic flows from Europe to South America and the Canaries.

Table 2. AFI Region Scheduled Movements Forecast
Scheduled movements to, from, within and over Africa

Year	Scheduled Movements To / from & Within Africa	Scheduled Movements Europe / Canaries	Scheduled Movements Europe / South America	Total Scheduled Movements	Percentage Change
1998	628,798	68,430	17,100	714,328	
1999	646,879	73,971	18,557	739,407	3.5%
2000	671,671	78,835	20,298	770,804	4.2%
2001	702,933	84,018	22,330	809,281	5.0%
2002	735,825	89,542	24,469	849,836	5.0%
2007	873,190	123,114	35,200	1,031,504	4.0%
2012	1,033,175	161,363	50,572	1,245,110	3.8%

The percentage change for 2007 and 2012 is the average annual percentage change

Table 3. AFI Region Charter Movements Forecast
Charter movements to, from, within and over Africa

Year	Charter Movements To / from & Within Africa	Charter Movements Europe / Canaries	Total Charter Movements	Percentage Change
1998	55,478	89,280	144,758	
1999	59,680	94,818	154,498	6.7%
2000	62,598	102,311	164,909	6.7%
2001	66,141	113,031	179,172	8.6%
2002	69,849	124,538	194,387	8.5%
2007	86,114	203,243	289,357	8.3%
2012	105,238	319,066	424,304	8.0%

The percentage change for 2007 and 2012 is the average annual percentage change

Table 4. AFI Region Commercial Movements Forecast
All commercial movements to, from, within and over Africa

Year	All Movements To / from & Within Africa	All Movements Europe / Canaries	All Movements Europe / South America	Total Movements	Percentage Change
1998	684,276	157,710	17,100	859,086	
1999	706,559	168,789	18,557	893,905	4.1%
2000	734,269	181,146	20,298	935,713	4.7%
2001	769,074	197,049	22,330	988,453	5.6%
2002	805,674	214,080	24,469	1,044,223	5.6%
2007	959,304	326,357	35,200	1,320,861	4.8%
2012	1,138,413	480,429	50,572	1,669,414	4.8%

The percentage change for 2007 and 2012 is the average annual percentage change

It is expected that by 2012 there will be nearly 1.7 million commercial movements in AFI airspace (including over flying traffic).

Around 62% of all charter flights through AFI airspace in 1998 were to the Canary Islands from Western Europe. A further 30% of all charter flights are to North African countries such as Egypt, Tunisia and Morocco. Forecast growth rates for charter movements are higher than those shown for scheduled flights to/from and within the AFI region. This difference is largely due to the nature of the charter market, which allows more flights to be flown at off peak times, and to the high levels of traffic between the particular country pairs.

Chart 1 details the number of domestic and international scheduled flights. Following a significant one-off growth for international traffic in 1997, the growth pattern for international and domestic traffic thereafter is quite similar. The annual growth percentages vary between 2% and 5% for both international and domestic traffic, confirmed in Chart 2 on the next page.

Chart 1. AFI Commercial Movements Forecast

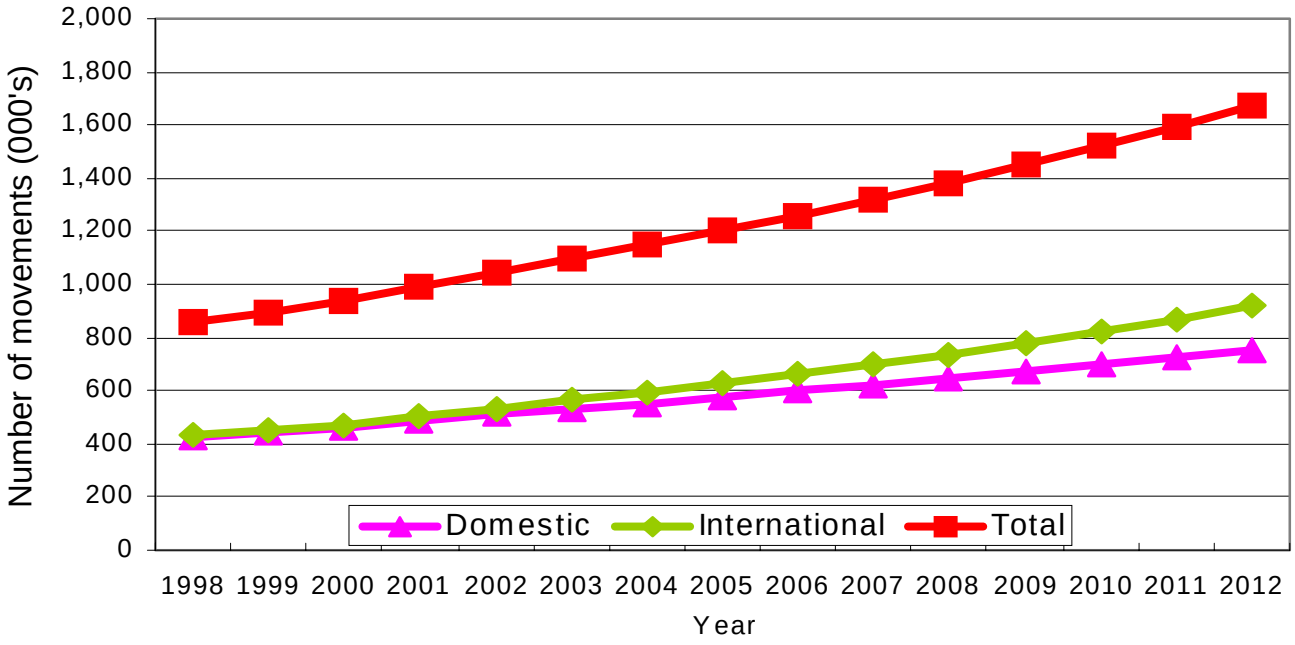
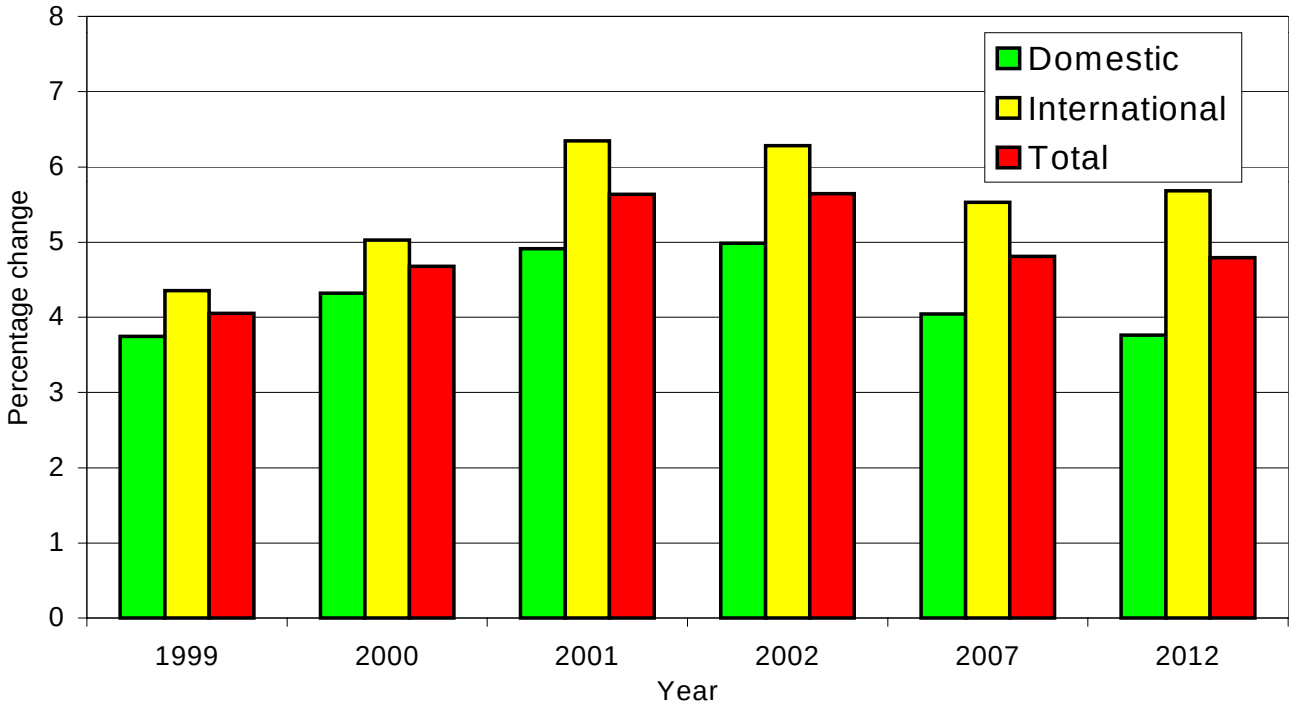


Chart 2. Annual Percentage Change – Commercial Movements Forecast



2.2 Regional Forecasts

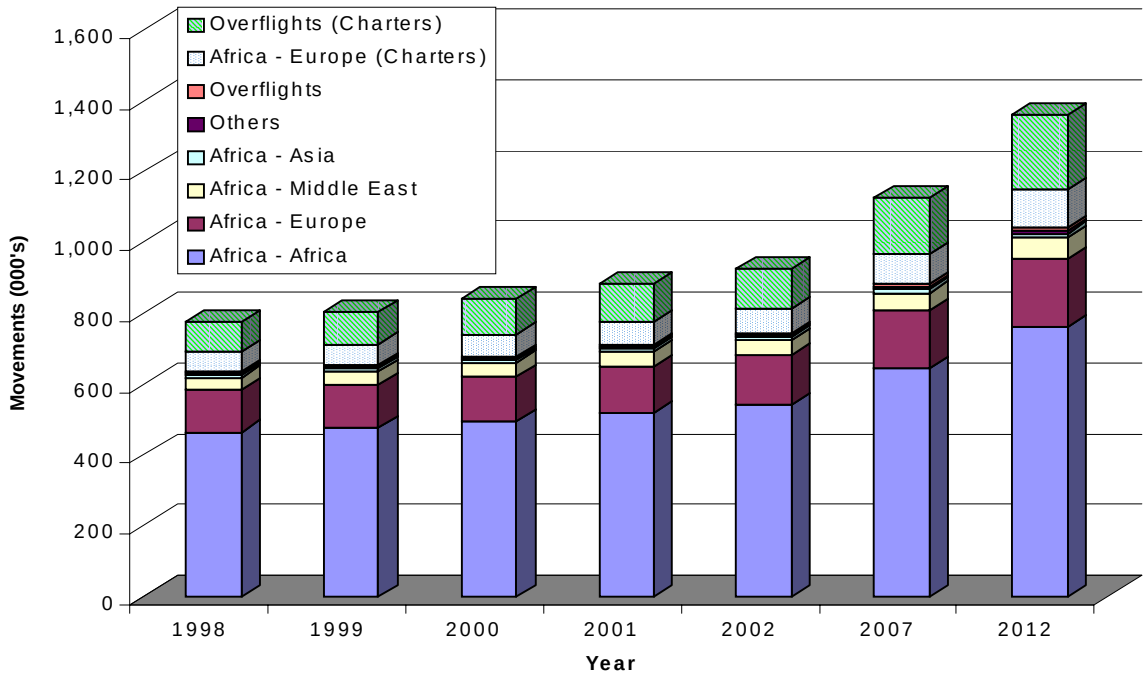
Table 5 below details the aircraft movements forecast by different regions – either within Africa (including domestic traffic), or between Africa and the main world regions. Traffic within Africa accounts for over a half of total movements by 2012. The most important external region is Europe, which is dominated by traffic between North Africa and Europe, and to a lesser extent, between South Africa and Europe.

Table 5. Commercial movement forecast by main region pairs

Regions	1997	1998	1999	2000	2001	2002	2007	2012
Africa-Africa	450,137	463,524	477,032	495,424	518,216	542,360	643,327	758,427
Africa-Europe	116,247	117,786	120,700	125,040	131,096	137,312	163,119	195,085
Africa-Europe (Charter)		55,478	59,680	62,598	66,141	69,849	86,114	105,238
Africa-Middle East	36,108	36,510	37,581	39,014	40,719	42,526	49,713	58,350
Africa-Asia	6,366	6,653	6,973	7,322	7,749	8,188	10,246	12,820
Others	4,072	4,325	4,593	4,870	5,153	5,439	6,785	8,493
Overflights		85,530	92,528	99,133	106,348	114,011	158,314	211,935
Overflights (Charter)		89,280	94,818	102,311	113,031	124,538	203,243	319,066
Grand Total	612,930	859,086	893,905	935,712	988,453	1,044,223	1,320,861	1,669,414

Chart 3 shows the information graphically. Please note there is a discontinuity in the time scale between 2002 and 2012.

Chart 3. Commercial aircraft movements forecast by region



The growth percentages do not differ significantly between different regions. The smaller regions (including Asia, the Americas and Australia) have higher growth expectations confirmed in **Table 6** below. Traffic within Africa has moderate growth expectations, while the Middle East and European

regions are below or around the average. The largest growth is expected on routes between Western Europe and the Canaries.

Table 6 . Commercial movement forecast percentage change

Regions	1998	1999	2000	2001	2002	2007	2012
Africa-Africa	3.0%	2.9%	3.9%	4.6%	4.7%	3.5%	3.3%
Africa-Europe	1.3%	2.5%	3.6%	4.8%	4.7%	3.5%	3.6%
Africa-Europe (Charter)		7.6%	4.9%	5.7%	5.6%	4.3%	4.1%
Africa-Middle East	1.1%	2.9%	3.8%	4.4%	4.4%	3.2%	3.3%
Africa-Asia	4.5%	4.8%	5.0%	5.8%	5.7%	4.6%	4.6%
Others	6.2%	6.2%	6.0%	5.8%	5.6%	4.5%	4.6%
Overflights		8.2%	7.1%	7.3%	7.2%	6.8%	6.0%
Overflights (Charter)		6.2%	7.9%	10.5%	10.2%	10.3%	9.4%
Grand Total		4.1%	4.7%	5.6%	5.6%	4.8%	4.8%

The percentage change for 2007 and 2012 is the average annual percentage change

Chart 4 below details the distribution of movements (including charter and over-flights) in 1998 between the main regions, and confirms the significant share of intra-African traffic at 54% of total.
Chart 5 shows a similar distribution for year 2012 and illustrates the increasing share of over-flying charter traffic.

Chart 4. Distribution of forecast commercial movements between region pairs (1998)

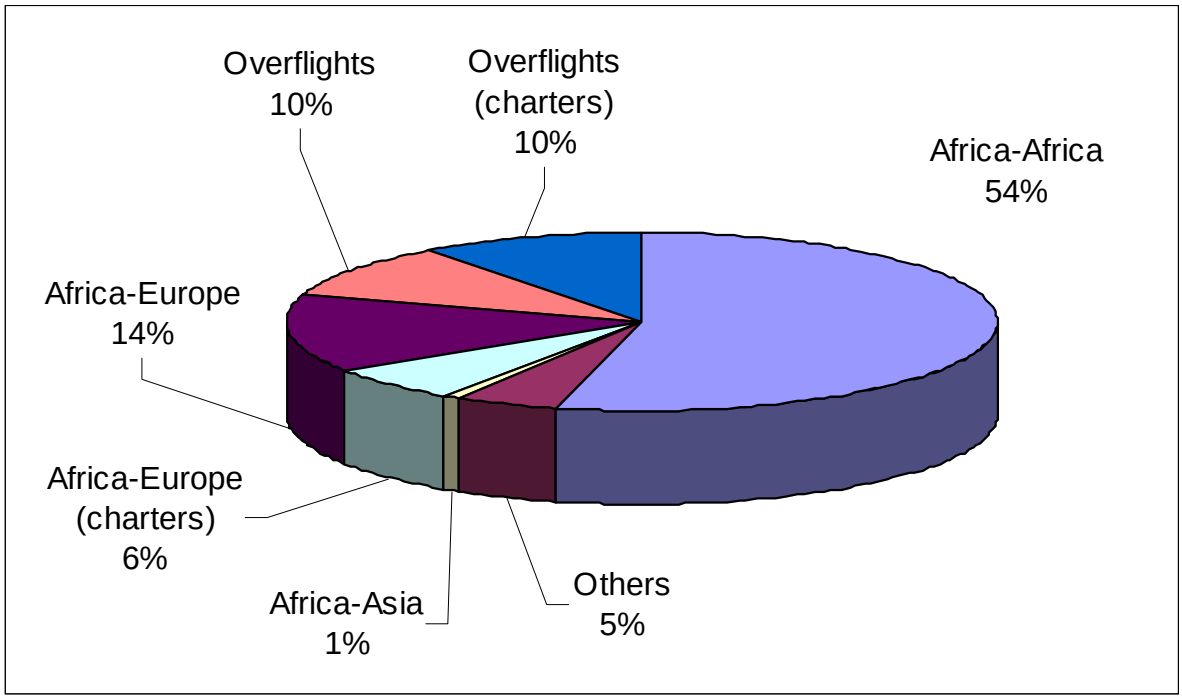


Chart 5. Distribution of projected commercial movements between region pairs (2012)

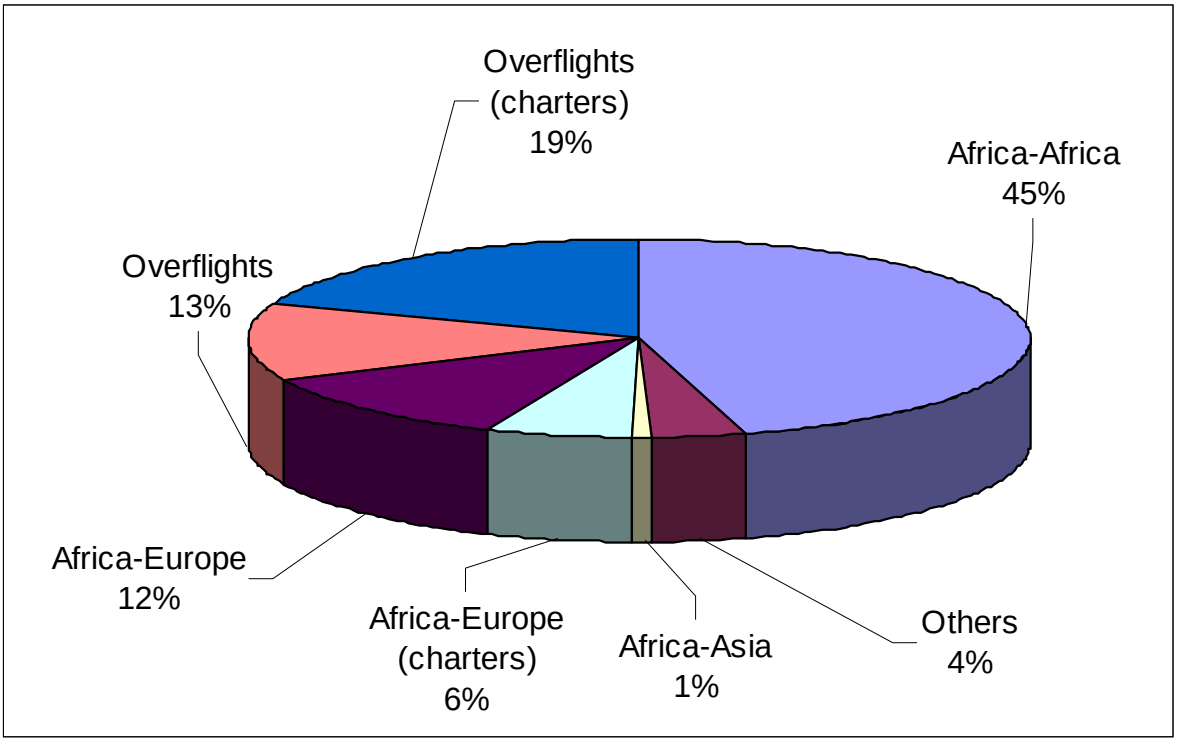


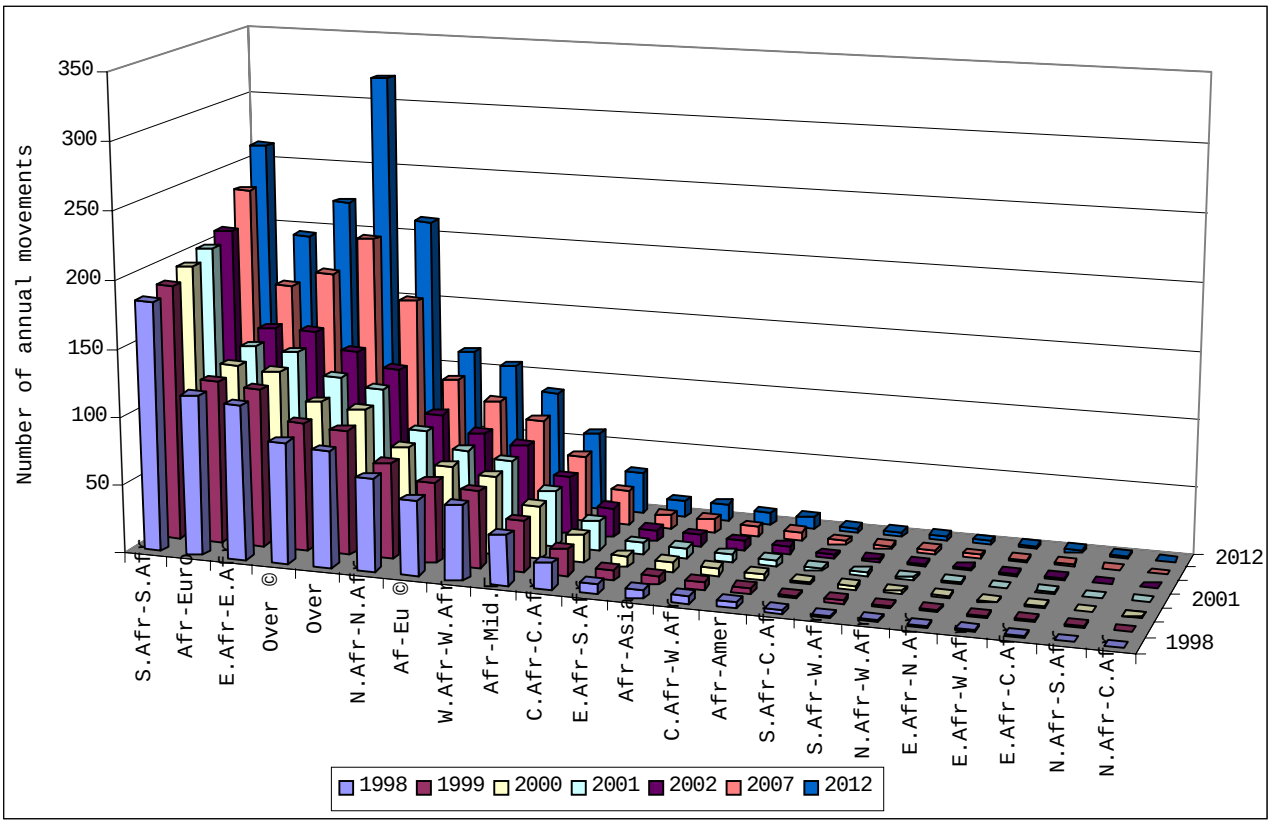
Table 7 below segments the results further into sub-regions and Chart 6 shows the forecast for the sub-regions in diagrammatic form. Table 7 shows that the traffic within regions dominates the African

scene. Most of this traffic is domestic movements. The major inter-regional traffic flows outside Africa are between Northern Africa and Europe.

Table 7. Forecast scheduled movements between sub-regions (1998)

Between	And	Total Flights
Central Africa	Central Africa	19,427
Central Africa	Eastern Africa	1,004
Central Africa	Northern Africa	52
Central Africa	Southern Africa	1,986
Central Africa	Western Africa	5,527
Eastern Africa	Eastern Africa	113,803
Eastern Africa	Northeast Asia	427
Eastern Africa	South Asia	1,777
Eastern Africa	Southeast Asia	266
Eastern Africa	Southern Africa	7,441
Eastern Africa	Southwest Pacific	161
Eastern Africa	Western Africa	1,006
Eastern Europe	Northern Africa	4,016
Eastern Europe	Southern Africa	176
Eastern Europe	Western Africa	329
Lower South America	Southern Africa	752
Lower South America	Western Africa	421
Middle East	Central Africa	147
Middle East	Eastern Africa	6,429
Middle East	Northern Africa	28,370
Middle East	Southern Africa	961
Middle East	Western Africa	604
North America	Northern Africa	1,289
North America	Southern Africa	805
North America	Western Africa	1,041
Northern Africa	Eastern Africa	1,447
Northern Africa	Northeast Asia	506
Northern Africa	Northern Africa	68,636
Northern Africa	South Asia	104
Northern Africa	Southeast Asia	272
Northern Africa	Southern Africa	515
Northern Africa	Western Africa	1,852
Southern Africa	Northeast Asia	1,622
Southern Africa	South Asia	286
Southern Africa	Southeast Asia	556
Southern Africa	Southern Africa	183,970
Southern Africa	Southwest Pacific	676
Upper South America	Western Africa	18
Between	**And**	**Total Flights**
Western Africa	Southern Africa	1,861
Western Africa	Western Africa	54,997
Western Europe	Central Africa	2,130
Western Europe	Eastern Africa	11,023
Western Europe	Northern Africa	74,369
Western Europe	Southern Africa	11,875
Western Europe	Western Africa	13,368

Chart 6. Commercial movements forecast by sub-regions



2.3 Country Forecasts

Table 8 below details the number of domestic movements forecast for the top ten countries in Africa (ranked in terms of movements). South Africa is by far the largest domestic market in Africa, with Kenya, the next largest market, having only around one-fifth of the movements of South Africa. The top ten countries together accounted for more than 80% of total domestic traffic within Africa.

Table 8. Top 10 Countries: Forecast of Domestic Traffic Movements

Country	1997	1998	1999	2000	2001	2002	2007	2012
South Africa	120,184	123,519	126,982	131,653	136,102	140,710	157,490	176,564
Kenya	24,562	25,178	25,921	27,002	28,501	30,232	37,944	47,769
Algeria	20,922	21,628	22,306	23,287	24,558	25,836	31,518	35,694
Egypt	20,338	21,024	21,683	22,637	23,873	25,115	30,638	34,697
Seychelles	19,642	20,135	20,728	21,593	22,792	24,176	30,343	38,200
Ethiopia	18,121	18,864	19,638	20,844	22,555	24,632	34,593	48,582
Madagascar	16,065	16,468	16,953	17,660	18,641	19,773	24,817	31,243
Morocco	12,758	13,188	13,602	14,200	14,975	15,754	19,219	21,765
Zimbabwe	11,909	12,240	12,615	13,079	13,521	13,978	15,645	17,540
Cape Verde	11,859	12,248	12,553	12,921	13,537	14,127	16,557	19,404
Other domestic	62,619	64,541	66,284	68,558	71,658	74,778	87,576	101,861
Total domestic	338,979	349,033	359,265	373,434	390,713	409,111	486,340	573,319

Table 9. Top 10 Countries: Percentage Increase Domestic Traffic Movements

Country	1998	1999	2000	2001	2002	2007	2012
South Africa	2.8%	2.8%	3.7%	3.4%	3.4%	2.3%	2.3%
Kenya	2.5%	2.9%	4.2%	5.6%	6.1%	4.6%	4.7%
Algeria	3.4%	3.1%	4.4%	5.5%	5.2%	4.1%	2.5%
Egypt	3.4%	3.1%	4.4%	5.5%	5.2%	4.1%	2.5%
Seychelles	2.5%	2.9%	4.2%	5.6%	6.1%	4.6%	4.7%
Ethiopia	4.1%	4.1%	6.1%	8.2%	9.2%	7.0%	7.0%
Madagascar	2.5%	2.9%	4.2%	5.6%	6.1%	4.6%	4.7%
Morocco	3.4%	3.1%	4.4%	5.5%	5.2%	4.1%	2.5%
Zimbabwe	2.8%	3.1%	3.7%	3.4%	3.4%	2.3%	2.3%
Cape Verde	3.3%	2.5%	2.9%	4.8%	4.4%	3.2%	3.2%
Other domestic	3.1%	2.7%	3.4%	4.5%	4.4%	3.2%	3.1%
Total Domestic	3.0%	2.9%	3.9%	4.6%	4.7%	3.5%	3.3%

The percentage change for 2007 and 2012 is the average annual percentage change

Table 10 shows the movement forecast for the top ten international scheduled country-pairs and **Table 11** shows the movement forecast for the top ten country-pairs for charter movements.

Table 10. Top 10 Country-Pairs: International Scheduled Movements

(excludes overflights)

Country-pair	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2007*	*2012*
France-Morocco	10,390	10,163	9,984	10,043	10,204	10,367	10,587	10,811
Egypt-Saudi Arabia	8,744	8,449	8,314	8,347	8,551	8,847	9,927	11,139
France-Tunisia	8,435	8,401	8,360	8,393	8,511	8,630	8,812	8,999
Mauritius-Reunion	6,818	6,914	7,011	7,173	7,412	7,658	8,540	9,523
Algeria-France	6,706	6,701	6,812	7,033	7,345	7,673	8,811	10,215
South Africa-Zimbabwe	5,957	6,151	6,359	6,632	6,861	7,098	7,965	8,937
Botswana-South Africa	4,093	4,207	4,325	4,484	4,636	4,793	5,364	6,014
Great Britain-South Africa	3,790	4,087	4,413	4,812	5,289	5,679	7,554	9,608
UAE-Egypt	2,654	2,875	3,106	3,390	3,571	3,761	4,619	5,671
France-Reunion	1,962	2,120	2,308	2,565	2,878	3,230	4,782	7,032
Other	N/A	319,848	334,062	349,997	369,399	389,698	487,403	605,375

Table 11. Top 10 Country-Pairs: Charter Movements

(Includes over flights)

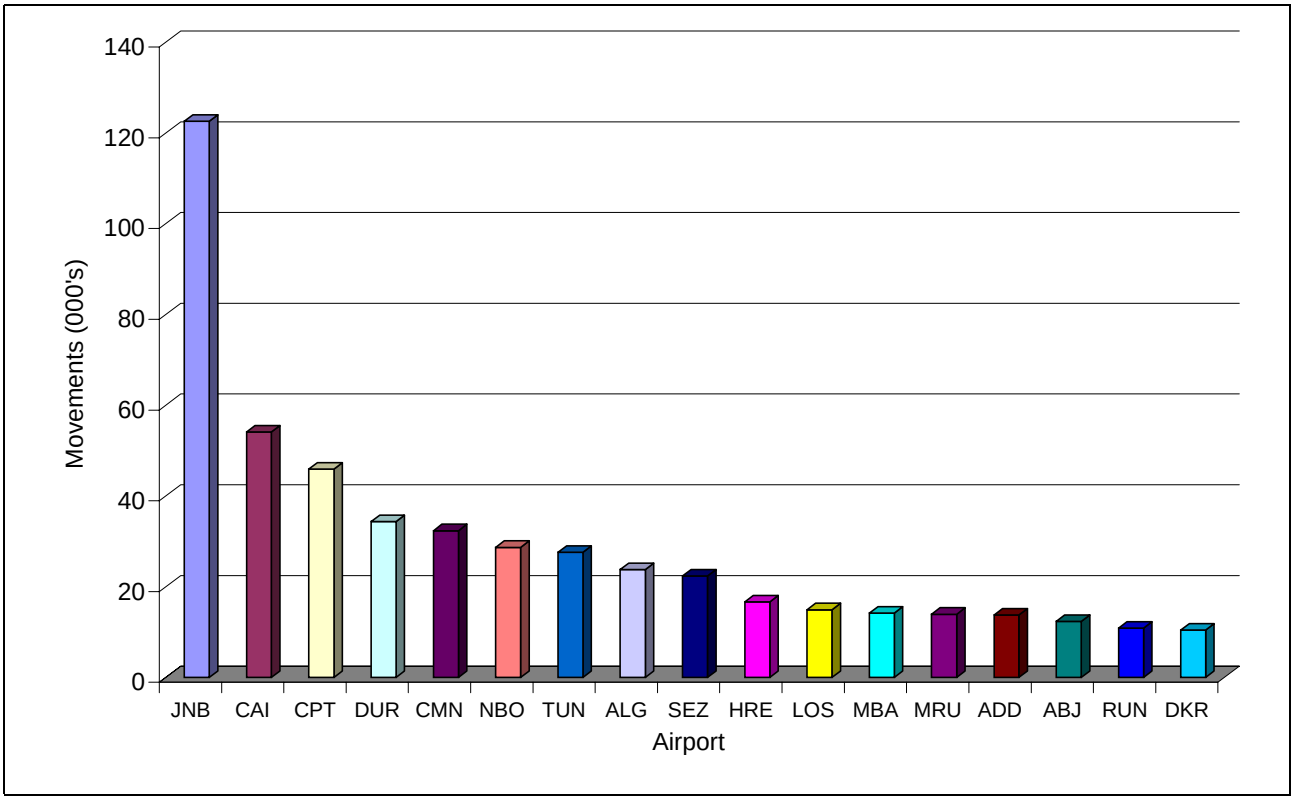
Country-pair	1998	1999	2000	2001	2002	2007	2012
Germany-Canaries	31,774	32,954	34,275	36,093	37,824	45,942	55,250
Great Britain-Canaries	31,343	34,654	39,593	47,218	55,784	120,450	220,354
Spain-Canaries	10,852	11,067	11,316	11,612	11,916	13,031	14,108
France-Tunisia	7,806	8,564	8,755	8,950	9,334	11,066	12,990
Germany-Tunisia	6,719	6,868	7,021	7,178	7,485	8,588	9,601
France-Morocco	4,669	5,064	5,290	5,526	5,890	7,784	10,186
Italy-Egypt	4,530	5,350	5,667	6,068	6,542	8,258	10,173
Italy-Tunisia	4,109	4,072	4,076	4,121	4,166	4,229	4,250
Sweden-Canaries	3,564	3,759	4,080	4,296	4,480	5,671	7,200
Netherlands-Canaries	3,254	3,383	3,527	3,732	3,949	5,032	6,356
Other	36,138	38,763	41,309	44,378	47,017	59,306	73,836

2.4 Major International Airports

This section details the current traffic and forecast for the major international airports in AFI region. The information is based on published scheduled commercial flights, and therefore excludes non-commercial flights, charter, general aviation and military flights.

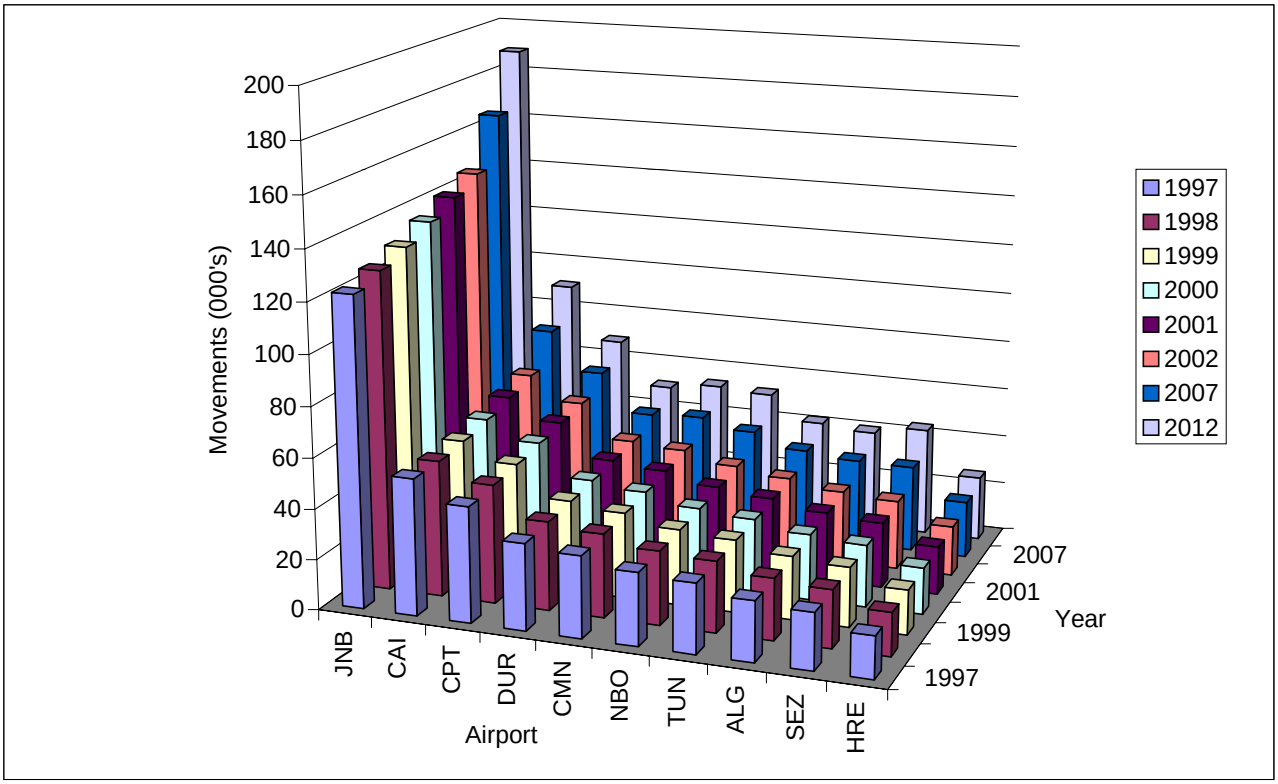
These individual airport forecasts were produced in the same way as the other forecasts in this report i.e. by applying country-pair traffic growth forecasts to airline schedule data. **Chart 7** below shows the total scheduled movements for the major (defined as having more than 10,000 movements per year) airports in AFI region for 1997. Movements in this case means the sum of arrivals and departures.

Chart 7. Scheduled Movements at Major AFI Airports (1997)



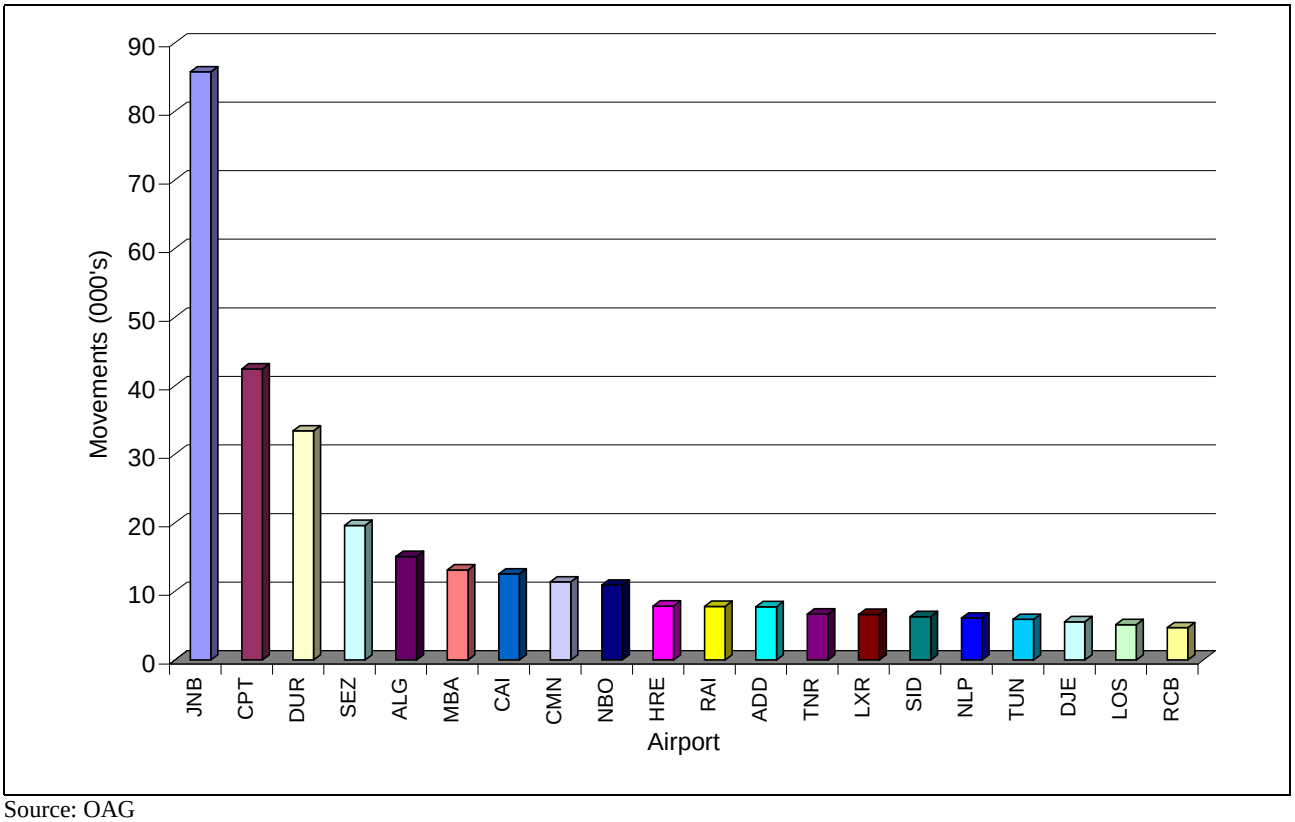
Source: OAG

Chart 8. Forecast of Scheduled Movements at Top 10 AFI Airports



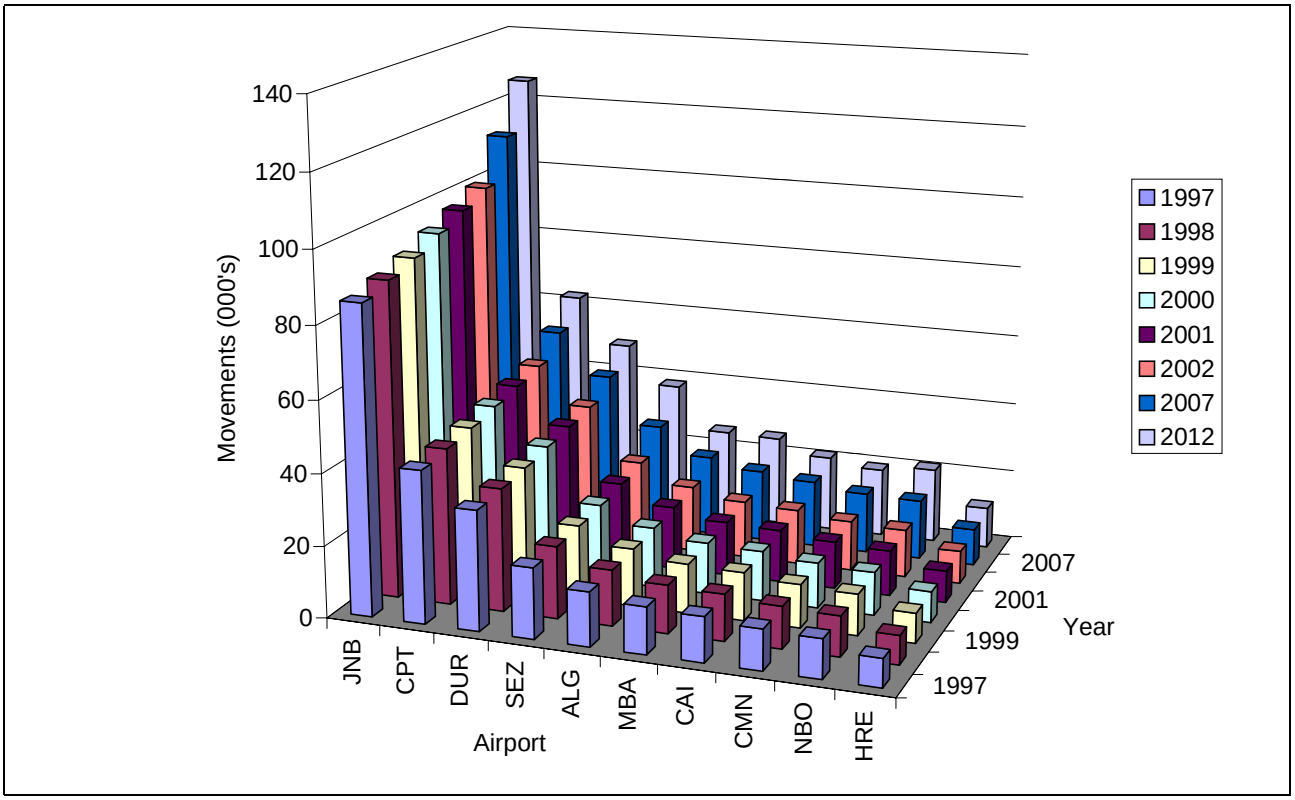
2.4.1 Domestic Movements

Chart 9. Scheduled Domestic Movements at AFI Airports (1997)



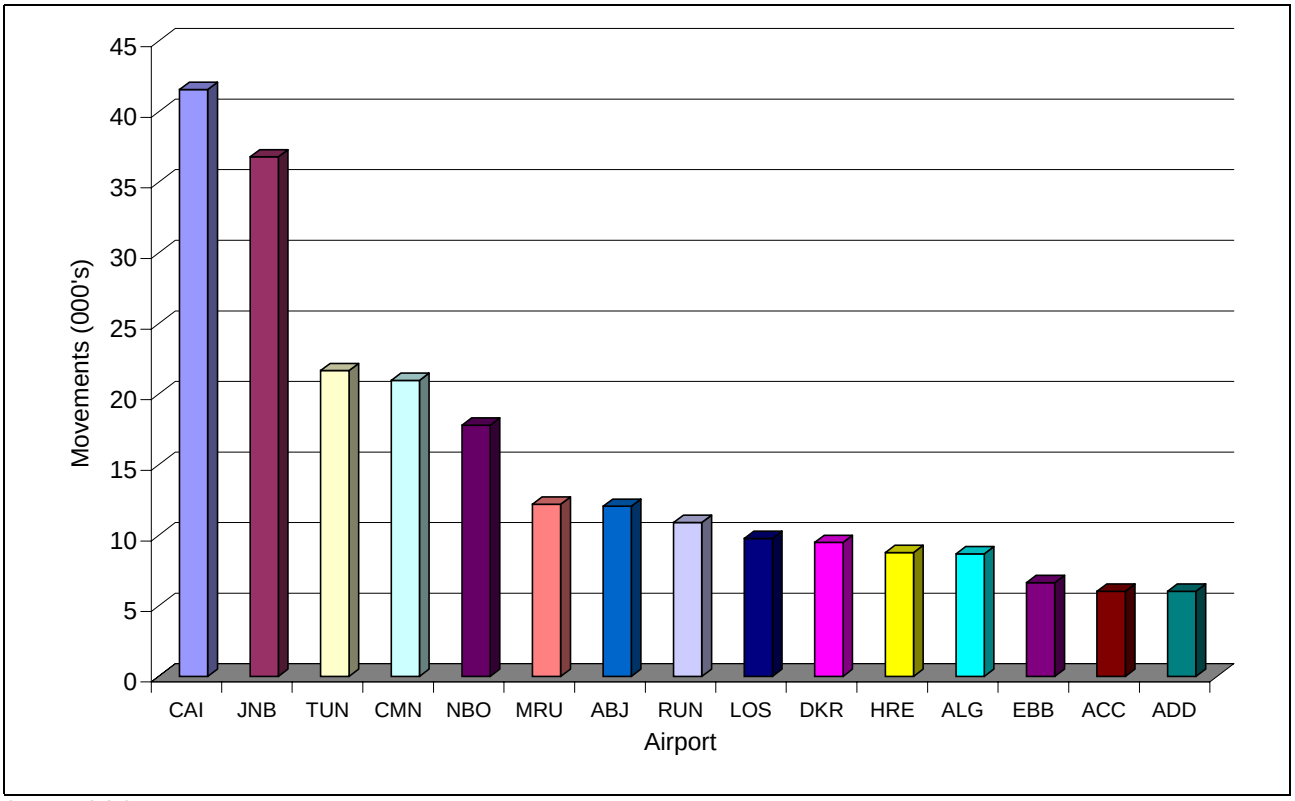
Source: OAG

Chart 10. Forecast of Scheduled Domestic Movements at Top 10 Airports



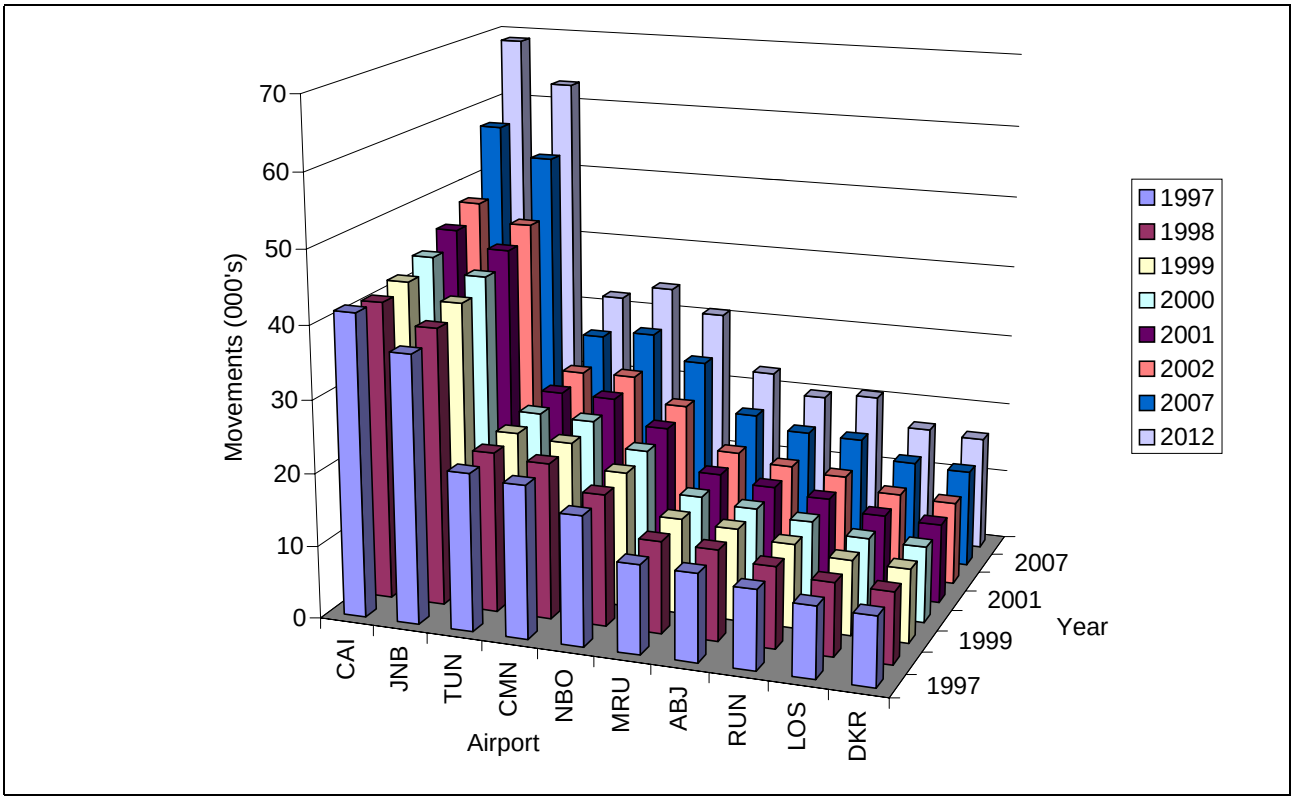
2.4.2 International Movements

Chart 11. International Scheduled Movements at AFI Airports (1997)



Source: OAG

Chart 12. Forecast of Scheduled International Movements at Top 10 Airports



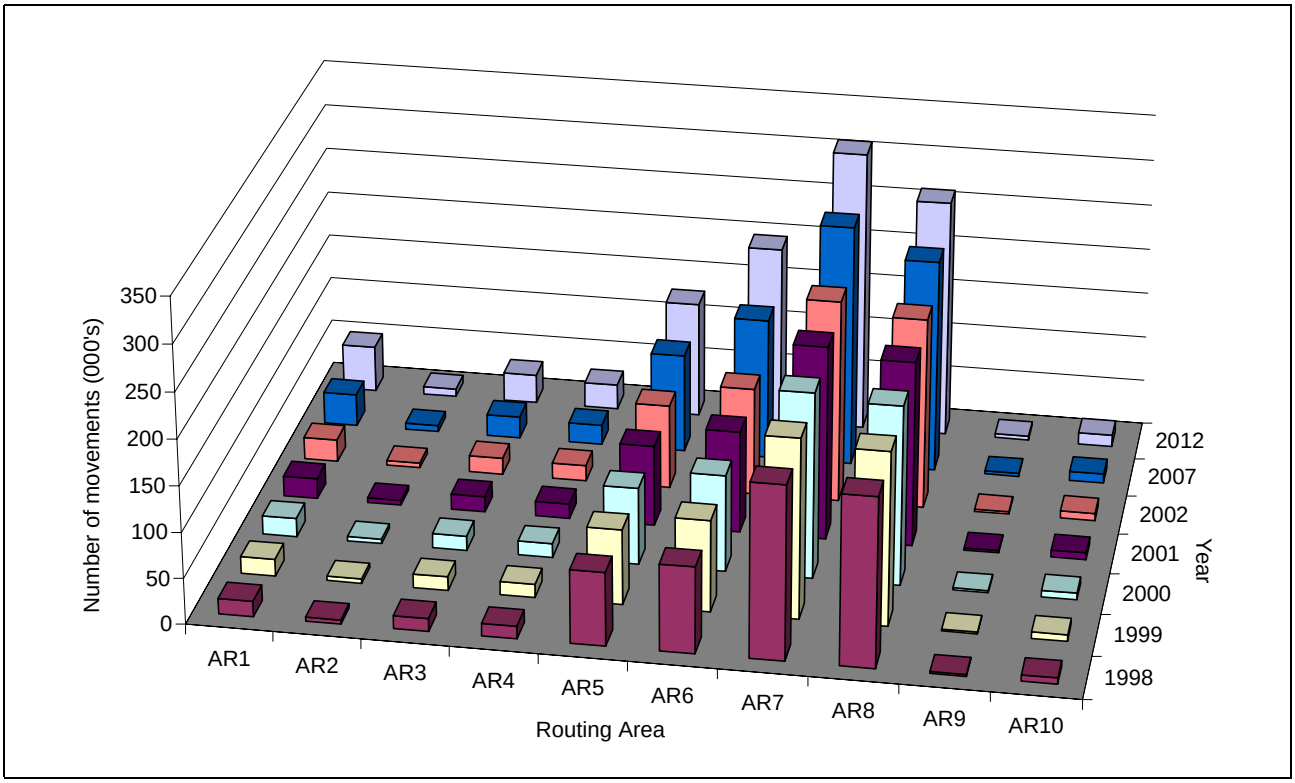
3 Homogeneous Routing Areas Analysis

3.1 Introduction

For the purposes of ATM/CNS planning and implementation, ICAO Doc 003 has defined 10 'homogenous' routing areas. While these routing areas do not encompass all African movements, they do include the major routes.. This includes the domestic flights in that particular route area.

Chart 13 below summarizes the forecast number of movements (including charters) within each route area, through to 2012.

Chart 13. Movements Forecast by Homogeneous Routing Area



3.2 Scheduled Regional Results

3.2.1 AR1 Europe – South America

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR1	15,718	17,100	18,557	20,298	22,330	24,469	35,200	50,572
AR1		8.8%	8.5%	9.4%	10.0%	9.6%	7.5%	7.5%

3.2.2 AR2 Atlantic Ocean

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR2	4,073	4,325	4,593	4,870	5,153	5,439	6,785	8,493
AR2		6.2%	6.2%	6.0%	5.8%	5.5%	4.5%	4.6%

3.2.3 AR3 Europe – Eastern Africa

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR3	10,712	11,023	11,691	12,444	13,378	14,402	19,089	25,604
AR3		2.9%	6.1%	6.4%	7.5%	7.7%	5.8%	6.0%

3.2.4 AR4 Europe – Southern Africa

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR4	11,496	12,051	12,732	13,513	14,472	15,368	19,428	24,272
AR4		4.8%	5.7%	6.1%	7.1%	6.2%	4.8%	4.6%

3.2.5 AR5 Coastal routes Gulf of Guinea

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR5	77,382	79,951	81,974	84,397	88,438	92,342	108,499	127,583
AR5		3.3%	2.5%	3.0%	4.8%	4.4%	3.3%	3.3%

3.2.6 AR6 Iberian Peninsula – Canaries

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR6	78,638	83,018	88,918	94,300	100,093	106,240	142,274	182,877
AR6		5.6%	7.1%	6.1%	6.1%	6.1%	6.0%	5.1%

3.2.7 AR7 North Africa Coastal Area

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR7	144,642	147,021	150,381	155,840	163,215	170,779	202,407	232,553
AR7		1.6%	2.3%	3.6%	4.7%	4.6%	3.5%	2.8%

3.2.8 AR8 Continental Southern Africa

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR8	179,050	183,970	189,118	196,042	202,642	209,481	234,331	262,557
AR8		2.7%	2.8%	3.7%	3.4%	3.4%	2.3%	2.3%

3.2.9 AR9 Trans-Sahelian

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR9	1,930	2,010	2,096	2,218	2,379	2,545	3,374	4,401
AR9		4.1%	4.3%	5.8%	7.2%	7.0%	5.8%	5.5%

3.2.10 AR10 Trans-Indian Ocean

AR	1997	1998	1999	2000	2001	2002	2007	2012
AR10	6,366	6,653	6,973	7,322	7,749	8,188	10,246	12,820
AR10		4.5%	4.8%	5.0%	5.8%	5.7%	4.6%	4.6%

Charter Regional Results

3.2.11 AR3 Europe – Eastern Africa

AR	1998	1999	2000	2001	2002	2007	2012
AR3	3,079	3,244	3,459	3,687	3,935	4,970	6,151
AR3		5.4%	6.6%	6.6%	6.7%	4.8%	4.4%

3.2.12 AR4 Europe – Southern Africa

AR	1998	1999	2000	2001	2002	2007	2012
AR4	1,567	1,672	1,745	1,825	1,940	2,531	3,270
AR4		6.7%	4.3%	4.6%	6.3%	5.5%	5.3%

3.2.13 AR6 Iberian Peninsula – Canaries

AR	1998	1999	2000	2001	2002	2007	2012
AR6	89,279	94,817	102,310	113,031	124,536	203,242	319,064
AR6		6.2%	7.9%	10.5%	10.2%	10.3%	9.4%

3.2.14 AR7 North Africa Coastal Area

AR	1998	1999	2000	2001	2002	2007	2012
AR7	41,790	45,504	47,161	49,031	51,725	63,631	77,761
AR7		8.9%	3.6%	4.0%	5.5%	4.2%	4.1%

Airport Development in the AFI Region

4.1 The expansion and development of existing airports with restricted capacity will resolve the current and expected problems of airport congestion and also could increase air traffic movement in the AFI Region.

4.2 In the AFI Region some national airports are expanding and developing into international airports, which would allow for an increase in air traffic.

5. Guidance for implementation

5.1 Basic aspects of financing airports and air navigation services

5.1.1 General

5.1.1.1 The substantial investments required to implement new airport and air navigation services call for innovative as well as traditional approaches to financing, including exploring new sources and financing mechanisms. Improvements in financial control and management are also required in many States if commercial financial institutions are to be convinced to advance funds for such investment projects.

5.1.1.2 The following are all important prerequisites for successful cost recovery of and obtaining financing for airport and air navigation services:

a) recognition and awareness of ICAO's cost recovery policy for airport and air navigation services;

b) establishment and existence of an effective cost and revenue accounting system;

c) a sound methodology for determining the cost basis for the charges; and

d) an effective mechanism for the collection of the charges.

5.1.1.3 Practical guidance on financial management of airports and air navigation services systems is available respectively in the ICAO *Airport Economics Manual (Doc 9562),* and the *Manual on Air Navigation Services Economics* (Doc 9161) as well as a *Report on Financial and Related Organizational and Managerial Aspects of Global Navigation Satellite Systems (GNSS) Provision and Operation* (Doc 9660).

5.1.2 Cost recovery policy

3.2.1 Detailed policy guidance in the area of airport and air navigation charges is provided in the *ICAO Policies on Charges for Airports and Air Navigation Services* (Doc 9082/6).

5.1.2.2 Basic principles contained in ~~the~~ ICAO 's Policies on charges documents are, for example, that charges should be based on the full costs of service provision, that charges can be levied for services provided outside the territory of the provider State, and that consultation with users should take place regarding new or revised charges. Of relevance in the context of financing is the principle that when the cost basis for air navigation services charges is established, the "costs to be taken into account should be those assessed in relation to the facilities and services, including satellite services, provided for and implemented under the ICAO

Regional Air Navigation Plan(s), supplemented where necessary pursuant to recommendations made by the relevant ICAO Regional Air Navigation Meeting, as approved by the Council. Any other facilities and services, unless provided at the request of operators, should be excluded..." (paragraph 34 (ii)). Bearing this in mind priority should first and foremost be given to financing facilities and services that meet these important cost recovery prerequisites.

5.1.2.3 International cooperation in the provision and operation of air navigation services is particularly encouraged in the ICAO Policies for Airports and Air Navigation Services.

5.1.3 **Availability of financial data essential for cost recovery and infrastructure financing**

5.1.3.1 When financing for airports and air navigation services infrastructure is being sought it is important to be able to demonstrate that the providers of airports and air navigation services in the State concerned employ efficient and effective accounting systems permitting the identification and inclusion of all relevant costs in the cost basis for airports and air navigation services charges. This is particularly relevant where prospective sources of financing are commercial banks or other commercial financial institutions, which place emphasis on evidence of sound financial management so as to be provided with added assurance that a loan granted by them can be serviced and repaid by the recipient.

5.1.3.2 Also relevant in the context of financing airports and air navigation services, is demonstration of the ability to draw up a financing plan. The plan should provide such basic information as estimates of component costs (labour, materials, etc.); the funds required at various stages; currencies in which payments are to be made; the sources from which the funds are to be forthcoming (self-generated and/or provided by others) including terms, and repayment (origin of funds used). It should be stressed that the availability of a financing plan is a prerequisite for meaningful negotiations with a commercial financing institution to take place.

5.1.4 **Cost/Benefit Analysis and Development of Business Cases**

5.1.4.1 Cost-benefit analysis is used to estimate the economic viability of a planned investment project, that is the extent to which the total benefit from the investment exceeds its total cost. CNS/ATM is more complex than most projects and consists of a package of investments.

5.1.4.2 A recommended approach to cost-benefit analysis of CNS/ATM is that of Net Present Value (NPV). This means making predictions of the future profiles of the annual costs and benefits associated with the implementation of CNS/ATM systems. Once all the year-by-year expenditures and benefits are established, the net benefit (benefit minus cost) for each year can be calculated and discounted back to the base year in accordance with standard accounting practices.

5.1.4.3 The development of business cases for the implementation of CNS/ATM systems involves taking cost-benefit analysis a step further. The business case evaluation should include the impact on revenues of changes in en-route charges associated with the implementation of the system. Such analysis will also provide the yearly funding profiles for each State, sub-region or the region concerned depending on the implementation strategy adopted. The overall socio-economic benefits of an improved aviation infrastructure are difficult to quantify. Nevertheless, States may also wish to consider these benefits in their overall analysis.

5.1.5 **Sources of financing and financing mechanisms**

5.1.5.1 Funding for airports and air navigation services may originate from a variety of sources on six of which attention is focussed below:

a) contributions from government (national or foreign);

b) commercial sources (debt financing);

c) accumulated excess of revenues over costs (profits);

d) bonds;

e) equity financing (share capital); and

f) leasing.

5.1.5.2 In addition to the these six basic sources, combination of those may be used; there may be also other options for the funding of airports and air navigation services in general.

5.2 **National organizational and international cooperative issues**

5.2.1 **Autonomy at the National Level**

5.2.1.1 There is a trend over recent years towards air navigation services and airports being operated by autonomous authorities established specifically for that purpose.

5.2.1.2 An autonomous authority refers to an independent entity or body established for the purpose of operating certain facilities and providing specific services, and being granted operational and financial freedom to carry out its functions. Autonomy can take many forms and does not necessarily mean privatization (although privatization is one form of autonomy) since ownership can rest in public or private hands or a mixture of both. A single autonomous authority may operate both airports and air navigation services and that authority may be in the form of a civil aviation authority. Regardless of the organizational form under which air navigation services are provided, according to Article 28 of the Chicago Convention it is the State that is ultimately responsible for the provision and operation of air navigation facilities and services. It also retains the responsibility for safety of the civil aviation.

5.2.2 **International Cooperative Ventures**

5.2.2.1 International cooperative ventures in the provision of air navigation services have normally proven to be highly cost-effective for provider States and the users served alike, and in some instances constitute the only means for implementing costly facilities and services which offer capacity that exceeds the requirements of individual States. By cooperating in such facility or service provision the States concerned are able to provide more efficient services and at lower cost than if they were to finance the facilities concerned themselves. Major CNS/ATM systems components are typical of such facilities and services where international cooperation is essential.

5.2.3 International Operating Agencies

5.2.3.1 An international operating agency is a separate entity assigned the task of providing air navigation services, principally route facilities and services, within a defined area on behalf of two or more sovereign States. The services such an agency provides are usually in the categories of air traffic services, aeronautical telecommunication, search and rescue (essentially rescue coordinating centres) and aeronautical information services, but can extend to meteorological services for air navigation as well. These agencies are also responsible for the operation of charges collection systems for the services provided. Examples of international operating agencies are ASECNA in Africa (which operates airports as well as air navigation services), COCESNA in Central America and EUROCONTROL in Europe.

5.2.4 Joint Charges Collection Agencies

5.2.4.1 Another effective, if less encompassing, means for States to benefit from co-operation in their provision of air navigation services would be to participate in the operation of a multinational charges collection agency. This is because States individually operating route facilities and charging for the services rendered are involved in considerable accounting work, and may also encounter collection difficulties where there is a substantial volume of overflying traffic.

5.2.4.2 Such an agency would collect route air navigation services charges on behalf of all of the participating States, including those which are overflown. The agency would then transfer to each participating State the charges revenue collected on its behalf. Added to each charge levied for each participating State would be a small fee or percentage to cover the State's share of the agency's costs. Start--up funds required for the acquisition of premises and data processing and other equipment, pre-operational training, etc, should normally not pose a major problem since they could be obtained through a financing institution, including a commercial bank. The loan would be repaid over a few years, with instalments and interest being included in the agency cost element that would be added to and recovered through the route air navigation services charges billed and collected by the agency. For the agency to be cost-effective several States would need to be involved.

5.2.5 Multinational Facilities and Services

5.2.5.1 A multinational navigation facility/service is essentially a facility or service included in an ICAO regional air navigation plan for the purpose of serving international air navigation in airspace extending beyond the airspace serviced by a single State in accordance with that regional air navigation plan. Elements of the satellite communications systems required to implement the CNS/ATM concept operated for groups of States represent examples of prospective multinational air navigation facilities/services while an earlier global example is the world area forecast system (WAFS).

5.2.6 Joint Financing-type Arrangements

5.2.6.1 The basis for the joint financing concept is that certain air navigation facilities and services may be too costly for a State to provide and operate alone for the benefit of international civil aviation at large. This is recognized in the Chicago Convention where Chapter XV lays down the basic principles for "joint support" action if a State applies to ICAO for financial or technical aid or if the Council acts on its own in offering assistance to remedy a situation that might impair the safe, efficient and economical operation of international air services. Two Agreements concluded under Chapter XV, one with Denmark, the other with Iceland, are currently in force. The Agreements cover the operation and financing of facilities and services provided by Denmark and Iceland for civil aircraft flying across the North Atlantic, north of the 45EN latitude. These services comprise air traffic control, communications and meteorology. Financial responsibility is assumed by

a group of 23 States whose Governments contract to the relevant Agreements, including the two provider States. The responsibility for the administration of the Agreements rests with the ICAO Council and the Secretary General, on behalf of the Contracting Governments.

5.2.6.2 The joint financing concept used for the Danish and Icelandic agreements has also been adopted for the administration by ICAO of a height monitoring systems programme operated jointly by six States providing air navigation services on the North Atlantic.

5.2.6.3 As another example of a joint financing-type arrangement, ICAO has, on request of the governments concerned, developed and is now administering the Satellite Distribution System (SADIS) Cost Allocation and Recovery (SCAR) scheme.

5.2.6.4 ICAO's administration of all the arrangements concerned has proven most successful and cost-effective from the viewpoint of the contracting governments involved.

5.2.6.5 Joint financing-type arrangements would lend themselves well to the implementation of a number of CNS/ATM systems components and other air navigation facilities or services in situations where it is, for example, very costly for a State to act alone or where an existing regional organization (ASECNA, COCESNA, EUROCONTROL etc.) does not act on the States's behalf. Such components include integrity monitoring and wide area augmentation systems required in connection with the GNSS, and could also include ground earth stations (GES) and sharing in the use of communications satellite transponders.

5.3 General Guidelines on the establishment and provision of multinational facilities/services in the AFI Region

5.3.1 General

5.3.1.1 When implementing facilities and services States will wish to explore the possibilities for the establishment and provision of a multinational facility/service and the following guidelines are available in that regard.

5.3.2 Introduction

5.3.2.1 These guidelines were developed by the CAR/SAM/3 RAN Meeting (1999), Recommendation 13/2 pursuant to Recommendation ANSEP/2-3 approved by the ICAO Council at the sixth meeting of its 146th Session.

5.3.2.2 They reflect relevant ICAO provisions and established policies on the Organization's regional planning for and implementation of facilities/services required for air navigation applicable in the AFI Region. They also recognize the principle that costs may be recovered for facilities and services provided for and implemented under the AFI Regional Plan as approved by the Council according to the principles set forth in the *ICAO Policies on Charges for Airports and Air Navigation Services* (Doc 9082, paragraph 34 (ii) refers) and the more detailed guidance material in the ICAO *Manual on Air Navigation Services Economics* (Doc 9161).

5.3.3 **Defining Multinational Air Navigation Facilities/Services**

5.3.3.1 It is expected that multinational air navigation facilities/services will, for some time, continue to be the exception rather than the rule within the AFI Region. Because of their uniqueness, their impact on the system as a whole as well as their implications for users and providers of the multinational facilities/services, need early identification by APIRG or other implementation group. Defining a multinational AFI air navigation facility/service in the following way would facilitate such identification in a rational manner:

> A facility/service specifically identified as such and included in the ICAO AFI Regional Plan for the purpose of serving international air navigation in airspace extending beyond the airspace serviced by a single State in accordance with the AFI Regional Plan.

5.3.3.2 The definition given above, would apply only to multinational facilities and services that, in order to be implemented, would require an amendment to the AFI Regional Air Navigation Plan. The purpose of a multinational facility/service to serve international air navigation in airspace extending beyond the airspace serviced by a single State is a useful and qualifying element. It is a crucial criterion in that it unambiguously discards other possibilities which the machinery for regional planning and implementation of requirements for facilities/services provides for under Article 28 of the Convention, in accordance with Standards and Recommended Practices and relevant Assembly Resolutions, e.g. delegation of airspace, operating agencies, bi- and multilateral agreements or as a last resort, joint financing under Chapter XV of the Convention. While in any such case States would individually remain responsible under Article 28 for the provision of facilities/services within the area of their jurisdiction, a “multinational” facility/service by its very nature would extend beyond the individual airspace of a State.

5.3.3.3 In ICAO rules and procedures the term “facility/service” for air navigation is well understood. Contrary to the term “project” or any other term which may relate only to certain segments or phases of an undertaking, it does not exclude research, development, operation and eventually the phasing out of a joint venture. In this context, there is therefore no need to depart from the well known term “facility/service” for air navigation. There is, however, room for amplifying the definition by additional elements in order to dissociate the common undertaking from those facilities/services which are provided by one State only.

5.3.4 **Applicability of ICAO provisions**

5.3.4.1 Pursuant to Article 28 of the Convention and in line with the ICAO policies concerning the formulation of regional plans and their implementation, a multinational facility/service, establishment of which requires an amendment to the AFI Regional Air Navigation Plan, would be set forth in the regional plan as established by the Council. In turn, when establishing the cost basis for route facility charges, the Council approved principles are to be applied, i.e. the costs to be taken into account should be those assessed in relation to facilities and services provided for and implemented under the AFI Regional Plan.

5.3.5 **AFI Regional Plan**

5.3.5.1 Regional plans for facilities, services and procedures are established by the Council, normally on the advice of Regional Air Navigation Meetings. Between such meetings plans are updated, on an *ad hoc* basis, through the Procedures for the Amendment of Approved Regional Plans. In both cases an experimental procedure based on Recommendation No. 2 of the Conference on the Economics of Route Air Navigation Facilities and Airports (1973), applies as follows: in case of an objection to the inclusion of facilities/services in the plan raised by a State on the grounds that facilities/services are not required for international civil aviation,

to the extent feasible, costs of the facilities/services questioned are evaluated.

5.3.5.2 The AFI ~~Regional~~ Planning and Implementation Regional Group (APIRG) as well as all parties to the regional planning processes for the continuous management of the AFI Air Navigation Plan, should continue to pay due regard to the operational requirements, expected technical progress, the likely financial implications for users and providers, and possible alternative solutions and operational cost/benefit considerations.

5.3.5.3 The process for development and implementation of multinational facilities/services would be similar to that concerning the inclusion of any facilities/services in the AFI Regional Plan and would have the general objective of ensuring continuous and coherent development of the AFI Regional Plan as a whole and possible benefits of joint action by participating States.

5.3.6 Planning and Development of a Multinational Air Navigation Facility/Service in the AFI Region

5.3.6.1 The following guidelines constitute a step by step process for the development of a multinational air navigation facility/service in the AFI region.

5.3.6.2 The need for a multinational air navigation facility/service may originate from either:
the AFI ~~Regional~~ Planning and Implementation Regional Group (APIRG); or
a State or a group of States.

5.3.6.3 It is recommended that States consider the following areas when assessing the need for and implications of establishing a multinational facility/service:

a) ***purpose of the multinational air navigation facility/service and its operational and technical justifications.*** This should include the overall plan and targets for the development and the establishment of the facility/service. The likely implications if any, on regulations, working-routines, equipment, premises and maintenance should be included. Information on the expected consequences on the overall AFI air navigation system or any part thereof should also be included;

b) ***financial implications and cost-effectiveness***. Related information should include estimates of the total costs of the multinational facility/service covering, as required, research and development, implementation, operation and maintenance, administration, and capital costs; how all costs incurred prior to the operational phase will be financed; assessing savings which may accrue from the implementation of the facility/service (these can be measured in monetary and/or physical terms for example air traffic controller positions, communications facilities, etc.) and comparing these savings to the total cost estimates; proposals as to how cost shares of States participating in the provision of the project are to be determined. Also, assessment needs to be provided on impact on users from charges for the facility/service concerned;

c) ***managerial implications***; and

d) ***alternative solutions.***

5.3.6.4 If the establishment of a multinational facility/service will not require an amendment to the AFI Regional Air Navigation Plan, States need only inform the ICAO Regional Office concerned. The regional office, in turn, should report to APIRG if the establishment of a multinational/service will have any potential effect on plans that are under development The need for an amendment to the Regional Air Navigation Plan should be assessed by the State or States involved.

5.3.6.5 If the establishment of a multinational air navigation facility or services will necessitate an amendment to the regional air navigation plan, the amendment will be carried out in accordance with the established procedures. The State or States involved should contact the ICAO Regional Office concerned. In turn, the regional office could consult APIRG when required, or if requested by the States establishing multinational facilities/services, to:

a) ensure the continuous and coherent development of the AFI Regional Plan as a whole taking into consideration the effect of such a development on the regional plans of adjacent regions; and

b) identify specific problems in the air navigation field and propose, in appropriate form, action aimed at resolving these problems.

5.3.7 Financial, managerial and other contractual aspects

5.3.7.1 The participation of States in the provision of a multinational facility/service is based on the assumption that any State having supported and agreed to the implementation of such a facility/service and making use of it, should also shoulder its respective share of the costs involved. The participating States would need to formalize the terms under which the multinational facility/service is to be provided in an agreement. A primary aim of the agreement should be to ensure that the costs involved are shared among the participating States in a fair and equitable manner.

5.3.7.2 This part of the guidelines is concerned with the main contractual aspects, financial, managerial and other issues, that should normally be considered when initiating work on a potential multinational facility/service. The basic provisions that would need to be considered for incorporation in such an agreement are outlined, including provisions concerning cost sharing and cost determination. However, the guidance does not extend to the presentation of a draft model agreement or clauses, since circumstances related to the planning, implementation and operation of individual multinational facilities/services may vary considerably.

Note.— The guidelines generally refer to "agreement" as a generic term covering one or more agreements as the case may be.

5.3.8 Types of agreements

5.3.8.1 An agreement covering the development, implementation, operation and maintenance of a multinational facility/service could either take the form of a formal international treaty or an "administrative agreement". Both forms establish an international obligation but a treaty requires the signature of the head of state or government and will also require the ratification or approval of the national legislative assembly, which, as a rule, is a time-consuming process. An "administrative agreement", on the other hand, is at a lower level of requirement in respect of formalities and procedures than a treaty, can be signed by a minister or director of civil aviation or some other authorized person, and could be concluded by an exchange of letters or notes.

5.3.8.2 It is recommended that, whenever possible, the agreement be established in the form of an "administrative agreement" rather than a formal international treaty because this would allow the agreement to come into force with minimum delay and also permit greater flexibility in incorporating any subsequent modifications required. It is recognized, however, that in some States constitutional or legal circumstances may require the approval of the legislative assembly for financial obligations to be accepted by the State, particularly if these are of a substantial magnitude and/or extend over a period of time. Whatever form is used the agreement(s) should be structured to provide for easy subsequent amendments as developments may require. To this end, material of detail which is more likely to require modifications, and which will not affect the basic provisions of the agreement, should be contained in annexes or appendices.

5.3.8.3 It is further recommended that whenever possible only one general agreement (treaty/"administrative agreement") be adopted covering all aspects of the facility/service concerned through all its phases. However, this may not always be possible. In certain circumstances it might be necessary or preferable to have more than one agreement (treaty/"administrative agreement") differing in scope and content. In those circumstances the aim should be to cover as many aspects as possible in the "administrative agreement" and limit the use of the treaty to those aspects for which this form of agreement is essential for the States concerned. Recognizing this, one agreement for example, might cover the activities, including pre-financing, to be undertaken by those States that accept the responsibility for bringing the facility/service up to operational status, with another agreement to be concluded between all the States (including the first group of States aforementioned), which would use or be served by the facility/service once it became operational. In such circumstances the former agreement would be important because the first group of States would have to ensure the provision of funds from their own resources to ensure the implementation of the facility/service, since no inflow of revenues from charges on users (aircraft operators) would take place until the multinational facility/service becomes operational.

5.3.8.4 Another possible approach, if required by circumstances, would be for all the participating States to conclude an agreement covering, in general terms, their commitment to participate in the provision of the multinational facility/service, and then developing a separate agreement covering all aspects relating to the financing and operation of the multinational facility/service.

5.3.8.5 The various basic provisions that would normally have to be covered in an agreement of this nature are addressed below in the sequence they would usually appear, as follows:

a) ***Objective of the agreement***. In the introductory text the agreement should set out the objective underlying the participating States' decision to jointly arrange for the provision of the multinational facility/service concerned.

b) ***Obligations of States party to the agreement***. The agreement should at the outset briefly set forth the basic obligations of the participating States. These include the obligation (by a participating State or group of States individually or collectively or as assigned to an organization or agency) to establish and operate the facility/service concerned; the obligation of each participating State to pay its share of the costs involved; the obligation to observe ICAO policies and practices, including those addressing cost recovery by States from aircraft operators, etc.

c) ***Definition and description of the facility/service***. The agreement should contain a clear and accurate definition and description of the multinational

facility/service to be provided and the functions it is to perform, including to the extent possible and desirable, the supporting services required. It may be advisable in certain cases to make specific reference to functions which the multinational facility/service will not be performing.

d) ***Establishment and operation of the facility/service.*** The agreement should specify who will establish and operate the facility/service concerned, namely whether this is to be done by one State, two or more States, an existing international organization, an existing national or international agency, or a new agency to be established specifically for this purpose.

Note.— The decision as to who should provide the facility/service could be influenced, in particular, by the anticipated capital investment and annual costs involved, as well as the extent to which the alternative providers (i.e. a participating State or States, international organization or agency) have been engaged in the function(s) concerned.

e) ***Legal responsibility.*** If an international organization or agency (as referred to in Assembly Resolution A22-19) is to establish and/or operate the facility/service concerned, it will have to be endowed with proper legal responsibility to have the capacity to contract, to acquire and dispose of property and to institute and answer legal proceedings.

f) ***Liability aspects.*** Closely related to legal responsibility are the liability aspects which may have to be addressed in the agreement. This involves such aspects as the determination of the extent to which liability is to be assumed in connection with the provision of the multinational facility/service. Other aspects also include whether the entity providing the facility/service concerned, whether an international organization agency or State(s), should alone assume such responsibility or whether this should be shared amongst all the participating States.

g) ***Managerial aspects.*** The nature of the governing body or bodies required to administer the agreement needs to be established and a description of their functions provided. Should a new agency be established to operate the multinational facility/service, this would need to be stipulated in the agreement, where reference should also be made to the functions and responsibilities of the executive head of the agency and to whom he or she would be responsible.

