



International Civil Aviation Organization

Eighth Meeting of CNS/MET Sub-Group of APANPIRG

Bangkok, Thailand, 12 – 16 July 2004

Agenda Item 9: Exchange of OPMET Information

SECOND OPMET MANAGEMENT TASK FORCE MEETING

(Presented by Australia)

SUMMARY

This paper reviews the work accomplished by the Second OPMET Management Task Force Meeting held in Bangkok, Thailand, 10-13 February 2004, and presents the work program developed by the meeting for review and consideration.

1. INTRODUCTION

1.1 The OPMET Exchange Task Force (OPMET/E TF/1) was established by Decision 13/29 of APANPIRG based on the proposal by the sixth meeting of the CNS/MET Sub-group held in Bangkok in July 2002 to address issues related to the ROBEX scheme and other OPMET exchanges. The OPMET/E TF was renamed the OPMET Management Task Force (OPMET/M TF), with revised terms of reference, work program and composition, at the CNS/MET SG/7 meeting held in Bangkok from 15-21 July 2003 and ratified at the APANPIRG/14 meeting held in Bangkok from 4 to 8 August 2003. This paper represents the work accomplished by the Second Meeting of the Task Force. The report of the Task Force with relevant Appendices is provided with this report for detailed review.

2. DISCUSSION

2.1 The OPMET/M TF/2 Meeting was held in Bangkok from 10 to 13 February 2004. The meeting was attended by – experts from Australia, Hong Kong, China, Fiji, Japan, Oman, Singapore, Thailand, Indonesia and IATA.

2.2 The meeting reviewed the TOR and work program of the group as approved by the CNS/MET SG/7 and proposed some changes as shown in Appendix B to the report; the meeting formulated the draft decision.

Draft Decision 2/1 - Terms of reference and work program of OPMET/M TF

That the terms of reference and the work program of the OPMET/M TF be amended as shown in Appendix B-1 to the Report.

2.3 The meeting discussed the current status of the OPMET exchange in the Region and reviewed the results of a recent monitoring of the OPMET data availability carried out by RODB Bangkok, as requested at the first Task Force meeting. The meeting expressed appreciation to Bangkok RODB for carrying out the monitoring.

2.4 The meeting requested that in order to monitor properly the OPMET information from the MID region, which is part of the ROBEX scheme, an updated MID FASID Table Met 1A should be made available.

2.5 The meeting noted the shortfalls in OPMET data from the Pacific region and it considered that more information regarding the current situation was needed. The meeting also expresses concern of the procedural and quality assurance aspects of FT bulletins issued by Vietnam for Cambodia and also for OPMET information from the Philippines which was not received regularly by Hong Kong, China. The meeting also noted the improvements of the ROBEX scheme in both Thailand and Australia.

2.6 In discussing Chapter 9 of the ROBEX Handbook, AIREP exchange, the meeting noted that due to the lack of up-to-date information regarding the AIREP exchange, the chapter had not been changed. The meeting agreed that a small sub-group named the AIREP Team, should carry out a survey, with a questionnaire circulated to all States in the ASIA/PAC and MID Regions.

2.7 The meeting considered the changes to the codes as a very important issue that needed to be addressed urgently by all ROBEX centres, as METAR and TAF bulletins issued by different States deviated considerably from the standard formats. The meeting formulated the following draft conclusion:

Draft Conclusion 2.2 – Fostering the standardization of OPMET bulletins in the ASIA/PAC Region.

That, the States in the ASIA/PAC Region be urged to fully implement the new provisions related to the format of the METAR, SPECI and TAF message specified in the Amendment 73 of the Annex 3, which will become applicable on 25 November 2004.

2.8 The expert from Brisbane RODB presented an alternative form of the ROBEX tables that could be use as a proper format of the future Catalogue. It was agreed that after completing the database content, this tool, named ASIA/PAC ROBEX Data Base. The meeting expressed its appreciation to the representative from Brisbane RODB and decided that all RODBs should take part in its further development and evaluation.

2.9 The meeting reviewed the drafts for the ROBEX handbook and the ICD document that had been prepared by the Secretariat. The meeting reviewed the draft in detail and proposed some corrections and additions. (Both of these documents will be presented as separate working papers.)

Draft Conclusion 2/3 – New edition of the ROBEX Handbook and ICD

That ICAO is invited to publish the new editions of the ROBEX Handbook and the Interface Control Document (ICD) for interrogating the ASIA/PAC Regional OPMET data Banks (ICD for ASIA/PAC RODBs), according to the established procedures.

Note: It is recommended that both documents be posted on the ICAO web site.

2.10 The meeting was informed that the seventh meeting of the CNS/MET SG, discussed the need for inclusion of “short” TAFs in regular ROBEX exchange. The Secretariat conducted a survey of ASIA/PAC States requesting information on the current situation concerning the issuance and dissemination of short TAF. Based on the results of the survey, the meeting agreed that the Regional ANP should be amended to reflect the requirement for the short TAF and formulated the following draft conclusion:

Draft Conclusion 2/4 – amendment of the ASIA/PAC Basic ANP and FASID to include enabling provision for the “short” TAF (period of validity – 9 or 12 – hour)

that the ASIA/PAC Basic ANP and FASID Table Met 1A be amended as shown in the Appendix D to the report.

2.11 The meeting recalled that OPMET/E TF/1 meeting was of the opinion that the RODBs should handle all types of OPMET information including SIGMET (WS, WC, WV) and advisories (FK and FV). The meeting was advised by the Secretariat that as a follow-up of Recommendation 1/12 b) of the MET Divisional Meeting (2002), a new version of the ASIA/PAC regional SIGMET Guide was prepared, published and distributed to all ASIA/PAC States.

2.12 The meeting reviewed the results of a monitoring exercise carried out by the SADIS Gateway in the UK. The monitoring included every SIGMET header received during a three-month period. It was seen from the table that there existed a serious shortfall of SIGMET messages from ASIA/PAC region for uplink through SADIS. The inclusion of information about SIGMET bulletins issued by the States in the ROBEX documentation, should allow for systematic monitoring of their availability, leading to resolving existing deficiencies. The meeting agreed to the formation of a SIGMET team to study matters related to SIGMET and report to the OPMET/M TF/3 meeting.

2.13 The meeting noted that currently WMO abbreviated heading for the AIREP message did not make any distinction between routine and special air-reports; the data type designator UA was used for both. However, the requirements for distribution of the routine (AIREP) and special air-reports (SPECIAL AIREP) reports were different. Taking into account that this matter should be addressed to WMO, the meeting formulated the following draft conclusion.

Draft Conclusion 2/5 - New data type designators for bulletins containing special air-reports.

That in order to facilitate the exchange of the special air-reports, WMO be invited to designate a new data type designators (A₁ A₂) for the WMO abbreviated headings of the bulletins containing special air-reports and, in particular, for special air-reports for volcanic ash.

2.14 The meeting noted that since the OPMET/E TF/1 meeting there were some improvements of the availability of ASIA/PAC OPMET data by including in the exchange data required by the SUG Annex 1.

2.15 The meeting recalled that the OPMET/E TF/1 meeting proposed that OPMET monitoring procedures similar to those used in EUR Region should be developed. Bangkok RODB agreed to perform the first monitoring; this was conducted on 1st July 2003 for 24 hours. The meeting was presented with tables showing the results of the first trial. It was agreed that all RODBs should implement monitoring as part of the quality control procedures.

2.16 It was recognized that one of the main difficulties in developing procedures for OPMET monitoring was in deciding what should be the adequate reference for the requirements against which the OPMET exchange should be monitored. There was a need to consolidate different requirements stated in different documents. Finally the meeting was advised that SUG Annex 1 should be considered a formal requirement set by the aviation users. Based on this understanding, the meeting agreed that the ROBEX scheme should continue to be developed in the direction to cover all requirements set by the Regional ANPs and the SUG Annex 1.

2.17 The meeting noted that with the inclusion of the new SIGMET table in the ROBEX Handbook, it would be possible to start monitoring of the SIGMET issuance and availability. The SIGMET team of the OPMET/M TF would undertake further work.

2.18 It was recognized that all RODBs have been using some kind of quality control procedures. It was agreed that in the future these procedures should be unified and documented in the ROBEX Handbook.

2.19 The meeting agreed to a proposal that in order to facilitate the communication between RODBs and ROBEX centres a system of focal points is developed.

2.20 The representative of Indonesia expressed their wish to become a permanent member of the OPMET/M TF. The meeting agreed that the membership of Indonesia would be very useful for the group.

3. ACTION BY THE MEETING

3.1 The meeting is expected to:

- a) review the report of the OPMET/M TF/2 Meeting provided in the Attachment;
- b) review the revised terms of reference, the action item list, and if found necessary, formulate recommendations for consideration by APANPIRG/15.

OPMET/M TF/2 – REPORT



**SECOND MEETING
OF ASIA/PAC OPMET MANAGEMENT TASK FORCE (OPMET/M TF/2)
OF CNS/MET SUB-GROUP OF APANPIRG**

(Bangkok, Thailand, 10 – 13 February 2004)

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**

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1. Introduction

1.1 The Second Meeting of the ASIA/PAC OPMET Management Task Force (OPMET/M TF/2) of the CNS/MET Sub-group of APANPIRG was held in Bangkok, Thailand from 10 to 13 February 2004.

2. Attendance

2.1 The meeting was attended by 15 experts from seven ASIA/PAC States, one expert from the Sultanate of Oman, representing the ICAO MID Region, and one expert from IATA. The List of participants is provided in Appendix A to the Report.

3. Opening of the meeting

3.1 On behalf of Mr. Lalit B. Shah, Regional Director, ICAO Asia and Pacific Office, Mr. Dimitar Ivanov welcomed all participants to the ICAO Regional Office, Bangkok and provided a brief overview of the objectives and the working arrangements for the meeting.

3.2 Mr. Rick Houghton, National Manager, Defence Weather Services, Australia, opened the meeting and welcomed the new participants from Indonesia, Hong Kong China, and Oman.