1) ***Governing bodies and decision-making arrangements.*** Voting arrangements should be specified. It would need to be decided whether each participating State should have equal voting power (as is for example the practice of ICAO). Alternatively, each State's vote may be weighed in accordance with a predetermined formula, which would need to be specified, for example, by determining the voting power according to that participant's share of total contributions to the facility/service or agency concerned. A maximum and/or a minimum limit may be set for the number of votes that can be

assigned to any individual participant regardless of that participant's share of total contributions.

Another voting aspect which has to be decided on, and specified in the agreement, is whether a simple majority would apply in all cases or whether for particular issues a large majority vote (to be specified) or even unanimity would be required. Where different degrees of majority voting would apply depending on the matter or subject being voted on, these would also need to be clearly identified in the agreement.

2) ***Organization and staffing.*** The agreement should refer to the manner in which the entity actually operating the facility/service would structure or organize its functions. This would apply in particular if the operation is to be assigned to a new agency. Various aspects of staffing (nationality, numbers and type etc.) will also need to be addressed and, as appropriate, incorporated in the agreement (or an annex to it). If the participating States agree that the multinational facility/service is to be provided by one State or by two or more States (each providing separate components or parts of the project involved), the nationality of staff should not give rise to any problems, and need not be covered in the agreement. However, operation by an international organization or agency, may require that certain stipulations be included in the agreement concerning the selection of qualified staff from participating States. Other aspects to be considered, aside from the number and types of staff, are the various elements of conditions of service including status to be accorded to any expatriate staff, tax exemptions, etc., which will reflect on the overall costs of the venture.

3) ***Consultation.*** Provision should be made in the agreement to ensure adequate consultation with States being party to the agreement but not represented on the governing body, and appropriate aircraft operators organizations. Such consultations should at least be undertaken in advance of any developments that could materially affect cost share to be allocated to these States, user charges, and the quality of the services provided.

h) **Financial aspects:**

1) ***Pre-implementation considerations***. The determination and presentation of the costs attributable to the provision of the multinational facility/service concerned should proceed in a manner acceptable to all the participating States. In this context it should be noted that bringing the facility/service up to implementation status can involve the costs of implementation being financed by one or more of the participating States. However, once the facility/service has been implemented, these costs would be capitalized and then

included as depreciation (together with accumulated interest) in the overall cost base to be shared among the States participating in the provision of the facility/service concerned.

2) ***Cost determination.*** In order to formalize the manner in which the costs to be shared should be arrived at, the agreement between the States participating in the provision of a multinational facility/service should contain clauses referring to the determination of the related costs. The agreement should also stipulate that the approach towards cost determination be based on that recommended in Chapter 4 of the ICAO Manual on Air Navigation Services Economics (Doc 9161). Should more comprehensive instructions, based on Doc 9161 be required, it is preferable that these be presented in an annex in view of their relative volume and detail, and also because it may be expected that they would need to be updated and modified more frequently than the main text of the agreement. (Amendments to the annexes to the agreement would normally be subject to the approval of the governing body of the multinational facility/service).

In line with the approach adopted in Doc 9161, the annex would normally contain an inventory of the various components of the multinational facility/service (e.g. buildings, equipment, number of staff by function, etc.). It would also cover the determination of annual costs, i.e. operation and maintenance costs, administrative overheads, depreciation and/or amortization and cost of capital as well as special capital outlays. Finally, where a multinational facility/service or any of its components serve other than the multinational functions specified in the agreement (i.e. functions serving one State only, or non-aeronautical functions), instructions should be provided to ensure the accurate determination of the "multinational" costs to be shared among the participating States.

The agreement would also need to specify, normally in an annex, the basic format to be used for the presentation of the annual costs for approval. The scope and detail of the format will depend on the particular circumstances involved.

3) ***Cost sharing.*** Once a State has supported and agreed to the implementation of a multinational facility/service and making use of it, it would be expected to assume responsibility for its share of the costs involved. This basic obligation should be reflected in the agreement between the participating States.

The agreement should outline the procedure to be applied for determining the cost share to be borne by each participating State. Any cost sharing method should, to the extent possible, be equitable, simple and easy to apply. The question of equity should not only be considered in the context of the participating States, but also with respect to the final users (aircraft operators) since it may be assumed

that in most instances the participating States would include the costs they incur in the cost base for their air navigation facility charges, where levied.

In general, it does not appear feasible to recommend one specific method or approach to cost sharing because the situation will vary, depending particularly, on the technical and operational characteristics of the multinational facility/service involved, the views or policies of the participating States on how costs should be shared, and the volume of these costs.

In the interest of equity, however, any method of cost sharing should, in principle, be based on the extent of the use of the multinational facility/service concerned by each participating State. Thus, the parameters or keys used to determine each State's cost share should reflect the extent of such use. However, if the use made of a multinational facility/service can only be measured by applying complex procedures and at a cost which is not commensurate with the costs to be shared, other methods of cost sharing based on readily available and relevant statistical data could be applied. Whatever method is selected it must provide for the just and equitable sharing of the costs involved.

A multinational facility/service might be operated by one or more States with other States contributing their share of the costs involved. In such circumstances, all the States concerned must decide whether or not the total costs should be subject to sharing or if any allowances should be made to reflect any tangible benefits accruing to the State(s) engaged in the actual operation of the facility/service concerned. Such benefits would usually be in the form of employment of nationals, contracts awarded to national companies, etc. with their associated multiplier effect on the economies of the State(s) concerned. It should be noted that the States actually operating the facility/service would, like other State(s) using it, be obliged to pay its (their) share of the total costs to be shared.

4) ***Recovery of costs from users***. As a rule, a multinational facility/service would have to be "multinationally" financed or prefinanced by a State, group of States or by an agency as established under the authority of an agreement by States. However, any of these could recover the costs so incurred from users once the facility/service has been implemented. Nevertheless, States may also choose to recover less than full costs in recognition of local, regional or national benefits (Doc 9082, paragraph 39 (i) refers). Where an agency has been authorized to recover its costs through charges, the authorizing States would nevertheless need to make up for revenue shortfalls where, for example, the States had decided certain flights should either be exempted from or pay reduced charges.

It would be up to each participating State to decide whether or not it wishes to recover its cost share from the users (aircraft operators). A State could either include these costs in its cost base for route facility charges (if it levies such charges), or, alternatively, recover the costs by levying a separate charge (normally a more complex and costly procedure to administer). While the recovery of such cost shares from users might normally not be referred to in an agreement on a multinational facility/service, the agreement could include a provision to the effect that such recovery must be based on Article 15 of the Chicago Convention as well as the principles and recommendations in Doc 9082.

If the participating States were to assign the operation of a multinational facility/service to an international organization or an international agency and decide that it should levy charges on aircraft operators for the purpose of full or partial cost recovery, this would need to be covered in the agreement. In such instances the agreement would usually also stipulate (probably in a separate annex) the charging formula to be used, reductions and exemptions granted, billing and payment arrangements, etc. Such procedures would, of course, need to conform with the provisions of Article 15 of the Chicago Convention and Doc 9082.

5) ***Budgeting***. Proper financial control will require costs and revenues to be estimated in advance. The itemization of the costs should basically correspond with that used for the presentation of costs. This will enable actual costs to be compared with estimated costs, and actual revenues with those estimated.

6) ***Authority to approve the budget***. The agreement should also stipulate who has the authority to approve the budget and thus authorize the use of funds to meet operating expenses and capital expenditures. This authority would normally be vested in the governing body of the multinational facility/service concerned.

7) ***Financial auditing.*** The financial audit function forms an integral part of the determination of the costs to be shared and the cost share to be borne by each participating State as well as of proper financial control. The agreement between States participating in the provision of a multinational facility/service should therefore specify that an annual financial audit be performed by a certified independent external auditor.

8) ***Taxation and other government levies.*** The subject of tax exemptions and other aspects related to taxation will need to be addressed in the context of the overall operations of the multinational facility/service. Similarly, with regard to other government levies such as custom fees and duties, value added tax, etc., it may also

need to be considered whether the import or export, purchase or sale of any equipment, supplies, etc., required for the operation of the multinational facility/service concerned should be exempted from all such levies in the participating States. The inclusion of clauses to that effect would be likely to require an agreement subject to ratification, such as a treaty.

i) ***Procedures for settlement of disputes.*** The agreement should contain stipulations setting out the procedures to be followed for settlement or disputes between the participating States arising from the provision of the facility/service concerned. Regarding the settlement of disputes arising from different interpretations being given to the agreement, the States concerned would have to agree on the procedures for negotiation or arbitration and on the body to which an appeal for a final ruling could be made.

j) ***Accessions, withdrawals, amendments to and termination of agreement.*** The agreement should contain provisions, including those describing the financial implications involved, to:

- cover the subsequent accession by any additional qualifying State(s) after the agreement is in force; and

- specify the procedure to be applied when a signatory State wishes to withdraw from the agreement as well as procedures to follow in the event of termination of the agreement.

Similarly, the agreement should specify the procedures to be followed if amendments are to be made to the main text or to any Annexes (for which different procedures would normally apply).

5.4 **Homogeneous Areas and Major Traffic Flows Defined**

5.4.1 The major traffic flows identified in the homogeneous areas are given in Table GEN 1A and Chart GEN 1A..

5.5 Management of Implementation Co-ordination Groups (ICGs)

A table is to be developed and included which identifies interested provider and user States and international organizations that correspond to each of the ten AFI routing areas specified by APIRG. That Group, in coordination with ALLPIRG as appropriate, will manage the formalization of such groupings and prioritize their work. The table will serve as a tool for inter-regional coordination.

TABLE GEN 1A

Areas of routing

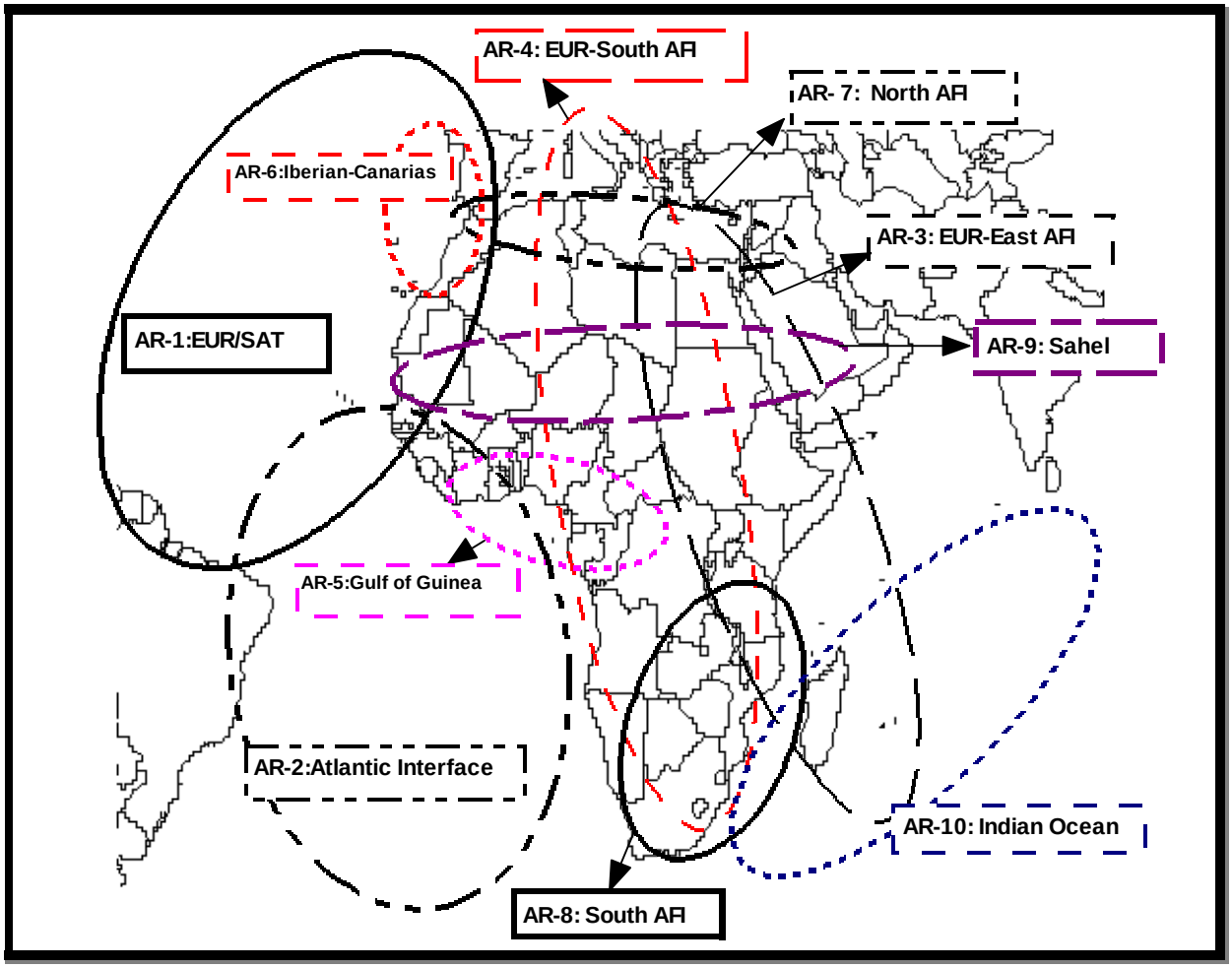
Area of routing (AR)	Traffic flows	FIRs involved	Type of area covered	Remarks
AR-1	Europe - South Atlantic (EUR/SAT)	Canarias Casablanca Dakar Oceanic Recife[1] Sal	Oceanic en-route low density	Major traffic flow AFI/SAM
AR-2	Atlantic Ocean (AFI-NAT/SAM interface)	Accra Dakar Oceanic Johannesburg-Oceanic Luanda Sal	Oceanic en-route low density	Homogeneous area AFI/NAT/SAM
AR-3	Europe - Eastern Africa (including oceanic areas)	Addis Ababa Antananarivo Asmara Cairo Dar es Salaam Entebbe Khartoum Mauritius Mogadishu Nairobi Seychelles Tripoli	Continental en-route / oceanic low density	Major traffic flow AFI/EUR
AR-4	Europe - Southern Africa	Algiers Brazzaville Gaborone Johannesburg Kano Kinshasa Luanda Lusaka N'Djamena Niamey Tripoli Tunis Windhoek	Continental en-route low density	Major traffic flow AFI/EUR

Area of routing (AR)	Traffic flows	FIRs involved	Type of area covered	Remarks
AR-5	Gulf of Guinea (Coastal routes)	Accra Brazzaville Dakar Kano Roberts	Continental/oceanic low density	Homogeneous area AFI
AR-6	Iberian Peninsula-Canaries	Canarias Casablanca Lisbon[1]	Oceanic high density	Major traffic flow AFI/EUR
AR-7	North AFI/Coastal and EUR/AFI Interface routes	Algiers Cairo Casablanca Tripoli Tunis	Continental / Oceanic low density	Homogeneous area AFI/EUR
AR-8	Continental Southern Africa	Beira Gaborone Harare Bloemfontein Capetown Dar es Salaam Durban Johannesburg Lilongwe Luanda Lusaka Port Elizabeth Windhoek	Continental low density	Homogeneous area AFI
AR-9	Trans-Sahelian	Asmara Dakar Kano Khartoum N'Djamena Niamey	Continental low density	Homogeneous area AFI
AR-10	Trans-Indian Ocean	Antananarivo Bombay[1] Johannesburg-Oceanic Male[1] Mauritius Perth[1] Seychelles	Oceanic low density	Homogeneous area AFI/ASIA

CHART GEN 1A - Areas of routing
CARTE GEN 1A - Zones d'acheminement

Appendix A to Section III, Doc 003 / Appendice A , Section III, Doc 003

Chart/Carte/Carta CNS/ATM - 1: Areas of routing / Zones de lignes aériennes



PART III - AERODROME OPERATIONS (AOP)
IIIe PARTIE - EXPLOITATION TECHNIQUE DES AERODROME(AOP)

PART III - AERODROME OPERATIONAL PLANNING (FASID)

1. INTRODUCTION

1.1 The Standards, Recommended Practices and Procedures to be applied and related guidance material are as listed in paragraph 1, Part III - AOP of the AFI Basic ANP. The material in this Part complements that contained Part I - BORPC of the Basic ANP and should be taken into consideration in the overall planning processes for the AFIRegion.

1.2 This Part contains the details of the facilities and/or services to be provided to fulfill the basic requirements of the Plan and/or as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO WACAF and ESAF Regional Offices.

2. AERODROME FACILITIES AND SERVICES
(FASID Table AOP 1)[AFI /7, Rec.2/2,3.1]

2.1 FASID Table AOP 1 shows the requirements for physical characteristics, radio and visual aids as well as other facilities and services to be provided at each aerodrome included in the AFI ANP. The table of explanation preceding FASID Table AOP 1 provides a detailed description of the data included in the Table.

2.2 Pertinent information or comments on specific requirements or identification of particular issues affecting the provision of a system and target dates for the implementation of a facility/service may be shown as “Remarks” (in italics) in the Table.

Note. - When no information or requirement has been shown or agreed upon, the related entry(ies) in FASID TABLE AOP 1 is(are) omitted.

3. RUNWAY SURFACE CONDITION INFORMATION

3.1 States should publish information on the runway surface friction characteristics such as skid-resistant treatment etc. for the guidance of the operators. The runway friction characteristics should be maintained at acceptable levels, measured using continuous friction measuring equipment and the measured values published. Information on publishing runway surface characteristics as specified in Annex 14, Volume I, Section 2.9 are available in Annex 15 and Airport Services Manual (Doc 9137) - Part 2.

4. AERODROME EMERGENCY PLANNING

Every aerodrome shall establish a comprehensive aerodrome emergency plan and test the plan by carrying out full-scale emergency exercises every two years and partial exercises during the intervening period. Guidance on aerodrome emergency planning is available in Airport Services Manual (Doc. 9137) - Part 7.

III^e PARTIE

PLANIFICATION OPÉRATIONNELLE D'AÉRODROMES (FASID)

1. INTRODUCTION

1.1 Les normes, pratiques recommandées et procédures applicables, ainsi que les éléments indicatifs connexes sont énumérés dans le paragraphe 1 de la partie III - AOP du Plan de navigation aérienne (ANP) de base Afrique et Océan Indien (AFI). Les éléments présentés ci-après complètent ceux qui figurent dans la partie I - BORPC de l'ANP AFI et devraient être pris en compte dans les procédures de planification générale concernant la région AFI.

1.2 La présente partie contient une description détaillée des installations et/ou services à fournir pour répondre aux besoins fondamentaux indiqués dans le Plan, comme convenu entre les fournisseurs et les Etats utilisateurs intéressés. Une telle entente indique que les Etats en question s'engagent à mettre en oeuvre les besoins spécifiés. Cette partie du FASID, en parallèle avec l'ANP AFI, fait l'objet d'un examen permanent du Groupe APIRG conformément à son programme de gestion et en consultation avec les Etats fournisseurs et les Etas utilisateurs ainsi qu'avec le concours des Bureaux régionaux accrédités dans la région AFI. (WACAF et ESAF)

2. INSTALLATIONS ET SERVICES D'AÉRODROMES (Tableau AOP 1 du FASID)[AFI/7, Rec. 2/2,3.1]

2.1. Le Tableau AOP 1 du FASID spécifie les besoins opérationnels à satisfaire en ce qui concerne les caractéristiques physiques, les aides radio et les aides visuelles pour chaque aérodrome indiqué dans l'ANP AFI. L'explication qui précède le tableau AOP 1 du FASID présente une description détaillée des renseignements figurant dans le Tableau.

2.2 Des renseignements ou des observations sur les besoins spécifiques ou sur des questions particulières concernant la fourniture d'un système et la date prévue de mise en oeuvre d'une installation/d'un service peuvent figurer sous la forme de remarque en italique dans le tableau.

Note.- Lorsqu'aucun renseignement ou besoin n'a été présenté ou fait l'objet d'une entente, les entrées correspondantes du Tableau AOP 1 du FASID sont omises.

3. RENSEIGNEMENTS SUR L'ETAT DE SURFACE DES PISTES

3.1 Les États devraient publier des renseignements sur les caractéristiques de frottement de surface des pistes tel que le traitement anti-dérapant effectué, etc. pour l'information des exploitants. Les caractéristiques de frottement de la piste déterminées au moyen d'un appareil de mesure continue du frottement devraient être maintenues à des niveaux acceptables, et les valeurs mesurées publiées. Les renseignements sur la publication des caractéristiques de frottement de piste comme indiquées dans l'Annexe 14, Volume I, Section 2,9 sont disponibles dans l'Annexe 15 et dans le Manuel des Services d'Aéroport (Doc. 9137) - Partie II.

4. PLANIFICATION D'URGENCE D'AÉRODROME

4.1 Chaque aérodrome établira un plan d'urgence d'aérodrome et la mettra à l'épreuve en effectuant des exercices d'application générale tous les deux ans et des exercices partiels d'urgence durant l'année intermédiaire. Les

éléments indicatifs concernant la planification d'urgence d'aérodrome sont contenues dans le Manuel des Services d'Aéroport (Doc. 9137) - Partie 7.

TABLE AOP 1
PHYSICAL CHARACTERISTICS, RADIO AND VISUAL AIDS AT AERODROMES

Explanation of the table

General

Table AOP 1 shows the operational requirements for physical characteristics, radio navigation aids, visual aids and runway visual range (RVR) at each aerodrome.

Columns 5 to 9 for physical characteristics relate to runways and taxiways. The physical characteristics of taxiways and aprons should be appropriate for the runways with which they are related.

Columns 4, and 10 to 13 show the requirements for air traffic services, radio and visual aids and reporting the RVR for the runway with which the entry is associated. These aids are generally indicated by "x" and the "x" indicates that the aid should be in accordance with the type of runway (Column 7). If the aid is different from the type of runway, then a "1", "2" or "3" is entered to indicate Category I, II or III respectively.

COLUMN

1 Name of the city and aerodrome, preceded by the location locator.

Designation of the aerodrome as:

RS - international scheduled air transport, regular use;
AS - international scheduled air transport, alternate use.

When an aerodrome is needed for more than one type of use, normally only the use highest on the above list is shown. An exception is that AS aerodromes are identified even when they are required for regular use by international non-scheduled air transport or international general aviation, as some specifications in Annex 14, Volume I, place special requirements on these aerodromes.

Example 1 - An aerodrome required for both RS and RG use would only be shown as RS in the list.

Example 2 - An aerodrome required for both RS and AS use would only be shown as RS in the list. However, the Table AOP 1 may still show specific requirements for AS use.

2 Alternate aerodromes for the regular aerodromes listed in Column 1, or if the aerodrome listed in Column 1 serves only as an alternate, the regular aerodromes for which it is an alternate. The aerodrome is shown by listing the name of the city, preceded by the location indicator.

3 Required Rescue and Fire Fighting Service (RFF):

The required level of protection expressed by means of an Aerodrome RFF Category Number, in accordance with Annex 14, Volume I, Chapter 9, Section 9.2.

4 Air traffic services

APP - Approach control service should be provided (shown by an "x") and when an "R" is shown, it indicates that the service should be provided with radar.

TWR - Aerodrome control tower should be provided (shown by an "x") and when an "R" is shown, it indicates that the service should be provided with an aerodrome surface movement radar.

ATIS - Automatic terminal information service should be provided and shown by an "x".

AFIS - Aerodrome flight information service should be provided and shown by an "x".

5 Runway designation numbers

6 Aerodrome reference code for aerodrome characteristics expressed in accordance with Annex 14, Volume I, Chapter 1.

7 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume I, Chapter 1, are:

NINST - non-instrument runway;
NPA - non-precision approach runway;
PA1 - precision approach runway, Category I;
PA2 - precision approach runway, Category II;
PA3 - precision approach runway, Category III.

8 Taxiway (TWY) to be provided to threshold of associated runway.

9 Required runway length expressed in terms of a balanced field length. In planning, account is taken of local conditions. If the requirement for alternate use is more critical, the aircraft type and runway length required are also indicated below the abbreviation "AS".

Critical aircraft for pavement strength and required pavement strength expressed as the all-up mass in thousands of kilograms. The operational mass of an aircraft, such as the A3XX, B747 and MD11, which may have a bearing on the design of culverts, cable ducts, bridge overpasses, etc. is also shown. If the aircraft requiring the aerodrome for alternate use is more critical, the aircraft type and runway strength required are also indicated below the abbreviation "AS".

Note 1.- A specific aircraft model based on the best available sources of information should be selected for planning runway length as this requirement is particularly affected by aircraft model differences. Aircraft models should thus be reviewed carefully to see that the correct one is used in determining the aerodrome characteristics. The Air Navigation Commission has directed that RAN meetings provide in the plan as realistic figures as possible on runway length and pavement strength requirements at individual aerodromes.

Note 2.- For international general aviation aerodromes, when there is no requirement for the runway to be paved, the pavement strength may be shown as "UNPAV".

Note 3.- Should a requirement for more than one runway be indicated for an aerodrome, the lengths of the secondary runways should be planned as appropriate. A specification concerning the lengths of such runways will be found in Annex 14, Volume I, Chapter 3, paragraph 3.1.7.

Note 4.- When the length or pavement strength is not a current requirement, the year in which it will be required is entered.

10 Radio navigation aids (approach and landing);

ILS - Instrument landing system, shown against the runway to be served and indicated by an "x" if the ILS is the same category as the runway type (Column 7) or, if it is different, by a numeral 1, 2 or 3 to indicate a Facility Performance Category I, II or III, respectively. The addition of a "D" indicates that a distance measuring equipment (DME) should be provided, e.g. as a substitute for marker beacon components of the required ILS. An "*" indicates that the ILS provides Category II signal quality, but without continuity of service provided by redundant equipment and automatic change-over.

VOR - Very high frequency omnidirectional radio range. An "x" indicates that the aid should be provided. The addition of a "D" indicates that a DME is associated with the required VOR facility.

NDB/L - Non-directional beacon, or locator. An "x" indicates that one of the aids should be provided.

GNSS - Global Navigation Satellite System, shown against the runway to be served and indicated by an “x” if the GNSS supports the same cateogory as the runway type or, it if is different, by an appropriate designator followed by the letter G or S to indicate ground-based augmentation system (GBAS) or satellite-based augmentation system (SBAS), as appropriate.

11 Lighting aids

PA - Precision approach lighting system, Category I, II or III shown by an "x" if the aid is the same category as the runway type (Column 7) or if it is different by the numeral 1, 2 or 3 against the runway to be served, to indicate the type of system required.

SA - Simple approach lighting system, shown by an "x" against the runway to be served.

VA - Visual approach slope indicator system, shown by an "L" or a "S" against the runway to be served. The letter "L" indicates that the system should be PAPI or T-VASIS (AT-VASIS) and the letter "S" indicates that the system should be PAPI (APAPI).

RWY - Runway edge, threshold and runway end lighting. An "x" indicates that these aids should be provided.

CLL - Runway centre line lighting, shown by an "x" against the runway to be served.

TDZ - Runway touchdown zone lighting, shown by an "x" against the runway to be served.

TE - Taxiway edge lighting. An "x" indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made when planning requirements for more than one runway are shown.

TC - Taxiway centre line lighting. An "x" indicates that this should be provided for the particular runway with which the entry is associated.

STB - Stop bars. An "x" indicates that stop bars should be provided for the runway with which the entry is associated.

B - Aerodrome or identification beacon. An "x" indicates that the aid should be provided. This requirement pertains to the entire aerodrome and only one entry is made.

12 Marking aids

DES - Runway designation marking, shown by an "x" against the runway to be served.

CLM - Runway centre line marking. An "x" indicates that the aid should be provided.

THR - Runway threshold marking, shown by an "x" against the runway to be served.

TDZ - Runway touchdown zone marking, shown by an "x" against the runway to be served.

SST - Runway side stripe marking. An "x" indicates that the aid should be provided.

AMG - Aiming point marking, shown by an "x" against the runway to be served.

TWY - Taxiway centre line and, where required, edge marking. An "x" indicates that the aid should be provided.

HLD - Taxiway holding position marking (renamed Runway holding position marking in Amendment No. 3 to Annex 14, Volume I), shown by an "x" against the runway to be served. The pattern of the marking should conform to the provisions of Annex 14, Volume I, Section 5.2.9.

13 Runway visual range (RVR)

TDZ - Observations should be provided representative of the touchdown zone.

MID - Observations should be provided representative of the middle of the runway.

END - Observations should be provided representative of the end portion of the runway.

TABLEAU AOP 1
CARACTÉRISTIQUES PHYSIQUES, AIDES RADIOS ET AIDES VISUELLES AUX AÉRODROMES

Explication du tableau

Généralités

Le Tableau AOP indique, pour chaque aérodrome, les besoins opérationnels à satisfaire en matière de caractéristiques physiques, d'aides de radionavigation, d'aides visuelles et de portée visuelle de piste (RVR).

Les colonnes 5 à 9, où figurent les caractéristiques physiques, concernent la piste et les voies de circulation. Les caractéristiques physiques des voies de circulation et des aires de stationnement doivent être à la mesure des pistes correspondantes.

Les colonnes 4 et 10 à 13 indiquent les besoins en matière de services de la circulation aérienne, d'aides radio et d'aides visuelles ainsi que de compte-rendus de RVR, pour la piste considérée. Ces aides sont généralement indiquées au moyen du symbole "x", signifiant que l'aide doit correspondre au type de la piste (colonne 7). Si l'aide ne correspond pas au type de la piste, le chiffre "1", "2" ou "3" désigne une aide de catégorie I, II ou III respectivement.

Colonne

1 Nom de ville et de l'aérodrome, précédée de l'indicateur d'emplacement.

Désignation de l'aérodrome :

RS - transport aérien international régulier, emploi régulier
AS - transport aérien international, dégagement

Dans le cas des aérodromes à vocation multiple, c'est normalement la catégorie la plus élevée de la liste ci-dessus qui est seule indiquée. Font exception les aérodromes AS, identifiés comme tels même s'ils sont régulièrement utilisés par le transport aérien international non régulier ou par l'aviation générale internationale, car certaines des spécifications de l'Annexe 14, Volume I, imposent des exigences particulières dans le cas de ces aérodromes.

Exemple 1 - Un aérodrome nécessaire pour des utilisations RS et RG serait indiqué seulement comme RS dans la liste.

Exemple 2 - Un aérodrome nécessaire pour des utilisations RS et AS serait indiqué seulement RS dans la liste. Le tableau des caractéristiques d'aérodromes pourra néanmoins montrer des besoins d'utilisation AS.

2 Aérodromes de dégagement pour les aérodromes réguliers inscrits à la colonne 1 ou, si l'aérodrome de la colonne 1 sert seulement de dégagement, aérodromes réguliers pour lesquels il joue ce rôle. L'aérodrome est indiqué par le nom de la ville, précédé de l'indicateur de l'emplacement.

3 Besoins en service de sauvetage et lutte contre l'incendie (RFF).

Le niveau de protection à assurer est exprimé par la catégorie d'aérodrome, conformément aux dispositions de l'Annexe 14, Volume I, Chapitre 9, Section 9.2.

4 Services de la circulation aérienne.

APP - Service de contrôle d'approche. Un "x" indique que ce service devrait être assuré. Un "R" indique que le service requis doit disposer d'un radar.

TWR - Tour de contrôle d'aérodrome. Un "x" indique que ce service devrait être assuré. Un "R" indique que le service requis doit disposer d'un radar de surveillance des mouvements en surface d'aérodrome.

ATIS - Service automatique d'information de région terminale d'aérodrome. Un "x" indique que ce service devrait être assuré.

AFIS - Service d'information de vol d'aérodrome. Un "x" indique que ce service devrait être assuré.

5 Numéro d'identification de piste.

6 Code de référence pour les caractéristiques d'aérodromes d'après les indications de l'Annexe 14, Volume I, Chapitre 1er.

7 Type de chacune des pistes à aménager. Les types de piste, définis à l'Annexe 14, Volume I, Chapitre 1er, sont les suivants :

NINST - Piste à vue ;
NPA - Piste avec approche classique (de non-précision) ;
PA1 - Piste avec approche de précision, catégorie I ;
PA2 - Piste avec approche de précision, catégorie II ;
PA3 - Piste avec approche de précision, catégorie III.

8 Voie de circulation (TWY) à aménager jusqu'au seuil de la piste associée.

9 Longueur de piste requise exprimée sous la forme de longueur de piste équivalente. La planification tient compte des conditions locales. Si le besoin pour l'utilisation comme aérodrome de dégagement est plus critique, le type d'aéronef et la longueur de piste requis sont également indiqués, en dessous de l'abréviation "AS".

Aéronef critique pour la résistance de la chaussée et résistance nécessaire, exprimée sous la forme de masse totale au décollage en milliers de kilogrammes. La masse en ordre d'exploitation d'avions tels que le B747 ou le DC 10, ce qui peut avoir une incidence sur la conception des ponceaux, des conduits de câbles et les passages supérieurs, etc., est également indiquée. Si le besoin pour l'utilisation comme aérodrome de dégagement est plus critique, le type d'aéronef et la résistance nécessaire sont également indiqués, en dessous de l'abréviation "AS".

Note 1. - Un modèle d'aéronef spécifique basé sur les meilleures sources de renseignements disponibles devrait être choisi aux fins de planification de la longueur des pistes, car les différences entre modèles d'aéronefs influent de façon déterminante sur ce besoin.

Note 2. - Pour les aérodromes d'aviation générale internationale, lorsqu'il n'est pas nécessaire d'avoir une piste avec revêtement, l'indication "UNPAV" peut être employée en ce qui concerne la résistance de la chaussée.

Note 3. - S'il est indiqué pour un aérodrome qu'il faut plus d'une piste, la longueur des pistes secondaires devraient être indiquée. Une spécification relative à la longueur de ces pistes figure à l'Annexe 14, Volume I, Chapitre 3, paragraphe 3.1.7.

Note 4. - Lorsque la longueur ou la résistance de la chaussée n'est pas un besoin actuel, indiquer l'année où cela sera un besoin.

10 Aides de radionavigation (Approche et atterrissage)

ILS - Système d'atterrissage aux instruments, indiqué en regard de la piste à desservir par la lettre "x" si l'ILS est de la même catégorie que la piste (colonne 7) ou, si elle est différente, par un chiffre 1,2 ou 3 signifiant qu'une installation de catégorie de performance I, II ou III respectivement. L'addition de la lettre "D" indique qu'un équipement de mesure de distance (DME) devrait être prévu, par exemple comme équipement de rechange pour les composantes radiobornes de l'ILS qui est nécessaire. Un astérisque "*" indique un ILS dont la qualité de signal requise est de la catégorie II, mais sans la fiabilité et la disponibilité qu'assurent un équipement redondant et le transfert automatique.

VOR - Radiophare omnidirectionnel très haute fréquence (VHF). La lettre "x" indique que cette aide doit être mise en place. La lettre "D" indique qu'un DME doit être associé au VOR.

NDB/L - Radiophare non directionnel, ou radiobalise LF/MF. La lettre "X" indique que cette aide doit être mise en place.

GNSS - Système mondial de navigation par satellite, indiqué en regard de la piste à desservir par la lettre "x" si le GNSS est de même catégorie que la piste ou, si elle est différente, par l'indication appropriée suivi de la lettre G ou S précisant s'il s'agit d'un système de renforcement à base de stations sol (GBAS) ou d'un système de renforcement satellitaire (SBAS), suivant le cas.

11 Aides lumineuses

PA - Dispositif lumineux d'approche de précision, catégorie I, II ou III, indiqué en regard de la piste à desservir par la lettre "x" si l'aide est de la même catégorie que la piste (colonne 7) ou, si elle est différente, par un chiffre 1, 2 ou 3 signifiant le type de système requis.

SA - Dispositif lumineux d'approche simplifiée, indiqué par la lettre"x" en regard de la piste à desservir.

VA - Indicateur visuel de pente d'approche, indiqué par la lettre"L" ou "S" en regard de la piste à desservir. La lettre "L" indique que le dispositif doit être un PAPI ou un T-VASIS (AT-VASIS) et la lettre "S" indique qu'il doit être un PAPI (APAPI).

RWY - Balisage lumineux de bord, de seuil ou d'extrémité de piste. La lettre "X" en regard de la piste à desservir indique que ces aides doivent être mises en place.

CLL - Balisage lumineux d'axe de piste, indiqué par la lettre "x" en regard de la piste à desservir.

TDZ - Balisage lumineux de zone de toucher de roues, indiqué par la lettre "x" en regard de la piste à desservir.

TE - Balisage lumineux de bord de voie de circulation. La lettre "x" indique que ce dispositif doit être fourni. Cette exigence s'applique à l'ensemble de l 'aérodrome, et elle n'est mentionnée qu'une seule fois lorsque la planification porte sur plusieurs pistes.

TC - Balisage lumineux axial de circulation. La lettre "x" indique que les feux sont à mettre en place pour la piste considérée.

STB - Barre d'arrêt. La lettre "x" indique que des barres d'arrêt sont à mettre en place pour la piste considérée.

B - Phare d'aérodrome ou d'identification. La lettre"x" indique que cette aide doit être fournie. Cette exigence s'applique à l'ensemble de l'aérodrome, et elle n'est mentionnée qu'une seule fois.

12 Marques

DES - Marques d'identification de piste indiquées par la lettre "X" en regard de la piste.

CLM - Marques d'axe de piste. La lettre "X" indique que ces marques sont à mettre en place.

THR - Marques de seuil de piste, indiquées par la lettre"s" en regard de la piste.

SST - Marques latérales de piste. La lettre"X" indique ces marques sont à mettre en place.

AMG - Marques de point cible, indiquées par la lettre "X" en regard de la piste.

TWY - Marques axiales de voie de circulation et, le cas échéant, marques de bord de voie de circulation. La lettre "X"indique que ces marques sont à mettre en place;

HLD - Marques de point d'attente de circulation, la lettre "X" étant inscrite en regard de la piste. La disposition des marques doit être conforme aux dispositions de l'Annexe 14, Volume I, Section 5.2.9.

13 Portée visuelle de piste (RVR)

TDZ - Observations représentatives des conditions à la zone de toucher des roues.

MID - Observations représentatives des conditions au point médian de la piste.

END - Observations représentatives des conditions à l'extrémité d'arrêt de la piste.

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11								12								13		
ALGERIA																																		
DAUA ADRAR/Touat RS	DAUG GHARDAIA DAAT TAMANRASSET	6		X			04 22	4C	NPA NINST	X	B727-200 3000 B727-200 90 B767 160		XD	X		X X	L L	X X		X		X	X	X	X		X	X	X				
DAAG ALGER/Houari Boumediene RS	DABB ANNABA DABC CONSTANTINE DAOO ORAN LEPA PALMA DE MALLORCA	9	X	X			05 23	4E	NPA PA2	X	IL62 3500 B747 350 A300 135	2	XD	X		X	L L	X X		X		X	X X	X	X X	X	X	X X	X	X			
							09 27	4E	PA1 NPA	X	B747 3500 B747 350 A300 135	2	XD X	X X		X	S	X X														
DABB ANNABA/El Mellah RS	DAAG ALGER DABC CONSTANTINE	7	X	X			01 19	4D	NPA PA1	X	B767 3000 B767 160 A300 135	2	XD	X X		X	L L	X X		X		X	X X	X	X X	X	X	X X	X	X			
							05 23	4D	NPA NINST		B727-200 2290 B727-200 90																					
DABC CONSTANTINE/Mohamed Boudiaf RS	DAAG ALGER DABB ANNABA	7	X	X			14 32	4D	NPA PA1	X	A300 2400 - A300 135 B727-200 90	2*	XD	X		X	L L	X X		X	X	X	X X	X	X X	X	X	X X	X	X			
							16 34	4E	NPA PA1		B747 3000 B747	2*	XD			X	S	X X		X		X	X X	X	X X	X	X	X X	X	X			
DAUG GHARDAIA/Noumérate RS	DAAG ALGER DAUH HASSI-MESSAOUD DAOO ORAN	6	X	X			12 30	4D	NPA PA1	X	B767 3100 B767 160 A300 135	1 1	XD	X		X	L	X X		X		X	X X	X	X X	X	X	X X	X	X			
							18 361		NINST	X	1400																					
DAUH HASSI-MESSAOUD/Oued Irara RS	DAUG GHARDAIA DAUZ ZARZAITINE	6	X	X			01 19	4D	PA1 NPA	X	B767 3000 B767 160 A300 135	1	XD	X		X	L L	X X		X		X	X X	X	X X	X	X	X X	X	X			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: TTC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11										12								13		
DAUI IN-SALAH/	DAUG GHARDAIA	5		X			05	4D	NPA	X	B727 3000		XD	X			L	X		X			X		X	X		X	X	X			X		
AS	DAAT TAMANRASSET						23		NPA		B727 90																								
	DAUA ADRAR										B767 160																								
DAOO ORAN/Es Sénia	DAAG ALGER	7	X	X			07	4E	NPA	X	B767 3060		XD	X			X	L	X			X X		X	X		X		X			X		
RS	LEAL ALICANTE						25		PA2		B767 350	2				X		L	X	X X			X		X	X	X	X	X	X	X	X	X	X	X
	LEPA PALMA DE MALLORCA										A300 135																								
DAAT TAMANRASSET/Aguennar	DAUA ADRAR	5		X			02	4D	NPA	X	B767 3600	2*	XD	X		X		L	X		X		X		X	X	X	X	X	X	X	X	X		
AS	DAUG GHARDAIA						20		NPA		B767 160						X	L	X						X		X X		X	X	X				
	DAUZ ZARZAITINE										A300 135																								
							08		PA1		B767 3100	2*		X		X		L	X				X		X	X	X	X	X	X	X	X			
							26		NPA		B767 160																								
											B727 90																								
DABS TEBESSA/Tébessa	DABB ANNABA	6		X			11	4C	NPA	X	B737 3000		XD	X			X	L	X		X		X		X	X	X	X	X	X	X	X	X		
RS	DABC CONSTANTINE						29		NPA		B727 90						X	L	X						X		X		X		X				
							12		NPA		B727 2400		XD	X				L	X																
							30		NINST		B727 90																								
DAON TLEMCEN/Zénata	DAAG ALGER	6		X			09	4D	NPA	X	B727 2600		XD	X			X	L	X		X		X		X	X	X	X	X	X	X	X	X		
RS	LEAL ALICANTE						27		NPA		B727 90						X	L	X		X				X		X		X		X				
	DAOO ORAN																																		
DAUZ ZARZAITINE/In Amenas	DAUH HASSI-	6		X			05	4C	NPA	X	B727 3000		XD	X			X	L	X		X		X		X	X	X	X	X	X	X	X	X		
RS	DAAT MESSAOUD TAMANRASSET						23		NPA		B727 90						X	L							X		X		X		X				
							15				B737 2200								X		X				X		X	X	X	X	X				
							33																												
ANGOLA																																			
FNHU HUAMBO/Albano Machado	FNLU LUANDA	7	X	X			11	4E	NPA	X	B707-300C 2600		XD				X	L	X		X		X		X	X	X	X	X	X	X	X			X
RS							29		NPA		B707-300C 112						X	L	X						X		X		X		X				X
											B747 247																								

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
FNLU LUANDA/4 de Fevereiro RS	FCBB BRAZZAVILLE FNHU HUAMBO FZAA KINSHASA FOOL LIBREVILLE FYWH WINDHOEK	9	X	X	X		05 23 07 25	4E	NPA PA1	X X	B707-300C 3550 B707-300C 153 B747B 322 2600	2*	XD	X		X X	L L	X X X X		X X		X		X X X X		X X X X		X X X X	X X X X			X X
BENIN																																		
DBBB COTONOU/Cadjehoun RS	DIAP ABIDJAN DGAA ACCRA FKKD DOUALA DNMM LAGOS DXXX LOME GLRB MONROVIA	9	X	X			06 24	4E	NPA PA1	X	B747 2400 B747 284 DC8-63 137	2*	XD	X		X X	L L	X X		X X	X X X		X	X X X X		X X X X		X X X X	X X X X			
BOTSWANA																																		
FBFT FRANCISTOWN/ Francistown RS	FBSK GABORONE FBMN MAUN FBSP SELEBI-PHIKWE	4	X	X			11 29	3C	NINST NINST		BE146 2200 BE146 25		XD	X		X X	L L	X X		X X		X		X X		X X		X	X X			
FBSK GABORONE/Sir Seretse Khama Intl RS	FAJS JOHANNESBURG	9	X	X			08 26	4E	PA1 NPA	X X	B747 3000 B747 296	1	XD			X X	L L	X X X		X X X X		X		X X		X X X X		X X X X	X X X X		X	X X
FBKE KASANE/Kasane RS	FLLI LIVINGSTONE FBMN MAUN FVFA VICTORIA FALLS	6	X	X			08 26	3C	NPA NINST	X	BE146 2000 BE146 41		XD			X	L L			X X		X		X X		X X X X	X X	X X X X	X			X
FBMN MAUN/Maun RS	FBFT FRANCISTOWN FBSK GABORONE FBKE KASANE	6	X	X			08 26	3C	NINST NINST		BE146 2000 BE146 41		XD	X			L L	X		X X		X		X X		X X X X	X X	X X X X	X			
FBSP SELEBI-PHIKWE/Selebi-Phikwe RS	FBFT FRANCISTOWN FBSK GABORONE	4		X			12 30	3C	NINST NINST		ATR42 1780 ATR42 18			X		X	L L			X X		X		X X		X X X X	X X	X X X X	X			
BURKINA FASO																																		
DFOO BOBO-DIOULASSO/Bobo-Dioulasso RS	DIAP ABIDJAN GABS BAMAKO DRRN NIAMEY DFFD OUAGADOUGOU	8	X	X			06 24	4D	PA1 NPA	X	DC8-63 3300 DC8-63 127	1	XD	X		X X	L L	X X		X X		X	X	X X		X X X X	X X X X	X X X X	X X X X	X		

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: STC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
DFFD OUAGADOUGOU/Ouagadougou RS	DIAP ABIDJAN DGAA ACCRA GABS BAMAKO DFOO BOBO-DIOULASSO DNMM LAGOS DRRN NIAMEY	9	X	X			04L 22R	4E	PA1 NPA	X	B747 3000 B747 266 DC8-63 139	2*	XD	X		X X	L L	X X		X		X		X X	X X	X X	X X	X X	X X	X X	X		
BURUNDI																																			
HBBA BUJUMBURA/Bujumbura RS	HUEN ENTEBBE FZNA GOMA HRYR KIGALI FZIC KISANGANI	7	X	X			18 36	4D	PA1 NPA	X X	B707-320C 3600 B707-320C 118	2*	XD			X X	L L	X X		X		X		X X	X X	X X	X X	X X	X X	X X	X	X	X X

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: TCC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
CAMEROON																																			
FKKD DOUALA/Douala	DGAA ACCRA	9	X	X	X		12	4E	NPA	X	DC8-63 2850		XD	X		X	L	X		X		X		X		X		X		X			
RS	FCBB BRAZZAVILLE						30		PA2		B747 3400	2			X		L	X	X	X		X	X		X	X	X	X	X	X	X	X		
	DNCA CALABAR										B707-320C 148																							
	DBBB COTONOU										B747 327																							
	FKKR GAROUA																																	
	DNKN KANO																																	
	DNMM LAGOS																																	
	FOOL LIBREVILLE																																	
	FGSL MALABO																																	
	FKYS YAOUNDE																																	
FKKR GAROUA/Garoua	FTTJ N'DJAMENA	8	X	X			09	4E	PA1	X	B737-200C 3400	2*	X	X		X	L	X		X		X	X	X	X	X	X	X	X	X	X	X		
RS	FKKN N'GAOUNDERE						27		NPA		B737-200C 44						L	X							X		X		X					
	FKYS YAOUNDE										AS																							
											B747 2500																							
											B747 247																							
FKKL MAROUA/Salak	FKKR GAROUA	6	X	X			13	4D	NPA	X	B737-200 2100			X		X	L	X		X		X		X	X	X	X	X	X	X	X		
RS	FTTJ N'DJAMENA						31		NINST		B737-200 42					X	L	X							X		X		X					
	FKKN N'GAOUNDERE																																	
FKKN N'GAOUNDERE/N'Gaound	FKKR GAROUA	6	X	X			03	4D	NPA	X	B737-200 2620		X	X		X	L	X		X		X		X	X	X	X	X	X	X	X		
ere	FKKL MAROUA						21		NINST		B737-200 44							X							X		X		X					
AS	FKYS YAOUNDE																																	
FKYS YAOUNDE/Nsimalen	DGAA ACCRA	9	X	X			01	4E	NINST	X	B747 3400		XD	X		X	L	X		X		X		X	X	X	X	X	X	X	X		
RS	FCBB BRAZZAVILLE						19		PA2		350	X			X		L	X	X	X		X	X	X	X	X	X	X	X	X	X	X		
	FKKD DOUALA																																	
	FKKR GAROUA																																	
	DNKN KANO																																	
	FZAA KINSHASA																																	
	DNMN LAGOS																																	
	FOOL LIBREVILLE																																	
CAPE VERDE																																		
GVFM PRAIA/Francisco Mendes	GVAC SAL I.	4	X	X			04	3C	NPA		HS748 1770			X		X	L	X					X	X	X	X		X		X			
RS							22		NINST		HS748 19						L	X							X		X				X	X		

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales						RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11									12								13		
GVAC SAL I./Amilcar Cabral	GOOY DAKAR	8	X	X			01	4E	PA1	X	B707-344C 3270	2*	XD	X		X		L	X		X	X	X	X	X	X	X	X	X	X	X	X	X		
RS	GCLP GRAN CANARIA						19		NPA		B707-344C 163						X	L	X						X		X	X	X		X				
											B747B 358																								
							07				1500																								
							25																												
CENTRAL AFRICAN REPUBLIC																																			
FEFF BANGUI/M'Poko	FCBB BRAZZAVILLE	8	X	X			17	4D	NPA	X	DC8-63 2600		XD	X			X	L	X		X		X		X		X		X		X			
RS	FKKD DOUALA						35		PA1		DC8-63 137	2*				X		L	X						X	X	X	X	X	X	X	X	X		
	FKKR GAROUA										DC10-30 210																								
	FOOL LIBREVILLE																																		
	FTTJ N'DJAMENA																																		
FEFT BERBERATI/Berberati							17	3C	NPA		DC4 1700		X	X			X	L							X	X	X			X	X				
RS							35		NINST		DC4 29														X		X								
CHAD																																			
FTTJ N'DJAMENA/N'Djamena	FEFF BANGUI	9	X	X			05	4E	PA1	X	DC10-30 2800	2*	XD	X		X		L	X		X		X		X	X	X	X	X	X	X	X	X		
RS	FKKD DOUALA						23		NPA		DC10-30 200						X	L							X		X	X		X	X	X			
	FKKR GAROUA										DC8-63 139																								
	DNKN KANO										B747 278																								
	DNMM LAGOS																																		
	FKKL MAROUA																																		
COMOROS																																			
FMCV ANJOUAN/Ouani	FMCZ DZAOUDZI			X			10	3B	NPA		DC4 1754			X				L							X	X	X		X	X	X			
RS							28		NPA		DC4 29							L							X		X			X					
FMCZ DZAOUDZI/Pamanzi,	FMNM MAHAJANGA	6		X			16	3C	NINST	X	B737 1850		XD	X			X	L	X		X				X	X	X		X	X	X		X		X
Mayotte I.	FMCH MORONI						34		NPA	X	B737 55						X	L	X						X		X			X					X
RS																																			
FMCH MORONI/Prince Said	FMMI ANTANANARIVO	7	X	X			02	4D	PA1	X	B707-300 2900	2*	XD	X		X		L	X		X		X		X	X	X	X	X	X	X	X		X	
Ibrahim	HTDA DAR-ES-SALAAM						20		NPA	X	B707-300 132						X	L	X						X		X			X	X	X		X	
RS	FMNM MAHAJANGA																																		
	FSIA MAHE																																		
	FMNN NOSY-BE																																		
	FMEE SAINT-DENIS																																		
CONGO																																			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: STC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: THWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
FCBB BRAZZAVILLE/Maya-Maya	FEFF BANGUI	9	X	X	X	X	06	4E	PA1	X	DC10-30 3300	2*	XD	X		X		L	X		X		X		X X	X X	X X	X X	X X	X X			X
RS	FKKD DOUALA						24		NPA		DC10-30 229						X	L	X						X		X			X X				
	FZAA KINSHASA										B747 322																							
	DNMM LAGOS										DC8-53 139																							
	FOOL LIBREVILLE																																	
	FNLU LUANDA																																	
FCPP POINTE NOIRE/Agostino Neto	FCBB BRAZZAVILLE	6	X	X			17	4C	NPA	X	B737-200 2050		XD	X		X	L	L	X		X		X		X X	X	X X	X X	X X	X X				
RS	FOOL LIBREVILLE						35		NPA		B737-200 52					X	L	L	X						X		X			X X				
	FOOG PORT GENTIL																																	
COTE D'IVOIRE																																		
DIAP ABIDJAN/Felix Houphouet Boigny Intl	DGAA ACCRA	9	X	X	X		03	4E	NPA	X	B747 2700		XD	X			X	L	X		X		X		X	X		X		X				
RS	DFOO BOBO-						21		PA2		B747 300	2				X		L	X	X	X		X	X		X X		X X	X X	X X	X X	X			
	DBBB DIOULASSO										B707-320C 153																							
	DGSI COTONOU																																	
	DNMM KUMASI																																	
	DXXX LAGOS																																	
	GLRB LOME																																	
	DRRN MONROVIA																																	
	DFFD NIAMEY																																	
	OUAGADOUGOU																																	
DIBK BOUAKE/Bouake	DIAP ABIDJAN	5	X	X			03	4C	NPA	X	FK28-400 3300		XD	X			X	X	X		X		X		X	X X	X	X		X				
RS							21		PA1		FK28-400 32	1				X		X							X	X X	X X	X X	X X	X X	X X	X			
DEMOCRATIC REPUBLIC OF THE CONGO																																		
FZNA GOMA/Goma	HBBA BUJUMBURA	6	X	X			18	4C	NINST		B737-200 3000		XD	X			X	L	X						X		X			X				
RS	HRYR KIGALI						36		NPA		B737-200 122						X	L	X					X	X X	X		X X	X X	X X				
FZAA KINSHASA/N'Djili	FEFF BANGUI	9	X	X			06	4E	NPA	X	B747-29 4700		XD	X			X	L	X		X		X		X		X			X				
RS	FCBB BRAZZAVILLE						24		PA1		B747-29 327	2*		X		X		L	X						X	X X	X X	X X	X X	X X	X X	X			
	FKKD DOUALA										DC8-62 145																							
	DNMM LAGOS																																	
	FOOL LIBREVILLE																																	
	FNLU LUANDA																																	
	FCPP POINTE NOIRE																																	
FZIC KISANGANI/Bangoka	HBBA BUJUMBURA	6	X	X			13	4D	NPA		B707-320C 3500		XD	X			X	L	X		X		X		X X	X	X	X X	X X	X X				
AS	HUEN ENTEBBE						31		NPA		B707-320C 122						X	L	X						X		X			X				
	HRYR KIGALI																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales						RVR		
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
FZQA	LUBUMBASHI/Luano	FLLS	LUSAKA	8	X	X			07	4D	PA1		DC8-63F 3100	2*	XD	X		X		L	X				X		X	X	X	X	X	X	X	X			
	AS								25		NPA		DC8-63F 140						X	L	X					X		X			X					
FZWA	MBUJI MAYI/Mbuji Mahi	FCBB	BRAZZAVILLE	6	X	X			17	4C	NPA	X	B737-200 2000		X				X	L	X		X		X	X	X	X		X	X	X				
	AS	FZQA	LUBUMBASHI						35		NINT		B737-200 44			X			X	L	X					X		X			X					
DJIBOUTI																																				
HDAM	DJIBOUTI/Ambouli	HAAB	ADDIS ABABA	8	X	X			09	4E	NPA	X	B707-320C 3140		XD	X			X	L	X		X		X	X	X	X		X	X	X				X
	RS	OYAA	ADEN						27		PA1	X	B707-320C 164	2*				X			X		X			X	X	X	X	X	X	X		X		X
		HHAS	ASMARA										B747 320																							
		OEJN	JEDDAH																																	
		HKJK	NAIROBI																																	
		OYSN	SANA'A																																	
EGYPT																																				
HEBL	ABU-SIMBEL/Abu-Simbel	HESN	ASWAN	4		X			15L	4C	NPA	X	B737-200 3000		XD			X		L	X		X		X	X	X	X		X	X	X				
	RS								33R		NPA	X	B737-200 52					X		L	X					X	X	X		X	X	X				
									15R		NPA	X	3000		X			X			X		X		X	X	X	X		X	X	X				
									33L		NPA	X	32					X			X		X			X	X	X		X	X	X				
HEAX	ALEXANDRIA/Alexandria	LTAC	ANKARA	6	X	X		X	04	4C	NPA	X	B737-200 2200		X	X			X	L	X		X	X	X	X	X	X		X	X	X	X			
	RS	LGAT	ATHINAI						22		NPA		B737-200 50						X	L	X		X	X		X	X	X		X						
		OLBA	BEIRUT																																	
		HECA	CAIRO						18		NPA		1800		X				X	L	X		X		X	X	X	X		X	X	X				
		LCLK	LARNACA						36		NPA		33								X			X		X	X	X		X	X	X				
		HELX	LUXOR																																	
HESN	ASWAN/Aswan	HELX	LUXOR	6	X	X		X	17	4E	NPA	X	B737-200 3400		X				X	L	X		X		X	X	X	X		X	X	X		X		
	RS								35		PA1		B737-200 52	2*				X		L		X				X	X	X	X	X	X	X				
HECA	CAIRO/Cairo Intl	LTAC	ANKARA	9	X	X	X	X	05L	4E	PA2	X	B707-400 3300	2	XD	X		X		L	X	X	X	X	X	X	X	X	X	X	X	X	X				
	RS	LGAT	ATHINAI						23R		PA2		B707-300C 153	2				X		L	X	X	X	X	X	X		X	X	X	X	X	X	X			
		OLBA	BEIRUT										B747 320																							
		HELX	LUXOR																																	
		LCNC	NICOSIA						05R	4E	PA2	X	B707-400 4000	2	XD	X		X		L	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
		LGRP	RODOS						23L		PA2		B747 320	2		X		X		L	X	X	X	X	X			X	X	X		X	X		X	
									16	4D	NPA	X	B707-400 3133			X				L	X					X	X	X		X	X	X				
									34		NPA		B707-300C 153					X		L	X					X	X	X		X	X					
HEGN	HURGHADA/Hurghada	HELX	LUXOR	9	X	X		X	16	4E	NPA	X	B767 4000		X	X			X	L	X		X		X	X		X		X	X				
	RS	HESH	SHARM EL SHEIK						34		PA1		A300 150	2*				X		L	X		X		X	X	X	X	X	X	X	X				

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11								12								13		
HELX LUXOR/Luxor	HESN ASWAN	9	X	X		X	02	4C	NPA	X	B727-200 3000		XD	X			X	L	X		X		X	X	X	X		X	X		X		
RS	HECA CAIRO						20		PA1		B727-200 87	1				X		L	X		X			X	X	X	X	X	X		X	X		
	HEGN HURGHADA										AS																							
	HSSS KHARTOUM										B707-300C 150							L																
HEMM MERSA-MATRUH/Mersa-Matruh	HEAX ALEXANDRIA	5					15	4D	NPA		B737-200 3000							L	X				X	X	X		X		X	X			
RS							33		NPA		B737-200 52							L	X					X	X	X			X	X			
HESH SHARM EL SHEIKH/Sharm El Sheikh	HEGN HURGHADA	9	X	X		X	04L	3C	PA1	X	B767 3080	2*	XD	X		X		L	X		X		X	X	X	X	X	X	X	X	X		
	HELX LUXOR						22R		NINST		A300 150						X	L	X		X			X		X	X						
RS																																		
							04R			X	2100								X		X			X	X	X							
							22L												X		X			X	X	X							
HESC ST. CATHERINE/St. Catherine		4		X			17	3C	NPA		F27 2115			X			X	L	X				X	X	X		X	X	X			
RS							35		NINST		F27 20													X		X							
HETB TABA/Taba	HESH SHARM EL	8	X	X			04		NINST	X	B747 3000			X			X	L	X		X		X	X	X	X			X			
RS	SHEIKH						22		NPA		52						X	L	X		X			X	X	X		X	X	X			
							14				3000																						
							32																										
EQUATORIAL GUINEA																																		
FGSL MALABO/Malabo	FKKD DOUALA	7	X	X			05	4D	PA1	X	DC8-62 2940	1	X	X		X		L	X		X		X	X	X	X	X	X	X	X	X		
RS	FOOL LIBREVILLE						23		NPA		DC8-62 135						X	L						X		X			X	X	X		
ERITREA																																		
HHAS ASMARA/Asmara Intl	HAAB ADDIS ABABA	7	X	X			07	4D	PA1	X	B720 3000	2*	XD	X		X		L	X		X		X	X	X	X	X	X	X	X	X	X		X
RS	HHSB ASSAB						25		NPA	X	B720 96						X	L	X					X		X			X	X	X			X
	HDAM DJIBOUTI																																	
	OEJN JEDDAH						12				1954																							
	HSSS KHARTOUM						30																											
HHSB ASSAB/Assab	OYAA ADEN	8					12	4E	NPA		B767 3500			X				L	X		X		X	X	X	X	X	X	X	X		X		
RS	HHAS ASMARA						30		NINST		150							L	X					X		X			X					
	HDAM DJIBOUTI																																	
	OYSN SANA'A																																	
ETHIOPIA																																		

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación							Marking aids Marques Señales						RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
HAAB ADDIS ABABA/Bole Intl	OYAA ADEN	8	X	X			07	4D	NPA	X	B707-330 3700		XD	X			X	L	X		X		X	X		X			X	X			X
RS	HHAS ASMARA						25		PA1	X	B707-330 150	2*				X		L	X					X	X	X	X	X	X	X	X		X	X
	HDAM DJIBOUTI										A300 150																							
	HSSS KHARTOUM										DC10 230																							
	HKJK NAIROBI																																	
HADR DIRE DAWA/Dire Dawa Intl	HAAB ADDIS ABABA	6	X	X			15	4D	NINST		B720 2800		XD	X			X	L	X		X		X	X		X			X				
RS	HDAM DJIBOUTI						33		NPA	X	B720 96						X	L	X					X	X	X	X	X						X
FRANCE (ILE DE LA REUNION)																																		
FMME SAINT-DENIS/Gilot La	FMMI ANTANANARIVO	9	X	X			12	4E	NINST	X	B747 3200		XD	X			X	L	X		X		X	X		X			X	X	X		X
Reunion	FIMP MAURITIUS						30		NPA	X	B747 310						X	L	X					X	X	X	X	X						X
RS	FMMT TOAMASINA																																	
							14	4E	PA1	x	B747 2670	2*	XD	X		X		L	X					X	X	X	X	X	X	X	X			
							32		NINST		B747 310							L	X					X	X	X		X		X				
GABON																																		
FOON FRANCEVILLE/M'Vengue	FCBB BRAZZAVILLE	9	X	X			15	4E	PA1	X	B747 3080	2*	X	X		X		L	X		X		X	X	X	X	X	X	X	X	X	X		
RS	FZAA KINSHASA						33		NPA		B747 310							L	X					X		X			X	X	X			
	FOOL LIBREVILLE										DC8-63 135																							
	FCPP POINTE NOIRE																																	
	FOOG PORT GENTIL																																	
FOOL LIBREVILLE/Leon M'Ba	FEFF BANGUI	9	X	X	X		16	4E	PA1	X	B747 3000	2*	XD	X		X		L	X		X		X	X	X	X	X	X	X	X	X	X		
RS	FCBB BRAZZAVILLE						34		NPA		B747 310						X	L						X		X			X					
	FKKD DOUALA										DC8-63 135																							
	FOON FRANCEVILLE																																	
	FZAA KINSHASA																																	
	DNMM LAGOS																																	
	FOOG PORT GENTIL																																	
	FKYS YAOUNDE																																	
FOOG PORT GENTIL/Port Gentil	FKKD DOUALA	6	X	X			03	4C	NPA	X	B737-200 1900		X	X			X	L	X		X		X	X		X			X	X			
RS	FOON FRANCEVILLE						21		PA1		B737-200 44	1				X		L						X	X	X	X	X	X	X	X			
	FOOL LIBREVILLE																																	
	FCPP POINTE NOIRE																																	
GAMBIA																																		
GBYD BANJUL/Banjul Intl	GUCY CONAKRY	9	X	X			14	4D	NPA		B747 3600		XD	X			X	L	X		X		X	X		X			X		X			
RS	GOOY DAKAR						32		PA1	X	B747 310	1				X		L	X					X	X	X	X	X	X	X	X	X		
	GFLL FREETOWN										A340																							

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11								12								13		
GHANA																																		
DGAA ACCRA/Kotoka Intl	DIAP ABIDJAN	9	X	X	X	X	03	4D	NPA		B747 2987		XD	X		X	L	X X		X		X		X		X		X	X			
RS	DBBB COTONOU						21		PA1	X	DC10-30 231	2*				X	L	X X X			X			X X	X X	X X	X X	X X	X X	X			X
	DGSI KUMASI																																	
	DNMM LAGOS																																	
	DXXX LOME																																	
	GLRB MONROVIA																																	
	DRRN NIAMEY																																	
	DFFD OUAGADOUGOU																																	
DGSI KUMASI/Kumasi	DIAP ABIDJAN	5	X	X			02	4C	NPA	X	FK28 1980		X	X		X	L	X		X		X		X X	X	X X	X X	X X	X X			
RS	DGAA ACCRA						20		NPA		FK28 32					X	L	X						X		X			X				
DGLE TAMALE/Tamale	DGAA ACCRA	6	X	X			05	4C	NPA	X	FK100 2348		X	X		X	L	X					X	X X	X X	X X	X X	X X	X X			
RS	DGSI KUMASI						23		NPA							X	L							X		X			X X				
GUINEA																																		
GUCY CONAKRY/Gbessia	DIAP ABIDJAN	8	X	X	X	X	06	4E	PA1	X	DC8-63 3300	2*	XD	X		X	L	X		X		X		X X	X X	X X	X X	X X	X X	X			X
RS	GABS BAMAKO						24		NPA		DC8-63 153					X	L							X		X X			X				
	GBYD BANJUL										DC10 232																							
	GOOY DAKAR										B747 250																							
	GFLL FREETOWN																																	
	GLRB MONROVIA																																	
GUXN KANKAN/Diankana	GABS BAMAKO	6	X	X		X	10	4D	NPA		B737 2500		X	X		X	L	X		X		X		X X	X	X	X X	X X	X X			
RS							28		NINST		B737 51					X	L	X						X		X			X				
GULB LABE/Tata	GBYD BANJUL	6	X	X		X	06	4C	NINST		B737-200 2600		X	X		X	L	X		X		X		X X	X	X	X X	X X	X X			
RS							24		NINST		B737-200 48					X	L	X						X		X			X				
GUNZ N'ZEREKORE/Konia	GLRB MONROVIA	4	X	X		X	18	1C	NPA		DH7 2000		X	X		X	S	X		X		X		X X	X	X	X X	X X	X X			
RS							36		NINST		DH7 60					X								X		X			X				
GUINEA-BISSAU																																		
GGOV BISSAU/Osvaldo Vieira Intl	GBYD BANJUL	8	X	X			03	4D	NPA		B707-382B 3200		XD	X		X	L	X		X		X		X		X		X		X			
RS	GUOK BOKE						21		PA1	X	148	1				X	L	X						X X	X X	X X	X X	X X	X X	X			X
	GUCY CONAKRY										A310 77							X																
	GOGG ZIGUINCHOR																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PA	Lighting aids: SA	Lighting aids: VA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TE	Lighting aids: TC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
KENYA																																			
HKEL ELDORET/Eldoret Intl	HUEN ENTEBBE	8	X	X			08	4D	PA2	X	A300 3500	2	XD	X		X		S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
RS	HKJK NAIROBI						26		NPA		B767 172						X	S	X			X		X	X	X		X		X	X	X			
HKMO MOMBASA/Moi Intl	HTDA DAR-ES-SALAAM	9	X	X			03	4E	NPA	X	B707-300 3350		XD	X			X	L	X			X		X	X		X		X	X				X
RS	HTKJ KILIMANJARO		(R)				21		PA1		B707-300 153	1				X			X						X	X	X	X	X	X		X	X		X
	FSIS MAHE										B747 320																								
	HKJK NAIROBI																																		
							15				1260																								
							33																												
HKJK NAIROBI/Jomo Kenyatta Intl	HAAB ADDIS ABABA	9	X	X	X		06	4E	PA2	X	B707-384C 4117	2	XD	X		X		L	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
RS	HTDA DAR-ES-SALAAM						24		NPA	X	B707-384C 153			X			X	L	X						X	X	X		X	X				X
	HUEN ENTEBBE										B747 350																								
	HTKJ KILIMANJARO																																		
	HCMM MOGADISHU																																		
	HKMO MOMBASA																																		
LESOTHO																																			
FXMM MASERU/Moshoeshoe I. Intl	FABL BLOEMFONTEIN	7	X	X			04	4D	NINST		B727 3200		XD	X			X	L	X			X		X	X		X		X	X				
RS							22		PA1	X	B727 90	1				X		L	X						X	X	X	X	X	X		X		X
							11				1010																								
							29																												
LIBERIA																																			
GLRB MONROVIA/Roberts Intl	DIAP ABIDJAN	8	X	X			04	4D	PA2	X	B707-321C 3350	2	XD	X		X		L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
RS	DGAA ACCRA						22		NPA		DC10-30 190						X	L	X						X		X			X				
	GABS BAMAKO										DC8-63 154																								
	GBYD BANJUL																																		
	GUCY CONAKRY																																		
	GOOY DAKAR																																		
	GFLL FREETOWN																																		
	GVAC SAL I.																																		

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
LIBYAN ARAB JAMAHIRIYA																																		
HLLB BENGHAZI/Benina	LGAT ATHINAI	8	X	X			15L	4C	PA1	X	B707-320 3600	2*	XD	X		X		L	X		X	X	X	X	X	X	X	X	X	X	X	X	X	
RS	LICC CATANIA						33R		NPA		B707-320 125						X	L	X					X		X			X	X	X			
	LMML MALTA																				X	X												
	LICJ PALERMO						15R	4C	NPA	X	B707-320 3600						X	L	X				X	X		X			X	X			
	HLLT TRIPOLI						33L		PA1		B707-320 125	2*				X		L	X					X	X	X	X	X		X	X		
HLLS SEBHA/Sebha	DRZA AGADES	7	X	X			13	4C	PA1	X	B727 3600	1	XD	X		X		L	X		X	X	X	X	X	X	X	X	X	X	X	X	
RS	HLLT TRIPOLI						31		NPA		B727 85						X	L	X					X		X			X	X	X		
							06				1360																						
							24																										
HLLT TRIPOLI/Tripoli Intl	HLLB BENGHAZI	8	X	X			09	4E	PA1	X	DC10-30 3736	1	XD	X		X		L	X		X		X	X	X	X		X	X	X	X	X	
RS	DTTJ DJERBA						27		PA2		A300 150	2				X		L	X	X	X	X	X	X	X	X	X	X	X	X	X		
	LMML MALTA										DC10-30 190																						
	DTMB MONASTIR																																
	LICJ PALERMO						18				2235																						
	LIRF ROMA						36																										
	HLLS SEBHA																																
	DTTA TUNIS																																
MADAGASCAR																																		
FMMI ANTANANARIVO/Ivato	HTDA DAR-ES-SALAAM	9	X	X	X		11	4E	PA1	X	B747 3100	2*	XD	X		X		L	X		X		X	X	X	X	X	X	X	X	X	X	X	X
RS	FMNM MAHAJANGA						29		NPA	X	B747 351						X	L	X					X		X			X		X			X
	FQMA MAPUTO										B707-320C 121																							
	FIMP MAURITIUS																																	
	FMEE SAINT-DENIS																																	
FMNA ANTSIRANANA/Arrachart	FMNM MAHAJANGA	6		X			13	3C	NPA	X	B737 1500		XD	X			X	L	X		X			X	X	X	X	X	X	X	X			X
RS	FMNN NOSY-BE						31		NINST	X	50														X	X	X			X	X			
	FMMT TOAMASINA																																	
FMNM MAHAJANGA/Amborovy	FMMI ANTANANARIVO	7	X	X			14	4C	NPA	X	B707 2200		XD	X			X	L	X		X		X	X	X	X		X	X	X	X			X
RS	FMNA ANTSIRANANA						32		NINST	X	B707 147						X	L	X					X		X			X		X			X
	FSIA MAHE																																	
	FIMP MAURITIUS																																	
	FMCH MORONI																																	
	FMNN NOSY-BE																																	
FMNN NOSY-BE/Fascene	FMNA ANTSIRANANA	6		X			05	4C	NPA	X	B737-200 2190		XD	X			X	L	X		X			X		X			X	X	X			X
RS	FMNM MAHAJANGA						23		PA1	X	B737-200 46	1				X		L	X					X	X	X	X	X	X	X	X	X		X

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales					RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
FMMS	SAINTE-MARIE/Sainte-Marie	FMMI	ANTANANARIVO	5		X		X	01	3C	NPA	X	HS748 1200		X										X		X							
	RS	FMMT	TOAMASINA						19		NPA	X	HS748 22												X		X							
FMMT	TOAMASINA/Toamasina	FMMI	ANTANANARIVO	6	X	X			01	4C	NPA	X	B737-200 2200		X		X	X		L	X		X				X		X			X	X			X
	RS								19		PA1	X	B737-200 46	1		X				L	X						X	X	X	X	X	X		X	X	X
FMSD	TOLAGNARO/Tolagnaro	FMMI	ANTANANARIVO	6				X	07	4C	NPA	X	B737 1800		XD		X	L		L	X		X				X		X	X						
	RS	FMMT	TOAMASINA						25		NPA	X	50				X	L		L	X		X				X		X	X						
MALAWI																																				
FWCL	BLANTYRE/Chileka	FQBR	BEIRA	8	X	X			10	4D	PA1	X	B727 2325	1	XD	X		X	L	L	X		X			X	X	X	X	X	X		X			X
	RS	FVHA	HARARE						28		NPA	X	115					X	L	L	X						X		X		X						X
		FLLS	LUSAKA																																	
FWLI	LILONGWE/Lilongwe Intl	HTDA	DAR-ES-SALAAM	9	X	X			14	4E	PA1	X	B747 3540	1	XD	X		X	L	L	X		X				X	X	X	X	X	X		X		X	X
	RS	FVHA	HARARE						32		NPA	X	B747 320					X	L	L	X						X		X		X						X
		FAJS	JOHANNESBURG										B707-300 150																								
		FLLS	LUSAKA																																	
		HKJK	NAIROBI																																	
MALI																																				
GABS	BAMAKO/Senou	DIAP	ABIDJAN	9	X	X			06	4E	PA1	X	B747 3200	2*	XD	X		X	L	L	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	RS	DFOO	BOBO-DIOULASSO						24		NPA		B747 295					X	L	L	X						X		X		X						
		GUCY	CONAKRY										DC8-63 126																								
		GOOY	DAKAR																																	
		GFLL	FREETOWN																																	
		GUXD	KANKAN																																	
		GLRB	MONROVIA																																	
		GAMB	MOPTI-BARBE																																	
		DFFD	OUAGADOUGOU																																	
GAGO	GAO/Gao	GAMB	MOPTI-BARBE	7	X	X			07	4C	NPA	X	B727-200 2500			X		X	L	L	X		X		X	X	X	X	X	X	X	X	X			
	RS	DRRN	NIAMEY						25		NINST		B727-200 65					X	L	L	X						X						X			
		GATB	TOMBOUCTOU																																	
GAKY	KAYES/Kayes	GABS	BAMAKO	7		X			08	4C	NPA	X	B727-200 2500			X		X	S	L	X		X		X	X	X	X	X	X	X	X	X			
	RS	GANR	NIORO						26		NINST		65								X						X			X			X			
		GOTT	TAMBACOUNDA																																	
GAKL	KIDAL/Kidal	GAGP	GAO	4		X			10	4C	NPA	X	AN24 1500			X		X	L	L	X		X		X		X	X	X	X	X	X	X			
	RS	GATB	TOMBOUCTOU						28		NINST		AN24 21								X						X		X				X			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales					RVR		
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
GAMB MOPTI-BARBE/Mopti-Barbe RS	GABS BAMAKO GAGO GAO DFFD OUAGADOUGOU GATB TOMBOUCTOU	6		X			05 23	4C	NPA NINST	X	B727-200 2500 B727-200 65		X	X		X	S	X X		X	X	X		X X	X X	X	X	X	X	X X				
GANR NIORO/Nioro RS	GABS BAMAKO GAKY KAYES GQNI NEMA	4		X			08 26	4C	NPA NINST	X	AN24 1500 AN24 21		X	X		X	L L	X X		X	X	X		X X	X X	X			X	X X				
GATB TOMBOUCTOU/Tombouctou RS	GAGO GAO GAMB MOPTI-BARBE	7		X			07 25	4C	PA1 NPA	X	B727-200 2500 B727-200 65	1	XD	X		X X	L L	X X		X X	X X	X		X X	X X	X	X	X	X	X X	X	X		
MAURITANIA																																		
GQPA ATAR/Atar RS	GQPP NOUADHIBOU GQNN NOUAKCHOTT GQPZ ZOUERATE	6		X		X	04 22	4C	NPA NINST	X	DC9 3000 DC9 50			X		X	L	X X		X	X	X		X X	X X	X	X	X	X	X X				
GQNI NEMA/Nema RS	GABS BAMAKO GANR NIORO	6		X		X	10 28	4D	NINST NPA	X	B737-200 2100 B737-200 48		X	X		X	L	X X		X		X		X X	X X	X	X	X	X	X X				
GQPP NOUADHIBOU/Nouadhibou RS	GQPA ATAR GABS BAMAKO GMMN CASABLANCA GUCY CONAKRY GOOY DAKAR GCLP GRAN CANARIA GQNN NOUAKCHOTT GQPZ ZOUERATE	8	X	X			03 21	4D	PA1 NPA	X	DC10-30 2425 DC10-30 210 DC8-63 135	1	XD	X		X X	L L	X X	X X	X X		X		X X	X X	X	X	X	X	X X	X	X	X	X
GQNN NOUAKCHOTT/Nouakchott RS	GABS BAMAKO GBYD BANJUL GUCY CONAKRY GOOY DAKAR GCLP GRAN CANARIA GQPP NOUADHIBOU	8	X	X			05 23	4D	PA1 NPA	X	DC10-30 3000 DC10-30 213	2*	XD	X		X X	L L	X X	X X	X X		X		X X	X X	X	X	X	X	X X	X	X	X	X
GQPZ ZOUERATE/Zouerate RS	GQPA ATAR GQPP NOUADHIBOU	6		X			28 10	4C	NPA NPA	X	B737-200 2400 B737-200 50		X	X		X	L L	X		X		X		X X	X X	X		X	X	X X				

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: STC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
MAURITIUS																																			
FIMP	MAURITIUS/Sir Seewoosagur Ramgoolam Intl RS	FMMI ANTANANARIVO HTDA DAR-ES-SALAAM FMNM MAHAJANGA FSIE MAHE FMEE SAINT-DENIS	9	X	X			14 32	4E	PA1 NPA	X X	B747 3300 B747 350	2*	XD	X		X	L L	X X		X			X X	X X	X X	X X	X X	X X	X X	X		X X
MOROCCO																																			
GMAD	AGADIR/Al Massira RS	GMNN CASABLANCA GCLP GRAN CANARIA GMMX MARRAKECH GMME RABAT	8	X	X			10 28	4E	NPA PA1	X	B720 3200 B720 104 A300 135	2*	XD	X		X	L L	X X		X		X	X X	X X	X	X X	X X	X			
GMTA	AL HOCEIMA/Cherif Al Idrissi RS	GMFF FES GMFO OUJDA GMTT TANGER	6	X	X			18 36	4C	PA1 NINST	X	B737-200 2160 B737-200 48	2*	XD	X		X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X		X
GMMN	CASABLANCA/Mohammed V RS	GMAD AGADIR LPFR FARO GCLP GRAN CANARIA LPPT LISBOA LEMG MALAGA GMMX MARRAKECH GMME RABAT GMTT TANGER	9	X	X			17 35	4E	NPA PA2	X	B707-330B 3720 B707-330B 153 B747 320	2	XD	X		X	L L	X X	X	X	X X X	X	X X	X X	X X	X X	X X	X X	X		X
GMFK	ERRACHIDIA/Moulay Ali Cherif AS	GMFF FES GMMZ OUARZAZATE GMFO OUJDA	9		X			13 31	4E	NPA PA1	X	B747 3200 B747 320	2*	XD	X X		X	L L	X		X		X	X X	X X	X X	X X	X X	X X			
GMFF	FES/Saïss RS	GMMN CASABLANCA GMFO OUJDA GMME RABAT	8	X	X	X		10 28	4C	NPA PA1	X	B727-200 3200 B707-300 140 A300 135	2*	XD	X		X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X		X
GMMX	MARRAKECH/Ménara RS	GMAD AGADIR GMMN CASABLANCA GMME RABAT	7	X	X	X		10 28	4C	PA1 NPA	X	B727-200 3100 B727-200 78	2*	XD	X		X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X		X
GMMZ	OUARZAZATE/Ouarzazate RS	GMAD AGADIR GMMN CASABLANCA GMFK ERRACHIDIA GMMX MARRAKECH	6		X			12 30	4C	NPA PA1	X	A300 3000 135	2*	XD	X		X	L L			X X			X X	X X	X X	X X	X X	X X	X		X

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación							Marking aids Marques Señales						RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
GMFO	OUJDA/Angads																																		
	RS	DAAG ALGER	X	X	X		06	4C	PA1	X	B727-200 3000	2*	XD	X		X		L	X		X			X X	X X		X		X X	X		X		
		GMMN CASABLANCA					24		NINST		B727-200 78						X	L	X		X		X		X	X X			X X		X			
		GMFF FES																																	
		LEMG MALAGA																																	
		DAOO ORAN																																	
GMME	RABAT/Salé																																		
	RS	GMAD AGADIR	X	X			04	4E	PA1	X	IL62 3500	2*	XD	X		X		L	X		X		X	X X	X X		X	X X	X	X	X	X			
		GMMN CASABLANCA					22		NPA		IL62 162						X	L	X		X			X	X			X		X X					
		LPFR FARO									A300 135																								
		LEMD MADRID																																	
		LEMG MALAGA																																	
		GMMX MARRAKECH																																	
		GMTT TANGER																																	
GMTT	TANGER/Ibnou-Batouta	GMMN CASABLANCA	X	X	X		10	4C	NPA	X	B727-200 3500		XD	X			X	L	X		X		X	X		X		X X	X					
	RS	LEMD MADRID					28		PA1		DC8 153	2*				X		L	X		X			X	X X	X	X X		X	X		X		
		LEMG MALAGA									A300																								
		GMFO OUJDA																																	
		GMME RABAT																																	
		LEZL SEVILLA																																	
GMAT	TAN-TAN/Plage Blanche	GSAI EL AAIUN			X		14	3C	NPA	X	FK27 1200			X			X	L	X		X		X	X X	X X		X	X X	X					
	RS						22		NINST		FK27 19							L						X	X			X		X X					
GMTN	TETOUAN/Saniat-Rimel	GMAD AGADIR			X		06	3B	NPA		B737-200 2300		XD	X			X	L	X		X		X	X X	X X		X	X X	X	X					
	RS	GMTA AL-HOCEIMA					24		NINST		48							L						X	X					X X					
		GMTT TANGER																																	
MOZAMBIQUE																																			
FQBR	BEIRA/Beira	FWCL BLANTYRE	X	X			12	4D	PA1	X	B707-382B 3400	2*	XD	X		X		L	X		X		X	X X	X X		X	X X	X	X	X	X		X	X
	RS	FAJS JOHANNESBURG					30		NPA	X	B707-382B 115						X	L	X		X			X		X			X		X				X
		FQMA MAPUTO																																	
							06				920																								
							24																												
FQMA	MAPUTO/Maputo Intl	FQBR BEIRA	X	X			05	4E	NPA	X	B707-382B 3660		XD				X	L	X		X		X	X		X		X	X		X			X	X
	RS	FADN DURBAN					23		PA1	X	B707-382B 102	2*				X		L	X					X	X X	X X	X X		X	X X	X			X	X
		FAJS JOHANNESBURG									B747 290																								
		FDMS MANZINI																																	
NAMIBIA																																			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAPI	Lighting aids: SAPI	Lighting aids: VASIS	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STOBAR	Lighting aids: BAR	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11								12								13		
FYKT KEETMANSHOOP/Keetmanshop RS	FAUP UPINGTON FYWB WALVIS BAY FYWH WINDHOEK	7		X			04 22 18 36	4D	NPA NPA	X X	B727-44 2420 B727-44 63 1469		XD			X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X			X X
FYWB WALVIS BAY/Walvis Bay RS	FAAB ALEXANDER BAY FYKT KEETMANSHOOP FYWH WINDHOEK	6	X	X			09 27 12 30	4D	NPA NPA	X X	B737 1520 B737 62 1200		XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X			X X
FYWH WINDHOEK/Hosea Kutako RS	FAJS JOHANNESBURG FYKT KEETMANSHOOP FAUP UPINGTON FYWB WALVIS BAY	9	X	X			08 26 16 34	4E	PA1 NPA	X X	B747-400 4532 B747 320 1525	2*	XD			X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X		X	X X
NIGER																																		
DRZA AGADES/Sud RS	DNKN KANO DRRN NIAMEY HLLS SEBHA DAAT TAMANRASSET DRZR ZINDER	6	X	X			07 25	4C	NPA NINST		B737-200 2300 B737-200 44		X	X		X X	L L	X X		 X			X X	X X	X X	X X	X X	X X	X X			
DRRN NIAMEY/Diori Hamani Intl RS	DIAP ABIDJAN DGAA ACCRA DFOO BOBO- DBBB DIOULASSO DNKN COTONOU DNMM KANO DXXX LAGOS DFFD LOME DRZR OUAGADOUGOU ZINDER	9	X	X			09R 27L 09L 27R	4E	PA1 NPA		B747 3000 B747 288 DC8-63 140 1620	2*	XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X		X	
DRZR ZINDER/Zinder AS	DRZA AGADES DNKN KANO DNMA MAIDUGURI DRRN NIAMEY FTTJ N'DJAMENA DNSO SOKOTO	6	X	X			06 24	4C	NPA NINST		B737-200 1825 44		X			X	L	X X		X			X X	X X	X X	X X	X X	X X	X X			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
NIGERIA																																			
DNAA ABUJA/Nnamdi Azikiwe	DNMM LAGOS	9	X	X			04	4E	NPA	X	B747 3600		XD			X	L	X				X		X		X		X		X				
RS	DNKN KANO						22		PA1		B747 385	2*				X	L	X			X			X	X	X	X	X	X	X	X			
DNCA CALABAR/Calabar	FKKD DOUALA	6	X	X			03	3C	NPA	X	B737 2450		XD	X		X	L	X					X	X		X		X		X				
RS	DNPO PORT HARCOURT						21		PA1		53	2*				X	L	X			X			X	X	X	X	X	X	X	X			
DNIL ILORIN/Ilorin	DNAA ABUJA	9	X	X			05	4E	PA1	X	B747 3100	2*	XD	X		X	L	X			X		X	X	X	X	X	X	X	X	X			
AS	DNMM LAGOS						23		NPA		B747 320					X	L	X						X		X		X		X				
DNKA KADUNA/Kaduna	DNAA ABUJA	9					05	4E	PA1	X	B747 3000	2*	XD			X	L	X			X		X	X	X	X	X	X	X	X	X			
RS	DNKN KANO						23		NPA		B747 320					X	L	X						X		X		X		X				
DNKN KANO/Mallam Aminu Kano Intl	DNAA ABUJA	9	X	X			06	4E	PA2	X	B747B 3300	2	XD	X		X	L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	DGAA ACCRA						24		PA2		B747B 322	3*				X	L	X	X	X	X	X	X		X		X	X	X	X	X			
RS	DBBB COTONOU										DC8-63 140																							
	FKKD DOUALA																																	
	DNMM LAGOS						05				2600																							
	DNMA MAIDUGURI						23																											
	FTTJ N'DJAMENA																																	
	DRRN NIAMEY																																	
DNMM LAGOS/Murtala Muhammed	DIAP ABIDJAN	9	X	X	X		01L	4E	PA2	X	B747B 3900	2	XD	X		X	L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	DNAA ABUJA						19R		PA2	X	B747B 258	2				X	L	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X
RS	DGAA ACCRA										DC8 145																							
	DBBB COTONOU																																	
	FKKD DOUALA						01R	4D	NPA		DC10-30 2745		XD	X			L	X			X	X		X	X		X		X	X				
	DNIL ILORIN						19L		PA2		DC10-30 207	2				X	L	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
	DNKN KANO																																	
	FOOL LIBREVILLE																																	
	DXXX LOME																																	
	DRRN NIAMEY																																	
	DFFD OUAGADOUGOU																																	
	DNPO PORT HARCOURT																																	
DNMA MAIDUGURI/Maiduguri	DNAA ABUJA	9	X	X			05	4E	PA2	X	B747 3000	2	XD	X		X	L	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RS	DNKA KADUNA						23		NPA		B747 320					X	L	X						X		X		X		X				
	DNKN KANO																																	
	FTTJ N'DJAMENA																																	
	DNPO PORT HARCOURT																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PA	Lighting aids: SA	Lighting aids: VA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TE	Lighting aids: STC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
DNPO PORT HARCOURT/Port Harcourt Intl RS	DNAA ABUJA FKKD DOUALA DNKN KANO DNMM LAGOS	9	X	X			03 21	4E	NPA PA1	X	B747 3000 B747 320	2*	XD	X		X	X	L L	X X			X		X	X X	X	X X	X	X	X X	X	X	X	
DNSO SOKOTO/Abubakar Saddiq III Intl RS	DNAA ABUJA DNKA KADUNA DNKN KANO DNMM LAGOS DRRN NIAMEY	9	X	X			08 26	4E	PA1 NPA	X	B747 3000 B747 320	2*	XD	X		X X		L L	X X			X		X	X X	X	X X	X	X	X X	X	X	X	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación							Marking aids Marques Señales					RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
RWANDA																																		
HRYR KIGALI/Gregoire Kayibanda	HBBA BUJUMBURA	9	X	X			10	4E	NPA	X	B707-300 3500		XD	X		X	L	X		X		X	X		X			X	X			X		
RS	HTDA DAR-ES-SALAAM						28		PA1	X	B707-300 110	2*				X	L	X						X	X	X	X	X	X			X		X
	HUEN ENTEBBE										B747 320																							
	FZNA GOMA																																	
	FZIC KISANGANI																																	
	HTKJ KILIMANJARO																																	
	HKJK NAIROBI																																	
SAO TOME AND PRINCIPE																																		
FPST SAO TOME/Sao Tomé	FOOL LIBREVILLE	8	X	X			11	4D	PA1		B707-300 2440	2*	XD	X		X	L	X		X		X	X	X	X	X	X	X	X	X	X	X	X	
RS							29		NPA		B707-300 150						L							X		X			X					
											L1011																								
SENEGAL																																		
GOGS CAP SKIRING/Cap Skiring	GBYD BANJUL	6	X	X			15	3D	NINST		B737-500 1450		X	X			L	X		X		X	X		X					X		X		
RS	GGOV BISSAU						33		NPA		A320 64					X	L	X						X	X	X		X	X	X	X			
	GOGG ZIGUINCHOR																																	
GOOY DAKAR/Leopold Sedar Senghor Intl	GABS BAMAKO	9	X	X	X		18	4E	PA2	X	B747 3490	2	XD			X	L	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		
RS	GBYD BANJUL						36		NPA		B747 330					X	L	X						X		X	X		X		X			
	GUCY CONAKRY										DC8-62 152																							
	GFLL FREETOWN																																	
	GCLP GRAN CANARIA						03				2030																							
	GLRB MONROVIA						21																											
	GQPP NOUADHIBOU																																	
	GQNN NOUAKCHOTT																																	
	GOSS SAINT LOUIS																																	
	GVAC SAL I.																																	
GOSS SAINT LOUIS/Saint Louis	GOOY DAKAR	6	X	X			18	4C	NPA		B737-200 1900			X		X	L	X		X		X	X	X	X	X		X	X	X	X			
RS	GQPP NOUADHIBOU						36		NINST		B737-200 64					X	L	X						X		X		X		X				
	GQNN NOUAKCHOTT																																	
GOTT TAMBACOUNDA/Tambaco unda	GAKY KAYES	6					06	4C	NPA		SE210 2000		X	X		X	L	X					X	X	X	X		X	X	X	X			
RS	GOGG ZIGUINCHOR						24		NPA		SE210 49					X	L	X						X		X		X		X				
GOGG ZIGUINCHOR/Ziguinchor	GBYD BANJUL	6	X	X			10	3C	NINST		B737-500 1545		X			X	L	X					X	X	X	X				X	X			
RS	GGOV BISSAU						28		NPA		B737-500 64					X	L	X						X		X		X	X		X			
	GOGS CAP SKIRING																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
SEYCHELLES																																		
FSIA MAHE/Seychelles Intl	FMMI ANTANANARIVO	9	X	X			13	4E	NPA	X	B747 2987		XD	X			X	L	X		X			X		X			X	X			X
RS	HTDA DAR-ES-SALAAM						31		PA1	X	B747 308	2*				X		L	X						X	X	X	X	X			X		X
	FMNM MAHAJANGA																																	
	FIMP MAURITIUS																																	
	HKMO MOMBASA																																	
	HKJK NAIROBI																																	
	FMNN NOSY-BE																																	
	FMEE REUNION																																	
SIERRA LEONE																																		
GFLL FREETOWN/Lungi	DIAP ABIDJAN	8	X	X			12	4D	NPA		B707-300 3200						X	L	X					X		X			X		X			
RS	GABS BAMAKO						30		PA1		B707-300 152	2*	XD			X		L	X				X	X	X	X	X	X	X	X	X	X		
	GBYD BANJUL										DC10 228																							
	GUCY CONAKRY																																	
	GOOY DAKAR																																	
	GLRB MONROVIA																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
SOMALIA																																			
HCMI BERBERA/Berbera	HCMV BURAO	4		X			05	3B	NINST		FK27 4150						L				X			X X	X	X		X X				
AS							23		NINST		FK27 17						L							X	X				X				
HCMV BURAO/Burao	HCMI BERBERA	4			X		13	4B	NINST		FK27 1840						L				X			X X	X	X		X X				
RS							31		NINST		FK27 18						L							X	X				X				
											AS																							
											DC6 40																							
HCMH HARGEISA/Hargeisa	HCMV BURAO	5		X			06	4C	NPA	X	DC6 2280	X	X			X	L	X		X		X	X X	X	X		X X	X	X		X
RS							24		NPA		DC6 40					X	L	X					X	X			X				X
HCMK KISIMAYU/Kisimayu	HCMM MOGADISHU	7		X			05	4D	NPA		DC8-62 3700		XD			X	L	X		X		X	X	X		X		X		X
AS							23		PA1	X	DC8-62 109	2*				X	L	X					X	X	X X	X	X			X	X
HCMM MOGADISHU/Mogadishu	HAAB ADDIS ABABA	8	X	X			05	4D	NPA	X	DC8-62 3150		XD			X	L	X		X		X	X	X		X		X	X		X
RS	HCMK KISIMAYU						23		PA1	X	DC8-62 120	2*				X	L	X					X	X	X X	X	X	X		X	X
	FSIA MAHE																																
	HKMO MOMBASA																																
	HKJK NAIROBI																																
SOUTH AFRICA																																			
FAAB ALEXANDER	FYWB WALVIS BAY			X			01	4C	NPA	X	CV12 1848		X			X	L	X		X		X	X X	X		X	X	X		X
BAY/Alexander Bay							19		NINST		CV12						L	X						X		X			X			
RS																																	
							07				1676																						
							25																										
							11				1470																						
							29																										
FABL BLOEMFONTEIN/Bloemfon	FAJS JOHANNESBURG	7	X	X			02	4D	PA1	X	B707-344C 2559	1	XD			X	L	X		X		X	X X	X X	X X	X	X		X	X
tein	FXMU MASERU						20		NPA	X	B707-344C 113					X	L	X					X	X		X				X
AS																																	
							12	4D	NINST		B707-344C 2194						L	X		X		X	X X	X	X		X	X			
							30		NINST		B707-344C 113						L	X					X	X		X		X			
FACT CAPE TOWN/Cape Town	FAAB ALEXANDER BAY	8	X	X			01	4E	PA1	X	B747 3201	2*	XD	X		X	L	X		X		X	X X	X X	X X	X	X	X	X	X
RS	FAJS JOHANNESBURG		(R)				19		NPA		B747					X	L	X					X	X		X			X		X
	FYWH WINDHOEK																																
							16	4E		X	A320 1701						L																
							34				A320						L																

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAA	Lighting aids: SAA	Lighting aids: VAA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEE	Lighting aids: TCC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11										12								13		
FADN DURBAN/Durban	FAJS JOHANNESBURG	8	X	X			05	4E	NPA	X	B747 2400		XD			X	L	X		X		X		X	X		X			X	X			X
RS	FQMA MAPUTO						23		PA1		B747 300	2*			X		L	X							X	X	X	X	X		X			X
	FXMM MASERU										B727-300 78																							
FAJS JOHANNESBURG/Johanne sburg	FABL BLOEMFONTEIN	9	X	X	X		03L	4E	PA2	X	DC10-30 4418	2	XD	X		X		L	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
RS	FACT CAPE TOWN		(R)				21R		INST		B707-344C 137						X	L	X						X		X			X				X
	FADN DURBAN										B747 298					X																		
	FVHA HARARE																																	
	FLLS LUSAKA						03R	4E	PA2	X	B747 2400	2	XD	X		X		L	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
	FQMA MAPUTO						21L		PA2	X	298	2						L	X	X	X	X	X	X	X		X	X	X	X			X	X	X
	FAUP UPINGTON																																		
	FYWH WINDHOEK						15	4D	NINST		B707-300 2830								X	X		X			X	X	X		X	X				
							33		NINST		B707-300 132								X						X		X							
FAGM JOHANNESBURG/Rand				X			18	3B	NPA	X	BE90 1463			X			X	L			X				X	X	X			X				X
RS							36		NPA	X	BE90						X	L							X	X	X							X
FALA LANSERIA/Lanseria	FAGM JOHANNESBURG			X	X		06L	3B	NPA	X	BE90 3048		XD	X			X	L			X		X		X	X	X	X	X	X	X	X			X
RS	FAJS JOHANNESBURG						24R		NINST		BE90 41							L							X		X	X			X				
	FAWB PRETORIA																																		
							06R				1335																								
							24L																												
							17				925																								
							35																												
FAUP UPINGTON/Upington	FYKT KEETMANSHOOP	6		X			01	4D	NPA	X	B727-44 2270	1	X			X	L	X		X		X		X	X	X	X	X	X	X	X			X
RS							19		NPA		B727-44 63					X	L	X							X		X			X				X
							08				1829																								
							26																												
SPAIN																																			
GCLP GRAN CANARIA/Gran Canaria, Canary I.	GMMN CASABLANCA	9	X	X			03L	4E	PA1	X	B747 3100	2*	XD	X		X		S	X		X	X		X	X	X	X	X	X	X	X	X	X	X	
RS	GOOY DAKAR						21R		NPA		B747-56 322						X	S	X						X		X			X				
	GSAI EL AAIUN																																		
	LPPT LISBOA						03R	4E	NINST		3100														X	X	X			X				
	GQPP NOUADHIBOU						21L		NINST																X	X	X			X				
	LPPS PORTO SANTO																																		
	GMME RABAT																																		
	GCTS TENERIFE SUR																																		
GCHI HIERRO/Hierro, Canary I.	GCLP GRAN CANARIA	5	X	X			16	3C	NPA		ATR42 1250		XD				X	S	X		X				X	X	X		X		X	X			
RS	GCTS TENERIFE SUR						34		NINST		ATR42 19							S	X						X		X					X			

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso		Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa		RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales					RVR	
					APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TCB	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END	
1		2		3	4				5	6	7	8	9	10				11									12								13	
GCLA	LA PALMA/La Palma, Canary I. RS	GCLP GCTS	GRAN CANARIA TENERIFE SUR	8	X	X			01 19	3C	NPA NINST		B767 2200 B767 150		XD	X			X	L L	X		X		X	X X	X	X X		X	X	X X			X
CGRR	LANZAROTE/Lanzarote, Canary I. RS	GCLP GCTS	GRAN CANARIA TENERIFE SUR	8	X	X			04 22	4C	NPA NPA	X	B767 2400 B707-300 152 L1011 190	2*	XD	X		X X	S L	X X			X			X	X X	X X	X X	X	X	X X	X	X	X
GEML	MELILLA/Melilla RS	GMMN LEMG	CASABLANCA MALAGA	5	X	X			15 33	3C	NPA NINST		FK27-200 1050 FK27-200 19			X			L L	X X			X		X	X X	X X	X	X		X	X X			
GCFV	FUERTEVENTURA/ Fuerteventura, Canary I. RS	GCLP GCRR GCTS	GRAN CANARIA LANZAROTE TENERIFE SUR	8	X	X			01 19	4C	PA1 NPA	X	B767 2400 DC10-30 240	2*	XD	X		X X	S L	X X			X			X	X X	X X	X X	X	X	X X	X	X	X
GCXO	TENERIFE NORTE/Los Rodeos, Canary I. RS	GCLP GCTS	GRAN CANARIA TENERIFE SUR	8	X	X			12 30	4C	NPA NPA	X	B767 3400 DC10 240		XD	X		X X	L L	X X			X			X	X X	X X	X X	X	X	X X	X	X	
GCTS	TENERIFE SUR/Reina Sofia, Canary I. RS	GMAD GMMN GSAI GCLP LPPT GMME	AGADIR CASABLANCA EL AAIUN GRAN CANARIA LISOBA RABAT	9	X	X			08 26	4E	PA1 NPA	X	B747 3200 B747 322	2*	XD	X		X X	L L	X X			X			X	X X	X X	X X	X	X	X X	X	X	X
SUDAN																																			
HSSJ	JUBA/Juba RS	HUEN	ENTEBBE	6	X	X			13 31	4C	PA1 NINST	X	B737-200 2400 B737-200 46	2*	XD			X X	L L	X X			X			X	X X	X X	X X	X	X	X X	X	X	X
HSKA	KASSALA/Kassala AS	HSSS	KHARTOUM	7					02 20		NINST NINST		B707-320C 2500 B707-320C 112							X X			X		X	X X	X X	X	X		X	X X			
HSSS	KHARTOUM/Khartoum RS	HAAB HHAS HECA HDAM OEJN HSKA HELX HKJK HSPN	ADDIS ABABA ASMARA CAIRO DJIBOUTI JEDDAH KASSALA LUXOR NAIROBI PORT SUDAN	8	X	X			18 36	4C	PA1 NPA	X	DC8-53 2950 B707-320C 130 A300 137	1	XD	X		X X	L L	X X X			X			X	X X	X X	X X	X	X	X X	X	X	X

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. / Piste n° / Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type / Type de piste / Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength / Longueur de piste/ Résistance / Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PAPI	Lighting aids: SAPI	Lighting aids: VASIS	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TEC	Lighting aids: STC	Lighting aids: STB	Lighting aids: BCN	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
HSPN PORT SUDAN/Port Sudan Intl	OEJN JEDDAH	6	X	X			18	4C	NPA	X	B737-200 2500		XD	X		X	L	X		X		X		X	X	X	X	X	X	X	X			
RS							36		PA1		B737-200 53	1			X		L	X							X		X				X	X		
SWAZILAND																																			
FDMS MANZINI/Matsapha	FAJS JOHANNESBURG	6	X	X			07	4C	NPA		FK28 2600		X	X		X	L	X		X		X		X	X	X	X		X		X	X		
RS	FQMA MAPUTO						25		NINST		FK28 29						L	X							X		X					X		
											B707 130																								
TOGO																																			
DXXX LOME/Tokoin	DIAP ABIDJAN	9	X	X			05	4E	NPA	X	B747 3000		XD	X		X	L	X		X		X		X	X		X		X	X	X	X		
RS	DGAA ACCRA						23		PA1		B747 310	2*			X		L	X							X	X	X	X	X	X		X		
	DBBB COTONOU										DC8-63 143																								
	DNMM LAGOS																																		
	DRRN NIAMEY																																		
	DXNG NIAMTOUGOU																																		
DXNG NIAMTOUGOU/Niamtougou	DBBB COTONOU	8	X	X			03		PA1		DC10-30 2500	2*	XD	X		X	L	X		X		X		X	X	X	X	X	X	X	X	X		
RS	DXXX LOME						21		NPA		220						L	X							X		X				X	X		
	DRRN NIAMEY																																		
	DFFD OUAGADOUGOU																																		
TUNISIA																																			
DTTJ DJERBA/Zarzis	DTMB MONASTIR	8	X	X	X	X	09	4E	PA1	X	DC10 3100	2*	XD	X		X	L	X		X		X		X	X	X	X	X	X	X	X	X	X		
RS	DTTX SFAX						27		NPA		DC10 220						L	X							X		X				X	X		
	HLLT TRIPOLI																																		
	DTTA TUNIS																																		
DTMB MONASTIR/Habib Bourguiba	DTTJ DJERBA	8	X	X	X	X	08	4E	PA1	X	DC10 2950	2*	XD	X		X	L	X		X		X		X	X	X	X	X	X	X	X	X	X		
RS	LMML MALTA						26		NPA		DC10 220						L	X							X		X				X	X		
	DTTX SFAX																																		
	DTKA TABARKA																																		
	HLLT TRIPOLI																																		
	DTTA TUNIS																																		
DTTX SFAX/Thyna	DTTJ DJERBA	7	X	X	X	X	15	4C	NPA		B727 3000		XD			X	L			X		X		X	X		X		X		X	X		
RS	LMML MALTA						33		NPA		B727 90					X	L								X		X				X			
	DTMB MONASTIR																																		
	HLLT TRIPOLI																																		
	DTTA TUNIS																																		

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS: APP	ATS: TWR	ATS: ATIS	ATS: AFIS	Physical characteristics: Rwy No. Piste n° Núm. de pista	Physical characteristics: RCCR	Physical characteristics: Rwy type Type de piste Tipo de pista	Physical characteristics: TWY	Physical characteristics: Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	Radio aids: ILS	Radio aids: VOR	Radio aids: NDB/L	Radio aids: GNSS	Lighting aids: PA	Lighting aids: SA	Lighting aids: VA	Lighting aids: RWY	Lighting aids: CLL	Lighting aids: TDZ	Lighting aids: TE	Lighting aids: STC	Lighting aids: STB	Lighting aids: B	Marking aids: DES	Marking aids: CLM	Marking aids: THR	Marking aids: TDZ	Marking aids: SST	Marking aids: AMG	Marking aids: TWY	Marking aids: HLD	RVR: TDZ	RVR: MID	RVR: END
1	2	3	4				5	6	7	8	9	10				11									12								13		
DTKA TABARKA/7 NOVEMBRE	DAGG ALGER	8	X	X	X	X	09	4E	NPA	X	DC10 2870					X	L	X						X		X		X		X				
RS	DABB ANNABA						27		PA1		220	2*	XD	X		X	L	X		X			X	X	X	X	X	X	X	X	X			
	DTMB MONASTIR																																	
	DTTA TUNIS																																	
DTTZ TOZEUR/Nefta	DTTJ DJERBA	8	X	X	X	X	09	4E	PA1	X	B707 3345	2*	XD	X		X	L	X		X			X	X	X	X	X	X	X	X	X			
RS	DTMB MONASTIR						27		NPA		B707 135					X	L	X						X		X			X					
	DTTX SFAX																																	
	DTTF GAFSA																																	
DTTF GAFSA/Ksar	DTTJ DJERBA	7	X	X	X	X	05	4D	PA1	X	B727 2900	1	XD			X		X		X	X	X		X	X	X	X	X		X	X	X		
RS	DTMB MONASTIR						23		NPA		B727 90						X	L	X					X	X	X	X			X	X			
	DTTX SFAX																																	
	DTTZ TOZEUR																																	
DTTA TUNIS/Carthage	DAAG ALGER	9	X	X	X	X	01	4E	NPA	X	B747 3200			XX			X	L	X		X			X	X	X	X	X	X	X	X			
RS	DABB ANNABA						19		PA1		B747 320	2*	XD			X	L	X						X	X	X	X		X		X	X		
	DTTJ DJERBA																								X									
	LMML MALTA						11	4E	NPA	X	A300 2870	2*					X	L	X					X	X	X	X		X		X	X		
	DTMB MONASTIR						29		PA1		142					X	L	X		X				X		X	X	X	X	X	X			
	LICJ PALERMO																																	
	LIRF ROMA																																	
	DTTX SFAX																																	
	DTKA TABARKA																																	
UGANDA																																		
HUEN ENTEBBE/Entebbe Intl	HBBA BUJUMBURA	9	X	X	X		17	4E	PA1	X	B747 3658	2*	XD	X		X	L	X		X			X	X	X	X	X	X	X	X	X	X		X
RS	HTDA DAR-ES-SALAAM						35		NPA	X							X	L	X					X		X			X					X
	HRYR KIGALI																																	
	HTKJ KILIMANJARO										B747 258																							
	FZIC KISANGANI																																	
	HKJK NAIROBI																																	
UNITED REPUBLIC OF TANZANIA																																		
HTDA DAR-ES-SALAAM/Dar-Es-Salaam	FWCL BLANTYRE	9	X	X	X		05	4E	PA1	X	DC10-30 3000	2*	XD	X		X	L	X		X			X	X	X	X	X	X	X	X	X	X		X
RS	HUEN ENTEBBE						23		NPA	X	DC10-30 210						X	L	X					X		X			X					X
	HTKJ KILIMANJARO										B747 300																							
	FWLI LILONGWE																																	
	FSIA MAHE																																	
	FIMP MAURITIUS																																	
	HCMM MOGADISHU																																	
	HKMO MOMBASA																																	
	HKJK NAIROBI																																	
	HTZA ZANZIBAR																																	

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación							Marking aids Marques Señales					RVR	
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	TC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
HTKJ KILIMANJARO/Kilimanjaro Intl RS	HTDA DAR-ES-SALAAM HUEN ENTEBBE HKMO MOMBASA HKJK NAIROBI	9	X	X			09 27	4E	PA1 NPA	X X	B747 3600 B747 300 DC10 226	1	XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X	X X	X X	X	X X
HTZA ZANZIBAR/Zanzibar RS	HTDA DAR-ES-SALAAM HTKJ KILIMANJARO FSIA MAHE HKMO MOMBASA	8	X	X			18 36	4D	NINST NPA	X	B767 2462 B767 136		XD	X		X	L L	X		X		X	X X	X X	X	X X	X X	X X	X	X X		
WESTERN SAHARA																																	
GSAI EL AAIUN/El Aaiun RS	GMAD AGADIR GCLP GRAN CANARIA GSMA SMARA GCTS TENERIFE SUR	6	X	X			04 22	4C	NPA PA1	X	B737 2700 B727 87	2*	XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X	X X	X	
GSMA SMARA/Smara RS	GSAI EL AAIUN	4					17 35	4C	NINST NINST		FK27 3000 C130 19		X										X	X X	X X	X	X	X	X X		
GSVO VILLA CISNEROS/Villa Cisneros RS	GQPP NOUADHIBOU	4	X	X			04 22	4C	NINST NPA	X	B727 3000 B727 19		X			X X	L L	X X		X		X	X X	X X	X	X X	X X	X X	X	X X		
ZAMBIA																																	
FLLI LIVINGSTONE/Livingstone Intl RS	FLLS LUSAKA	4	X	X			10 28 15 33	3C	NPA NPA	X X	HS748 2292 HS748 20 1372		XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X	X X	X	X X
FLLS LUSAKA/Lusaka Intl RS	FWCL BLANTYRE FCBB BRAZZAVILLE HTDA DAR-ES-SALAAM FVHA HARARE FAJS JOHANNESBURG FLLI LIVINGSTONE FLND NDOLA	8	X	X	X		10 28	4D	PA1 NPA	X X	DC8-62 3962 DC8-62 147 DC10-30 190	2*	XD	X		X X	L L	X X		X		X	X X	X X	X X	X X	X X	X X	X X	X X	X	X X
FLMF MFUWE/Mfuwe RS	FWLI LILONGWE	6	X	X			08 26	4C	NPA NPA	X X	B737-200 2200 B737-200 50		XD	X		X X	L L	X X		X			X X	X X	X X	X X	X X	X X	X X	X X	X	X X

City/Aerodrome — Use Ville/Aérodrome — emploi Ciudad/Aeródromo — uso	Alternate aerodromes Aérodromes de dégagement Aeródromos de alternativa	RFF	ATS				Physical characteristics Caractéristiques physiques Características físicas					Radio aids Aides radio Radio ayudas				Lighting aids Aides lumineuses Ayudas de iluminación								Marking aids Marques Señales					RVR		
			APP	TWR	ATIS	AFIS	Rwy No. Piste n° Núm. de pista	RCCR	Rwy type Type de piste Tipo de pista	TWY	Runway length/ Pavement strength Longueur de piste/ Résistance Longitud de pista/ Resistencia del pavimento	ILS	VOR	NDB/L	GNSS	PA	SA	VA	RWY	CLL	TDZ	TE	STC	STB	B	DES	CLM	THR	TDZ	SST	AMG	TWY	HLD	TDZ	MID	END
1	2	3	4				5	6	7	8	9	10				11								12								13		
FLND NDOLA/Ndola	FLLS LUSAKA	6	X	X			10L	4D	NPA	X	B707-300 2515		XD			X		L	X		X		X	X	X	X	X	X	X	X	X	X	X	X
RS							28R		NPA	X	B707-300 112						X	L	X						X		X			X				X
							10R				1219																							
							28L																											
ZIMBABWE																																		
FVBU BULAWAYO/Bulawayo	FVHA HARARE	8	X	X			13	4E	NPA	X	B727-44 2588	2*	XD			X		L	X		X		X	X	X	X	X	X	X	X	X	X	X	X
RS							31		NPA	X	B727-44 63						X	L	X						X		X			X				X
											AS																							
											B747B 260																							
FVHA HARARE/Harare	FVBU BULAWAYO	9	X	X	X		06	4E	PA1	X	B747 4727	2*	XD	X		X		L	X		X		X	X	X	X	X	X	X	X	X	X	X	X
RS	FAJS JOHANNESBURG						24		PA1	X	B747B 282	2*				X		L	X						X	X	X	X	X	X			X	X	X
FVFA VICTORIA FALLS/Victoria Falls	FVBU BULAWAYO	7	X	X			12	4E	PA1	X	B720 2286	2*		X		X		L	X		X		X	X	X	X	X	X	X	X	X	X		X
RS							30		NINST		B747 260						X	L							X		X			X				

INDEX OF AERODROMES

FASID CHART AOP 1
(To be inserted)

PART IV - COMMUNICATIONS - NAVIGATION - SURVEILLANCE (CNS)

IVe PARTIE - COMMUNICATIONS - NAVIGATION - SURVEILLANCE (CNS)

PART IV

COMMUNICATIONS - NAVIGATION - SURVEILLANCE (CNS)

1. Introduction

1.1 The relevant Standards, Recommended Practices and Procedures to be applied are contained in:

1) Annex 10 - *Aeronautical Telecommunications*, Volumes I, II, III, IV and V.

2) *Regional Supplementary Procedure*s (Doc 7030), Part 2 - Communications.

1.2 This Part contains a detailed description/list of the facilities and/or services to be provided to fulfil the basic requirements of the Plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO Eastern and Southern African Office, Nairobi, and the Western and Central African Office, Dakar.

2. Aeronautical fixed service (AFS) (FASID Tables CNS-1A, 1B, 1C et 1D, Charts CNS-1A, 1B, 1C, 1D and 1E)

2.1 FASID Tables CNS-1A, 1B, 1C and 1D show respectively the requirements for AFTN, ATN services, and ATS direct speech circuits in the AFI Region.

2.2 FASID Chart CNS-1E shows the coverage of the SADIS for the dissemination of WAFS products using Intelsat satellite 604 at 60° E.

3. Aeronautical mobile service (AMS) (FASID Table CNS-2A, Chart CNS-2A)

3.1 FASID Table CNS-2A contains detailed information on the provision of aeronautical mobile services for HF and VHF general purposes requirements, aerodrome and approach control service (VHF), and flight information and area control service (VHF) in the AFI Region.

4. Aeronautical radio navigation service (FASID Table CNS-3, Charts CNS-3A and 3B)

4.1 FASID Table CNS-3 lists, State-by-State in alphabetical order, those radio navigation aids which are required for navigation and/or to support terminal area and/or instrument approach procedures in the AFI Region. A more detailed description of required NAVAIDs services is given in the table of explanation to FASID Table CNS-3.

5. Aeronautical surveillance (FASID Tables CNS-4A and 4B)

5.1 FASID Tables CNS-4A and 4B list, State-by-State in alphabetical order, the surveillance systems and facilities required in the AFI Region.

IVe PARTIE

COMMUNICATIONS - NAVIGATION - SURVEILLANCE (CNS)

1. Introduction

1.1 Les normes, pratiques recommandées et procédures applicables sont énumérées dans:

1) L'Annexe 10 - *Télécommunicdions Aéronautiques*, Volumes I, II, III, IV et V.

2) *Procédures Complémentaires Régionales* (Doc 7030), 2ème Partie - Communications.

1.2 La présente partie contient une description/liste détaillée des installations et/ou services à fournir pour répondre aux besoins fondamentaux indiqués dans le Plan, comme convenu entre les États fournisseurs et les États utilisateurs intéressés. Une telle entente indique que les États en question s'engagent à mettre en oeuvre les besoins spécifiés. Cette partie du FASID, en parallèle avec l'ANP AFI, fait l'objet d'un examen permanent du Groupe APIRG conformément à son programme de gestion et en consultation avec les États fournisseurs et les États utilisateurs et avec le concours du Bureau Afrique orientale et australe, à Nairobi, et du Bureau Afrique occidentale et australe, à Dakar.

2. Service fixe aéronautique (SFA) (Tableaux CNS 1A, 1B, 1C et 1D, et Cartes CNS 1A, 1B, 1C,1D et 1E)

2.1 Les Tableaux CNS 1A, 1B, 1C et 1D indiquent respectivement les besoins de la Région AFI en services du RSFTA et de l' ATN et en circuits vocaux directs ATS.

2.2 La carte FASID CNS-1E indique la couverture du SADIS pour la diffusion des produits du WAFS par l'intermédiaire du satellite Intelsat 604 situé à 60 °Est.

3. Service mobile aéronautique (SMA) (Tableau CNS 2A et Carte CNS 2A)

3.1 Le Tableau CNS 2A contient des renseignements détaillés sur la fourniture de services mobiles aéronautiques pour les besoins généraux HF et VHF, le service de contrôle d'approche et d'aérodrome (VHF) ainsi que le service d'information de vol et de contrôle régional (VHF) de la Région AFI.

4. Service de radionavigation aéronautique (Tableau CNS 3 et Cartes CNS 3A et 3B)

4.1 Le Tableau CNS 3 énumère, État par État, dans l'ordre alphabétique, les aides de radionavigation qui sont nécessaires à la navigation et/ou pour appuyer les procédures d'approche en région terminale et/ou d'approche aux instruments dans la Région AFI. L'explication du Tableau CNS 3 offre une description plus détaillée des aides de radionavigation (NAVAID) requises

5. Surveillance Aéronautique (Tableaux FASID CNS- 4A et 4B)

5.1 Les Tableaux CNS-4A et 4B énumèrent, État par État, dans l'ordre alphabétique, les systèmes de surveillance et les installations qui sont nécessaires à la surveillance dans la Région AFI.

TABLE CNS 1A - AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK

TABLEAU CNS 1A - RÉSEAU DU SERVICE FIXE DES TÉLÉCOMMUNICATIONS AÉRONAUTIQUES

EXPLANATION OF THE TABLE

Column

1 The terminal stations of individual circuits. The circuits are listed alphabetically by the terminal I station. Each circuit is listed once only. Terminal I is always the station which is first alphabetically within the circuit.

2 Category

M	-	Main AFTN communication centre
T	-	Tributary AFTN communication centre
S	-	AFTN station

EXPLICATION DU TABLEAU

Colonne

1 Stations terminales du circuit. Les circuits sont indiqués dans l'ordre alphabétique des stations terminales I. Chaque circuit ne figure qu'une fois, et la station terminale I est toujours la première dans l'ordre alphabétique à l'intérieur du circuit.

2 Catégorie

M	-	Centre de communication RSFTA principal
T	-	Centre de communication RSFTA tributaire
S	-	Station RSFTA

Terminal I/Tête de ligne I Terminal II/Tête de ligne II 1	Category/Catégorie 2	Remarks/Observations 3
ADDIS ABABA	M	
ASMARA	T	
DJIBOUTI	T	
KHARTOUM	T	
NAIROBI	M	
NIAMEY	M	
(MID)	-	JEDDAH
ALGER	M	
CASABLANCA	M	
NIAMEY	M	
TUNIS	M	
(EUR)	-	PARIS/ORLEANS
BRAZZAVILLE	M	
BANGUI	T	
DAKAR	M	
DOUALA	T	
KINSHASA	T	
JOHANNESBURG	M	
LIBREVILLE	T	
LUANDA	T	
MALABO	S	VIA DOUALA
NAIROBI	M	
N'DJAMENA	T	
NIAMEY	M	
SAO TOME & PRINCIPE	T	
CAIRO	M	
KHARTOUM	T	
NAIROBI	M	
TUNIS	M	
(EUR)	-	ATHENS
(MID)	-	BEIRUT & JEDDAH
CASABLANCA	M	

Terminal I/Tête de ligne I Terminal II/Tête de ligne II 1	Category/Catégorie 2	Remarks/Observations 3
DAKAR	M	
LAS-PALMAS	T	
VILLA CISNEROS	T	
(EUR)	-	MADRID
DAKAR	M	
ABIDJAN	T	
BAMAKO	T	
BANJUL	T	
BISSAU	T	
CONAKRY	S	VIA ROBERTS
FREETOWN	S	VIA ROBERTS
NIAMEY	M	
NOUAKCHOTT	T	
ROBERTS	T	
SAL	T	
(SAM)	-	BRASILIA
JOHANNESBURG	M	
ANTANANARIVO	T	
BEIRA	T	
BRAZZAVILLE	M	
GABORONE	T	
HARARE	T	
LILONGWE	T	
LUSAKA	T	
MAPUTO	T	
MASERU	T	
MANZINI	T	
NAIROBI	M	
WINDHOEK	T	
(SAM)	-	BUENOS AIRES
NAIROBI	M	
BUJUMBURA	S	VIA DAR-ES-SALAAM

Terminal I/Tête de ligne I Terminal II/Tête de ligne II 1	Category/Catégorie 2	Remarks/Observations 3
DAR-ES-SALAAM	T	
DZAOUDZI	S	VIA ANTANANARIVO
ENTEBBE	T	
KIGALI	S	VIA DAR-ES-SALAAM
MAURITIUS	T	
MOGADISHU	T	
MORONI	S	VIA ANTANANARIVO
SEYCHELLES	T	
ST. DENIS	S	VIA MAURITIUS
(ASIA)	-	BOMBAY
(ASIA/PAC)	-	BRISBANE VIA MAURITIUS
NIAMEY	M	
ACCRA	T	
COTONOU	S	VIA ACCRA
KANO	T	
LAGOS	S	VIA KANO
LOME	S	VIA ACCRA
N'DJAMENA	T	
OUAGADOUGOU	T	
TUNIS	M	
TRIPOLI	T	
(EUR)	-	ROME

CHART CNS-1A
CARTE CNS-1A

RATIONALIZED AFTN PLAN FOR AFI REGION SHOWING MAIN AFTN CENTRES AND TRIBUTARY CONNECTIONS
PLAN DE RSFTA RATIONALISE POUR LA REGION AFI (CENTRES RSFTA PRINCIPAUX ET LES LIAISONS TRIBUTAIRES)

TO BE INSERTED

A INSERER

TABLE CNS 1B - ATN ROUTER PLAN

EXPLANATION OF THE TABLE

Column

1	Administration - the name of the Administration, State or Organization responsible for management of the router
2	Location of the router
3	Type of router: BBIS - Backbone Boundary Intermediate System BIS - Boundary Intermediate System
4	Type of interconnection: Inter-regional Intra-regional Inter-domain
5	Interconnection, connected to router of: name of the city or location of the correspondent router
6	Link speed - Speed requirements for the interconnecting link
7	Link protocol - Protocol requirements for the interconnecting link
8	Target date of Implementation - date of implementation of the router services
9	Remarks

TABLEAU CNS 1B - PLAN DES ROUTEURS ATN

EXPLICATION DU TABLEAU

Colonne

1 Administration - nom de l'Administration, de l'Etat ou de l'Organisation responsable de la gestion du routeur

2 Emplacement du routeur

3 Type de routeur:

BBIS - Système Intermédiaire Limite Principal
BIS - Système Intermédiaire Limite

4 Type d'interconnection:

Inter-régional
Intra-régional
Inter-domaine

5 Interconnection, connecté au routeur de: nom de la ville ou emplacement du routeur correspondant

6 Vitesse de la liaison - Vitesse requise pour la liaison d'interconnection

7 Protocole de la liaison - Protocole requis pour la liaison d'interconnection

8 Date de mise en oeuvre - date de mise en oeuvre des services du routeur

9 Observations

TABLE CNS 1B - ATN ROUTER PLAN
TABLEAU CNS 1B - PLAN DES ROUTEURS ATN

Administration	Location of Router/ Emplacement du routeur	Type of router/ Type de routeur	Type of/Type d' Interconnection	Connected to router of/ Connecté au routeur de	Link Speed/ Vitesse de la liaison (bps)	Link Protocol/ Protocole de la liaison	Target date of implementation/ Date de mise en oeuvre	Remarks Observations
1	2	3	4	5	6	7	8	9

(To be developed)

CHART CNS-1B
CARTE CNS-1B

ATN ROUTER PLAN FOR AFI REGION SHOWING CONNECTIONS
PLAN DES ROUTEURS ATN POUR LA REGION AFI ET LES LIAISONS

TO BE INSERTED

A INSERER

TABLE CNS 1C
ATS MESSAGE HANDLING SERVICES (AMHS) ROUTING PLAN

EXPLANATION OF THE TABLE

Column

1 Administration - the name of the Administration, State or Organization responsible for management of the AMHS

2 Location of AMHS

3 ATSMHS Type:

AFTN/AMHS Gateway
Message Transfer Agent (MTA) Server

4 AMHS Pair - the name of the city or location of the correspondent end of the AMHS service

5 Target date of implementation - date of implementation of the AMHS services

6 Remarks

TABLEAU CNS 1C
PLAN D'ACHEMINEMENT DES SERVICES DE MESSAGERIE ATS (AMHS)

EXPLICATION DU TABLEAU

Colonne

1 Administration - nom de l'Administration, de l'Etat ou de l'Organisation responsable de la gestion de l'AMHS

2 Emplacement de l'AMHS

3 Type de Messagerie ATS

Passerelle RSFTA/AMHS
Serveur Agent de Transfert de Message (MTA)

4 AMHS correspondant - nom de la ville ou emplacement de l'extrémité correspondante du service AMHS

5 Date de mise en oeuvre - date de mise en oeuvre des services AMHS

6 Observations

TABLE CNS 1C - AMHS ROUTING PLAN
TABLEAU CNS 1C - PLAN D'ACHEMINEMENT AMHS

Administration	Location of AMHS/ Emplacement de l'AMHS	ATSMHS Type/ Type de messagerie ATS	AMHS Pair/ AMHS correspondent	Target date of implementation/ Date de mise en oeuvre	Remarks/ Observations
1	2	3	4	5	6

(To be developed)

CHART CNS-1C
CARTE CNS-1C

ATS MESSAGE HANDLING SERVICES (AMHS) ROUTING PLAN FOR AFI REGION SHOWING CONNECTIONS
PLAN D'ACHEMINEMENT DES SERVICES DE MESSAGERIE ATS (AMHS) POUR LA REGION AFI ET LES LIAISONS

TO BE INSERTED

A INSERER

TABLE CNS 1D - ATS DIRECT SPEECH CIRCUITS PLAN/ TABLEAU CNS 1D DES CIRCUITS ATS EN PHONIE DIRECTE

EXPLANATION OF THE TABLE

Column 1:	Terminal I:	State and ATS centres to be considered are sequenced in alphabetical order.
Column 2:	Terminal II:	Stations to be connected in alphabetical order.
Column 3:	Type : "A"	indicates a requirements for direct-speech communications capable of establishment in less than 15 seconds (to be used principally for the exchange of updated flight plan data with adjacent units and for co-ordination between air traffic controllers).
	"d"	indicates that the requirements for communications which effectively provides for immediate access between controllers (to be used principally for transfer of control between radar controllers).
Column 4:	Remarks	

EXPLICATION DU TABLEAU

Colonne 1 :	Terminal I	Etats et centres ATS à prendre en considération énumérés en ordre alphabétique.
Colonne 2 :	Terminal II:	Les stations qui doivent être reliées sont classées, en ordre alphabétique.
Colonne 3 :	Type : "A"	communications vocales directes pouvant être établies en moins de 15 secondes (ces communications servent principalement à l'échange de données actualisées de plan de vol avec les organes voisins ainsi qu'à la coordination entre contrôleurs de la circulation aérienne).
	"d"	indique un besoin de communications instantanées, assurant un accès immédiat entre contrôleurs (principalement pour le transfert de contrôle entre contrôleurs radar).
Colonne 4:	Remarques	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
ALGERIA			
ALGER	BARCELONA	A	
ACC-FIC	CASABLANCA	A	
	DAKAR	A	
	MARSEILLE	A	
	NIAMEY	A	
	TRIPOLI	A	
	TUNIS	A	
ANGOLA			
LUANDA	ACCRA	A	
ACC-FIC	BRASILIA	A	
	BRAZZAVILLE	A	
	GABORONE	A	
	JOHANNESBURG	A	
	KINSHASA	A	
	LUSAKA	A	
	WINDHOEK	A	
BENIN			
COTONOU	ACCRA	A	
	LAGOS	A	
	LOME	A	
BOTSWANA			
GABORONE	FRANCISTOWN	A	
ACC-FIC	HARARE	A	
	JOHANNESBURG	A	
	LUANDA	A	
	LUSAKA	A	
	WINDHOEK	A	
FRANCISTOWN	BULAWAYO	A	
TWR	GABORONE	A	
BURKINA FASO			
BOBO	ABIDJAN	A	
DIOULASSO	ACCRA	A	
	BAMAKO	A	
	OUAGADOUGOU	A	
	ABIDJAN	A	
OUAGADOUGOU	ACCRA	A	
	BAMAKO	A	
	BOBO DIOULASSO	A	
	NIAMEY	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
BURUNDI			
BUJUMBURA	DAR-ES-SALAAM	A	
APP	GOMA	A	
	KIGALI	A	
	KINSHASA	A	
CAMEROON			
DOUALA	BATA	A	
APP	BRAZZAVILLE	A	
	KANO	A	
	LAGOS	A	
	LIBREVILLE	A	
	MALABO	A	
	N'DJAMENA	A	
CAPE VERDE			
SAL I.	DAKAR	A	
ACC	LAS PALMAS	A	
	SANTA MARIA	A	
CENTRAL AFRICAN REPUBLIC			
BANGUI	BRAZZAVILLE	A	
APP	GBADOLITE	A	
	N'DJAMENA	A	
CHAD			
N'DJAMENA	BANGUI	A	
APP-FIC	BRAZZAVILLE	A	
	DOUALA	A	
	GAROUA	A	
	KANO	A	
	KHARTOUM	A	
	MAIDUGURI	A	
	NIAMEY	A	
	TRIPOLI	A	
COMOROS			
DZAOUDZI	ANTANANARIVO	A	
APP			
MORONI	ANTANANARIVO	A	
APP			

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
CONGO			
BRAZZAVILLE	ACCRA	A	
APP-FIC	BANGUI	A	
	DOUALA	A	
	KANO	A	
	KHARTOUM	A	
	KINSHASA	A	
	LIBREVILLE	d	
	LUANDA	A	
	N'DJAMENA	A	
	SAO TOME	A	
COTE D'IVOIRE			
ABIDJAN	ACCRA	A	
APP	BAMAKO	A	
	BOBO DIOULASSO	A	
	DAKAR	A	
	NIAMEY	A	
	OUAGADOUGOU	A	
	ROBERTSFIELD	A	
DEMOCRATIC REPUBLIC OF CONGO			
BUKAVU	KIGALI	A	
GBADOLITE	BANGUI	A	
GOMA	BUJUMBURA	A	
	KIGALI	A	
LUBUMBASHI	NDOLA	A	
KINSHASA	BRAZZAVILLE	d	
	BUJUMBURA	A	
	DAR-ES-SALAAM	A	
	ENTEBBE	A	
	KHARTOUM	A	
	KIGALI	A	
	LUANDA	A	
	LUSAKA	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
DJIBOUTI			
DJIBOUTI	ADDIS ABABA	A	
APP	ADEN	A	
	ASMARA	A	
	DIRE DAWA	A	
	HARGHEISA	A	
	MOGADISHU	A	
	SANA'A	A	
EGYPT			
CAIRO	AMMAN	A	
ACC	ATHENS	A	
	BEIRUT	A	
	JEDDAH	A	
	KHARTOUM	A	
	NICOSIA	A	
	TEL AVIV	A	
	TRIPOLI	A	
EQUATORIAL GUINEA			
BATA	DOUALA	A	
APP	LIBREVILLE	A	
	MALABO	A	
	BATA	A	
MALABO	DOUALA	A	
APP	LIBREVILLE	A	
ERITREA			
ASMARA	ADDIS ABABA	A	
ACC	DJIBOUTI	A	
	JEDDAH	A	
	KHARTOUM	A	
	SANA'A	A	
ETHIOPIA			
ADDIS ABABA	ASMARA	A	
ACC-FIC	DJIBOUTI	A	
	JEDDAH	A	
	KHARTOUM	A	
	MOGADISHU	A	
	NAIROBI	A	
	SANA'A	A	
DIRE DAWA	DJIBOUTI	A	
TWR			

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
FRANCE (REUNION)			
SAINT-DENIS	ANTANANARIVO	A	
APP	MAURITIUS	A	
GABON			
LIBREVILLE	ACCRA	A	
ACC	BATA	A	
	BRAZZAVILLE	A	
	DOUALA	A	
	KANO	A	
	LAGOS	A	
	MALABO	A	
	SAO TOME	A	
GAMBIA			
BANJUL	BISSAU	A	
APP	DAKAR	A	
GHANA			
ACCRA	ABIDJAN	A	
APP-FIC	BOBO DIOULASSO	A	
	BRAZZAVILLE	A	
	COTONOU	A	
	KANO	A	
	LAGOS	A	
	LIBREVILLE	A	
	LOME	A	
	LUANDA	A	
	NIAMEY	A	
	OUGADOUGOU	A	
	SAO TOME	A	
GUINEA			
CONAKRY	BISSAU	A	
APP	FREETOWN	A	
	ROBERTSFIELD	A	
GUINEA-BISSAU			
BISSAU	BANJUL	A	
APP	CONAKRY	A	
	DAKAR	A	

ATS requirements for speech communications Besoins en communications vocales Requisitos de communicaciones orales			**Remarks Observations Observaciónes**
Terminal I Terminal I Estación terminal I	**Terminal II Terminal II Estación terminal II**	**Type Type Tipo**	
1	2	3	4
KENYA			
MOMBASA	DAR-ES-SALAAM	d	
APP	KILIMANJARO	A	
	NAIROBI	d	
NAIROBI	ADDIS ABABA	A	
ACC	DAR-ES-SALAAM	A	
	ENTEBBE	A	
	KHARTOUM	A	
	KILIMANJARO	d	
	MOGADISHU	A	
	MOMBASA	d	
	SEYCHELLES	A	
LESOTHO			
MASERU	BLOEMFONTEIN	A	
APP			
LIBERIA			
ROBERTSFIELD	ABIDJAN	A	
ACC-FIC	BAMAKO	A	
	CONAKRY	A	
	DAKAR	A	
	FREETOWN	A	
LIBYAN ARAB JAMAHIRIA			
BENGHAZI	ATHENS	A	
APP	MALTA	A	
	ALGER	A	
TRIPOLI	CAIRO	A	
ACC-FIC	KHARTOUM	A	
	MALTA	A	
	N'DJAMENA	A	
	NIAMEY	A	
	TUNIS	A	
MADAGASCAR			
ANTANANARIVO	BEIRA	A	
ACC-FIC	DAR-ES-SALAAM	A	
	DZAOUDZI	A	
	JOHANNESBURG	A	
	MAURITIUS	A	
	MORONI	A	
	SAINT-DENIS	A	
	SEYCHELLES	A	

ATS requirements for speech communications Besoins en communications vocales Requisitos de communicaciones orales			Remarks Observations Observaciónes
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
MALAWI			
LILONGWE	BEIRA	A	
ACC-FIC	DAR-ES-SALAAM	A	
	HARARE	A	
	LUSAKA	A	
MALI			
BAMAKO	ABIDJAN	A	
APP	BOBO DIOULASSO	A	
	DAKAR	A	
	GAO	A	
	MOPTI	A	
	OUAGADOUGOU	A	
	ROBERTSFIELD	A	
GAO	BAMAKO	A	
APP	MOPTI	A	
	NIAMEY	A	
MOPTI	BAMAKO	A	
APP	GAO	A	
MAURITANIA			
NOUADHIBOU	DAKAR	A	
APP	LAS PALMAS	A	
	NOUAKCHOTT	A	
NOUAKCHOTT	DAKAR	A	
APP	NOUADHIBOU	A	
MAURITIUS			
MAURITIUS	ANTANANARIVO	A	
ACC-FIC	BOMBAY	A	
	COCOS	A	
	JOHANNESBURG	A	
	PERTH	A	
	SAINT-DENIS	A	
	SEYCHELLES	A	
MOROCCO			
CASABLANCA	ALGER	A	
ACC-FIC	DAKAR	A	
	LAS PALMAS	A	
	LISBOA	A	
	SEVILLA	A	
	VILLA CISNEROS	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
MOZAMBIQUE			
BEIRA	ANTANANARIVO	A	
ACC-FIC	DAR-ES-SALAAM	A	
	HARARE	A	
	LILONGWE	A	
	LUSAKA	A	
	MAPUTO	A	
MAPUTO	BEIRA	A	
APP	DURBAN	A	
	JOHANNESBURG	A	
	MANZINI	A	
NAMIBIA			
WINDHOEK	BLOEMFONTEIN	A	
ACC-FIC	CAPETOWN	A	
	GABORONE	A	
	JOHANNESBURG	A	
	LUANDA	A	
NIGER			
NIAMEY	ABIDJAN	A	
ACC-FIC	ACCRA	A	
	ALGER	A	
	DAKAR	A	
	GAO	A	
	KANO	A	
	N’DJAMENA	A	
	OUAGADOUGOU	A	
	TRIPOLI	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
NIGERIA			
KANO	ACCRA	A	
ACC-FIC	BRAZZAVILLE	A	
	DOUALA	A	
	LAGOS	A	
	LIBREVILLE	A	
	MAIDUGURI	A	
	N'DJAMENA	A	
	NIAMEY	A	
LAGOS	ACCRA	A	
ACC	COTONOU	A	
	DOUALA	A	
	KANO	A	
	LIBREVILLE	A	
MAIDUGURI	KANO	A	
APP	N'DJAMENA	A	
RWANDA			
KIGALI	BUJUMBURA	A	
APP	BUKAVU	A	
	DAR-ES-SALAAM	A	
	ENTEBBE	A	
	GOMA	A	
	KINSHASA	A	
SAO TOME AND PRINCIPE			
SAO TOME	ACCRA	A	
TWR	BRAZZAVILLE	A	
	LIBREVILLE	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
SENEGAL			
DAKAR	ABIDJAN	A	
ACC-FIC	ALGER	A	
	BAMAKO	A	
	BANJUL	A	
	BISSAU	A	
	CASABLANCA	A	
	FREETOWN	A	
	LAS PALMAS	A	
	NIAMEY	A	
	NOUADHIBOU	A	
	NOUAKCHOTT	A	
	RECIFE	A	
	ROBERTSFIELD	A	
	ROCHAMBEAU	A	
	SAL	A	
SEYCHELLES			
SEYCHELLES	ANTANANARIVO	A	
ACC-FIC	BOMBAY	A	
	DAR-ES-SALAAM	A	
	MAURITIUS	A	
	MOGADISHU	A	
	NAIROBI	A	
SIERRA LEONE			
FREETOWN	DAKAR	A	
APP	CONAKRY	d	
	ROBERTSFIELD	d	
SOMALIA			
MOGADISHU	ADDIS ABABA	A	
ACC-FIC	BOMBAY	A	
	DJIBOUTI	A	
	NAIROBI	A	
	SANA'A	A	
	SEYCHELLES	A	
HARGEISA	DJIBOUTI	A	
APP			

ATS requirements for speech communications Besoins en communications vocales Requisitos de communicaciones orales			Remarks Observations Observaciónes
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
SOUTH AFRICA			
BLOEMFONTEIN	CAPETOWN	A	
	DURBAN	A	
	JOHANNESBURG	A	
	MASERU	A	
	PORT ELIZABETH	A	
	WINDHOEK	A	
CAPETOWN	BLOEMFONTEIN	A	
	JOHANNESBURG	A	
	PORT ELIZABETH	A	
	WINDHOEK	A	
DURBAN	BLOEMFONTEIN	A	
	JOHANNESBURG	A	
	MANZINI	A	
	MAPUTO	A	
	PORT ELIZABETH	A	
JOHANNESBURG	ANTANANARIVO	A	
	BEIRA	A	
	BLOEMFONTEIN	A	
	BRASILIA	A	
	CAPETOWN	A	
	DURBAN	A	
	EZEIZA	A	
	GABORONE	A	
	HARARE	A	
	LUANDA	A	
	MANZINI	A	
	MAPUTO	A	
	MAURITIUS	A	
	PERTH	A	
	PORT ELIZABETH	A	
	WINDHOEK	A	
PORT ELIZABETH	BLOEMFONTEIN	A	
	CAPETOWN	A	
	DURBAN	A	
	JOHANNESBURG	A	

ATS requirements for speech communications Besoins en communications vocales Requisitos de communicaciones orales			**Remarks Observations Observaciónes**
Terminal I Terminal I Estación terminal I	**Terminal II Terminal II Estación terminal II**	**Type Type Tipo**	
1	2	3	4
SPAIN			
LAS PALMAS ACC-FIC	CASABLANCA DAKAR LISBOA NOUADHIBOU SAL SANTA MARIA	A A A A A A	
SUDAN			
KHARTOUM ACC-FIC	ADDIS ABABA ASMARA BRAZZAVILLE CAIRO ENTEBBE JEDDAH KIINSHASA NAIROBI N'DJAMENA TRIPOLI	A A A A A A A A A A	
SWAZILAND			
MANZINI APP	DURBAN JOHANNESBURG MAPUTO	A A A	
TOGO			
LOME APP NIAMTOUGOU	ACCRA COTONOU NIAMTOUGOU ACCRA LOME OUAGADOUGOU	A A A A A A	
TUNISIA			
TUNIS ACC-FIC	ALGER MALTA MARSEILLE ROMA TRIPOLI	A A A A A	
UGANDA			
ENTEBBE ACC-FIC	DAR-ES-SALAAM KHARTOUM KIGALI KINSHASA NAIROBI	A A A A A	

ATS requirements for speech communications Besoins en communications vocales Requisitos de communicaciones orales			**Remarks Observations Observaciónes**
Terminal I Terminal I Estación terminal I	**Terminal II Terminal II Estación terminal II**	**Type Type Tipo**	
1	2	3	4
UNITED REPUBLIC OF TANZANIA			
DAR-ES-SALAAM	ANTANANARIVO	A	
ACC-FIC	BEIRA	A	
	BUJUMBURA	A	
	ENTEBBE	A	
	KIGALI	A	
	KILIMANJARO	A	
	KINSHASA	A	
	LILONGWE	A	
	LUSAKA	A	
	MOMBASA	d	
	NAIROBI	A	
	SEYCHELLES	A	
	ZANZIBAR	A	
KILIMANJARO	DAR-ES-SALAAM	A	
APP	MOMBASA	A	
	NAIROBI	A	
ZANZIBAR	DAR-ES-SALAAM	A	
WESTERN SAHARA			
EL AIOUN	LAS PALMAS	A	
DAKHLA	NOUADHIBOU	A	
ZAMBIA			
LUSAKA	BEIRA	A	
ACC-FIC	DAR-ES-SALAAM	A	
	GABORONE	A	
	HARARE	A	
	KINSHASA	A	
	LILONGWE	A	
	LUANDA	A	
	NDOLA	A	
NDOLA	LUBUMBASHI	A	
	LUSAKA	A	

ATS requirements for speech communications **Besoins en communications vocales** **Requisitos de communicaciones orales**			**Remarks** **Observations** **Observaciónes**
Terminal I **Terminal I** **Estación terminal I**	**Terminal II** **Terminal II** **Estación terminal II**	**Type** **Type** **Tipo**	
1	2	3	4
ZIMBABWE			
BULAWAYO	FRANCISTOWN	A	
	HARARE	A	
HARARE	BEIRA	A	
	BULAWAYO	A	
	GABORONE	A	
	JOHANNESBURG	A	
	LILONGWE	A	
	LUSAKA	A	

CHART CNS-1D
CARTE CNS-1D

ATS/DS CIRCUITS PLAN FOR AFI REGION
PLAN DE CIRCUITS ATS/DS POUR LA REGION AFI

TO BE INSERTED

A INSERER

CHART CNS-1E
CARTE CNS-1E

COVERAGE OF THE SATELLITE DISTRIBUTION SYSTEM FOR WAFS PRODUCTS (SADIS) USING INTELSAT 604 AT 60° E
COUVERTURE DU SYSTEME DE DIFFUSION PAR SATELLITE DES PRODUITS DU WAFS (SADIS) AVEC INTELSAT 604 A 60° E

TO BE INSERTED

A INSERER

TABLE CNS 2A — AERONAUTICAL MOBILE SERVICE

TABLEAU CNS 2A — SERVICE MOBILE AÉRONAUTIQUE

TABLA CNS 2A — SERVICIO MÓVIL AERONÁUTICO

EXPLANATION OF THE TABLE

Column

1 Name of station, preceded by its location indicator. Functions for which frequencies are required, using the abbreviations and identifiers as listed in the "Explanation of functions and symbols" below.

The annotation "ER" appears where extended range coverage is required on one or more frequencies. The direction of preferential coverage is indicated (e.g. N, NE, E, etc.).

2 Required number of channels for the function(s) shown in Column 1.

3 HF radiotelephony network designators. An "R" following a designator indicates RDARA family frequencies.

Explanation of functions and symbols

ACC-L	Area control service for flights up to FL 250
ACC-U	Area control service for flights up to FL 450
APP-L	Approach control service for flights below FL 100
APP-I	Approach control service for flights up to FL 150
APP-H	Approach control service for flights up to FL 250
APP-U	Approach control service for flights up to FL 450
FIS-L	Flight information service for flights up to FL 250
FIS-U	Flight information service for flights up to FL 450
GP	VHF en-route general purpose system
ATIS	Automatic terminal information service
AFIS	Aerodrome flight information service
PAR	Precision approach radar service
SMC	Surface movement control service
TWR	Aerodrome control service
VOLMET	VOLMET broadcasts
MWARA	Major world air routes area
RDARA	Regional and domestic air routes area
RCAG	Remote control air-ground

EXPLICATION DU TABLEAU

Colonne

1 Nom de la station, précédé de l'indicateur d'emplacement. Fonctions pour lesquelles des fréquences sont nécessaires, indiquées à l'aide d'abréviations et d'identificateurs choisis dans la liste intitulée <<Explication des fonctions et symboles>> figurant ci-dessous.

L'annotation <<ER>> signifie qu'une couverture étendue est requise sur une ou plusieurs fréquences. La direction de couverture préférée est indiquée (exemple: N, NE, E, etc.).

2 Le nombre de canaux recommandé pour la fonction (ou les fonctions) mentionnées dans la colonne 1.

3 Indicatifs de réseau radiotéléphonique HF. Un "R" placé après l'indicatif signifie des fréquences de la famille de fréquences ZLARN.

Explication des fonctions et symboles

ACC-L	Contrôle régional jusqu'à FL 250
ACC-U	Contrôle régional jusqu'à FL 450
APP-L	Contrôle d'approche au-dessous de FL 100
APP-I	Contrôle d'approche jusqu'à FL 150
APP-H	Contrôle d'approche jusqu'à FL 250
APP-U	Contrôle d'approche jusqu'à FL 450
FIS-L	Service d'information de vol jusqu'à FL 250
FIS-U	Service d'information de vol jusqu'à FL 450
GP	VHF de route d'emploi général
ATIS	Service automatique d'information de région terminale
AFIS	Service d'information de vol d'aérodrome
PAR	Service radar d'approche de précision
SMC	Contrôle des mouvements à la surface
TWR	Contrôle d'aérodrome
VOLMET	Émissions VOLMET
ZLAMP	Zone de passage des lignes aériennes mondiales principales
ZLARN	Zone des lignes aériennes régionales et nationales
RCAG	Air-sol télécommandé

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3

ALGERIA

DAUA ADRAR/Touat
TWR 1

DAAA ALGER
ACC-U 8 AFI-2
ACC-L 5
FIS-L 3-ER 3
VOLMET 1

DAAG ALGER/Houari Boumediene
SMC 1
TWR 1
APP-L 4
APP-I 1

DABB ANNABA/El Mellah
SMC 1
TWR 1
APP-L 1

DAAE BEJAIA/Bejaia
TWR 1

DABC CONSTANTINE/Ain el Bey
SMC 1
TWR 1
APP-L 1

DAUG GHARDAIA AFI-2R

DAUG GHARDAIA/Noumérate
SMC 1
TWR 1
APP-L 1

DAUH HASSI-MESSAOUD/Oued Irara
TWR 1
APP-L 1

DAUI IN SALAH/In Salah
TWR 1

DAOO ORAN/Es Sénia
SMC 1
TWR 1
APP-L 1
APP-I 1

DAAT TAMANRASSET
AFI-2R

DAAT TAMANRASSET/Aguenar
TWR 1
APP-L 1

DABS TEBESSA/Tebessa
TWR 1
APP-L 1

DAON TLEMCEN/Zénata
TWR 1
APP-L 1

~~DAOB TIARET BOU-CHEKIF~~
~~TWR 1~~
~~APP-L 1~~

DAUZ ZARZAITINE AFI-2R

DAUZ ZARZAITINE/In Aménas
TWR 1
APP-L 1

ANGOLA

FNHU HUAMBO/Albano Machado
TWR 1
APP-L 1

FNLU LUANDA
ACC-U 2 AFI-4
GP 1 AFI-4R
ACC-L 1 SAT-2

FNLU LUANDA/4 de Fevereiro
SMC 1
TWR 1
APP-U 1
APP-I 1
APP-L 1
VOLMET
ATIS 1

BENIN

DBBB COTONOU/Cadjehoun
TWR 1 AFI-4R
APP-I 1

BOTSWANA

FBFT FRANCISTOWN/Francistown
TWR 1
APP-H 1
SMC 1

FBSK GABORONE
ACC-U 2-ER 2AFI-4
AFI-4R

FBSK GABORONE/Sir Seretse Khama
TWR 1
APP-H 2
SMC 1

FBMN MAUN/Maun

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
TWR		1	
APP-H		1	
SMC		1	
FBKE KASANE/Kasane			
TWR		1	
APP-H		1	
SMC		1	
FBSP SELEBI-PHIKWE/Selebi-Phikwe			
TWR		1	
SMC		1	
BURKINA FASO			
DFOO BOBO-DIOULASSO/ Bobo-Dioulasso			AFI-1R
DFOO BOBO-DIOULASSO/ Bobo-Dioulasso			
TWR		1	
APP-I		1	
DFFD OUAGADOUGOU AFI-1R			
DFFD OUAGADOUGOU/Ouagadougou			
TWR		1	
APP-U		1	
BURUNDI			
HBBA BUJUMBURA			AFI-4R
ACC-I	ER	1	
HBBA BUJUMBURA/Bujumbura			
SMC		1	
TWR		1	
APP-H		1	
CAMEROON			
FKKK DOUALA			
ACC-U	2-ER NE	2	
	SE		AFI-4R
VOLMET		1	
FKKD DOUALA/Douala			
SMC		1	
TWR		1	
APP-I		1	
APP-U		1	
FKKR GAROUA			
FKKR GAROUA/Garoua AFI-4R			

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
TWR		1	
APP-I		1	
FKKL MAROUA			AFI-4R
FKKL MAROUA/Salak			
TWR		1	
FKKN N'GAOUNDERE/N'Gaoundéré			
TWR		1	
FKYS YAOUNDE/Nsimalen			
TWR		1	
APP-I		1	
CAPE VERDE			
GVFM PRAIA/Francisco Mendes			
TWR		1	
APP-L		1	
GVAC SAL I.			
ACC-U	2-ER	2	SAT-1
ACC-L		1	SAT-2
			AFI-1
			AFI-2
GVAC SAL I./Amilcar Cabral			
TWR		1	
APP-I		1	
CENTRAL AFRICAN REPUBLIC			
FEFF BANGUI			
FIS-L	2-ER	2	
FEFF BANGUI/M'Poko			AFI-4R
TWR		1	
APP-I		1	
FEFT BERBERATI/Berberati			
TWR		1	
CHAD			
FTTT N'DJAMENA			
ACC-U		1	AFI-2
FIS-L	1-ER	1	
FTTJ N'DJAMENA/N'Djamena			
TWR		1	
APP-I		1	
COMOROS			
FMCV ANJOUAN/Ouani			
TWR		1	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
FMCZ DZAOUDZI/Pamanzi, Mayotte I.		
TWR	1	
APP-I	1	
FMCH MORONI		AFI-5
FMCH MORONI/Prince Said Ibrahim		
TWR	1	
APP-L	1	
CONGO		
FCCC BRAZZAVILLE		
ACC-U	1	AFI-4
FIS-U 2-ER	2	AFI-4R
VOLMET (HF)		
FCBB BRAZZAVILLE/Maya-Maya		
TWR	1	
APP-U	1	
FCPP POINTE NOIRE/Agostino Neto		
TWR	1	
APP-I	1	
COTE D'IVOIRE		
DIII ABIDJAN		
ACC-U	1	AFI-1
VOLMET	1	
DIAP ABIDJAN/Felix H. Boigny		
SMC	1	
TWR	1	
APP-H	1	
DIBK BOUAKE/Bouaké		
SMC	1	AFI-1R
TWR	1	
APP-I	1	
DEMOCRATIC REPUBLIC OF THE CONGO		
FZNA GOMA		AFI-4R
FZNA GOMA/Goma		
TWR	1	
APP-I	1	
FZZA KINSHASA		
ACC-U 4-ER	4	AFI-4 AFI-4R
FZAA KINSHASA/N'Djili		
TWR	1	
APP-I	1	
FZIC KISANGANI		
FIS-U	1	AFI-4R
ACC-I	1	
FZIC KISANGANI/Bangoka		
TWR	1	
APP-I	1	
FZWA MBUJI MAYI/Mbuji Mayi		
TWR	1	
FZQA LUBUMBASHI		
ACC-U	1	AFI-4R
FZQA LUBUMBASHI/Luano		
TWR	1	
APP-U	1	
DJIBOUTI		
HDDD DJIBOUTI		
HDAM DJIBOUTI/Ambouli		
SMC	1	
TWR	1	AFI-3R
APP-H	1	
EGYPT		
HEBL ABU SIMBEL/Abu Simbel		
TWR	1	
APP-I	1	
HEAX ALEXANDRIA/Alexandria		
TWR	2	
APP-I	1	
APP-L	1	
SMC	1	
HESN ASWAN/Aswan		
TWR	1	
APP-I	1	
HECA CAIRO		
ACC-U 8-ER	8	AFI-3
ACC-L	3	MID-1
VOLMET	1	
HECA CAIRO/Cairo Intl		
SMC	2	
TWR	2	
APP-I	2	
APP-L	1	
ATIS	1	
HEGN HURGHADA/Hurghada		
SMC	1	
TWR	2	
APP-I	1	
APP-L	1	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
HELX LUXOR/Luxor		
SMC	1	
TWR	2	
APP-I	1	
APP-L	1	
HEMM MERSA MATRUH/Mersa Matruh		
TWR	1	
HESC SAINTE CATHERINE/Sainte Catherine		
TWR	1	
HETB TABA/Taba	2	
TWR		
HESH SHARM EL SHEIK/Sharm El Sheikh		
TWR	2	
APP-I	1	
APP-L	1	
SMC	1	
EQUATORIAL GUINEA		
FGSL MALABO/Malabo		
TWR	1	
APP-I	1	
ERITREA		
HHSB ASSAB/Assab Intl.		1
HHAS ASMARA/Asmara Intl.		
SMC	1	AFI-3
TWR	1	
APP-U	1	
ACC-U	2	
ETHIOPIA		
HAAB ADDIS ABABA		
ACC-U 3-ER	3	AFI-3 AFI-3R
HAAB ADDIS ABABA/Bole Intl		
SMC	1	
TWR	1	
APP-I	1	
HADR DIRE DAWA/Aba Tenna		
SMC	1	
TWR	1	
APP-I	1	
GABON		
FOON FRANCEVILLE		AFI-4R

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
FOON FRANCEVILLE/M'Vengué		
TWR	1	
APP-L	1	
SMC	1	
FOOO LIBREVILLE		
ACC-U	1	AFI-4R
FIS-L	1	
FOOL LIBREVILLE/Léon M'Ba		AFI-4R
SMC	1	
TWR	1	
APP-U	1	
FOOG PORT GENTIL		AFI-4R
FOOG PORT GENTIL/Port Gentil		
TWR	1	
APP-I	1	
SMC	1	
GAMBIA		
GBYD BANJUL/Yundum		
SMC	1	
TWR	1	
APP-H	1	
GHANA		
DGAA ACCRA		
ACC-U 2-ER	2	AFI-4R
DGAA ACCRA/Kotoka Intl		
SMC	1	
TWR	1	
APP-I	1	
APP-U	1	
DGSI KUMASI/Kumasi		
TWR	1	
DGLE TAMALE/Tamale		
TWR	1	
APP	1	
GUINEA		
~~GUOK BOKE/Baralandé~~		
~~TWR~~	~~1~~	
GUCY CONAKRY		AFI-1R
GUCY CONAKRY/Gbessia		
SMC	1	
TWR	1	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
APP-I	1	
~~GUFH FARANAH/Badala~~		
~~TWR~~	~~1~~	
GUXD KANKAN/Diankana		
TWR	1	
GULB LABE/Tata		
TWR	1	
GUNZ N'ZEREKORE/Konia		
TWR	1	
GUINEA-BISSAU		
GGOV BISSAU/Oswaldo Viera Intl		
TWR	1	
APP-H	1	
FIS-L	1	
SMC	1	
KENYA		
HKEL ELDORET/Eldoret Intl.		
SMC		
TWR		
APP-I		
HKMO MOMBASA/Moi Intl		
SMC	1	
TWR	1	
APP-U	1	
HKNA NAIROBI		
ACC-U	6	AFI-3
FIS-L	1	AFI-3R
HKNA NAIROBI/Jomo Kenyatta Intl		
SMC	1	
TWR	1	
APP-U	1	
APP-I	2	
LESOTHO		
FXMM MASERU		
FIS-L		AFI-4R
FXMM MASERU/Moshoeshoe I Intl		
SMC	1	
TWR	1	
APP-H	1	
LIBERIA		
GLRB MONROVIA		
ACC-U 2-ER	2	AFI-1R
GLRB MONROVIA/Roberts Intl		
SMC	2	AFI-1
TWR	1	
APP-I	1	
LIBYAN ARAB JAMAHIRIA		
HLLB BENGHAZI		
ACC-U	1	AFI-3
ACC-L	1	
FIS-L	1	
VOLMET	1	
HLLB BENGHAZI/Benina		
SMC	1	
TWR	1	
APP-I	1	
APP-L	1	
HLLS SEBHA/Sebha		
SMC	1	
TWR	1	
APP-I	1	
HLLT TRIPOLI		
ACC-L	1	AFI-2
FIS-L	1	AFI-3
GP	1	
VOLMET	1	
HLLT TRIPOLI/Tripoli Intl.		
SMC	1	
TWR	1	
APP-I	1	
APP-L	1	
MADAGASCAR		
FMMM ANTANANARIVO		
FIS-U	2	
ACC-U	1	INO-1
GP	1	AFI-5
VOLMET (HF)		
FMMI ANTANANARIVO/Ivato		
TWR	1	
APP-I	1	
FMNA ANTSIRANANA/Arrachart		
TWR	1	
FMNM MAHAJANGA/Amborovy		
TWR	1	
APP-I	1	
FMNN NOSY-BE/Fascène		
TWR	1	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
FMMS SAINTE MARIE/St. Marie		
AFIS	1	
FMMT TOAMASINA/Toamasina		
TWR	1	
APP-I	1	
FMSD TOLAGNARO/Tolagnaro		
AFIS	1	
MALAWI		
FWCL BLANTYRE/Chileka		
SMC	1	
TWR	1	
APP-U	1	
FWLI LILONGWE/Lilongwe Intl.		
SMC	1	
TWR	1	
APP-U	1	
APP-I	1	
FWLL LILONGWE		
ACC-U ER	1	AFI-4R
MALI		
GABS BAMAKO		AFI-1R
GABS BAMAKO/Sénou		
TWR	1	
APP-I	1	
APP-U	1	
GAGO GAO		AFI-2R
GAGO GAO/Gao		
TWR	1	
APP-I	1	
GAKY KAYES/Kayes		
TWR	1	
GAMB MOPTI-BARBE/Mopti-Barbe		
TWR	1	
GANR NIORO/Nioro		
TWR	1	
GATB TOMBOUCTOU/Tombouctou		
TWR	1	
MAURITANIA		
GQPA ATAR/Atar		
TWR	1	
GQNI NEMA/Nema		
TWR	1	
GQPP NOUADHIBOU		AFI-1R SAT-2R
GQPP NOUADHIBOU/Nouadhibou		
TWR	1	
APP-I	1	
GQNN NOUAKCHOTT AFI-1R		SAT-2R
GQNN NOUAKCHOTT/Nouakchott		
TWR	1	
APP-I	1	
APP-U	1	
GQPZ ZOUERATE/Zouerate		
TWR	1	
MAURITIUS		
FIMP MAURITIUS		
ACC-U	1	INO-1
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl		
SMC	1	
TWR	1	
APP-U	1	
MOROCCO		
GMAD AGADIR/Al Massira		
TWR	2	
APP-L	2	
GMTA AL HOCEIMA/Chérif Al Idrissi		
TWR	1	
APP-L	3	
GMMM CASABLANCA		
ACC-U 3-ER	6	AFI-1
VOLMET	1	
GMMN CASABLANCA/Mohammed V		
TWR	1	
APP-L	2	
GMFK ERRACHIDIA/Moulay Ali Chérif		
TWR	1	
GMFF FES/Saïss		
TWR	2	
ATIS	1	
GMMX MARRAKECH/Ménara		
TWR	2	