4. Officers and Secretariat

4.1 Mr. Rick Houghton, Rapporteur of the OPMET/M Task Force presided over the meeting.

4.2 Mr. Dimitar H. Ivanov, Regional Officer, Aeronautical Meteorology acted as Secretary of the meeting. He was assisted by Mr. Li Peng, Regional Officer, CNS.

5. Agenda of the Meeting

5.1 The agenda adopted by the meeting was as follows:

Agenda Item 1: a) Adoption of provisional agenda and working arrangements for the meeting
 b) Review of the TORs and work programme of the group

Agenda Item 2: Review:

 a) Current status of OPMET exchange in the Region
 b) Content and operation of regional OPMET Data Banks
 c) Inter-Regional exchange

Agenda Item 3: Review of regional guidance material on OPMET exchange

 a) Draft new version of ROBEX Handbook
 b) Regional ICD for OPMET data banks access procedures

Agenda Item 4: Requirements for amendments of the OPMET exchange schemes

Agenda Item 5: Development of procedures for monitoring and management of the OPMET information:

 a) OPMET exchange monitoring

- b) OPMET bulletins update procedure
- c) SIGMET tests
- d) OPMET data banks quality control procedures

Agenda Item 6: Future Work Programme

Agenda Item 7: Any other business

Agenda Item 1 b): Review of the TORs and work programme of the group

1.1 The meeting recalled that the OPMET Exchange Task Force (OPMET/E TF) was established by Decision 13/28 of APANPIRG based on the proposal by the sixth meeting of the CNS/MET Sub-group held in July 2002 in Bangkok. The Seventh Meeting of the CNS/MET Sub-group of APANPIRG, held in Bangkok conjointly with the Tenth Meeting of the CNS/ATM Implementation Coordination Sub-group from 15 to 21 July 2003, reviewed the terms of reference (TOR) and work programme of the OPMET Exchange Task Force. It was recognized that the OPMET exchange and the ROBEX scheme needed continuous management, therefore, the meeting proposed to assign some additional tasks to the group and to rename it to ASIA/PAC OPMET Management Task Force (OPMET/M TF). The CNS/MET SG/7 meeting adopted Decision 7-10/26, by which the TOR and the work programme of the task were amended to reflect its expanded responsibilities.

1.2 The meeting reviewed the TOR and the work program of the group as approved by CNS/MET SG/7 and proposed some changes, as shown in Appendix B to the report. The meeting formulated the following draft decision:

Draft Decision 2/1 – Terms of reference and work programme of OPMET/M TF

That, the terms of reference and the work programme of the OPMET/M TF be amended as shown in Appendix/xx to the Report.

1.3 The meeting reviewed the progress on the Action Item list developed by OPMET/E TF/1 meeting. The list contained 24 Action Items and represented *de facto* a detailed work schedule to be followed by the task force in carrying out the tasks defined by the CNS/MET SG. It was identified that nine tasks have been fully completed and two tasks have been partly completed, while the rest of the tasks were on-going. Detailed information on the status of the tasks, together with the new tasks agreed by the meeting, is provided in Appendix C-1, Revised list of Action Items by OPMET/M TF/2 meeting.

Agenda Item 2: Review:

- a) Current status of OPMET exchange in the Region**
- b) Content and operation of regional OPMET Data Banks**
- c) Inter-Regional exchange**

2.1 Current status of OPMET exchange in the Region**2.1.1 Monitoring of OPMET data availability**

2.1.1.1 The meeting reviewed the results of a recent monitoring of the OPMET data availability carried out by RODB Bangkok. The purpose of this monitoring exercise was to identify any shortfalls of OPMET data required at RODB Bangkok. ROBEX Tables and ASIA/PAC AOP1 Table were used as reference in monitoring the incoming OPMET traffic for a period of 24 hours. The results are presented in Appendix D to the report in two tables covering: a) aerodromes listed in ASIA/PAC FASID Table MET 1A, from which METAR and “long” (18 and 24 hr) TAF are required; b) additional aerodromes, not listed in ASIA/PAC FASID Table MET 1A, for which METAR and/or TAF have been received at the RODB Bangkok.

2.1.1.2 The meeting expressed its appreciation to RODB Bangkok for providing the material, which, though limited to 24-hours, was illustrative of the current status of the OPMET data availability. In discussing the results of the study, the following observations were made:

- all aerodromes in the MID region were listed in table B, since only the FASID Table MET 1A from the ASIA/PAC region had been used as reference;
- there were still a number of AOP aerodromes, from which OPMET data was missing;
- there were a number of non-AOP domestic aerodromes included in the OPMET exchange, mainly due to the requirements stated in the SADIS User Guide (SUG), Annex 1.

2.1.1.3 The meeting requested that in order to monitor properly the OPMET information from the MID region, which is part of the ROBEX scheme, an updated MID FASID Table MET 1A should be made available (**Action item**).

2.1.1.4 The meeting was advised by the Secretariat that the inclusion of additional domestic aerodromes in the SUG Annex 1 was done through a process that involved concurrence by the States concerned. Therefore, once the States agree on the inclusion of these aerodromes in the SUG Annex 1, OPMET data for them should be included in the exchange, and in particular, should be made available on SADIS. In this regard, the meeting agreed that in assessing the availability of the OPMET data, the three main sources of requirements for regular (METAR, TAF) data should be considered, as follows: 1) Regional ANP: BANP Table AOP1, FASID Table MET 1A, FASID Table MET 2; 2) ROBEX Tables developed initially by the RAN meeting and updated afterwards, which may differ slightly from the ANP tables; and, 3) SUG Annex 1, which reflects the requirements by aviation users for global availability of OPMET data through SADIS.

2.1.1.5 Based on the above understanding, it has been generally agreed that in the future, the availability of OPMET data should be monitored against the three sources mentioned above, either separately, or simultaneously. This matter was further discussed under Agenda Item 5.

2.1.2 OPMET data shortfalls

2.1.2.1 The meeting noted in particular the shortfalls of OPMET data from the Pacific region. It was felt that more information regarding the current situation with the OPMET exchange in the Pacific was needed. In this regard, the meeting invited the members from Brisbane and Nadi RODBs to carry out a study on the availability of OPMET data from the Pacific region and the corresponding arrangements for the preparation and dissemination of this information. It was noted that New Zealand in a recent communication with the Rapporteur of the group expressed concern regarding the current situation with the provision of OPMET information in some parts of the Pacific region and requested the assistance of the group in improving this situation. **(Action item)**

2.1.2.2 The meeting was informed that Hong Kong China, as the ROBEX centre responsible for the OPMET information from the Philippines, had not received regularly METAR and TAF messages from the Philippines and that it faced difficulties in communicating with the relevant State's authorities on this matter. It was decided that the problems related to the availability of OPMET information from the Philippines should be pursued with the help of the Secretariat. If no improvement was achieved by the APANPIRG/15 meeting in August 2004, the irregular METAR and TAF information from the Philippines should be included in the List of Air Navigation Deficiencies for the ASIA/PAC Region. **(Action item)**

2.1.2.3 The expert from Indonesia informed the meeting on the planned inclusion of METAR and TAF for most of the Indonesian aerodromes listed in the FASID Table MET 1A into the ROBEX bulletins compiled by Jakarta ROBEX centre. He provided the information about the new structure of the ROBEX bulletins from Indonesia for inclusion in the final draft of the ROBEX Handbook.

2.1.2.4 The meeting noted an information that TAF for the two international aerodromes of Cambodia have appeared recently in a FT bulletin issued by Vietnam. The Secretariat was aware of the fact that these TAFs were not issued by a meteorological office in Cambodia and it was most likely that the TAFs were issued by a meteorological office in Vietnam. The meeting expressed concern of the procedural and quality assurance aspects in this case and requested the Secretariat to clarify it further with the meteorological authorities of Cambodia and Vietnam. **(Action item)**

2.1.3 The meeting noted the following improvements of the ROBEX exchange:

2.1.3.1 Australia introduced new bulletins SAAU31 and SAAU32 containing 34 Australian aerodromes. Three TAF bulletins have been introduced as follows: FTAU31 (10 airports); FTAU32 (11 airports), and FCAU33 (13 airports issuing 12-hr forecasts at 6-hr cycle). With the introduction of the new bulletins all requirements for OPMET information from Australia stated in the FASID Table MET 1A and SUG Annex 1 were covered.

2.1.3.2 Thailand introduced new METAR bulletins SATH31, SATH32, SATH33, and new TAF bulletins FTTH31, FTTH32, FTTH33, which have been sent regularly to London for uplink through SADIS. Thus, OPMET information from 35 international and domestic aerodromes in Thailand has been included in the exchange covering most of the requirements of FASID Table MET 1A and SUG Annex 1

2.2 **Content and operation of regional OPMET Data Banks**

2.2.1 Representatives of Bangkok, Brisbane, Nadi, Singapore and Tokyo RODBs presented to the meeting information on the current content and procedures of the corresponding data banks.

2.2.1.1 RODB Bangkok carried out monitoring trials on the availability of OPMET data and reported the results to CNS/MET SG/7 meeting. This issue was discussed in more detail under agenda

item 5. New METAR and TAF bulletins for additional airports in Thailand were introduced and sent to London regularly.

2.2.1.2 RODB Brisbane has been developing a new ROBEX database based on Microsoft Access. New METAR and TAF bulletins for Australia have been introduced in order to fulfill the requirements of the FASID Table MET 1A and SUG Annex 1.

2.2.1.3 RODB Nadi has continued to serve PAC area. The meeting was informed that a secondary access to Brisbane via Internet has been established.

2.2.1.4 RODB Singapore presented examples of OPMET bulletins received and pointed out a number of discrepancies in the format of the bulletins, as follows:

- a) the use of code words METAR and TAF, and the date/time group in the bulletins varied from centre to centre;
- b) TAFs with different validity periods were included in some bulletins; FT data type designator was used for “short” TAFs; the filing time for TAFs was also incorrect in some instances;
- c) examples for AIREP bulletins showed that most of them were being received via GTS or ISCS and only a few via AFTN;
- d) the code word PIREP appeared in some special air-reports, disseminated in the AIREP bulletins; in this regard, it was pointed out that PIREP was not defined neither by ICAO nor by WMO and, therefore, should not be used.