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
APP-L		1	
ATIS		1	
GMMZ OUARZAZATE/Ouarzazate			
TWR		3	
GMFO OUJDA/Angads			
TWR		2	
APP-L		1	
ATIS		1	
GMME RABAT/Salé			
TWR		3	
APP-L		2	
GMTT TANGER/Ibriou Batouta			
TWR		1	
APP-L		1	
GMAT TAN-TAN/Plage Blanche			
TWR		1	
GMTN TETOUAN/Saniat-Rimel			
TWR		1	
MOZAMBIQUE			
FQBR BEIRA			
ACC-U	3-ER	3	
FIS-L	ER	1	INO-1
FIS-U			AFI-4
			AFI-4R
FQBR BEIRA/Beira			
TWR		1	
APP-I		1	
SMC		1	
FQMA MAPUTO			
ACC-U	ER	1	
FQMA MAPUTO/Maputo			
TWR		1	
APP-U		1	
SMC		1	
FQTT TETE			
GP	ER		
FQWP NAMPULA			
GP	ER	1	
NAMIBIA			
FYKT KEETMANSHOOP/ Keetmanshoop			
TWR		1	
APP		1	
FYWB WALVIS BAY/Walvis Bay			
TWR		1	
APP		1	
FYWH WINDHOEK			AFI-4
FYWH WINDHOEK/Hosea Kutako			
TWR		1	
APP-I		1	
NIGER			
DRZA AGADES/Sud			
TWR		1	
DRRR NIAMEY			AFI-2
ACC-U	2-ER	2	AFI-4
FIS-U		2	
DRRN NIAMEY/Diori Hamani Intl			
TWR		1	
APP-U		1	
DRZR ZINDER/Zinder			
TWR		1	
NIGERIA			
DNAA ABUJA/Nnamdi Azikiwe			
TWR		1	
APP-I		1	
SMC		1	
DNCA CALABAR/Calabar			
TWR		1	
APP-L		1	
DNIL ILORIN/Ilorin			
TWR		1	
APP-L		1	
DNKA KADUNA/Kaduna			
TWR		1	
APP-L		1	
DNKK KANO			
ACC-U	2-ER	4	AFI-2
			AFI-4
DNKN KANO/Mallam Aminu Kano			
SMC		1	
TWR		1	
APP-U		2	
DNLL LAGOS			
ACC-U	3-ER	4	AFI-4
DNMM LAGOS/Murtala Muhammed			
SMC		1	
TWR		1	
APP-U		2	

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
DNMA MAIDUGURI/Maiduguri			
TWR		1	
APP-I		1	
DNPO PORT HARCOURT/Port Harcourt			
SMC		1	
TWR		1	
APP-L		1	
APP-U		1	
DNSO SOKOTO/Siddiq Abubakar III			
TWR		1	
APP-L		1	
REUNION (France)			
FMEE SAINT-DENIS/ Gillot (La Réunion)			
SMC		1	
TWR		1	
APP-U		1	
RWANDA			
HRYR KIGALI/Gregoire Kayibanda			AFI-4R
SMC		1	
TWR		1	
APP-H		1	
ACC-L		1	
SAO TOME AND PRINCIPE			
FPST SAO TOME			AFI-4R
FPST SAO TOME/Sao Tome			
TWR		1	
APP-I		1	
SMC		1	
SENEGAL			
GOGS CAP SKIRING/Cap Skiring			
TWR		1	
GOOO DAKAR			AFI-1
ACC-U	3-ER	3	SAT-1
FIS-U	2	2	SAT-2
GOOY DAKAR/Léopold Sédar Senghor			
SMC		1	
TWR		1	
APP-U		2	
GOTT TAMBACOUNDA/Tambacounda			
TWR		1	
GOSS SAINT-LOUIS/Saint-Louis			
TWR		1	
GOGG ZIGUINCHOR/Ziguinchor			
TWR		1	
SEYCHELLES			
FSIA MAHE			INO-1
ACC-U	ER	1	AFI-5
			AFI-3
FSIA MAHE/Seychelles Intl			
SMC		1	
TWR		1	
APP-U		1	
SIERRA LEONE			
GFLL FREETOWN			AFI-1
GFLL FREETOWN/Lungi			
SMC		1	
TWR		1	
APP-I		1	
SOMALIA			
HCMI BERBERA/Berbera			
TWR		1	
APP-U		1	
HCMV BURAO/Burao			
TWR		1	
HCMH HARGEISA/Hargeisa			
TWR		1	
APP-U		1	
HCMK KISIMAYU/Kisimayu			
TWR		1	
APP-U		1	
HCMM MOGADISHU			
ACC-U		1	AFI-3
HCMM MOGADISHU/Mogadishu			
SMC		1	
TWR		1	
APP-U		1	
SOUTH AFRICA			
FAAB ALEXANDER BAY/ Alexander Bay			
TWR		1	
FABL BLOEMFONTEIN			

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
ACC-U	1	
FIS-L	1	
FABL BLOEMFONTEIN/Bloemfontein		
TWR	1	
APP-I	1	
FACT CAPE TOWN		
ACC-U	1	SAT-2
FACT CAPE TOWN/CapeTown		
TWR	1	
FADN DURBAN/Durban		
ACC-U	1	INO-1
FIS-L	1	
FADN DURBAN/Durban		
TWR	1	
APP-I	2	
FAJS JOHANNESBURG AFI-4		
ACC-U	1	
GP	2	AFI-4R
FAJS JOHANNESBURG/Johannesburg		
TWR	1	
APP-I	2	
FAGM JOHANNESBURG/Rand		
TWR	1	
FALA LANSERIA/Lanseria		
TWR	1	
FAMM MAFIKENG/Mafikeng		
TWR	1	
FANS NELSPRUIT/Nelspruit		
TWR	1	
FAPB PIETERSBURG/Gateway		
TWR	1	
FADE PORT ELIZABETH/Port Elizabeth		
TWR	1	
APP-I	1	
FAUP UPINGTON/Upington		
TWR	1	
SPAIN		
GCFV FUER TEVENTURA Fuerteventura, Canary Is.		
SMC	1	
TWR	1	
APP-I	1	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3
GCCC GRAN CANARIA/Gran Canaria, Canary Is.		
ACC-U 4-ER	4	
GP	1	SAT-2
ACC-L	4	
GCLP GRAN CANARIA/ Gran Canaria, Canary Is.		
SMC	1	
TWR	1	
APP-I	2	
APP-U	1	
ATIS	1	
GCHI HIERRO I./Hierro, Canary Is.		
SMC	1	
TWR	1	
GCLA LA PALMA/La Palma, Canary Is.		
SMC	1	
TWR	1	
GCRR LANZAROTE/Lanzarote, Canary Is.		
SMC	1	
TWR	1	
APP-I	1	
GEML MELILLA/Melilla		
SMC	1	
TWR	1	
GCXO TENERIFE NORTE/Los Rodeos Canary Is.		
SMC	1	
TWR	1	
APP-I	1	
GCTS TENERIFE SUR/Reina Sofia, Canary Is.		
SMC	1	
TWR	1	
APP-L	1	
SUDAN		
HSSJ JUBA/Juba		
TWR	1	
APP-U	1	
HSSS KHARTOUM		
ACC-U	2	AFI-3
HSSS KHARTOUM/Khartoum		
TWR	1	
APP-U	1	
HSSP PORT SUDAN/Port Sudan		
TWR	1	
APP-U	1	

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
SWAZILAND			
FDMS MANZINI			
FDMS MANZINI/Matsapha			
TWR		1	
APP-I		1	
TOGO			
DXXX LOMÉ			AFI-4R
DXXX LOMÉ/Tokoin			
TWR		1	
APP-I		1	
DXNG NIAMTOUGOU/Niamtougou			
TWR		1	
APP-H		1	
TUNISIA			
DTTJ DJERBA/Zarzis			
SMC		1	
TWR		1	
APP-L		1	
APP-I		1	
DTTF GAFSA/Ksar			
TWR		1	
DTMB MONASTIR/Habib Bourguiba			
SMC		1	
TWR		1	
APP-I		1	
APP-L		1	
DTTX SFAX/Thyna			
TWR		1	
APP-I		1	
DTKA TABARKA/7 Novembre			
TWR		1	
APP-I		1	
DTTZ TOZEUR/Nefta			
TWR		1	
APP-I		1	
DTTC TUNIS			
ACC-U	3-ER	5	
FIS-L	2-ER	1	
VOLMET	2-2E	2	
DTTA TUNIS/Carthage			
SMC		1	
TWR		1	
APP-I		2	
APP-L		2	

Location and function Emplacement et fonction Lugar y función		VHF	HF En route/ en ruta
1		2	3
UGANDA			
HUEN ENTEBBE			AFI-3
ACC-U		1	AFI-4
		1	AFI-4R
HUEN ENTEBBE/Entebbe Intl			
TWR		1	
APP-L		1	
UNITED REPUBLIC OF TANZANIA			
HTDA DAR-ES-SALAAM			
ACC-U		2	
ACC-L		4	AFI-4R
VOLMET		1	AFI-4R
			INO-1
HTDA DAR-ES-SALAAM/ Dar-es-Salaam			
SMC		1	AFI-4
TWR		1	AFI-4R
APP-L		1	
APP-I		3	
HTKJ KILIMANJARO/Kilimanjaro Intl			
SMC		1	
TWR		1	
APP-I		3	
HTZA ZANZIBAR/Zanzibar			
SMC		1	
TWR		1	
APP-I		2	
WESTERN SAHARA			
GSAI EL AAIUN/El Aaiun			
TWR		1	
APP-L		2	
GSVO VILLA CISNEROS/Villa Cisneros			
TWR		2	
ZAMBIA			
FLLI LIVINGSTONE/Livingstone Intl			
TWR		1	
APP-H		1	
FLLS LUSAKA			
ACC-U	3-ER	3	AFI-4R
FLLS LUSAKA/Lusaka Intl			
TWR		1	
APP-H		2	

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3

Location and function Emplacement et fonction Lugar y función	VHF	HF En route/ en ruta
1	2	3

FLMF MFUWE/Mfuwe
- TWR 1
- APP-H 1

FLND NDOLA/Ndola
- TWR 1
- APP-H 1

ZIMBABWE

FVBU BULAWAYO

FVBU BULAWAYO/Bulawayo
- TWR 1
- APP-H 1

FVHA HARARE
- ACC-U 1
- GP 1
- FIS-L 2-ER 2

FVHA HARARE/Harare
- TWR 1
- APP-I 1

FVFA VICTORIA FALLS/Victoria Falls
- TWR 1
- APP-I 1

APPENDIX TO TABLE CNS 2A— VHF FREQUENCY UTILIZATION PLAN
APPENDICE AU TABLEAU CNS 2A - PLAN D'UTILISATION DES FREQUENCES VHF

Function/Fonction/Función	Frequencies (MHz)/Fréquences (MHz)/Frecuencias (MHz)						
TWR	118.1	118.3	118.4	118.6	118.7	118.9	
SMC	121.7	121.9					
APP-L	119.0	119.1	119.2	119.4	119.6	119.7	120.0
APP-I	120.3	120.7	121.1	121.2	121.3	123.9	124.3
APP-U	124.5 126.9	124.9 127.2	125.3 128.2	125.5	125.7	125.9	126.0
APP-PAR	119.5	119.9	120.1				
ACC-FIS	118.5 124.7 127.3 129.3	119.3 125.1 128.7	119.8 125.4 128.8	120.5 126.1 128.9	120.6 126.5 129.5	120.8 126.7 128.1	124.6 127.1 129.1
OPC	131.4 – 131.9						
GP	AFI-1 AFI-2 AFI-3 AFI-4 AFI-5	131.3 126.3 129.3 128.7 128.9					
IGA	Aerodrome control service/ Contrôle d'aérodrome/ Servicio de control de aeródromo			118.2			
	Approach control service/ Contrôle d'approche/ Servicio de control de aproximación			119.6			
VOLMET/ATIS	126.2	126.4	126.6	126.8	127.0	127.6	
AIR-TO-AIR/ COMMUNICATION AIR-AIR/ COMUNICACIÓN AIRE-A-AIRE	123.45						

CHART CNS-2A
CARTE CNS-2A

HF EN ROUTE RADIOTELEPHONY NETWORKS AND VHF EXTENDED RANGE
RESEAUX RADIOTLEPHONIQUES HF EN ROUTE ET VHF PORTEE ELARGIE

TO BE INSERTED

A INSERER

APPENDIX TO CHART CNS-2A
APPENDICE A LA CARTE CNS-2A

TABULAR FORM OF CHART CNS-2A AS IT APPLIES TO THE AFI REGION
PRESENTATION TABULAIRE DE LA CARTE CNS-2A APPLICABLE A LA REGION AFI

Freq Freq (Khz)	ITU allotment area/zone d'allotissement UIT	AFI-1	AFI-2	AFI-3	AFI-4	AFI-5	INO-1	SAT-1	SAT-2	V AFI	REMARKS/ OBSERVATIONS
1	2	3	4	5	6	7	8	9	10	11	12
2851	AFI				X						
2854	SAT								X		
2860	V AFI									X	
2878	AFI				X						
2935	SAT										(1)
3404	V AFI									X	
3419	AFI		X								
3425	AFI					X					
3452	SAT	X						X			(3)
3467	AFI, MID, SP			X							
3476	INO, NAT						X				
4657	AFI, CEP					X					
5493	AFI				X						
5499	V AFI									X	
5517	AFI,			X							
5565	SAT								X		
5634	INO						X				
5652	AFI, CWP		X								
6535	SAT	X						X			(3)
6538	V AFI									X	
6559	AFI				X						
6574	AFI			X							
6586	RDARA 7				X						
6673	AFI, CEP	X									
8852	V AFI									X	

Freq Freq (Khz)	ITU allotment area/zone d'allotissement UIT	AFI-1	AFI-2	AFI-3	AFI-4	AFI-5	INO-1	SAT-1	SAT-2	V AFI	REMARKS/ OBSERVATIONS
1	2	3	4	5	6	7	8	9	10	11	12
8861	SAT	X						X			(3)
8870	RDARA 5			X							
8873	RDARA 4				X						
8879	INO, NAT						X				
8888	RDARA 7				X						
8894	AFI		X								
8903	AFI, CWP				X						
10057	V AFI									X	
11291	SAT								X		
11300	AFI			X							
11330	AFI, NP										(1)
13261	V AFI									X	
13273	AFI		X								
13288	AFI, EUR, MID			X							
13294	AFI				X						
13306	INO, NAT						X				
13315	SAT, NCA								X		
13357	SAT	X						X			(3)
17955	SAT	X						X	X		(3)
17961	AFI, INO		X	X	X		X				

Note.— Headings of columns 3 through 11 indicate the ICAO designator for HF MWARA and VOLMET networks operating in or adjacent to the AFI Region and are derived from the ITU allotment area abbreviations as contained in Appendix 27 Aer2 to the ITU Radio Regulations.

ITU Allotment areas from ITU RR Appendix 27 Aer2:

Two and three letter entries indicate major world air route areas (MWARAs):

AFI	=	Africa	CEP	=	Central East Pacific
EUR	=	Europe	CWP	=	Central West Pacific
INO	=	Indian Ocean	NAT	=	North Atlantic
MID	=	Middle East	NP	=	North Pacific
NCA	=	North Central Asia	SAT	=	South Atlantic

Four letter entries indicate VOLMET areas:

V AFI	=	VOLMET area — Africa-Indian Ocean
V EUR	=	VOLMET area — Europe
V MID	=	VOLMET area — Middle East
V NCA	=	VOLMET area — North Central Asia
V SEA	=	VOLMET area — South East Asia

Numeric followed by alpha(s) indicates regional and domestic air route areas (RDARAs).

Column 12 — Remarks indicate:

1) Available for future use in the allotment area indicated, subject to coordination with ICAO.

2) Available for future use in the network indicated, subject to coordination with ICAO.

3) Frequency selected by applying the provisions of Appendix 27/21 of Appendix 27 Aer 2 to the ITU Radio Regulations.

Note.- Les titres des colonnes 3 à 11 sont les indicatifs OACI de réseau ZLAMP et VOLMET HF fonctionnant dans la Région AFI ou les régions adjacentes: ces indicatifs sont forms d'après les designations des zones d'allotissement UIT qui figurent dans l'Appendice 27 Aer2 au Règlement des radiocommunications de l'UIT:

Zones d'allotissement de l'UIT, selon l'Appendice 27 Aer2 au RR de l'UIT:

Les sigles de deux ou trois lettres désignent les zones de passage des lignes aériennes mondiales principales (ZLAMP):

AFI	=	Afrique	CEP	=	Centre Est Pacifique
EUR	=	Europe	CWP	=	Centre Ouest Pacifique
INO	=	Océan Indien	NAT	=	Nord Atlantique
MID	=	Moyen-Orient	NP	=	Nord Pacifique
NCA	=	Nord Centre Asie	SAT	=	Sud Atlantique

Les sigles de quatre lettres désignent les zones VOLMET:

V AFI	=	zone VOLMET - Afrique-Océan Indien
V EUR	=	zone VOLMET - Europe
V MID	=	zone VOLMET - Moyen-Orient
V NCA	=	zone VOLMET - Nord Centre Asie
V SEA	=	zone VOLMET - Sud-est asiatique

Les nombres suivis d'une ou plusieurs lettres désignent les zones des lignes aériennes régionales et nationales (ZLARN).

Colonne 12 - Observations:

1) Disponible pour utilisation future dans la zone d'allotissement indiquée, sous reserve de coordination avec l'OACI.

2) Disponible pour utilisation future dansle réseau indiqué, sous reserve de coordination avec l'OACI.

3) Fréquence choisie par application des dispositions de l'Appendice 27/21 de l'Appendice 27 Aer2 du Règlement des radiocommunications de l'UIT.

- - - - - - - - - - - -

[INSERT SPANISH TRANSLATION]

TABLE CNS 3 - RADIONAVIGATION AIDS
Phases I and II of the AFI GNSS Strategy
EXPLANATION OF THE TABLE

Column

1 Name of the country, city and aerodrome and, for en-route and terminal area aids, the location of the facility.

2 Type of runway:

NINST	-	non-instrument
NPA	-	non-precision approach runway
PA1	-	precision approach runway, Category I
PA2	-	precision approach runway, Category II

3 The function served by the aids shown in columns 4 to 8:

A/L	-	approach and landing
E	-	en-route
T	-	terminal

4 ILS - Instrument landing system. The designation number of the runway to be served by an ILS is indicated together with a Roman numeral I or II to indicate a facility performance Category I or II ILS, respectively.

Note: - The symbol "" indicates that the ILS requires a Category II signal quality but without the reliability and availability provided by redundant equipment and automatic changeover.*

5 Locator, either associated with an ILS or for use as an approach aid to an aerodrome.

6 Distance measuring equipment. Aligned with the ILS shown in column 4 when the DME is required to serve as a substitute for a marker beacon component of ILS. When aligned with the VOR in column 7, indicates a requirement for the DME to be collocated with the VOR.

7 Recommended VOR.

8 NDB.

Note I:- New requirements for NDB are discouraged. En-route navigation requirements are to be met by VOR/DME facilities.

Note II:- A plus sign (+) indicates that the NDB should be withdrawn when the recommended VOR or VOR/DME is implemented.

Note III:- The LF/MF NDB annoted with the symbol "#" are, with few exceptions, existing national facilities which are not protected from interference to the extent required by the international planning provisions of Annex 10.

9 The distance and altitude to which signal protection of the VOR or VOR/DME is required, indicated in nautical miles (NM) and in hundreds of feet, or recommended rated coverage of NDB expressed in nautical miles.

Note: - Rated coverage is defined as the area surrounding an NDB within which the strength of the vertical field of the ground wave exceeds the minimum value specified for geographical area in which the radio beacon is located.

10 & 11 GNSS - global navigation satellite system (including GBAS and SBAS). **(To be developed)**

GBAS (ground-based augmentation system) implementation planned to be used in precision approach and landing CAT-I , CAT-II, CAT-III.

Note: CAT-I by GBAS or SBAS will be available at those location where analysis of historical MET data or traffic characteristics justifies the requirement.

SBAS (satellite-based augmentation system) planned to be used for route navigation, for terminal, for non precision approach and landing. An "X" indicates service availability; exact location of installation will be determined.

12 Remarks

TABLEAU CNS 3 - AIDES DE RADIONAVIGATION

EXPLICATION DU TABLEAU

Colonne

1 Nom du pays, de la ville et de l'aérodrome et, dans le cas des aides de route et de région terminale, emplacement de l'installation.

2 Type de piste:

NINST - piste à vue
NPA - piste avec approche de non-précision
PA1 - piste avec approche de précision, catégorie I
PA2 - piste avec approche de précision, catégorie II

3 Fonction des aides indiquées dans les colonnes 4 à 8:

A/L - aide d'approche et d'atterrisage
E - aide de route
T - aide terminale

4 ILS - Système d'atterrisage aux instruments. Le numéro d'identification de la piste qui doit être desservie par un ILS est indiqué et accompagné du chiffre romain I ou II pour indiquer une installation ILS de catégorie de performance I ou II, respectivement.

Note: - Le symbole "" indique que l'ILS doit émettre des signaux d'assez bonne qualité pour la catégorie II, sans la fiabilité et la disponibilité procurées par un équipement redondant et le passage automatique sur équipement de secours.*

5 Radiobalise associée à un ILS ou utilisée comme aide d'approche sur un aérodrome.

6 Équipement de mesure de distance. En regard de l'ILS de la colonne 4: le DME doit être utilisé à place d'une radioborne faisant partie de l'ILS. En regard du VOR de la colonne 7: le DME doit être coïmplanté avec le VOR.

7 VOR recommandé.

8 NDB recommandé.

Note I:- Le signe plus (+) indique que le NDB devra être mis hors de service lorsque l'installation VOR ou VOR/DME aura été mis en oeuvre.

Note II:- Presque tous les NDB LF/MF identifiés par le symbol "#" sont des aides nationales existantes non protégées contre le brouillage autant que l'exigent les dispositions de l'Annexe 10 relatives à la planification internationale.

9 La distance et l'altitude jusqu'auxquelles les signaux du VOR ou du VOR/DME doivent être protégés sont respectivement indiquées en milles marins (NM) et en centaines de pieds, et la couverture nominale recommandée pour le radiophare non directionnel NDB est donnée en miles marins.

Note: - Par définition, la couverture nominale est la zone entourant le NDB dans laquelle le champ vertical de l'onde de sol dépasse la valeur minimale spécifiée pour la région où se trouve ce radiophare.

10 & 11`GNSS - système mondial de navigation par satellite (y compris GBAS et SBAS) (à élaborer)

GBAS (système de renforcement à base de stations au sol) à mettre en oeuvre pour être utilisé à l'approche et l'atterrissage de précision CAT-I, CAT-II, CAT-III.

Note: Le GBAS ou SBAS de CAT-I sera disponible aux emplacements où l'anlyse des données MET historiques ou bien les caractéristiques de trafic en justifient le besoin.

SBAS (système de renforcement satellitaire) prévu poue être utilisé pour la navigation en route, en region terminale et pour l'approche et l'atterrissage classiques. Un "X" indique la disponibilité du service; l'emplacement exact des installations sera à determiner.

12 Observations

- - - - - -

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
ALGERIA											
ADRAR/Taouat	04 NPA 22 NINST	A/L		X	X	X	X	200/250			
ALGER/Houari Boumediene		E			X	X		200/500			
	05 NPA	A/L		X	X	X					
	23 PA2	A/L	23-II	X	X	X					
	09 PA1	A/L	09-II*	X							
	27 NPA	A/L									
ANNABA/EL Mellah		E			X	X	X	200/250			
	01 NPA	A/L		X	X	X	X				
	19 PA1	A/L	19-II	X	X	X					
	05 NPA	A/L									
	23 NINST	A/L									
BEJAIA/Bejaia		E					X				
	08 NPA	A/L									
	26 NPA	A/L									
BENI ABBES		E					X	200/500			
BENI AMRANE		E					X	200/170			
BORDJ MOKHTAR		E				X		100			
BORDJ OMAR DRISS		E			X	X	X	200/500			
BOU-SAADA		E			X	X		200/500			
CHERCHELL		E			X	X	X	100			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
CONSTANTINE/Mouhamed Boudiaf		E			X	X	X	200/500			
	14 NPA	A/L			X	X	X				
	32 PA1	A/L	32-II*		X	X	X				
	16 NPA	A/L			X	X					
	34 PA1	A/L	34-II*		X	X					
DELLYS		E					X	50			
DJANET		E			X	X		200/500			
		E					X + #	100			
EL BAYADH		E				X		150/100			
							X	100			
EL GOLEA		E			X	X		200/500			
		E					X +	100			
EL OUED		E			X	X	X	200/400			
GHARDAIA/Noumérate		E			X	X	X	200/500			
	12 NPA	A/L			X	X	X				
	30 PA1	A/L	30-I		X	X	X				
HASSI-MESSAOUD/Oued Irara		E			X	X		200/500			
		E					X + #	50			
	01 PA1	A/L	01-I		X	X					
	19 NPA	A/L			X	X					
ILLIZI		E				X		200/500			
IN GUEZZAM		E				X		200/170			
							X	100			
IN SALAH/In Salah		E			X	X		200/400			
		E					X	100			
	05 NPA	A/L		X	X	X					
	23 NPA	A/L		X	X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
JIJEL/Ferhat Abbas		E			X	X		200/500			
							X	50			
MECHERIA		E					X	50			
MOSTAGANEM		E			X	X		200/500			
ORAN/Es Sénia		E			X	X		200/400			
	07 NPA	A/L		X	X	X					
	25 PA2	A/L	25-II	X	X	X		~~200/400~~			
REGGAN		E					X	80			
TAMANRASSET/Aguennar		E			X	X		200/500			
	02 NPA	A/L	~~03-II*~~	X	X	X		~~200/500~~			
	20 NPA	A/L		X	X	X					
	08 PA1	A/L	08-II*	X							
	26 NPA	A/L		X							
TEBESSA/Tébessa		E			X	X		200/500			
	11 NPA	A/L		X	X	X					
	29 NPA	A/L									
TIARET/~~Bou Chekif~~		E			X	X		200/500			.
	~~09 NPA~~	~~A/L~~		~~X~~		~~X~~					
		~~E~~					~~X+~~	~~50~~			
TIMIMOUN		E			X	X	X	200/400			
TINDOUF		E			X	X		200/400			
							X	125			
TLEMCEN/Zénata	07 NPA	A/L			X	X	X	20/500			
	25 NPA										
							X	180			
TOUGGOURT/~~Sidi Mahdi~~		E			X	X		200/500			
							X	50			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
ZARZAITINE/In-Amenas		E			X	X		200/400			
	05 NPA	A/L			X	X	X	~~200/400~~			
	23 NPA	A/L					X	135			
ZEMMOURI		E			X	X		200/500			
							X	135			
ANGOLA											
CUITO CUANAVALE		E			X	X		200/500			
HUAMBO/Albano Machado	11 NPA	A/L			X	X		200/500			
	29 NPA										
KUITO		E			X	X		200/500			
LUANDA/4 de Fevereiro		E			X	X		200/500			
	05 NPA	A/L		X	X	X					
	23 PA1	A/L	23-II*	X	X	X					
LUENA		E			X	X		200/500			
SAURIMO		E			X	X		200/500			
		E					X + #	50			
BENIN											
COTONOU/Cadjehoun		E			X	X		200/500			
	06 NPA	A/L		X	X	X					
	24 PA1	A/L	24-II*	X	X	X					
BOTSWANA											
FRANCISTOWN		E		X	X	X		200/500			
	11 NINST	A/L									
	29 NINST										
GABORONE/Sir Seretse Khama Intl		E			X	X		200/500			
	08 PA1	A/L	08-I								

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
	26 NPA	A/L			X	X					
KASANE/Kasane	08 NPA 26 NINST	A/L			X	X		200/500			
MAUN/Maun		E			X	X		200/500			
	08 NINST	A/L				X					
	26 NINST										
KANG		E				X		200/500			
SELEBI-PHIKWE/Selebi Phikwe	12 NINST	A/L					X				
	30 NINST										
BURKINA FASO											
BOBO-DIOULASSO/Bobo-Dioulasso		E			X	X		200/500			
	06 PA1	A/L	06-I	X	X	X					
	24 NPA	A/L		X	X	X					
OUAGADOUGOU/Ouagadougou		E			X	X		200/500			
	04L PA1	A/L	04L-II*	X	X	X					
	22R NPA	A/L		X	X	X					
BURUNDI											
BUJUMBURA/Bujumbura		E			X	X		200/500			
	18 PA1	A/L	18-II*	X	X	X					
	36 NPA	A/L			X	X					
CAMEROON											
DOUALA/Douala		E		X	X	X		200/500			
	12 NPA	A/L		X	X	X					
	30 PA2	A/L	30-II	X	X	X					
FOUMBAN		E				X		200/500			
GAROUA/Garoua		E			X	X		200/500			
	09 PA1	A/L	09-II*	X	X	X					
	27 NPA	A/L		X		X					
MAMFE		E				X		200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
		E				X		200/500			
MAROUA/Salak	13 NPA	A/L				X	X				
	31 NINST										
M'BANGA		E					X	200			
N'GAOUNDERE/N'Gaoundéré		E				X		200/500			
	03 NPA	A/L		X		X					
	21 NINST										
YAOUNDE/Nsimalen		E		X	X	X		200/500			
	01 NINST										
	19 PA2	A/L	19-II*	X	X	X					
CAPE VERDE											
PRAIA/Francisco Mendes	04 NPA	A/L		X							
	22 NINST										
SAL I./ Amilcar Cabral		E			X	X		200/500			
	01 PA1	A/L	01-II		X	X					
	19 NPA	A/L			X	X					
		E					X	400			
		~~A/L~~					~~X~~	~~400~~			
CENTRAL AFRICAN REPUBLIC											
BANGUI/M'Poko		E			X	X		200/500			
	17 NPA	A/L		X	X	X					
	35 PA1	A/L	35-II*	X	X	X					
BERBERATI/Berberati		E				X		200/500			
	17 NPA	A/L		X		X		200/500			
	35 NINST										
CHAD											
ABECHE		E				X		200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
N'DJAMENA/N'Djamena		E			X	X		200/500			
		E					X	250			
	05 PA1	A/L	05-II*	X	X	X					
	23 NPA	A/L		X	X	X					
MOUNDOU		E				X		200/500			
COMOROS											
ANJOUAN/Ouani	10 NPA	A/L		X							
	28 NPA										
DZAOUDZI/Pamanzi, Mayotte I.	16 NINST										
	34 NPA	A/L		X	X	X		40/250			
MORONI/~~Hahaia~~ Prince Said Ibrahim		E			X	X		200/500			
	02 PA1	A/L	02-II*	X	X	X					
	20 NPA	A/L	X	X	X	X					
CONGO											
BRAZZAVILLE/Maya-Maya		E			X	X		200/500			
	06 PA1	A/L	06 -II*	X	X	X					
	24 NPA	A/L		X	X	X					
MAKOUA		E				X		200/500			
POINTE-NOIRE/Agostino Neto		E			X	X		200/500			
	17 NPA	A/L		X	X	X		200/500			
	35 NPA	A/L		X	X	X					
							X	150			
COTE D'IVOIRE											
ABIDJAN/Félix Houphouet Boigny		E			X	X		200/500			
	03 NPA	A/L		X	X	X					
	21 PA2	A/L	21-II	X	X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
BOUAKE/Bouaké		E			X	X		200/500			
	03 NPA	A/L		X	X	X					
	21 PA1	A/L	21-I	X	X	X					
DEMOCRATIC REPUBLIC OF CONGO											
BUNIA		E				X		200/500			
GOMA/Goma		E			X	X		200/500			
	18 NINST										
	36 NPA	A/L			X	X					
KALEMIE		E				X		200/500			
KANANGA		E				X		200/500			
KINDU		E				X		200/500			
KINSHASA/N'Djili		E			X	X		200/500			
	06 NPA	A/L		X	X	X					
	24 PA1	A/L	24-II*	X	X	X					
KISANGANI/Bangoka		E				X		200/500			
	13 NPA	A/L		X		X					
	31 NPA	A/L		X		X					
LUBUMBASHI/Luano		E			X	X		200/500			
	07 PA1	A/L	07 -II*	X	X	X					
	25 NPA	A/L		X	X	X					
MBUJI MAYI/Mbuji Mayi	17 NPA	A/L		X		X					
	35 NINST	A/L									
DJIBOUTI											
DJIBOUTI/Ambouli		E			X	X		200/500			
	09 NPA	A/L		X	X	X					
	27 PA1	A/L	27-II*	X	X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
EGYPT											
ABU SIMBEL/Abu Simbel		E			X	X		200/500			
	15L NPA	A/L			X	X					
	33R NPA	A/L			X	X					
	15R NPA	A/L				X					
	33L NPA	A/L				X					
ALEXANDRIA/Alexandria		E			X	X		200/500			
	04 NPA	A/L	~~04-II*~~		X	X					
	~~PA-I~~										
	22 NPA	A/L			X	X					
	18 NPA	A/L			X	X					
	36 NPA	A/L			X	X					
ASWAN/Aswan		E			X	X		200/500			
	17 NPA	A/L			X	X					
	35 PA1	A/L	35-II*		X	X					
ASYUT		E			X	X		200/500			
BALTIM		E			X	X		200/500			
CAIRO/Cairo Intl	05L PA2	A/L	05L-II		X	X					
		E			X	X		200/500			
		T			X	X					
	23R PA2	A/L	23R-II		X	X					
		E			X	X		200/500			
		T			X	X					
	05R PA2	A/L	05R-II		X	X					
		E			X	X		200/500			
		T			X	X					
	23L PA2	A/L	23L-II		X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
	16 NPA 34 NPA	A/L			X	X					
		E T			X X	X X		200/500			
EL ARISH	NPA	E A/L			X X	X X		200/500			
FAYOUM		E			X	X		200/500			
HURGHADA/Hurghada	16 NPA 34 PA1	E A/L A/L	34-II*		X X	X X	X	200/500			
LUXOR/Luxor	02 NPA 20 PA1	E A/L A/L	20-I	X X	X X	X X		200/500			
MERSA MATRUH/Mersa Matruh	15 NPA 33 NPA	A/L A/L									
NUWEIBAA		E					X	200			
SAINTE CATHERINE/Sainte Catherine ~~Intl~~	17 NPA 35 NINST	E A/L A/L					X X	200			
SHARM EL SHEIK/Sharm El Sheik	04L PA1 22R NINST	E A/L A/L	04L-II*		X X	X X	X+	200/500			
TABA/Taba	04 NINST 22 NPA	E A/L A/L					X X	200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
EQUATORIAL GUINEA											
BATA		E					X	200			
MALABO/Malabo		E				X		200/500			
		E					X +	150			
	05 PA1	A/L	05-I	X		X					
	23 NPA	A/L		X		X					
ERITREA											
ASMARA/Asmara Intl		E			X	X	X	200/500			
	07 PA1	A/L	07-II*	X	X	X					
	25 NPA	A/L		X		X	X				
ASSAB/Assab	12 NPA	A/L					X	150			
	30 NINST	A/L									
ETHIOPIA											
ADDIS ABABA/Bole Intl		E			X	X		200/500			
	07 NPA	A/L		X	X	X					
	25 PA1	A/L	25-II*	X	X	X					
0519.3N 3745.1E		E			X	X		200/500			
DIRE DAWA/Dire Dawa Intl		E			X	X		200/500			
		E					X#	150			
	15 NINST	A/L									
	33 NPA	A/L		X	X	X					
GAMBELA		E					X	200/500			
LALIBELA		E					X	200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
FRANCE											
SAINT-DENIS/Gillot (La Réunion)		E			X	X		200/500			
	14 PA1	A/L	14-II*	X	X	X					
	32 NINST	A/L									
	12 NINST	A/L									
	30 NPA	A/L		X	X	X					
GABON											
FRANCEVILLE/M'Vengue		E			X	X		200/500			
	15 PA1	A/L	15-II*	X	X	X					
	33 NPA	A/L		X	X	X					
LIBREVILLE/Léon M'Ba		E			X	X		200/500			
	16 PA1	A/L	16-II*	X	X	X					
	34 NPA	A/L		X	X	X					
PORT GENTIL/Port Gentil		E				X		200/500			
	03 NPA	A/L		X		X					
	21 PA1	A/L	21-I	X		X					
GAMBIA											
BANJUL/Banjul Intl		E			X	X		200/500			
	14 NPA	A/L		X	X	X					
	32 PA1	A/L	32-I	X	X	X					
GHANA											
ACCRA/Kotoka Intl		E			X	X		200/500			
	03 NPA	A/L		X	X	X					
	21 PA1	A/L	21-II*	X	X	X					
KUMASI/Kumasi		E			X	X		200/500			
	02 NPA	A/L		X		X		25/100			
	20 NPA	A/L					X	100			
PAMPA/Pampa		E			X	X		200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
TAMALE/Tamale		E			X	X		200/500			
	05 NPA	A/L		X	X	X					
	23 NPA	A/L									
GUINEA											
~~BOKE/Baralande~~	~~NINST~~										
CONAKRY/Gbessia		E			X	X		200/500			
	06 PA1	A/L	06-II*	X	X	X					
	24 NPA	A/L		X	X	X					
~~FARANAH/ Badala~~	~~NPA~~	~~A/L~~		~~X~~		~~X~~		~~200/500~~			
KANKAN/Diankana		E					X	150			
	10 NPA	A/L		X		X					
	28 NINST	A/L									
LABE/Tata	06 NINST	A/L		X		X					
	24 NINST	A/L									
N'ZEREKORE/Konia	18 NPA	A/L		X		X					
	36 NINST	A/L									
GUINEA-BISSAU											
BISSAU/Osvaldo Vieira Intl		E			X	X		200/500			
	03 NPA	A/L		X	X	X					
	21 PA1	A/L	21-I	X	X	X	X				
KENYA											
ELDORET/Eldoret Intl	08 PA2	A/L	08-II	X	X	X		200/500			
	26 NPA	A/L		X	X	X					
GARISSA		E			X	X		200/500			
LODWAR		E			X	X		200/500			
		E					X	350			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
MANDERA		E			X	X		200/500			
MOMBASA/Moi Intl		E			X	X		200/500			
	03 NPA	A/L		X	X	X					
	21 PA1	A/L	21-I	X	X	X					
NAIROBI/Jomo Kenyatta Intl		E			X	X		200/500			
	06 PA-2	A/L	06-II	X	X	X					
	24 NPA	A/L		X	X	X					
NAKURU		E			X	X		40/250			
LESOTHO											
MASERU/Moshoeshoe I Intl		E			X	X	X	200/500			
	04 NINST	A/L									
	22 PA1	A/L	22-I	X	X	X					
LIBERIA											
MONROVIA/Roberts Intl		E			X	X		200/500			
	04 PA2	A/L	04-II	X	X	X					
	22 NPA	A/L		X	X	X					
LIBYAN ARAB JAMAHIRIA											
BENGHAZI/Benina		E			X	X		200/500			
	15 L PA1	A/L	15L-II*	X	X	X					
	33R NPA	X		X	X	X					
	15R NPA	A/L									
	33L PA1	A/L	33L-II*								
BENI WALID		E				X		150/500			
GHADAMES		E			X	X		200/500			
		E					X +	160			
KUFRA		E				X		200/500			

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SARIR		E			X	X		200/500			
SEBHA/Sebha		E			X	X		200/500			
	13 PA1	A/L	13-I		X	X					
	31 NPA	A/L			X	X					
TRIPOLI/Tripoli Intl		E			X	X		50/250			
	09 PA1	A/L	09-I								
	27 PA2	A/L	27-II	X							
ZAWIA		E				X		200/500			
MADAGASCAR											
ANKAZOBE		E					X	200/500			
ANTANANARIVO/Ivato		E		X	X	X		200/500			
	11 PA1	A/L	11-II*	X	X	X					
	29 NPA	A/L		X	X	X					
ANTSIRANANA/Arrachart		E		X	X	X		200/500			
	13 NPA	A/L		X	X	X					
	31 NINST	A/L									
MAHAJANGA/Amborovy		E			X	X		200/500			
	14 NPA	A/L		X	X	X					
	32 NINST	A/L									
MAINTIRANO		E				X		200/500			
MORAMANGA		E					X	200/500			
MORONDAVA		E				X		200/500			
NOSY-BE/Fascène		E			X	X		200/500			
	05 NPA	A/L		X	X	X					
	23 PA1	A/L	23-I	X	X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SAINTE-MARIE/Sainte-Marie		E		X		X		200/500			
	01 NPA	A/L				X					
	19 NPA	A/L				X					
TOAMASINA/Toamasina		E				X		200/500			
	01 NPA	A/L		X		X					
	19 PA1	A/L	19-I	X							
TOLAGNARO/Tolagnaro		E			X	X		200/500			
	07 NPA	A/L			X	X					
	25 NPA	A/L			X	X					
TOLARIA		E				X		200/500			
MALAWI											
BLANTYRE/Chileka		E			X	X		200/500			
	10 NPA	A/L		X	X	X					
	28 NPA	A/L									
LILONGWE/Lilongwe Intl		E			X	X		200/500			
	14 PA1	A/L	14-I	X	X	X					
	32 NPA	A/L		X	X	X					
MALI											
BAMAKO/Sénou		E		X	X	X		200/500			
	06 PA1	A/L	06-II*	X	X	X					
	24 NPA	A/L		X	X	X					
GAO/Gao		E				X		200/500			
	07 NPA	A/L		X		X		200/500			
	25 NINST	A/L									
KAYES/Kayes		E				X		200/500			
		E					X +	200			
	08 NPA	A/L		X		X					
	26 NINST	A/L									
KIDAL/Kidal	10 NPA	A/L		X		~~X~~		~~200/500~~			
	28 NINST	A/L									

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
MOPTI-BARBE/Mopti-Barbe	05 NPA 23 NINST	A/L A/L		X		X		200/500			
NIORO/Nioro	08 NPA 26 NINST	A/L A/L		X		~~X~~	 X +	~~200/500~~ 50			
TESSALIT		E E				X	 X +	200/500 200			
TOMBOUCTOU/Tombouctou	07 NPA ~~PA1~~ 25 NPA	E A/L A/L	~~07-I~~	X X	X X	X X X		200/500			
MAURITANIA											
ATAR/Atar	 04 NPA 22 NINST	E E A/L A/L		 X		X X	 X +	200/500 200			
NEMA/Néma	10 NINST 28 NPA	A/L A/L		X		X		200/500			
NOUADHIBOU/Nouadhibou	 03 PA1 21 NPA	E A/L A/L	03-II*	X X	X X	X X X	 X	200/500 200			
NOUAKCHOTT/Nouakchott	 05 PA1 23 NPA	E A/L A/L	05-II*	X X	X X	X X X		200/500			
ZOUERATE/Zouérate	 10 NPA 28 NPA	E A/L A/L		X		X X		200/500			
MAURITIUS											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
MAURITIUS/Sir Seewoosagur Ramgoolam Intl		E E			X	X X		200/500 450			
	14 PA1 32 NPA	A/L A/L	14-I	X X	X X	X X					
MOROCCO											
AGADIR/Al Massira		E			X	X		200/500			
	10 NPA 28 PA1	A/L A/L	28 -II*	X X	X X	X X	X				
AL HOCEIMA/CHerif Al Idrissi		E			X	X		100/500			
	18 PA1 36 NPA	A/L A/L	18-II*	X X	X X	X X					
CASABLANCA/Mohamed V		E			X	X		150/500			
	17 NPA 35 PA2	A/L A/L	35-II	X X	X X	X X					
ERRACHIDA/Moulay Ali Cherif		E			X	X		200/500			
	13 NPA 31 PA1	A/L A/L	31-II*	X X	X X	X X					
FES/Saïss		E			X	X		150/500			
	10 NPA 28 PA1	A/L A/L	28-II*	X X	X X	X X					
MARRAKECH/Ménara		E			X	X		150/500			
	10 PA1 28 NPA	A/L A/L	10-II*	X X	X X	X X					
OUARZAZATE/Ouarzazate		E			X	X		200/500			
	12 NPA 30 PA1	A/L A/L	30-II*	X X	X X	X X					
OUJDA/Angads		E			X	X		150/500			
	06 PA1 24 NINST	A/L A/L	06-II*	X	X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
RABAT/Salé		E			X	X		150/250			
	04 PA1	A/L	04-II*	X	X	X					
	22 NPA	A/L		X	X	X					
TANGER/Ibnou Batouta		E			X	X		150/500			
	10 NPA	A/L		X	X	X					
	28 PA1	A/L	28-II*	X	X	X					
TAN-TAN/Plage Blanche		E		X		X		150/500			
	14 NPA	A/L				X					
	22 NINST	A/L									
TETOUAN/Saniat Rimel		E			X	X		100/500			
	06 NPA	A/L		X	X	X					
	24 NINST	A/L									
MOZAMBIQUE											
BEIRA/Beira		E			X	X		200/500			
	12 PA1	A/L	12-II*		X	X					
	30 NPA	A/L			X	X					
LIMPOPO		E					X	300			
LICHINGA		E			X	X		200/500			
MAPUTO/Maputo Intl		E			X	X		200/500			
	05 NPA	A/L			X	X					
	23 PA1	A/L	23-II*		X	X	X				
NAMPULA		E			X	X		200/500			
QUELIMANE		E				X		200/500			
TETE		E		X		X		200/500			
NAMIBIA											
KEETMANSHOOP/ Keetmanshoop		E			X	X	X	200/500			
	06 NPA	A/L			X	X	X				
	24 NPA	A/L									

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
WALVIS BAY/Walvis Bay		E			X	X	X	200/500			
	09 NPA	A/L			X	X	X				
	27 NPA	A/L									
WINDHOEK/Hosea Kutako		E			X	X	X	200/500			
	08 PA1	A/L	08-II*		X	X	X				
	26 NPA	A/L			X	X					
NIGER											
AGADES/Sud		E				X		200/500			
	07 NPA	A/L		X		X					
	25 NINST	A/L									
DIRKOU		E				X		200/500			
NIAMEY/Diori Hamani Intl		E		X	X	X		200/500			
	09R PA1	A/L	09R-II*	X	X	X					
	27L NPA	A/L		X	X	X					
ZINDER/Zinder		E				X		200/500			
	06 NPA	A/L				X					
	24 NINST	A/L									
NIGERIA											
ABUJA/Nnamdi Azikiwe		E			X	X		200/500			
	04 NPA	A/L			X	X					
	22 PA1	A/L	22-II*	X		X					
BIDA		E			X	X		200/500			
CALABAR/Calabar		E			X	X		200/500			
	03 NPA	A/L			X	X					
	21 PA1	A/L	21-II*			X	X	50			
GWASERO		E			X	X		200/500			
ILORIN/Ilorin	05 PA1	A/L	05-II*		X	X		25/100			
	23 NPA	A/L			X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
JOS		E			X	X		200/500			
KADUNA/Kaduna		E			X	X		200/500			
	05 PA1	A/L	05-II*	X	X	X					
	23 NPA	A/L			X	X					
KANO/Mallam Aminu Kano Intl		E			X	X		200/500			
	06 PA2	A/L	06-II		X	X					
	24 PA2	A/L	24-III*	X							
LAGOS/Murtala Muhammed		E			X	X		200/500			
	01L PA2	A/L	01L-II	X	X	X					
	19R PA2	A/L	19R-II								
	01R NPA	A/L		X	X	X					
	19L PA2	A/L	01R-II	X	X	X					
MAIDUGURI/Maiduguri		E			X	X		200/500			
	05 PA2	A/L	05-II	X	X	X					
	23 NPA	A/L		X	X	X					
PORT HARCOURT/Port Harcourt Intl		E			X	X		200/500			
	03 NPA	A/L			X	X					
	21 PA1	A/L	21-II*		X	X					
SOKOTO/ Abubakar Saddiq III Intl		E			X	X		200/500			
	08 PA1	A/L	08-II*	X	X	X					
	26 NPA	A/L		X	X	X					
RWANDA											
KIGALI/Grégoire Kayibanda		E			X	X		200/500			
	10 NPA	A/L		X	X	X					
	28 PA1	A/L	28-II*	X	X	X					
SÃO TOMÉ AND PRINCIPE											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SÃO TOMÉ/São Tomé		E			X	X		200/500			
	11 PA1	A/L	11-II*	X	X	X					
	29 NPA	A/L		X	X	X					
SENEGAL											
CAP SKIRING/Cap Skiring	15 NINST	A/L									
	33 NPA	A/L		X				25/100			
DAKAR/Léopold Sédar Senghor Intl		E			X	X		200/500			
	18 NPA	A/L		X	X	X					
	36 PA2	A/L	36-II	X	X	X					
SAINT-LOUIS/Saint-Louis	18 NPA	A/L		X				25/100			
	36 NINST	A/L		X							
TAMBACOUNDA/Tambacounda		E				X		200/500			
	06 NPA	A/L		X		X					
	24 NPA	A/L		X		X					
ZIGUINCHOR/Ziguinchor		E				X		200/500			
	10 NINST	A/L									
	28 NPA	A/L		X		X					
SEYCHELLES											
MAHE/Seychelles Intl		E			X	X		200/500 (N + E)			
		E					X	150			
	13 NPA	A/L			X	X					
	31 PA1	A/L	31-II*		X	X					
PRASLIN		E			X	X		200/500			
SIERRA LEONE											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
FREETOWN/Lungi		E			X	X		200/500			
	12 NPA	A/L			X	X					
	30 PA1	A/L	30-II*	X	X	X					
SOMALIA											
BERBERA/Berbera	05 NINST	A/L									
	23 NINST	A/L									
BURAO/Burao	13 NINST	A/L									
	31 NINST	A/L									
HARGEISA/Hargeisa		E			X	X		200/500			
		E					X +	150			
	06 NPA	A/L			X	X					
	24 NPA	A/L									
KISIMAYU/Kisimayu		E			X	X		200/500			
		E					X + #	200			
	05 NPA	A/L			X	X					
	23 PA1	A/L	23-II*		X	X					
MOGADISHU/Mogadishu		E			X	X		200/500			
	05 NPA	A/L			X	X					
	23 PA1	A/L	23-II*		X	X					
SOUTH AFRICA											
ALEXANDER BAY/Alexander Bay	01 NPA	A/L			X	X		40/250			
	19 NPA	NPA			X	X					
BLOEMFONTEIN/Bloemfontein		E			X	X		200/500			
	02 NPA	A/L	~~02-I~~		X	X					
	~~PA1~~	A/L			X	X					
	20 NPA										
CAPE TOWN/Cape Town		E			X	X		200/500			
	01 PA3	A/L	01-III		X	X					
	19 PA2	A/L	19-II		X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
		E			X	X		200/500			
DURBAN/Durban	06 PA2	A/L	06-II	X	X	X					
	24 PA1	A/L	24-II*		X	X					
~~GATEWAY~~					~~X~~	~~X~~		~~200/500~~			
GREEFSWALD		E			X	X		200/500			
HARTEBEESPOORTDAM		E				X		200/500			
JOHANNESBURG/Johannesburg		E			X	X		200/500			
	03L PA2	A/L	03L-II	X	X	X					
	21R NPA	A/L		X	X	X					
	03R PA2	A/L	03R-II	X							
	21L PA2	A/L	21L-II								
JOHANNESBURG/Rand	35 NPA	A/L		X							
LANSERIA/Lanseria	06L NPA	A/L		X		X		25/100			
	24R NINST										
MAFIKENG/Mafikeng	04 NPA	A/L			X	X					
	22 NPA	A/L			X	X					
NELSPRUIT/Nelspruit	04NPA										
	22NPA				X	X					
PIETERSBURG/Gateway	E				X	X		200/500			
	05 NPA				X	X					
	23 NPA										
PORT ELIZABETH/Port Elizabeth	08 PA1	A/L	08-I		X	X					
	26 PA1	A/L	26-I		X	X					
UPINGTON/Upington		E				X		200/500			
	17 NPA					X					
	35 NPA	A/L	~~01-I~~		X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
SPAIN											
GRAN CANARIA/Gran Canaria, Canary Is.	03L PA2 21R NPA	E A/L A/L	03L-I	X X	X X X	X X X	X	200/500			
	03R NINST 21L NINST	A/L A/L									
HIERRO/Hierro, Canary Is.	16 NPA 34 NINST	E A/L A/L		X			X	200/500			
LA PALMA I./La Palma, Canary Is.	01 NPA 19 NINST	E A/L A/L		X	X X		X	200/500 40			
LANZAROTE/Lanzarote, Canary Is.	04 PA1 22 NPA	E A/L A/L	04-I	X X	X X X	X X X	X	200/500			
MELILLA/Melilla	15 NPA 33 NINST	A/L A/L			X	X		200/500			
FUERTEVENTURA/Fuerteventura, Canary Is.	01 PA1 19 NPA	E A/L A/L	01-I	X X	X X X	X X X	X	200/500 40			
TENERIFE NORTE/Los Rodeos, Canary Is.	12 NPA 30 NPA	E E A/L A/L	~~30-I~~	X X	X X X	X X X	X	200/500 200			
TENERIFE SUR/Reina Sofia, Canary Is.	08 PA1 26 NPA	E A/L A/L	08-I	X X	X X X	X X X	X	40/250			
SUDAN											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
		E			X	X		200/500			
EL FASHER		E					X +	200			
EL OBEID		E				X		200/500			
GENEINA		E				X		200/500			
		E						200			
JUBA/Juba		E			X	X		200/500			
		~~E~~					~~X +~~	~~200~~			
	13 PA1	A/L	13-II*		X	X					
	31 NINST	A/L									
KARINA		E			X	X		200/500			
		E					X +	200			
KASSALA/Kassala		E			X	X		200/500			
		E					X +	100			
	02 NINST	A/L			X	X					
	20 NINST	A/L					~~X +~~	~~100~~			
KHARTOUM/Khartoum		E			X	X		200/500			
	18 PA1	A/L	18-I	X	X	X					
	36 NPA	A/L		X	X	X					
		E			X	X		200/500			
MALAKAL		E					X +	200			
PORT SUDAN/Port Sudan Intl		E			X	X		200/500			
		E					X +	150			
	18 NPA	A/L		X	X	X					
	36 PA1	A/L	36-I	X	X	X					
SWAZILAND											
MANZINI/Matsapha		E			X	X		200/500			
	07 NPA	A/L		X	X	X					
	25 NINST	A/L									

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
TOGO											
LOME/Tokoin		E			X	X		200/500			
	05 NPA	A/L		X	X	X					
	23 PA1	A/L	23-II*	X	X	X					
		E			X	X		200/500			
NIAMTOUGOU/Niamtougou	03 PA1	A/L	03-II*	X	X	X					
	21 NPA	A/L		X	X	X					
TUNISIA											
BEN AOUN		E				X		200/500			
CAP BON		E				X		200/500			
DJERBA/Zarzis		E			X	X		200 /500			
	09 PA1	A/L	09-II	X	X	X					
	27 NPA	A/L		X	X	X		~~150~~			
EL-BORMA		E				X		200/500			
GAFSA/Ksar		E			X	X		200/500			
	05 NPA	A/L			X	X					
	23 NPA	A/L			X	X					
MONASTIR/Habib Bourguiba		E			X	X		200/500			
	07 PA1	A/L	07-II	X	X	X					
	25 NPA	A/L			X	X					
SFAX/Thyna		E				X		200/500			
	15 NPA	A/L	~~15-I~~			X					
	~~PA1~~	A/L				X					
	33 NPA										
TABARKA/ 7 Novembre		E			X	X		200/500			
	09 NINST	A/L			X	X	~~X~~	~~200/500~~			
	27 PA1	A/L	27-II		X	X					

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
TOZEUR/Nefta		E			X	X		200/500			
	09 PA1	A/L	09-II	X	X	X					
	27 NPA	A/L			X	X					
TUNIS/Carthage		E			X	X		200 /500			
	01 NPA	A/L		~~X~~	X	X					
	19 PA1	A/L	19-II	X	X	X					
	11 NPA	A/L			X	X					
	29 PA1	A/L	29-II	X	X	X		~~50~~			
UGANDA											
ENTEBBE/ Entebbe Intl		E			X	X		200/500			
	17 PA1	A/L	17-II*	X	X	X					
	35 NPA	A/L		X	X	X					
UNITED REPUBLIC OF TANZANIA											
DAR-ES-SALAAM/Dar-es-Salaam		E			X	X		200/500			
		E					X	350			
	05 PA1	A/L	05-II*	X	X	X					
	23 NPA	A/L		X	X	X					
DODOMA		E			X	X		200/500			
		E					X +	150			
KILIMANJARO/Kilimanjaro Intl		E			X	X		200/500			
	09 PA1	A/L	09-I	X	X	X					
	27 NPA	A/L		X	X	X					
MBEYA		E			X	X		200/500			
		E					X +	100			
MWANZA		E			X	X		200/500			
ZANZIBAR/Zanzibar		E			X	X		200/500			
	18 NINST	A/L					X +	100			
	36 NPA	A/L			X	X					
WESTERN SAHARA											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
EL AAIUN/El Aaiun		E			X	X		200/500			
	04NPA	A/L			X	X					
	22 PA1	A/L	03-I								
SMARA/Smara	17 NINST	A/L				X					
	35 NINST	A/L									
VILLA CISNEROS/Villa Cisneros		E			X	X		200/500			
	04 NINST	A/L		X	X	X					
	22 NPA	A/L		X	X	X					
ZAMBIA											
KAOMA		E					X +	350			
		E				X		200/500			
KAPIRI		E					X +	350			
WEST TWO		E				X		200/500			
LIVINGSTONE/Livingstone Intl		E			X	X		200/500			
	11 NPA	A/L	~~11-I~~		X	X					
	29 NPA	A/L			X	X					
LUSAKA/Lusaka Intl		E			X	X		200/500			
	10 PA1	A/L	10-II*	X	X	X		~~200/500~~			
	28 NPA	A/L		X	X	X		~~40~~			
MFUWE/Mfuwe		E			X	X		200/500			
	08 NPA	A/L			X	X					
	26 NPA	A/L			X	X					
NDOLA/Ndola		E			X	X		200/500			
	10L NPA	A/L	~~10L-I~~		X	X		~~200/500~~			
	28R NPA	A/L			X	X					
ZIMBZABWE											

Station	RWY Type	Function Fonction	ILS	L	DME	VOR	NDB	Coverage Couverture	GNSS		REMARKS/OBSERVATIONS
									GBAS	SBAS	
1	2	3	4	5	6	7	8	9	10	11	12
BULAWAYO/Bulawayo		E			X	X		200/500			
	13 NPA	A/L	~~13-II*~~	~~X~~	X	X		~~200/500~~			
	31 NPA	A/L			X	X					
FLYDE		E			X	X		200/500			
GOKWE		E				X		200/500			
HARARE/Harare		E			X	X		200/500			
	06 PA1	A/L	06-II*		X	X		~~200/500~~			
	24 PA1	A/L	24-II*	X	X	X					
HWANGE		E				X		200/500			
MASVINGO		E			X	X		200/500			
VICTORIA FALLS/Victoria Falls		E					X	200/500			
	12 PA1	A/L	12-II*	X							
	30 NINST	A/L									

- - - - - - - -

(CNSTBL_3.WPD)

Appendix to Table CNS 3

GEOGRAPHICAL SEPARATION CRITERIA FOR VOR, VOR/DME AND ILS INSTALLATIONS

1. VHF omnidirectional radio range (VOR)/distance measuring equipment (DME)

1.1 In the selection of frequencies for VOR and/or VOR/DME the following criteria are to be applied:

a) for VOR required to serve en-route flight operations up to FL 500, geographic separations should be:

   1) for co-channel: 1 020 km (550 NM) between 200 NM/FL 450 facilities;
   2) for adjacent channel: 410 km (220 NM);

b) for VORs required for use in terminal areas 40 NM/FL 250 geographic separation should be:

   1) for co-channel: 370 km (200 NM);
   2) for adjacent channel: 110 km (60 NM);

c) for VORs required for use in final approach and landing (25 NM/FL 100) geographic separation should be:

   1) for co-channel: 240 km (130 NM);
   2) for adjacent channel[1]: 55 km (30 NM);

1.2 Detailed frequency assignment criteria for VOR are provided in Annex 10, Volume I, 3.3.2, guidance material contained in Annex 10, Volume I, Attachment C, Sections 3.4 and 3.5, and Annex 10, Volume V, Section 4.2.

1.3 Detailed frequency assignment criteria for DME are provided in Annex 10, Volume I, 3.5.3.3 and Attachment C, and Annex 10, Volume V, Section 4.3.

2. Instrument landing system (ILS)

2.1 In the selection of frequencies for ILS the following criteria are to be applied:

a) for co-channel: 175 NM;
b) for adjacent channel: 45 NM.

2.2 Detailed frequency assignment criteria for ILS are provided in Annex 10, Volume I, 3.1.3.2, guidance material contained in Annex 10, Volume I, Attachment C, Section 3.5, and Annex 10, Volume V, Section 4.2.

1. Based on 100 kHz channel spacing.

CHART CNS-3A

EN-ROUTE RADIONAVIGATION AIDS
AIDES DE RADIONAVIGATION EN ROUTE

TO BE INSERTED

A INSERER

CHART CNS-3B

AIDS TO FINAL APPROACH AND LANDING
AIDES A L'APPROCHE ET A L'ATTERRISSAGE

TO BE INSERTED

A INSERER

APPENDIX 3C

INITIAL CONCEPT OF THE GNSS STRATEGY FOR THE AFI REGION

Introduction

1. The purpose of the AFI GNSS strategy is to define an evolution path for replacement of ground-based navigation aids, i.e. VOR/DME/ILS/NDB, ensuring that operational and other concerns such as positive cost-benefit are fully taken into account.
2. The AFI GNSS strategy assumes availability of a GNSS meeting the specified parameters at every phase of deployment. It does not analyse GNSS systems configuration per se nor the advantages and disadvantages of various deployment strategies.

General Considerations

By necessity, satellite-based and ground-based navigation systems will co-exist for a period of time. Considering that the operation of a dual system is detrimental to a positive cost-benefit, users and providers will co-operate with the view of reducing the duration of the transition period as much as possible, having due regard for the following principles:

- The level of safety will not be downgraded during the transition
- GNSS-based service must, before the end of the transition period, fully meet the required parameters of accuracy, availability, integrity and continuity for all phases of flight;
- During the transition, gradually evolving levels of functionality will be available.
- Operational advantage shall be taken of the available capabilities at every step of deployment.
- Methods of application will take into full consideration safety considerations of any functional limitations;
- Users must be given sufficient advance notice to re-equip before ground-based systems are decommissioned.

Evolving functionality*

Phase I (Short term), up to 2003: *Additional ranging and health information on GPS constellation provided via GEO satellites*

- This phase will allow the use of GNSS as a primary-means of navigation for en-route and TMA, and as a supplemental-means navigation system for NPA. Existing ground infrastructure remains intact.
- An AFI GNSS test bed will be implemented to validate the objectives and differential correction algorithms of Phase II and Phase III.

Phase II (Medium term) 2003-2008: *NPV-I, 20m vertical accuracy, will be available everywhere in the AFI Region* This will be achieved by the deployment of a network of RIM stations through the AFI Region.

1. This phase will allow for:
    - En-route phase: sufficient capability to meet en-route navigation requirements

* Dates are indicative

everywhere in the AFI Region; GNSS is approved as a sole-means system for en-route navigation.

- Approach and landing phase: sufficient capability for non-precision approach and landing in the whole AFI Region.

2. During Phase II, a satellite-based augmentation system (SBAS) ground infrastructure will be put in place in the AFI Region; en-route navigation aids will be progressively withdrawn. VOR/DME and ILS will continue to be provided in terminal areas and at aerodromes.

Phase III (Long term) 2008 onwards: *SBAS CAT I will be available in those locations where analysis of historical MET data or traffic characteristics justifies the requirement. Other requirements will be met by ground-based augmentation system (GBAS).* This will require the deployment of additional RIMS in the AFI. It is also assumed that at least two constellations of navigation satellites will be available.

a) During Phase III, ILS CAT I will be withdrawn. Where CAT II/III ILS requirements have been confirmed, these will remain unless technical evolution then demonstrates that the requirement can be supported by GNSS.
b) The plan of withdrawal of ILS should ensure availability of an ILS at least within 500 NM. This reduced back-up network of ILS will remain in place as long as necessary and until sufficient level of confidence has been built on GNSS as sole-means navigation system for CAT I approach and landing operations.

3. Terminal area VOR/DME will also be progressively withdrawn during Phase III in a co-ordinated ILS/VOR/DME withdrawal plan, catering for the alternate availability of the two sets of facilities at different locations.

Institutional issues

a) Phases II and III of the AFI GNSS strategy will require the deployment of AFI specific GNSS components. In order to minimize costs associated with the deployment and operation of these components, AFI should seek cooperation agreements with systems providers in adjacent regions with a view to the joint use of GNSS components where feasible and cost-effective.

b) Meanwhile the modalities of installation and cost-recovery of multinational facilities, essentially RIMS, in some AFI States, must be addressed without delay so that deployment can be initiated as soon as technically possible.

APPENDICE 3C

CONCEPT INITIAL DE LA STRATÉGIE RELATIVE AU GNSS POUR LA RÉGION AFI

Introduction

1. La stratégie relative au GNSS pour la Région AFI a pour but de définir une trajectoire évolutive en vue du remplacement des aides à la navigation au sol, à savoir les VOR/DME/ILS/NDB, en faisant en sorte que les facteurs opérationnels et autres, tels la nécessité d'un rapport coûts-avantages positif, soient pris en considération.

2. La stratégie relative au GNSS pour la Région AFI part du principe de l'existence d'un GNSS qui satisfasse aux paramètres spécifiés pour chaque phase du déploiement. Elle n'évalue pas la configuration des systèmes GNSS en elle-même, ni les avantages et inconvénients que présentent les diverses stratégies de déploiement.

Considérations d'ordre général

Les systèmes de navigation par satellite et au moyen d'aides au sol devront nécessairement coexister pendant un certain temps. Etant donné que l'exploitation de deux systèmes n'est pas économique, les utilisateurs et les fournisseurs devront coopérer pour réduire autant que faire se peut la durée de la période de transition, en tenant dûment compte des principes suivants:

- **!** le niveau de la sécurité ne sera pas diminué pendant la transition;
- **!** avant l'expiration de la période de transition, les services reposant sur le GNSS doivent être pleinement conformes aux paramètres de précision, de disponibilité, d'intégrité et de continuité pour toutes les phases du vol;
- **!** pendant la transition, les niveaux de fonctionnalité évolueront graduellement ;
- **!** à chaque étape du déploiement, il sera tiré parti au niveau de l'exploitation des possibilités qui s'offriront ;
- **!** les méthodes d'application tiendront pleinement compte des répercussions pour la sécurité de toute limitation fonctionnelle ;
- **!** il faudra informer suffisamment à l'avance les utilisateurs de la nécessité de s'équiper à nouveau avant que les systèmes au sol ne soient mis hors service.

Fonctionnalité évolutive

Phase I (court terme), jusqu'en 2003 : *informations supplémentaires sur la couverture - de santé de la constellation GPS fournies par les satellites GEO*

- **!** Cette phase autorisera l'utilisation du GNSS en tant que principal moyen de navigation pour la navigation en route et les TMA, et en tant que moyen de navigation complémentaire pour les approches classiques (NPA). L'infrastructure au sol reste inchangée.

! Un banc d'essai AFI du GNSS sera mis en oeuvre pour valider les objectifs et les algorithmes de correction différentielle des Phases II et III.

Phase II (moyen terme) 2003 - 2008 : *le dispositif NPV-1 et une précision verticale de 20 m seront disponibles à tout point de la Région AFI, grâce au déploiement d'un réseau de stations RIM dans toute la Région.*

! Cette phase autorisera:

a) phase en route : **capacité** suffisante pour répondre aux besoins de navigation en route en tout point de la Région AFI; le GNSS est approuvé comme système unique pour la navigation en route

c) phase d'approche et d'atterrissage : capacité suffisante pour des approches et des atterrissages classiques dans l'ensemble de la Région AFI

2. Pendant la Phase II, une infrastructure au sol à système de renforcement satellitaire (SBAS) sera mise en place dans la Région AFI; les aides à la navigation en route seront progressivement supprimées. Le VOR/DME et l'ILS continueront d'être disponibles dans les régions terminales et aux aérodromes.

Phase III (long terme), 2008 et au-delà : *le système de renforcement satellitaire (SBAS) de CAT I sera disponible aux emplacements où l'analyse des données MET historiques ou bien les caractéristiques de trafic justifient le besoin. Le système de renforcement à base de stations sol (GBAS) répondra aux autres besoins.* Cela nécessitera le déploiement de stations RIM supplémentaires dans la Région AFI. Il est par ailleurs présumé qu'au moins deux constellations de satellites de navigation seront disponibles.

a) Pendant la Phase III, l'ILS CAT I sera retiré. Lorsque des besoins ILS CAT II/III auront été confirmés, ils seront maintenus à moins que le progrès technique apporte la démonstration que le GNSS peut y répondre ;

b) Le plan de retrait de l'ILS devrait garantir la disponibilité d'un ILS à une distance d'au moins 500 NM. Ce réseau réduit d'ILS de secours restera en place aussi longtemps qu'il le faudra et jusqu'à ce qu'un niveau de confiance suffisant puisse être placé dans le GNSS en tant que seul moyen de navigation pour les approches et les atterrissages de CAT I.

3. Les VOR/DME de région terminale seront aussi progressivement supprimés pendant la Phase III dans le contexte d'un plan de retrait coordonné des ILS/VOR/DME, prévoyant la disponibilité simultanée des deux types de moyens de navigation à différents emplacements.

Questions institutionnelles

a) Les Phases II et III de la stratégie AFI relative au GNSS nécessiteront le déploiement de composantes du GNSS propres à la Région AFI. Afin de réduire au minimum les dépenses associées au déploiement et à l'utilisation de ces composantes, la Région AFI devrait chercher à conclure des accords de coopération avec les fournisseurs de systèmes des régions limitrophes, visant à une utilisation conjointe des composantes du GNSS, si cela est faisable, économique et efficace.

b) Dans l'intervalle, les modalités d'installation et de recouvrement des dépenses afférentes aux installations et services multinationaux, à savoir essentiellement aux stations RIM, dans quelques Etats AFI, doivent être étudiées sans délai de façon que le déploiement puisse être entrepris dès que cela sera techniquement faisable.

Table CNS 4A - SURVEILLANCE SYSTEMS

EXPLANATION OR THE TABLE

Column

1	Name of country and location of radar head facility or FIR
2	Area of routing
3	Air Traffic Services Unit served by the facility or FIR
4	PSR - Primary Surveillance Radar
5	Coverage of Primary Surveillance Radar in nautical miles
6	SSR - Secondary Surveillance Radar and Modes implemented will be indicated within brackets, namely Modes A, C and S
7	Coverage of Secondary Surveillance Radar in nautical miles
8	ADS-B - Automatic Dependent Surveillance Broadcast *
9	ADS-C - Automatic Dependent Surveillance Contract
10	Remarks

Note:
The following codes are used in columns 4, 6, 8-10

I - Required and implemented. For column 6,
- I stands for implementation using conventional SSR, while
- MI stands for implementation using Monopulse SSR.

X - Required but implementation status not determined

N - Required but not implemented

A - existing facility provided to supplement or substitute the requirement

F - Future Plan

< - Year: planned commissioning year to be used as appropriate in conjunction with “F” and “N”

> - Year: planned commissioning year to be used as appropriate in conjunction with “A” and “I”

* Under development

Tableau CNS 4A - SURVEILLANCE

EXPLICATION DU TABLEAU

Colonne

1	Nom du pays et emplacement de la tête radar ou de la FIR
2	Zone de routes aériennes
3	Organe ATS desservi par l'installation ou FIR
4	PSR - Radar Primaire de Surveillance
5	Couverture du Radar Primaire de Surveillance en miles nautiques
6	SSR - Radar Secondaire de Surveillance et les Modes mis en oeuvre seront indiqués entre parenthèses, soit Modes A, C et S
7	Couverture du Radar Secondaire de Surveillance en miles nautiques
8	ADS-B - Surveillance Automatique Dépendante par Diffusion *
9	ADS-C - Surveillance Automatique Dépendante par Contrat
10	Remarques

Note:
Les codes suivants sont utilisés dans les colonnes 4, 6, 8-10

I - Requis et mis en oeuvre. Pour la colonne 6,
- I signifie mis en oeuvre en utilisant le radar SSR conventionnel tandis que
- MI signifie mis en oeuvre en utilisant le radar SSR monopulse

X - Requis mais dont l'état de mise en oeuvre est indéterminé

N - Requis mais non mis en oeuvre

A - Installation existante fournie en supplément ou en substitution du besoin

F - Futur Plan

< - Année: Année prévue pour la mise en service à utiliser selon le cas avec "F" et "N"

> - Année: Année prévue pour la mise en service à utiliser selon le cas avec "A" et "I"

* En cours de développement

TABLE CNS-4A - SURVEILLANCE SYSTEMS
TABLEAU CNS-4A - SYSTEMES DE SURVEILLANCE

(TO BE DEVELOPED/ A REMPLIR)

State/Location Etat/Emplacement	AR	ATS unit served Organe ATS desservi	PSR	Coverage/ Couverture of/du PSR (NM)	SSR (A/C/S)	Coverage/ Couverture of/du SSR (NM)	ADS-B*	ADS-C	Remarks/ Remarques
1	2	3	4	5	6	7	8	9	10

Table CNS 4B - ATS AUTOMATION SYSTEMS

EXPLANATION OR THE TABLE

Column

1	Name of country and location of radar head facility or FIR
2	Area of routing
3	Air Traffic Services Unit served by the ATS automation systems. The abbreviations for this column are: ACC-Area Control AACC-Area/Approach Control Center APP-Approach Control EC-Enroute Centre FIS-Flight Information Service SMC-Surface Movement Control TCU-Terminal Control Unit TMA-Terminal Control Area TWR-Tower Control
4	Surveillance sensor linked to the ATS Automation Systems, 4-letter FIR Identifier, enclosed in brackets, shall be shown for sensors outside the FIR
5	RDPS - Radar Data Processing System
6	FDPS - Fight Data Processing System
7	MSAW - Minimum Safe Altitude Warning System
8	ADS - Automatic Dependent Surveillance
9	CPDLC - Controller-Pilot Data Link Communications
10	AIDC - ATS inter-facility Data Link Communications
11	PA/RDPS - Processing area of the radar Data Processing System in (nautical miles)^2
12	Npos - Number of ATS positions
13	Remarks

Note:
The following codes are used in columns 5 to12:

I - Required and implemented.

X - Required but implementation status not determined

N - Required but not implemented

A - existing facility provided to supplement or substitute the requirement

F - Future Plan

The number of systems provided for each type of process and the yaer of commissioning and decommissioning:

< - Year: planned commissioning year to be used as appropriate in conjunction with “F” and “N”

> - Year: planned decommissioning year to be used as appropriate in conjunction with “A” and “I”

Tableau CNS 4B - SYSTEMES D'AUTOMATISATION DE L'ATS

EXPLICATION DU TABLEAU

Colonne

1 Nom du pays et emplacement de la tête radar ou de la FIR

2 Zone de routes aériennes

3 Organe ATS desservi par les systèmes d'automatisation de l'ATS. Les abréviations de cette colonne sont:

ACC- Centre de contrôle régional AACC- Centre de contrôle régional/d'approche
APP-Contrôle d'approche EC- Centre en route FIS-Service d'information en vol
SMC-Contrôle de la circulation à la surface TCU-Organe de contrôle terminal
TMA-Région de contrôle terminale TWR-Tour de contrôle

4 Unité de surveillance connectée aux systèmes d'automatisation de l'ATS, Identificateur de la FIR à quatre lettres entre parenthèses sera utilisé au cas où les unités de surveillance sont situées en dehors de la FIR

5 RDPS - Système de traitement de données radar

6 FDPS - Système de traitement de données de vol

7 MSAW - Système d'avertissement de l'altitude minimale de sécurité

8 ADS - Surveillance Automatique Dépendante

9 CPDLC - Communications contrôleur-pilote par liaison de données

10 AIDC - Communications de données entre installations des services de la circulation aérienne

11 PA/RDPS - Surface de traitement du Système de traitement de données radar

12 Npos - Nombre de positions ATS

13 Remarques

Note: Les codes suivants sont utilisés dans les colonnes 5 à 12

I - Requis et mis en oeuvre.

X - Requis mais dont l'état de mise en oeuvre est indéterminé

N - Requis mais non mis en oeuvre

A - Installation existante fournie en supplément ou en substitution du besoin

F - Futur Plan

Le nombre se systèmes fournies pour chaque type de traitement et l'année de mise en service ou de retrait

< - Année: Année prévue pour la mise en service à utiliser selon le cas avec "F" et "N"

> - Année: Année prévue pour le retrait à utiliser selon le cas avec "A" et "I"

TABLE CNS-4B - ATS AUTOMATION SYSTEMS
TABLEAU CNS-4B - SYSTEMES D'AUTOMATISATION DE L'ATS

State/Location Etat/Emplacement	AR	ATS unit served Organe ATS desservi	Data Source Source de données	RDPS	FDPS	MSAW	ADS	CPDLC	AIDC	PA/RDPS $(NM)^2$	Npos	Remarks/ Remarques
1	2	3	4	5	6	7	8	9	10	11	12	13

PART V - AIR TRAFFIC MANAGEMENT (ATM)

V^{ème} PARTIE - GESTION DU TRAFIC AERIEN (ATM)

PART V – AIR TRAFFIC MANAGEMENT

1. INTRODUCTION

1.1 The Standards, Recommended Practices and procedures to be applied and related guidance material are as listed in paragraph 1, Part V – ATM of the Africa and Indian Ocean (AFI) Basic ANP. The material in this part complements that contained in Part I – Statement of Basic Operational Requirements and Planning Criteria of the Basic ANP and should be taken into consideration in the overall planning processes for the AFI Region.

1.2 This part contains the details of the facilities and/or services to be provided to fulfil the basic requirements of the plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO ESAF and WACAF Regional Offices in Nairobi and Dakar.

1.3 For reasons of both economy and efficiency, it is necessary to ensure that differences in the development and implementation of the emerging ATM systems in the AFI Region does not result in incompatibilities. In view of the above, the evolution of ATM in the AFI Region, including the transition from conventional systems, has been carefully planned and generally outlined in the ATM Evolution Tables at Appendix A to the FASID. This approach was taken in order to ensure that the present levels of safety are not compromised and to allow a progressive improvement to the air navigation system, taking due account of cost/benefit ratios.

2. SSR CODE ALLOTMENT PLAN

2.1 The revised Africa and Indian Ocean Code Allotment Plan at Appendix B should constitute the plan for SSR code allotment for the AFI Region.
[~~CAR/SAM/3, Rec. 5/19~~]

3. Table of Contents

APPENDIX A - ATM EVOLUTION TABLES

Table I - En-route

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Europe - South Atlantic (Oceanic routes) **AR-1**	Canarias Casablanca Dakar Oceanic Recife[1] Sal	Progressive evolution towards a random RNAV environment from West to East (2000 - 2005; Reduction of longitudinal separation to 10 minutes using Mach Number Technique (1998); extension to route UA302 (1999); Distance based separation 80 NM (1998 - 2002) 50NM (2002 - onwards); Reduction of lateral separation to 50 NM (1999- 2004). Further reduction of lateral separation to 25 NM (2004 - onwards); RVSM (2000 -2005): progressive evolution towards RVSM FL290/410	DCPC (data) by participating aircraft (Bpa) (2000); Extension of VHF voice (1999)	Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main centres (1999-onwards)	RNP 5: Casablanca and Canarias FIRs (1998); RNP 10: Other FIRs (1999-2004); RNP 5: (2004 - onwards) Other FIRs	Automatic Position Reporting (APR) Bpa trials (2000); Automatic Dependent Surveillance (ADS) on RNP airspace Bpa (from 2000)

Note: 1: Outside AFI. Indicated for coordination.

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Atlantic Ocean (AFI-NAT/SAM interface) **AR-2**	Accra Dakar Oceanic Johannesburg Oceanic Luanda Sal	Random routing; Reduction of longitudinal separation to 10 minutes (2000)	DCPC (data) by participating aircraft (Bpa) (1998); Extension of VHF voice (1999)	Gradual introduction of ATN compatible bit-oriented procedures (BOP) between main AFTN Centres (1998-onwards); AFTN and ATS/DS (1999)	RNP 10 (2000)	Automatic Position Reporting (APR) Bpa trials (2000); ADS (2000)

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Europe - Eastern Africa (including oceanic areas) **AR-3**	Addis Ababa Antananarivo Asmara Cairo Dar es Salaam Entebbe Khartoum Mauritius Mogadishu Nairobi Seychelles Tripoli	Fixed RNAV routes coexisting with conventional routes (1999); Longitudinal separation 10 minutes (2000); Lateral separation: progressive introduction of 25 NM in line with RNP 5 in the upper airspace (2001); Vertical Separation: introduction of RVSM initially between FL 330 and FL 370 (2001-onwards) and extension to FL 290 - FL 410 by 2005; Area Control service in all FIRs (1999); RNAV: Gradual implementation of Random RNAV initially above FL 350 from 2001.	Extension of VHF voice (1999); DCPC (data) Bpa (2000).	Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main centres (1999-onwards); Full interface between aeronautical networks (2001); AFTN and ATS/DS (1999); Introduction of ATS inter-facility data communications (AIDC) starting in 2002 to be completed by 2005	RNP 10: (2000); RNP 5: from 2001 onwards	Procedural; ADS 2001 onwards with full ground capability in 2005; SSR in selected airspaces (1999); Automation: progressive introduction of computer assisted conflict detection and resolution from 2000

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Europe - Southern Africa **AR-4**	Algiers Brazzaville Gaborone ~~Harare~~ Johannesburg Kano Kinshasa Luanda Lusaka N'Djamena Niamey Tunis Tripoli Windhoek	Fixed RNAV routes coexisting with conventional routes from 1995 to 2000; Longitudinal separation 10 minutes from (2000) Lateral separation minima; Gradual introduction of 50 NM (2000); RVSM: Introduction initially between FL 330 and 370 (~~2001~~ 2002-onwards), evolving towards FL 290/410 from 2005; Full ATC service on all ATS routes above FL 245 and 150NM from international airports. Random RNAV between FL330-370.	~~Extension of VHF voice (1999)~~; Full VHF coverage on all ATS routes above FL300 and 150 NM from international airports. DCPC (data) Bpa (From 2001)	Implementation of all ATS/DS circuits. AFTN and ATS/DS links upgraded; full interface between aeronautical networks (from,2001); Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main centres (1999 - onwards); Gradual introduction of AIDC to be completed by (2005)	RNP 5: Initially between FL330 and FL370 (from 2000) WGS 84	Procedural (on account of traffic diversity); ADS (2000 onwards); SSR at Brazzaville, Kinshasa, Luanda and N'Djamena from (2000); RADAR and ADS integration from (2000)

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Gulf of Guinea (Coastal routes) **AR-5**	Accra Brazzaville Dakar Kano Roberts	Longitudinal separation 10 minutes (2000); Lateral separation 25NM in an RNP 5 environment (2001 - onwards); RVSM initially between (FL330 -FL370) (2001 -onwards); Random routing initially above FL350 (2001 - onwards)	Full VHF voice coverage (2000); Progressive introduction of DCPC (data) from 1999 onwards	AFTN and ATS/DS links upgraded (June 1999); Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main Centres (1999-onwards); Full interface between aeronautical networks 2001 - onwards	VOR/DME (TMAs); RNP 5 environment (2001)	SSR along itinerary Abidjan/Accra/Lagos (2000); ADS/CPDLC from 2001 with full ground capability by 2005

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Iberian Peninsula-Canaries **AR-6**	Canarias Casablanca Lisbon[1]	Fixed RNAV routes (1995); Longitudinal separation 30 NM (2001). Lateral separation 25 NM (2001) both with radar surveillance; RVSM (2002 - onwards)	DCPC 2005 - onwards	Gradual introduction of ATN compatible bit-oriented procedures (BOP) between main AFTN centres (2002)	RNP 5 (1998)	APR Bpa (1998); Mode S (2000); ADS Bpa - 1999 onwards

Note: 1: Outside AFI. Indicated for coordination.

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
North AFI/Coastal and EUR/AFI Interface routes **AR-7**	Algiers Cairo Casablanca Tripoli Tunis	Reduction of longitudinal separation to 10 minutes along specific itineraries (2000) ; Fixed RNAV coexisting with conventional routes (1999); RVSM (2002 - onwards)	DCPC 2005 onwards; Extension of VHF voice 1999	Gradual introduction of ATN between selected ACCs (1999); ATS/DS (1999)	VOR/DME (TMAs); RNP 5 2000 onwards in selected upper airspaces	SSR (high density airspaces) (2000); Mode S (where justified) (2000).

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Continental Southern Africa **AR-8**	Beira Gaborone Harare Bloemfontein Capetown Dar es Salaam Durban Johannesburg Lilongwe Luanda Lusaka Port Elizabeth Windhoek	Fixed RNAV routes coexisting with conventional routes (2000); Longitudinal separation 10 minutes (23/3/2000); Full ATC (2000); Lateral separation (TBD); Random routing initially above FL 350 (TBD); RVSM initially between FL 330 and FL 370 (TBD)	Full VHF voice coverage (2000); DCPC (data) from 2000	AFTN implemented (1999); Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main centres (1999); ATS/DS (1999); AIDC (2001-2005)	VOR/DME (TMAs); RNP 10 (2000); RNP 5: (from 2000), and evolution to RNP 4 in selected airspaces	SSR (high density airspaces) (1996); ADS/CPDLC Bpa (2000); SSR (Luanda, 2000)

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Trans-Sahelian **AR-9**	Asmara Dakar Kano Khartoum N'Djamena Niamey	Fixed RNAV routes co-existing with conventional routes (1999); Longitudinal separation of 10 minutes (2000); Lateral separation 25 NM in an RNP 5 environment (2001 - onwards); RVSM- initially between FL330 - 370 (2001 -2005)	Extension of VHF voice (2000); DCPC (data) (2000 - 2005).	AFTN and ATS/DS links upgraded (1999); Full Interface between aeronautical networks 2001 - onwards; Gradual introduction of ATN compatible bit-oriented procedures (BOP) between AFTN main centres (1999-onwards)	RNP 10: (2000); RNP 5: 2000- onwards evolving towards RNP5	APR Bpa (1998); ADS/DCPC (2001 - onwards) with full ground capability by 2005; SSR coverage at N'Djamena sector

Area of Routing	FIRs	Systems Evolution 1995-2005				
		Airspace and Traffic Management	Communications		Navigation	Surveillance
			Mobile Service	Fixed Service		
1	2	3	4	5	6	7
Trans-Indian Ocean **AR-10**	Antananarivo Bombay[1] Johannesburg Oceanic Male[1] Mauritius Perth[1] Seychelles	Reduction of longitudinal separation to 10 minutes (2000); Random routing in selected portions of the airspace (1999); RNP itineraries (2000); Upper airspace control in 1999; Reduction of lateral separation to 50 NM coinciding with RNP 10 from 2000 onwards; RVSM along selected itineraries initially between FL 310-FL370 (2001-onwards) evolving towards FL 290-FL 410 from 2005 onwards.	DCPC (data) from 1999); Extension of VHF voice (1999)	AFTN and ATS/DS links upgraded (1999); Interface between aeronautical networks (1999); AIDC (2002) with full capability in 2005	RNP 10: (2000)	APR Bpa (1999); ADS Bpa (2000)

Note: 1: Outside AFI. Indicated for coordination.

Table II - TMAs and/et Aerodromes

Type of TMA or Aerodrome (See Note 1)	Characterisation	Systems evolution 1995-2005			
		Communications		Navigation	Surveillance
		Voice	Data		
1	2	3	4	5	6
TMA Type 1	Multiple airports within TMA; Complex traffic patterns; High density traffic.	VHF voice coverage up to 150 NM from all international airports at operationally significant altitudes	VHF data-link by participating aircraft	VOR/DME; fixed RNAV routes; GNSS overlay NPA GNSS	Voice position reports plus: - SSR; Mode S (See Note 2) - Automatic Dependent Surveillance (ADS) by participating aircraft.
TMA Type 2	Multiple airports within TMA with complex traffic patterns, or TMAs with medium density traffic.		VHF data-link by participating aircraft (the ground element of the system where justified only)		Voice position reports plus: - SSR Mode A/C (where justified) - ADS (where justified)
TMA Type 3	TMAs with low density traffic.		N/A		Voice position reports.
Aerodrome Type 1	High density traffic.	Independent ground and Tower high reliability VHF voice frequencies	VHF data-link by participating aircraft; Gate data-link by participating aircraft.	ILS; GNSS based approach procedures : 1. overlay to ILS procedures; 2. non-instrument runways; 3. non-precision runways.	Voice position reports. Visual surveillance plus: - Surface Movement Radar (where justified) - ADS by participating aircraft.
Aerodrome Type 2	Medium density traffic.		VHF data-link by participating aircraft; (the ground element of the system where justified only)		Voice position reports; Visual surveillance plus: - ADS by participating aircraft (where justified).
Aerodrome Type 3	Low density traffic.	Single ground/Tower high reliability VHF voice frequency	N/A		Voice position reports. Visual surveillance.

Note 1: Those Airports and TMAs falling within each type will be designated by the AFI Planning and Implementation Regional Group (APIRG) based on suitable proposals by provider and user States and organizations concerned.

Note 2: Primary radars may continue to be used in those TMAs where there is a mix of transponder equipped and non-transponder equipped aircraft and the number of non-transponder equipped aircraft is sufficiently large to justify the requirement.

TABLE III

Categorization of TMAs and Aerodromes
Classification provisoire des TMA et Aérodromes

State/Etat	TMA	Type	Aerodromes	Type
Algeria/Algérie	Alger	1	Alger	1
	Constantine	1	Constantine Bejaia* Jijel*	133
	Annaba	1	Annaba Tebessa	13
	Oran	1	Oran Tlemcen Tiaret Mascara*	1333
	Other TMAs	1/2	Other Aerodromes	2/3
Angola	Luanda		Luanda Huambo	
Benin/Bénin	Cotonou	2	Cotonou	2
Botswana	Francistown Gaborone Maun Kasane	3233	Gaborone Others	23
Burkina Faso	Bobo Dioulasso Ouagadougou	32	Bobo Dioulasso Ouagadougou	32
Burundi	Bujumbura		Bujumbura	
Cameroon/Cameroun	Douala Yaounde	23	Douala Yaounde/Nsimalen	23
Cape Verde/Cap-Vert	Sal	2	Amilcar Cabral Francisco Mendes	23
Central A.Rep./R.C.A.	Bangui	2	Bangui	2
Chad/Tchad	Ndjamena	2	Ndjamena	2
Comoros/Comores	Moroni			
Congo	Brazzaville Pointe Noire	23	Brazzaville Point Noire	23
Côte d'Ivoire	Abidjan Bouake	23	Abidjan/F.H. Boigny Bouake	23
Dem. Rep. Of Congo Rep. Dém. Du Congo	Kinshasa Other TMA's	23	Kinshasa Other aerodromes	23

State/Etat	TMA	Type	Aerodromes	Type
Djibouti	Djibouti		Djibouti	
Egypt/Égypte	Alexandria Aswan Cairo Hurgadah Luxor	22122	Abu Simbel Alexandria Aswan El Arish* Cairo Hurghada Luxor Mers Matruh Sharm El Sheikh St. Catherine Taba	2e + 08
Equat. Guinea/Guinée Equat.	Malabo	2	Malabo Bata*	33
Eritrea/Érythrée	Asmara	3	Asmara Assab	3
Ethiopia/Éthiopie	Addis Ababa	3	Addis Ababa Dire Dawa	3
France (Réunion)	St. Denis	2	St. Denis	2
Gabon	Libreville Port Gentil	23	Libreville Port Gentil	23
Gambia/Gambie	Banjul		Banjul	
Ghana	Accra Kumasi	23	Accra/KIA Kumasi/Kumasi	23
Guinea/Liberia/Sierra Leone	Roberts	2	Conakry Freetown Monrovia	222
Guinea Bissau/Guninée Bissau	Bissau		Bissau	
Kenya	Nairobi	1	Nairobi Eldoret Mombasa	1
Lesotho	Maseru	2	Maseru	2
Libyan Arab Jamahiria	Benghazi Tripoli		Benghazi Tripoli Sebha	
Madagascar	Ivato	2	Ivato Mahajanga Toamasina	233
Malawi	Lilongwe	3	Lilongwe	3
Mali	Bamako	2	Bamako	2
Mauritania/Mauritanie	Nouakchott Nouadhibou	2 3	Nouakchott Nouadhibou	3 3

State/Etat	TMA	Type	Aerodromes	Type
Mauritius	Mauritius		S.S. Ramgoolam	
Morocco/Maroc	Casablanca Agadir Fes Marrakech Ouarzazate Oujda Rabat-Sale Tangiers	1 2 2 2 2 2 2 2	Casablanca Agadir Fes Marrakech Ouarzazate Oujda Rabat-Sale Tangiers	1 2 2
Mozambique	Beira Maputo	3 2	Beira Maputo	3 2
Namibia	Windhoek		Windhoek	
Niger	Niamey	2	Niamey	2
Nigeria/Nigéria	Abuja Calabar Ilorin Kaduna Kano Lagos Maiduguri Port Harcourt Sokoto	2.33e + 08	Abuja Calabar Ilorin Kaduna Kano Lagos/Murtala Mhmd. Maiduguri Port Harcourt Sokoto	2e + 08
Rwanda	Kigali		Kigali	
Sao Tome	Sao Tome	3	Sao Tome	3
Senegal/Sénégal	Dakar	2	Dakar/L.S. Senghor	2
Seychelles	Seychelles	2	Seychelles Int.	2
Somalia/Somalie	Mogadishu		Mogadishu	
South Africa/Afrique du Sud	Bloemfontein Cape Town Durban East London George Johannesburg Lanseria Port Elizabeth	32233113	Bloemfontein Cape Town Durban East London George Johannesburg Lanseria Port Elizabeth	3e + 07
Spain (Canary Islands) Espagne (îles Canaries)	Canarias	1	Gran Canaria Tenerife Sur Tenerife Norte Lanzarote Fuerteventura La Palma El Hierro	1e + 06
Sudan	Khartoum		Khartoum	

State/Etat	TMA	Type	Aerodromes	Type
Swaziland	Manzini		Manzini	
Togo	Lome Niamtougou	23	Lome Niamtougou	23
Tunisia/Tunisie	Tunis Djerba Monastir Sfax Tabarka Tozeur	112222	Tunis Djerba Monastir Sfax Tabarka Tozeur	111222
Uganda/Ouganda	Entebbe	3	Entebbe	3
United Rep. of Tanzania/Tanzanie	Dar es Salaam	3	Dar es Salaam	3
Zambia/Zambie	Lusaka	2	Lusaka	2
Zimbabwe	Harare		Harare	

9 Note: * means aerodrome not part of the AFI Plan / * signifie aérodrome ne faisant pas partie du Plan AFI.

TABLE IV ATM operational requirements in an RNP/RNAV environment

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
AIR TRAFFIC SERVICES				
1.	**Routings and required conventional functionalities**			
1A	C fixed routes	C RNAV capability	C NAVAID infrastructure	
1B	C flexible routes	C RNAV capability	C NAVAID infrastructure	
2.	**Routings and required CNS/ATM functionalities**			
2A	C fixed routes	C DCPC (voice/data) C RNP/X approval/certification C FMS	C DCPC (voice/data)	C see Notes 1, 2 and 3
2B	C flexible routes	C DCPC (voice/data) C RNP/X approval/certification C FMS	C DCPC (voice/data)	C see Notes 1, 2 and 3
2C	C dynamic user-preferred re-route (e.g. DARPs)	C DCPC (voice/data) C RNP/X approval/certification C AOC data link C Direct flight plan uploads C FMS	C DCPC (voice/data) C AOC data link C flight plan generation C AOC/ATS data communication	C utilization dependent on airspace complexity C see Notes 1, 2 and 3

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
2D	C autonomy of flight** concept	C TBD	C TBD	C concept still undergoing definition by ICAO
3.	**En-route vertical separation reductions**			
3A	C 1 000 ft vertical separation between FL 290 and FL 410	C RVSM certification/ operational approval C voice/data communication	C height monitoring sampling C voice/data communication	C see ICAO *Regional Supplementary Procedures* (Doc 7030) NAT/RAC-1, 2-1 C sampling to verify that aircraft population height keeping accuracy is in conformance with appropriate standards
4.	**En-route longitudinal separation reductions**			
4A	C 80 NM (non-radar environment)	C RNAV C MNPS approval C voice/data communication	C MNT C 60-minute position reporting C voice/data communication	C MNT may be required C MNPS is used in a generic sense and may not be required in all cases C see Note 1
4B	C 50 NM (non-radar environment)	C RNP 10 approval/ certification C FMS C DCPC (voice/data)	C 30-minute position reporting C MNT C DCPC/voice/data	C final requirements TBD C MNT may be required C see Notes 1, 2 and 3

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
4C	C 30 NM (non-radar environment)	C FMS C DCPC (voice/data) C RNP 4 approval/ certification C ADS	C DCPC (voice/data) C ADS	C final requirements TBD C see Notes 1, 2, 3 and 4
4D	C less than 30 NM (non-radar environment)	C FMS C DCPC (voice/data) C RNP/X approval/ certification C ADS	C DCPC (voice/data) C ADS	C final requirements TBD C see Notes 1, 2, 3 and 4
4E	C 10 minutes (non-radar environment)	C RNAV C voice/data communication	C MNT where prescribed C voice/data communication	C RNAV capability may not be required in all situations C accurate time requirement/common time reference C see Note 1
4F	C 7 minutes (non-radar environment)	C FMS C DCPC (voice/data) C RNP 10 approval/ certification	C DCPC (voice/data)	C final requirements TBD C accurate time requirement/common time reference C see Notes 1, 2 and 3
5.	**En-route lateral separation**			
5A	C 60 NM (non-radar environment)	C RNP 12.6 approval/certification C voice/data communication	C voice/data communication C pilot position reports	C presently implemented as MNPS and AUSEP in the NAT and Asia Pacific Regions respectively C performance monitoring may be required C see Notes 1, 3 and 5

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
5B	C 50 NM (non-radar environment)	C RNP 10 approval/ certification C voice/data communication	C voice/data communication C pilot position reports	C performance monitoring may be required C see Notes 1, 3 and 5
5C	C 30 NM (non-radar environment)	C RNP 4 approval/ certification C DCPC (voice/data)	C DCPC (voice/data)	C final requirements TBD C performance monitoring may be required C see Notes 1, 2, 3 and 5
5D	C less than 30 NM (non-radar environment)	C DCPC (voice/data) C RNP/X approval/ certification C ADS	C DCPC (voice/data) C ADS	C final requirements TBD C performance monitoring may be required C see Notes 1, 2, 3, 4 and 5
5E	— 16.5 NM (uni-directional) (non-radar environment)	C RNP 5 approval/ certification C DCPC voice	C DCPC voice	C relates to VOR reference system C see Notes 3, 5, 6 and 7
5F	— 18 NM (bi-directional) (non-radar environment	C RNP 5 approval/ certification C DCPC voice	C DCPC voice	C relates to VOR reference system C see Notes 3, 5, 6 and 7
5G	— 10 to 15 NM (radar environment)	C RNP 5 approval/ certification C DCPC voice	C radar C DCPC voice	C system safety evaluation required C see Notes 3, 5, 6 and 7
5H	— 8 to 12 NM (radar environment)	C RNP 4 approval/ certification C DCPC voice	C Radar C DCPC voice	C system safety evaluation required C see Notes 3, and 5

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
AIRSPACE MANAGEMENT				
6A	C airspace integration and flexible use of airspace[1]	C to be provided to all aircraft	C separate databases for: — aircraft — AOC — military reserved airspace — national security — environmental — aeronautical information — airports — weather — traffic — SAR — rules of the air	C this provides the information that is necessary to create flexible use of airspace*

[1]Emerging concept or technology-consensus still to be reached.

Code	ATM Operational Enhancements*	Required Functions — Air	Required Services — Ground	Notes
AIR TRAFFIC FLOW MANAGEMENT				
7A	C integrated air traffic flow management	C to be provided to all aircraft	C separate databases for: — aircraft — AOC — airspace requirements — environmental — aeronautical information — airports — weather — traffic forecast C integrated automation of database management C AOC interface C ATC/ASM/ATFM interface	C purpose is to ensure an optimum flow of air traffic by balancing traffic demand and ATC capacity

NOTES

1) When data link is used for communication, voice communications must be available. Depending upon the separation requirement, the voice requirement may be for direct voice.

2) Performance requirements of data link depend upon the application for which it is being used.

3) The approval for RNP operations is specific for each RNP type.

4) ADS requirement is associated with and related to the over-all communication performance requirements for position reporting.

5) Lateral route systems require regional safety assessments and agreement.

6) In some cases, the RNP requirement may be met without the use of RNAV; however, in future CNS/ATM systems, all aircraft are expected to be RNAV-equipped.

7) RNP/5 relates to a VOR reference system up to the year 2000, at which time safety assessments will be required against a new target level of safety.

Appendix B

ALLOCATION AND ASSIGNMENT OF SECONDARY SURVEILLANCE RADAR (SSR) CODES IN THE AFI REGION

1. Objectives of the new code allotment plan (CAP)

1.1 The new code allotment plan (CAP) shall provide States in the AFI Region with a means to coordinate the use of 4 096 secondary surveillance radar (SSR) codes in Mode A/3 in the most efficient and economical manner.

1.2 The plan shall foster the early implementation of a method which will ultimately allow an assigned four-digit code to be maintained for the longest possible time during a flight in the AFI Region.

2. General principles to meet the objective

2.1 The detailed principles governing the use of SSR codes in the AFI Region are based on the following general principles which are complementary to the worldwide provisions (PANS-RAC, Doc 4444, Part VI). These principles provide for a smooth transition from the present use of SSR to that mentioned in 1.2.

2.1.1 Mode A/3 codes shall be used for ATS purposes only.

2.1.2 Codes will be allocated to ATS units on the basis of duly justified operational requirements and their number will be established based on the number of aircraft to be handled simultaneously within a specified area and for a determined period of protection during traffic peaks.

2.1.3 Code requirements will be expressed in terms of complete code series (sixty-four four-digit codes in each series) or specified parts thereof. In special cases, such requirements may even cover designated four-digit codes only.

2.1.4 Codes intended to be used as international transit codes will be allocated to specific ACCs for use within participating areas (PA) consisting of the areas of ATS responsibility of several States.

2.1.5 Codes intended to be used for domestic purposes will be allotted to States for use by ATS units which require limited geographical protection for such codes only.

3. Operational and technical factors involved

3.1 The following operating conditions are likely to persist for the lifetime of the next CAP concept:

a) both auto-active and passive SSR decoding equipment will be used for ATS purposes in the AFI Region;

b) because of this, comparatively simple code assignment methods like the assignment by reference to ATC sectors will coexist with, and vertically or laterally adjoin, more sophisticated, computer-assisted code assignment methods; and

c) as 4 096 code capability in Mode A/3 is a prerequisite for full application of sophisticated code assignment methods, it appears essential to make this capability a mandatory requirement for aircraft operating international transit flights. For this reason, an environment of sixty-four code capability is not taken into account in this context.

3.2 For guidance material detailing the requirements for the development of automated SSR code assignment systems, refer below to Considerations Relevant to the Progressive Sophistication of Treatment of SSR-derived Data for ATS Purposes.

4. Permanent code distribution and categories

4.1 *Distribution of codes*

4.1.1 Certain codes are reserved for special purposes on a worldwide scale. The remaining code series for use in the region are, in this CAP, divided into two distinct categories: transit codes for international use and domestic codes for national use.

4.1.2 The number of codes used for international transit purposes has to be relatively high, due to the extended geographical protection required in order to reduce to a minimum the chances of confusion between the identity of two different aircraft assigned the same four-digit code. Sufficient protection must be allowed to prevent interference with affected PAs in neighbouring regions.

4.1.3 The number of codes used for domestic purposes can be kept relatively small, as these may be repeated in different States or, as the case may be, even within the same State.

4.1.4 Where required, the allocation possibilities can be increased significantly by dividing specific code series into eight blocks of eight four-digit codes.

4.2 *Special purpose codes*

4.2.1 Specific codes in certain series are reserved for special purposes as follows:

Series 00 — Code 0000	available as a general purpose code for domestic use by any State.
(Codes 0001 – 0077	are available for domestic purposes (cf. 4.2.2)).
Series 20 — Code 2000	to be used by flights required to set a code without specific ATC instructions when entering an area where SSR coverage is available.
(Codes 2001 – 2077	are available for international transit purposes.)
Series 75 — Code 7500	reserved for use in the event of unlawful interference.
(Codes 7501 – 7577	are available for domestic use subject to specific conditions (cf. 4.2.3)).
Series 76 — Code 7600	reserved for use in the event of radiotelephony communication failure.
(Codes 7601 – 7677	are available for domestic use subject to specific conditions (cf. 4.2.3))
Series 77 — Code 7700	reserved for use in the event of emergencies.
(Codes 7701 – 7777	are temporarily unavailable.

4.2.2 Code blocks in the series 00 (with the exception of code 0000) are allotted to States for domestic purposes so that every State in the region is allotted two octal blocks of four-digit codes in such a manner that a code duplication is avoided at the State borders.

4.2.3 States may use discrete codes 7501 to 7577 and 7601 to 7677 for domestic purposes provided they have ascertained that in the area concerned and in affected adjacent areas:

a) no sixty-four code ground equipment is in operation; and

b) 4 096-code ground decoding equipment has the capability of permitting the use of such codes without generating the aural or visual alarms associated with the special purpose codes 7500 and 7600 (cf. Annex 10, Volume IV, 2.1.4).

4.3 *Transit codes*

4.3.1 Transit codes are allocated to specific area control centres (ACCs) or approach control offices (APPs) for assignment to international transit flights. Aircraft will retain the assigned code beyond national boundaries but not normally beyond the AFI Region (4.3.4 c) refers).

4.3.2 Initially the allotment of transit codes in the AFI Region is based on one participating area which includes the following flight information centres/area control centres (FICs/ACCs):

Accra	Dar-es-Salaam	Kinshasa	Niamey
Addis Ababa	Durban	Lilongwe	Roberts
Antananarivo	Entebbe	Luanda	Sal
Beira	Gaborone	Lusaka	Seychelles
Brazzaville	Harare	Mauritius	Tripoli
Cairo	Johannesburg	Mogadishu	Windhoek
Cape Town	Kano	Nairobi	
Dakar	Khartoum	N'Djamena	

Note.— Transit codes allocated to ATS units in Algeria, Egypt, Morocco, Spain (Canarias) and Tunisia are listed in the Air Navigation Plan — European Region (Doc 7754).

4.3.3 Transit codes shall be assigned in accordance with the following principles governing the originating region code assignment method (ORCAM):

a) when an aircraft enters the AFI Region (either on departure or in flight), it will be assigned a specific four-digit code by the first ATS unit concerned in the region. This code will be selected from a given stock of code series allocated in such a manner that duplication of codes assigned by different centres is prevented within the region;

b) the air traffic forecasts for the AFI Region in order to determine the likely growth of air traffic classified as international in the region;

c) the requirement for code series for a given ATC unit is derived from the total number of aircraft requiring assignment of a specific code during the busiest period of activity of that ATC unit;

d) in calculating the required code series in accordance with c) above, a "protection period" of approximately three hours is used, i.e. any specific code assigned to an aircraft by an ATC unit is normally available for re-use after a period of three hours following the initial assignment of the code; and

e) the assignment of a specific code to an aircraft is made once the aircraft in question is ready for departure on a flight, or when the aircraft in flight is expected to come under imminent control. Permanent code assignments based on the flight number or any other systematic distinguishing features cannot as a general rule be accepted because of the wasteful effects on the economy in the use of codes required.

.

b) each flight will keep the original code assigned on

entering the region for the whole flight time within that region. Appropriate code protection criteria have to be applied in order to avoid duplication by too early reassignment of the same code. Efforts should be made to reduce the "protection period" referred to in 4.3.4 d) while retaining adequate protection; and

c) normally a code change will be required at the time a flight crosses the AFI Region boundary. However, in specific cases and by specific arrangements agreed between the ATS units affected during the continuation of the flight, the assigned code may be retained beyond the AFI Region boundary.

4.3.4 In establishing the number of transit code series, account has been taken of the following factors:

a) the lifetime of the air navigation plan of which SSR is but one element. At present this does not exceed a
4.3.5 Common criteria applying to traffic figures will have to be established to assess the number of transit codes required by each ACC or APP in the region. The distribution of transit codes should be done by reference to the portion of peak international flights originating from the ACC or APP and that will be assigned an SSR code. A fix time evaluation of each facility could be used to determine the SSR code requirements maximum of seven years;

4.3.6 All code series allocated to the AFI Region must be protected from affected PAs in neighbouring regions.

4.4 *Domestic codes*

4.4.1 Domestic codes are allocated for use by flights which, throughout their flight, remain within the boundaries of the agreed area of use of such codes

(normally within one State). The relevant code series are: 04, 05, 06, 07, 12, 13, 30, 31, 35, 52, 53, 57, 66, 67 and 70. In addition, codes 0001 to 0077, 7501 to 7577 and 7601 to 7677 may be available with the conditions specified in 4.2.2 and 4.2.3 respectively.

4.4.2 Domestic codes should be used so that utmost economy in the number of codes required is achieved ~~achieve~~. As national requirements vary considerably, no definite rules can at present be established; however, in order to assist States, and in order to facilitate required international coordination of use of domestic codes in border areas, the following guidelines are provided.

4.4.2.1 As a general rule, codes employed primarily for transit purposes may be used for domestic purposes in those States where a buffer of one FIR exists between the area where the code is used for transit and that where it is used for domestic purposes. Based on appropriate agreements between the ATC units affected, exceptions to this rule may be made, provided that it is ensured that this will not lead to difficulties.

4.4.2.2 With regard to domestic codes used primarily for terminal control purposes (terminal control area (TMA/APP) and ground controlled approach (GCA), it is assumed that, unless specified otherwise, the area of operational use of the code concerned corresponds to the area of use of the associated air-ground communication channel.

4.4.2.3 Domestic codes used for terminal purposes (TMA/APP and GCA) or used within specified portions of the airspace (sectors) will be ensured protection in these functions. Adjacent States may use such codes for their domestic purposes provided a buffer equal to one sector or a distance of 60 NM between the closest edge of the two areas of use exists.

5. Monitoring of the plan

5.1 While full implementation of the CAP must inevitably be achieved gradually, it is expected that progressive development of ground facilities will allow in future an increasing number of States to adhere to the provisions foreseen in the plan.

5.2 Provisions regarding the progressive implementation of the SSR CAP and its monitoring should be agreed by the AFI Region. States expecting to introduce SSR facilities are requested to advise the ICAO regional office as to their intended use of codes at least six months in advance, in order to permit timely accomplishment of any necessary coordination.

ABBREVIATIONS AND GLOSSARY OF TERMS

PA	Participating area. An area of specified dimensions comprising the areas of ATS responsibility of several States wherein a four-digit code assigned to a specific aircraft engaged in an international flight is normally retained by this aircraft while operating in that area.
CAP	Code allotment plan.
AFI PA	The ICAO AFI Region except the following States: Algeria, Egypt, Morocco, Spain (Canarias FIR), Tunisia (included in EUR CAP).
ORCAM	Originating region code assignment method. (see 4.3.3)
Basic code	An SSR identity code containing combinations of A and B pulses only (also replies from a 4 096 code transponder where no C or D pulses are present): (Z1, Z2, (0, 0) with Zi = 0, 1, 2, . . .7)
Discrete code	An SSR identity code containing all those combinations of A, B, C and D pulses which do not constitute a basic code (cannot be generated by a sixty-four code transponder): (Z1, Z2, Z3, Z4) with Zi = (0, 1, 2, . . .7) and Z3 + Z4 ... 0.
Four-digit code	An SSR identity code containing combinations of A, B, C and D pulses (any reply generated by a 4 096-code transponder): (Z1, Z2, Z3, Z4) with Zi = (0, 1, 2, . . .7).
Code series	A group of the sixty-four four-digit codes having the same first two digits.
Code block	A continuous sequence of four-digit codes within a code series. Specific "octal" blocks of eight sequential codes having common first three digits may be identified by reference to the third digit of the full four-digit code (e.g. 0-block = codes XX00 to XX07. Codes 0010 to 0017 may be designated as codes 00 (1), codes 0020 to 0027 as codes 00 (2), etc.).
Code assignment	Distribution of SSR codes to aircraft (see *Procedures for Air Navigation Services — Rules of the Air and Air Traffic Services* (PANS-RAC, Doc 4444).
Code allocation	Distribution of SSR codes to services (cf. PANS-RAC).
Code allotment	Distribution of SSR codes to areas or countries (cf. PANS-RAC).
Transit code	A code allotted to a specific ATC unit for assignment to an aircraft engaged in an international flight and which will be retained by this aircraft at least while operating within the related PA.
Domestic code	A code allotted to a specific State for use by a designated ATS unit within that State in relation to flights which remain throughout their operation within the agreed area of use of the code concerned.

CONSIDERATIONS RELEVANT TO THE PROGRESSIVE SOPHISTICATION OF TREATMENT OF SSR-DERIVED DATA FOR ATS PURPOSES

1. Introduction

1.1 The AFI Region States are relying increasingly on the use of secondary surveillance radar (SSR) in automated air traffic control (ATC) ground systems to ensure uninterrupted identification of individual aircraft and maintenance of radar/flight plan correlation.

1.2 The common availability of specified capabilities in automated ATC ground systems has been recognized as being essential for:

a) the participation of individual automated ATC units in a cooperative environment;

b) the application of a common SSR code assignment method in accordance with the ICAO principles; and

c) the efficient utilization of four-digit SSR codes in automated ATC ground systems.

1.3 This "Statement of essential common capabilities for automated ATC ground systems in relation to the use of SSR" lists the capabilities concerned; it is intended to become a common part of the basis for minimum operational specifications for automated ground systems.

2. General system consideration

2.1 The application of automatic data processing in ATC ground systems allows for great freedom in the definition of system capabilities. This freedom should be exploited to:

a) provide for all essential capabilities related to the use of SSR in the most simple manner having due regard to operational requirements; and

b) enable individual automated ATC ground systems to function as part of a cooperative environment and to comply with agreed conventions facilitating such cooperation (e.g. principles and basic rules for code assignment, code assignment methods, etc.).

2.2 Individual automated ATC ground systems should, as part of a cooperative environment, be capable of making the maximum use of four-digit identity codes previously assigned by other units controlling the aircraft concerned, i.e. they should not introduce any code changes or, if this is impossible in some circumstances, they should require only the minimum of changes.

2.3 Taking into account a possible cooperation of ATC ground systems within the AFI Region with others outside the region and the range of four-digit identity codes which may be utilized under such arrangements, automated ATC ground systems should be capable of performing all system functions related to the use of SSR for any four-digit identity code.

2.4 Automated ATC ground systems should be designed to allow the use of a minimum number of four-digit identity SSR codes. (The application of sophisticated code correlation methods may reduce the number of codes needed in comparison with those required when simpler methods are used.)

2.5 The processing of SSR data in automated ATC ground systems should be aimed at reducing the need for controller intervention.

3. Essential capabilities for automated ground systems

3.1 It is essential that automated ATC ground systems be designed to have certain capabilities in common, based on the assumption that:

a) the maximum use will be made of previously assigned four-digit identity SSR codes and of Mode C;

b) only where continuing use of previously assigned codes would give rise to ambiguity will new four-digit identity codes be assigned in accordance with a suitable common SSR code assignment method;

c) the prime use of four-digit identity codes will be to facilitate automatic identifications, automatic tracking and automatic radar/flight plan data correlation; and

d) the differentiation of aircraft essential for the execution of these functions can be achieved through the use of a single, adequately protected code per flight.

3.2 In detail, automated ATC ground systems should be capable of automatic:

a) *exchange of four-digit identity codes*, in particular, of timely transmission to adjacent centres concerned of information on the code previously assigned to flights to be transferred;

b) *assignment of four-digit identity codes*, in all instances where no previous code assignment has been made or where previous assignments are found to be unsuitable;

c) *recognition of SSR codes*, in particular, decoding of all SSR codes transmitted within the SSR coverage of a centre (auto-active decoding);

d) *processing of SSR code information*, including:

1) initiation of automatic tracking of SSR responses;

Note.— This does not exclude tracking on the basis of primary radar returns in areas where adequate primary coverage is available.

2) determination for each code whether it meets the criteria to be established for unambiguous correlation;

3) recognition of any code duplications affecting correlation;

4) proposing action by controllers to resolve code duplications affecting correlation;

5) establishment of initial correlation between real-time radar information and current flight plan information on the basis of decoded SSR replies (including Mode C information). Correlation should be achieved sufficiently in advance of time at which an aircraft enters the jurisdiction of a centre;

e) *display of information*, including:

1) presentation in a suitable manner of decoded SSR replies and/or correlated flight plan information;

2) filtering of information to be displayed on the basis of SSR-derived data (Modes A and C); and

3) indication of code duplications;

6) maintenance of correlation between real-time radar information and current flight plan information on the basis of decoded SSR replies and/or coincidence of flight plan information (route, heading, altitude) or other distinguishing criteria and radar information;

7) storage of code information until a time at which its activation and protection is desired; and

8) activation of stored information for correlation at a given time and/or within a given airspace;

f) *initiation of alarms*, indicating the detection of special codes as specified on a regional or worldwide basis, maintenance of tracking and correlation on aircraft using these codes; and

g) *recovery from ground system degradation*. In cases of ground system degradation (excluding display component failure) to the extent that essential SSR-derived information is not displayed, automated ATC ground systems should be capable of restoring all essential information within the shortest possible time. Until full serviceability can be restored, the above aim may necessitate suppression of functions of secondary importance.

4. Development of automated SSR code assignment systems

As the use of computers could be a limiting factor in code assignment and thus reflect on the code allotment, the following principles for the development of automated SSR code assignment systems should be observed:

a) automated systems shall not require the use of basic codes when there is a need to recognize a grouping of aircraft. The automated equipment shall be able to achieve group recognition on the basis of a four-digit code common to such grouping;

Note.— International transit flights are not to be transferred on such common codes to adjacent ATS units unless specifically agreed between the units concerned.

b) automated systems shall be capable of using code blocks (parts of a code series) without getting confused if, in a neighbouring system, other blocks of the same code series (with the same first and second digits) are used;

c) automated equipment shall be capable of coping with a limited number of code conflicts rather than preventing code duplications by means of more complicated and less economical code allocation and assignment methods;

Note.— It is expected that this feature will become even more important as traffic increases.

d) automated systems shall be capable of assigning codes with reference to the category of a flight, i.e. transit codes shall be assigned to international transit flights and domestic codes to flights confined within the smaller area of use reserved for such codes;

e) automated systems shall permit the addition of a sophisticated capability of assigning codes with reference to the routing or special code protection required for specific flights, especially when this will permit economies in the number of codes required;

f) the code assignment logic of an automated system shall not impose any restrictions on the free choice of any specific additional codes if this is required to satisfy new requirements; and

g) automated code assignment systems shall aim at international cooperation. National solutions should be considered only as interim ones.

Chart ATM 1

MAP OF AFI PARTICIPATING AREAS

(To be developed)

GUIDELINES FOR THE APPLICATION OF
TABLE ATS 1 OF THE
***AIR NAVIGATION PLAN —AFRICA AND INDIAN OCEAN REGION* (DOC 7474)**

1. INTRODUCTION

1.1

In accordance with the implementation requirements of the *Air Navigation Plan —Africa and Indian Ocean Region* (Doc 7474), Table ATS 1, States and Organizations responsible for providing air traffic services in the AFI Region should properly apply the procedures of the AFI SSR code allocation plan (CAP) approved by the AFI Regional Planning and Implementation Group (APIRG). This document contains guidelines for achieving this objective.

1.2

It is impossible to cover all potential variables due to the diversity of circumstances and characteristics which, at a given point, might have a bearing on the application of procedures; therefore, it is expected that States will interpret correctly the application criteria and that this guide will serve as an auxiliary document for applying the procedures. It is also noted that the ICAO ESAF ~~NACC~~ and WACAF ~~SAM~~ Regional Offices will be responsible for monitoring the CAP, so States may therefore ask them for clarification when necessary.

2. GENERAL PROCEDURES

2.1

Use of codes

2.1.1

States and Organizations responsible for providing services should limit the use of SSR codes to the series allocated to them in Table ATS 1.

2.1.2

States and Organizations responsible for services should internally redistribute allocated codes, distributing the available code series or fractions thereof to ATC units equipped with radar systems under their jurisdiction, taking into account the volume of outgoing flights and overflights requiring codes.

Note.— In order to make better use of code series, they may be divided in fractions in such a way that they may be used as a whole or in halves, quarters or eighths of a series, as required, according to the volume of flights served by each ATC unit.

2.1.3

Codes are assigned to flights leaving the jurisdiction of the ATC unit where those flights originate. This means that they are assigned to departures from airports within the area and to overflights arriving from airspaces lacking radar service or to other aircraft which have not been previously assigned a code.

2.1.4

Efforts should be made to maintain the code already assigned to an aircraft. This assumes that the code is known at the time of coordination and that it may be introduced into the automated processing system, so that the system will recognize when the aircraft enters the radar system coverage area.

2.1.5

Code occupation period

2.1.6

In order to protect the use of a unique code for each flight, avoiding its double assignment to another flight within the airspace of a PA, each State or ATC unit shall determine a "protection period" within its area, i.e. the period of time in which the code used by a flight cannot be assigned to another flight.

2.1.7

The submitted proposal estimates a protection period of 6 hours for all cases, this period being considered the most critical. This gives ATC units greater capacity for using allocated codes through a reduction in the protection period, as long as it does not cause a duplication as mentioned in 2.2.1.

2.1.8

For maximum economy of codes, it is recommended that they be assigned as closely as possible to the time of flight activation; likewise, when a flight has already been assigned a code and it is not activated within a reasonable time limit, the code assignment should be cancelled, releasing it for use by another flight.

2.1.9

In some cases, when flight time within airspaces with radar coverage so permit, codes may be assigned in a cyclical manner; that is, codes are progressively assigned until reaching the last available code, at which time the assignment starts over again from the beginning, irrespective of the time elapsed. In some cases, when feasible, this procedure is simpler for ATC units.

2.2

Saturation

2.2.1

When the demand for codes exceeds the number available, due to an increase in traffic, and solutions such as the reduction of the protection period cannot be adopted, control units may apply the following measures:

i) in the case of transit flights, use can be made of code series allocated to States/FIRs belonging to non-adjacent PAs. This procedure should be used in extreme cases, after coordinating with those States which might be affected. The ICAO WACAF and ESAF Regional Offices may recommend this solution after studying the possibilities and assessing potential consequences.

ii in the case of domestic flights, use can be made of transit codes allocated to the State/FIR concerned or, if necessary, to another State/FIR within the same PA, at the same time taking the relevant protective measures to avoid any negative effects.

2.3

Assigning codes to domestic flights

2.3.1

The proposed Table ATS 1 recommends assigning codes from the series apportioned for domestic flights for use by States/FIRs. Based on the needs of ATC units, this proposal could be modified to permit a more appropriate application, considering that:

a) the same code can be assigned to different domestic flights, as long as airspaces where the flights take place are not adjacent and there is no intermediate radar coverage area for at least 60 nautical miles;

b) the rule described in a) above may be applied within the same State/FIR and also between adjacent States/FIRs when relevant arrangements have been made;

c) in order to take maximum advantage of this procedure, it is preferable to allocate the same domestic codes in different smaller areas, instead of assigning codes taken from many different series; and

d) when saturation in the demand for domestic codes is foreseen, the procedure described in b) above may be applied.

TABLE ATS 2 — HF VOLMET BROADCASTS

TABLEAU ATS 2 - EMISSIONS RADIOTELEPHONIQUES VOLMET HF

EXPLANATION OF THE TABLE

The transmitting station appears at the top of each block. Names in lower case letters indicate aerodromes for which reports are required.

EXPLICATION DU TABLEAU

La station d'émission figure à la partie supérieure de chaque case. Les noms en minuscules sont ceux des aerodromes pour lesquels des messages d'observation sont nécessaires.

AFI

FREQUENCIES/FREQUENCES/FREQUENCIAS: 2860, 5499, 10057, 17901/13261 kHz

Brazzaville 15–25 45–55	Antananarivo 25–30 55–60
Brazzaville Douala Libreville Bangui N'Djaména Kinshasa Pointe-Noire Port-Gentil Yaoundé Luanda Sao Tomé Lagos Kano Garoca	Antananarivo Mahajanga Toamasina Moroni Saint-Denis Mauritius Nosy-Bé

TABLE ATS 2A — VHF VOLMET BROADCASTS

TABLEAU ATS 2A - EMISSIONS VHF VOLMET

EXPLANATION OF THE TABLE

In the box at the top of each block are shown the location in the vicinity of which the broadcasts are to be made and the recommended frequency(ies) assigned for the broadcasts.

EXPLICATION DU TABLEAU

Dans la case située au haut de claque bloc sont indiqués les emplacements à proximité desquels les émissions doivent être effectuées ainsi que les fréquences qu'il est recommandé d'assigner à ces émissions.

ALGER 126.8 MHz	CAIRO 126.2 MHz	CASABLANCA 127.6 MHz	LAS PALMAS DE GRAN CANARIA 126.6 MHz	TUNIS 126.6 MHz
ALGER Q	CAIRO Q	CASABLANCA/ Mohamed V Q	LAS PALMAS DE GRAN CANARIA	TUNIS/ Carthage Q
ANNABA Q	BEIRUT Q	RABAT	TENERIFE	JERBA/Zarzis
CONSTANTINE Q	DAMASCUS Q	MARRAKECH	EL AAIUN	MONASTIR/ Habib Bourgiba
ORAN Q	NICOSIA Q	TANGER	LANZAROTE	SFAX/El Maou
TUNIS Q	ATHENS Q	AGADIR	MADRID	
MADRID Q	BENGHAZI Q	OUJDA	CASABLANCA	
BARCELONA Q	KHARTOUM Q	LAS PALMAS DE GRAN CANARIA	MARRAKECH	
PALMA DE MALLORCA Q	JEDDAH Q	MÁLAGA	AGADIR	
MARSEILLES Q	ALEXANDRIA Q	SEVILLA	LISBOA	
NICE Q	ASWAN Q			
	LUXOR Q			
	AMMAN Q			
	TEL AVIV Q			

TABLE ATS 3
SSR CODE ASSIGNMENT SYSTEM (INTERNATIONAL AND DOMESTIC)

TABLEAU ATS 3
SYSTÈME D'ATTRIBUTION DES CODES SSR (INTERNATIONAL ET INTÉRIEUR)

TABLA ATS 3
SISTEMA DE ASIGNACIÓN DE CÓDIGOS SSR (INTERNACIONALES Y NACIONALES)

FIR (Accra – Kano) Code Código	ACCRA	ADDIS ABABA	ANTANANARIVO	ASMARA	BEIRA	BLOEMFONTEIN	BRAZZAVILLE	BUJUMBURA	CAIRO	CAPE TOWN	DAKAR	DAR ESSALAAM	DJIBOUTI	DURBAN	ENTEBBE	GABORONE	GILLOT APP	HARARE	JOHANNESBURG	KANO
0000	GENERAL PURPOSE CODE/CODE D'EMPLOI GÉNÉRAL/CÓDIGO PARA FINES GENERALES																			
0001-0077	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0100-0177	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0200–0277	–	–	T	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0300–0377	–	–	–	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–
0400–0477							D					D						D		
0500–0577		*							–	D										D
0600–0677		*							–										D	
0700–0777		*							–										D	
1101–1177	–	–	–	–	–	–	–	–	–	–	–	–	–	T---	–	–	–	–	–	–
1200–1277							D		*			D						D		
1300–1377		D	D						*		D					D				
1400–1477	–	–	–	–	–	–	–	–	D	–	–	–	–	–	–	–	–	–	–	–
1500–1577	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1600–1677	–	–	–	–	–	–	–	–	D	–	–	–	–	–	–	–	–	–	–	–
1700–1777	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T
2001–2077																				
2100–2177																				
2200–2277																				
2300–2377	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–
2400–2477	–	T	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–

FIR (Accra – Kano) Code Código	ACCRA	ADDIS ABABA	ANTANANARIVO	ASMARA	BEIRA	BLOEMFONTEIN	BRAZZAVILLE	BUJUMBURA	CAIRO	CAPE TOWN	DAKAR	DAR ES SALAAM	DJIBOUTI	DURBAN	ENTEBBE	GABORONE	GILLOT APP	HARARE	JOHANNESBURG	KANO
2500–2577																				
2600–2677	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T	–
2700–2777		–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–
3000–3077	D	*							–						D					
3100–3177	D	*			D				–						D					
3200–3277	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3300–3377	–	–	–	–	–	–	–	–	D	–	–	–	–	–	–	–	–	–	–	–
3400–3477	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3500–3577																				
3600–3677	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T	–	–
3700–3777	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			–	–	–
4000–4077	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4100–4177	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4200–4277	–	–	–	–	–	–	–	–	–	–	–	–	–		T	–	–	–	–	–
4300–4377	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T	–	–	–	–
4400–4477	–	–	–	–	–	–	–	–	D	–	–	–	–	–	–	–	–	–	–	–
4500–4577																				
4600–4677	T	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4700–4777									D						–	–	–	–	–	–
5000–5077	–	–	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–
5100–5177	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–	–	–
5200–5277							D		*			D						D		
5300–5377							D					D						D		
5400–5477																				

FIR (Accra – Kano) Code Código	ACCRA	ADDIS ABABA	ANTANANARIVO	ASMARA	BEIRA	BLOEMFONTEIN	BRAZZAVILLE	BUJUMBURA	CAIRO	CAPE TOWN	DAKAR	DAR ES SALAAM	DJIBOUTI	DURBAN	ENTEBBE	GABORONE	GILLOT APP	HARARE	JOHANNESBURG	KANO
5500–5577																				
5600–5677																				
5700–5777	D	*			D				–											
6000–6077																				
6100–6177	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6200–6277	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6300–6377																				
6400–6477																				
6500–6577																				
6600–6677	D	*																		
6700–6777	D	*																		
7001–7077	D	*																		
7100–7177	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7200–7277																				
7300–7377																				
7400–7477	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7500																				
7600																				
7700																				

FIR (Khartoum – Windhoek) Code Código	KHARTOUM	KIGALI	KINSHASA	LILONGWE	LUANDA	LUSAKA	MASERU	MATSAPHA	MAURITIUS	MOGADISHU	NAIROBI	N'DJAMENA	NIAMEY	PORT ELIZABET	ROBERTS	SAL	SEYCHELLES	TRIPOLI	WINDHOEK
0000	GENERAL PURPOSE CODE/CODE D'EMPLOI GÉNÉRAL/CÓDIGO PARA FINES GENERALES																		
0001–0077	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0100–0177	T	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–
0200–0277	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0300–0377	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
0400–0477										D								*	D
0500–0577	*								D	*	D				D	D			
0600–0677	*					D			D	*	D				D	D			
0700–0777	*					D			D	*	D			D	D	D			
1101–1177	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1200–1277	D									D			D					*	D
1300–1377			D	D														D	
1400–1477	–	–	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–
1500–1577	–	–	–	–	–	T	–	–	–	–	–	–	–	–	T	–	–	–	–
1600–1677	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–	T	–	–
1700–1777	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2001–2077																			
2100–2177																			
2200–2277																			
2300–2377	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2400–2477	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–
2500–2577																			
2600–2677	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2700–2777	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

FIR (Khartoum – Windhoek) Code Código	KHARTOUM	KIGALI	KINSHASA	LILONGWE	LUANDA	LUSAKA	MASERU	MATSAPHA	MAURITIUS	MOGADISHU	NAIROBI	N'DJAMENA	NIAMEY	PORT ELIZABET	ROBERTS	SAL	SEYCHELLES	TRIPOLI	WINDHOEK
3000–3077	*				D					*		D					D		
3100–3177	*				D					*	–	D					D		
3200–3277	–	–	–	–	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–
3300–3377	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3400–3477	–	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–
3500–3577																			
3600–3677	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3700–3777	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T	–	–	–
4000–4077	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T	–
4100–4177	–	–	–	–	–	–	–	–		–	–	T	–	–	–	–	–	–	–
4200–4277	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–	–	–	–
4300–4377	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4400–4477	–	–	–	–	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–
4500–4577																			
4600–4677	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4700–4777	–	–	–	–	–	–	–	–		–	–	–	–	–	–	–	–	–	–
5000–5077	–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–
5100–5177	–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–	–
5200–5277	D									D			D					*	D
5300–5377	D									D			D					*	D
5400–5477																			
5500–5577																			
5600–5677																			
5700–5777										*		D					D		

FIR (Khartoum – Windhoek) Code Código	KHARTOUM	KIGALI	KINSHASA	LILONGWE	LUANDA	LUSAKA	MASERU	MATSAPHA	MAURITIUS	MOGADISHU	NAIROBI	N'DJAMENA	NIAMEY	PORT ELIZABET	ROBERTS	SAL	SEYCHELLES	TRIPOLI	WINDHOEK
6000–6077																			
6100–6177	–	–	T	–	–	–	–	–	–	*	–	–	–	–	–	–	–	–	–
6200–6277	–	–	–	–	T	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6300–6377																			
6400–6477																			
6500–6577																			
6600–6677																			
6700–6777																			
7001–7077												D					D		
7100–7177		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	T
7200–7277																			
7300–7377																			
7400–7477	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7500																			
7600																			
7700																			

T Whole series for transit use
– Transit code retained
* Not available for domestic use
D Domestic use
XX 7601-7612 Red Cross/humanitarian

T Série complète pour vol en transit
– Code de transit conservé
* Non disponible pour usage intérieur
D Usage intérieur
XX 7601-7612 Croix Rouge/Humanitaire

T Series completas para uso en tránsito
– Código de tránsito por mantener
* No disponible para uso nacional
D Utilización nacional
XX 7601-7612 Cruz Roja/Humanitarios

VOLMET BROADCASTS

FASID CHART ATS 4
(To be inserted)

PART VI -METEOROLOGY (MET)

V^{ième} PARTIE - METEOROLOGIE (MET)

Part VI - METEOROLOGY (MET)

1. INTRODUCTION

1.1 The Standards, Recommended Practices and Procedures to be applied are as listed in paragraph 1, Part VI - MET of the AFI ANP. The material in this part complements that contained in Part 1.2 - BORPC of the AFI ANP and should be taken into consideration in the overall planning processes for the AFI Region.

1.2 This Part contains a detailed description/list of the facilities and/or services to be provided to fulfil the basic requirements of the Plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the basic part of the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO Regional Offices concerned.

2. METEOROLOGICAL SERVICE REQUIRED AT AERODROMES & REQUIREMENTS FOR METEOROLOGICAL WATCH OFFICES

(FASID Tables MET 1A AND 1B
FASID Chart MET 1)

2.1 The meteorological service to be provided to satisfy international flight operations is outlined in FASID Table MET 1A. AFTN routing areas identified by the letters in Table MET 1A are shown on FASID Chart MET 1. The requirements for meteorological watch offices (MWO) together with the service to be provided to flight information regions (FIR), Control areas (CTA), upper flight information regions (UIR) and search and rescue regions (SSR) are listed in FASID Table MET 1B.

3. EXCHANGE OF OPERATIONAL METEOROLOGICAL INFORMATION

(FASID Tables MET 2A, 2B, 2C,
4A and 4B)

3.1 The requirements for the exchange of reports in the METAR/ SPECI code forms and aerodromes forecasts in the TAF code form, not catered by AMBEX Scheme, to satisfy international flight operations in the AFI Region are shown in FASID Table MET 2A.

3.2 FASID Table MET 2B contains the exchange requirement in the AFI Region for SIGMET messages and special air reports.

3.3 FASID Table MET 2C sets out the operational meteorological information, additional to that contained in Table MET 2A, required by States during the pilgrimage season.

3.4 FASID Tables MET 4A and 4B set out the AFI Meteorological Bulletins Exchange (AMBEX) Scheme for the collection of aerodrome forecasts (TAF) and air-reports (AIREP) respectively.

Note- Details of the AMBEX procedures including the exchange of TAF and AIREP required under the scheme are given in the AMBEX Handbook prepared by the ICAO Dakar Office in coordination with the ICAO Nairobi Office.

4. TROPICAL CYCLONE WARNING SYSTEM AND INTERNATIONAL AIRWAY VOLCANO WATCH

(FASID Tables MET 3A and 3B)

(FASID Charts MET 2 and MET 3)

4.1 The area of responsibility, the period of operation of the Tropical Cyclone Advisory Centre (TCAC), (France) Reunion and the MWOs to which the advisory information should be sent by the TCAC are contained in FASID Table MET 3A. The areas of responsibility of the designated TCACs in all regions are shown on FASID Chart MET 2.

4.2 The area of responsibility of the volcanic ash advisory centre (VAAC), Toulouse, the MWOs and ACCs to which the advisory information should be sent by the VAAC are contained in FASID Table MET 3B. The areas of responsibility of the designated VAACs in all regions are shown on FASID Chart MET 3.

Note: Operational procedures to be used for the dissemination of information on volcanic eruptions and associated ash clouds in areas which could effect routes used by international flights and necessary pre-eruption arrangements as well as the list of operational contact points are provided in the handbook on the International Airways Volcano Watch (IAVW) - Operational procedures and contact list (Doc 9766). This document is published annually by ICAO and circulated to States. Additional guidance regarding what each of the parties in the IAVW is expected to do and why, are contained in the "Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds" (Doc 9691). This document is being prepared by ICAO Secretariat with assistance of the Volcanic Ash Warning Study Group (VAWSG).

5. World Area Forecast System (WAFS)

(FASID Tables MET 5, MET 6
and MET 7, FASID Charts
MET 4, MET 5,MET 6 and MET 7)

5.1 FASID Table MET 5 sets out the AFI Region requirements for WAFS products: upper wind and temperature and significant weather (SIGWX) charts and the guided binary (GRIB) data and abbreviated plain language SIGWX to be provided by WAFC London.

5.2 FASID Table MET 6 sets out the WAFC responsibilities for the production of SIGWX forecasts and upper wind and temperature charts for the areas of coverage indicated, and GRIB data. WAFS maximum areas of coverage are shown on FASID Charts MET4, MET5, MET6 and MET7.

5.3 The FASID Table MET 7 provides the status of authorized access by satellite distribution system for information relating to air navigation (SADIS) users to the satellite broadcast and location of the operational VSATs. The table is included in the FASID for information purposes and kept up-to-date by the Regional Offices concerned.

FASID TABLE MET 1A - METEOROLOGICAL SERVICE AT AERODROMES

Explanation of the table

Column

1	Name of the aerodrome (or location) where meteorological service is required
2	Designation of aerodrome RS - International scheduled air transport, regular use AS - International scheduled air transport, alternate use
3	ICAO location indicator of the aerodrome
4	Name of meteorological office responsible for the provision of meteorological service at the aerodrome concerned
5	ICAO location indicator of the responsible meteorological office
6	Areas of coverage of charts required for flight documentation *Note*.— Areas of coverage denoted by B, C, E etc, are shown in FASID charts MET 4,5,6 and 7
7	AFTN routing areas containing destinations to which flight documentation is required to be prepared. *Note*.— The AFTN routing areas are shown on the FASID chart MET 1
8	Requirement for trend forecasts
9	Requirement for 24-hour validity aerodrome forecasts in the TAF code form

TABLEAU FASID MET 1A - SERVICE MÉTÉOROLOGIQUE AUX AÉRODROMES

Explication du tableau

Colonne	
1	Nom de l'aérodrome (ou emplacement) où l'assistance météorologique doit être fourni
2	Désignation de l'aérodrome RS — transport aérien régulier international, usage régulier AS — transport aérien régulier international, dégagement
3	Indicateur d'emplacement OACI de l'aérodrome
4	Nom du centre météorologique responsable de l'assistance météorologique sur l'aérodrome concerné
5	Indicateur d'emplacement OACI du centre météorologique responsable
6	Zones de couverture des cartes requises pour la documentation de vol *Note.— Les zones de couverture désignées par B, C, E, etc., sont indiquées sur les carts MET-2, MET-3 et MET-4.*
7	Zones d'acheminement RSFTA comprenant les destinations pour lesquelles il est nécessaire de préparer une documentation de vol *Note.— Les zones d'acheminement RSFTA figurent sur la carte de la page ….*
8	Besoin de prévisions du type tendance
9	Besoin de prévisions d'aérodrome d'une durée de validité de 24 heures en code TAF

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
ALGERIA						X					X			
ADRAR/Touat	RS	DAUA	ADRAR/Touat	DAUA								D, E, L		
ALGER/Houari Boumediene	RS	DAAG	Alger/Houari Boumediene	DAAG								D, E, G, H, L, O	X	X
ANNABA/ El Mellah	RS	DABB	ANNABA/El Mellah	DABB								D, E, L	X	X
CONSTANTINE/ Mohamed Boudiaf	RS	DABC	Constantine/Mohamed Boudiaf	DABC								D, E, L		X
GHARDAIA/ Noumérate	RS	DAUG	Ghardaia/ Noumérate	DAUG								D, E, L		
HASSI-MESSAOUD/ Oued Irara	RS	DAUH	Hassi-Messaoud/ Oued Irara	DAUH								D, E, L		
IN-SALAH/In Salah	RS	DAUI	In Salah	DAUI								D,E, L		
ORAN/Es Sénia	RS	DAOO	ORAN/Es Sénia	DAOO								D, E, L	X	X
TAMANRASSET/ Aguennar	AS	DAAT	Tamanrasset/ Aguennar	DAAT								D, E, L		X
TEBESSA/Tebessa	RS	DABS	Tebessa	DABS								D, E, L		
~~TIARET/Bou-Chekif~~	~~RS~~	~~DAOB~~	~~Tiaret/Bouchekif~~	~~DAOB~~										
TLEMCEN/Zenata	RS	DAON	Tlemcen/Zenata	DAON								D, E, L		X
ZARZAITINE/ In Amenas	RS	DAUZ	Zarzaitine/ In Amenas	DAUZ								D, E, L		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
ANGOLA					X	X								
HIUAMBO/Huambo	RS	FNHU	LUANDA/4 de Fevereiro	FNLU								F		
LUANDA/4 de Fevereiro	RS	FNLU	LUANDA/4 de Fevereiro	FNLU								D, E, F, G, H, L, M, U, S	X	X
BENIN						X								
COTONOU/ Cadjehoun	RS	DBBB	COTONOU/ Cadjehoun	DBBB								D, E, F, G, H, L, U	X	X
BOTSWANA						X								
FRANCISTOWN/ Francistown	RS	FBFT	GABORONE/Sir Seretse Khama Intl	FBSK								F		
GABORONE/Sir Seretse Khama Intl	RS	FBSK	GABORONE/Sir Seretse Khama Intl	FBSK								E, F, H	X	X
KASANE/Kasane	RS	FBKE	GABORONE/Sir Seretse Khama Intl	FBSK								F		
MAUN/Maun	RS	FBMN	GABORONE/Sir Seretse Khama Intl	FBSK								F		
SELEBI-PHIKWE/ Selebi-Phikwe	RS	FBSP	GABORONE/Sir Seretse Khama Intl	FBSK								F		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
BURKINA FASO						X								
BOBO-DIOULASSO/ Bobo-Dioulasso	RS	DFOO	OUAGADOUGOU/ Ouagadougou	DFFD								D, G, H		
OUAGADOUGOU/ Ouagadougou	RS	DFFD	OUAGADOUGOU/ Ouagadougou	DFFD								D, E, F, G, H, L	X	X
BURUNDI						X								
BUJUMBURA/ Bujumbura	RS	HBBA	BUJUMBURA/ Bujumbura	HBBA								E, F, H, L	X	X
CAMEROON						X								
DOUALA/Douala	RS	FKKD	DOUALA/Douala	FKKD								D, E, F, G, H, L, U	X	X
GAROUA/Garoua	RS	FKKR	GAROUA/Garoua	FKKR								F, L	X	
MAROUA/Salak	RS	FKKL	DOUALA/Douala	FKKD								F		
N'GAOUNDERE/ N'Gaoundéré	AS	FKKN	DOUALA/Douala	FKKD								F		
YAOUNDE/ Nsimalen	RS	FKYS	YAOUNDE/Nsimalen	FKYS								E, F, L	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
CAPE VERDE					X	X								
PRAIA/Francisco Mendes	RS	GVPR	SAL I./Amilcar Cabral	GVAC								G		
SAL I./Amilcar Cabral	RS	GVAC	SAL I./Amilcar Cabral	GVAC								E, F, G, K, L, M, S, T	X	X
CENTRAL AFRICAN REP.						X								
BANGUI/M'Poko	RS	FEFF	BANGUI/M'Poko	FEFF								D, E, F, G, H, L, O	X	X
BERBERATI/ Berberati	RS	FEFT	BANGUI/M'Poko	FEFF								F		
CHAD							X							
N'DJAMENA/ N'Djamena	RS	FTTJ	N'DJAMENA/ N'Djamena	FTTJ								D, F, H, L, O	X	X
COMOROS														
ANJOUAN/Ouani	RS	FMCV	MORONI/Hahaïa	FMCH								F		
DZAOUDZI/Pamanzi Mayotte I.	RS	FMCZ	DZAOUDZI/ Pamanzi, Mayotte I.	FMCZ								F		
MORONI/~~Hahaïa~~ Prince Said Ibrahim	RS	FMCH	MORONI/~~Hahaïa~~ Prince Said Ibrahim	FMCH								F, H, L		X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
CONGO						X								
BRAZZAVILLE/ Maya-Maya	RS	FCBB	BRAZZAVILLE/ Maya-Maya	FCBB								D, E, F, G, H, L	X	X
POINTE-NOIRE/ Agostino Neto	RS	FCPP	POINTE-NOIRE/ Agostino Neto	FCPP								D, F	X	X
COTE D'IVOIRE					X	X								
ABIDJAN//Felix Houphouet Boigny Intl	RS	DIAP	ABIDJAN//Felix Houphouet Boigny Intl	DIAP								D, E, F, G, H, L, S	X	X
BOUAKE/Bouaké	RS	DIBK	ABIDJAN//Felix Houphouet Boigny Intl	DIAP								D, G		
DEMOCRATIC REPUBLIC OF CONGO					X	X								
GOMA/Goma	RS	FZNA	KINSHASA/N'Djili	FZAA								F, H		
KINSHASA/N'Djili	RS	FZAA	KINSHASA/N'Djili	FZAA								D, E, F, H, L	X	X
KISANGANI/Bangoka	AS	FZIC	KINSHASA/N'Djili	FZAA								F		
LUBUMBASHI/Luano	AS	FZQA	KINSHASA/N'Djili	FZAA								E, F, L		
Mbujimayi/Mbujimayi	AS	FZWA	KINSHASA/N'Djili	FZAA								F		
DJIBOUTI						X								
DJIBOUTI/Ambouli	RS	HDAM	DJIBOUTI/Ambouli	HDAM								F, H, L, O	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
EGYPT							X		X	X	X			
ABU SIMBEL/ Abu Simbel	RS	HEBL	CAIRO/Cairo Intl	HECA								H		
ALEXANDRIA/ Alexandria	RS	HEAX	CAIRO/Cairo Intl	HECA								E, H, L, O		X
ASWAN/Aswan	RS	HESN	CAIRO/Cairo Intl	HECA								H		
CAIRO/Cairo Intl	RS	HECA	CAIRO/Cairo Intl	HECA								D, E, G, H, K, L, O, U, V, W	X	X
HURGHADA/Hurghada	RS		CAIRO/Cairo Intl	HECA								E, H, L, O		
LUXOR/Luxor	RS	HELX	CAIRO/Cairo Intl	HECA								E, H, L, O		X
MERSA-MATRUH/ Mersa-Matruh	RS	HEMM	CAIRO/Cairo Intl	HECA								H		
SHARM EL SHEIKH/ Sharm El Sheikh	RS	HESH	CAIRO/Cairo Intl	HECA								H		
ST. CATHERINE/ St. Catherine	RS	HESC	CAIRO/Cairo Intl	HECA								H		
TABA/Taba	RS	HETB	CAIRO/Cairo Intl	HECA								E, H, L, O		
EQUATORIAL GUINEA						X								
MALABO/Malabo	RS	FGSL	MALABO/Malabo	FGSL								D, F, G, L, U		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
ERITREA						X								
ASMARA/Asmara Intl	RS	HHAS	ASMARA/Asmara Intl	HHAS		X						H, L, O	X	X
ASSAB/Assab	RS	HHSB	ASSAB/Assab	HHSB		X						H, L, O	X	
ETHIOPIA						X		X						
ADDIS ABABA/ Bole Intl	RS	HAAB	ADDIS ABABA/ Bole Intl	HAAB								D, E, F, H, L, O, U, V, Z	X	X
DIRE DAWA/Dire Dawa Intl	RS	HADR	ADDSIS ABABA/ Bole Intl	HAAB								H		
FRANCE (Ile de la Réunion)						X		X						
SAINT-DENIS/Gillot La Réunion	RS	FMEE	SAINT-DENIS/Gillot La Reunion	FMEE								F, H, L, O	X	X
GABON						X								
FRANCEVILLE/ M'vengué	RS	FOON	LIBREVILLE/ Léon M'Ba	FOOL								F		
LIBREVILLE/ Leon M'Ba	RS	FOOL	LIBREVILLE/ Léon M'Ba	FOOL								D, E, F, G, H, L	X	X
PORT GENTIL/Port Gentil	RS	FOOG	LIBREVILLE/ Léon M'Ba	FOOL								F		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
GAMBIA						X								
BANJUL/Yundum Intl	RS	GBYD	BANJUL/Yundum Intl	GBYD								D, E, G, L		
GHANA														
ACCRA/Kotoka Intl	RS	DGAA	ACCRA/Kotoka Intl	DGAA								D, E, F, G, H, L	X	X
KUMASI/Kumasi	RS	DGSI	ACCRA/Kotoka Intl	DGAA								D		
TOMALE/Tomale	RS	DGLE										D		
GUINEA						X								
CONAKRY/Gbessia	RS	GUCY	CONAKRY/Gbessia	GUCY								D, E, G, L, U	X	X
KANKAN/Kankan	RS	GUXN	CONAKRY/Gbessia	GUCY								G		
LABE/Tata	RS	GULB	CONAKRY/Gbessia	GUCY								G		
N'ZEREKORE/Konia	RS	GUNZ	CONAKRY/Gbessia	GUCY								G		
GUINEA-BISSAU						X								
BISSAU/Osvaldo Vieira Intl	RS	GGOV	BISSAU/Osvaldo Vieira Intl	GGOV								F, G, L	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
KENYA						X		X						
ELDORET/Eldoret Intl	RS	HKEL	ELDORET/Eldoret Intl	HKEL								E, F, H, L	X	X
MOMBASA/Moi Intl.	RS	HKMO	MOMBASA/Moi Intl.	HKMO								E, F, H, L	X	X
NAIROBI/Jomo Kenyatta Intl	RS	HKJK	NAIROBI/Jomo Kenyatta Intl	HKJK								D, E, F, H, L, O, V	X	X
LESOTHO						X								
MASERU/Moshoeshoe I. Intl	RS	FXMM	MASERU/Moshoeshoe I. Intl	FXMM								F, H,	X	X
LIBERIA					X	X								
MONROVIA/ Roberts Intl	RS	GLRB	MONROVIA/Roberts Intl	GLRB								D, E, G, K, L, S	X	X
LIBYAN ARAB JAMAHIRIYA						X					X			
BENGHAZI/Benina	RS	HLLB	BENGHAZI/Benina	HLLB								D, E, H, L, O, D	X	X
SEBHA/Sebha	RS	HLLS	BENGHAZI/Benina	HLLB								D, H		`
TRIPOLI/Tripoli Intl	RS	HLLT	TRIPOLI/Tripoli Intl	HLLT								D, E, F, G, H, L, O	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
MADAGASCAR						X		X						
ANTANANARIVO/ Ivato	RS	FMMI	ANTANANARIVO/ Ivato	FMMI								F, H, L, O	X	X
ANTSIRANANA/ Arrachart	RS	FMNA	MAHAJANGA/ Amborovy	FMNM								F,H		
MAHAJANGA/ Amborovy	RS	FMNM	MAHAJANGA/ Amborovy	FMNM								F, H	X	X
NOSY-BE/Fascène	RS	FMNN	MAHAJANGA/ Amborovy	FMNM								F, H		
SAINTE MARIE/ Sainte Marie	RS	FMMS	TOAMASINA/ Toamasina	FMMT								F		
TOAMASINA/ Toamasina	RS	FMMT	TOAMASINA/ Toamasina	FMMT								F	X	X
TOLAGNARO/ Tolagnaro	RS	FMSD	ANTANANARIVO/ Ivato	FMMI								F		
MALAWI						X								
BLANTYRE/Chileka	RS	FWCL	BLANTYRE/Chileka	FWCL								F	X	
LILONGWE/Lilongwe Intl	RS	FWLI	LILONGWE/Lilongwe Intl	FWLI								E, F, H	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
MALI						X								
BAMAKO/Sénou	RS	GABS	BAMAKO/Sénou	GABS								D, E, F, G, H, L, O	X	X
GAO/Gao	RS	GAGO	BAMAKO/Sénou	GABS								D, G		
KAYES/Kayes	RS	GAKY	BAMAKO/Sénou	GABS								G		
KIDAL/Kidal	RS	GAKL	BAMAKO/Sénou	GABS								G		
MOPTI-BARBE/ Mopti-Barbe	RS	GAMB	BAMAKO/Sénou	GABS								G		
NIORO/Nioro	RS	GANR	BAMAKO/Sénou	GABS								G		
TOMBOUCTOU/ Tombouctou	AS	GATB	BAMAKO/Sénou	GABS								G		
MAURITANIA						X								
ATAR/Atar	RS	GQPA	NOUAKCHOTT/ Nouakchott	GQNN								G		
NEMA/Néma	RS	GQNI	NOUAKCHOTT/ Nouakchott	GQNN								G		
NOUADHIBOU/ Nouadhibou	RS	GQPP	NOUADHIBOU/ Nouadhibou	GQPP								D, G, L	X	X
NOUAKCHOTT/ Nouakchott	RS	GQNN	NOUAKCHOTT/ Nouakchott	GQNN								D, E, F, G, L	X	X
ZOUERATE/Zouerate	RS	GQPZ	NOUAKCHOTT/ Nouakchott	GQNN								G		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
MAURITIUS						X		X						
MAURITIUS/Sir Seewoosagur Ramgoolam Intl	RS	FIMP	MAURITIUS/Sir Seewoosagur Ramgoolam Intl	FIMP								A, E, F, H, L, O, V, W	X	X
MOROCCO					X	X					X			
AGADIR/Al Massira	RS	GMAD	AGADIR/Al Massira	GMAD								E, G, L	X	X
AL HOCEIMA/Cherif Al Idrissi	RS	GMTA	CASABLANCA/ Mohammed V	GMMN								E, G, L		
CASABLANCA/ Mohammed V	RS	GMMN	CASABLANCA/ Mohammed V	GMMN								D, E, G, H, K, L, O, S	X	X
ERRACHIDIA/Moulay Ali Cherif	AS	GMFK	CASABLANCA Mohammed V	GMMN								E, G, L, O	X	X
FES/Saïss	RS	GMFF	FES/Saïss	GMFF								G, L	X	X
MARRAKECH/Ménara	RS	GMMX	MARRAKECH/Ménara	GMMX								E, G, L	X	X
OUARZAZATE/ Ouarzazate	RS	GMMZ	CASABLANCA/ Mohammed V	GMMN								E, G, L	X	X
OUJDA/Angads	RS	GMFO	OUJDA/Angads	GMFO								E, L	X	X
RABAT/Salé	RS	GMME	RABAT/Salé	GMME								E, G, L, M, U	X	X
TANGER/Ibnou Batouta	RS	GMTT	TANGER/Ibnou Batouta	GMTT								E, G, L	X	X
TAN-TAN/Plage Blanche	RS	GMAT	CASABLANCA/ Mohammed V	GMMN								G		
TETOUAN/Saniat-Rimel	RS	GMTN	TANGER/Ibnou Batouta	GMTT								G		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
MOZAMBIQUE						X								
BEIRA/Beira	RS	FQBR	BEIRA/Beira	FQBR								F	X	X
MAPUTO/Maputo Intl	RS	FQMA	MAPUTO/Maputo Intl	FQMA								F, H, L	X	X
NAMIBIA						X								
KEETMANSHOOP/ Keetmanshoop	RS	FYKT	WINDHOEK/Windhoek	FYWH								F		
WALVIS BAY/ Walvis Bay	RS	FYWB	WINDHOEK/Windhoek	FYWH								F		
WINDHOEK/~~Windhoek~~ Hosea Kutako	RS	FYWH	WINDHOEK/~~Windhoek~~ Hosea Kutako	FYWH								D, E, F, L	X	X
NIGER						X								
AGADES/Sud	RS	DRZA	NIAMEY/Diori Hamani Intl.	DRRN								D, F, L		
NIAMEY/Diori Hamani Intl.	RS	DRRN	NIAMEY/Diori Hamani Intl.	DRRN								D, E, F, G, H, L, O	X	X
ZINDER/Zinder	RS	DRZR	NIAMEY/Diori Hamani Intl.	DRRN								D, F		

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
NIGERIA					X	X								
ABUJA/Nnandi Azikiwe	RS	DNAA	KANO/Kano	DNKN								D, E	X	
CALABAR/Calabar	RS	DNCA	LAGOS/Murtala Muhammed	DNMM								D, F		
ILORIN/Ilorin	AS	DNIL	LAGOS/Murtala Muhammed	DNMM								D		
KADUNA/Kaduna	RS	DNKA	KANO/Mallam Aminu Kano Intl.	DNNK								D		
KANO/Mallam Aminu Kano Intl	RS	DNKN	KANO/Mallam Aminu Kano Intl	DNKN								D, E, F, H, L, O	X	X
LAGOS/Murtala Muhammed	RS	DNMM	LAGOS/Murtala Muhammed	DNMM								D, E, F, G, H, K, L, O, S	X	X
MAIDUGURI/ Maiduguri	RS	DNMA	KANO/Mallam Aminu Kano Intl	DNKN								D		
PORT HARCOURT/ Port Harcourt Intl	RS	DNPO	LAGOS/Murtala Muhammed	DNMM								E, F, L		
SOKOTO/Saddiq Abubakar III Intl	RS	DNSO	KANO/Mallam Aminu Kano Intl	DNKN								D		
RWANDA								X						
KIGALI/Gregoire Kayibanda	RS	HRYR	KIGALI/Gregoire Kayibanda	HRYR								E, F, H, L, O	X	X

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
SAO TOME & PRINCIPE						X								
SAO TOME/Sao Tomé	RS	FPST	SAO TOME/Sao Tomé	FPST								F, G, L	X	X
SENEGAL					X	X								
CAP SKIRING/ Cap Skiring	RS	GOGS	DAKAR/Leopold S. Senghor	GOOY								G		
DAKAR/Léopold Sedar Senghor	RS	GOOY	DAKAR/Leopold S. Senghor	GOOY								D, E, F, G, H, K, L, O, S, U	X	X
SAINT LOUIS/ Saint Louis	RS	GOOS	DAKAR/Leopold S. Senghor	GOOY								G		
TAMBACOUNDA/ Tambacounda	RS	GOTT	DAKAR/Leopold S. Senghor	GOOY								G		
ZIGUINCHOR/ Ziguinchor	RS	GOGG	DAKAR/Leopold S. Senghor	GOOY								G		
SEYCHELLES						X		X						
MAHE/Seychelles Intl	RS	FSIA	MAHE/Seychelles Intl	FSIA								E, F, H, L, O, V, W	X	X
SIERRA LEONE					X	X								
FREETOWN/Lungi	RS	GFLL	FREETOWN/Lungi	GFLL								D, E, G, L	X	X
SOMALIA						X								

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
BERBERA/Berbera	AS	HCMI	MOGADISHU/ Mogadishu	HCMM								H, O		
BURAO/Burao	RS	HCMV	MOGADISHU/ Mogadishu	HCMM								H		
HARGEISA/Hargeisa	RS	HCMH	MOGADISHU/ Mogadishu	HCMM								H		
KISIMAYU/Kisimayu	AS	HCMK	MOGADISHU/ Mogadishu	HCMM								H		
MOGADISHU/ Mogadishu	RS	HCMM	MOGADISHU/ Mogadishu	HCMM								E, F, H, L, O	X	X
SOUTH AFRICA					X	X		X	X	X	X			
ALEXANDER BAY/ Alexander Bay	RS	FAAB	CAPE TOWN Cape Town	FACT								F		
BLOEMFONTEIN/ Bloemfontein	RS	FABL	BLOEMFONTEIN/ Bloemfontein	FABL								F	X	X
CAPE TOWN/ Cape Town	RS	FACT	CAPE TOWN/ Cape Town	FACT								E, F, T, K	X	X
DURBAN/Durban	RS	FADN	DURBAN/Durban	FADN								F, O, V	X	X
JOHANNESBURG/ Johannesburg	RS	FAJS	JOHANNESBURG/ Johannesburg	FAJS								A, D, E, F, G, H, K, L, O, R, S, T, W, V, Y	X	X
JOHANNESBURG/Rand	RS	FAGM	JOHANNESBURG/ Johannesburg	FAJS								F		
SOUTH AFRICA (Cont.d)														

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
LANSERIA/Lanseria	RS	FALA	JOHANNESBURG/ Johannesburg	FAJS								F		
UPINGTON/Upington	RS	FAUP	JOHANNESBURG/ Johannesburg	FAJS								F		
SPAIN					X	X								
GRAN CANARIA/Gran Canaria, Canary I.	RS	GCLP	GRAN CANARIA/ Gran Canaria, Canary I.	GCLP								D, E, F, G, L, M, S	X	X
HIERRO/Hierro, Canary I.	RS	GCHI	GRAN CANARIA/ Gran Canaria, Canary I.	GCLP								G		
LA PALMA/La Palma, Canary I.	RS	GCLA	GRAN CANARIA/ Gran Canaria, Canary I.	GCLP								G		
LANZAROTE/Lanzarote, Canary I.	RS	GCRR	GRAN CANARIA/ Gran Canaria, Canary I.	GCLP								E, G, L		
MELILLA/Melilla	RS	GEML	MELILLA/Melilla	GEML								G, L		
FUERTEVENTURA/ Fuerteventura, Canary I.	RS	GCFV	GRAN CANARIA/ Gran Canaria, Canary I.	GCLP								E, G, L		
TENERIFE SUR/Reina Sofia, Canary I.	RS	GCTS	TENERIFE SUR/Reina Sofia, Canary I.	GCTS								E, L, M, S	X	X
TENERIFE NORTE/Los Rodeos, Canary I.	RS	GCXO	TENERIFE NORTE/Los Rodeos, Canary I.	GCXO								E, G, L, M, S	X	X
SUDAN						X								

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
JUBA/Juba	RS	HSSJ	KHARTOUM/ Khartoum	HSSS								H		
KASSALA/Kassala	AS	HSKA	KHARTOUM/ Khartoum	HSSS								H		
KHARTOUM/Khartoum	RS	HSSS	KHARTOUM/ Khartoum	HSSS								D, E, F, H, L, O	X	X
PORT SUDAN/Port Sudan Intl	RS	HSSP	KHARTOUM/ Khartoum	HSSS								H, O		
SWAZILAND						X								
MANZINI/Matsapha	RS	FDMS	MANZINI/Matsapha	FDMS								F, H	X	X
TOGO						X								
LOME/Tokoin	RS	DXXX	LOME/Tokoin	DXXX								D, E, F, G, H, L	X	X
NIAMTOUGOU/ Niamtougou	RS	DXNG	LOME/Tokoin	DXXX								D	X	
TUNISIA					X	X			X	X	X			

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
DJERBA/Zarzis	RS	DTTJ	I.N.M. (Institut National de la Météo)	DTTA								D, E, F, G, H, L, O, U	X	X
MONASTIR/Habib Bourguiba	RS	DTMB	I.N.M	DTTA								D, E, F, G, H, L, O, U	X	X
SFAX/Thyna	RS	DTTX	I.N.M	DTTA								D, E, F, G, H, L, O, U	X	
TABARKA/7 Novembre	RS	DTKA	I.N.M	DTTA								D, E, F, G, H, L, O, U	X	
TOZEUR/Nefta	RS	DTTZ	I.N.M	DTTA								D, E, F, G, H, L, O, U	X	X
TUNIS/Carthage	RS	DTTA	I.N.M	DTTA								D, E, F, G, H, L, O, U	X	X
UGANDA						X								
ENTEBBE/Entebbe Intl	RS	HUEN	ENTEBBE/Entebbe Intl	HUEN								E, F, H, O	X	X
UNITED REPUBLIC OF TANZANIA						X		X						
DAR-ES-SALAAM/ Dar-Es- Salaam	RS	HTDA	DAR-ES-SALAAM/ Dar-Es- Salaam	HTDA								E, F, H, L, O, V	X	X
KILIMANJARO/ Kilimanjaro Intl	RS	HTKJ	KILIMANJARO/ Kilimanjaro Intl	HTKJ								E, F, H, L, O	X	X
ZANZIBAR/Zanzibar	RS	HTZA	ZANZIBAR/ Zanzibar	HTZA								E, F, H, L, O	X	X
WESTERN SAHARA						X								

Aerodrome where service is to be provided/ Aérodrome où l'assistance doit être fournie			Responsible MET Office/ Centre MET responsable		Areas of coverage of charts/ Zones représentées sur les cartes							AFTN routing areas of destination/ Zones d'acheminement RSFTA de destination	Forecasts to be provided/ Prévisions à fournir	
Name/Nom	Use/Usage	ICAO loc. ind./Ind. d'empl. OACI	Name/Nom	ICAO loc. ind./Ind. d'empl. OACI	B	C	D	E	G	H	EUR		TEND	TAF24
1	2	3	4	5	6							7	8	9
EL AAIUN/El Aaiun	RS	GSAI	EL AAIUN/El Aaiun	GSAI								G		
SMARA/Smara	RS	GSMA	EL AAIUN/El Aaiun	GSAI								G		
VILLA CISNEROS/ Villa Cisneros	RS	GSVO	EL AAIUN/El Aaiun	GSAI								G		
ZAMBIA						X		X						
LIVINGSTONE/ Livingstone Intl	RS	FLLI	LUSAKA/Lusaka Intl	FLLS								F		
LUSAKA/Lusaka Intl	RS	FLLS	LUSAKA/Lusaka Intl	FLLS								D, E, F, H, L, V	X	X
MFUWE/Mfuwe	AS	FLMF	LUSAKA/Lusaka Intl	FLLS								F		
NDOLA/Ndola	AS	FLND	LUSAKA/Lusaka Intl	FLLS								F		
ZIMBABWE						X		X						
BULAWAYO/ Bulawayo	RS	FVBU	BULAWAYO/ Bulawayo	FVBU								F	X	
HARARE/Harare	RS	FVHA	HARARE/Harare	FVHA								A, D, E, F, H, L	X	X
VICTORIA FALLS/Victoria Falls	RS	FVFA	HARARE/Harare	FVHA								F		

CHART SHOWING THE AFTN ROUTING AREAS IDENTIFIED BY LETTERS IN COLUMN 7 OF FASID TABLE MET 1A/CARTES INDIQUANT LES ZONES D'ACHEMINEMENT RSFTA IDENTIFIEES PAR DES LETTRES DANS LA COLONNE 7 DU TABLEAU FASID MET 1A

FASID CHART MET 1
(To be inserted)

FASID TABLE MET 1B — METEOROLOGICAL WATCH OFFICES

Explanation of table

Column

1 Location of the meteorological watch office (MWO)

2 ICAO location indicator assigned to the MWO

3 Name of the FIR, UIR and/or search and rescue region (SRR) served by the MWO

4 ICAO location indicator assigned to the ATS unit serving the FIR, UIR and/or SRR

5 Remarks

Note.— Unless otherwise stated in Column 5, the MWO listed in Column 1 is the designated collecting centre for the air-reports received within the corresponding FIR/UIR listed in Column 3.