2.2.1.5 The meeting expressed serious concern regarding the deviations from the standard formats of the OPMET messages and bulletins, as seen from the examples provided by Singapore, and stressed on the need for standardizing all messages and bulletins according to ICAO SARPs and WMO codes. This was particularly important in view of the additional changes to the METAR, SPECI and TAF codes introduced by Amendment 73 of Annex 3. The Secretariat advised that these changes have already been introduced in the draft new edition of the ROBEX Handbook, where examples of the correct format for all OPMET messages and bulletins were provided. The issue was further discussed under the Agenda Item 3.

2.2.1.6 RODB Tokyo informed on the on-going work for adding some domestic airports in Japan to the ROBEX bulletins. Japan had already included short TAFs (9-hr validity) in the OPMET exchange. It was also noted that the procedures for SIGMET for volcanic ash issued by MWO Tokyo have been aligned with the ICAO requirements.

2.2.1.7 Regarding the mirroring of the data between the RODBs, the Secretariat informed that in the new ROBEX tables the AFTN addresses of four RODBs: Bangkok, Brisbane, Singapore and Tokyo, were included in the dissemination lists of all ROBEX bulletins. This will ensure that all ASIA/PAC OPMET data included in the ROBEX exchange will be available in these four RODBs. RODB Nadi was not included in the mirroring at this stage but this could be done in the future if necessary. In order to facilitate this mirroring procedure RODB Brisbane was requested to introduce a single AFTN address for the incoming messages. **(Action item)**

2.3 Inter-Regional exchange

2.3.1 The meeting recalled the agreement by the OPMET/E TF/1 meeting that the inter-regional exchange should be carried out through dedicated gateways, rather than through individual addressing by the ROBEX centres. This procedure was intended to eliminate the current practice of

sending more than one copy of the same bulletin to other regions, which created problems in automatic handling of the OPMET data by the receiving/processing centres.

2.3.2 This procedure has been introduced in the exchange between ASIA/PAC and EUR regions, where RODB Singapore relayed all collected ASIA/PAC OPMET data to London. Similarly, RODB Bangkok provided ASIA/PAC OPMET data to MID Region and Tokyo to NAM Region. By means of dedicated single IROGs the inter-regional exchange has improved, however, it was identified that the procedure has not been fully efficient yet. Some of the ROBEX centres have continued to send their bulletins directly to the other regions, therefore, duplications still existed. The meeting agreed that all ROBEX centres should be advised by the Secretariat on the need to eliminate the AFTN address of other Regions from the distribution lists for their METAR and TAF bulletins. (**Action item**)

2.3.3 Regarding the transmission of ASIA/PAC OPMET data to North America, the meeting recognized that Tokyo, Nadi and Brisbane were sending bulletins to Washington which would lead to repetitions of bulletins. Since the U.S. member of the group was not present, it was decided that the matter of single IROG for NAM region should be further coordinated with Washington. (**Action item**)

2.3.4 It was noted that RODB Brisbane can not provide IROG function for South America because there was no direct AFTN link between Brisbane and Chile and it was not feasible to establish such a link in the future. That is why, the transmission of OPMET data between ASIA/PAC and South America was through the U.S. In view of this it was proposed to amend the ROBEX Handbook by deleting the requirement for IROG between ASIA/PAC and SAM regions.

2.3.5 The observer from IATA presented preliminary results of a monitoring study aimed at identifying the availability of OPMET data from ASIA/PAC region in the EUR Region and on SADIS. The availability in EUR was monitored based on the OPMET data received at the German Weather Service (DWD). The results were grouped in different tables, reflecting the status of the exchanged information against the requirements stated by the ANP (the AOP table), SUG Annex 1 and the IATA requirements. The monitoring results showed a large variety in the availability of the OPMET data. It was noted, in particular, that some ASIA/PAC OPMET data were available in the DWD, but not on SADIS. It was suggested that inadequate AFTN addressing, as well as dissemination of OPMET data through non-ICAO communication circuits, for instance, via the WMO GTS, could have bearing to the observed discrepancies. The meeting was invited to review the results and to pay special attention to missing or irregular OPMET data on SADIS.

2.4 Transition to ATN

2.4.1 The meeting was briefed by the secretariat on the developments related to the transition to ATN Transition in the ASIA/PAC Region. It was recalled that OPMET/E TF/1 meeting recognized the need for continuous liaison with the ATN Transition Task Force and requested information on possible effect of ATN on the current OPMET exchange procedures and data formats. It was explained that the ground/ground element of Aeronautical Telecommunication Network (ATN) in the Asia and Pacific regions is expected to be completed by the end of 2005. The ground/ground application – AMHS, would be gradually employed to replace AFTN switches by States in the region. During the transition period, the conventional messages, exchanged through AFTN, including OPMET messages, would continue be supported by address conversion to AMHS format and vice versa. No changes would be made to the format and contents of text part of AFTN messages carried over by AMHS. Inter-regional exchanges of OPMET bulletins should be carried out via AFTN during the transition period through AMHS/AFTN gateway.

2.4.2 The meeting felt that the transition to ATN should continue to be a focus of the group and liaison with the ATN Transition Task Force should be maintained. It was stressed also that these issues

should become even more important in connection with the planned transition from alphanumeric aeronautical meteorological codes to binary coded BUFR messages. It was mentioned in this regards that, though this transition was to be finalized not earlier than 2015, preparations should start on time. It was decided that some information related to the transition from AFTN to ATN should be included in the ROBEX Handbook to increase the awareness of the ROBEX centres on the on-going developments in the COM field. (**Action item**)

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Agenda Item 3: Review of regional guidance material on OPMET exchange

- a) Draft new version of ROBEX Handbook**
- b) Regional ICD for OPMET data bank access procedures**

3.1 Under this agenda item the meeting reviewed the drafts for the ROBEX Handbook and the ICD document, that had been prepared by the Secretariat. Some changes were proposed for the final drafts, which are to be presented at the CNS/MET SG/8 Meeting in July 2004.

3.2 ROBEX Handbook

3.2.1 The ROBEX Handbook has been fully revised and the draft new version (12th edition) presented a number of changes to cover *inter alia* the items agreed by the OPMET/E TF/1 meeting, as follows:

- aligning the provisions of ROBEX Handbook with the relevant provisions of Annex 3, Annex 10, WMO No.306 and WMO No. 386;
- inclusion of all OPMET data types in the ROBEX exchange;
- modifying the structure of the ROBEX scheme and changing the related terminology (cf. p. 3.4 of OPMET/E TF/1 report);
- improving the format of the ROBEX tables;
- introducing new tables where necessary and deleting the obsolete tables.

3.2.2 The meeting reviewed the draft in detail and proposed some corrections and additions. The Secretariat took note of the changes proposed, which appear in the final draft shown in Appendix ... to this report as highlighted/deleted text.

3.2.3 In discussing Chapter 9 of the Handbook, AIREP exchange, the meeting noted that due to the lack of up-to-date information regarding this particular exchange, the chapter has not been changed. It was felt that a survey with the ASIA/PAC and MID States on the AIREP exchange was necessary in order to verify the current procedures, as well as the availability and the usage of the AIREP bulletins. The Secretariat advised that according to Annex 3, the collection and dissemination of the AIREPs was supposed to be done by the MWOs, while in the current version of the ROBEX Handbook this task was assigned to the METAR Collection Centres (MCCs). The meeting agreed that a small sub-group, named AIREP Team, should carry out the survey by means of a questionnaire circulated to all States in the regions. The Secretariat would support the work of the AIREP Team. (**Action item**)

3.2.4 The meeting noted that new ROBEX Tables for “short” TAF (FC TAF with 9 and 12 hour validity), and for SIGMET, were under development based on surveys done by Secretariat. It was expected that these new tables should be finalized on time for inclusion in the draft new ROBEX Handbook. (**Action item**)

3.2.5 The meeting was advised by the Secretariat on the changes to METAR, SPECI and TAF formats as a result of Amendment 73 to Annex 3, which would become applicable on 25 November 2004. In particular, it was noted that each METAR, SPECI and TAF message in a bulletin should start with the code words METAR, SPECI and TAF, respectively; in case of corrected and/or amended messages, the abbreviations COR and AMD should be additionally included, e.g., METAR COR, TAF AMD. Since these changes were to be implemented by the end of November this year, they have been incorporated in the draft ROBEX Handbook.

3.2.6 The meeting considered the changes to the codes as a very important issue that needed to be addressed urgently by all ROBEX Centres. It was shown through examples that the current METAR

and TAF bulletins issued by different States deviated considerably from the standard formats. It was stressed that the format of the OPMET messages and bulletins should be standardized by strictly following the ICAO and WMO provisions. In this regard, the meeting formulated the following draft conclusion:

Draft Conclusion 2/2 – Fostering the standardization of OPMET bulletins in the ASIA/PAC region

That, the States in the ASIA/PAC Region be urged to fully implement the new provisions related to the format of the METAR, SPECI and TAF messages specified in the Amendment 73 of the Annex 3, which will become applicable on 25 November 2004.

3.2.7 The meeting noted that the ROBEX Handbook chapters on OPMET exchange management procedures and quality control of OPMET data were still under development. Nevertheless, the meeting considered the draft of the new ROBEX Handbook as a considerable improvement and agreed that it should be published as soon as possible, while the missing new chapters could be added at a later stage. The meeting agreed also that the ROBEX Handbook should be a dynamic document that could be amended quickly when necessary, and should be made available on the ICAO web site and on the OPMET/M TF page on the web site of the Bureau of Meteorology, Australia.

3.2.8 Concern was expressed regarding the time that should be given to the ROBEX centres and RODBs to introduce the changes required by the new ROBEX Handbook including those originating from the Amendment 73 of Annex 3. The meeting was advised by the Secretariat that the applicability date of the Amendment 73 was November 2004; as for the applicability date for the new ROBEX Handbook, it was explained that it should undergo a review by the CNS/MET SG/8 meeting in July, followed by final presentation at the APANPIRG/15 in August 2004. Thus it was feasible that the applicability date for any new provisions should be around 1 January 2005. This should not prevent, however, the introduction of some of the changes included in the ROBEX Handbook on an earlier date by some centres if this would not affect the normal operation of other centres included in the ROBEX scheme.