TABLEAU FASID MET 1B — CENTRES DE VEILLE MÉTÉOROLOGIQUE

Explication du tableau

Colonne

1 Emplacement du centre de veille météorologique (MWO)

2 Indicateur d'emplacement OACI assigné au MWO

3 Nom de la FIR, UIR et/ou SRR (région de recherches et de sauvetage) desservie par le MWO

4 Indicateur d'emplacement OACI assigné au centre ATS qui dessert la FIR, UIR et/ou SRR

5 Observations

Note.— Sauf indication contraire à la colonne 5, le MWO de la colonne 1 est le centre de collecte désigné pour les comptes rendus en vol reçus dans la FIR/UIR correspondante figurant dans la colonne 3.

MWO Location/ Emplacement MWO	ICAO loc.ind./ ind.d'empl. OACI	AREA SERVED/ ZONES DESSERVIE		Remarks/ observations
		NAME/NOM	ICAO loc. ind./ Ind.d'empl. OACI	
1	2	3	4	5
ALGERIA				
ALGER/Baraki*	DAAL	Alger FIR/SRR	DAAA	
ANGOLA				
LUANDA/4 de Fevereiro	FNLU	Luanda FIR/SRR	FNAN	
BOTSWANA				
GABORONE/Sir Seretse Khama Intl	FBSK	Gaborone FIR/SRR	FBGR	
BURUNDI				
BUJUMBURA/Bujumbura	HBBA	Bujumbura FIR	HBBA	
CAPE VERDE				
SAL I./AMILCAR CABRAL	GVAC	Sal Oceanic FIR/SRR	GVSC	
CHAD				
N'DJAMENA/N'Djamena	FTTJ	N'Djamena FIR/SRR	FTTT	
CONGO				
BRAZZAVILLE/Maya-Maya	FCBB	Brazzaville FIR/SRR	FCCC	
DEMOCRATIC REPUBLIC OF CONGO				
KINSHASA/N'Djili	FZAA	Zaire FIR, Kinshasa SRR	FZAA	
EGYPT				
CAIRO/Cairo Intl	HECA	Cairo FIR/SRR	HECC	

* To be established/à implanter.

MWO Location/ Emplacement MWO	ICAO loc.ind./ ind.d'empl. OACI	AREA SERVED/ ZONES DESSERVIE		Remarks/ observations
		NAME/NOM	ICAO loc. ind./ Ind.d'empl. OACI	
1	2	3	4	5
ETHIOPIA				
ADDIS ABABA/Bole Intl	HAAB	Addis Ababa FIR/SRR	HAAA	
GHANA				
ACCRA/Kotoka Intl	DGAA	Accra FIR/SRR	DGAC	
KENYA				
NAIROBI/Jomo Kenyatta Intl	HKJK	Nairobi FIR/SRR	HKNA	
LIBERIA*				
MONROVIA/Roberts Intl	GLRB	Roberts FIR/SRR	GLRB	
LIBYAN ARAB JAMAHIRIYA				
TRIPOLI/Tripoli Intl	HLLT	Tripoli FIR/SRR	HLLL	
MADAGASCAR				
ANTANANARIVO/Ivato	FMMI	Antananarivo FIR/SRR	FMMM	
MALAWI				
LILONGWE/Lilongwe Intl	FWLI	Lilongwe FIR/SRR	FWLL	
MAURITIUS				
MAURITIUS/Sir Seewoosagur Ramgoolam Intl	FIMP	Mauritius FIR/SRR	FIMM	
MOROCCO				
CASABLANCA/Anfa	GMMC	Casablanca FIR/SRR	GMMM	

Responsibility MWO transferred provisionally to Conakry (GUCY) Guinea
Responsabilité MWO transferée provisoirement à Conakry (GUCY) Guinée

MWO Location/ Emplacement MWO	ICAO loc.ind./ ind.d'empl. OACI	AREA SERVED/ ZONES DESSERVIE		Remarks/ observations
		NAME/NOM	ICAO loc. ind./ Ind.d'empl. OACI	
1	2	3	4	5
MOZAMBIQUE				
MAPUTO/Maputo Intl	FQMA	Beira FIR/SRR	FQBE	
NAMIBIA				
WINDHOEK/~~Windhoek~~ Hosea Kutako	FYWH	Windhoek FIR/SRR	FYWH	
NIGER				
NIAMEY/Diori Hamani Intl.	DRRN	Niamey FIR/SRR	DRRR	
NIGERIA				
KANO/Mallam Aminu Kano Intl	DNKN	Kano FIR/SRR	DNKK	
RWANDA				
KIGALI/Gregoire Kayibanda	HRYR	Kigali FIR/SRR	HRYR	
SENEGAL				
DAKAR/Leopold Sedar Senghor	GOOY	Dakar FIR/SRR Dakar oceanic FIR	GOOO	
SEYCHELLES				
MAHE/Seychelles Intl	FSIA	Seychelles FIR/SRR	FSSS	
SOMALIA				
MOGADISHU/Mogadishu	HCMM	Mogadishu FIR/SRR	HCSM	
SOUTH AFRICA				
BLOEMFONTEIN/Bloemfontein	FABL	Bloemfontein FIR	FABL	
CAPE TOWN/Cape Town	FACT	Cape town FIR	FACT	
DURBAN/Durban	FADN	Durban FIR	FADN	

MWO Location/ Emplacement MWO	ICAO loc.ind./ ind.d'empl. OACI	AREA SERVED/ ZONES DESSERVIE		Remarks/ observations
		NAME/NOM	ICAO loc. ind./ Ind.d'empl. OACI	
1	2	3	4	5
JOHANNESBURG/Johannesburg	FAJS	Johannesburg FIR/ARCC Port Elizabeth FIR Cape Town MRCC and Johannesburg SRR	FAJS FAPE	
PRETORIA/Central MET Office	FAPR	Johannesburg Oceanic FIR/ARCC	FAJS	
SPAIN				
GRAN CANARIA/Gran Canary, Canary I.	GCLP	Canarias FIR and Grando RSS	GCCC	
SUDAN				
KHARTOUM/Khartoum	HSSS	Khartoum FIR/SRR	HSSS	
TUNISIA				
Institut National de la Météorologie	DTTA	Tunis FIR/UIR	DTTC	
UGANDA				
ENTEBBE/Entebbe Intl.	HUEN	Entebbe FIR	HUEC	
UNITED REPUBLIC OF TANZANIA				
DAR-ES-SALAAM/Dar-es-Salaam	HTDA	Dar-es-Salaam FIR	HTDC	
ZAMBIA				
LUSAKA/Lusaka Intl	FLLS	Lusaka FIR/SRR	FLFI	
ZIMBABWE				
HARARE/Harare	FVHA	Harare FIR/SRR	FVHA	

— — — — — — —

FASID TABLE MET 2A — EXCHANGE OF OPERATIONAL METEOROLOGICAL INFORMATION

Explanation of the Table

Regular exchanges (≥ 4 flights per week)			**Non-regular exchanges** (<4 flights per week)		
F	=	METAR/SPECI + TAF	f	=	METAR/SPECI + TAF
S	=	METAR/SPECI	s	=	METAR/SPECI
T	=	TAF	t	=	TAF

X = AERODROME INCLUDED IN THE AMBEX SCHEME

TABLEAU FASID MET 2A — ÉCHANGE DE RENSEIGNEMENTS MÉTÉOROLOGIQUES D'EXPLOITATION

Explication du tableau

Échanges courants ($ 4 vols par semaine)	**Échanges non courants** (< 4 vols par semaine)
F = METAR/SPECI+TAF	f = METAR/SPECI+TAF
S = METAR/SPECI	s = METAR/SPECI
T = TAF	t = TAF

X = AÉRODROMES DANS LE SYSTÈME AMBEX

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
AFI																																																										
ALGERIA																																																										
ADRAR	DAUA									F	F																																															
ALGER/BARAKI	DAAL																																																									
ALGER/HARARI	DAAG		t		t			T		t	S		T	T	T		S					T		T						S						S			S	S						t						S						X
ANNABA	DABB		t					T		t	S		T	t								t		T						S						S			S													S						X
CONSTANTINE	DABC		t	T		F		T		t	F		T	t	F							t		T						S			F						S				F								t	S						
GHARDAIA	DAUG					F					F				F									T																			F																
HASSI-MESSAOUD	DAUH					F					F				F																				F										F																
IN-SALAH	DAUI																																																									
ORAN	DAOO							T					T		t																		S			S			S														S						X
TAMANRASSET	DAAT		t					T		t	S		T		T							T		T																	S	S						t					t						X
TEBESSA	DABS					F																																																			
~~TIARET~~	~~DAOB~~																																																									
TLEMCEN	DAON					t																																																			
ZARZAITINE	DAUZ					F				F			F		F																	S			F										F																
ANGOLA																																																										
HUAMBO	FNHU												S	S								s		S																	S	S					F										S	S	
LUANDA	FNLU	t			s		S			s	S		S	S								S		S		s													S				S					S									S	S	X
BENIN																																																										
COTONOU	DBBB		S			S		S			S		S		S			S				S			S		t		S			t							S	S			S								S							X
BOTSWANA																																																										
FRANCISTOWN	FBFT																																													F										S	
GABORONE	FBSK		f																									S					t						S									S			S					S	S	X
KASANE	FBKE																																													F											
MAUN	FBMN																																													F											
SELEBI-PHIKWE	FBSP																																													F											

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
BURKINA FASO																																																										
BOBO-DIOULASSO	DFOO														S									S									S							S					S													
OUAGADOUGOU	DFFD							s			S				S						s			S	S		t		S				S							S					S						S							X
BURUNDI																																																										
BUJUMBURA	HBBA		S											S		s				S							S														S								S				S	S		S		
CAMEROON																																																										
DOUALA	FKKD		S	s						S	S		S	S	S			S				S		S									t						S	S							S											X
GAROUA	FKKR		f	f						S	S		S		S							S		S																S																		
MAROUA	FKKL										S		S																																													
N’GAOUNDERE	FKKN										S		S	S																																			S									
YAOUNDE	FKYS									S	S		S	S				S				S														t				s																		X
CAPE VERDE																																																										
PRAIA	GVPR																												S							S							S				S											
AMILCAR CABRAL	GVAC																												S							S							S				S											X
CENTRAL AFRICAN REP.																																																										
BANGUI	FEFF	T	S		s			S			S	S		S								S		S						t									s	s									S									X
BERBERATI	FEFT										S	S		S																																												
CHAD																																																										
N’DJAMENA	FTTJ	S	s		s	S		S		S			S	S								S		S		s				S			s						S	S									S									X
COMOROS																																																										
ANJOUAN	FMCV																																		S																							
DZAOUDZI	FMCZ																														S				S																							
MORONI	FMCH																														S	S			S		S										S							S		S		X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
CONGO																																																										
BRAZZAVILLE	FCBB	T	S	S	s		S	S	T	S	S			S	S			S				S	t	S								S	s				S		S	S	S		t				S						S			s		X
POINTE NOIRE	FCPP		S																																																							
COTE D'IVOIRE																																																										
ABIDJAN	DIAP			S		S		s	s		S											S	S	S	S	s			S	T			S			t			S	S		s	S		S		S				S							X
BOUAKE	DIBK					t																		S	s				S				S						S				S				T											
DEMOCRATIC REPUBLIC OF CONGO																																																										
GOMA	FZNA						s						S														S														S													S				
KINSHASA	FZAA		S				S	S	T	S	S		S										S	S		S						s	s						S		S		t				S						S	S		S	S	X
KISANGANI	FZIC						s				S		S																																									S				
LUBUMBASHI	FZQA		F		f		s						S																																		F		S				S	S		S	S	
DJIBOUTI																																																										
DJIBOUTI	HFAM							t					s				S										S					S	t													S			S				S	S				X
EGYPT																																																										
ABU-SIMBEL	HEBL																																																S									
ALEXANDRIA	HEAX																							T						S																			S			S						X
ASWAN	HESN																																														T		S									
CAIRO	HECA																							T						S																			S			S					T	X
LUXOR	HELX												S																	S																S			S			S						X
EQUATORIAL GUINEA																																																										
MALABO	FGSL			f				S					S									S		S																																		X
ERITREA																																																										
ASMARA	HHAS							t								S	S										S						t													S			S			t						X
ETHIOPIA																																																										
ADDIS ABABA	HAAB						S							S		S	S															S	t								S					S			S					S				X
BAHAR DARE	HABD																																														T											
DIRE DAWA	HADR															S											S																			S												X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
FRANCE (Ile de la Réunion)																																																										
SAINT DENIS	FMEE											S																			S	S			S		S										S											X
GABON																																																										
FRANCEVILLE	FOON							f					S	S				f																																								
LIBREVILLE	FOOL		S	f				S	T	S	S		S	S	S			S						S		s							s							S		S									S							X
PORT GENTIL	FOOG							s					S	S										S		s														S																		
GAMBIA																																																										
BANJUL	GBYD		t						S					s	S									S	S				S				s	S		S							S	S				S										X
GHANA																																																										
ACCRA	DGAA	t	S	S		S		S	s		s		S		S					S		S							S	T			S			t			S	S			S		S						S							X
KUMASI	DGSI					S									s																								S												S							
GUINEA																																																										
CONAKRY	GUCY								S					T	S								S	S		S			S				S	S		S							S		S													X
KANKAN	GUXN	T				t									S								S	S		S			S				S	s									S															
LABE	GULB																																																									
N'ZEREKORE	GUNZ																																																									
GUINEA BISSAU																																																										
BISSAU	GGOV								S															S	S								s	s								s	S		S													X
KENYA																																																										
ELDORET	HKEL																																																									
MOMBASA	HKMO											s	S				S													t	S	S					S				S					S	s		S				S	S				X
NAIROBI	HKJK				s		S					s	S	S			S													1	S	S					S				S					S	s		S				S	S		S		X
LESOTHO																																																										
MASERU	FXMM				S																																S										S			S						S	S	X
LIBERIA																																																										
MONROVIA	GLRB			s				t	S						S								S	S	S								S			s				S			S		S													X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
LIBYAN ARAB JAMARIHIYA																																																										
BENGHAZI	HLLB	S															S			t				T																									S			S						X
SEBHA	HLLS	F	t			t		t		t	S		t									t																	S										S			S						
TRIPOLI	HLLT	S	t					t		t	S		T							t		t		T			S									S			S										S			S						X
MADAGASCAR																																																										
ANTANANARIVO	FMMI											S									S											S			S		S										S							S			s	X
MAHAJANGA	FMNM											S																							S																			S				X
NOSY BE	FMNN																																														F											
TOAMASINA	FMMT											s									S																s																					X
MALAWI																																																										
BLANTYRE	FWCL																										S				S						S										F			s				S		S	S	
LILONGWE	FWLI				S								S														S				S						S										S			s				S		S	S	X
MALI																																																										
BAMAKO	GABS	S	t	S		S			s		S		s	t	S									S	S	S			S					S					S	S			S		s					S								X
GAO	GAGO	S				t																		S		S													S				S															
KAYES	GAKY																							S		S													S				S															
MOPTI-BARBE	GAMB					t																																					S															
NIORO	GANR																																																									
TOMBOUCTOU	GATB					t																																																				
MAURITANIA																																																										
ATAR	GQPA																																																									
KAEDI	GQNK																																										S															
NEMA	GQNI																																																									
NOUADHIBOU	GQPP																						t	S	S				S				s			S							S		S			S				s			s			X
NOUAKCHOTT	GQNN	S																				S	t	S	S				S				s			S							S		S			S				s			s			X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																											
MAURITIUS																																																											
MAURITIUS	FIMP											s									S										S	S					S										S							s				X
MOROCCO																																																											
AGADIR	GMAD	S																t						T						S													S					S							S			X
AL HOCEIMA	GMTA	S																																																								
CASABLANCA	GMMN	S													t			t				f		T						S									t				S		s			S				S			S			X
FES	GMFF	S																						T																								S										
MARRAKECH	GMMX	S																						T						S				s									S					S				S			S			X
OUJDA	GMFO	S																						T																																		
RABAT	GMME	S													t			t				f		T																			S					S							S			X
TANGER	GMTT	S																					t	T																					s							S						X
TAN-TAN	GMAT	S																																																					S			
MOZAMBIQUE																																																											
BEIRA	FQBR				S																							S			S	S			S			S									S			S				S		S	S	X
MAPUTO	FQMA		s										s															S			S	S			S			S									S			S				S		S	S	X
NAMIBIA																																																											
KEETMANSHOOP	FYKT																																														F											
WALVIS BAY	FYWB																																														F											
WINDHOEK	FYWH								T				s																																		S									S	S	X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
NIGER																																																										
AGADES	DRZA	s						s			S													S						S			s							S												S						
NIAMEY	DRRN	S	s	S		S		s			S		S		S							S		S					S	S			S							S			S								S	S						X
ZINDER	DRZR	s						s			S																						s							s												S						
NIGERIA																																																										
ABUJA	DNAA																							S																																		
CALABAR	DNCA		S					S					S					s				s																																				
KADUNA	DNKA													S										S																																		
KANO	DNKN		s					S		S	S		S	S	S			S				S	S	S			T		S	S			s						S										S		S	S						X
LAGOS	DNMM	S	S	S				S		S	S		S	S	S			S				S	S	S			T		S			t	s						S				S						S		S	S		t				X
MAIDUGURI	DNMA	S		s				s			S		S	S								S																													s							
PORT HARCOURT	DNPO		S					s					S	S									s	S			t																															
SOKOTO	DNSO																																						S																			
RWANDA																																																										
KIGALI	HRYR		S				S					s	S	S			S										S					S																	S				S	S		S		X
SAO TOME & PRINCIPE																																																										
SAO TOME	FPST		S						T				S	s								S		S		s																																X
SENEGAL																																																										
CAP SKIRING	GOGS																						S		S	S																																
DAKAR	GOOY	s		S		S			S				T	t	S							F	S	S	S	S			S				S	S		S									S			S				s						X
SAINT LOUIS	GOSS	t							S															S		S			S					S														S										
TAMBACOUNDA	GOTT																							S		S			S																													
ZIGUINCHOR	GOGG								S													S			S	S																																
SEYCHELLES																																																										
MAHE	FSIA																				s										S				S											S								s				X
SIERRA LEONE																																																										
FREETOWN	GFLL								S						S									S		S								s		s				S			S															X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
SOMALIA																																																										
BURAO	HCMV															s																																										
HARGEISA	HCMH															S																																										
KISIMAYU	HCMK																t										S				S																											
MOGADISHU	HCMM												S														S				S				S																			S				X
SOUTH AFRICA																																																										
BLOEMFONTEIN	FABL												s				s											S			S						S													S						S	S	X
CAPE TOWN	FACT																																					S																S				X
DURBAN	FADN												s				t											S			S	S			t		S													S				S		S	S	X
JOHANNESBURG	FAJS				S				T				s															S			S	S			t		S	S												S				S		S	S	X
LANSERIA	FALA																																																									
UPINGTON	FAUP																																					S																			S	
SPAIN																																																										
GRAN CANARIA	GCLP								S														t											s		S							S		t										S			
LA PALMA	GCLA								S																																																	
LANZAROTE	GCRR															s								S					S					S		S							S	s											S			X
PUERTO DEL ROSARIO	GCFV								S																											S							S															
TENERIFE NORTE	GCXO								S																																																	
TENERIFE SUR	GCTS															s								S					S					S		S							S												S			X
SUDAN																																																										
JUBA	HSSJ						s						s	S			S										S																										S	S				
KASSALA	HSKA																S																																									
KHARTOUM	HSSS			t				t			S		f				S							T			S			t			t													S							S	S				X
PORT SUDAN	HSPN																S																													S												
SWAZILAND																																																										
MANZINI	FDMS				S																							S			S	S					S										S						s	S		S	S	X
TOGO																																																										
LOME	DXXX	F	S	S		S		s		s	s		S		S			S				S	S	S	S				S			t						S	S				S															X
NIAMTOUGOU	DXNG	F		t		t							S		s									S														S	S																			

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
TUNISIA																																																										
DJERBA	DTTJ	S		t				T		t	s			t			S							T						S						S			S	t																		
MONASTIR	DTMB	S						T			s						S							T						S						S			S	t																		
SFAX	DTTX	S																																																							
TABARKA	DTKA	S																																																							
TOZEUR	DTTZ	S																						T																																	
TUNIS	DTTA	S						T		t				t			S							T						S						S			S																			X
UGANDA																																																									
ENTEBBE	HUEN		S		s		S				S		S	S			S										S					S									S								S					S		S		X
UNITED REP. OF TANZANIA																																																									
DAR-ES-SALAAM	HTDA				s		S					s		S			S										S				S						S				S					S			S	s						S		X
KILIMANJARO	HTKJ						S							S			S										S				S	S					S				S					S			S				S			S		X
ZANZIBAR	HTZA															S											S																										S					X
WESTERN SAHARA																																																									
EL AAIUN	GSAI																						f							t				f		F							S					S										
SMARA	GS..																																	f		F												S										
VILLA CISNEROS	GSVO																						f							t						F							S					S										
ZAMBIA																																																									
LIVINGSTONE	FLLI		S										s																			S															F										S	
LUSAKA	FLLS		S		S		S						S	S																		S									S						S							S			S	X
MFUWE	FLMF																															S					S										F											
NDOLA	FLND		S		s		s						s	S																											S						F							S			S	
ZIMBABWE																																																									
BULAWAYO	FVBU		S		s									S																		f					S										F			S				S				
HARARE	FVHA		S		S								S	S																		f					S										S			S				S		S		X
VICTORIA FALLS	FVFA				F																																										F									F		

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
ASIA																																																										
AUSTRALIA																																																										
ADELAIDE	APAD																																		t																							
KALGOORLIE	APKG																																		t																							
PERTH	APPH																																		t												T										t	
CHINA																																																										
BEIJING	ZBAA																			t																																						
HANGZHOU	ZSHC																			t																																						
SHANGAI	ZSSS																			t																																						
HONG KONG (China)																																																										
HONG KONG	VHHH				t																																										T											
INDIA																																																										
AHMADABAD	VAAH																t			T															t												T											
BOMBAY	VABB																t			T															t												T							T				
DELHI	VIDP																t			T															t												T							T				
MADRAS	VOMM																																														T							T				
INDONESIA																																																										
JAKARTA	WIII																t																																									
SURABAYA	WRSJ																t																																									
PAKISTAN																																																										
KARACHI	OPKC																S			t							t			t																												
LAHORE	OPLA																S										t																															
ISLAMABAD	OPRN																S										t																															
SINGAPORE																																																										
SINGAPORE	WSSS																										t								t												T											

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
SRI LANKA																																																										
COLOMBO	VCBI																																		t																							
THAILAND																																																										
BANGKOK	VTDB																																																									
CAR																																																										
CUBA																																																										
HABANA	MUHA								t																																																	
EUR																																																										
AUSTRIA																																																										
WIEN	LOWW												t																	f																	T					f						
BELGIUM																																																										
BRUXELLES	EBBR		t	t		t	t	t					t	T	T								t	T					t	t			t						F	T			T		t		T	t	t		t	F		t		t		
OOSTENDE	EBOS													T																													T									F						
BULGARIA																																																										
SOFIA	LBSF																													t																						F						
CROATIA																																																										
ZAGREB	LDZA																																														T											
CYPRUS																																																										
LARNACA	LCLK																									t			S																			f									
NICOSIA	LCNC																									t			S																			f							t		

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
CZECH																																																										
PRAGUE	LKPR												t																	f													t															
DENMARK																																																										
KOBENHAVN	EKCH																																														T											
FINLAND																																																										
HELSINKI	EFHK																																															T										
FRANCE																																																										
BALE MULHOUSE	LFSB		t	t		t		T		t			t	t	T							T	t		T	T			t				t		T		t	t		T			T		t		T	T	T			F		t				
BORDEAUX	LFBD					t		T		t	t		T	t	T																		t	t					t				t		t			T			t	F						
LILLE	LFQQ					T		T	t	t	t			t								T												t					t						t						T							
LYON/Bron	LFLY					T		T	t	T	t	t			T							T		T		T			t		t		T	t	T		t	t	t		t		T		t		t	T	T		T	F						
LYON/Satolas	LFLL			T										T																																						F		T			T	
MARSEILLE	LFML		t	T		T		T	t	t	T	t	T	T	T									T	T	T			t		t		T	T	T		t	t	T				T		t		T	T	T		T	F		T			T	
MONTPELLIER	LFMT											t																																			T											
NICE	LFMN		t	T		T				t		t	T	T	T	T						T	t	T	T	T			t	T	t		T	t	T		t	t	T				T		t		T	T	T		T	F		T				
PARIS/Charles de Gaulle	LFPG		t	T	t	T	t	T	t	t	T	t	T	T	T	T	T			t		T	t	T	T	T			t		t	T	T	T	T		t		T		t		T		t		T	T	T		T		t	T		t	T	
PARIS/Le Bourget	LFPB																					T		T																							T											
PARIS/Orly	LFPO			t	t	T	t	T	T	t	T	t	T	T	T	T	T			t		T		T	T				t		t	T	T	T	T				T		t		T		t		T	T	T		T	F	t	T			T	
STRASBOURG	LFST																																																			F						
TOULOUSE	LFBO							t		t	t		t	T	T																		t	t					t	T			t				T				T	F						

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																									
GERMANY																																																									
BERLIN/Schonefeld	EDDB												S																																	t									t			F					
BERLIN/Tegel	EDDT																			t		t																																			
BREMEN	EDDW																																																							t	
DRESDEN	EDTN																			t		t																																			
DUSSELDORF	EDDL							t																T					t											t			t				T	T				F					T	
FRANKFURT	EDDF		t	t		t	t	t	t				t	T	t	t				t		t		T	T					t									T	t	T	t		T			t	T	T	t		t	F	t	t				
HAMBURG	EDDH							t						T																				t										t					t	T	T									T	
HANNOVER	EDVV							t																														t											t			t				T	T				F					t	
KOLN	EDDK		t	t			t	t	t					T		t									T																		t	T	t					t	T	T	t		t	F	t	t				
LEIPZIG	EDDP																																																			F					
MUNCHEN	EDDM							t						T						t										t										t			t				T	T			t	F					t	
NURNBERG	EDDN							t																																							t								T	T				F					t	
STUTTGART	EDDS		t	t				t	t	t			t	T										t	T	T	t			t	t			t		t		t		t	T			T		t		T	T	t		t	F		t			t	
GREECE																																																									
ATHINAI/Athinai	LGAT							t		t			t	t	t	t					t	t								S	t		t		t				t	t	t		t				T	t	s		t	f		t				
ATHINAI/Elefsis	LGEL																													S												t								s			f		t				
IRAKLION	LGIR																																																	T			f					
RODOS	LGRP																													S																				T		s								
THESSALONIKI	LGTS							t																						S																				T		s			f					
IRELAND																																																									
DUBLIN	EIDW																							T																																		
SHANNON	EINN																							T																																		
HUNGARY																																																									
BUDAPEST	LHBP		t						T				t																					f				t																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
ITALY																																																										
BRINDISI	LIBR														T		T										T													T			t			t	T					F						
CATANIA	LICC														T		T													S										T							T					F						
GENOVA	LIMJ							t					t							T		t		T		T				S													T				T		t			F						
MILANO/Linate	LIML			t																T										S										t			T					T			t	F						
MILANO/Malpensa	LIMC		t	t		t		t		t			t	t	T					T		t	t	T		T			t				t		t				T	t			T		t		T	T	t		t	F		t				
NAPOLI	LIRN														T						t			T						S										T							T					F						
PALERMO	LICJ																													S																						F						
PISA	LIRP							t							T		T																							T			T				T					F						
ROMA/Ciampino	LIRA								T						T										t					S										T			T				T					F						
ROMA/Fiumicino	LIRF		t	t		t		t		t	t		t	t	T					T	t	T	t	T	t	T							t	t	t				T	T			T			t	T	T	t		T	F		t				
TORINO	LIMF														T		t													S													T				T					F						
LUXEMBOURG																																																										
LUXEMBOURG	ELLX		t			t	t		T					T																									t		t						T					F	t	t				
MALTA																																																										
MALTA	LMML					t		t	T				t																	F										t												F						
NETHERLANDS																																																										
AM STERDAM	EHAM		t	t	t	t	t	t	T				t	T										T	T				t	t		t							T	T	t				T		T	t	t		t	F	T	T			t	
MAASTRICHT	EHBK																								T					t																	T					F						
ROTTERDAM	EHRD																							T						t																	T		t			F		T				
NORWAY																																																										
OSLO/Fornebu	ENFB																																															t										
POLAND																																																										
GDANSK	EPGD																													T																												
WARSZAWA	EPWA																													T																												

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
PORTUGAL																																																										
FARO	LPFR		T						T				t												t	t				t							t					t					T	F										
LISBOA	LPPT		T						T	t			t												t	t			t								t					t	t				T	F									t	
PORTO	LPPR		T						T	t			t												t	t																t	t					F										
RUSSIAN FEDERATION																																																										
MOSKVA/Domodedovo	UUDD							t	T											t																																						
MOSKVA/Sheremetyero	UUEE																			t																																						
MOSKVA/Vnukiovo	UUWW																																																			F						
ST. PETER BURG	ULLI								T																																																	
SLOVAKIA																																																										
BRATISLAVA	LKIB												t														t																															
SPAIN																																																										
BARCELONA	LEBL			t				T	t	T	t	t	T	T	T			t				t		T						T										T			T				T	F			t	F						
IBIZA	LEIB								T		t																																T															
MADRID	LEMD			t		t		T	T	t	t				t			t						T			t		t	T			t	t				t		t		t	T				T	F				F						
MALAGA	LEMG			t				T	t	t			T	t										T			t		t									t					T				T	F				F						
PALMA DE MALLORCA	LEPA		t	t				T	T	t	t		t	T	T			t				t		T	t	T							t						t	T			T		t						T	F						
SEVILLA	LEZL								T				t											T					t					t									T				T	F										
SWEDEN																																																										
GOTEBORG	ESGG																																															t										
MALMO	ESMS																																															t										
STOCKHOLM/Arlanda	ESSA																						t																								T	t				F						
STOCKHOLM/Bromma	ESSB																																														T											

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
SWITZERLAND																																																										
GENEVA	LSGG		t	t		t		t		t			t		t						t	T	t	T	t	T				F	t		t		t		t	t	t	t			T		t		T	T	T		t	F	t			t		
ZURICH	LSZH		t	t		t		t		t			t		t							T	t	T	t	T				F	t		t		t		t	t	t	t			T		t		T	T	T		t	F	t			t		
TURKEY																																																										
ANKARA	LTAC																													F																			T									
ISTANBUL	LTBA																										T			F																			T			F						
IZMIR	LTBJ																																																			F						
UKRAINE																																																										
KIEV	UKBB								T																																																	
ODESSA	UKOO							t																																																		
UNITED KINGDOM																																																										
BIRMINGHAM	EGBB							t						t	t								t	T					t											T							T											
LONDON/Gatwick	EGKK					t		t	t					t	t								t	T					t			t								T					t		T	T	t			F	T	T				
LONDON/Heathrow	EGLL				t				t					t	t					t			t	T					t			t						T		T					t		T	T	t			F	T	T				
LONDON/Stansted	EGSS				t			t						t															t											T							T											
LUTON	EGGW							t							t								t	T																T												F						
MANCHESTER	EGCC							t						t									t	T																T							T						T					
PRESTWICK	EGPK							t						t	t								t	T					t											T													T					
MID																																																										
BAHRAIN																																																										
BAHRAIN	OBBI																										t							t	t												T		s			F						
IRAQ																																																										
BAGHDAD	ORBS																S																																			f						
ISRAEL																																																										
TEL AVIV	LLBG																										t																				T											

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA
JORDAN																													
AMMAN/Marka	OJAM	t														t	F										t		
AMMAN/Q.A.	OJAI	t																									t		
KUWAIT																													
KUWAIT	OKBK																S												
LEBANON																													
BEIRUT	OLBA	t														t	S										t		
OMAN																													
MUSCAT	OOMS															s				t							t		
QATAR																													
DOHA	OTBD																			S									
SAUDI ARABIA																													
DHARAN	OEDR							t									S							t					
JEDDAH	OEJN	T		t		t				t	T					S	S				t	t	t	t	t	t			
MADINAH	OEMA	T				t										S	S							t					
RIYADH	OERK	T				t		t		t	T		t			S	S				t	t	t	t	t				
SYRIAN ARAB REPUBLIC																													
ALEPPO	OSAP																S												
DAMASCUS	OSDI	t														T	S												
UNITED ARAB EMIRATES																													
ABU DABI	OMAA															f				F							t		
DUBAI	OMDB															f				F							t		
RAS AL KHAIMAH	OMRK																												
SHARJAH	OMSS																												

From/de	Loc. Ind./ Ind. d'empl.	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
JORDAN																														
AMMAN/Marka	OJAM	S																						F						
AMMAN/Q.A.	OJAI																							F						
KUWAIT																														
KUWAIT	OKBK																							F						
LEBANON																														
BEIRUT	OLBA	S										t												F						
OMAN																														
MUSCAT	OOMS					t																				f				
QATAR																														
DOHA	OTBD																							F						
SAUDI ARABIA																														
DHARAN	OEDR						t												T		S									
JEDDAH	OEJN	S	t		t	t	T	T			t	T					t	f	T		S		t	F	t	T	t			
MADINAH	OEMA	S	t					T			t	T			T			f	T		S			F		T				
RIYADH	OERK	t	t		t	t	T				t				T				T		S			F	t	T	t			
SYRIAN ARAB REPUBLIC																														
ALEPPO	OSAP																													
DAMASCUS	OSDI	S																						F						
UNITED ARAB EMIRATES																														
ABU DABI	OMAA	t						t										f	T					F		f				
DUBAI	OMDB	t						t										f	T					F		f				
RAS AL KHAIMAH	OMRK																									f				
SHARJAH	OMSS																	f	T						t	f				

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R.)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (REUNION)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP.OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	AMBEX
From/de																																																										
YEMEN																																																										
ADEN	OYAA							t									S																													t												
HODEIDAH	OYHD															f	S			S							S																															
RIYAN	OYAR																																																s									
SANA'A	OYSN															f	S			S							S																					s									
NAM																																																										
UNITED STATES																																																										
BOSTON	KBOS								t								t							t					t							t							T				T									t		
NEW YORK	KJFK								t								t							t					t					t		t							T				T									t		
PHILADELPHIA	KPHL								t								t							t					t							t							T				T									t		
MIAMI	KMIA																																														T											
SAM																																																										
ARGENTINA																																																										
BUENOS AIRES	SAEZ								T																																						T	t										
MENDOZA	SAME																																														T											
CATARATAS	SARI																																														T											
BRAZIL																																																										
BRASILIA	SBBR																																														T	t										
CAMPO GRANDE	SBCG																																														T											
NATAL	SBNT								T																																																	
RECIFE	SBRF								T																																																	
RIO DE JANEIRO	SBGL								T																																						T	t										
SAO PAULO	SBGR																																														T	t										
SALVADOR	SBSV								T																																						t											
FRENCH GUIANA																																																										
CAYENNE	SOCA								T																																		t															
URUGUAY																																																										
MONTEVIDEO	SUMU								T																																						t											

FASID TABLE MET 2B — EXCHANGE OF SIGMET MESSAGES

Explanation of the Table

S = SIGMET and SIGMET with OUTLOOK (for volcanic ash and/or tropical cyclones)

s = SIGMET

s’ = SIGMET with OUTLOOK (for volcanic ash and/or tropical cyclones)

X = To be available on MOTNE

TABLEAU FASID MET 2B — ECHANGE DE MESSAGES SIGMET

Explication du Tableau

S = SIGMET et SIGMET avec OUTLOOK (aperçu) (pour les cendres volcaniques et/ou les cyclones tropicaux)

s = SIGMET

s' = SIGMET avec OUTLOOK (aperçu) (pour les cendres volcaniques et/ou les cyclones tropicaux

X = Doit être disponible sur le MOTNE

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
AFI																																																										
ALGERIA																																																										
ALGER	DAAG					s					s		s				s							s					s	s			s			s			s	s			s					s				s						
ANGOLA																																																										
LUANDA	FNLU						s	s					s	s								s		s					s								s	s		s	s		s				s						s	s			s	X
BOTSWANA																																																										
GABORONE	FBSK		s																									s				s					s	s									s									s	s	
BURUNDI																																																										
BUJUMBURA	HBBA		s										s	s					s	s							s														s								s				s	s		s		
CAMEROON																																																										
DOUALA	FKKD	s’	s’			s’			s’	s’	s’		s’	s’	s’		s’			s’		s’		s’	s’		s’	s’		s’		s’	s’	s’	s’					s’			s’				s’		s’									
CAPE VERDE																																																										
AMILCAR CABRAL	GVAC	s’						s’					s’		s’								s’	s’	S	s’			S				S			S			s’	s’		s’	S		s’		s’	S							s’			X
CHAD																																																										
N’DJAMENA	FTTJ	s		s		s		s		s			s	s			s		s	s				s		s				s									s	s									s			s	s					
CONGO																																																										
BRAZZAVILLE	FCBB		s	s		s	s	s		s	s			s	s			s		s		s		s						s								s	s	s	s	s	s				s		s		s		s	s		s		
DEMOCRATIC REPUBLIC OF CONGO																																																										
KINSHASA	FZAA		s’			s’	s	S		S	S		S		s’		s’			S		S		S	s’	s’	S					s’		s’		s’	s	s		S	s		s’				S		S				s	S		s	S	
EGYPT																																																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
CAIRO	HECA	s									s					s			s	s										s										s						s			s			s						
ERITREA																																																										
ASMARA	HHAS						s					s				s				s							s																															
ETHIOPIA																																																										
ADDIS ABABA	HAAB						s	s’			s		s	S	S	s	S							s’			S			s	S	s	s	s’	s’	s’	s’		s	s’	s		s’	s’		S	s		S				s	S		s’	s’	X
FRANCE (Ile de la Réunion)																																																										
SAINT DENIS					S							S								S							S	S			S	S			S		S							S		S	S			S				s		s	s	
GHANA																																																										
ACCRA	DGAA	s		s		s		s			s		s	s	s			s				s	s						s				s					s		s			s		s						s							X
KENYA																																																										
NAIROBI	HKJK				s’		s	s’				S	s	S	s	s	S	s	S	S	s			S							s	S			S		S				s		s’	S		S	s		S				s	S		S	S	X
LIBERIA																																																										
MONROVIA	GLRB		s			s			s						s								s	s	s	s							s	s					s	s			s		s			s										
LIBYAN ARAB JAMAHIRIYA																																																										
TRIPOLI	HLLT	s				s					s		s																							s			s	s									s			s						
MADAGASCAR																																																										
ANTANANARIVO	FMMI											S					S		S	S	s											S			S		S							S		S	S			s’				S		s	S	X
MALAWI																																																										
LILONGWE	FWKI											s’		s						s’							S				S						S							s’			S			S			s	S		S	S	
MAURITIUS																																																										
MAURITIUS	FIMP											S								s’	s						s’				S	s’					S							S		S	s’			s’				S		s’	s’	X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
MOROCCO																																																										
CASABLANCA	GMMC	s				s			s															s						s			s	s					s				s					s				s			s			
MOZAMBIQUE																																																										
MAPUTO	FQMA		s	s’								S	s	s													s’	s			S	S			S			s			s			s’			S			S				S		S	S	
NAMIBIA																																																										
WINDHOEK	FYWH		s		s									s																							s										s									s	s	
NIGER																																																										
NIAMEY	DRRN	s		s		s		s		s	s		s	s	s			s		s		s		s						s			s			s				s		s	s						s		s	s						
NIGERIA																																																										
KANO	DNKN	s	s	s				s			s		s	s	s			s				s		s					s	s									s			s	s						s		s							X
RWANDA																																																										
KIGALI	HRYR		s				s						s	s			s										s										s												s				s	s		s		
SENEGAL																																																										
DAKAR	GOOY	s	s	s		s		s	s		s		s		s					s		s	s	s	s	s			s	s			s	s		s			s	s					s			s			s				s			X
SEYCHELLES																																																										
MAHE	FSIA											S				s			S	S	s						s’				S	S			S		S									s	S			s’				S		s’	S	X
SOMALIA																																																										
MOGADISHU	HCMM											s				s	s		s	s							s				s				s									s					s				s	s				X

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
SOUTH AFRICA																																																										
BLOEMFONTEIN	FABL																											s									s	s												s								X
CAPE TOWN	FACT																																					s																				X
DURBAN	FADN				s'							s'		s'						s'							s'	s			S	s'			s'		S							s'						S				s'		s'	S	X
JOHANNESBURG	FAJS		s		s							s	s	s														s			s	s					s	s												s				s		s	s	X
SPAIN																																																										
GRAN CANARIA	GCLP								s'														s						s					s		s							s												s			X
SUDAN																																																										
KHARTOUM	HSSS						s			s	s		s	s		s	s		s	s							s			s										s	s					s							s	s		s		
TUNISIA																																																										
TUNIS	DTTA	s									s						s													s						s																						
UGANDA																																																										
ENTEBBE	HUEN						s				s		s	s			s										s				s						s				s								s					s		s		
UNITED REP. OF TANZANIA																																																										
DAR-ES-SALAM	HTDA		s				s					S		s			s			s'							S				S	S			S		S				s			s		s	S		S				s			S	S	X
ZAMBIA																																																										
LUSAKA	FLLS		s		s		s'						s	s														s			s	s					s										s		s	s				s			s	
ZIMBABWE																																																										
HARARE	FVHA		s		s																							s			s	s					s										s			s			s	s		S		X
ASIA																																																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
AUSTRALIA																																																										
ADELAIDE	APAP																																														s’										s’	
BRISBANE	ABBN																																														s’										s’	
DARWIN	ADDD																																														s’										s’	
MELBOURNE	AMML																																														s’										s’	
PERTH	APPH																																		s												s’										s’	X
BANGLADESH																																																										
DHAKA	VGZR																																														s’											
HONG KONG (China)																																																										
HONG KONG	VHHH																																											S		s’	s’											
INDIA																																																										
BOMBAY	VABB																S			S							S								S									s		s	s’							s		S	s’	X
CALCUTA	VECC																s’			s’							s’								s’												s’									s’	s’	X
DELHI	VIDP																s’			s’							s’								s’												s’									s’	s’	X
MADRAS	VOMM																s’			s’															s’												s’									s’	s’	
MALAYSIA																																																										
KUALA LUMPUR	WMKK																																														s’											X
MALDIVES																																																										
MALE	VRMM																																		s’																							X
MYANMAR																																																										
YANGON	VYYY																																														s’											
PAKISTAN																																																										
KARACHI	OPKC																S													S																								s’				X
LAHORE	OPLA																s’																														s’											
PHILIPPINES																																																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	Loc. Ind./ Ind. d'empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
MANILA	RPMM																s'																													s'											
SINGAPORE																																																															
SINGAPORE	WSSS																																											S			s'															X
SRI LANKA																																																															
COLOMBO	VCBI																										s				s				s									s				s'															X
THAILAND																																																															
BANGKOK	VTBD																s'																																	s'															X
VIET NAM																																																															
HO-CHI-MINH	VVTS																																																															
CAR																																																															
BAHAMAS																																																															
NASSAU	MYNN														s'		s'														s'																																			
CUBA																																																															
HABANA	MUHA								S						s'		s'																																																		X
HAITI																																																															
PORT-AU-PRINCE	MTPP														s'		s'																																																	
JAMAICA																																																															
KINGSTON	MKJP														s'		s'																																																	X
PUERTO RICO																																																															
SAN JUAN	TJSJ								s						s'		s'																																																X
EUR																																																															

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

From/de	**Loc. Ind./ Ind. d’empl.**	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
AUSTRIA																																																										
WIEN	LOWW																												s																							s						
BELGIUM																																																										
BRUXELLES	EBBR																																																			s						
CYPRUS																																																										
LARNACA	LCLK																												s																			s									
FRANCE																																																										
TOULOUSE	LFBO	s’	s’	s’	s’	s’	s’	s’	s’	s’	s’	s’	s’		s’	s’	s’	s’	s’	s’		s’		s’	s’		s’			S	s’		s’	s’	s’	S	s’		s’	s’	s’		S	s’			s’				s’	s						
GERMANY																																																										
FRANKFURT	EDDF																												s																							s						
MUNCHEN	EDDM																												s																							s						
GREECE																																																										
ATHINAI	LGAT										s																			s																			s			s						
HUNGARY																																																										
BUDAPEST	LHBP																												s																							s						
ITALY																																																										
BRINDISI	LIBR	s’	s’			s’		s’	s’	s’	s’	s’	s’	s’	s’		s’		s’	s’		s’		s’	s’		s’			S	s’	s’	s’	s’	s’	s’	s’			s’			s’	s’		s’	s’		s’			s		s’			s’	
MILANO	LIML	s’	s’			s’		s’	s’	s’	s’	s’	s’	s’	s’		s’		s’	s’		s’		s’	s’		s’			S	s’	s’	s’	s’	s’	s’	s’			s’			s’	s’		s’	s’		s’			s		s’			s’	
ROMA	LIRA	s’	s’			s’		s’	s’	s’	S	s’	s’	s’	s’		s’		s’	s’		s’		s’	s’		s’			S	s’	s’	s’	s’	s’	s’	s’			s’			s’	s’		s’	s’		s’			s		s’			s’	
MALTA																																																										
MALTA	LMML										s																			s									s										s			s						
PORTUGAL																																																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D’IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
LISBOA	LPPT	s’	s’			s’		s’	S	s’	s’	s’	s’	s’	s’		s’		s’	s’		s’		s’	s’		s’			s’	s’	s’	s’	s’	s’	s’	s’			s’			S	s’		s’	s’	s	s’					s’			s’	
ROMANIA																																																										
BUCARESTI	LROP																													s																												
SPAIN																																																										
MADRID	LEMD								s																																		s									s						
SWITZERLAND																																																										
GENEVA	LSGG																													s																						s						
ZURICH	LSZH																													s																						s						
MID																																																										
JORDAN																																																										
AMMAN	OJAI																s			s										s																s			s									
LEBANON																																																										
BEIRUT	OLBA																s													s																			s									
OMAN																																																										
MUSCAT	OOMS																s		s	s																										s												
SAUDI ARABIA																																																										
RIYAD	OERK																																																									
JEDDAH	OEJN										s				s	s	s										s			s						s										s			s									X
SYRIAN ARAB REPUBLIC																																																										
DAMASCUS	OSDI																s													s																												
YEMEN																																																										
ADEN	OYAA															s	s		s	s							s																			s			s									X
NAM																																																										

TO BE AVAILABLE IN/DOIVENT ÊTRE DISPONIBLE A

	Loc. Ind./ Ind. d’empl.	ALGERIA	ANGOLA	BENIN	BOTSWANA	BURKINA FASO	BURUNDI	CAMEROON	CAPE VERDE	CENTRAL AFRICAN REP.	CHAD	COMOROS	CONGO	CONGO (D.R)	COTE D'IVOIRE	DJIBOUTI	EGYPT	EQUATORIAL GUINEA	ERITREA	ETHIOPIA	FRANCE (Réunion)	GABON	GAMBIA	GHANA	GUINEA	GUINEA BISSAU	KENYA	LESOTHO	LIBERIA	LIBYAN ARAB JAMAHIRIYA	MADAGASCAR	MALAWI	MALI	MAURITANIA	MAURITIUS	MOROCCO	MOZAMBIQUE	NAMIBIA	NIGER	NIGERIA	RWANDA	SAO TOME & PRINCIPE	SENEGAL	SEYCHELLES	SIERRA LEONE	SOMALIA	SOUTH AFRICA	SPAIN	SUDAN	SWAZILAND	TOGO	TUNISIA	UGANDA	UNITED REP. OF TANZANIA	WESTERN SAHARA	ZAMBIA	ZIMBABWE	MOTNE
From/de																																																										
UNITED STATES																																																										
HOUSTON/OCEANIC	KZHU														s’		s’																							s’			s’				s’									s’		
MIAMI/OCEANIC	KZMA														s’		s’																							s’			s’				s’									s’		
NEW YORK/OCEANIC	KZWY								s						s’		s’																							s’			s’				s’									s’		
SAM																																																										
BRAZIL																																																										
BRASILIA	SBBR																																										s				s											
RECIFE	OERK								s																	s			s														s															X
URUGUAY																																																										
MONTEVIDEO	SUMU																																														s											
VENEZUELA																																																										
CARACAS	SVMI																																														s										

- - - - - - - - - - - - -

FASID TABLE MET 2C — EXCHANGE OF OPERATIONAL METEOROLOGICAL INFORMATION DURING THE PILGRIMAGE SEASON

Explanation of the table

Column

1 Name of the State in which the operational meteorological information should be available

2 Location from which the operational meteorological information is required

3 TF - Aerodrome forecasts
4 RF - Route forecasts A X - Seasonal requirement

TABLEAU FASID MET 2C — ECHANGE DE RENSEIGNEMENTS METEOROLOGIQUES D'EXPLOITATION PENDANT LA SAISON DE PELERINAGE

Explication du tableau

Colonne

1 Nom de l'Etat où les renseignements météorologiques d'exploitation devraient pouvoir être obtenus.

2 Emplacements en provenance desquels des renseignements météorologiques d'exploitation sont requis.

3 TF - Prévisions d'aérodrome
4 RF - Prévisions de route A X - Besoin saisonnier

To be available in/Doivent être disponibles en	From or related to/ Provenant de ou concernant	Information required/ Renseignements requis	
		TF	RF
1	2	3	4
ALGERIA	ASMARA	X	
	CAIRO	X	
	DHAHRAN	X	
	DJIBOUTI	X	
	JEDDAH	X	
	KHARTOUM	X	
	MADINAH	X	
	RIYADH	X	
BENIN	ASMARA	X	
BURKINA FASO	DHAHRAN	X	
COTE D'IVOIRE	DJIBOUTI	X	
GUINEA	JEDDAH	X	
MALI	KHARTOUM	X	
MAURITANIA	MADINAH	X	
NIGER	NAIROBI	X	
SENEGAL	RIYADH	X	
SIERRA LEONE	JEDDAH	X	
CAMEROON	ADDIS ABABA	X	
CENTRAL AFRICAN REPUBLIC	ASMARA	X	
	DHAHRAN	X	
CONGO	DJIBOUTI	X	
	ENTEBBE	X	
	JEDDAH	X	
	MADINAH	X	
	RIYADH	X	
CHAD	DHAHRAN	X	
	MADINAH	X	
	RIYADH	X	
	JEDDAH (route Jeddah-Khartoum)		X
	KHARTOUM (route Khartoum-Geneina)		X
DJIBOUTI	MADINAH	X	
KENYA	RIYADH	X	
UGANDA			
UNITED REPUBLIC OF TANZANIA			

To be available in/Doivent être disponibles en	From or related to/ Provenant de ou concernant	Information required/ Renseignements requis	
		TF	RF
1	2	3	4
GHANA	ASMARA	X	
	DHAHRAN	X	
	DJIBOUTI	X	
	JEDDAH	X	
	KHARTOUM	X	
	MADINAH	X	
	RIYADH	X	
LIBYAN ARAB JAMAHIRIYA	DHAHRAN	X	
	MADINAH	X	
	RIYADH	X	
	ALGER (route Casablanca-Tripoli)		X
	CAIRO (route Tripoli-Jeddah)		X
MOROCCO	ASMARA	X	
	DHAHRAN	X	
	DJIBOUTI	X	
	JEDDAH	X	
	KHARTOUM	X	
	MADINAH	X	
	RIYADH	X	
	ALGER (route/ruta Casablanca-Tripoli		X
	CAIRO (route/ruta Tripoli-Jeddah)		X
NIGERIA	DHAHRAN	X	
	MADINAH	X	
	RIYADH	X	
	CAIRO (route Tripoli-Jeddah)		X
	JEDDAH (route/ruta Jeddah-Khartoum)		X
	KHARTOUM (route/ruta Khartoum-Geneina)		X
SEYCHELLES	CAIRO	X	
	LUXOR	X	
	HARGEISA	X	
	MAURITIUS	X	
	MOMBASA	X	
	PORT SUDAN	X	

To be available in/Doivent être disponibles en	From or related to/ Provenant de ou concernant	Information required/ Renseignements requis	
		TF	RF
1	2	3	4
SOUTH AFRICA	DHAHRAN	X	X
	DJIBOUTI	X	X
	JEDDAH	X	
	RIYADH	X	
SUDAN	BAMAKO	X	
	CONAKRY	X	
	DAKAR	X	
	NOUADHIBOU	X	
	OUAGADOUGOU	X	
	SAL ISLAND	X	
	JEDDAH (route/ruta Jeddah-Khartoum)		X
TUNISIA	ASMARA	X	
	DHAHRAN	X	
	DJIBOUTI	X	
	JEDDAH	X	
	KHARTOUM	X	

! ! ! ! ! ! ! !

FASID TABLE MET 3A - TROPICAL CYCLONE ADVISORY CENTRE

EXPLANATION OF THE TABLE

Column

1 Location of the tropical cyclone advisory centre (TCAC).
2 Area of responsibility for the preparation of advisory information on tropical cyclones by the TCAC in Column I.
3 Period of operation of the TCAC.
4 MWO to which the advisory information on tropical cyclones should be sent;

Note. - ICAO location indicators for MWOs are shown in FASID Table MET 1B.

TABLEAU FASID MET 3A — CENTRE D'AVIS DE CYCLONES TROPICAUX

EXPLICATION DU TABLEAU

Colonne

1 Emplacement du centre d'avis de cyclones tropicaux (TCAC).
2 Zone de responsabilité pour la préparation d'avis de cyclones tropicaux par le TCAC en colonne 1.
3 Période d'activité du TCAC
4 MWO auxquels les avis consultatifs doivent être envoyées.

Note. Les indicateurs d'emplacement OACI des MWO sont donnés au Tableau FASID MET 1B

TROPICAL CYCLONE ADVISORY CENTRE/CENTRE D'AVIS DE CYCLONES TROPICAUX	AREA OF RESPONSIBILITY/ ZONE DE RESPONSABILITÉ	PERIOD OF OPERATION/ PERIODE D'ACTIVITE	MWOS TO WHICH ADVISORY INFORMATION IS TO BE SENT/MWO AUXQUELS LES AVIS CONSULTATIFS DOIVENT ÊTRE ENVOYÉS
1	2	3	4
France (Réunion)	Southwest Indian Ocean/ Sud-ouest de l'océan Indien N: 0E S S: 30ES W: 30EE E: 90EE	1 November - 30 April/ 1er novembre au 30 avril	Antananarivo Bloemfontein Bombay Dar es Salaam Durban Gaborone Harare Johannesburg Lilongwe Mahé Male Maputo Mauritius Nairobi Perth

CURRENT STATUS OF ICAO TROPICAL CYCLONE ADVISORY CENTRES (TCACs) - AREAS OF RESPONSIBILITY/SITUATION ACTUELLE DES CENTRES D'AVIS DE CYCLONES TROPICAUX (TCACs) - ZONES DES RESPONSABILITE

FASID CHART MET 2
(To be inserted)

FASID TABLE MET 3B - VOLCANIC ASH ADVISORY CENTRE

EXPLANATION OF THE TABLE

Column

1 Location of the tropical cyclone advisory centre (VAAC).

2 Area of responsibility for the preparation of advisory information on volcanic ash by the VAAC in Column 1.

3 MWOs to which the advisory information on volcanic ash should be sent.

4 ACC to which the advisory information on volcanic ash should be sent.

5 ICAO location indicator assigned to the ACC in Column 4.

Note. - ICAO location indicators for MWOs are shown in FASID Table MET IB.

TABLEAU FASID MET 3B - CENTRES D'AVIS DE CENDRES VOLCANIQUES

EXPLICATION DU TABLEAU

Column

1 Emplacement du centre d'avis de cendres volcaniques (VAAC).

2 Zone de responsabilité pour la préparation des renseignements consultatifs sur les cendres volcaniques fournis par le VAAC en colonne 1.

3 MWO auquel les renseignements consultatifs sur les cendres volcaniques doivent être envoyés.

4 ACC auquel les renseignements consultatifs sur les cendres volcaniques doivent être envoyés.

5 Indicateur d'emplacement OACI assigné à l'ACC en colonne 4.

Note. - Les indicateurs d'emplacement OACI pour les MWO sont indiqués au Tableau FASID MET 1B.

FASID TABLE MET 3B
VOLCANIC ASH ADVISORY CENTRE

TABLEAU FASID MET 3B
CENTRE D'AVIS DE CENDRES VOLCANIQUES

VOLCANIC ASH ADVISORY CENTRE/CENTRE D'AVIS DE CENDRES VOLCANIQUES	AREA OF RESPONSIBILITY/ZONE DE RESPONSABILITÉ	MWO TO WHICH ADVISORY INFORMATION IS TO BE SENT/MWO AUQUEL LES RENSEIGNEMENTS CONSULTATIFS DOIVENT ÊTRE ENVOYÉS	ACC TO WHICH ADVISORY INFORMATION IS TO BE SENT/ACC AUQUEL LES RENSEIGNEMENTS CONSULTATIFS DOIVENT ÊTRE ENVOYÉS	
1	2	3	4	5
Toulouse (France)	AFI Region Santa Maria Oceanic* EUR* (except for London, Scottish and Shannon FIRs) and MID* Regions: south of 71E N west of 60E E	Accra Addis Ababa Amilcar Cabral Antananarivo Brazzaville Bujumbura Dakar Gran Canaria Kano Kigali Kinshasa Nairobi Niamey N'Djamena Sal I.	Accra Addis Ababa Antananarivo Brazzaville Bujumbura Dakar Gran Canaria Kano Kigali Kinshasa Nairobi Niamey N'Djamena Robertsfield (Conakry) Sal I.	DGAA HAAB FMMI FCBB HBBA GOOY GCLP DNKN HRYR FZAA HKNA DRRN FTTJ GUCY GVAC

— — — — — — — —

*Requirement shown in EUR, MID and NAT Regional Air Navigation Plans/
Besoin indiqué dans les plans de navigation aérienne EUR, MID et NAT.

CURRENT STATUS OF ICAO VOLCANIC ASH ADVISORY CENTRES (VAACs) - AREAS OF RESPONSIBILITY/SITUATION ACTUELLE DES CENTRES OACI D'AVIS DE CENDRES VOLCANIQUES (VAAC) - ZONES RESPONSABILITE

FASID CHART MET 3
(To be inserted)

FASID TABLE MET 4A — AFI MET BULLETIN EXCHANGE (AMBEX) SCHEME
COLLECTION AREAS FOR AERODROME FORECASTS
TABLEAU MET 4A - SYSTEME D'ECHANGE DE BULLETINS AFI MEET (AMBEX) ZONES DE COLLECTE DES PREVISIONS D'AERODROME (TAF)

Explanation of the Table

Column

1 Location of the TAF collection centre

2 Aerodromes for which aerodrome forecasts in the TAF code form are collected

Explication du Tableau

Colonne

1 Emplacement du centre collecteur de TAF

2 Aerodrome pour lesquels les collectés TAF sont

TAF Collection centre/Centre collecteur	Collection area/Zone de collecte
1	2
ADDIS ABABA	Addis Ababa Asmara Aden Djibouti
ALGER	Alger Annaba Oran Tamanrasset Tunis Tripoli Benghazi
ANTANANARIVO	Antananarivo Mahajanga Toamasina Mauritius Moroni Saint-Denis

TAF Collection centre/Centre collecteur	Collection area/Zone de collecte
1	2
BRAZZAVILLE	Brazzaville Bangui Douala Kinshasa Libreville Luanda Malabo Sao Tome & Principe
CAIRO	Cairo Alexandria Luxor Khartoum
CASABLANCA	Casablanca Agadir Marrakech Rabat Tanger Las Palmas Tenerife sur
DAKAR	Dakar Abidjan Banjul Bamako Conakry Freetown Monrovia Nouadhibou Nouakchott Sal Oceanic Bissau

TAF Collection centre/Centre collecteur	Collection area/Zone de collecte
1	2
JOHANNESBURG	Johannesburg Bloemfontein Cape Town Durban Gaborone Harare Lilongwe Lusaka Manzini Beira Maputo Maseru Windhoek
NAIROBI	Nairobi Eldoret International Bujumbura Dar-es-Salaam Entebbe Kilimanjaro Khartoum Kigali Mahé Mogadishu Mombassa Zanzibar
NIAMEY	Niamey Accra Cotonou Kano Lagos Lome N'Djamena Ouagadougou

— — — — — — — —

FASID TABLE MET 4B — AFI MET BULLETIN EXCHANGE (AMBEX) SCHEME COLLECTION AREAS FOR AIR-REPORTS

TABLEAU FASID MET 4B — SYSTEME D'ECHANGE DES BULLETINS AFI MET (AMBEX) ZONES DE COLLECTE DES COMPTES RENDUS EN VOL

AIREP Collection centre/ Centre collecteur	Collection area/ Zone de collecte
1	2
ADDIS ABABA	Addis Ababa
	Aden
	Asmara
	Djibouti
ALGER	Alger
	Annaba
	Benghazi
	Oran
	Tamanrasset
	Tripoli
	Tunis
ANTANANARIVO	Antananarivo
	Mahajanga
	Mauritius
	Moroni
	Saint-Denis
	Toamasina
BRAZZAVILLE	Bangui
	Brazzaville
	Douala
	Kinshasa
	Libreville
	Luanda
	Malabo
	Sao Tome & Principe
CAIRO	Alexandria
	Cairo
	Khartoum
	Luxor
CASABLANCA	Agadir
	Casablanca
	Marrakech
	Rabat
	Tanger
	Las Palmas
	Tenerife Sur

AIREP Collection centre/ Centre collecteur	Collection area/ Zone de collecte
1	2
DAKAR	Bamako
	Abidjan
	Banjul
	Bissau
	Conakry
	Dakar
	Freetown
	Monrovia
	Nouadhibou
	Nouakchott
	Sal Oceanic
JOHANNESBURG	Beira
	Bloemfontein
	Cape Town
	Durban
	Gaborone
	Harare
	Johannesburg
	Lilongwe
	Lusaka
	Manzini
	Maputo
	Maseru
	Windhoek
NAIROBI	Nairobi
	Bujumbura
	Dar-es-Salaam
	Eldoret International
	Entebbe
	Khartoum
	Kigali
	Kilimanjaro
	Mahé
	Mogadishu
	Mombasa
	Zanzibar

AIREP Collection centre/ Centre collecteur	Collection area/ Zone de collecte
1	2
NIAMEY	Accra Cotonou Kano Lagos Lome Niamey N'Djamena Ouagadougou

— — — — — — — —

FASID TABLE MET 5 - REQUIREMENTS FOR WAFS PRODUCTS
TABLEAU FASID MET 5 BESOINS EN PRODUITS DU WAFS

EXPLANATION OF THE TABLE

Column

1. WAFS products required by the AFI States, to be provided by WAFC London

2. Area of coverage required for the upper-wind and temperature and SIGWX charts and other WAFS data, to be provided by WAFC London

EXPLICATION DU TABLEAU

Colonne

1. Besoins en produits du WAFS Région AFI, à fournir par le WAFC de Londres

2. Zones de couverture requises pour la température et vent en altitude et les cartes SIGWX et les autres données WAFS à fournir par le WAFC de Londres.

FASID TABLE MET/5 – REQUIREMENTS FOR WAFS PRODUCTS
TABLEAU FASID MET/5 - BESOINS EN PRODUITS DU WAFS

PRODUCT REQUIRED/ PRODUITS REQUIS	AREAS REQUIRED/ ZONES REQUISES
1	2
W/T CHART/CARTES V/T > FL 390	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 390	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 340	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 300	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 240	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 180	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 100	A, B_1, E, F, G, H, I, J, EUR
" " " " FL 50	
SWM/SWH CHART/CARTE (FL 100 - 450)	EUR A, B_1, E, F, G, H, I, J, EUR
GRIB data/Données GRIB	GLOBAL/GLOBE ENTIER
SIGWX forecasts in abbreviated plain language/Prévisions SIGWX en langage clair abrégé	YES/OUI

Note : *SWL charts should be provided outside the WAFS.*
Cartes SWL devraient être fournies en dehors du WAFS

FASID TABLE MET 6 –
RESPONSIBILITIES OF THE WORLD AREA FORECAST CENTRES

EXPLANATION OF THE TABLE

Column

1 Name of the world area forecast centre (WAFC)

2 Area of responsibility for the preparation of significant weather (SIGWX) forecasts by the WAFC in Column 1

3 Area of coverage of SIGWX charts prepared or relayed by the WAFC in Column 1

4 Area of coverage of the upper-wind and temperature charts prepared by the WAFC in Column 1

5 Area of coverage of the GRIB data prepared by the WAFC in Column1

TABLEAU FASID MET 6 -
ZONES DE RESPONSABILITÉ DES CENTRES MONDIAUX
DE PRÉVISION DE ZONE

EXPLICATION DU TABLEAU

Colonne

1 Nom du centre mondial de prévisions de zone (WAFC)

2 Zone de responsabilité pour la préparation de temps significatif (SIGWX) par le WAFC indique en colonne 1

3 Zone de couverture des cartes de SIGWX préparées et relayées par le WAFC indique en colonne 1

4 Zone de couverture des cartes de vent et température en altitude préparées par le WAFC indique en colonne 1

5 Zone de couverture pour les données GRIB préparées par le WAFC indique en colonne 1.

WAFC	SIGWX		Upper wind and temperature/ Vent et température en altitude	
	Area of responsibility/ Zone de responsabilité	**Areas of coverage of SIGWX/Zones de couverture de SIGWX**	**Areas of charts coverage/ Zones de couvertures des cartes**	**GRIB data/ Données GRIP**
1	2	3	4	5
London/ Londres	global/Globe entier	B, E, G, H, K, E,R and MID (FL 100-450), C and/y D[1]	B, C, D, E, G, H and/et K	global/Globe entier
Washington	global/Globe entier	A[2], B_1, H, J, E, G, I and/et F	A, B_1, E, F, G, H, Iand/et J	global/Globe entier

Notes corresponding to superscripts in FASID Table MET 6/Notes relatives aux inscriptions en chiffres dans le Tableau FASID MET 6.

[1]Parts of area D currently produced by RAFCs Dakar and Nairobi and relayed to WAFC London for uplink on SADIS/Présentement produite par les RAFC de Dakar et Nairobi et relayée au WAFC Londres par liaison montante pour les besoins au SADIS

[2]Currently produced by RAFC Brasilia (area limited by 12° N - 130° W; 12°N - 25° W; 35° S - 25° W; 35° S - 130° W) and RAFC Buenos Aires (stereographic polar plane limited by 7.85° S - 95.98° W; 11.48° S - 41.57° W; 59.91° S - 0.22° E; 39.25° S - 136.56° W)/Présentement produite par le RAFC Brasilia (Zone limitée par 12° N - 130° W; 12°N - 25° W; 35° S - 25° W; 35° S - 130° W) et le RAFC Buenos Aires (projection stéréographique polaire limitée par 7.85° S - 95.98° W; 11.48° S - 41.57° W; 59.91° S - 0.22° E; 39.25° S - 136.56° W)

WAFS MAXIMUM AREAS OF COVERAGE - MERCATOR PROJECTION/ZONES DE COUVERTURE MAXIMALES DU WAFS - PROJECTION MERCATOR

FASID CHART MET 4
(To be inserted)

WAFS MAXIMUM AREAS OF COVERAGE - POLAR STEREOGRAPHIC PROJECTION (NORTH)/ZONES DE COUVERTURE MAXIMALES DU WAFS - PROJECTION STEREOGRAPHIQUES POLAIRE (NORD)

FASID CHART MET 5
(To be inserted)

WAFS MAXIMUM AREAS OF COVERAGE - EUROPEAN CHART/ZONES COUVERTURE MAXIMALES DU WAFS - CARTE EUROPE

FASID CHART MET 6
(To be inserted)

WAFS MAXIMUM AREAS OF COVERAGE - POLAR STEROGRAPHIC PROJECTION (SOUTH)/ZONES DE COUVERTURE MAXIMALES DU WAFS - PROJECTION STEREOGRAPHIQUES POLAIRE (SUD)

FASID CHART MET 7
(To be inserted)

FASID TABLE MET 7 -
STATUS OF AUTHORIZED ACCESS BY SADIS USERS TO THE SATELLITE BROADCAST AND LOCATION OF THE OPERATIONAL VSATs

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory.

2 User of the satellite broadcast. Abbreviations used:

ASECNA	-	Agency for air navigation safety in Africa and Madagascar (The)
CAA	-	civil aviation authority
NMS	-	national meteorological service
O	-	other than the civil aviation authority or the national meteorological service

3 Location of VSAT: town and, where applicable, aerodrome to be indicated

4 Indication whether the access to the satellite broadcast has been approved:

X	-	yes
[blank]	-	no

5 Indication whether the equipment is operational:

2w	-	two-way VSAT operational
1w	-	one-way VSAT operational
[blank]	-	no

_____

TABLEAU FASID MET 7 -
ETAT DE L'ACCES AUTORISE AUX USAGERS DU SADIS A LA DIFFUSION PAR SATELLITE ET EMPLACEMENT DES VSAT OPERATIONNELS

EXPLICATION DU TABLEAU

Colonne

1 Nom de l'Etat ou territoire

2 Usager de la diffusion par satellite. Abréviations utilisées :

ASECNA	-	agence pour la Sécurité de la Navigation Aérienne en Afrique et à Madagascar;
CAA	-	administration d'aviation civile
NMS	-	service météorologique national
O	-	autre service que l'autorité de l'aviation civile ou le service météorologique national

3 Emplacement du VSAT : ville et, s'il y a lieu, aérodrome à indiquer

4 Indication si l'accès à la diffusion par satellite a été approuve

X	-	oui
[en blanc]	-	non

5 Indication si l'équipement est opérationnel

2w	-	VSAT bi-directionnelle opérationnel
1w	-	VSAT uni-directionnelle opérationnelle
[en blanc]	-	non

SATELLITE DISTRIBUTION SYSTEM FOR INFORMATION RELATING TO AIR NAVIGATION (SADIS)				
State/Territory	**User of Satellite broadcast**	**Location of VSAT**	**Access approved**	**Equipment operational**
1	2	3	4	5
Benin	ASECNA	Cotonou	X	1W
Botswana	NMS	Gaborone/S.S. Khama Airport	X	1W
Burkina Faso	ASECNA	Ouagadougou	X	1W
Burundi	NMS		X	
Cameroon	ASECNA	Douala/Airport	X	1W
Central African Rep.	ASECNA	Bangui/Mpoko	X	
Chad	ASECNA	Ndjamena/Aéroport	X	1W
Congo	ASECNA	Brazzaville/Maya Maya Aéroport	X	1W
Congo (RD)	NMS	Kinshasa/Aeroport N'Jili	X	1W
Côte d'Ivoire	ASECNA	Abidjan/F.H. Boigny Aéroport	X	1W
Equatorial Guinea	ASECNA	Malabo/Aéroport	X	1W
Eritrea	NMS		X	
Ethiopia	NMS	Addis Ababa/Bole Intl.	X	1W
Ethiopia	CAA	Addis Ababa	X	1W
Gabon	ASECNA	Libreville/Aéroport MBa	X	1W
Gambia	NMS	Banjul/Yundum Intl.	X	1W
Ghana	NMS		X	
Guinea	NMS	Conakry/Aéroport Gbessia	X	1W
Kenya	NMS	Nairobi/Jomo Kenyatta Intl.	X	1W
Madagascar	ASECNA	Antananarivo/Aéroport IVATO	X	1W
Malawi	NMS		X	
Mali	ASECNA	Bamako/Senou	X	

SATELLITE DISTRIBUTION SYSTEM FOR INFORMATION RELATING TO AIR NAVIGATION (SADIS)				
State/Territory	**User of Satellite broadcast**	**Location of VSAT**	**Access approved**	**Equipment operational**
1	2	3	4	5
Mauritania	ASECNA	Nouakchott/Nouakchott	X	
Mauritius	NMS	Mauritius/Sirs. Rangoolam Intl.	X	1W
Namibia	NMS	Windhoek/Airport	X	1W
Niger	ASECNA	Niamey/Aéroport Diori Hamani	X	1W
Niger	EAMAC	Niamey EAMAC	X	IW
Nigeria	NMS		X	
Senegal	ASECNA	Dakar -/Aéroport L.S. Senghor	X	1W
Senegal	ASECNA	Dakar -/Aéroport L.S. Senghor	X	1W
Seychelles	NMS	Mahé/Seychelles Intl.	X	1W
Sierra Leone	NMS		X	
Somalia	NMS		X	
South Africa	NMS	Pretoria/NMS	X	2W
South Africa	NMS	Pretoria/NMS	X	1W
Swaziland	NMS		X	1W
Tanzania	NMS	Dar-Es-Salaam	X	1W
Togo	ASECNA	Lome/Tokoin	X	1W
Uganda	NMS	Entebbe/Intl.	X	1W
Zambia	NMS	Lusaka/Intl.	X	1W

NMS - National MET Services

PART VII - SEARCH AND RESCUE (SAR)

VII^{ème} PARTIE - RECHERCHES ET SAUVETAGE (SAR)

PART VII – SEARCH AND RESCUE (SAR) SERVICES (FASID)

1. INTRODUCTION

1.1 The Standards, Recommended Practices and procedures to be applied and related guidance material are as listed in paragraph 1, Part VII – SAR of the Africa and Indian Ocean (AFI) Basic ANP. The material in this part complements that contained in Part I – Statement of Basic Operational Requirements and Planning Criteria of the Basic ANP and should be taken into consideration in the overall planning processes for the AFI Region.

1.2 This part contains the details of the facilities and services to be provided to fulfil the basic requirements of the plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO AFI and WACAF Regional Offices in Niarobi and Dakar.

2. SEARCH AND RESCUE FACILITIES

2.1 FASID, Table SAR-1
[AFI/7, Rec. 6/8]

2.1.1 The list of search and rescue (SAR) facilities as contained in Table SAR-1 should constitute the plan for SAR facilities for the AFI Region.

TABLE SAR 1 — SEARCH AND RESCUE FACILITIES

EXPLANATION OF THE TABLE

Column

1 Name of the Rescue Coordination Centre (RCC) or Rescue Subcentre (RSC) followed by the location of each rescue unit.

2 Minimum requirements for search and rescue aircraft, marine craft and desert rescue units (DRU):

Extra-long range (ELR) — Aircraft with a radius of action of 2 780 km (1 500 NM) or more, plus 2½ hours search remaining.

Very long range (VLR) — Aircraft with a radius of action of more than 1 850 km (1 000 NM) plus 2½ hours search remaining.

Long range (LRG) — Aircraft with a radius of action of 1 390 km (750 NM) plus 2½ hours search remaining.

Medium range (MRG) — Aircraft with a radius of action of 740 km (400 NM) plus 2½ hours search remaining.

Short range (SRG) — Aircraft with a radius of action of 280 km (150 NM) plus ½ hour search remaining.

Helicopter (HEL-L) — A helicopter suitable for rescue purposes with, in normal circumstances, a radius of action for rescue purposes of up to 185 km (100 NM) and a capacity for evacuating 1 to 5 persons.