3.3 ASIA/PACIFIC Regional Interface Control Document for OPMET Data Banks Access Procedures

3.3.1 The meeting reviewed the draft new ASIA/PAC Regional Interface Control Document for OPMET Data Banks Access Procedures (RODB ICD) prepared by the Secretariat. The new concept for the ICD was to have one “general” part describing the common procedures valid for all RODBs, and separate Appendices for each RODB, describing some specific procedures and formats.

3.3.2 It was planned that the ICD should contain in the future another appendix, ASIA/PAC OPMET Data Catalogue, which should contain a comprehensive list of all OPMET data available in all RODBs. This part of the ICD was still to be developed.

3.3.3 The new ICD document included a standardized format for a RODB “Reply” message similar to the one used by the European Data Banks. The RODBs were requested to assess the feasibility of introducing such a message including the necessary software changes and advise the Secretariat accordingly.

3.3.4 The expert from Brisbane RODB presented an alternative form of the ROBEX Tables that could be used as a proper format of the future Catalogue. He presented also information on the development of a ROBEX database by means of the Microsoft Access, that could be used by the RODBs, ROBEX centres, and the Secretariat as a standard tool in the OPMET exchange management. It was

agreed that after completing the database content, this tool, named ASIA/PAC ROBEX Data Base, should be made available on CD-ROM or through a FTP site to all members for testing and evaluation.

3.3.5 The meeting expressed its appreciation to the representative of Brisbane RODB for developing this very useful tool and decided that all RODBs should take part in its further development and evaluation. The results of the evaluation would be reviewed by OPMET/M TF/3 meeting in February 2005.

3.3.6 A proposal was made to combine the ROBEX Handbook and the RODB ICD in one document and thus to avoid duplication of tables and other identical material. The Secretariat explained that while this was a very good idea, it was very important to publish the new versions of the documents as soon as possible, since the older versions were very much outdated. Combining the two documents would require coordination and corresponding changes in some other documents, like the Regional ANP, and this would cause a delay. Therefore, it was agreed that the prepared drafts, amended as necessary to reflect the agreed changes by this meeting, should be processed further and published after the final approval by APANPIRG/15 in August 2004. In this regard, the meeting formulated the following draft conclusion:

Draft Conclusion 2/3 – New edition of the ROBEX Handbook and ICD

That, ICAO is invited to publish the new editions of the ROBEX Handbook and the Interface Control Document (ICD) for interrogating the ASIA/PAC Regional OPMET Data Banks (ICD for ASIA/Pac RODBs), according to the established procedures.

Note: It is recommended that both documents be posted on the ICAO web site.

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Agenda Item 4: Requirements for amendments of the OPMET exchange schemes**4.1 Inclusion of “short” TAF in the ROBEX scheme**

4.1.1 The meeting was informed that the seventh meeting of CNS/MET SG held in Bangkok, July 2003, discussed the need for inclusion of the “short” TAFs in the regular ROBEX exchange. The meeting was aware that a number of States in the Region have already been issuing short TAFs with period of validity 9 or 12 hours (FC TAF). It was noted, however, that there was no formal requirement for these forecasts in the Regional ANP and for this reason the short TAFs were not included in the ROBEX exchange. It was also noted that IATA had included the requirement for the short TAFs, issued by ASIA/PAC States, in the SUG Annex 1. Therefore, CNS/MET SG/7 agreed that the ASIA/PAC States should be requested to include the “short” TAF bulletins in the regular ROBEX exchange, and consequently, make them available for uplink to SADIS and ISCS. A draft conclusion on the subject was formulated.

4.1.2 APANPIRG/14 endorsed the conclusion on “short” TAF and, as a follow-up, a letter was circulated to the ASIA/PAC States requesting information on the current situation concerning the issuance and dissemination of short TAF. The Secretariat informed the meeting that 17 replies to the State letter were received. Most of the States that replied had the practice of regular issuance of short TAFs with validity of either 9 or 12 hours. Some of these short TAFs had already been included in the regular exchange but this had not been reflected in the ROBEX Handbook. Out of the 17 States that replied, two States did not issue short TAF (the U.S. and Macao, China) and one State (Cambodia) did not issue any TAF at the moment. There was a general agreement expressed by the States that the short TAFs should be included in the ROBEX exchange. One State (New Zealand) advised that the 9-hour TAFs for its international aerodromes were issued mainly for the purpose of VOLMET, and since there was no requirement from the aviation users for their short TAF, there were no plans to include them in ROBEX.

4.1.3 Based on the results of the study above, the meeting agreed that the Regional ANP should be amended to reflect the requirement for the short TAF and formulated the following draft conclusion:

Draft Conclusion 2/4 – Amendment of the ASIA/PAC Basic ANP and FASID to include enabling provision for “short” TAF (period of validity - 9- or 12-hour)

That, the ASIA/PAC Basic ANP and FASID Table MET 1A be amended as shown in Appendix xx to the Report.

Note: The draft amendment proposal is to be prepared by the Secretariat and coordinated with the MET Section, ICAO Headquarters, so as to be ready for the CNS/MET SG/8 meeting in July 2004.

4.2 Inclusion of SIGMET in the ROBEX scheme

4.2.1 The meeting recalled that OPMET/E TF/1 meeting was of the opinion that the RODBs should handle all types of OPMET information including SIGMET (WS, WC, WV) and advisories (FK and FV). The meeting was advised by the Secretariat that as a follow-up of Recommendation 1/12 b) of the MET Divisional Meeting (2002), a new version of the ASIA/PAC Regional SIGMET Guide was prepared and published. This document provided *inter alia* information on the requirements for the dissemination and exchange of SIGMET. The Guide was sent to all ASIA/PAC States and posted on ICAO web site.

4.2.2 The meeting reviewed the results of a monitoring exercise carried out by the SADIS Gateway in the UK on the availability of SIGMET for SADIS. The monitoring results were presented in a

table that included every SIGMET header received at the SADIS Gateway during a three-month period. It was seen from the table that there existed serious shortfalls of SIGMET messages from ASIA/PAC region for uplink through SADIS. The reason for this could be two-fold: inadequate communication (e.g., AFTN addressing of SIGMET did not include SADIS), or not issuance of SIGMET by the MWOs in the States. It was recalled that, whatever the reason was, lack of SIGMETs from some MWOs in the ASIA/PAC Region has been recognized and included in the list of air navigation deficiencies.

4.2.3 The inclusion of information about SIGMET bulletins issued by the States in the ROBEX documentation should allow for systematic monitoring of their availability and, thus, should lead to resolving the existing deficiencies. Therefore, the group agreed that this task should be given highest priority, and a SIGMET-team should study the matters related to SIGMET and report to OPMET/M TF/3 meeting. **(Action item)**

4.2.4 The meeting noted that provisions for SIGMET have already been included in the draft new ROBEX Handbook. The Secretariat informed the meeting that in December 2003 a letter was sent to all ASIA/PAC States requesting information on SIGMET bulletins issued by their MWOs. So far, only 7 replies have been received. The results from this survey, together with the information received from the participants at this meeting would be used to develop a SIGMET bulletin table for the ROBEX Handbook. This table will use as a reference the FASID Table MET 1B, which lists all MWOs in the ASIA/PAC Region. Similar table should be prepared for the MID Region. **(Action item)**

4.3 Introduction of new WMO data type designator for the bulletins containing special air-reports

4.3.1 The meeting noted that currently the WMO abbreviated heading for the AIREP messages did not make any distinction between routine and special air-reports; the data type designator UA was being used for both. However, the requirements for distribution of the routine (AIREP) and special air-reports (SPECIAL AIREP) were different. That is why, the meeting agreed to propose to CNS/MET SG/8 meeting to review the matter of introducing separate data type designator for special AIREPs (e.g., UB), and eventually, for the particular case of special AIREP for volcanic ash (e.g., UV). Taking into account that this matter should be addressed to WMO, the meeting formulated the following draft conclusion:

Draft Conclusion 2/5 – New data type designators for bulletins containing special air-reports

That, in order to facilitate the exchange of the special air-reports, WMO be invited to designate new data type designators (A_1A_2) for the WMO abbreviated headings of the bulletins containing special air-reports and, in particular, for special air-reports for volcanic ash.

4.4 Additional requirements for OPMET data

4.4.1 The meeting noted that since the OPMET/E TF/1 meeting there were some improvements of the availability of ASIA/PAC OPMET data by including in the exchange additional data required by the SUG Annex 1. New METAR and TAF bulletins were introduced by Australia and Thailand. The experts from Indonesia advised that Indonesia would also introduce new bulletins to include all required AOP aerodromes. The information from Indonesia was appreciated by the meeting.

4.4.2 In reviewing the new ROBEX tables for TAF the meeting noted that currently the FT bulletins from Japan were issued with a lead-time of 9 hours, while it was a requirement by the ASIA/PAC Basic ANP, that the filing time of these forecasts should be “approximately two hours before

the start of the period of validity”. The expert from Japan took note of this discrepancy to be further reviewed by Japan with the intention to align the procedure with the requirement for a two-hour lead-time. **(Action item)**

4.4.3 Singapore indicated that METAR and TAF for Paya Lebar airport could be made available after consultation with the ROBEX centre Kuala Lumpur.

4.4.4 The meeting was informed that Papua New Guinea agreed to introduce new OPMET bulletins in order to include in the exchange all aerodromes required by SUG Annex 1. The introduction of the new bulletins would be done in cooperation with Brisbane ROBEX centre.

4.4.5 Australia informed that information for the two international airports in East Timor (not included in the ASIA/PAC AOP1 table) could also be made available by the Brisbane RODB.