Helicopter (HEL-M) — A helicopter suitable for rescue purposes with, in normal circumstances, a radius of action for rescue purposes of 185 to 370 km (100 to 200 NM) and a capacity for evacuating 6 to 15 persons.

Helicopter (HEL-H) — A helicopter suitable for search and rescue purposes with, in normal circumstances, a radius of action for rescue purposes of more than 370 km (200 NM) and a capacity for evacuating more than 15 persons.

Rescue boat (RB) — Short-range coastal and river craft with a speed approaching 14 knots or better.

Rescue vessel (RV) — Vessel possessing sea-going qualities, long range and reasonable speed. Patrol, customs, pilotage and other craft fulfil the purpose if assigned a high priority for search and rescue operations.

Mountain rescue unit (MRU)

Desert rescue unit (DRU)

RCC and rescue units	Required rescue facilities
1	2

RCC and rescue units	Required rescue facilities
1	2

ALGERIA

ALGER RCC			
Alger SRR			DRU
Alger	MRG	RB	
	HEL-M	RV	
Annaba	HEL-M	RB	
Béchar	MRG		
Oran	HEL-M	RB	
Ouargla	MRG		
Tamanrasset	MRG		
Tindouf	MRG		

ANGOLA

LUANDA RCC		
Luanda	ELR	RV
Huambo	MRG	

BENIN

Cotonou RSC		
(ACCRA RCC)		
Cotonou	MRG	RB
		RV

BOTSWANA

GABORONE RCC		
Gaborone	ELR	
	MRG	
	HEL-M	
Francistown	MRG	
	HEL-M	
Maun	HEL-M	
	HEL-L	
Kasane	VRL	
	HEL-L	

BURKINA FASO

Ouagadougou RSC		
(NIAMEY RCC)		
Ouagadougou	SRG	

BURUNDI

BUJUMBURA RCC		
Bujumbura	SRG	RB
	HEL-M	

CAMEROON

Douala RSC		
(BRAZZAVILLE RCC)		
Douala	MRG	RV
	HEL-M	RB
Limbé		RV

CAPE VERDE

SAL RCC		
Sal	VLR	RB
	SRG	RV

CENTRAL AFRICAN REPUBLIC

Bangui RSC		
(BRAZZAVILLE RCC)		
Bangui	MRG	

CHAD

N'DJAMENA RCC			
N'Djamena SRR			DRU
Faya Largeau	MRG		
N'Djamena	MRG		

COMOROS

Moroni RSC		
(ANTANANARIVO RCC)		
Moroni	SRG	

CONGO

BRAZZAVILLE RCC		
Brazzaville	MRG	
	HEL-L	
Pointe-Noire	MRG	RV
		RB

COTE D'IVOIRE

ABIDJAN RCC		
Abidjan	VLR	
	MRG	
	HEL-M	RB

RCC and rescue units	Required rescue facilities
1	2

RCC and rescue units	Required rescue facilities
1	2

DEMOCRATIC REPUBLIC OF THE CONGO

KINSHASA RCC			
Kamina	MRG		
Kinshasa	MRG	RB	
Kisangani	MRG		

DJIBOUTI

Djibouti RSC			
(ADDIS ABABA RCC)			
Djibouti	SRG		DRU
	HEL-M		MRU

EGYPT

CAIRO RCC			
Cairo SRR			
Alexandria	HEL-M	RV	
		RB	
Cairo	VLR	DRU	
	LRG	LRU	
	MRG	MRU	
	SRG		
	HEL-H		
	HEL-M		
	HEL-L		
El-Arish	HEL-M		DRU
El-Tor			DRU
Hurghada	HEL-M	RV	DRU
		RB	
Ras-Banas			DRU
Luxor	HEL-M		DRU
El-Minya			DRU
Matruh	HEL-M	RV	DRU
		RB	
Hadata			DRU
New Valley			DRU
Siwa			DRU

EQUATORIAL GUINEA

Bata RSC		
(BRAZZAVILLE RCC)		
Bata	SRG	

ERITREA

ASMARA RCC			
Asmara	HEL-M		DRU
Assab			MRU
Massawa	SRG	RV	
		RB	

ETHIOPIA

ADDIS ABABA RCC			
Addis Ababa SRR	HEL-M		DRU
Addis Ababa	MRG		

GABON

Libreville RSC			
(BRAZZAVILLE RCC)			
Libreville	MRG	RV	
	HEL-M		
Port Gentil	HEL-L	RV	
		RB	

GAMBIA

Banjul RSC		
(DAKAR RCC)		
Banjul		RB

GHANA

ACCRA RCC			
Accra SRR	VLR		
	HEL-L		
Accra	MRG	RB	
Takoradi	MRG	RV	

GUINEA

Conakry RSC		
(ROBERTS RCC)		
Conakry	SRG	RV

GUINEA-BISSAU

Bissau RSC		
(DAKAR RCC)		
Bissau	SRG	
Bolama		RB

KENYA

NAIROBI RCC		
Kisumu		RB

RCC and rescue units	Required rescue facilities		
1	2		
Mombasa	MRG	RV	
Nairobi	MRG		
	HEL-M		
LESOTHO			
Maseru RSC			
(JOHANNESBURG ARCC)			
Maseru	MRG		
	HEL-M		
LIBERIA			
ROBERTS RCC			
Monrovia		RV	
Roberts	MRG		
LIBYAN ARAB JAMAHIRIYA			
TRIPOLI RCC			
Tripoli SRR	HEL-H		DRU
Marsa Brega		RV	
Sirte		RV	
Tobruk		RV	
Tripoli	VLR	RV	
MADAGASCAR			
ANTANANARIVO RCC			
Antananarivo	MRG		
	HEL-L		
Antsiranana	MRG	RV	
MALAWI			
LILONGWE RCC			
Lilongwe SRR	HEL-L		
Lilongwe	MRG		

RCC and rescue units	Required rescue facilities		
1	2		
MALI			
Bamako RSC			
(DAKAR RCC)			
Bamako	MRG		DRU
	HEL-M		
	HEL-L		
Tessalit	MRG		DRU
MAURITANIA			
Nouakchott RSC			
(DAKAR RCC)			
Nouadhibou		RB	
Nouakchott	MRG		DRU
MAURITIUS			
MAURITIUS RCC			
Mauritius	ELR	RV	
	MRG		
MOROCCO			
CASABLANCA RCC			
Casablanca SRR	HEL-M		DRU
Agadir		RV	
Al Hoceima		RV	
Casablanca	LRG	RV	
Dakhla		RV	
Jebha		RV	
Kenitra	LRG		
Laâyoune	LRG		
M'diq		RV	
Nador		RV	
Rabat/Salé	LRG		
Tanger		RV	
MOZAMBIQUE			
BEIRA RCC			
Beira	SRG	RV	
Maputo	MRG	RV	
Nampula	SRG		
Tete	SRG		
NAMIBIA			
Windhoek RSC			
(JOHANNESBURG ARCC)			
Windhoek	MRG		
	HEL-L		
Walvis Bay RSC			
Walvis Bay	HEL-M	MRG	RV
(CAPE TOWN MRCC)			

RCC and rescue units	Required rescue facilities	
1	2	

NIGER

NIAMEY RCC		
Niamey SRR		DRU
Agades	MRG	DRU
Dirkou		DRU
Nguimi		DRU
Niamey	VLR	DRU
	MRG	
	SRG	
	HEL-M	
Tahoua		DRU
Zinder		DRU

NIGERIA

KANO RCC		
Kano	ELR	
LAGOS RCC	SPOC	
Calabar		RV
Lagos	VLR	RB
	HEL-H	
Port Harcourt	VLR	RB
	HEL-H	

REUNION (France)

Réunion RSC		
(ANTANANARIVO RCC)		
Pointe-des-Galets		RV
		RB
Saint-Denis	MRG	
	HEL-L	

RWANDA

KIGALI RCC		
Kigali	SRG	
	HEL-L2SOUT	

SAO TOME AND PRINCIPE

Sao Tome RSC		
(BRAZZAVILLE RCC)		
Sao Tome	MRG	RB
	SRG	

SENEGAL

DAKAR RCC		
Dakar	VLR	RV
	MRG	RB

SEYCHELLES

SEYCHELLES RCC		
Mahé	MRG	RV
		RB

SIERRA LEONE

Freetown RSC		
(ROBERTS RCC)		
Freetown	SRG	RB
	HEL-L	

SOMALIA

MOGADISHU RCC			
Mogadishu SRR			DRU
Berbera		RV	
		RB	
Chisimaio		RV	
		RB	
Hargeisa	SRG		
	HEL		
Mogadishu	VLR	RV	
	MRG	RB	
	HEL		

SOUTH AFRICA

CAPE TOWN MRCC			
Cape Town	ELR		
	VLR		
JOHANNESBURG ARCC			
Johannesburg	MRG		DRU

SPAIN (Canarias)

GANDO RCC,		
Gando SRR	HEL-M	
Gando	LRG	RB
Tenerife	SRG	RV

SUDAN

KHARTOUM RCC			
Khartoum SRR	HEL-M		DRU
El Obeid	MRG		
Juba	MRG		
Khartoum	MRG		
Port Sudan	MRG		

TOGO

Lomé RSC		
(ACCRA RCC)		
Lomé	MRG	RV
	HEL-M	RB

RCC and rescue units	Required rescue facilities		
1	2		
	HEL-L		
TUNISIA			
TUNIS RCC			
Tunis SRR	HEL-M		DRU
Gabès	SRG		
Jerba		RB	
Tunis	SRG		
UGANDA			
ENTEBBE RCC			
Entebbe	MRG	RB	
	HEL-L		

RCC and rescue units	Required rescue facilities	
1	2	
UNITED REPUBLIC OF TANZANIA		
DAR-ES-SALAAM RCC		
Dar-es-Salaam	MRG	RV
	SRG	RB
	HEL-H	
Zanzibar		RV
		RB
WESTERN SAHARA		
El Aaiun RSC		DRU
(GANDO RCC)		
ZAMBIA		
LUSAKA RCC		
Lusaka	MRG	
	HEL-L	
ZIMBABWE		
HARARE RCC		
Harare SRR	HEL-M	
Harare	MRG	

PART VIII - AERONAUTICAL INFORMATION SERVICES AND CHARTS (AIS/MAP)

VIII^{E} PARTIE - SERVICES D'INFORMATION ET DES CARTES AERONAUTIQUES (AIS/MAP)

PART VIII - AERONAUTICAL INFORMATION SERVICES AND CHARTS (AIS/MAP)

1. INTRODUCTION

1.1 The Standards, Recommended Practices and Procedures to be applied and related guidance material are listed in paragraph 1, Part VIII - AIS of the AFI ANP. The material in this Part complements that contained in Part I - BORPC of the Basic ANP and should be taken into consideration into the overall planning processes for the AFI Region.

1.2 This Part contains the details of the facilities and/or services to be provided to fulfill the basic requirements of the Plan and are as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. This element of the FASID, in conjunction with the AFI ANP, is kept under constant review by the APIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO AFI ans WACAF Regional Offices in Niarobi and Dakar.

2. TABLE OF CONTENTS

3. ORGANIZATION AND PROVISION OF AERONAUTICAL INFORMATION SERVICES AND CHARTS

3.1 The requirements for the organization of aeronautical information services at aerodromes in the AFI Region are shown in FASID Table AIS-1.

3.2 FASID Table AIS-2 contains the requirements for the provision of aeronautical information at aerodromes in the AFI Region.

3.3 FASID Table AIS-3 sets out the AFI Region requirements for International NOTAM Offices (NOFs).

3.4 FASID Table AIS-4 sets out the requirements for the availability of the elements of the integrated aeronautical information package from other States at international aerodromes in the AFI Region.

3.5 FASID Table AIS-5 sets out the requirements for World Geodetic System -— 1984 (WGS-84) aeronautical coordinates in the AFI Region.

3.6 FASID Table AIS-6 sets out the requirements for aeronautical charts' production in the AFI Region.

3.7 FASID Table AIS-7 sets out the allocation of production responsibility for sheets of the World Aeronautical Chart — ICAO 1: 1 000 000 series for the AFI Region.

3.8 FASID Table AIS-8 sets out the requirements for the elements of the integrated aeronautical information package in the AFI Region.

FASID TABLE AIS-1 - ESTABLISHMENT OF AERODROME AIS UNITS

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
ALGERIA	Adrar/Touat
	Alger/Houari Boumediene
	Annaba/El Mellah
	Constantine/Mohamed Boudiaf
	Ghardaia/Noumérate
	Hassi-Messaoud/Oued Irara
	Oran/Es Sénia
	Tamanrasset/Aguennar
	Tébessa/Tébessa
	Tiaret/Bou-Chekif
	Tlemcen/Zénata
	Zarzaitine/In Amenas
ANGOLA	Huambo/Albano Machado
	Luanda/4 de Fevereiro
BENIN	Cotonou/Cadjehoun
BOTSWANA	Francistown/Francistown
	Gaborones/Sir Seretse Khama Intl
	Kasane/Kasane
	Maun/Maun
	Selebi-Phikwe/Selebi-Phikwe
BURKINA FASO	Bobo-Dioulasso/Bobo-Dioulasso
	Ouagadougou/Ouagadougou
BURUNDI	Bujumbura/Bujumbura
CAMEROON	Douala/Douala
	Garoua/Garoua
	Maroua/Salak
	N’Gaoundere/N’Gaoundere
	Yaounde/Nsimalen
CAPE VERDE	Praia/Francisco Mendes
	Sal I./Amilcar Cabral
CENTRAL AFRICAN REPUBLIC	Bangui/M’Poko

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
	Berberati/Berberati
CHAD	N'Djamena/N'Djamena
COMOROS	Anjouan/Ouani
	Dzaoudzi/Pamanzi, Mayotte I.
	Moroni/Hahaia
CONGO	Brazzaville/Maya-Maya
	Pointe Noire/Agostino Neto
CÔTE D'IVOIRE	Abidjan/Felix Houphouet Boigny Intl
	Bouake/Bouake
DEMOCRATIC REPUBLIC OF THE CONGO	Goma/Goma
	Kinshasa/N'Djili
	Kisangani/Bangoka
	Lubumbashi/Luano
DJIBOUTI	Djibouti/Ambouli
EGYPT	Abu-Simbel/Abu-Simbel
	Alexandria/Alexandria
	Aswan/Aswan
	Cairo/Cairo Intl
	Hurghada/Hurghada
	Luxor/Luxor
	Mersa-Matruh/Mersa-Matruh
	Sharm El Sheikh/Sharm El Sheikh
	St. Catherine/St. Catherine
	Taba/Taba
EQUATORIAL GUINEA	Malabo/Malabo
ERITREA	Asmara/Asmara Intl
	Assab/Assab
ETHIOPIA	Addis Ababa/Bole Intl
	Dire Dawa/Dire Dawa Intl

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
GABON	Franceville/M'Vengue
	Libreville/Leon M'ba
	Port Gentil/Port Gentil
GAMBIA	Banjul/Banjul Intl
GHANA	Accra/Kotoka Intl
	Kumasi/Kumasi
	Tamale/Tamale
GUINEA	Boke/Baralande
	Conakry/Gbessia
	Faranah/Badala
	Kankan/Diankana
	Labe/Tata
	N'zerekore/Konia
GUINEA-BISSAU	Bissau/Osvaldo Vieira Intl
KENYA	Eldoret/Eldoret Intl
	Mombasa/Moi Intl
	Nairobi/Jomo Kenyatta Intl
LESOTHO	Maseru/Moshoeshoe I. Intl
LIBERIA	Monrovia/Roberts Intl
LIBYAN ARAB JAMAHIRIYA	Benghazi/Benina
	Sebha/Sebha
	Tripoli/Tripoli Intl
MADAGASCAR	Antananarivo/Ivato
	Antsiranana/Arrachart
	Mahajanga/Amborovy
	Nosy-Be/Fascene
	Sainte-Marie/Sainte-Marie
	Toamasina/Toamasina
	Tolagnaro/Tolagnaro
MALAWI	Blantyre/Chileka
	Lilongwe/Lilongwe Intl

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
MALI	Bamako/Senou
	Gao/Gao
	Kayes/Kayes
	Kidal/Kidal
	Mopti-Barbe/Mopti-Barbe
	Nioro/Nioro
	Tombouctou/Tombouctou
MAURITANIA	Atar/Atar
	Nema/Nema
	Nouadhibou/Nouadhibou
	Nouakchott/Nouakchott
	Zouerate/Zouerate
MAURITIUS	Mauritius/Sir Seewoosagur Ramgoolam Intl
MOROCCO	Agadir/Al Massira
	Al Hoceima/Cherif Al Idrissi
	Casablanca/Mohammed V
	Errachidia/Moulay Ali Cherif
	Fes/Saïss
	Marrakech/Ménara
	Ouarzazate/Ouarzazate
	Oujda/Angads
	Rabat/Salé
	Tanger/Ibnou-Batouta
	Tan-Tan/Plage Blanche
	Tetouan/Saniat-R'mel
MOZAMBIQUE	Beira/Beira
	Maputo/Maputo Intl
NAMIBIA	Keetmanshoop/Keetmanshoop
	Walvis Bay/Walvis Bay
	Windhoek/Windhoek

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
NIGER	Agades/Sud
	Niamey/Diori Hamani Intl
	Zinder/Zinder
NIGERIA	Abuja/Nnamdi Azikiwe
	Calabar/Calabar
	Ilorin/Ilorin
	Kaduna/Kaduna
	Kano/Mallam Aminu Kano Intl
	Lagos/Murtala Muhammed
	Maiduguri/Maiduguri
	Port Harcourt/Port Harcourt Intl
	Sokoto/Saddiq Abubakar III Intl
REUNION (FRANCE)	Saint-Denis/Gillot La Réunion
RWANDA	Kigali/Gregoire Kayibanda
SAO TOME AND PRINCIPE	Sao Tomé/Sao Tomé
SENEGAL	Cap Skiring/Cap Skiring
	Dakar/Leopold Sedar Senghor Intl
	Saint Louis/Saint Louis
	Tambacounda/Tambacounda
	Ziguinchor/Ziguinchor
SEYCHELLES	Mahe/Seychelles Intl
SIERRA LEONE	Freetown/Lungi
SOMALIA	Berbera/Berbera
	Burao/Burao
	Hargeisa/Hargeisa
	Kisimayu/Kisimayu
	Mogadishu/Mogadishu

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
SOUTH AFRICA	Alexander Bay/Alexander Bay
	Bloemfontein/Bloemfontein
	Cape Town/Cape Town
	Durban/Durban
	Johannesburg/Johannesburg
	Johannesburg/Rand
	Lanseria/Lanseria
	Upington/Upington
SPAIN	Gran Canaria/Gran Canaria, Canary I.
	Hierro/Hierro, Canary I.
	La Palma/La Palma, Canary I.
	Lanzarote/Lanzarote, Canary I.
	Melilla/Melilla
	Fuerteventura/Fuerteventura, Canary I.
	Tenerife Norte/Los Rodeos, Canary I.
	Tenerife Sur/Reina Sofia, Canary I.
SUDAN	Juba/Juba
	Kassala/Kassala
	Khartoum/Khartoum
	Port Sudan/Port Sudan Intl
SWAZILAND	Manzini/Matsapha
TOGO	Lome/Tokoin
	Niamtougou/Niamtougou
TUNISIA	Djerba/Zarzis
	Monastir/Habib Bourguiba
	Sfax/Thyna
	Tabarka/7 Novembre
	Tozeur/Nefta
	Tunis/Carthage
UGANDA	Entebbe/Entebbe Intl

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
UNITED REPUBLIC OF TANZANIA	Dar-Es-Salaam/Dar-Es-Salaam
	Kilimanjaro/Kilimanjaro Intl
	Zanzibar/Zanzibar
WESTERN SAHARA	El Aaiun/El Aaiun
	Smara/Smara
	Villa Cisneros/Villa Cisneros
ZAMBIA	Livingstone/Livingstone Intl
	Lusaka/Lusaka Intl
	Mfuwe/Mfuwe
	Ndola/Ndola
ZIMBABWE	Bulawayo/Bulawayo
	Harare/Harare
	Victoria Falls/Victoria Falls

FASID TABLE AIS-2 — AERONAUTICAL INFORMATION SERVICES REQUIRED AT AERODROMES

EXPLANATION OF THE TABLE

Column

1 Name of the aerodrome or location where aeronautical information services are required

2 Designation of aerodrome:

RS — international scheduled air transport, regular use
RNS — international non-scheduled air transport, regular use
RG — international general aviation, regular use
AS — international scheduled air transport, alternate use

3 ICAO location indicator of the aerodrome

4 Name of the AIS office responsible for the provision of aeronautical information service at the aerodrome concerned indicated in column 1

5 ICAO AFTN address of the responsible AIS office

6 AIS information to be available at the aerodrome:

AIP+: Includes AIP and Amendments, AIP Supplements, NOTAM, AIC
L - country in which the aerodrome is located
S - surrounding countries
FIL - all countries up to and including the aerodrome of first intended landing

PIB: Pre-flight Information Bulletins
P1 - Aerodrome (AD) format
P2 - Area format, AD format
P3 - Route format, Area format, AD format

PREP: Preparation method of PIB
C - Centralized preparation
L - Local preparation (at the aerodrome concerned)

7 Area of coverage by AFTN routing areas for which aeronautical information/flight documentation is required to be available
Note.— The AFTN routing areas are shown on FASID Chart MET 1

8 Availability of Post-Flight Reporting Forms

9 Remarks
(Indicate where processing of aeronautical information is automated/database).
A - Automated

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
ALGERIA			NOF ALGER,SIA, Dar el Beida.	DAAAYNYX								
ADRAR/Touat	RS	DAUA			X	X		P1			X	
ALGER/Houari Boumediene	RS	DAAG			X	X	X	P3			X	
ANNABA/El Mellah	RS	DABB			X	X		P2			X	
CONSTANTINE/Mohamed Boudiaf	RS	DABC			X	X		P1			X	
GHARDAIA/Noumérate	RS	DAUG			X	X		P1			X	
HASSI-MESSAOUD/Oued Irara	RS	DAUH			X	X		P1			X	
ORAN/Es Sénia	RS	DAOO			X	X		P1			X	
TAMANRASSET/Aguennar	AS	DAAT			X	X		P1			X	
TEBESSA/Tébessa	RS	DABS			X	X		P1			X	
TIARET/Bou-Chekif	RS	DAOB			X	X		P1			X	
TLEMCEN/Zénata	RS	DAON			X	X		P1			X	
ZARZAITINE/In Amenas	RS	DAUZ			X	X		P1			X	
ANGOLA			AERONAUTICA LUANDA, DNAC, Luanda.	FNLUYAYX								
HUAMBO/Albano Machado	RS	FNHU			X	X		P2			X	
LUANDA/4 de Fevereiro	RS	FNLU			X	X	X	P3			X	
BENIN			AEROCIVIL COTONOU, DAC. Cotonou.	DBBBYAYX								
COTONOU/Cadjehoun	RS	DBBB			X	X	X	P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
BOTSWANA			AIS, GABORONE	FBHQYAYX								
FRANCISTOWN/Francistown	RS	FBFT			X	X		P2			X	
GABORONE/Sir Seretse Khama Intl	RS	FBSK			X	X	X	P3			X	
KASANE/Kasane	RS	FBKE			X			P1			X	
MAUN/Maun	RS	FBMN			X			P1			X	
SELEBI-PHIKWE/Selebi-Phikwe	RS	FBSP			X			P1			X	
BURKINA FASO			MINITP OUGADOUGOU, DAC, Ouagadougou. (ASECNA).	DFFVYAYX								
BOBO-DIOULASSO/Bobo-Dioulasso	RS	DFOO			X			P2			X	
OUAGADOUGOU/Ouagadougou	RS	DFFD			X	X		P2			X	
BURUNDI			AEROBU BUJUMBURA, RSA-SIA, Bujumbura	HBBAYAYX								
BUJUMBURA/Bujumbura	RS	HBBA			X	X		P2			X	
CAMEROON			AEROCIVILE YAOUNDÉ, DAC, Yaoundé. (ASECNA).	FKKYYAYX								
DOUALA/Douala	RS	FKKD			X	X	X	P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
GAROUA/Garoua	RS	FKKR			X	X		P2			X	
MAROUA/Salak	RS	FKKL			X	X		P2			X	
N'GAOUNDERE/N'Gaoundere	AS	FKKN			X	X		P2			X	
YAOUNDE/Nsimalen	RS	FKYS			X	X	X	P2			X	
CAPE VERDE			AVIACIVIL SAL, ASA ENASA, Aeroporto Amilcar Cabral, Ilha do Sal.	GVACYOYX								
PRAIA/Francisco Mendes	RS	GVFM			X	X		P2			X	
SAL I./Amilcar Cabral	RS	GVAC			X	X	X	P3			X	
CENTRAL AFRICAN REPUBLIC			DIREGENAVIA CIVIL BANGUI, DGACM, Bangui.	FEFVYAYX								
BANGUI/M'Poko	RS	FEFF			X	X	X	P3			X	
BERBERATI/Berberati	RS	FEFT			X	X		P2			X	
CHAD			DAC, N'Djamena.	FTTVYAYX								
N'DJAMENA/N'Djamena	RS	FTTJ			X	X	X	P3			X	
COMOROS			AVIACIVIL MORONI, DAM, Moroni.									
ANJOUAN/Ouani	RS	FMCV			X	X		P2			X	
DZAOUDZI/Pamanzi, Mayotte I.	RS	FMCZ			X	X		P2			X	
MORONI/Hahaia	RS	FMCH			X			P1			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
CONGO			AVIACIVILE BRAZZAVILLE, ANAC, Brazzaville. (ASECNA)	FCBVYAYX								
BRAZZAVILLE/Maya-Maya	RS	FCBB			X	X	X	P3			X	
POINTE NOIRE/Agostino Neto	RS	FCPP			X	X		P2			X	
COTE D'IVOIRE			ANAM, Abidjan. (ASECNA)	DIAPYAYX								
ABIDJAN/Felix Houphouet Boigny Intl	RS	DIAP			X	X	X	P3			X	
BOUAKE/Bouake	RS	DIBK			X	X		P2			X	
DEMOCRATIC REPUBLIC OF THE CONGO			NOFKIN, SIA, RVA, Kinshasa/N'Dolo.	FZAZYOYX								
GOMA/Goma	RS	FZNA			X	X		P2			X	
KINSHASA/N'Djili	RS	FZAA			X	X	X	P3			X	
KISANGANI/Bangoka	AS	FZIC			X	X		P2			X	
LUBUMBASHI/Luano	AS	FZQA			X	X	X	P2			X	
DJIBOUTI			Bureau d'Information Aeronautique, Aéroport de Djibouti/Ambouli	HDAMYDYX								

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	F I L	P1 P2 P3	P R E P			
1	2	3	4	5	6					7	8	9
DJIBOUTI/Ambouli	RS	HDAM			X	X	X	P3			X	
EGYPT			Egyptian CAA, AIS, Cairo International Airport.	HECAYOYX								
ABU-SIMBEL/Abu-Simbel	RS	HEBL			X	X		P2			X	
ALEXANDRIA/Alexandria	RS	HEAX			X	X		P3			X	
ASWAN/Aswan	RS	HESN			X	X		P2			X	
CAIRO/Cairo Intl	RS	HECA			X	X	X	P3			X	
HURGHADA/Hurghada	RS	HEGN			X	X		P3			X	
LUXOR/Luxor	RS	HELX			X	X		P2			X	
MERSA-MATRUH/Mersa-Matruh	RS	HEMM			X	X		P2			X	
SHARM EL SHEIKH/Sharm El Sheikh	RS	HESH			X	X		P2			X	
ST. CATHERINE/St. Catherine	RS	HESC			X	X		P2			X	
TABA/Taba	RS	HETB			X	X		P1			X	
EQUATORIAL GUINEA			DGAC, Malabo. (ASECNA)	FGSLYFYX								
MALABO/Malabo	RS	FGSL			X	X		P2			X	
ERITREA			CAA, AIS, Asmara	HHASYOYX								
ASMARA/Asmara Intl	RS	HHAS			X	X	X	P3			X	
ASSAB/Assab	RS	HHSB			X	X	X	P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
ETHIOPIA			CIVILAIR ADDIS ABABA, CAA- AIS, Addis Ababa	HAAAYGYX								
ADDIS ABABA/Bole Intl	RS	HAAB			X	X	X	P3			X	
DIRE DAWA/Dire Dawa Intl	RS	HADR			X	X	X	P2			X	
FRANCE (Ile de la Réunion)			(France)									
SAINT-DENIS/Gillot La Reunion	RS	FMME			X	X	X	P2			X	
GABON			AVIACIVILE LIBREVILLE, SGACC, Libreville. (ASECNA)	FOOVYAYX								
FRANCEVILLE/M'vengue	RS	FOON			X	X		P2			X	
LIBREVILLE/Leon M'Ba	RS	FOOL			X	X	X	P2			X	
PORT GENTIL/Port Gentil	RS	FOOG			X	X		P2			X	
GAMBIA			AIS, Banjul International Airport	GBYDYOYX								
BANJUL/Banjul Intl	RS	GBYD			X	X		P2			X	
GHANA			AIS GCAA, Kotoka International Airport, Accra	DGAAYOYX								
ACCRA/Kotoka Intl	RS	DGAA			X	X	X	P3			X	
KUMASI/Kumasi	RS	DGSI			X	X		P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
TAMALE/Tamale	RS	DGLE			X	X		P2			X	
GUINEA			CIVIL AVIATION CONAKRY, AIS Conakry	GUCYYOYX								
BOKE/Baralande	RS	GUOK			X	X		P2			X	
CONAKRY/Gbessia	RS	GUCY			X	X	X	P3			X	
FARANAH/Badala	RS	GUFH			X	X		P2			X	
KANKAN/Diankana	RS	GUXN			X	X		P2			X	
LABE/Tata	RS	GULB			X	X		P2			X	
N'ZEREKORE/Konia	RS	GUNZ			X	X		P2			X	
GUINEA-BISSAU			AEROCIVIL BISSAU, DGAC Bissau	GGOVYAYX								
BISSAU/Osvaldo Vieira Intl	RS	GGOV			X	X		P2			X	
KENYA			DIRECTAIR NAIROBI, DCA, AIS, Nairobi.	HKNCYOYX								
ELDORET/Eldoret Intl	RS	HKEL			X	X		P2			X	
MOMBASA/Moi Intl	RS	HKMO			X	X	X	P3			X	
NAIROBI/Jomo Kenyatta Intl	RS	HKJK			X	X	X	P3			X	
LESOTHO			CIVILAIR MASERU, AIS Maseru	FXMMYOYX								
MASERU/Moshoeshoe I. Intl	RS	FXMM			X	X	X	P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
LIBERIA			CIVILAIR MONROVIA, DCA Monrovia	GLMCYAYX								
MONROVIA/Roberts Intl	RS	GLRB			X	X	X	P3			X	
LIBYAN ARAB JAMAHIRIYA			DIRECTAIR TRIPOLIBYA, AIS Tripoli	HLLTYOYX								
BENGHAZI/Benina	RS	HLLB			X	X		P2			X	
SEBHA/Sebha	RS	HLLS			X	X		P2			X	
TRIPOLI/Tripoli Intl	RS	HLLS			X	X	X	P3			X	
MADAGASCAR			AVIACIVIL ANTANANARIVO, Direction des Transports Aériens, Antananarivo	FMMDYAYX								
ANTANANARIVO/Ivato	RS	FMMI			X	X	X	P3			X	
ANTSIRANANA/Arrachart	RS	FMNA			X	X		P2			X	
MAHAJANGA/Amborovy	RS	FMNM			X	X		P2			X	
NOSY-BE/Fascene	RS	FMNN			X	X		P2			X	
SAINTE-MARIE/Sainte-Marie	RS	FMMS			X	X		P2			X	
TOAMASINA/Toamasina	RS	FMMT			X	X		P2			X	
TOLAGNARO/Tolagnaro	RS	FMSD			X	X		P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
MALAWI			AVIATION LILONGWE, AIS, DCA Lilongwe.	FWHQYOYX								
BLANTYRE/Chileka	RS	FWCL			X	X	X	P3			X	
LILONGWE/Lilongwe Intl	RS	FWLI			X	X	X	P3			X	
MALI			AVIACIVIL BAMAKO, DNAC, Bamako	GABVYAYX								
BAMAKO/Senou	RS	GABS			X	X	X	P3			X	
GAO/Gao	RS	GAGO			X	X		P2			X	
KAYES/Kayes	RS	GAKY			X	X		P2			X	
KIDAL/Kidal	RS	GAKL			X	X		P2			X	
MOPTI-BARBE/Mopti-Barbe	RS	GAMB			X	X		P2			X	
NIORO/Nioro	RS	GANR			X	X		P2			X	
TOMBOUCTOU/Tombouctou	RS	GATB			X	X		P2			X	
MAURITANIA			MINITRANS NOUAKCHOTT, DAC Nouakchott. (ASECNA).									
ATAR/Atar	RS	GQPA			X	X		P2			X	
NEMA/Nema	RS	GQNI			X	X		P2			X	
NOUADHIBOU/Nouadhibou	RS	GQPP			X	X	X	P3			X	
NOUAKCHOTT/Nouakchott	RS	GQNN			X	X	X	P3			X	
ZOUERATE/Zouerate	RS	GQPZ			X	X		P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
MAURITIUS			DCAMAU, DCA-AIS, Sir Seewoosagur Ramgoolam Int. Airport.									
MAURITIUS/Sir Seewoosagur Ramgoolam Intl	RS	FIMP			X	X	X	P3			X	
MOROCCO			AISMOROC M, NOF CASA, DAC-AIS, Aeroport de Casablanca/Anfa.									
AGADIR/Al Massira	RS	GMAD			X	X	X	P3			X	
AL HOCEIMA/Cherif Al Idrissi	RS	GMTA			X	X		P2			X	
CASABLANCA/Mohammed V	RS	GMMN			X	X	X	P3			X	
ERRACHIDIA/Moulay Ali Cherif	AS	GMFK			X	X		P1			X	
FES/Saïss	RS	GMFF			X	X		P2			X	
MARRAKECH/Ménara	RS	GMMX			X	X		P2			X	
OUARZAZATE/Ouarzazate	RS	GMMZ			X	X		P2			X	
OUJDA/Angads	RS	GMFO			X	X		P2			X	
RABAT/Salé	RS	GMME			X	X	X	P3			X	
TANGER/Ibnou-Batouta	RS	GMTT			X	X	X	P3			X	
TAN-TAN/Plage Blanche	RS	GMAT			X	X		P2			X	
TETOUAN/Saniat-Rimel	RS	GMTN			X	X		P2			X	
MOZAMBIQUE			AERONAUTICA MAPUTO, SIA, Alameda do Aeroporto, Maputo.									

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
BEIRA/Beira	RS	FQBR			X	X		P2			X	
MAPUTO/Maputo Intl	RS	FQMA			X	X	X	P3			X	
NAMIBIA			AIS-DCA, Ausspannplatz, Windhoek	FYWEZPZX								
KEETMANSHOOP/Keetmanshop	RS	FYKT			X	X		P2			X	
WALVIS BAY/Walvis Bay	RS	FYWB			X	X		P2			X	
WINDHOEK/Windhoek	RS	FYWB			X	X	X	P3			X	
NIGER			AVIACIVILE NIAMEY, DAC Niamey. (ASECNA)	DRRVYAYX								
AGADES/Sud	RS	DRZA			X	X		P2			X	
NIAMEY/Diori Hamani Intl	RS	DRRN			X	X	X	P3			X	
ZINDER/Zinder	AS	DRZR			X	X		P2			X	
NIGERIA			AIRCIVIL LAGOS, NAMA-ATS-AIS, Ikeja.	DNLLYAYX								
ABUJA/Nnamdi Azikiwe	RS	DNAA			X	X		P2			X	
CALABAR/Calabar	RS	DNCA			X	X		P2			X	
ILORIN/Ilorin	AS	DNIL			X	X		P2			X	
KADUNA/Kaduna	RS	DNKA			X	X		P2			X	
KANO/Mallam Aminu Kano Intl	RS	DNKN			X	X	X	P3			X	
LAGOS/Murtala Muhammed	RS	DNMM			X	X	X	P3			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
MAIDUGURI/Maiduguri	RS	DNMA			X	X		P2			X	
PORT HARCOURT/Port Harcourt Intl	RS	DNPO			X	X	X	P3			X	
SOKOTO/Abubakar Saddiq III Intl	RS	DNSO			X	X		P2			X	
RWANDA			DIRAVIAMET KIGALI, SIA, Kigali	HRYRYAYX								
KIGALI/Gregoire Kayibanda	RS	HRYR			X	X	X	P3			X	
SAO TOME & PRINCIPE			ENASA SAO TOME, ENASA-AIS, Aerporto de Sao Tome	FPSTYOYX								
SAO TOME/Sao Tomé	RS	FPST			X	X	X	P3			X	
SENEGAL			AVIACIVIL DAKAR, DAC, Dakar/Yoff.	GOOOYAYX								
CAP SKIRING/Cap Skiring	RS	GOGS			X	X		P2			X	
DAKAR/Leopold Sedar Senghor Intl	RS	GOOY			X	X	X	P3			X	
SAINT LOUIS/Saint Louis	RS	GOSS			X	X		P2			X	
TAMBACOUNDA/Tambacounda	RS	GOTT			X	X		P2			X	
ZIGUINCHOR/Ziguinchor	RS	GOGG			X	X		P2			X	
SEYCHELLES			DIRECTAIR SEYCHELLES, DCA-AIS, Victoria, Mahé.	FSIAYAYX								

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	F I L	P1 P2 P3	P R E P			
1	2	3	4	5	6					7	8	9
MAHE/Seychelles Intl	RS	FSIA			X	X	X	P3			X	
SIERRA LEONE			AIRCIVIL FREETOWN, DCA-MTC, Freetown	GFLLYAYX								
FREETOWN/Lungi	RS	GFLL			X	X	X	P3			X	
SOMALIA			CIVAIR MOGADISHU, DCA-AIS, Mogadishu.	HCMMYAYX								
BERBERA/Berbera	AS	HCMI			X			P1			X	
BURAO/Burao	RS	HCMV			X			P2			X	
HARGEISA/Hargeisa	RS	HCMH			X	X		P2			X	
KISIMAYU/Kisimayu	AS	HCMK			X	X		P2			X	
MOGADISHU/Mogadishu	RS	HCMM			X	X	X	P2			X	
SOUTH AFRICA			CAA - AIS, Pretoria.	FAHQYNYX								
ALEXANDERBAY/Alexander Bay	RS	FAAB			X	X		P2			X	
BLOEMFONTEIN/Bloemfontein	AS	FABL			X	X		P2			X	
CAPE TOWN/Cape Town	RS	FACT			X	X	X	P3			X	
DURBAN/Durban	RS	FADN			X	X	X	P3			X	
JOHANNESBURG/Johannesburg	RS	FAJS			X	X	X	P3			X	
JOHANNESBURG/Rand	RS	FAGM			X	X		P2			X	
LANSERIA/Lanseria	RS	FALA			X	X		P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
UPINGTON/Upington	RS	FAUP			X	X		P2			X	
SPAIN			SIA,c/Juan Ignacio, Madrid.	LEACYOYX								
GRAN CANARIA/Gran Canaria, Canary I.	RS	GCLP			X	X		P2			X	
HIERRO/Hierro, Canary I.	RS	GCHI			X	X		P2			X	
LA PALMA/La Palma, Canary I.	RS	GCLA			X	X		P2			X	
LANZAROTE/Lanzarote, Canary I.	RS	CGRR			X	X		P2			X	
MELILLA/Melilla	RS	GEML			X	X		P2			X	
FUERTEVENTURA/Fuerteventura, Canary I.	RS	GCFV			X	X		P2			X	
TENERIFE NORTE/Los Rodeos, Canary I.	RS	GCXO			X	X		P2			X	
TENERIFE SUR/Reina Sofia, Canary I.	RS	GCTS			X	X		P2			X	
SUDAN			CIVAIR KHARTOUM, CAA-AIS, Khartoum	HSSSYOYX								
JUBA/Juba	RS	HSSJ			X	X		P2			X	
KASSALA/Kassala	AS	HSKA			X	X		P2			X	
KHARTOUM/Khartoum	RS	HSSS			X	X	X	P3			X	
PORT SUDAN/Port Sudan Intl	RS	HSPN			X	X		P2			X	
SWAZILAND			MINWORKS MBABANE, CAB Mbabane	FDMBYAYX								

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
MANZINI/Matsapha	RS	FDMS			X	X	X	P3			X	
TOGO			MINCOMMERCE LOMÉ, MCT, Lomé, (ASECNA).	DXXXYAYX								
LOME/Tokoin	RS	DXXX			X	X	X	P3			X	
NIAMTOUGOU/Niamtougou	RS	DXNG			X	X		P2			X	
TUNISIA			OPAT TUNIS, AIS-CNA, Tunis-Carthage.	DTTCYNYX								
DJERBA/Zarzis	RS	DTTJ			X	X	X	P3			X	
MONASTIR/Habib Bourguiba	RS	DTMB			X	X		P2			X	
SFAX/Thyna	RS	DTTX			X	X		P2			X	
TABARKA/7 NOVEMBRE	RS	DTKA			X	X		P2			X	
TOZEUR/Nefta	RS	DTTZ			X	X		P2			X	
TUNIS/Carthage	RS	DTTA			X	X	X	P3			X	
UGANDA			CAA-AIS, Kampala	HUENYOYX								
ENTEBBE/Entebbe Intl	RS	HUEN			X	X	X	P3			X	
UNITED REPUBLIC OF TANZANIA			AIS, Dar-es-Salaam Airport	HTDGYOYO								
DAR-ES-SALAAM/Dar-Es-Salaam	RS	HTDA			X	X	X	P3			X	
KILIMANJARO/Kilimanjaro Intl	RS	HTKJ			X	X	X	P2			X	

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage by AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO loc. ind.	Name	ICAO loc. ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
ZANZIBAR/Zanzibar	RS	HTZA			X	X		P2			X	
WESTERN SAHARA												
EL AAIUN/El Aaiun	RS	GSAI			X	X	X	P2			X	
SMARA/Smara	RS	GSMA			X	X		P2			X	
VILLA CISNEROS/Villa Cisneros	RS	GSVO			X	X	X	P2			X	
ZAMBIA			AVIATION LUSAKA, DCA-AIS, Lusaka	FLHQYAYX								
LIVINGSTONE/Livingstone Intl	RS	FLLI			X	X		P2			X	
LUSAKA/Lusaka Intl	RS	FLLS			X	X	X	P3			X	
MFUWE/Mfuwe	RS	FLMF			X	X		P2			X	
NDOLA/Ndola	RS	FLND			X	X		P2			X	
ZIMBABWE			AVIATION HARARE, CAA-AIS, Causeway, Harare.	FVHAYOYX								
BULAWAYO/Bulawayo	RS	FVBU			X	X		P2			X	
HARARE/Harare	RS	FVHA			X	X	X	P3			X	
VICTORIA FALLS/Victoria Falls	RS	FVFA			X	X		P2			X	

FASID TABLE AIS-3 - DESIGNATED INTERNATIONAL NOTAM OFFICES (NOF) IN THE AFI REGION

NOF	*Areas of responsibility by FIR*	*Remarks*
ACCRA	ACCRA	
ADDIS ABABA	ADDIS ABABA	
ALGER	ALGER	
ANTANANARIVO	ANTANANARIVO	
ASMARA	ASMARA	cf. Amdt proposal ESAF 99/1 as approved by Council on 8/3/2000.
BRAZZAVILLE	BRAZZAVILLE	
BUJUMBURA	BUJUMBURA	
CAIRO	CAIRO	
CASABLANCA	CASABLANCA	
DAKAR	DAKAR, DAKAR OCEANIC, NIAMEY	
DAR-ES-SALAAM	DAR-ES-SALAAM	
ENTEBBE	ENTEBBE	
FREETOWN	ROBERTS	
GABORONE	GABORONE	
HARARE	HARARE	
JOHANNESBURG	BLOEMFONTEIN, CAPETOWN, DURBAN, JOHANNESBURG, JOHANNESBURG OCEANIC, PORT ELIZABETH, WINDHOEK	
KHARTOUM	KHARTOUM	
KIGALI	KIGALI	
KINSHASA	KINSHASA	
LAGOS	KANO	
LILONGWE	LILONGWE	
LUANDA	LUANDA	
LUSAKA	LUSAKA	

NOF	*Areas of responsibility by FIR*	*Remarks*
MADRID	CANARIAS	
MAHE	SEYCHELLES	
MANZINI	SWAZILAND (WITHIN JOHANNESBURG FIR)	
MAPUTO	BEIRA	
MASERU	LESOTHO (WITHIN BLOEMFONTEIN FIR)	
MOGADISHU	MOGADISHU	
NAIROBI	NAIROBI	
PLAISANCE	MAURITIUS	
SAL	SAL OCEANIC	
TRIPOLI	TRIPOLI	
TUNIS	TUNIS	
WINDHOEK	WINDHOEK	

FASID TABLE AIS 4 -
EXCHANGE OF AERONAUTICAL INFORMATION

EXPLANATION OF THE TABLE

FASID Table AIS-4 sets out the requirement for the integrated aeronautical information package from foreign Aeronautical Information Services (AIS) to be available at aerodrome/heliport AIS Units in the AFI region, for pre-flight briefing.

The table consists of three parts. Table AIS-4A covers the requirements for the integrated aeronautical information package from States and Territories in the AFI region, Table-4B includes the requirements from the EUR region and Table AIS-4C includes the requirements from the ASIA, CAR, MID, NAT and SAM regions.

For each aerodrome/heliport in the AFI region, the requirement is shown by an "X" against the State or Territory from which the integrated aeronautical information package is required.

For each aeronautical/heliport the location indicator and designator of aerodrome/heliport use are listed.

Aerodrome/heliport use designation:

RS	-	international scheduled air transport, regular use;
RNS	-	international non-scheduled air transport, regular use;
RG	-	international general aviation, regular use;
AS	-	international scheduled air transport, alternate use.

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
ALGERIA	
DAUA ADRAR/Touat RS	
DAAG ALGER/Houari Boumediene RS	
DABB ANNABA/El Mellah RS	
DABC CONSTANTINE/Mohamed Boudiaf RS	
DAUG GHARDAIA/Noumérate RS	
DAUH HASSI-MESSAOUD/Oued Irara RS	
DAOO ORAN/Es Sénia RS	
DAAT TAMANRASSET/Aguennar AS	
DABS TEBESSA/Tébessa RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
DAOB TIARET/Bou-Chekif RS	
DAON TLEMCEN/Zénata RS	
DAUZ ZARZAITINE/In Amenas RS	
ANGOLA	
FNHU HUAMBO/Albano Machado RS	
FNLU LUANDA/4 de Fevereiro RS	
BENIN	
DBBB COTONOU/Cadjehoun RS	
BOTSWANA	
FBFT FRANCISTOWN/Francistown RS	

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FBSK GABORONE/Sir Seretse Khama Intl RS																																																						
FBKE KASANE/Kasane RS																																																						
FBMN MAUN/Maun RS																																																						
FBSP SELEBI-PHIKWE/Selebi-Phikwe RS																																																						

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
BURKINA FASO																																																						
DFOO BOBO-DIOULASSO/Bobo-Dioulasso RS																																																						
DFFD OUAGADOUGOU/Ouagadougou RS																																																						
BURUNDI																																																						
HBBA BUJUMBURA/Bujumbura RS																																																						
CAMEROON																																																						
FKKD DOUALA/Douala RS																																																						
FKKR GAROUA/Garoua RS																																																						
FKKL MAROUA/Salak RS																																																					
FKKN N'GAOUNDERE/ N'Gaoundere AS																																																						

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FKYS YAOUNDE/Nsimalen RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
CAPE VERDE	
GVFM PRAIA/Francisco Mendes RS	
GVAC SAL I./Amilcar Cabral RS	
CENTRAL AFRICAN REPUBLIC	
FEFF BANGUI/M'Poko RS	
FEFT BERBERATI/Berberati RS	
CHAD	
FTTJ N'DJAMENA/N'Djamena RS	
COMOROS	
FMCV ANJOUAN/Ouani RS	
FMCZ DZAOUDZI/Pamanzi, Mayotte I. RS	

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FMCH MORONI/Hahaia RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
CONGO	
FCBB BRAZZAVILLE/Maya-Maya RS	
FCPP POINTE NOIRE/Agostino Neto RS	
COTE D'IVOIRE	
DIAP ABIDJAN/Felix Houphouet Boigny Intl RS	
DIBK BOUAKE/Bouake RS	
DEMOCRATIC REPUBLIC OF THE CONGO	
FZNA GOMA/Goma RS	
FZAA KINSHASA/N'Djili RS	
FZIC KISANGANI/Bangoka AS	

AIS-4-A	FROM/DE																																																					
	AFI																																																				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FZQA LUBUMBASHI/Luano AS																																																						
DJIBOUTI																																																							
HDAM DJIBOUTI/Ambouli RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
EGYPT	
HEBL ABU-SIMBEL/Abu-Simbel RS	
HEAX ALEXANDRIA/Alexandria RS	
HESN ASWAN/Aswan RS	
HECA CAIRO/Cairo Intl RS	
HEGN HURGHADA/Hurghada RS	
HELX LUXOR/Luxor RS	
HEMM MERSA-MATRUH/ Mersa-Matruh RS	
HESH SHARM EL SHEIKH/Sharm El Sheikh RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
HESC ST. CATHERINE/St. Catherine RS	
HETB TABA/Taba RS	
EQUATORIAL GUINEA	
FGSL MALABO/Malabo RS	
ERITREA	
HHAS ASMARA/Asmara Intl RS	
HHSB ASSAB/Assab RS	
ETHIOPIA	
HAAB ADDIS ABABA/Bole Intl RS	
HADR DIRE DAWA/Dire Dawa Intl RS	
FRANCE (Ile de la Réunion)	

AIS-4-A	FROM/DE																																																						
	AFI																																																						
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																							
FMME SAINT-DENIS/Gillot La Reunion RS																																																							
GABON																																																							
FOON FRANCEVILLE/M'vengue RS																																																							
FOOL LIBREVILLE/Leon M'Ba RS																																																							
FOOG PORT GENTIL/Port Gentil RS																																																							
GAMBIA																																																							
GBYD BANJUL/Banjul Intl RS																																																							
GHANA																																																							
DGAA ACCRA/Kotoka Intl RS																																																							
DGSI KUMASI/Kumasi RS																																																							
DGLE TAMALE/Tamale RS																																																							

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
GUINEA																																																						
GUOK BOKE/Baralande RS																																																						
GUCY CONAKRY/Gbessia RS																																																						
GUFH FARANAH/Badala RS																																																						
GUXN KANKAN/Diankana RS																																																						
GULB LABE/Tata RS																																																						
GUNZ N'ZEREKORE/Konia RS																																																						
GUINEA-BISSAU																																																							
GGOV BISSAU/Osvaldo Vieira Intl RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
KENYA	
HKEL ELDORET/Eldoret Intl RS	
HKMO MOMBASA/Moi Intl RS	
HKJK NAIROBI/Jomo Kenyatta Intl RS	
LESOTHO	
FXMM MASERU/Moshoeshoe I. Intl RS	
LIBERIA	
GLRB MONROVIA/Roberts Intl RS	
LIBYAN ARAB JAMAHIRIYA	
HLLB BENGHAZI/Benina RS	
HLLS SEBHA/Sebha RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
HLLT TRIPOLI/Tripoli Intl RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
MADAGASCAR	
FMMI ANTANANARIVO/Ivato RS	
FMNA ANTSIRANANA/Arrachart RS	
FMNM MAHAJANGA/ Amborovy RS	
FMNN NOSY-BE/Fascene RS	
FMMS SAINTE-MARIE/Sainte-Marie RS	
FMMT TOAMASINA/Toamasina RS	
FMSD TOLAGNARO/Tolagnaro RS	
MALAWI	

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FWCL BLANTYRE/Chileka RS																																																						
FWLI LILONGWE/Lilongwe Intl RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
MALI	
GABS BAMAKO/Senou RS	
GAGO GAO/Gao RS	
GAKY KAYES/Kayes RS	
GAKL KIDAL/Kidal RS	
GAMB MOPTI-BARBE/Mopti-Barbe RS	
GANR NIORO/Nioro RS	
GATB TOMBOUCTOU/Tombouctou RS	
MAURITANIA	
GQPA ATAR/Atar RS	
GQNI NEMA/Nema RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
GQPP NOUADHIBOU/Nouadhibou RS	
GQNN NOUAKCHOTT/Nouakchott RS	
GQPZ ZOUERATE/Zouerate RS	
MAURITIUS	
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl RS	
MOROCCO	
GMAD AGADIR/Al Massira RS	
GMTA AL HOCEIMA/Cherif Al Idrissi RS	
GMMN CASABLANCA/Mohammed V RS	
GMFK ERRACHIDIA/Moulay Ali Cherif AS	
GMFF FES/Saïss RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
GMMX MARRAKECH/Ménara RS	
GMMZ OUARZAZATE/ Ouarzazate RS	
GMFO OUJDA/Angads RS	
GMME RABAT/Salé RS	
GMTT TANGER/Ibnou-Batouta RS	
GMAT TAN-TAN/Plage Blanche RS	
GMTN TETOUAN/Saniat-Rimel RS	
MOZAMBIQUE	
FQBR BEIRA/Beira RS	
FQMA MAPUTO/Maputo Intl RS	
NAMIBIA	

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FYKT KEETMANSHOOP/ Keetmanshop RS																																																						
FYWB WALVIS BAY/Walvis Bay RS																																																						
FYWH WINDHOEK/Windhoek RS																																																						
NIGER																																																						
DRZA AGADES/Sud RS																																																						
DRRN NIAMEY/Diori Hamani Intl RS																																																						
DRZR ZINDER/Zinder AS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
NIGERIA	
DNAA ABUJA/Nnamdi Azikiwe RS	
DNCA CALABAR/Calabar RS	
DNIL ILORIN/Ilorin AS	
DNKA KADUNA/Kaduna RS	
DNKN KANO/Mallam Aminu Kano Intl RS	
DNMM LAGOS/Murtala Muhammed RS	
DNMA MAIDUGURI/Maiduguri RS	
DNPO PORT HARCOURT/Port Harcourt Intl RS	
DNSO SOKOTO/Abubakar Saddiq III Intl RS	
RWANDA	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
HRYR KIGALI/Gregoire Kayibanda RS	
SAO TOME & PRINCIPE	
FPST SAO TOME/Sao Tomé RS	
SENEGAL	
GOGS CAP SKIRING/Cap Skiring RS	
GOOY DAKAR/Leopold Sedar Senghor Intl RS	
GOSS SAINT LOUIS/Saint Louis RS	
GOTT TAMBACOUNDA/Tambacounda RS	
GOGG ZIGUINCHOR/Ziguinchor RS	
SEYCHELLES	
FSIA MAHE/Seychelles Intl RS	
SIERRA LEONE	

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
GFLL FREETOWN/Lungi RS																																																						
SOMALIA																																																						
HCMI BERBERA/Berbera AS																																																						
HCMV BURAO/Burao RS																																																						
HCMH HARGEISA/Hargeisa RS																																																						
HCMK KISIMAYU/Kisimayu AS																																																						
HCMM MOGADISHU/Mogadishu RS																																																						
SOUTH AFRICA																																																						
FAAB ALEXANDERBAY/Alexander Bay RS																																																						
FABL BLOEMFONTEIN/Bloemfontein AS																																																						
FACT CAPE TOWN/Cape Town RS																																																						

AIS-4-A	FROM/DE																																																					
	AFI																																																					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria	Angola	Benin	Botswana	Burkina Faso	Burundi	Cameroon	Cap Verde	Central African Rep.	Chad	Comoros	Congo	Côte d'Ivoire	Dem. Rep. of the Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea Bissau	Ile de la Réunion (France)	Kenya	Lesotho	Liberia	Libyan Arab Jamahirya	Madagascar	Malawi	Mali	Mauritania	Mauritius	Morocco	Mozambique	Namibia	Nigeria	Rwanda	Sao Tome & Principe	Senegal	Seychelles	Sierra Leone	Somalia	South Africa	Spain	Sudan	Swaziland	Togo	Tunisia	Uganda	United Rep. of Tanzania	Western Sahara	Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																																						
FADN DURBAN/Durban RS																																																						
FAJS JOHANNESBURG/ Johannesburg RS																																																						
FAGM JOHANNESBURG/Rand RS																																																						
FALA LANSERIA/Lanseria RS																																																						
FAUP UPINGTON/Upington RS																																																						

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
SPAIN	
GCLP GRAN CANARIA/Gran Canaria, Canary I. RS	
GCHI HIERRO/Hierro, Canary I. RS	
GCLA LA PALMA/La Palma, Canary I. RS	
CGRR LANZAROTE/Lanzarote, Canary I. RS	
GEML MELILLA/Melilla RS	
GCFV FUERTEVENTURA/ Fuerteventura, Canary I. RS	
GCXO TENERIFE NORTE/Los Rodeos, Canary I. RS	
GCTS TENERIFE SUR/Reina Sofia, Canary I. RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
SUDAN	
HSSJ JUBA/Juba RS	
HSKA KASSALA/Kassala AS	
HSSS KHARTOUM/Khartoum RS	
HSPN PORT SUDAN/Port Sudan Intl RS	
SWAZILAND	
FDMS MANZINI/Matsapha RS	
TOGO	
DXXX LOME/Tokoin RS	
DXNG NIAMTOUGOU/Niamtougou RS	
TUNISIA	
DTTJ DJERBA/Zarzis RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
DTMB MONASTIR/Habib Bourguiba RS	
DTTX SFAX/Thyna RS	
DTKA TABARKA/7 NOVEMBRE RS	
DTTZ TOZEUR/Nefta RS	
DTTA TUNIS/Carthage RS	
UGANDA	
HUEN ENTEBBE/Entebbe Intl RS	
UNITED REPUBLIC OF TANZANIA	
HTDA DAR-ES-SALAAM/Dar-Es-Salaam RS	
HTKJ KILIMANJARO/Kilimanjaro Intl RS	
HTZA ZANZIBAR/Zanzibar RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
WESTERN SAHARA	
GSAI EL AAIUN/El Aaiun RS	
GSMA SMARA/Smara RS	
GSVO VILLA CISNEROS/Villa Cisneros RS	
ZAMBIA	
FLLI LIVINGSTONE/Livingstone Intl RS	
FLLS LUSAKA/Lusaka Intl RS	
FLMF MFUWE/Mfuwe RS	
FLND NDOLA/Ndola RS	
ZIMBABWE	
FVBU BULAWAYO/Bulawayo RS	
FVHA HARARE/Harare RS	

AIS-4-A	FROM/DE
	AFI
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cap Verde, Central African Rep., Chad, Comoros, Congo, Côte d'Ivoire, Dem. Rep. of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ile de la Réunion (France), Kenya, Lesotho, Liberia, Libyan Arab Jamahirya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Spain, Sudan, Swaziland, Togo, Tunisia, Uganda, United Rep. of Tanzania, Western Sahara, Zimbabwe
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso	
FVFA VICTORIA FALLS/Victoria Falls RS	

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
ALGERIA																														
DAUA ADRAR/Touat RS																														
DAAG ALGER/Houari Boumediene RS																														
DABB ANNABA/El Mellah RS																														
DABC CONSTANTINE/Mohamed Boudiaf RS																														
DAUG GHARDAIA/Noumérate RS																														
DAUH HASSI-MESSAOUD/Oued Irara RS																														
DAOO ORAN/Es Sénia RS																														
DAAT TAMANRASSET/Aguennar AS																														
DABS TEBESSA/Tébessa RS																														
DAOB TIARET/Bou-Chekif RS																														
DAON TLEMCEN/Zénata RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
DAUZ ZARZAITINE/In Amenas RS																														
ANGOLA																														
FNHU HUAMBO/Albano Machado RS																														
FNLU LUANDA/4 de Fevereiro RS																														
BENIN																														
DBBB COTONOU/Cadjehoun RS																														
BOTSWANA																														
FBFT FRANCISTOWN/Francistown RS																														
FBSK GABORONE/Sir Seretse Khama Intl RS																														
FBKE KASANE/Kasane RS																														
FBMN MAUN/Maun RS																														
FBSP SELEBI-PHIKWE/Selebi-Phikwe RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
BURKINA FASO																														
DFOO BOBO-DIOULASSO/Bobo-Dioulasso RS																														
DFFD OUAGADOUGOU/Ouagadougou RS																														
BURUNDI																														
HBBA BUJUMBURA/Bujumbura RS																														
CAMEROON																														
FKKD DOUALA/Douala RS																														
FKKR GAROUA/Garoua RS																														
FKKL MAROUA/Salak RS																														
FKKN N'GAOUNDERE/ N'Gaoundere AS																														
FKYS YAOUNDE/Nsimalen RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
CAPE VERDE																														
GVFM PRAIA/Francisco Mendes RS																														
GVAC SAL I./Amilcar Cabral RS																														
CENTRAL AFRICAN REPUBLIC																														
FEFF BANGUI/M'Poko RS																														
FEFT BERBERATI/Berberati RS																														
CHAD																														
FTTJ N'DJAMENA/N'Djamena RS																														
COMOROS																														
FMCV ANJOUAN/Ouani RS																														
FMCZ DZAOUDZI/Pamanzi, Mayotte I. RS																														
FMCH MORONI/Hahaia RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
CONGO																														
FCBB BRAZZAVILLE/Maya-Maya RS																														
FCPP POINTE NOIRE/Agostino Neto RS																														
COTE D'IVOIRE																														
DIAP ABIDJAN/Felix Houphouet Boigny Intl RS																														
DIBK BOUAKE/Bouake RS																														
DEMOCRATIC REPUBLIC OF THE CONGO																														
FZNA GOMA/Goma RS																														
FZAA KINSHASA/N'Djili RS																														
FZIC KISANGANI/Bangoka AS																														
FZQA LUBUMBASHI/Luano AS																														
DJIBOUTI																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
HDAM DJIBOUTI/Ambouli RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
EGYPT																														
HEBL ABU-SIMBEL/Abu-Simbel RS																														
HEAX ALEXANDRIA/Alexandria RS																														
HESN ASWAN/Aswan RS																														
HECA CAIRO/Cairo Intl RS																														
HEGN HURGHADA/Hurghada RS																														
HELX LUXOR/Luxor RS																														
HEMM MERSA-MATRUH/ Mersa-Matruh RS																														
HESH SHARM EL SHEIKH/Sharm El Sheikh RS																														
HESC ST. CATHERINE/St. Catherine RS																														
HETB TABA/Taba RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
EQUATORIAL GUINEA																														
FGSL MALABO/Malabo RS																														
ERITREA																														
HHAS ASMARA/Asmara Intl RS																														
HHSB ASSAB/Assab RS																														
ETHIOPIA																														
HAAB ADDIS ABABA/Bole Intl RS																														
HADR DIRE DAWA/Dire Dawa Intl RS																														
FRANCE (Ile de la Réunion)																														
FMME SAINT-DENIS/Gillot La Reunion RS																														
GABON																														
FOON FRANCEVILLE/M'vengue RS																														
FOOL LIBREVILLE/Leon M'Ba RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
FOOG PORT GENTIL/Port Gentil RS																														
GAMBIA																														
GBYD BANJUL/Banjul Intl RS																														
GHANA																														
DGAA ACCRA/Kotoka Intl RS																														
DGSI KUMASI/Kumasi RS																														
DGLE TAMALE/Tamale RS																														
GUINEA																														
GUOK BOKE/Baralande RS																														
GUCY CONAKRY/Gbessia RS																														
GUFH FARANAH/Badala RS																														
GUXN KANKAN/Diankana RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
GULB LABE/Tata RS																														
GUNZ N'ZEREKORE/Konia RS																														
GUINEA-BISSAU																														
GGOV BISSAU/Osvaldo Vieira Intl RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
KENYA																														
HKEL ELDORET/Eldoret Intl RS																														
HKMO MOMBASA/Moi Intl RS																														
HKJK NAIROBI/Jomo Kenyatta Intl RS																														
LESOTHO																														
FXMM MASERU/Moshoeshoe I. Intl RS																														
LIBERIA																														
GLRB MONROVIA/Roberts Intl RS																														
LIBYAN ARAB JAMAHIRIYA																														
HLLB BENGHAZI/Benina RS																														
HLLS SEBHA/Sebha RS																														
HLLT TRIPOLI/Tripoli Intl RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
MADAGASCAR																														
FMMI ANTANANARIVO/Ivato RS																														
FMNA ANTSIRANANA/Arrachart RS																														
FMNM MAHAJANGA/ Amborovy RS																														
FMNN NOSY-BE/Fascene RS																														
FMMS SAINTE-MARIE/Sainte-Marie RS																														
FMMT TOAMASINA/Toamasina RS																														
FMSD TOLAGNARO/Tolagnaro RS																														
MALAWI																														
FWCL BLANTYRE/Chileka RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
FWLI LILONGWE/Lilongwe Intl RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
MALI																														
GABS BAMAKO/Senou RS																														
GAGO GAO/Gao RS																														
GAKY KAYES/Kayes RS																														
GAKL KIDAL/Kidal RS																														
GAMB MOPTI-BARBE/Mopti-Barbe RS																														
GANR NIORO/Nioro RS																														
GATB TOMBOUCTOU/Tombouctou RS																														
MAURITANIA																														
GQPA ATAR/Atar RS																														
GQNI NEMA/Nema RS																														
GQPP NOUADHIBOU/Nouadhibou RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
GQNN NOUAKCHOTT/Nouakchott RS																														
GQPZ ZOUERATE/Zouerate RS																														
MAURITIUS																														
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl RS																														
MOROCCO																														
GMAD AGADIR/Al Massira RS																														
GMTA AL HOCEIMA/Cherif Al Idrissi RS																														
GMMN CASABLANCA/Mohammed V RS																														
GMFK ERRACHIDIA/Moulay Ali Cherif AS																														
GMFF FES/Saïss RS																														
GMMX MARRAKECH/Ménara RS																														
GMMZ OUARZAZATE/ Ouarzazate RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
GMFO OUJDA/Angads RS																														
GMME RABAT/Salé RS																														
GMTT TANGER/Ibnou-Batouta RS																														
GMAT TAN-TAN/Plage Blanche RS																														
GMTN TETOUAN/Saniat-Rimel RS																														
MOZAMBIQUE																														
FQBR BEIRA/Beira RS																														
FQMA MAPUTO/Maputo Intl RS																														
NAMIBIA																														
FYKT KEETMANSHOOP/ Keetmanshop RS																														
FYWB WALVIS BAY/Walvis Bay RS																														
FYWH WINDHOEK/Windhoek RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
NIGER																														
DRZA AGADES/Sud RS																														
DRRN NIAMEY/Diori Hamani Intl RS																														
DRZR ZINDER/Zinder AS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
NIGERIA																														
DNAA ABUJA/Nnamdi Azikiwe RS																														
DNCA CALABAR/Calabar RS																														
DNIL ILORIN/Ilorin AS																														
DNKA KADUNA/Kaduna RS																														
DNKN KANO/Mallam Aminu Kano Intl RS																														
DNMM LAGOS/Murtala Muhammed RS																														
DNMA MAIDUGURI/Maiduguri RS																														
DNPO PORT HARCOURT/Port Harcourt Intl RS																														
DNSO SOKOTO/Abubakar Saddiq III Intl RS																														
RWANDA																														
HRYR KIGALI/Gregoire Kayibanda RS																														
SAO TOME & PRINCIPE																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
FPST SAO TOME/Sao Tomé RS																														
SENEGAL																														
GOGS CAP SKIRING/Cap Skiring RS																														
GOOY DAKAR/Leopold Sedar Senghor Intl RS																														
GOSS SAINT LOUIS/Saint Louis RS																														
GOTT TAMBACOUNDA/Tambacounda RS																														
GOGG ZIGUINCHOR/Ziguinchor RS																														
SEYCHELLES																														
FSIA MAHE/Seychelles Intl RS																														
SIERRA LEONE																														
GFLL FREETOWN/Lungi RS																														
SOMALIA																														
HCMI BERBERA/Berbera AS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
HCMV BURAO/Burao RS																														
HCMH HARGEISA/Hargeisa RS																														
HCMK KISIMAYU/Kisimayu AS																														
HCMM MOGADISHU/Mogadishu RS																														
SOUTH AFRICA																														
FAAB ALEXANDERBAY/Alexander Bay RS																														
FABL BLOEMFONTEIN/Bloemfontein AS																														
FACT CAPE TOWN/Cape Town RS																														
FADN DURBAN/Durban RS																														
FAJS JOHANNESBURG/ Johannesburg RS																														
FAGM JOHANNESBURG/Rand RS																														
FALA LANSERIA/Lanseria RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																													
FAUP UPINGTON/Upington RS																													

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
SPAIN																														
GCLP GRAN CANARIA/Gran Canaria, Canary I. RS																														
GCHI HIERRO/Hierro, Canary I. RS																														
GCLA LA PALMA/La Palma, Canary I. RS																														
CGRR LANZAROTE/Lanzarote, Canary I. RS																														
GEML MELILLA/Melilla RS																														
GCFV FUERTEVENTURA/ Fuerteventura, Canary I. RS																														
GCXO TENERIFE NORTE/Los Rodeos, Canary I. RS																														
GCTS TENERIFE SUR/Reina Sofia, Canary I. RS																														
SUDAN																														
HSSJ JUBA/Juba RS																														
HSKA KASSALA/Kassala AS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
HSSS KHARTOUM/Khartoum RS																														
HSPN PORT SUDAN/Port Sudan Intl RS																														
SWAZILAND																														
FDMS MANZINI/Matsapha RS																														
TOGO																														
DXXX LOME/Tokoin RS																														
DXNG NIAMTOUGOU/Niamtougou RS																														
TUNISIA																														
DTTJ DJERBA/Zarzis RS																														
DTMB MONASTIR/Habib Bourguiba RS																														
DTTX SFAX/Thyna RS																														
DTKA TABARKA/7 NOVEMBRE RS																														
DTTZ TOZEUR/Nefta RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
DTTA TUNIS/Carthage RS																														
UGANDA																														
HUEN ENTEBBE/Entebbe Intl RS																														
UNITED REPUBLIC OF TANZANIA																														
HTDA DAR-ES-SALAAM/Dar-Es-Salaam RS																														
HTKJ KILIMANJARO/Kilimanjaro Intl RS																														
HTZA ZANZIBAR/Zanzibar RS																														
WESTERN SAHARA																														
GSAI EL AAIUN/El Aaiun RS																														
GSMA SMARA/Smara RS																														
GSVO VILLA CISNEROS/Villa Cisneros RS																														
ZAMBIA																														
FLLI LIVINGSTONE/Livingstone Intl RS																														

AIS-4-B	FROM/DE																														
	EUR																														
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Luxembourg	Malta	Netherlands, Kingdom of the	Norway	Poland	Portugal	Romania	Russian Federation	Slovakia	Spain	Sweden	Switzerland	Turkey	Ukraine	United Kingdom	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																														
FLLS LUSAKA/Lusaka Intl RS																														
FLMF MFUWE/Mfuwe RS																														
FLND NDOLA/Ndola RS																														
ZIMBABWE																														
FVBU BULAWAYO/Bulawayo RS																														
FVHA HARARE/Harare RS																														
FVFA VICTORIA FALLS/Victoria Falls RS																														

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
ALGERIA																																						
DAUA ADRAR/Touat RS																																						
DAAG ALGER/Houari Boumediene RS																																						
DABB ANNABA/El Mellah RS																																						
DABC CONSTANTINE/Mohamed Boudiaf RS																																						
DAUG GHARDAIA/Noumérate RS																																						
DAUH HASSI-MESSAOUD/Oued Irara RS																																						
DAOO ORAN/Es Sénia RS																																						
DAAT TAMANRASSET/Aguennar AS																																						
DABS TEBESSA/Tébessa RS																																						
DAOB TIARET/Bou-Chekif RS																																						
DAON TLEMCEN/Zénata RS																																						

AIS-4-C	FROM/DE																																						
	ASIA														CAR					MID												NAM		SAM					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																							
DAUZ ZARZAITINE/In Amenas RS																																							
ANGOLA																																							
FNHU HUAMBO/Albano Machado RS																																							
FNLU LUANDA/4 de Fevereiro RS																																							
BENIN																																							
DBBB COTONOU/Cadjehoun RS																																							
BOTSWANA																																							
FBFT FRANCISTOWN/Francistown RS																																							
FBSK GABORONE/Sir Seretse Khama Intl RS																																							
FBKE KASANE/Kasane RS																																							
FBMN MAUN/Maun RS																																							
FBSP SELEBI-PHIKWE/Selebi-Phikwe RS																																							

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
BURKINA FASO																																						
DFOO BOBO-DIOULASSO/Bobo-Dioulasso RS																																						
DFFD OUAGADOUGOU/Ouagadougou RS																																						
BURUNDI																																						
HBBA BUJUMBURA/Bujumbura RS																																						
CAMEROON																																						
FKKD DOUALA/Douala RS																																						
FKKR GAROUA/Garoua RS																																						
FKKL MAROUA/Salak RS																																						
FKKN N'GAOUNDERE/ N'Gaoundere AS																																						
FKYS YAOUNDE/Nsimalen RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
CAPE VERDE																																						
GVFM PRAIA/Francisco Mendes RS																																						
GVAC SAL I./Amilcar Cabral RS																																						
CENTRAL AFRICAN REPUBLIC																																						
FEFF BANGUI/M'Poko RS																																						
FEFT BERBERATI/Berberati RS																																						
CHAD																																						
FTTJ N'DJAMENA/N'Djamena RS																																						
COMOROS																																						
FMCV ANJOUAN/Ouani RS																																						
FMCZ DZAOUDZI/Pamanzi, Mayotte I. RS																																						
FMCH MORONI/Hahaia RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
CONGO																																						
FCBB BRAZZAVILLE/Maya-Maya RS																																						
FCPP POINTE NOIRE/Agostino Neto RS																																						
COTE D'IVOIRE																																						
DIAP ABIDJAN/Felix Houphouet Boigny Intl RS																																						
DIBK BOUAKE/Bouake RS																																						
DEMOCRATIC REPUBLIC OF THE CONGO																																						
FZNA GOMA/Goma RS																																						
FZAA KINSHASA/N'Djili RS																																						
FZIC KISANGANI/Bangoka AS																																						
FZQA LUBUMBASHI/Luano AS																																						
DJIBOUTI																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
HDAM DJIBOUTI/Ambouli RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
EGYPT																																						
HEBL ABU-SIMBEL/Abu-Simbel RS																																						
HEAX ALEXANDRIA/Alexandria RS																																						
HESN ASWAN/Aswan RS																																						
HECA CAIRO/Cairo Intl RS																																						
HEGN HURGHADA/Hurghada RS																																						
HELX LUXOR/Luxor RS																																						
HEMM MERSA-MATRUH/ Mersa-Matruh RS																																						
HESH SHARM EL SHEIKH/Sharm El Sheikh RS																																						
HESC ST. CATHERINE/St. Catherine RS																																						
HETB TABA/Taba RS																																						
EQUATORIAL GUINEA																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
FGSL MALABO/Malabo RS																																						
ERITREA																																						
HHAS ASMARA/Asmara Intl RS																																						
HHSB ASSAB/Assab RS																																						
ETHIOPIA																																						
HAAB ADDIS ABABA/Bole Intl RS																																						
HADR DIRE DAWA/Dire Dawa Intl RS																																						
FRANCE (Ile de la Réunion)																																						
FMME SAINT-DENIS/Gillot La Reunion RS																																						
GABON																																						
FOON FRANCEVILLE/M'vengue RS																																						
FOOL LIBREVILLE/Leon M'Ba RS																																						
FOOG PORT GENTIL/Port Gentil RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
GAMBIA																																						
GBYD BANJUL/Banjul Intl RS																																						
GHANA																																						
DGAA ACCRA/Kotoka Intl RS																																						
DGSI KUMASI/Kumasi RS																																						
DGLE TAMALE/Tamale RS																																						
GUINEA																																						
GUOK BOKE/Baralande RS																																						
GUCY CONAKRY/Gbessia RS																																						
GUFH FARANAH/Badala RS																																						
GUXN KANKAN/Diankana RS																																						
GULB LABE/Tata RS																																						
GUNZ N'ZEREKORE/Konia RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
GUINEA-BISSAU																																						
GGOV BISSAU/Osvaldo Vieira Intl RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
KENYA																																						
HKEL ELDORET/Eldoret Intl RS																																						
HKMO MOMBASA/Moi Intl RS																																						
HKJK NAIROBI/Jomo Kenyatta Intl RS																																						
LESOTHO																																						
FXMM MASERU/Moshoeshoe I. Intl RS																																						
LIBERIA																																						
GLRB MONROVIA/Roberts Intl RS																																						
LIBYAN ARAB JAMAHIRIYA																																						
HLLB BENGHAZI/Benina RS																																						
HLLS SEBHA/Sebha RS																																						
HLLT TRIPOLI/Tripoli Intl RS																																						

AIS-4-C	FROM/DE																																				
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
MADAGASCAR																																						
FMMI ANTANANARIVO/Ivato RS																																						
FMNA ANTSIRANANA/Arrachart RS																																						
FMNM MAHAJANGA/ Amborovy RS																																						
FMNN NOSY-BE/Fascene RS																																						
FMMS SAINTE-MARIE/Sainte-Marie RS																																						
FMMT TOAMASINA/Toamasina RS																																						
FMSD TOLAGNARO/Tolagnaro RS																																						
MALAWI																																						
FWCL BLANTYRE/Chileka RS																																						
FWLI LILONGWE/Lilongwe Intl RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID													NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
MALI																																						
GABS BAMAKO/Senou RS																																						
GAGO GAO/Gao RS																																						
GAKY KAYES/Kayes RS																																						
GAKL KIDAL/Kidal RS																																						
GAMB MOPTI-BARBE/Mopti-Barbe RS																																						
GANR NIORO/Nioro RS																																						
GATB TOMBOUCTOU/Tombouctou RS																																						
MAURITANIA																																						
GQPA ATAR/Atar RS																																						
GQNI NEMA/Nema RS																																						
GQPP NOUADHIBOU/Nouadhibou RS																																						
GQNN NOUAKCHOTT/Nouakchott RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
GQPZ ZOUERATE/Zouerate RS																																						
MAURITIUS																																						
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl RS																																						
MOROCCO																																						
GMAD AGADIR/Al Massira RS																																						
GMTA AL HOCEIMA/Cherif Al Idrissi RS																																						
GMMN CASABLANCA/Mohammed V RS																																						
GMFK ERRACHIDIA/Moulay Ali Cherif AS																																						
GMFF FES/Saïss RS																																						
GMMX MARRAKECH/Ménara RS																																						
GMMZ OUARZAZATE/ Ouarzazate RS																																						
GMFO OUJDA/Angads RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
GMME RABAT/Salé RS																																						
GMTT TANGER/Ibnou-Batouta RS																																						
GMAT TAN-TAN/Plage Blanche RS																																						
GMTN TETOUAN/Saniat-Rimel RS																																						
MOZAMBIQUE																																						
FQBR BEIRA/Beira RS																																						
FQMA MAPUTO/Maputo Intl RS																																						
NAMIBIA																																						
FYKT KEETMANSHOOP/ Keetmanshop RS																																						
FYWB WALVIS BAY/Walvis Bay RS																																						
FYWH WINDHOEK/Windhoek RS																																						
NIGER																																						
DRZA AGADES/Sud RS																																						

AIS-4-C	FROM/DE																																												
	ASIA														CAR					MID																NAM		SAM								
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela							
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																													
DRRN NIAMEY/Diori Hamani Intl RS																																													
DRZR ZINDER/Zinder AS																																													

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
NIGERIA																																						
DNAA ABUJA/Nnamdi Azikiwe RS																																						
DNCA CALABAR/Calabar RS																																						
DNIL ILORIN/Ilorin AS																																						
DNKA KADUNA/Kaduna RS																																						
DNKN KANO/Mallam Aminu Kano Intl RS																																						
DNMM LAGOS/Murtala Muhammed RS																																						
DNMA MAIDUGURI/Maiduguri RS																																						
DNPO PORT HARCOURT/Port Harcourt Intl RS																																						
DNSO SOKOTO/Abubakar Saddiq III Intl RS																																						
RWANDA																																						
HRYR KIGALI/Gregoire Kayibanda RS																																						
SAO TOME & PRINCIPE																																						

AIS-4-C	FROM/DE																																												
	ASIA														CAR					MID																NAM		SAM							
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela							
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																													
FPST SAO TOME/Sao Tomé RS																																													
SENEGAL																																													
GOGS CAP SKIRING/Cap Skiring RS																																													
GOOY DAKAR/Leopold Sedar Senghor Intl RS																																													
GOSS SAINT LOUIS/Saint Louis RS																																													
GOTT TAMBACOUNDA/Tambacounda RS																																													
GOGG ZIGUINCHOR/Ziguinchor RS																																													
SEYCHELLES																																													
FSIA MAHE/Seychelles Intl RS																																													
SIERRA LEONE																																													
GFLL FREETOWN/Lungi RS																																													
SOMALIA																																													
HCMI BERBERA/Berbera AS																																													

AIS-4-C	FROM/DE																																				
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
HCMV BURAO/Burao RS																																						
HCMH HARGEISA/Hargeisa RS																																						
HCMK KISIMAYU/Kisimayu AS																																						
HCMM MOGADISHU/Mogadishu RS																																						
SOUTH AFRICA																																						
FAAB ALEXANDERBAY/Alexander Bay RS																																						
FABL BLOEMFONTEIN/Bloemfontein AS																																						
FACT CAPE TOWN/Cape Town RS																																						
FADN DURBAN/Durban RS																																						
FAJS JOHANNESBURG/ Johannesburg RS																																						
FAGM JOHANNESBURG/Rand RS																																						
FALA LANSERIA/Lanseria RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
FAUP UPINGTON/Upington RS																																						

AIS-4-C		FROM/DE																																			
		ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN		Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. Ind. Lugar	City/Aerodrome/Use Ciudad/Aeródromo/Uso																																						
SPAIN																																							
GCLP	GRAN CANARIA/Gran Canaria, Canary I. RS																																						
GCHI	HIERRO/Hierro, Canary I. RS																																						
GCLA	LA PALMA/La Palma, Canary I. RS																																						
CGRR	LANZAROTE/Lanzarote, Canary I. RS																																						
GEML	MELILLA/Melilla RS																																						
GCFV	FUERTEVENTURA/ Fuerteventura, Canary I. RS																																						
GCXO	TENERIFE NORTE/Los Rodeos, Canary I. RS																																						
GCTS	TENERIFE SUR/Reina Sofia, Canary I. RS																																						
SUDAN																																							
HSSJ	JUBA/Juba RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
HSKA KASSALA/Kassala AS																																						
HSSS KHARTOUM/Khartoum RS																																						
HSPN PORT SUDAN/Port Sudan Intl RS																																						
SWAZILAND																																						
FDMS MANZINI/Matsapha RS																																						
TOGO																																						
DXXX LOME/Tokoin RS																																						
DXNG NIAMTOUGOU/Niamtougou RS																																						
TUNISIA																																						
DTTJ DJERBA/Zarzis RS																																						
DTMB MONASTIR/Habib Bourguiba RS																																						
DTTX SFAX/Thyna RS																																						
DTKA TABARKA/7 NOVEMBRE RS																																						

AIS-4-C	FROM/DE																																					
	ASIA														CAR					MID												NAM		SAM				
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																						
DTTZ TOZEUR/Nefta RS																																						
DTTA TUNIS/Carthage RS																																						
UGANDA																																						
HUEN ENTEBBE/Entebbe Intl RS																																						
UNITED REPUBLIC OF TANZANIA																																						
HTDA DAR-ES-SALAAM/Dar-Es-Salaam RS																																						
HTKJ KILIMANJARO/Kilimanjaro Intl RS																																						
HTZA ZANZIBAR/Zanzibar RS																																						
WESTERN SAHARA																																						
GSAI EL AAIUN/El Aaiun RS																																						
GSMA SMARA/Smara RS																																						
GSVO VILLA CISNEROS/Villa Cisneros RS																																						
ZAMBIA																																						

AIS-4-C	FROM/DE																																						
	ASIA														CAR					MID												NAM		SAM					
TO BE AVAILABLE IN ESTARÁN DISPONIBLES EN	Australia	Bangladesh	China	India	Indonesia	Malaria	Maldives	Myanmar	Pakistan	Philippines	Singapore	Sri Lanka	Thailand	Viet Nam	Bahamas	Cuba	Haiti	Jamaica	Puerto Rico (USA)	Bahrain	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syrian Arab Rep.	United Arab Emirates	Yemen	United States		Argentina	Brazil	French Guyana (France)	Uruguay	Venezuela	
Loc. Ind. City/Aerodrome/Use Ind. Lugar Ciudad/Aeródromo/Uso																																							
FLLI LIVINGSTONE/Livingstone Intl RS																																							
FLLS LUSAKA/Lusaka Intl RS																																							
FLMF MFUWE/Mfuwe RS																																							
FLND NDOLA/Ndola RS																																							
ZIMBABWE																																							
FVBU BULAWAYO/Bulawayo RS																																							
FVHA HARARE/Harare RS																																							
FVFA VICTORIA FALLS/Victoria Falls RS																																							

FASID TABLE AIS-5 — WGS-84 REQUIREMENTS

EXPLANATION OF THE TABLE

Column

1 Name of the State, territory or aerodrome for which WGS-84 coordinates are required with the designation of the aerodrome use:

RS — international scheduled air transport, regular use
RNS — international non-scheduled air transport, regular use
RG — international general aviation, regular use
AS — international scheduled air transport, alternate use

2 Runway designation numbers

3 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume 1, Chapter I, are:

NINST — non-instrument runway;
NPA — non-precision approach runway
PA1 — precision approach runway, Category I;
PA2 — precision approach runway, Category II;
PA3 — precision approach runway, Category III.

4 Requirement for the WGS-84 coordinates for FIR, shown by an “X” against the State or territory to be covered.

5 Requirement for the WGS-84 coordinates for Enroute points, shown by an “X” against the State or territory to be covered.

6 Requirement for the WGS-84 coordinates for the Terminal Area, shown by an “X” against the aerodrome to be covered.

7 Requirement for the WGS-84 coordinates for the Approach points, shown by an “X” against the runway designation to be covered.

8 Requirement for the WGS-84 coordinates for runways, shown by an “X” against the runway designation to be covered.

9 Requirement for the WGS-84 coordinates for Aerodrome/Heliport points (e.g. aerodrome/heliport reference point, taxiway, parking position, etc.), shown by an “X” against the aerodrome to be covered.

10 Requirement for geoid undulation shown by an “X” against the runway threshold to be covered.

11 Requirement for the WGS-84 Quality System, shown by an “X” against the State or territory to be covered.

12 Requirement for publication of WGS-84 coordinates in the AIP shown by an X against the State or territory to be covered.

13 Remarks (timetable for implementation).

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
ALGERIA			X	X						X	X	
DAUA ADRAR/Touat	04	NPA			X	X	X	X	X			
RS	22	NINST										
DAAG ALGER/Houari Boumediene	05	NPA			X	X	X	X	X			
RS	23	PA2				X	X		X			
	09											
	27											
DABB ANNABA/El Mellah	01	NPA			X	X	X	X	X			
RS	19	PA1				X	X		X			
	05	NPA				X	X		X			
	23	NINST										
DABC CONSTANTINE/Mohamed Boudiaf	14	NPA			X	X	X	X	X			
RS	32	PA1				X	X		X			
	16	NPA				X	X		X			
	94	PA1				X	X		X			
DAUG GHARDAIA/Noumérate	13	NPA			X	X	X	X				
RS	31	PA1				X	X					
	01											
	19											
DAUH HASSI-MESSAOUD/Oued Irara	01	PA1			X	X	X	X	X			
RS	19	NPA				X	X		X			
DAOO ORAN/Es Sénia	07	NPA			X	X	X	X	X			
RS	25	PA2				X	X		X			
DAAT TAMANRASSET/Aguennar	03	PA1			X	X	X	X	X			
AS	21	NPA				X	X		X			
	09											
	27											
DABS TEBESSA/Tébessa	11	NPA			X	X	X	X	X			
RS	29	NPA				X	X		X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
DAOB TIARET/Bou-Chekif RS	09 27	NPA NINST			X	X X	X X	X	X X			
DAON TLEMCEN/Zénata RS	07 25	NPA NPA			X	X X	X X	X	X X			
DAUZ ZARZAITINE/In Amenas RS	05 23 15 33	NPA NPA			X	X X	X X	X	X X			
ANGOLA			X	X						X	X	
FNHU HUAMBO/Albano Machado RS	11 29	NPA NPA			X	X X	X X	X	X X			
FNLU LUANDA/4 de Fevereiro RS	05 23 07 25	NPA PA1			X	X X	X X	X	X X			
BENIN			X	X						X	X	
DBBB COTONOU/Cadjehoun RS	06 24	NPA PA1			X	X X	X X	X	X X			
BOTSWANA			X	X						X	X	
FBFT FRANCISTOWN/Francistown RS	11 29 16 34	NINST NINST			X			X				
FBSK GABORONE/Sir Seretse Khama Intl RS	08 26	PA1 NPA			X	X X	X X	X	X X			
FBKE KASANE/Kasane RS	08 26	NPA NINST			X	X	X	X	X			
FBMN MAUN/Maun RS	08 26	NINST NINST			X			X				
FBSP SELEBI-PHIKWE/Selebi-Phikwe RS	12 30	NPA NINST			X	X	X	X	X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
BURKINA FASO			X	X						X	X	
DFOO BOBO-DIOULASSO/Bobo-Dioulasso RS	06 24	PA1 NPA			X	X X	X X	X	X X			
DFFD OUAGADOUGOU/ Ouagadougou RS	04L 22R	PA1 NPA			X	X X	X X	X	X X			
BURUNDI			X	X						X	X	
HBBA BUJUMBURA/Bujumbura RS	18 36	PA1 NPA			X	X X	X X	X	X X			
CAMEROON			X	X						X	X	
FKKD DOUALA/Douala RS	12 30	NPA PA2			X	X X	X X	X	X X			
FKKR GAROUA/Garoua RS	09 27	PA1 NPA			X	X X	X X	X	X X			
FKKL MAROUA/Salak RS	13 31	NPA NINST			X	X	X	X	X			
FKKN N'GAOUNDERE/ N'Gaoundere AS	03 21	NPA NINST			X	X	X	X	X			
FKYS YAOUNDE/Nsimalen RS	01 19	NINST PA2			X	X	X	X	X			
CAPE VERDE			X	X						X	X	
GVFM PRAIA/Francisco Mendes RS	04 22	NPA NINST			X	X	X	X	X			
GVAC SAL I./Amilcar Cabral RS	01 19 07 25	PA1 NPA			X	X X	X X	X	X X			
CENTRAL AFRICAN REPUBLIC			X	X						X	X	

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
FEFF BANGUI/M'Poko RS	17 35	NPA PA1			X	X X	X X	X	X X			
FEFT BERBERATI/Berberati RS	17 35	NPA NINST			X	X	X	X	X			
CHAD			X	X						X	X	
FTTJ N'DJAMENA/N'Djamena RS	05 23	PA1 NPA			X	X X	X X	X	X X			
COMOROS			X	X						X	X	
FMCV ANJOUAN/Ouani RS	10 28	NPA NPA			X	X X	X X	X	X X			
FMCZ DZAOUDZI/Pamanzi, Mayotte I. RS	16 34	NINST NPA			X	X	X	X	X			
FMCH MORONI/Hahaia RS	02 20	PA1 NPA			X	X X	X X	X	X X			
CONGO			X	X						X	X	
FCBB BRAZZAVILLE/Maya-Maya RS	06 24	PA1 NPA			X	X X	X X	X	X X			
FCPP POINTE NOIRE/Agostino Neto RS	17 35	NPA NPA			X	X X	X X	X	X X			
COTE D'IVOIRE			X	X						X	X	
DIAP ABIDJAN/Felix Houphouet Boigny Intl RS	03 21	NPA PA2			X	X X	X X	X	X X			
DIBK BOUAKE/Bouake RS	03 21	NPA PA1			X	X X	X X	X	X X			
DEMOCRATIC REPUBLIC OF THE CONGO			X	X						X	X	
FZNA GOMA/Goma RS	18 36	NINST NPA			X	X	X	X	X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
FZAA KINSHASA/N'Djili	07	NPA			X	X	X	X	X			
RS	25	PA1				X	X		X			
FZIC KISANGANI/Bangoka	13	NPA			X	X	X	X	X			
AS	31	NPA				X	X		X			
FZQA LUBUMBASHI/Luano	08	PA1			X	X	X	X	X			
AS	26	NPA				X	X		X			
DJIBOUTI			X	X						X	X	
HDAM DJIBOUTI/Ambouli	09	NPA			X	X	X	X	X			
RS	27	PA1				X	X		X			
EGYPT			X	X						X	X	
HEBL ABU-SIMBEL/Abu-Simbel	15L	NPA			X	X	X	X	X			
RS	33R	NPA				X	X		X			
	15R	NPA				X	X		X			
	33L	NPA				X	X		X			
HEAX ALEXANDRIA/Alexandria	04	NPA			X	X	X	X	X			
RS	22	NPA				X	X		X			
	18	NPA				X	X		X			
	36	NPA				X	X		X			
HESN ASWAN/Aswan	17	NPA			X	X	X	X	X			
RS	35	PA1				X	X		X			
HECA CAIRO/Cairo Intl	05L	PA2			X	X	X	X	X			
RS	23R	PA2				X	X		X			
	05R	PA2				X	X		X			
	23L	PA2				X	X		X			
	16	NPA				X	X		X			
	34	NPA				X	X		X			
HEGN HURGHADA/Hurghada	16	NPA			X	X	X	X	X			
RS	34	PA1				X	X		X			
HELX LUXOR/Luxor	02	NPA			X	X	X	X	X			
RS	20	PA1				X	X		X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
HEMM MERSA-MATRUH/ Mersa-Matruh RS	15 33	NPA NPA			X	X X	X X	X	X X			
HESH SHARM EL SHEIKH/Sharm El Sheikh RS	04L 22R 04R 22L	PA1 NINST			X	X	X	X	X			
HESC ST. CATHERINE/St. Catherine RS	17 35	NPA NINST			X	X	X	X	X			
HETB TABA/Taba RS	04 22 14 32	NINST NPA			X	X	X	X	X			
EQUATORIAL GUINEA			X	X						X	X	
FGSL MALABO/Malabo RS	05 23	PA1 NPA			X	X X	X X	X	X X			
ERITREA			X	X						X	X	
HHAS ASMARA/Asmara Intl RS	07 25 12 30	PA1 NPA			X	X X	X X	X	X X			
HHSB ASSAB/Assab RS	12 30	NPA NINST			X	X	X	X	X			
ETHIOPIA			X	X						X	X	
HAAB ADDIS ABABA/Bole Intl RS	07 25	NPA PA1			X	X X	X X	X	X X			
HADR DIRE DAWA/Dire Dawa Intl RS	15 33	NINST NPA			X	X	X	X	X			
FRANCE (Ile de la Réunion)			X	X						X	X	
FMME SAINT-DENIS/Gillot La Reunion RS	12 30 14 32	NINST NPA PA1 NINST			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GABON			X	X						X	X	
FOON FRANCEVILLE/M'vengue	15	PA1			X	X	X	X	X			
RS	33	NPA				X	X		X			
FOOL LIBREVILLE/Leon M'Ba	16	PA1			X	X	X	X	X			
RS	34	NPA				X	X		X			
FOOG PORT GENTIL/Port Gentil	03	NPA			X	X	X	X	X			
RS	21	PA1				X	X		X			
GAMBIA			X	X						X	X	
GBYD BANJUL/Banjul Intl	14	NPA			X	X	X	X	X			
RS	32	PA1				X	X		X			
GHANA			X	X						X	X	
DGAA ACCRA/Kotoka Intl	03	NPA			X	X	X	X	X			
RS	21	PA1				X	X		X			
DGSI KUMASI/Kumasi	02	NPA			X	X	X	X	X			
RS	20	NPA				X	X		X			
DGLE TAMALE/Tamale	05	NPA			X	X	X	X	X			
RS	23	NPA				X	X		X			
GUINEA			X	X						X	X	
GUOK BOKE/Baralande	02	NINST						X				
RS	20	NINST										
GUCY CONAKRY/Gbessia	06	PA1			X	X	X	X	X			
RS	24	NPA				X	X		X			
GUFH FARANAH/Badala	09	NPA			X	X	X	X	X			
RS	27	NINST										
GUXN KANKAN/Diankana	10	NPA			X	X	X	X	X			
RS	28	NINST										
GULB LABE/Tata	06	NINST						X				
RS	24	NINST										
GUNZ N'ZEREKORE/Konia	18	NPA			X	X	X	X	X			
RS	36	NINST										

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GUINEA-BISSAU			X	X						X	X	
GGOV BISSAU/Osvaldo Vieira Intl RS	03 21	NPA PA1			X	X X	X X	X	X X			
KENYA			X	X						X	X	
HKEL ELDORET/Eldoret Intl RS	08 26	PA2 NPA			X	X X	X X	X	X X			
HKMO MOMBASA/Moi Intl RS	03 21 15 33	NPA PA1			X	X X	X X	X	X X			
HKJK NAIROBI/Jomo Kenyatta Intl RS	06 24	PA2 NPA			X	X X	X X	X	X X			
LESOTHO			X	X						X	X	
FXMM MASERU/Moshoeshoe I. Intl RS	04 22 11 29	NINST PA1			X	X	X	X	X			
LIBERIA			X	X						X	X	
GLRB MONROVIA/Roberts Intl RS	04 22	PA2 NPA			X	X X	X X	X	X X			
LIBYAN ARAB JAMAHIRIYA			X	X						X	X	
HLLB BENGHAZI/Benina RS	15L 33R 15R 33L	PA1 NPA NPA PA1			X	X X X X	X X X X	X	X X X X			
HLLS SEBHA/Sebha RS	13 31 06 24	PA1 NPA			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
HLLT TRIPOLI/Tripoli Intl	09	PA1			X	X	X	X	X			
RS	27	PA2				X	X		X			
	18											
	36											
MADAGASCAR			X	X						X	X	
FMMI ANTANANARIVO/Ivato	11	PA1			X	X	X	X	X			
RS	29	NPA				X	X		X			
FMNA ANTSIRANANA/Arrachart	13	NPA			X	X	X	X	X			
RS	31	NINST										
FMNM MAHAJANGA/ Amborovy	14	NPA			X	X	X	X	X			
RS	32	NINST										
FMNN NOSY-BE/Fascene	05	NPA			X	X	X	X	X			
RS	23	PA1				X	X		X			
FMMS SAINTE-MARIE/Sainte-Marie	01	NPA			X	X	X	X	X			
RS	19	NPA				X	X		X			
FMMT TOAMASINA/Toamasina	01	NPA			X	X	X	X	X			
RS	19	PA1				X	X		X			
FMSD TOLAGNARO/Tolagnaro	07	NPA			X	X	X	X	X			
RS	25	NPA				X	X		X			
MALAWI			X	X						X	X	
FWCL BLANTYRE/Chileka	10	NPA			X	X	X	X	X			
RS	28	NPA				X	X		X			
FWLI LILONGWE/Lilongwe Intl	14	PA1			X	X	X	X	X			
RS	32	NPA				X	X		X			
MALI			X	X						X	X	
GABS BAMAKO/Senou	06	PA1			X	X	X	X	X			
RS	24	NPA				X	X		X			
GAGO GAO/Gao	07	NPA			X	X	X	X	X			
RS	25	NINST										

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GAKY KAYES/Kayes RS	08 26	NPA NINST			X	X	X	X	X			
GAKL KIDAL/Kidal RS	10 28	NPA NINST			X	X	X	X	X			
GAMB MOPTI-BARBE/Mopti-Barbe RS	05 23	NPA NINST			X	X	X	X	X			
GANR NIORO/Nioro RS	08 26	NPA NINST			X	X	X	X	X			
GATB TOMBOUCTOU/Tombouctou RS	07 25	PA1 NPA			X	X X	X X	X	X X			
MAURITANIA			X	X						X	X	
GQPA ATAR/Atar RS	04 22	NPA NINST			X	X	X	X	X			
GQNI NEMA/Nema RS	10 28	NINST NPA			X	X	X	X	X			
GQPP NOUADHIBOU/Nouadhibou RS	03 21	PA1 NPA			X	X X	X X	X	X X			
GQNN NOUAKCHOTT/Nouakchott RS	05 23	PA1 NPA			X	X X	X X	X	X X			
GQPZ ZOUERATE/Zouerate RS	28 10	NPA NPA			X	X X	X X	X	X X			
MAURITIUS			X	X						X	X	
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl RS	14 32	PA1 NPA			X	X X	X X	X	X X			
MOROCCO			X	X						X	X	
GMAD AGADIR/Al Massira RS	10 28	NPA PA1			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GMTA AL HOCEIMA/Cherif Al Idrissi RS	18 36	PA1 NINST			X	X	X	X	X			
GMMN CASABLANCA/ Mohammed V RS	17 35	NPA PA2			X	X X	X X	X	X X			
GMFK ERRACHIDIA/Moulay Ali Cherif AS	13 31	NPA PA1			X	X X	X X	X	X X			
GMFF FES/Saïss RS	10 28	NPA PA1			X	X X	X X	X	X X			
GMMX MARRAKECH/Ménara RS	10 28	PA1 NPA			X	X X	X X	X	X X			
GMMZ OUARZAZATE/ Ouarzazate RS	12 30	NPA PA1			X	X X	X X	X	X X			
GMFO OUJDA/Angads RS	06 24	PA1 NINST			X	X	X	X	X			
GMME RABAT/Salé RS	04 22	PA1 NPA			X	X X	X X	X	X X			
GMTT TANGER/Ibnou-Batouta RS	10 28	NPA PA1			X	X X	X X	X	X X			
GMAT TAN-TAN/Plage Blanche RS	14 22	NPA NINST			X	X	X	X	X			
GMTN TETOUAN/Saniat-Rimel RS	06 24	NPA NINST			X	X	X	X	X			
MOZAMBIQUE			X	X						X	X	
FQBR BEIRA/Beira RS	12 30 06 24	PA1 NPA			X	X X	X X	X	X X			
FQMA MAPUTO/Maputo Intl RS	05 23	NPA PA1			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
NAMIBIA			X	X						X	X	
FYKT KEETMANSHOOP/ Keetmanshop RS	04 22 18 36	NPA NPA			X	X X	X X	X	X X			
FYWB WALVIS BAY/Walvis Bay RS	09 27 12 30	NPA NPA			X	X X	X X	X	X X			
FYWH WINDHOEK/Windhoek RS	08 26 16 34	PA1 NPA			X	X X	X X	X	X X			
NIGER			X	X						X	X	
DRZA AGADES/Sud RS	07 25	NPA NINST			X	X	X	X	X			
DRRN NIAMEY/Diori Hamani Intl RS	09R 27L 09L 27R	PA1 NPA			X	X X	X X	X	X X			
DRZR ZINDER/Zinder AS	06 24	NPA NINST			X	X	X	X	X			
NIGERIA			X	X						X	X	
DNAA ABUJA/Nnamdi Azikiwe RS	04 22	NPA PA1			X	X X	X X	X	X X			
DNCA CALABAR/Calabar RS	03 21	NPA PA1			X	X X	X X	X	X X			
DNIL ILORIN/Ilorin AS	05 23	PA1 NPA			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
DNKA KADUNA/Kaduna RS	05 23	PA1 NPA			X	X X	X X	X	X X			
DNKN KANO/Mallam Aminu Kano Intl RS	06 24 05 23	PA2 PA2			X	X X	X X	X	X X			
DNMM LAGOS/Murtala Muhammed RS	01L 19R 01R 19L	PA2 PA2 NPA PA2			X	X X X X	X X X X	X	X X X X			
DNMA MAIDUGURI/Maiduguri RS	05 23	PA2 NPA			X	X X	X X	X	X X			
DNPO PORT HARCOURT/Port Harcourt Intl RS	03 21	NPA PA1			X	X X	X X	X	X X			
DNSO SOKOTO/Abubakar Saddiq III Intl RS	08 26	PA1 NPA			X	X X	X X	X	X X			
RWANDA			X	X						X	X	
HRYR KIGALI/Gregoire Kayibanda RS	10 28	NPA PA1			X	X X	X X	X	X X			
SAO TOME & PRINCIPE			X	X						X	X	
FPST SAO TOME/Sao Tomé RS	11 29	PA1 NPA			X	X X	X X	X	X X			
SENEGAL			X	X						X	X	
GOGS CAP SKIRING/Cap Skiring RS	15 33	NINST NPA			X	X	X	X	X			
GOOY DAKAR/Leopold Sedar Senghor Intl RS	18 36 03 21	PA2 NPA			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GOSS SAINT LOUIS/Saint Louis RS	18 36	NPA NINST			X	X	X	X	X			
GOTT TAMBACOUNDA/ Tambacounda RS	06 24	NPA NPA			X	X X	X X	X	X X			
GOGG ZIGUINCHOR/Ziguinchor RS	10 28	NINST NPA			X	X	X	X	X			
SEYCHELLES			X	X						X	X	
FSIA MAHE/Seychelles Intl RS	13 31	NPA PA1			X	X X	X X	X	X X			
SIERRA LEONE			X	X						X	X	
GFLL FREETOWN/Lungi RS	12 30	NPA PA1			X	X X	X X	X	X X			
SOMALIA			X	X						X	X	
HCMI BERBERA/Berbera AS	05 23	NINST NINST						X				
HCMV BURAO/Burao RS	13 31	NINST NINST						X				
HCMH HARGEISA/Hargeisa RS	06 24	NPA NPA			X	X X	X X	X	X X			
HCMK KISIMAYU/Kisimayu AS	05 23	NPA PA1			X	X X	X X	X	X X			
HCMM MOGADISHU/Mogadishu RS	05 23	NPA PA1			X	X X	X X	X	X X			
SOUTH AFRICA			X	X						X	X	
FAAB ALEXANDERBAY/ Alexander Bay RS	01 19 07 25 11 29	NPA NINST			X	X	X	X	X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
FABL BLOEMFONTEIN/ Bloemfontein AS	02 20 12 30	PA1 NPA NINST NINST			X	X X	X X	X	X X			
FACT CAPE TOWN/Cape Town RS	01 19 16 34	PA1 NPA			X	X X	X X	X	X X			
FADN DURBAN/Durban RS	05 23	NPA PA1			X	X X	X X	X	X X			
FAJS JOHANNESBURG/ Johannesburg RS	03L 21R 03R 21L 15 33	PA2 INST PA2 PA2 NINST NINST			X	X X X	X X X	X	X X X			
FAGM JOHANNESBURG/Rand RS	18 36	NPA NPA			X	X X	X X	X	X X			
FALA LANSERIA/Lanseria RS	06L 24R 06R 24L 17 35	NPA NINST			X	X	X	X	X			
FAUP UPINGTON/Upington RS	01 19 08 26	NPA NPA			X	X X	X X	X	X X			
SPAIN			X	X						X	X	
GCLP GRAN CANARIA/Gran Canaria, Canary I. RS	03L 21R 03R 21L	PA1 NPA NINST NINST			X	X X	X X	X	X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
GCHI HIERRO/Hierro, Canary I. RS	16 34	NPA NINST			X	X	X	X	X			
GCLA LA PALMA/La Palma, Canary I. RS	01 19	NPA NINST			X	X	X	X	X			
CGRR LANZAROTE/Lanzarote, Canary I. RS	04 22	NPA NPA			X	X X	X X	X	X X			
GEML MELILLA/Melilla RS	15 33	NPA NINST			X	X	X	X	X			
GCFV FUERTEVENTURA/ Fuerteventura, Canary I. RS	01 19	PA1 NPA			X	X X	X X	X	X X			
GCXO TENERIFE NORTE/Los Rodeos, Canary I. RS	12 30	NPA NPA			X	X X	X X	X	X X			
GCTS TENERIFE SUR/Reina Sofia, Canary I. RS	08 26	PA1 NPA			X	X X	X X	X	X X			
SUDAN			X	X						X	X	
HSSJ JUBA/Juba RS	13 31	PA1 NINST			X	X	X	X	X			
HSKA KASSALA/Kassala AS	02 20	NINST NINST						X				
HSSS KHARTOUM/Khartoum RS	18 36	PA1 NPA			X	X X	X X	X	X X			
HSPN PORT SUDAN/Port Sudan Intl RS	18 36	NPA PA1			X	X X	X X	X	X X			
SWAZILAND			X	X						X	X	
FDMS MANZINI/Matsapha RS	07 25	NINST NINST						X				
TOGO			X	X						X	X	

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
DXXX LOME/Tokoin	05	NPA			X	X	X	X	X			
RS	23	PA1				X	X		X			
DXNG NIAMTOUGOU/Niamtougou	03	PA1			X	X	X	X	X			
RS	21	NPA				X	X		X			
TUNISIA			X	X						X	X	
DTTJ DJERBA/Zarzis	09	PA1			X	X	X	X	X			
RS	27	NPA				X	X		X			
DTMB MONASTIR/Habib Bourguiba	08	PA1			X	X	X	X	X			
RS	26	NPA				X	X		X			
DTTX SFAX/Thyna	15	NPA			X	X	X	X	X			
RS	33	NPA				X	X		X			
DTKA TABARKA/7 NOVEMBRE	09	NPA			X	X	X	X	X			
RS	27	PA1				X	X		X			
DTTZ TOZEUR/Nefta	09	PA1			X	X	X	X	X			
RS	27	NPA				X	X		X			
DTTA TUNIS/Carthage	01	NPA			X	X	X	X	X			
RS	19	PA1				X	X		X			
	11	NINST				X	X		X			
	29	NPA										
UGANDA			X	X						X	X	
HUEN ENTEBBE/Entebbe Intl	17	PA1			X	X	X	X	X			
RS	35	NPA				X	X		X			
UNITED REPUBLIC OF TANZANIA			X	X						X	X	
HTDA DAR-ES-SALAAM/Dar-Es-Salaam	05	PA1			X	X	X	X	X			
RS	23	NPA				X	X		X			
HTKJ KILIMANJARO/Kilimanjaro Intl	09	PA1			X	X	X	X	X			
RS	27	NPA				X	X		X			
HTZA ZANZIBAR/Zanzibar	18	NINST			X	X	X	X	X			
RS	36	NPA										

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
WESTERN SAHARA			X	X						X	X	
GSAI EL AAIUN/El Aaiun RS	04 22	NPA PA1			X	X X	X X	X	X X			
GSMA SMARA/Smara RS	17 35	NINST NINST						X				
GSVO VILLA CISNEROS/Villa Cisneros RS	04 22	NINST NPA			X	X	X	X	X			
ZAMBIA			X	X						X	X	
FLLI LIVINGSTONE/Livingstone Intl RS	11 29 15 33	PA1 NPA			X	X X	X X	X	X X			
FLLS LUSAKA/Lusaka Intl RS	10 28	PA1 NPA			X	X X	X X	X	X X			
FLMF MFUWE/Mfuwe RS	08 26	NPA NPA			X	X X	X X	X	X X			
FLND NDOLA/Ndola RS	10L 28R 10R 28L	PA1 NPA			X	X X	X X	X	X X			
ZIMBABWE			X	X						X	X	
FVBU BULAWAYO/Bulawayo RS	13 31	NPA NPA			X	X X	X X	X	X X			
FVHA HARARE/Harare RS	06 24	PA1 PA1			X	X X	X X	X	X X			
FVFA VICTORIA FALLS/Victoria Falls RS	12 30	PA1 NINST			X	X	X	X	X			

FASID TABLE AIS-6 — AERONAUTICAL CHART REQUIREMENTS

EXPLANATION OF THE TABLE

Column

1 Name of the State, territory or aerodrome for which aeronautical chart is required with the designation of the aerodrome use:

RS — international scheduled air transport, regular use
RNS — international non-scheduled air transport, regular use
RG — international general aviation, regular use
AS — international scheduled air transport, alternate use

2 Runway designation numbers

3 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume 1, Chapter I, are:

NINST — non-instrument runway;
NPA — non-precision approach runway
PA1 — precision approach runway, Category I;
PA2 — precision approach runway, Category II;
PA3 — precision approach runway, Category III.

4 Requirement for the Enroute Chart — ICAO (ENRC), shown by an “X” against the State or territory to be covered.

5 Requirement for the Instrument Approach Chart — ICAO (IAC), shown by an “X” against the runway designation to be covered.

6 Requirement for the Aerodrome/Heliport Chart — ICAO (ADC), shown by an “X” against the aerodrome to be covered.

7 Requirement for the Aerodrome Obstacle Chart — ICAO Type A (AOC-A), shown by an “X” against the runway designation to be covered.

8 Requirement for the Precision Approach Terrain Chart — ICAO (PATC), shown by an “X” against the runway designation to be covered.

9 Requirement for the Area Chart — ICAO (ARC), shown by an “X” against the aerodrome to be covered.

10 Requirement for the Standard Departure Chart-Instrument — ICAO (SID), shown by an “X” against the runway designation to be covered.

11 Requirement for the Standard Arrival Chart-Instrument — ICAO (STAR), shown by an “X” against the runway designation to be covered.

12 Requirement for the Visual Approach Chart — ICAO (VAC), shown by an “X” against the aerodrome or runway designation to be covered.

13 Requirement for the Aerodrome Obstacle Chart — ICAO Type C (AOC-C), shown by an “X” against the aerodrome to be covered.

14 Remarks

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ALGERIA			X										
DAUA ADRAR/Touat	04	NPA		X	X	X		X				X	
RS	22	NINST				X							
DAAG ALGER/Houari Boumediene	05	NPA		X	X	X		X				X	
RS	23	PA2		X		X	X						
	09												
	27												
DABB ANNABA/El Mellah	01	NPA		X	X	X		X				X	
RS	19	PA1		X		X							
	05	NPA		X		X							
	23	NINST				X							
DABC CONSTANTINE/Mohamed Boudiaf	14	NPA		X	X	X		X				X	
RS	32	PA1		X		X							
	16	NPA		X		X							
	94	PA1		X		X							
DAUG GHARDAIA/Noumérate	13	NPA		X	X	X		X				X	
RS	31	PA1		X		X							
	01												
	19												
DAUH HASSI-MESSAOUD/Oued Irara	01	PA1		X	X	X		X				X	
RS	19	NPA		X		X							
DAOO ORAN/Es Sénia	07	NPA		X	X	X		X				X	
RS	25	PA2		X		X	X						
DAAT TAMANRASSET/Aguennar	03	PA1		X	X	X		X				X	
AS	21	NPA		X		X							
	09												
	27												
DABS TEBESSA/Tébessa	11	NPA		X	X	X		X				X	
RS	29	NPA		X		X							
DAOB TIARET/Bou-Chekif	09	NPA		X	X	X		X				X	
RS	27	NINST		X		X							
DAON TLEMCEN/Zénata	07	NPA		X	X	X		X				X	
RS	25	NPA		X		X							
DAUZ ZARZAITINE/In Amenas	05	NPA		X	X	X		X				X	
RS	23	NPA		X		X							
	15												
	33												

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ANGOLA			X										
FNHU HUAMBO/Albano Machado	11	NPA		X	X	X		X				X	
RS	29	NPA		X		X							
FNLU LUANDA/4 de Fevereiro	05	NPA		X	X	X		X				X	
RS	23	PA1		X		X							
	07												
	25												
BENIN			X										
DBBB COTONOU/Cadjehoun	06	NPA		X	X	X		X				X	
RS	24	PA1		X		X							
BOTSWANA			X										
FBFT FRANCISTOWN/Francistow	11	NINST			X	X		X				X	
n	29	NINST				X							
RS	16												
	34												
FBSK GABORONE/Sir Seretse	08	PA1		X	X	X		X				X	
Khama Intl	26	NPA		X		X							
RS													
FBKE KASANE/Kasane	08	NPA		X	X	X		X				X	
RS	26	NINST				X					X		
FBMN MAUN/Maun	08	NINST			X	X							
RS	26	NINST				X							
FBSP SELEBI-PHIKWE/Selebi-	12	NPA		X	X	X		X				X	
Phikwe	30	NINST				X							
RS													
BURKINA FASO			X										
DFOO BOBO-DIOULASSO/Bobo-	06	PA1		X	X	X		X				X	
Dioulasso	24	NPA		X		X							
RS													
DFFD OUAGADOUGOU/	04L	PA1		X	X	X		X				X	
Ouagadougou	22R	NPA		X		X							
RS													
BURUNDI			X										
HBBA BUJUMBURA/Bujumbura	18	PA1		X	X	X		X				X	
RS	36	NPA		X		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CAMEROON			X										
FKKD DOUALA/Douala	12	NPA		X	X	X		X				X	
RS	30	PA2		X		X	X						
FKKR GAROUA/Garoua	09	PA1		X	X	X		X				X	
RS	27	NPA		X		X							
FKKL MAROUA/Salak	13	NPA		X	X	X		X				X	
RS	31	NINST				X							
FKKN N'GAOUNDERE/ N'Gaoundere AS	03	NPA		X	X	X		X				X	
	21	NINST				X							
FKYS YAOUNDE/Nsimalen	01	NINST			X	X		X				X	
RS	19	PA2		X		X	X						
CAPE VERDE			X										
GVFM PRAIA/Francisco Mendes	04	NPA		X	X	X		X				X	
RS	22	NINST				X							
GVAC SAL I./Amilcar Cabral	01	PA1		X	X	X		X				X	
RS	19	NPA		X		X							
	07												
	25												
CENTRAL AFRICAN REPUBLIC			X										
FEFF BANGUI/M'Poko	17	NPA		X	X	X		X				X	
RS	35	PA1		X		X							
FEFT BERBERATI/Berberati	17	NPA		X	X	X		X				X	
RS	35	NINST				X							
CHAD			X										
FTTJ N'DJAMENA/N'Djamena	05	PA1		X	X	X		X				X	
RS	23	NPA		X		X							
COMOROS			X										
FMCV ANJOUAN/Ouani	10	NPA		X	X	X		X				X	
RS	28	NPA		X		X							
FMCZ DZAOUDZI/Pamanzi, Mayotte I.	16	NINST			X	X		X				X	
RS	34	NPA		X		X							
FMCH MORONI/Hahaia	02	PA1		X	X	X		X				X	
RS	20	NPA		X		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
CONGO			X										
FCBB BRAZZAVILLE/Maya-Maya	06	PA1		X	X	X		X				X	
RS	24	NPA		X		X							
FCPP POINTE NOIRE/Agostino Neto	17	NPA		X	X	X		X				X	
RS	35	NPA		X		X							
COTE D'IVOIRE			X										
DIAP ABIDJAN/Felix Houphouet Boigny Intl	03	NPA		X	X	X		X				X	
RS	21	PA2		X		X	X						
DIBK BOUAKE/Bouake	03	NPA		X	X	X		X				X	
RS	21	PA1		X		X							
DEMOCRATIC REPUBLIC OF THE CONGO			X										
FZNA GOMA/Goma	18	NINST			X	X		X				X	
RS	36	NPA		X		X							
FZAA KINSHASA/N'Djili	07	NPA		X	X	X		X				X	
RS	25	PA1		X		X							
FZIC KISANGANI/Bangoka	13	NPA		X	X	X		X				X	
AS	31	NPA		X		X							
FZQA LUBUMBASHI/Luano	08	PA1		X	X	X		X				X	
AS	26	NPA		X		X							
DJIBOUTI			X										
HDAM DJIBOUTI/Ambouli	09	NPA		X	X	X		X				X	
RS	27	PA1		X		X							
EGYPT			X										
HEBL ABU-SIMBEL/Abu-Simbel	15L	NPA		X	X	X		X				X	
RS	33R	NPA		X		X							
	15R	NPA		X		X							
	33L	NPA		X		X							
HEAX ALEXANDRIA/Alexandria	04	NPA		X	X	X		X				X	
RS	22	NPA		X		X							
	18	NPA		X		X							
	36	NPA		X		X							
HESN ASWAN/Aswan	17	NPA		X	X	X		X				X	
RS	35	PA1		X		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
HECA CAIRO/Cairo Intl	05L	PA2		X	X	X	X	X				X	
RS	23R	PA2		X		X	X						
	05R	PA2		X		X	X						
	23L	PA2		X		X	X						
	16	NPA		X		X							
	34	NPA		X		X							
HEGN HURGHADA/Hurghada	16	NPA		X	X	X		X				X	
RS	34	PA1		X		X							
HELX LUXOR/Luxor	02	NPA		X	X	X		X				X	
RS	20	PA1		X		X							
HEMM MERSA-MATRUH/	15	NPA		X	X	X		X				X	
Mersa-Matruh	33	NPA		X		X							
RS													
HESH SHARM EL SHEIKH/Sharm El Sheikh	04L	PA1		X	X	X		X				X	
RS	22R	NINST				X							
	04R												
	22L												
HESC ST. CATHERINE/St. Catherine	17	NPA		X	X	X		X				X	
RS	35	NINST				X							
HETB TABA/Taba	04	NINST			X	X		X				X	
RS	22	NPA		X		X							
	14												
	32												
EQUATORIAL GUINEA			X										
FGSL MALABO/Malabo	05	PA1		X	X	X		X				X	
RS	23	NPA		X		X							
ERITREA			X										
HHAS ASMARA/Asmara Intl	07	PA1		X	X	X		X				X	
RS	25	NPA		X		X							
	12												
	30												
HHSB ASSAB/Assab	12	NPA		X	X	X		X				X	
RS	30	NINST				X							
ETHIOPIA			X										
HAAB ADDIS ABABA/Bole Intl	07	NPA		X	X	X		X				X	
RS	25	PA1		X		X							
HADR DIRE DAWA/Dire Dawa Intl	15	NINST			X	X		X				X	
RS	33	NPA		X		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
FRANCE (Ile de la Réunion)			X										
FMME SAINT-DENIS/Gillot La Reunion	12	NINST			X	X		X				X	
RS	30	NPA		X		X							
	14	PA1		X		X							
	32	NINST				X							
GABON			X										
FOON FRANCEVILLE/M'vengue	15	PA1		X	X	X		X				X	
RS	33	NPA		X		X							
FOOL LIBREVILLE/Leon M'Ba	16	PA1		X	X	X		X				X	
RS	34	NPA		X		X							
FOOG PORT GENTIL/Port Gentil	03	NPA		X	X	X		X				X	
RS	21	PA1		X		X							
GAMBIA			X										
GBYD BANJUL/Banjul Intl	14	NPA		X	X	X		X				X	
RS	32	PA1		X		X							
GHANA			X										
DGAA ACCRA/Kotoka Intl	03	NPA		X	X	X		X				X	
RS	21	PA1		X		X							
DGSI KUMASI/Kumasi	02	NPA		X	X	X		X				X	
RS	20	NPA		X		X							
DGLE TAMALE/Tamale	05	NPA		X	X	X		X				X	
RS	23	NPA		X		X							
GUINEA			X										
GUOK BOKE/Baralande	02	NINST			X	X		X				X	
RS	20	NINST				X							
GUCY CONAKRY/Gbessia	06	PA1		X	X	X		X				X	
RS	24	NPA		X		X							
GUFH FARANAH/Badala	09	NPA		X	X	X		X				X	
RS	27	NINST				X							
GUXN KANKAN/Diankana	10	NPA		X	X	X		X				X	
RS	28	NINST				X							
GULB LABE/Tata	06	NINST			X	X		X				X	
RS	24	NINST				X							
GUNZ N'ZEREKORE/Konia	18	NPA			X	X	X		X			X	
RS	36	NINST					X						

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GUINEA-BISSAU			X										
GGOV BISSAU/Osvaldo Vieira Intl RS	03 21	NPA PA1		X X	X	X X		X				X	
KENYA			X										
HKEL ELDORET/Eldoret Intl RS	08 26	PA2 NPA		X X	X	X X	X	X				X	
HKMO MOMBASA/Moi Intl RS	03 21 15 33	NPA PA1		X X	X	X X		X				X	
HKJK NAIROBI/Jomo Kenyatta Intl RS	06 24	PA2 NPA		X X	X	X X		X				X	
LESOTHO			X										
FXMM MASERU/Moshoeshoe I. Intl RS	04 22 11 29	NINST PA1		X	X	X X		X				X	
LIBERIA			X										
GLRB MONROVIA/Roberts Intl RS	04 22	PA2 NPA		X X	X	X X	X	X				X	
LIBYAN ARAB JAMAHIRIYA			X										
HLLB BENGHAZI/Benina RS	15L 33R 15R 33L	PA1 NPA NPA PA1		X X X X	X	X X X X		X				X	
HLLS SEBHA/Sebha RS	13 31 06 24	PA1 NPA		X X	X	X X		X				X	
HLLT TRIPOLI/Tripoli Intl RS	09 27 18 36	PA1 PA2		X X	X	X X	X	X				X	
MADAGASCAR			X										
FMMI ANTANANARIVO/Ivato RS	11 29	PA1 NPA		X X	X	X X		X				X	
FMNA ANTSIRANANA/Arrachart RS	13 31	NPA NINST		X	X	X X		X				X	

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
FMNM MAHAJANGA/ Amborovy RS	14 32	NPA NINST		X	X	X X		X				X	
FMNN NOSY-BE/Fascene RS	05 23	NPA PA1		X X	X	X X		X				X	
FMMS SAINTE-MARIE/Sainte-Marie RS	01 19	NPA NPA		X X	X	X X		X				X	
FMMT TOAMASINA/Toamasina RS	01 19	NPA PA1		X X	X	X X		X				X	
FMSD TOLAGNARO/Tolagnaro RS	07 25	NPA NPA		X X	X	X X		X				X	
MALAWI			X										
FWCL BLANTYRE/Chileka RS	10 28	NPA NPA		X X	X	X X		X				X	
FWLI LILONGWE/Lilongwe Intl RS	14 32	PA1 NPA		X X	X	X X		X				X	
MALI			X										
GABS BAMAKO/Senou RS	06 24	PA1 NPA		X X	X	X X		X				X	
GAGO GAO/Gao RS	07 25	NPA NINST		X	X	X X		X				X	
GAKY KAYES/Kayes RS	08 26	NPA NINST		X	X	X X		X				X	
GAKL KIDAL/Kidal RS	10 28	NPA NINST		X	X	X X		X				X	
GAMB MOPTI-BARBE/Mopti-Barbe RS	05 23	NPA NINST		X	X	X X		X				X	
GANR NIORO/Nioro RS	08 26	NPA NINST		X	X	X X		X				X	
GATB TOMBOUCTOU/Tombouctou RS	07 25	PA1 NPA		X X	X	X X		X				X	

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAURITANIA			X										
GQPA ATAR/Atar	04	NPA		X	X	X		X				X	
RS	22	NINST				X							
GQNI NEMA/Nema	10	NINST			X	X		X				X	
RS	28	NPA		X		X							
GQPP NOUADHIBOU/Nouadhibou	03	PA1		X	X	X		X				X	
RS	21	NPA		X		X							
GQNN NOUAKCHOTT/Nouakchott	05	PA1		X	X	X		X				X	
RS	23	NPA		X		X							
GQPZ ZOUERATE/Zouerate	28	NPA		X	X	X		X				X	
RS	10	NPA		X		X							
MAURITIUS			X										
FIMP MAURITIUS/Sir Seewoosagur Ramgoolam Intl	14	PA1		X	X	X		X				X	
RS	32	NPA		X		X							
MOROCCO			X										
GMAD AGADIR/Al Massira	10	NPA		X	X	X		X				X	
RS	28	PA1		X		X							
GMTA AL HOCEIMA/Cherif Al Idrissi	18	PA1		X	X	X		X				X	
RS	36	NINST				X							
GMMN CASABLANCA/ Mohammed V	17	NPA		X	X	X		X				X	
RS	35	PA2		X		X	X						
GMFK ERRACHIDIA/Moulay Ali Cherif	13	NPA		X	X	X		X				X	
AS	31	PA1		X		X							
GMFF FES/Saïss	10	NPA		X	X	X		X				X	
RS	28	PA1		X		X							
GMMX MARRAKECH/Ménara	10	PA1		X	X	X		X				X	
RS	28	NPA		X		X							
GMMZ OUARZAZATE/ Ouarzazate	12	NPA		X	X	X		X				X	
RS	30	PA1		X		X							
GMFO OUJDA/Angads	06	PA1		X	X	X		X				X	
RS	24	NINST				X							
GMME RABAT/Salé	04	PA1		X	X	X		X				X	
RS	22	NPA		X		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GMTT TANGER/Ibnou-Batouta	10	NPA		X	X	X		X				X	
RS	28	PA1		X		X							
GMAT TAN-TAN/Plage Blanche	14	NPA		X	X	X		X				X	
RS	22	NINST				X							
GMTN TETOUAN/Saniat-Rimel	06	NPA		X	X	X		X				X	
RS	24	NINST				X							
MOZAMBIQUE			X										
FQBR BEIRA/Beira	12	PA1		X	X	X		X				X	
RS	30	NPA		X		X							
	06												
	24												
FQMA MAPUTO/Maputo Intl	05	NPA		X	X	X		X				X	
RS	23	PA1		X		X							
NAMIBIA			X										
FYKT KEETMANSHOOP/	04	NPA		X	X	X		X				X	
Keetmanshop	22	NPA		X		X							
RS													
	18												
	36												
FYWB WALVIS BAY/Walvis Bay	09	NPA		X	X	X		X				X	
RS	27	NPA		X		X							
	12												
	30												
FYWH WINDHOEK/Windhoek	08	PA1		X	X	X		X				X	
RS	26	NPA		X		X							
	16												
	34												
NIGER			X										
DRZA AGADES/Sud	07	NPA		X	X	X		X				X	
RS	25	NINST				X							
DRRN NIAMEY/Diori Hamani Intl	09R	PA1		X	X	X		X				X	
RS	27L	NPA		X		X							
	09L												
	27R												
DRZR ZINDER/Zinder	06	NPA		X	X	X		X				X	
AS	24	NINST				X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
NIGERIA			X										
DNAA ABUJA/Nnamdi Azikiwe	04	NPA		X	X	X		X				X	
RS	22	PA1		X		X							
DNCA CALABAR/Calabar	03	NPA		X	X	X		X				X	
RS	21	PA1		X		X							
DNIL ILORIN/Ilorin	05	PA1		X	X	X		X				X	
AS	23	NPA		X		X							
DNKA KADUNA/Kaduna	05	PA1		X	X	X		X				X	
RS	23	NPA		X		X							
DNKN KANO/Mallam Aminu Kano Intl	06	PA2		X	X	X	X	X				X	
RS	24	PA2		X		X	X						
	05												
	23												
DNMM LAGOS/Murtala Muhammed	01L	PA2		X	X	X	X	X				X	
RS	19R	PA2		X		X	X						
	01R	NPA		X		X							
	19L	PA2		X		X	X						
DNMA MAIDUGURI/Maiduguri	05	PA2		X	X	X		X				X	
RS	23	NPA		X		X							
DNPO PORT HARCOURT/Port Harcourt Intl	03	NPA		X	X	X		X				X	
RS	21	PA1		X		X							
DNSO SOKOTO/Abubakar Saddiq III Intl	08	PA1		X	X	X		X				X	
RS	26	NPA		X		X							
RWANDA			X										
HRYR KIGALI/Gregoire Kayibanda	10	NPA		X	X	X		X					
RS	28	PA1		X		X							
SAO TOME & PRINCIPE			X										
FPST SAO TOME/Sao Tomé	11	PA1		X	X	X		X				X	
RS	29	NPA		X		X							
SENEGAL			X										
GOGS CAP SKIRING/Cap Skiring	15	NINST			X	X		X				X	
RS	33	NPA		X		X							
GOOY DAKAR/Leopold Sedar Senghor Intl	18	PA2		X	X	X	X	X				X	
RS	36	NPA		X		X							
	03												
	21												

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GOSS SAINT LOUIS/Saint Louis	18	NPA		X	X	X		X				X	
RS	36	NINST				X							
GOTT TAMBACOUNDA/	06	NPA		X	X	X		X				X	
Tambacounda	24	NPA		X		X							
RS													
GOGG ZIGUINCHOR/Ziguinchor	10	NINST			X	X		X				X	
RS	28	NPA		X		X							
SEYCHELLES			X										
FSIA MAHE/Seychelles Intl	13	NPA		X	X	X		X				X	
RS	31	PA1		X		X							
SIERRA LEONE			X										
GFLL FREETOWN/Lungi	12	NPA		X	X	X		X				X	
RS	30	PA1		X		X							
SOMALIA			X										
HCMI BERBERA/Berbera	05	NINST			X	X		X				X	
AS	23	NINST				X							
HCMV BURAO/Burao	13	NINST			X	X		X				X	
RS	31	NINST				X							
HCMH HARGEISA/Hargeisa	06	NPA		X	X	X		X				X	
RS	24	NPA		X		X							
HCMK KISIMAYU/Kisimayu	05	NPA		X	X	X		X				X	
AS	23	PA1		X		X							
HCMM MOGADISHU/Mogadishu	05	NPA		X	X	X		X				X	
RS	23	PA1		X		X							
SOUTH AFRICA			X										
FAAB ALEXANDERBAY/	01	NPA		X	X	X		X				X	
Alexander Bay	19	NINST				X							
RS	07												
	25												
	11												
	29												
FABL BLOEMFONTEIN/	02	PA1		X	X	X		X				X	
Bloemfontein	20	NPA		X		X							
AS	12	NINST				X							
	30	NINST				X							
FACT CAPE TOWN/Cape Town	01	PA1		X	X	X		X				X	
RS	19	NPA		X		X							
	16												
	34												

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
FADN DURBAN/Durban	05	NPA		X	X	X		X				X	
RS	23	PA1		X		X							
FAJS JOHANNESBURG/	03L	PA2		X	X	X	X	X				X	
Johannesburg	21R	INST		X		X							
RS													
	03R	PA2		X		X	X						
	21L	PA2		X		X	X						
	15	NINST				X							
	33	NINST				X							
FAGM JOHANNESBURG/Rand	18	NPA		X	X	X		X				X	
RS	36	NPA		X		X							
FALA LANSERIA/Lanseria	06L	NPA		X	X	X		X					
RS	24R	NINST				X							
	06R												
	24L												
	17												
	35												
FAUP UPINGTON/Upington	01	NPA		X	X	X		X				X	
RS	19	NPA		X		X							
	08												
	26												
SPAIN			X										
GCLP GRAN CANARIA/Gran Canaria,	03L	PA1		X	X	X		X				X	
Canary I.	21R	NPA		X		X							
RS													
	03R	NINST				X							
	21L	NINST				X							
GCHI HIERRO/Hierro, Canary I.	16	NPA		X	X	X		X				X	
RS	34	NINST				X							
GCLA LA PALMA/La Palma, Canary I.	01	NPA		X	X	X		X				X	
RS	19	NINST				X							
CGRR LANZAROTE/Lanzarote,	04	NPA		X	X	X		X				X	
Canary I.	22	NPA		X		X							
RS													
GEML MELILLA/Melilla	15	NPA		X	X	X		X				X	
RS	33	NINST				X							
GCFV FUERTEVENTURA/	01	PA1		X	X	X		X				X	
Fuerteventura, Canary I.	19	NPA		X		X							
RS													

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
GCXO TENERIFE NORTE/Los Rodeos, Canary I. RS	12 30	NPA NPA		X X	X	X X		X				X	
GCTS TENERIFE SUR/Reina Sofia, Canary I. RS	08 26	PA1 NPA		X X	X	X X		X				X	
SUDAN			X										
HSSJ JUBA/Juba RS	13 31	PA1 NINST		X	X	X X		X				X	
HSKA KASSALA/Kassala AS	02 20	NINST NINST			X	X X		X				X	
HSSS KHARTOUM/Khartoum RS	18 36	PA1 NPA		X X	X	X X		X				X	
HSPN PORT SUDAN/Port Sudan Intl RS	18 36	NPA PA1		X X	X	X X		X				X	
SWAZILAND			X										
FDMS MANZINI/Matsapha RS	07 25	NINST NINST			X	X X		X				X	
TOGO			X										
DXXX LOME/Tokoin RS	05 23	NPA PA1		X X	X	X X		X				X	
DXNG NIAMTOUGOU/Niamtougou RS	03 21	PA1 NPA		X X	X	X X		X				X	
TUNISIA			X										
DTTJ DJERBA/Zarzis RS	09 27	PA1 NPA		X X	X	X X		X				X	
DTMB MONASTIR/Habib Bourguiba RS	08 26	PA1 NPA		X X	X	X X		X				X	
DTTX SFAX/Thyna RS	15 33	NPA NPA		X X	X	X X		X				X	
DTKA TABARKA/7 NOVEMBRE RS	09 27	NPA PA1		X X	X	X X		X				X	

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
DTTZ TOZEUR/Nefta	09	PA1		X	X	X		X				X	
RS	27	NPA		X		X							
DTTA TUNIS/Carthage	01	NPA		X	X	X		X				X	
RS	19	PA1		X		X							
	11	NINST				X							
	29	NPA		X		X							
UGANDA			X										
HUEN ENTEBBE/Entebbe Intl	17	PA1		X	X	X		X				X	
RS	35	NPA		X		X							
UNITED REPUBLIC OF TANZANIA			X										
HTDA DAR-ES-SALAAM/Dar-Es-Salaam	05	PA1		X	X	X		X				X	
RS	23	NPA		X		X							
HTKJ KILIMANJARO/Kilimanjaro Intl	09	PA1		X	X	X		X				X	
RS	27	NPA		X		X							
HTZA ZANZIBAR/Zanzibar	18	NINST			X	X		X				X	
RS	36	NPA		X		X							
WESTERN SAHARA			X										
GSAI EL AAIUN/El Aaiun	04	NPA		X	X	X		X				X	
RS	22	PA1		X		X							
GSMA SMARA/Smara	17	NINST			X	X		X				X	
RS	35	NINST				X							
GSVO VILLA CISNEROS/Villa Cisneros	04	NINST			X	X		X				X	
RS	22	NPA		X		X							
ZAMBIA			X										
FLLI LIVINGSTONE/Livingstone Intl	11	PA1		X	X	X		X				X	
RS	29	NPA		X		X							
	15												
	33												
FLLS LUSAKA/Lusaka Intl	10	PA1		X	X	X		X				X	
RS	28	NPA		X		X							
FLMF MFUWE/Mfuwe	08	NPA		X	X	X		X				X	
RS	26	NPA		X		X							
FLND NDOLA/Ndola	10L	PA1		X	X	X		X				X	
RS	28R	NPA		X		X							
	10R												
	28L												

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/USE	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	STD	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ZIMBABWE			X										
FVBU BULAWAYO/Bulawayo RS	13 31	NPA NPA		X X	X	X X		X				X	
FVHA HARARE/Harare RS	06 24	PA1 PA1		X X	X	X X		X				X	
FVFA VICTORIA FALLS/Victoria Falls RS	12 30	PA1 NINST		X	X	X X		X					

FASID TABLE AIS-7 — PRODUCTION RESPONSIBILITY FOR SHEETS OF THE WORLD AERONAUTICAL CHART — ICAO 1:1 000 000

EXPLANATION OF THE TABLE

Column

1 Name of State accepting production responsibility

2 World Aeronautical Chart — ICAO 1:1 000 000 sheet number(s) for which production responsibility is accepted

3 Remarks

State	Sheet number(s)	Remarks
Algeria	2345-46, 2421-22, 2452, 2453, 2537, 2538, 2539, 2540, 2571, 2572, 2573, 2661	
Angola	3056, 3057, 3150, 3151, 3179	
Cape Verde	2656, 2657, 2699	
Democratic Republic of the Congo	2907, 2908, 2933, 2934, 3027, 3028, 3029	
Egypt	2447, 2448, 2543, 2544	
Ethiopia	2688, 2788, 2789, 2809, 2810	
Ghana	2782	
Kenya	2910, 2931	
Liberia	2818	
Libyan Arab Jamahiriya	2449, 2450, 2541, 2542, 2569, 2424	
Morocco	2420	
Mozambique	3154, 3175, 3276, 3299	
Nigeria	2783, 2784, 2815	
Somalia	2790, 2791, 2808, 2911	
South Africa	3178, 3273, 3274, 3300, 3301, 3302, 3396, 3397, 3398, 3421, 3422	
Spain	2455, 2536, 2575	
Sudan	2567, 2568, 2665, 2666, 2667, 2689, 2690, 2787, 2811	

State	Sheet number(s)	Remarks
Uganda	2909	
United Kingdom	3022, 3034, 3147, 3171, 3280, 3499	
United Republic of Tanzania	2932, 3030, 3031, 3053	
Zambia	3054, 3055, 3152, 3153	

Note.- *In those instances where the production responsibility for certain sheets has been accepted by more than one State, these States by mutual agreement should define limits of responsibility for those sheets.*

FASID TABLE AIS-8 - REQUIREMENTS OF THE INTEGRATED AERONAUTICAL INFORMATION PACKAGE

EXPLANATION OF THE TABLE

Column

1	Name of State or Territory
2	Availability of AIP (see Remarks)
3	AIP Amendment issued at regular intervals or publication date
4	AIP Amendment - issued in accordance with AIRAC procedures
5	AIP Amendment - NIL notification issued when Amendment not published
6	AIP Supplement - issued regularly
7	AIP Supplement - issued in accordance with AIRAC procedures
8	NIL Notification when AIP Supplement not issued on the AIRAC effective date previously published.
9	AIC published as required
10	NOTAM isssued on regular basis in accordance with the NOTAM Format
11	Trigger NOTAM issued as required (Annex 15, paragraph 5.1.1.2)
12	Checklist of NOTAM issued as required (Annex 15, paragraphs 5.2.8, 5.2.8.1, 5.2.8.2)
13	Monthly printed plain language summary of NOTAM issued as required (Annex 15, paragraph 5.2.8.3)
14	AIRAC system implemented as required
15	NIL notifications issued as required
16	Remarks (Indicate if AIP is available in the restructured format and if not, expected date of implementation)

State/Territory	AIP	AIP AMENDMENT			AIP SUPPLEMENT			AIC	NOTAM				AIRAC		REMARKS OBSERVACIONES
		REG	AIRAC	NIL	REG	AIRAC	NIL		REG	TRIGGER INICIADOR	CHKLIST LISTA DE VERIFICACIÓN	SUMMARY RESUMEN	REG	NIL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ALGERIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ANGOLA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BOTSWANA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BURKINA FASO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BURUNDI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CAMEROON	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CAPE VERDE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CENTRAL AFRICAN REPUBLIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CHAD	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
COMOROS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CONGO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
COTE D'IVOIRE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DJIBOUTI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
EGYPT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
EQUATORIAL GUINEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ERITREA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ETHIOPIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
FRANCE (Ile de la Réunion)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GABON	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GAMBIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GHANA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GUINEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GUINEA-BISSAU	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

State/Territory	AIP	AIP AMENDMENT			AIP SUPPLEMENT			AIC	NOTAM				AIRAC		REMARKS OBSERVACIONES
		REG	AIRAC	NIL	REG	AIRAC	NIL		REG	TRIGGER INICIADOR	CHKLIST LISTA DE VERIFICACIÓN	SUMMARY RESUMEN	REG	NIL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
KENYA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LESOTHO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LIBERIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LIBYAN ARAB JAMAHIRIYA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MADAGASCAR	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MALAWI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MALI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MAURITANIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MAURITIUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MOROCCO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MOZAMBIQUE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NAMIBIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NIGER	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
NIGERIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
RWANDA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SAO TOME & PRINCIPE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SENEGAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SEYCHELLES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SIERRA LEONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SOMALIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SOUTH AFRICA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SPAIN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SUDAN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

State/Territory	AIP	AIP AMENDMENT			AIP SUPPLEMENT			AIC	NOTAM				AIRAC		REMARKS OBSERVACIONES
		REG	AIRAC	NIL	REG	AIRAC	NIL		REG	TRIGGER INICIADOR	CHKLIST LISTA DE VERIFICACIÓN	SUMMARY RESUMEN	REG	NIL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SWAZILAND	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TOGO	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TUNISIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UGANDA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UNITED REPUBLIC OF TANZANIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
WESTERN SAHARA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZAIRE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZAMBIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZIMBABWE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

APPENDIX A

SAMPLE OF AN AERONAUTICAL INFORMATION CIRCULAR ON THE USE OF GPS AS SUPPLEMENTAL MEANS OF NAVIGATION

1. Introduction

1.1 ICAO Circular 267 was published in 1996 to provide guidelines for the introduction and operational use of the Global Navigation Satellite System (GNSS) comprising the global positioning system (GPS) and the global orbiting navigation satellite system (GLONASS).

1.2 This AIC reviews the capabilities, limitations and constraints of the GPS, sets out airworthiness criteria for the approval of GNSS-based aircraft navigation equipment and defines conditions for the use of GNSS as *supplemental* means of navigation for en-route and terminal operations and overlay non-precision approaches. A list of terms is at the Attachment.

Note.- Refer to the note under "non precision approach" in paragraph 8.2 below with regard to publication of AIC for non-precision approach applications.

1.3 The GPS of the United States is a satellite-based radio navigation system. In October 1994, the system was formally offered by the United States for use by the international aviation community, and the offer was accepted by the ICAO Council on 26 October 1994.

1.4 In February 1995, at its ninth meeting, the AFI Planning and Implementation Regional Group (APIRG) adopted the AFI Communications, Navigation and Surveillance and Air Traffic Management (CNS/ATM) Implementation Plan, which, *inter alia*, advocates the progressive utilization of GNSS for all phases of flight in the Africa and Indian Ocean Region.

1.5 The interim policy stated in this AIC parallels the early stages of the use of GPS as authorized by the United States Federal Aviation Administration (FAA), and Transport Canada. Its aim is to realize early benefits from existing capabilities of GPS without waiting for the availability of differential GPS or full GNSS.

2. Brief description of the GPS

2.1 Twenty-four satellites are in six orbits approximately 20,200 km (10,900 NM) above the surface of the earth. Each satellite broadcasts a timing signal and data message. A portion of the data message gives a GPS receiver the orbital details of each satellite. The receiver measures the time taken for the signal to arrive from the satellites in view and from this information computes a position and velocity.

2.2 Three satellites are needed to determine a two dimensional position, and four for a three dimensional position. The elevation and geometry of each satellite relative to the receiver must satisfy certain criteria before the designed system accuracy can be achieved. Standard positioning service (SPS) accuracy of 100 metres or better should be available with ninety-five percent probability and 300 metres or better with 99.99 percent probability. The vertical accuracy is 156 metres (95 percent probability), and the timing/time control accuracy is within 340 nanoseconds (95 percent probability) of Coordinated Universal Time (UTC). However, it should be noted that the GPS signal may suffer interference, and that gaps in coverage do occur. These gaps are normally transient and predictable.

3. Geodetic considerations

3.1 GPS derived position information is referenced to the World Geodetic System-1984 (WGS-84) Datum. This datum relates geographical coordinates to a mathematically defined ellipsoid that approximates the shape of the Earth. The point of origin for the WGS-84 datum is the Earth's centre of gravity. ICAO has adopted WGS-84 as the common geodetic system for international civil aviation and requested that as of 1 January 1998, published geographical coordinates be referred to WGS-84

(Annex 15, Chapter 3.3.4.4).

3.2 Aeronautical geographical coordinates throughout the world have in the past been derived in relation to local or regional datums. A given set of coordinates referenced to a national datum could, however, be significantly displaced from the same coordinates referenced to the WGS-84. Therefore, where the WGS-84 coordinates have not been implemented, GPS based navigation may result in significant position errors in flight. For example, it is not safe to use GPS derived information to carry-out instrument approaches at runways for which WGS-84 coordinates have not been provided.

3.3 Guidance on WGS-84 is provided in ICAO Doc 9674, World Geodetic System-1984 (WGS-84) Manual. Determination of WGS-84 coordinates are to be carried out in accordance with specifications of Annex 11, Chapter 2, paragraph 2.18 and Annex 14, Chapter 2, paragraph 2.1.

4. Other considerations

4.1 Introduction of GPS-based operations involves a number of additional considerations that must be taken into account. These include data-base development and maintenance, pilot training, certification, ground and flight inspection.

5. The need for augmentation of the GPS

5.1 Present ground-based navigation aids are monitored, and the monitor takes action if erroneous signals are being radiated. On the present configuration of the GPS system it may take considerable time before users become aware of any malfunctioning.

5.2 Aircraft-based augmentation can provide this information as necessary for supplemental means of navigation.

a) Aircraft-based augmentation can be implemented by:

i) Receiver Autonomous Integrity Monitoring (RAIM) whereby, provided that there are five satellites in view with adequate geometry, erroneous information from one satellite can be detected. If there are six satellites in view, the faulty satellite can be rejected by the receiver; or

ii) Aircraft Autonomous Integrity Monitoring (AAIM) whereby the GPS signal is integrated with other sensors (for example, INS) which can detect and reject spurious information from the GPS.

6. Use of GPS receivers in VFR and IFR

6.1 There are a number of GPS receivers available that do not meet the requirements for IFR operations specified in the FAA TSO-C129. Although sufficiently accurate guidance is normally furnished by these receivers, false information can, however, be provided without warning. Although the use of such receivers is not permitted in IFR, uncertified GPS receivers may be used to support VFR navigation only in conjunction with standard VFR navigation practices, namely the cross-checking of present position by visual reference to landmarks.

6.2 Only certified GPS receivers should be used in IFR.

7. Supplementary-means use of the GPS

7.1 VOR, VOR/DME and NDB as appropriate are the primary navigation systems for continental en-route and terminal area operations and for non-precision approach and landing in the (NNNN) FIR. Aircraft must be suitably equipped with serviceable primary navigation systems for navigation appropriate for the intended flight operations.

7.2 With immediate effect a GPS receiver may be used to navigate the aircraft under the following conditions:

7.2.1 Continental En-route and Terminal area

a) the GPS navigation equipment must have been certified to comply with the requirements for any of the Classes in FAA TSO C-129 or equivalent, be installed and approved in accordance with FAA AC 20-138 for stand-alone equipment or AC 20-130 for multi-sensor equipment and be operated in accordance with the approved Flight Manual or any Supplement thereof; and

b) Aircraft using GPS equipment under IFR must be equipped with another approved and operational means of navigation. Should GPS navigation capability be lost, this equipment must allow navigation along the planned route or suitable alternate route. Monitoring of the traditional navigation equipment is necessary when there are insufficient satellites in view for RAIM to operate.

7.2.2 Non-Precision Approach

(Note: This section applies only when approach coordinates are provided using separate AIC for specific runways when and where WGS-84 based coordinates have been provided.

a) the GPS navigation equipment must have been certified to comply with the requirements for one of the Classes A1, B1, B3, C1, C3 in FAA TSO C-129 or equivalent, installed and approved in accordance with FAA AC 20-138 for stand-alone equipment (or equivalent) or, AC 20-130 for multi-sensor equipment (or equivalent), and operated in accordance with the approved Flight Manual or any Supplement thereof; and

b) aircraft with approved GPS installations can use GPS-based non-precision approach procedure(s) which points and fixes have been referenced to the WGS-84 provided the following conditions are complied with:

i) the avionics data base must be current and must contain the non-precision approach to be flown. All associated data bases must contain coordinates referenced to the WGS-84; and

ii) an approach procedure using GPS shall not be flown unless it is retrieved from the avionics data base. The GPS avionics must store the location of all way-points and fixes defining the approach and must present them in the order depicted on the relevant instrument approach chart;

8. Users are encouraged to submit details of any discrepancies on the use of GPS and/or any other comments to the following address:

(To be included)

Note 1: States are expected to ensure the validity of documentation referenced in this AIC before its publication.

Note 2: Additional requirements by States (e.g. licensing, availability, NOTAMS) may be included.

TERMINOLOGY

For the purpose of this AIC, the following apply:

"accuracy"	is the degree of conformance between the estimated or measured position and/or velocity of a platform at a given time and its true position and/or velocity.
"availability"	is the ability of the total system to perform its function at the initiation of the intended operation.
"integrity"	is the ability of a system to provide timely warnings to users when the system should not be used for navigation.
"continuity"	is the ability of the total system to perform its function without interruption during the intended operation.
"primary-means navigation system"	is a navigation system approved for a given operation or phase of flight that must meet accuracy and integrity requirements but need not meet full availability and continuity of service requirements. Safety is achieved by limiting flights to specific periods, and through appropriate procedural restrictions.
Note	*There is no requirement to have a sole means navigation system on board to support a primary means system*.
"Receiver autonomous integrity monitoring (RAIM)"	is a technique whereby an airborne GNSS receiver/processor autonomously monitors the integrity of the navigation signals from GNSS satellites.
"Sole-means navigation system"	is a navigation system approved for a given operation or phase of flight that must allow the aircraft to meet, for that operation or phase of flight all four navigation system performance requirements: accuracy, integrity, availability and continuity of service.

Note.- This term does not exclude the carriage of other navigation systems. Any sole-means navigation system could include one (stand-alone installation) or several sensors, possibly of different types (multi-sensors installation).

"Supplemental-means navigation system" is a navigation system that must be used in conjunction with a sole-means navigation system. Approval for supplemental means for a given phase of flight requires that a sole means navigation system for that phase of flight must be on board and may be monitored for cross-checking. Amongst the navigation system performance requirements for a given operation or phase of flight, a supplemental-means navigation system must meet the accuracy and integrity requirements for that operation or phase of flight; there is no requirement to meet availability and continuity requirements.

APPENDIX A

SAMPLE OF AN AERONAUTICAL INFORMATION CIRCULAR ON THE USE OF GPS AS SUPPLEMENTAL MEANS OF NAVIGATION

1. Introduction

1.1 ICAO Circular 267 was published in 1996 to provide guidelines for the introduction and operational use of the Global Navigation Satellite System (GNSS) comprising the global positioning system (GPS) and the global orbiting navigation satellite system (GLONASS).

1.2 This AIC reviews the capabilities, limitations and constraints of the GPS, sets out airworthiness criteria for the approval of GNSS-based aircraft navigation equipment and defines conditions for the use of GNSS as *supplemental* means of navigation for en-route and terminal operations and overlay non-precision approaches. A list of terms is at the Attachment.

Note.- Refer to the note under "non precision approach" in paragraph 8.2 below with regard to publication of AIC for non-precision approach applications.

1.3 The GPS of the United States is a satellite-based radio navigation system. In October 1994, the system was formally offered by the United States for use by the international aviation community, and the offer was accepted by the ICAO Council on 26 October 1994.

1.4 In February 1995, at its ninth meeting, the AFI Planning and Implementation Regional Group (APIRG) adopted the AFI Communications, Navigation and Surveillance and Air Traffic Management (CNS/ATM) Implementation Plan, which, *inter alia*, advocates the progressive utilization of GNSS for all phases of flight in the Africa and Indian Ocean Region.

1.5 The interim policy stated in this AIC parallels the early stages of the use of GPS as authorized by the United States Federal Aviation Administration (FAA), and Transport Canada. Its aim is to realize early benefits from existing capabilities of GPS without waiting for the availability of differential GPS or full GNSS.

2. Brief description of the GPS

2.1 Twenty-four satellites are in six orbits approximately 20,200 km (10,900 NM) above the surface of the earth. Each satellite broadcasts a timing signal and data message. A portion of the data message gives a GPS receiver the orbital details of each satellite. The receiver measures the time taken for the signal to arrive from the satellites in view and from this information computes a position and velocity.

2.2 Three satellites are needed to determine a two dimensional position, and four for a three dimensional position. The elevation and geometry of each satellite relative to the receiver must satisfy certain criteria before the designed system accuracy can be achieved. Standard positioning service (SPS) accuracy of 100 metres or better should be available with ninety-five percent probability and 300 metres or better with 99.99 percent probability. The vertical accuracy is 156 metres (95 percent probability), and the timing/time control accuracy is within 340 nanoseconds (95 percent probability) of Coordinated Universal Time (UTC). However, it should be noted that the GPS signal may suffer interference, and that gaps in coverage do occur. These gaps are normally transient and predictable.

3. Geodetic considerations

3.1 GPS derived position information is referenced to the World Geodetic System-1984 (WGS-84) Datum. This datum relates geographical coordinates to a mathematically defined ellipsoid that approximates the shape of the Earth. The point of origin for the WGS-84 datum is the Earth's centre of gravity. ICAO has adopted WGS-84 as the common geodetic system for international civil aviation and requested that as of 1 January 1998, published geographical coordinates be referred to WGS-84

(Annex 15, Chapter 3.3.4.4).

3.2 Aeronautical geographical coordinates throughout the world have in the past been derived in relation to local or regional datums. A given set of coordinates referenced to a national datum could, however, be significantly displaced from the same coordinates referenced to the WGS-84. Therefore, where the WGS-84 coordinates have not been implemented, GPS based navigation may result in significant position errors in flight. For example, it is not safe to use GPS derived information to carry-out instrument approaches at runways for which WGS-84 coordinates have not been provided.

3.3 Guidance on WGS-84 is provided in ICAO Doc 9674, World Geodetic System-1984 (WGS-84) Manual. Determination of WGS-84 coordinates are to be carried out in accordance with specifications of Annex 11, Chapter 2, paragraph 2.18 and Annex 14, Chapter 2, paragraph 2.1.

4. Other considerations

4.1 Introduction of GPS-based operations involves a number of additional considerations that must be taken into account. These include data-base development and maintenance, pilot training, certification, ground and flight inspection.

5. The need for augmentation of the GPS

5.1 Present ground-based navigation aids are monitored, and the monitor takes action if erroneous signals are being radiated. On the present configuration of the GPS system it may take considerable time before users become aware of any malfunctioning.

5.2 Aircraft-based augmentation can provide this information as necessary for supplemental means of navigation.

a) Aircraft-based augmentation can be implemented by:

i) Receiver Autonomous Integrity Monitoring (RAIM) whereby, provided that there are five satellites in view with adequate geometry, erroneous information from one satellite can be detected. If there are six satellites in view, the faulty satellite can be rejected by the receiver; or

ii) Aircraft Autonomous Integrity Monitoring (AAIM) whereby the GPS signal is integrated with other sensors (for example, INS) which can detect and reject spurious information from the GPS.

6. Use of GPS receivers in VFR and IFR

6.1 There are a number of GPS receivers available that do not meet the requirements for IFR operations specified in the FAA TSO-C129. Although sufficiently accurate guidance is normally furnished by these receivers, false information can, however, be provided without warning. Although the use of such receivers is not permitted in IFR, uncertified GPS receivers may be used to support VFR navigation only in conjunction with standard VFR navigation practices, namely the cross-checking of present position by visual reference to landmarks.

6.2 Only certified GPS receivers should be used in IFR.

7. Supplementary-means use of the GPS

7.1 VOR, VOR/DME and NDB as appropriate are the primary navigation systems for continental en-route and terminal area operations and for non-precision approach and landing in the (NNNN) FIR. Aircraft must be suitably equipped with serviceable primary navigation systems for navigation appropriate for the intended flight operations.

7.2 With immediate effect a GPS receiver may be used to navigate the aircraft under the following conditions:

7.2.1 Continental En-route and Terminal area

a) the GPS navigation equipment must have been certified to comply with the requirements for any of the Classes in FAA TSO C-129 or equivalent, be installed and approved in accordance with FAA AC 20-138 for stand-alone equipment or AC 20-130 for multi-sensor equipment and be operated in accordance with the approved Flight Manual or any Supplement thereof; and

b) Aircraft using GPS equipment under IFR must be equipped with another approved and operational means of navigation. Should GPS navigation capability be lost, this equipment must allow navigation along the planned route or suitable alternate route. Monitoring of the traditional navigation equipment is necessary when there are insufficient satellites in view for RAIM to operate.

7.2.2 Non-Precision Approach

(Note: This section applies only when approach coordinates are provided using separate AIC for specific runways when and where WGS-84 based coordinates have been provided.

a) the GPS navigation equipment must have been certified to comply with the requirements for one of the Classes A1, B1, B3, C1, C3 in FAA TSO C-129 or equivalent, installed and approved in accordance with FAA AC 20-138 for stand-alone equipment (or equivalent) or, AC 20-130 for multi-sensor equipment (or equivalent), and operated in accordance with the approved Flight Manual or any Supplement thereof; and

b) aircraft with approved GPS installations can use GPS-based non-precision approach procedure(s) which points and fixes have been referenced to the WGS-84 provided the following conditions are complied with:

i) the avionics data base must be current and must contain the non-precision approach to be flown. All associated data bases must contain coordinates referenced to the WGS-84; and

ii) an approach procedure using GPS shall not be flown unless it is retrieved from the avionics data base. The GPS avionics must store the location of all way-points and fixes defining the approach and must present them in the order depicted on the relevant instrument approach chart;

8. Users are encouraged to submit details of any discrepancies on the use of GPS and/or any other comments to the following address:

(To be included)

Note 1: States are expected to ensure the validity of documentation referenced in this AIC before its publication.

Note 2: Additional requirements by States (e.g. licensing, availability, NOTAMS) may be included.

TERMINOLOGY

For the purpose of this AIC, the following apply:

"accuracy"	is the degree of conformance between the estimated or measured position and/or velocity of a platform at a given time and its true position and/or velocity.
"availability"	is the ability of the total system to perform its function at the initiation of the intended operation.
"integrity"	is the ability of a system to provide timely warnings to users when the system should not be used for navigation.
"continuity"	is the ability of the total system to perform its function without interruption during the intended operation.
"primary-means navigation system"	is a navigation system approved for a given operation or phase of flight that must meet accuracy and integrity requirements but need not meet full availability and continuity of service requirements. Safety is achieved by limiting flights to specific periods, and through appropriate procedural restrictions.
Note	*There is no requirement to have a sole means navigation system on board to support a primary means system*.
"Receiver autonomous integrity monitoring (RAIM)"	is a technique whereby an airborne GNSS receiver/processor autonomously monitors the integrity of the navigation signals from GNSS satellites.
"Sole-means navigation system"	is a navigation system approved for a given operation or phase of flight that must allow the aircraft to meet, for that operation or phase of flight all four navigation system performance requirements: accuracy, integrity, availability and continuity of service.

Note.- This term does not exclude the carriage of other navigation systems. Any sole-means navigation system could include one (stand-alone installation) or several sensors, possibly of different types (multi-sensors installation).

"Supplemental-means navigation system" is a navigation system that must be used in conjunction with a sole-means navigation system. Approval for supplemental means for a given phase of flight requires that a sole means navigation system for that phase of flight must be on board and may be monitored for cross-checking. Amongst the navigation system performance requirements for a given operation or phase of flight, a supplemental-means navigation system must meet the accuracy and integrity requirements for that operation or phase of flight; there is no requirement to meet availability and continuity requirements.

Appendix

SUMMARY OF AMENDMENTS TO THE PLAN

(Approved by the President on behalf of the Council)