4.4.6 The observer from IATA requested that the tables presented by him as a result of a survey of the availability of OPMET data in EUR Region and on SADIS be further reviewed by the RODBs and IROGs in order to introduce corrections to the dissemination procedures, especially for those airports indicated as “sometime available”. The meeting agreed that the tables presented by IATA indicated a large number of issues for the ASIA/PAC region and that the tables presented would serve as a basis for identifying the main shortfalls, for which rectifying action should be taken urgently. **(Action item)**.

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Agenda Item 5: Development of procedures for monitoring and management of the OPMET information:

- a) **OPMET exchange monitoring**
- b) **OPMET bulletins update procedure**
- c) **SIGMET tests**
- d) **OPMET data banks quality control procedures**

5.1 OPMET exchange monitoring

5.1.1 The meeting recalled that the OPMET/E TF/1 Meeting proposed that OPMET monitoring procedures similar to those used in the EUR Region should be developed. It was agreed that Bangkok RODB should perform the first monitoring trial on the regular METAR and TAF exchange.

5.1.2 RODB Bangkok carried out the first OPMET monitoring on 1st July 2003 for 24 hours. During this period all received METAR and TAF bulletins by Bangkok RODB were filed and analysed in regard to the availability of METAR and TAFs from the aerodromes required by the ROBEX tables. The format of the WMO header and the dissemination time were also monitored. The meeting was presented with tables showing the results of this first trial. The tables allowed for identification of airports with irregular availability of METAR or TAF.

5.1.3 The meeting was informed that Bangkok RODB could not utilise the software developed by UK for OPMET monitoring due to some differences in the presentation format of the OPMET data in the two centres. Therefore, the first trial, as well as the most recent monitoring carried out just before the meeting, involved manual processing of the incoming data. The meeting was informed in this regard that a special OPMET monitoring software was under development in RODB Bangkok and expected to be completed before CNS/MET SG/8 meeting in July 2004.

5.1.4 The meeting expressed appreciation to the Bangkok RODB for carrying out the monitoring trials and agreed that the monitoring procedures for both regular and non-regular OPMET data should continue to be developed by the OPMET/M TF. It was also agreed that all RODBs should implement monitoring as part of the quality control procedures. Brisbane RODB proposed to carry out an off-line monitoring trial using data from all other RODBs. For the purpose of this trial, it was decided that all RODBs should provide taped OPMET data for an agreed period on CD-ROM or through Internet.

5.1.5 It was recognized that one of the main difficulties in developing procedures for OPMET monitoring was in deciding what should be the adequate reference for the requirements against which the OPMET exchange should be monitored. There was a need to consolidate different requirements stated in different documents, like: Regional ANP (Table AOP1 and relevant FASID Tables), ROBEX Handbook, and SUG Annex 1. It was recalled that APANPIRG Conclusion 10/23 called for inclusion of all aerodromes in Table MET 1A (same as AOP1 Table); the current ROBEX tables did not yet cover all these aerodromes, though the situation has been improved since the OPMET/E TF/1 meeting in 2003. Finally, the meeting was advised that SUG Annex 1 should be considered a formal requirement set by the aviation users. Based on this understanding, the meeting agreed that the ROBEX scheme should continue to be developed in the direction to cover all the requirements set by the Regional ANPs and the SUG Annex 1. In view of this, it was agreed that the monitoring exercises and the presentation of the results from them should be done either separately against each of the tables in the main documents (ANP, ROBEX Handbook, SUG Annex 1), or, alternatively, against consolidated tables combining all requirements.

5.1.6 Regarding the additional requirements for the exchange of OPMET information not catered for by the ROBEX scheme, stated in FASID Table MET 2, the meeting was on the opinion that they were very much outdated. It was also recognized that keeping this table up-to-date was a very difficult task since it included information from different regions. The expert from IATA advised the meeting that in the EUR Region the SUG Annex 1 was considered as replacement of FASID Table MET 2. The meeting requested that Secretariat should further clarify the status of FASID Table MET 2 with the view that it could be declared obsolete and replaced by the SUG Annex 1 table as a formal “global” requirement for OPMET data stated by aviation users.

5.2 OPMET Bulletins Update Procedure

5.2.1 No progress has been made on this subject since OPMET/E TF/1 meeting. The Secretariat advised the group that during this period there was only one official request from an airline for additional OPMET data for one airport in India. The meeting was of the opinion that direct implementation of the EUR procedure for bulletin updates might not be efficient for ASIA/PAC Region. It was proposed that a simplified procedure should be used with the ICAO Regional Office acting as the main coordinator of any changes in the ROBEX bulletins.

5.2.2 On agreeing in principle with the development of a simplified procedure, the meeting stressed that whatever procedure was to be utilized, the States and ROBEX centres should be given advanced notice about any changes in the ROBEX bulletins in order to introduce the necessary changes to their data handling systems. In this regard, a lead time period of two months (or two AIRAC cycles, as defined in the EUR procedure) was considered appropriate.

5.3 SIGMET Tests

5.3.1 The meeting noted that with the inclusion of the new SIGMET table in the ROBEX Handbook, it would be possible to start monitoring of the SIGMET issuance and availability. Further development of the necessary procedures, based on those used in EUR Region, would be undertaken by the SIGMET team of the OPMET/M TF (cf. p.4.2.3).

5.4 OPMET Data Banks Quality Control Procedures

5.4.1 It was recognized that all RODBs have been using some kind of quality control procedures. It was agreed that in the future these procedures should be unified and documented in the ROBEX Handbook. The matter of developing quality control procedures, including suitable performance indicators, would continue to be in the work programme of the task force.

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Agenda Item 6: Future Work Programme

6.1 Based on the discussions on the different agenda items, a list of action items has been adopted by the meeting with corresponding target dates and responsibilities as shown in Appendix J to the report.

6.2 It was expected that during the period between the meetings the group should continue working actively by correspondence. It was agreed that the Rapporteur should present the report of this second meeting of the Task Force at the Eighth Meeting of the CNS/MET Sub-group to be held from 12 to 16 July 2004 in Bangkok.

6.3 The meeting agreed that the third meeting of the group will be held in February 2005, the exact dates to be decided. Tentatively the venue for this third meeting should be ICAO Regional Office, Bangkok.

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Agenda Item 7: Any other business

7.1 The expert from IATA who is also a member of the EUR BMG presented to the meeting a briefing on the recent BMG meeting. The following was the highlight of the discussions by BMG:

- The regular monitoring tests would be performed in the future at six-month intervals rather than three-months; the reason being an overall improvement of the OPMET exchange that rendered it possible to have less frequent tests;
- BMG have continued developing performance indicators and they could be found together with the results from the monitoring tests at the FTP sites of the three OPMET databanks in Europe;
- Problem handling procedures have been developed; the users report problems to BMG, who decides what follow up should be undertaken;
- Volcanic ash SIGMETs have been included as a separate item in the monitoring tests;
- BMG expressed some concerns regarding the introduction of BUFR coded OPMET data and its handling by the COM systems.

7.2 A proposal was made that in order to facilitate the communication between the RODBs and the ROBEX centres a system of focal points should be developed. The meeting agreed with this proposal and requested the Rapporteur to draft a letter to all ROBEX centres seeking nomination of focal points. The Secretariat would assist in this matter. (**Action item**)

7.3 The Secretariat was requested to provide as a matter of urgency additional information on the current status of Amendment 73 and the items related to the format of OPMET messages. It was agreed that this information would be provided in two weeks time after the meeting. (**Action item**)

7.4 The representative of Indonesia expressed their wish to become a permanent member of the OPMET/M TF. The meeting agreed that the membership of Indonesia would be very useful for the group and that the CNS/MET SG/8 meeting should be requested to adopt the corresponding amendment of the composition of the TF. (**Action item**)

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TERMS OF REFERENCE OF ASIA/PAC OPMET MANAGEMENT TASK FORCE

ASIA/PAC OPMET MANAGEMENT TASK FORCE (OPMET/M TF)

1. Terms of Reference

- Review the OPMET exchange schemes in the ASIA/PAC and MID Region and develop proposals for their optimization taking into account the current trends requirements by the aviation users and the current trends for the global OPMET exchange;
- Develop monitoring and management procedures related to the ROBEX exchange and other exchanges of OPMET information;
- Keep up to date Regularly update the regional guidance material related to OPMET exchange;
- Liaise with similar other groups dealing with communication and/or management aspects of the OPMET exchange in ASIA/PAC and in other ICAO Regions (ASIA/PAC ATN Transition TF, BMG EUR Region, CNS/MET SG MID Region, etc.).

2. Work Programme

The work to be addressed by the ASIA/PAC OPMET Exchange Management Task Force includes:

- (a) to examine the existing requirements and any new requirements for the OPMET exchange in ASIA/PAC and MID regions and to assess the feasibility of satisfying these requirements, taking into account the availability of the data;
- (b) to keep under review the ROBEX scheme and other OPMET exchange schemes and based on this review to prepare proposal for updating and optimizing of the schemes;
- (c) to review and update the procedures for interregional OPMET exchange and for ensure transmission the availability of the required regional ASIA/PAC and MID OPMET data to for the AFS satellite broadcasts providers (ISCS and SADIS);
- (d) to keep under review and provide timely amendments of the regional guidance materials on the OPMET exchange: to ensure that guidance material and to include covers procedures for the exchange of all required OPMET message data types: SA, SP, FC, FT, WS, WC, WV, FK, FV, UA;
- (e) to conduct trials and develop procedures for monitoring and management of the OPMET information exchange; to foster implementation of quality management of OPMET data by the ROBEX centres and the RODBs, based on the procedures used at the OPMET data banks;

~~Note: It is recommended that the EUR OPMET update quality control and management procedures to be reviewed and utilized as the bases for in development developing of similar procedure for the ASIA/PAC and MID Regions.~~

3. Composition

- (a) The Task Force is composed by experts from:

Australia (Rapporteur), China, Fiji, Japan, Singapore, Thailand, United Kingdom and United States.

- (b) ~~IATA~~ Representatives of IATA, EUR BMG and MID OPMET Bulletin Board are is invited to participate in the work of the Task Force

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Revised List of Action Items from OPMET/E TF/1 Meeting, 19 – 21 February 2003

Action Item ID	Paragraph from the Report	Action	Status	Target Date	TF Member(s)
2.1	2.1.6	Consultation with ATN Transition TF on the possible impact on OPMET Data exchange; report to OPMET/E TF/2	<i>Ongoing</i>	Permanent task	Secretariat (RO/CNS)
3.1	3.2	Provide the Secretariat with updated information on the AIREP exchange in ASIA/PAC	<i>Ongoing</i>	July 2004	AIREP Team
3.2	3.3	Preparation of a draft proposal for the re-composition of the ROBEX scheme based on the current MCC and TCC centres	<i>Completed</i>	15 April 2003 to be reported to CNS/MET SG/7 July 2003	Secretariat
3.3	3.4	Introduction of the new terminology to the ROBEX Handbook and other relevant documents	<i>Completed</i>	April 2003 to be reported to CNS/MET SG/7 July 2003	Secretariat
3.4	3.5	Coordination of the ROBEX Tables with the ROBEX centres	<i>Completed</i>	Tables sent to States before 30 April 2003 Replies from States before 15 June 2003	Secretariat All Members
3.5	3.6 (1)	Australian METAR and TAF bulletins to be rearranged to include all required international aerodromes	<i>Completed</i>	March 2004	Australia
3.6	3.6 (2), 4.12	Survey of the availability of METAR and TAF from the Pacific States (based on FASID Table MET 1A and SUG Annex 1	<i>Ongoing</i>	July 2004	Fiji Australia United States

Action Item ID	Paragraph from the Report	Action	Status	Target Date	TF Member(s)
3.7	3.9	Harmonization of the format and content of OPMET related Tables in different documents; change of format of FASID Tables MET 4A and 4B	<i>Ongoing</i>	July 2004	Secretariat
3.8	3.10	Change of OPMET bulletin structure from multinational to national	<i>Ongoing</i>	2005	Secretariat, Rapporteur, ROBEX centres
3.9	3.12 5.4	Preparation of Catalogue of ASIA/PAC OPMET bulletins	<i>Ongoing</i>	First draft – January 2005	Australia
3.10	3.14	Deletion of obsolete EUR AFTN addresses from the distribution lists of ROBEX centres	<i>Ongoing</i>	December 2004	ROBEX centres, Secretariat
3.11	3.14, 3.15, 3.16	Designation of inter-regional OPMET Gateways as single contact points for other regions	<i>Completed</i>	Continuous implementation	Singapore Bangkok Tokyo Secretariat
3.12	3.17	RODB Bangkok to provide back-up to RODB Singapore as IROG for EUR	<i>Ongoing</i>	July 2004	Bangkok Singapore Secretariat
3.13	3.19	ASIA/PAC RODBs to handle all OPMET data types	<i>Completed</i>	31 May 2003	All RODBs
3.14	3.20	Introduction of mirroring of Databank's content (first phase)	<i>Ongoing</i>	31 December 2004	Bangkok Singapore Tokyo
3.15	3.21	Further standardization of access procedure to the ASIA/PAC RODBs	<i>Ongoing</i>	Along with action item 5.3	All RODBs Secretariat Rapporteur
3.16	3.23	Study of the possibilities of the RODBs to provide ftp and Internet access to OPMET related information.	<i>Completed</i> <i>Ongoing</i>	31 March – web place for the OPMET/E TF February 2005	Australia Other RODBs

Action Item ID	Paragraph from the Report	Action	Status	Target Date	TF Member(s)
4.1	4.2	Proposal for transforming the Task Force into a "Management Group"	<i>Completed</i>	CNS.MET SG/7 Meeting July 2003.	Secretariat
4.1/1	4.2	Preparation of a modified OPMET update procedure for ASIA/PAC based on the EUR procedure	<i>Ongoing</i>	July 2004	Secretariat
4.2	4.3	NO messages generated in EUR to be distributed to ASIA/PAC	<i>Ongoing</i>	ASAP	Rapporteur of BMG
4.3	4.7	Introduction of the EUR monitoring procedure by RODB Bangkok on a trial basis; provision of relevant software by UK	<i>Completed</i>	First 24-hour trial – AIRAC date 2 May 2003	Bangkok UK Secretariat
5.1	5.1	Preparation of the new edition of the ROBEX Handbook	<i>Completed</i> <i>On-going</i>	Submission of the first draft to the ROBEX centres for review, comments and proposals – 30 April 2003 - Responses by the ROBEX centres – 15 June 2003 - Final draft to be presented at the CNS/MET SG/8 Meeting, July 2004	Secretariat ROBEX centres Secretariat
5.2	5.3	Singapore RODB to provide Secretariat with information on the current availability of EUR OPMET data	<i>Completed</i>	30 April	Singapore

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Action Item ID	Paragraph from the Report	Action	Status	Target Date	TF Member(s)
5.3	5.4	Preparation of the new edition of the Asia/Pacific Regional ICD for OPMET Data Bank Access Procedures	<i>Ongoing</i>	July 2004	Secretariat RODBs
7.1	7.2	Resolving operational problems with OPMET bulletins	<i>Ongoing</i>	Permanent Task	Rapporteur Secretariat

List of Action Items agreed by the OPMET/M TF/2 Meeting, 10 – 13 February 2004

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
PART 1. Operational Issues						
2004-1	<u>1.1 Data Management</u>	OPMET DATA Shortfalls	Prepare list of missing OPMET data by Region and inform States		July 2004	TF members and ROBEX centres
		- ASIA OPMET Shortfalls - PAC Data shortfalls - MID data shortfalls				
		New Bulletins	States planning for new bulletins to inform Secretariat when ready		All new bulls to be introduced not later than 1 Jan 2005	TF members, Secretariat
		- Australia - Thailand - Indonesia - Papua New Guinea - East Timor - Others				
		Situation with OPMET data from Philippines	Validate with the Philippines and add to deficiency list		ASAP	TF member from HK, China, Secretariat
		Filing time of TAF by Japan	Japan to correct the procedure for filing time for the TAFs in accordance with Annex 3 and ASIA/PAC ANP		To be advised	Japan
		TAFs for Cambodia issued by Vietnam – clarify	Check with Cambodian authorities		May 2004	Secretariat

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
2004-2	<u>1.2 Procedures</u>	Inclusion all RODB addresses in distribution lists for all bulletins	1. List to be provided after verification 2. All ROBEX centres informed on RODBs addresses		May 2004	1. Australian member 2. All RODBs, Secretariat
		Deletion of obsolete EUR AFTN addresses (avoid duplication)	1. Letter to ROBEX Centres 2. Checking and removing duplications		May 2004	1. Secretariat 2. RODBs/ ROBEX centres
		Consultation with US on the way to send ASIA/PAC OPMET data to US	Coordination by RODBs concerned		May 2004	RODB Tokyo, Brisbane, Nadi
		How to handle Irregular METARs/TAFs	Require information on the availability of METAR and TAF during the day		July 2004	Secretariat
2004-3	<u>1.3 Standardize formats</u>	Use of BBB group	Detailed explanation in ROBEX Handbook		April 2004	Secretariat
		Changes METAR & TAF Amd 73	1. Coordinate with the HQ and inform TF members 2. Conclusion for APANPIRG/15 3. State letter		1. March 2004 2. July 2004 3. August 2004	Secretariat; TF
		SIGMET Headers	Prepare a new ROBEX Table		April 2004	Secretariat
		AFTN Address Brisbane RODB	Provide one address for use by all centres concerned		May 2004	TF member from Australia
		Clarification PIREP – Japan	Remove “PIREP” from SPECIAL AIREP messages		-	TF member from Japan

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
2. Studies necessary for improvement/optimization						
2004-4	<u>2.1 AIREP</u>	Study: - current situation with collection/dissemination; - current use of AIREP by Met Offices; - proposals from States for improvement.	1. Prepare a questionnaire and send to all States concerned 2. Prepare proposal for amendment of ROBEX scheme as necessary		July 2004	AIREP Team: Singapore & Australia – chair, assisted by RODBs & ROBEX
2004-5	<u>2.2 SIGMET and advisories</u>	- Continue survey on the SIGMET headings; - Survey advisories headings; - Survey dissemination schemes used by MWO	- Finalize SIGMET table for ROBEX - Prepare proposal for optimization of dissemination schemes - Proposal for SIGMET tests		April 2004 Rest of the task – TF/3 meeting	SIGMET Team: Rapporteur – Chair, assisted by all RODBs
3. Regional Guidance documents						
2004-6	<u>3.1 ROBEX handbook</u>	Editorial changes proposed at the meeting	All changes agreed to be introduced by Secretariat		May 2004	Secretariat
		Add information on procedures for splitting the long bulletins	Include information in Appendix F		May 2004	Secretariat
		Clarify provision about filing times, obs. times & DTG SPECI	Consult with the HQ		May 2004	Secretariat
		New table short TAF	Prepare table		May 2004	Secretariat
		New table SIGMET	Prepare table		May 2004	Secretariat
		Update MID Region ROBEX tables	Information to be provided by the MID Region		May 2004	Secretariat

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
		Final draft – all ROBEX centres (incl MID)	Send to TF members for coordination; Present at CNS/MET SG/8		June 2004	Secretariat
2004-7	<u>3.2 ICD</u>	Update information for RODB Nadi	Nadi RODB to provided updated information		April 2004	Nadi RODB
		Standardize the ICD with a “common” part and appendices	Remove ‘common’ part from current Appendices – describe differences for RODB’s only		May 2004	Secretariat in coordination with RODBs
		Decide standardized ‘reply’ message	Decide is it necessary, is it possible, software changes required.		May 2004	Secretariat in coordination with RODBs
		Final draft	Send to TF members for coordination; Present at CNS/MET SG/8		July 2004	Secretariat, RODBs
2004-8	<u>3.3 DB & Catalogue</u>	Distribute DB from Brisbane to RODBs and ICAO	Finalize DB distribute to RODBs		April 2004	Australia
		- Complete DB OPMET data from ASIA/PAC & MID - Add Available OPMET from other Regions	RODBs to update data		June 2004	RODBs
		Use of DB on trial basis.	- RODBs to trial use of DB - OPMET/M TF/3 to review and prepare proposals for further use		February 2005	RODBs Secretariat

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
4. Quality Management Procedures						
2004-9	<u>4.1 Monitoring exercises</u>	Continue monitoring trials against - ROBEX Tables - FASID Tables (ASIA/PAC, MID) - SUG Annex 1	RODBs to perform monitoring exercises as appropriate; RODBs to share data sets and monitoring results	Ongoing	2004	All RODBs
		Present monitoring results at CNS/MET SG/8	Bangkok to prepare a paper for CNS/MET SG/8 showing result of monitoring		July 2004	Bangkok RODB
		Decide performance indices & presentation styles	Paper for TF/3 meeting		End of 2004	RODBs to coordinate and decide
		Exchange operational data sets	Send data on CD or via FTP		May 2004	Brisbane RODB to coordinate
		Standardize monitoring procedures	Exchange information via e-mail and prepare proposal for TF/3 meeting		Late 2004	RODBs; TF members
2004-10	<u>4.2 ROBEX update procedures</u>	Revise APANPIRG conclusion regarding the use of EUR OPMET procedure	Revisit the EUR procedure and amend it according to the regional practice		July 2004	Secretariat
2004-11	<u>4.3 SIGMET monitoring procedures</u>	Develop procedure for SIGMET monitoring	To be developed base on the SIGMET study by the SIGMET Team			SIGMET Team

Item No.	Field	Description	Action	Status	Target Date	To be done by
1	2	3	4	5	6	7
5. Liaison with other groups						
2004-12	<u>5.1 Groups</u>	- ATN/T Task Force - MID CNS/MET SG - MID Bulletin Management Group - BMG - US NWS - Other ICAO Regions	MID pass to Secretariat resolution of meeting Request for Rapporteur to attend meeting Send report Send report Send report	Ongoing		Rapporteur, Secretariat
6. Administrative						
2004-13	<u>6.1 Improving efficiency of the TF</u>	Focal point ROBEX centres	Rapporteur to write State letter requesting nomination of focal person		April 2004	Rapporteur, Secretariat
		Use of WEB site - Report TF - Discussion Group	Investigate possibility of discussion email/web group	On-going		Rapporteur
		Reporting CNS/MET SG/8	Report to be prepared and presented		July 2004	Rapporteur
	<u>6.2 Composition of the TF</u>	Include Indonesia as a member of the group	Present proposal to CNS/MET SG/8		July 2004	Secretariat
		Invite India to join the group	Send invitation letter		December 2004	Secretariat

**ROBEX Exchange of METARs and TAFs
compared with ASIA/PAC FASID Table**

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
AMERICAN SAMOA (United States)						
PAGO PAGO/Pago Pago Intl	RS	NSTU	-	FTPS31 NFFN	-	NADI
AUSTRALIA						
ADELAIDE/Adelaide	RS	YPAD	SAAU31 YBBN	FTAU31 YBBN	-	BRISBANE
ALICE SPRINGS/Alice Springs	AS	YBAS	SAAU31 YBBN	FTAU31 YBBN	-	BRISBANE
BRISBANE/Brisbane	RS	YBBN	SAAU31 YBBN	FTAU31 YBBN	-	BRISBANE
BROOME/Broome	AS	YBRM	SAAU32 YBBN	FTAU33 YBBN	-	BRISBANE
CAIRNS/Cairns	RS	YBCS	SAAU31 YBBN	FTAU33 YBBN	-	BRISBANE
CHRISTMAS I./Christmas I.	RS	YPXM	SAAU31 YBBN	FTAU33 YBBN	-	BRISBANE
COCOS I./Cocos I.	RS	YPCC	SAAU31 YBBN	FTAU32 YBBN	-	BRISBANE
DARWIN/Darwin	RS	YPDN	SAAU31 YBBN	FTAU32 YBBN	-	BRISBANE
DUBBO/Dubbo	AS	YSDU	SAAU32 YBBN	FTAU33 YBBN	-	BRISBANE
HOBART/Hobart	RS	YMHB	SAAU32 YBBN	FTAU33 YBBN	-	BRISBANE
LEARMONTH/Learmonth	AS	YPLM	SAAU31 YBBN	FTAU33 YBBN	-	BRISBANE
MELBOURNE/Melbourne Intl	RS	YMLL	SAAU31 YBBN	FTAU31 YBBN	-	BRISBANE
NORFOLK I./Norfolk I.	RS	YSNF	SAAU32 YBBN	FTAU33 YBBN	-	BRISBANE
PERTH/Perth Intl	RS	YPPH	SAAU31 YBBN	FTAU32 YBBN	-	BRISBANE
PORT HEDLAND/Port Hedland	RS	YPPD	SAAU32 YBBN	FTAU32 YBBN	-	BRISBANE
ROCKHAMPTON/Rockhampton	AS	YBRK	SAAU32 YBBN	FTAU33 YBBN	-	BRISBANE
SYDNEY/Kingsford Smith Intl	RS	YSSY	SAAU31 YBBN	FTAU31 YBBN	-	BRISBANE
TINDAL/Tindal	AS	YPTN	SAAU31 YBBN	FTAU32 YBBN	-	BRISBANE
TOWNSVILLE/Townsville	RS	YBTL	SAAU31 YBBN	FTAU32 YBBN	-	BRISBANE
BANGLADESH						
CHITTAGONG/Chittagong	RS	VGEG	SAAE31 VECC	FTBW31 VGEG	-	BANGKOK
DHAKA/Zia Intl	RS	VGZR	SAAE31 VECC	FTAS31 VTBB	-	BANGKOK
BHUTAN						
PARO/Paro	RS	VQPR	-	-	-	
BRUNEI DARUSSALAM						
BANDAR SERI BEGAWAN/ Brunei Intl	RS	WBSB	SAMS31 WMKK	FTSR32 WSSS	-	SINGAPORE

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
CAMBODIA						
PHNOM-PENH/Pochentong	RS	VDPP	SAAS31 VTBB	AS31 VTBB	-	BANGKOK
SIEM-REAP/Angkor	AS	VDSR	SAKP31 VDSR	-	-	BANGKOK
CANADA						
ABBOTSFORD/Abbotsford	AS	CYXX	-	-	-	
CALGARY/Calgary Intl	RS	CYYC	-	-	-	
COMOX/Comox	AS	CYQQ	-	-	-	
EDMONTON/Edmonton Intl	RS	CYEG	-	-	-	
VANCOUVER/Vancouver Intl	RS	CYVR	-	-	-	
VICTORIA/Victoria Intl	RNS	CYYJ	-	-	-	
CHILE						
ISLA DE PASCUA/Mataverí	RS	SCIP	-	-	-	
CHINA						
BEIJING/Capital	RS	ZBAA	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
CHANGSHA/Huanghua	RS	ZGHA	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
CHENGDU/Shuangliu	RS	ZUUU	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
CHONGQING/Jiangbei	RS	ZUCK	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
DALIAN/Zhoushuizi	RS	ZYTL	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
FUZHOU/Changle	RS	ZSFZ	-	-	-	
GAOXIONG/Gaoxiong	RS	RCKH	SAHK31 VHHH	FTHK31 VHHH	-	TOKYO
GUANGZHOU/Baiyun	RS	ZGGG	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
GUILIN/Liangjiang	RS	ZGKL	SACI32 ZBBBB	FTCI32 ZBBBB	-	TOKYO
HANGZHOU/Jianqiao	RS	ZSHC	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
HARBIN/Yanjiagang	RS	ZYHB	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
HEFEI/Luogang	AS	ZSOF	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
HOHHOT/Baita	RS	ZBHH	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
JINAN/Yaoqiang	RS	ZSJN	-	-	-	
KASHI/Kashi	AS	ZWAK	-	-	-	
KUNMING/Wujiaba	RS	ZPPP	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
LANZHOU/Zhongchuan	AS	ZLLL	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
NANJING/Lukou	RS	ZSNJ	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
NANNING/Wuxu	AS	ZGNN	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
QINGDAO/Liuting	RS	ZSQD	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
SANYA/Fenghuang	RS	ZGSA	-	-	-	

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Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
SHANGHAI/Hongqiao	RS	ZSSS	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
SHANGHAI/Pudong	RS	ZSPD	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
SHENYANG/Taoxian	RS	ZYTX	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
SHENZHEN/Huangtian	RS	ZGSZ	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
TAIBEI/Sungshan	AS	RCSS	SAHK31 VHHH	FTHK31 VHHH	-	TOKYO
TAIBEI/Taipei Intl	RS	RCTP	SAHK31 VHHH	FTHK31 VHHH	-	TOKYO
TAIYUAN/Wusu	AS	ZBYN	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
TIANJIN/Binhai	RS	ZBTJ	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
URUMQI/Diwopu	RS	ZWWW	SACI31 ZBBB	FTCI31 ZBBB	-	TOKYO
WUHAN/Tianhe	RS	ZHHH	SACI41 ZBBB	FTCI41 ZBBB	-	TOKYO
XIAMEN/Gaoqi	RS	ZSAM	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
XI'AN/Xianyang	RS	ZLXY	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
XICHANG/Qingshan	RNS	ZUXC	-	-	-	
Hong Kong, China						
HONG KONG/Hong Kong Intl	RS	VHHH	SAHK31 VHHH	FTHK31 VHHH	-	TOKYO
Macau, China						
MACAU	RS	VMMC	SAHK31 VHHH	FTHK31 VHHH	-	TOKYO
COOK ISLANDS						
AVARUA/Rarotonga Intl	RS	NCRG	-	FTNZ32 NZKL	-	
DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA						
PYONGYANG/Sunan	RS	ZKPY	-	-	-	
FIJI						
NADI/Nadi Intl	RS	NFFN	-	FTPS31 NFFN	-	NADI
SUVA/Nausori	RS	NFSU	-	-	-	
FRENCH POLYNESIA						
RANGIROA/Rangiroa	AS	NTTG	-	-	-	
TAHITI/Faaa	RS	NTAA	-	FTNZ32 NZKL	-	
GUAM (United States)						
GUAM I./Agana NAS	RS	PGUM	-	-	-	
GUAM I./Anderson AFB	AS	PGUA	-	-	-	

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
INDIA						
AHMADABAD/Ahmadabad	AS	VAAH	SAIN31 VABB	FTIN31 VABB	-	BANGKOK
AMRITSAR/Amritsar	RS	VIAR	SAIN32 VABB	-	-	BANGKOK
CALCUTTA/Calcutta	RS	VECC	SAAE31 VECC	FTIN31 VABB	-	BANGKOK
CALICUT/Calicut	RS	VOCL	-	FTIN31 VABB	-	BANGKOK
CHENNAI/Chennai	RS	VOMM	SAIN31 VABB	FTIN32 VABB	-	BANGKOK
DELHI/Indira Gandhi Intl	RS	VIDP	SAIN32 VABB	FTIN31 VABB	-	BANGKOK
MUMBAI/Jawaharlal Nehru Intl	RS	VABB	SAIN31 VABB	FTIN31 VABB	-	BANGKOK
NAGPUR/Nagpur	AS	VANP	SAIN31 VABB	FTIN31 VABB	-	BANGKOK
PATNA/Patna	RS	VEPT	SAAE31 VABB	-	-	BANGKOK
TIRUCHCHIRAPPALLI/ Tiruchchirappalli	RS	VOTR	SAIN31 VABB	-	-	BANGKOK
TRIVANDRUM/Trivandrum	RS	VOTV	SAIN31 VABB	FTIN32 VABB	-	BANGKOK
VARANASI/Varanasi	RS	VIBN	SAIN32 VABB	-	-	BANGKOK
INDONESIA						
AMBON/Pattimura	RNS	WAPP	-	-	-	
BALIKPAPAN/Sepinggan	RS	WRLI	-	-	-	
BANJARMASIN/Syamsuddin Noor	AS	WRBB	-	-	-	
BATAM/Hang Nadim	AS	WIKB	-	-	-	
BIAK/Frans Kaisieppo	RS	WABB	SAID31 WIII	-	-	SINGAPORE
DENPASAR/Ngurah Rai (Bali Intl)	RS	WRRR	SAID31 WIII	FTSR31 WSSS	-	SINGAPORE
JAKARTA/Halim Perdanakusuma	RS	WIII	SAID31 WIII	FTSR31 WSSS	-	SINGAPORE
JAKARTA/Soekarno Hatta Intl	RS	WIII	SAID31 WIII	FTSR31 WSSS	-	SINGAPORE
JAYAPURA/Sentani	RS	WAJJ	-	-	-	
KUPANG/Eltari	RS	WRKK	-	-	-	
MANADO/Sam Ratulangi	RS	WAMM	-	-	-	
MEDAN/Polonia	RS	WIMM	SAID31 WIII	FTSR32 WSSS	-	SINGAPORE
MERAUKE/Mopah	RNS	WAKK	-	-	-	
PADANG/Tabing	RS	WIMG	-	-	-	
PALEMBANG/Sultan Mahmud Badaruddin II	RNS	WIPP	-	-	-	
PEKANBARU/Simpang Tiga	RS	WIBB	-	-	-	
PONTIANAK/Supadio	RS	WIOO	-	-	-	
SURABAYA/Juanda	RS	WRSJ	SAID31 WIII	FTSR31 WSSS	-	SINGAPORE
TANJUNG PINANG/Kijang	RS	WIKN	-	-	-	
TARAKAN/Tarakan	RS	WRLR	-	-	-	
TIMIKA/Tembagapura	RNS	WABP	-	-	-	

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Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
UJUNG PANDANG/Hasanuddin	RNS	WAAA	SAID31 WIII	-	-	SINGAPORE
JAPAN						
FUKUOKA/Fukuoka	RS	RJFF	SAFE32 RJTD	FTJP32 RJTD	FCJP32 RJTD	TOKYO
HAKODATE/Hakodate	AS	RJCH	SAFE32 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
HIROSHIMA/Hiroshima	RS	RJOA	-	FTJP32 RJTD	FCJP32 RJTD	TOKYO
KAGOSHIMA/Kagoshima	RS	RJFK	SAFE32 RJTD	FTJP32 RJTD	FCJP32 RJTD	TOKYO
KUMAMOTO/Kumamoto	RS	RJFT	-	FTJP32 RJTD	FCJP32 RJTD	TOKYO
NAGASAKI/Nagasaki	RS	RJFU	SAFE32 RJTD	FTJP32 RJTD	FCJP32 RJTD	TOKYO
NAGOYA/Nagoya	RS	RJNN	SAFE31 RJTD	FTJP32 RJTD	FCJP32 RJTD	TOKYO
NAHA/Naha	RS	ROAH	SAFE31 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
NIIGATA/Niigata	RS	RJSN	-	FTJP32 RJTD	FCJP32 RJTD	TOKYO
OITA/Oita	RS	RJFO	-	FTJP32 RJTD	FCJP32 RJTD	TOKYO
OKAYAMA/Okayama	RS	RJOB	-	FTJP32 RJTD	FCJP32 RJTD	TOKYO
OSAKA/Kansai Intl	RS	RJBB	SAFE31 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
OSAKA/Osaka Intl	RS	RJOO	SAFE31 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
SAPPORO/New Chitose	RS	RJCC	SAFE32 RJTD	FTJP32 RJTD	FCJP32 RJTD	TOKYO
SENDAI/Sendai	RNS	RJSS	-	FTJP31 RJTD	FCJP31 RJTD	TOKYO
TAKAMATSU/Takamatsu	RS	RJOT	-	FTJP31 RJTD	FCJP31 RJTD	TOKYO
TOKYO/New Tokyo Intl	RS	RJAA	SAFE31 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
TOKYO/Tokyo Intl	AS	RJTT	SAFE31 RJTD	FTJP31 RJTD	FCJP31 RJTD	TOKYO
JOHNSTON I. (United States)						
JOHNSTON I./Johnston Atoll	RS	PJON	-	-	-	
KIRIBATI						
KIRITIMATI/Christmas I.	RS	PLCH	-	-	-	
TARAWA/Bonriki Intl	RS	NGTA	-	-	-	
LAO PEOPLE'S DEMOCRATIC REPUBLIC						
VIENTIANE/Wattay	RS	VLVT	SAAS31 VTBB	FTAS31 VTBB	-	BANGKOK
MALAYSIA						
JOHOR BAHRU/Sultan Ismail	RS	WMKJ	-	FTSR31 WSSS	-	SINGAPORE
KOTA KINABALU/Kota Kinabalu Intl	RS	WBKK	SAMS31 WMKK	FTSR32 WSSS	-	SINGAPORE
KUALA LUMPUR/Kuala Lumpur Intl	RS	WMKK	SAMS31 WMKK	FTSR31 WSSS	-	SINGAPORE

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
KUANTAN/Kuantan	RS	WMKD	-	FTSR31 WSSS	-	SINGAPORE
KUCHING/Kuching	RS	WBGG	SAMS31 WMKK	FTSR32 WSSS	-	SINGAPORE
MALACCA/Malacca	RS	WMKM	-	-	-	
PENANG/Bayan Lepas	RS	WMKP	SAMS31 WMKK	FTSR31 WSSS	-	SINGAPORE
PULAU LANGKAWI/Pulau Langkawi	RS	WMKL	-	-	-	
TAWAU/Tawau	RS	WBKW	-	-	-	
MALDIVES						
GAN/Gan	AS	VRGN	-	-	-	
MALE/Hulule	RS	VRMM	SASB31 VCCC	-	-	BANGKOK
MARSHALL ISLANDS						
MAJURO ATOLL/Marshall I. Intl	RS	PKMJ	-	-	-	
MICRONESIA, FEDERATED STATES OF						
MOEN/Truk Intl	RS	PTKK	-	-	-	
PONAPE I./Ponape	RS	PTPN	-	-	-	
YAP I./Yap Intl	RS	PTYA	-	-	-	
MONGOLIA						
ULAN BATOR/Ulan Bator	RS	ZMUB	SACI32 ZBBB	FTCI32 ZBBB	-	TOKYO
MYANMAR						
YANGON/Yangon Intl	RS	VYYY	SAAS31 VTBB	FTAS31 VTBB	-	BANGKOK
NAURU						
NAURU I./Nauru	RS	ANAU	-	-	-	
NEPAL						
KATHMANDU/Tribhuvan Intl	RS	VNKT	SAAE31 VECC	FTIN32 VABB	-	BANGKOK
NEW CALEDONIA (France)						
NOUMEA/La Tontouta	RS	NWWW	-	FTPS31 NFFN	-	NADI
NEW ZEALAND						
AUCKLAND/Auckland Intl	RS	NZAA	SANZ31 NZKL	FTNZ31 NZKL	-	BRISBANE

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Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
CHRISTCHURCH/Christchurch Intl	RS	NZCH	SANZ31 NZKL	FTNZ31 NZKL	-	BRISBANE
WELLINGTON/Wellington Intl	RS	NZWN	SANZ31 NZKL	FTNZ31 NZKL	-	BRISBANE
NIUE (New Zealand)						
ALOFI/Niue Intl	RS	NIUE	-	-	-	
NORTHERN MARIANA ISLANDS (United States)						
ROTA/Rota Intl	RS	PGRO	-	-	-	
SAIPAN I. (OBYAN)/Saipan I. (Obyan) Intl	RS	PGSN	-	-	-	
PAKISTAN						
GWADAR/Gwadar	RS	OPGD	-	FTPK31 OPKC	-	BANGKOK
ISLAMABAD/Chaklala	RS	OPRN	SAPK31 OPKC	FTPK31 OPKC	-	BANGKOK
KARACHI/Quaid-E-Azam Intl	RS	OPKC	SAPK31 OPKC	FTPK31 OPKC	-	BANGKOK
LAHORE/Lahore	RS	OPLA	SAPK31 OPKC	FTPK31 OPKC	-	BANGKOK
NAWABSHAH/Nawabshah	AS	OPNH	SAPK31 OPKC	FTPK31 OPKC	-	BANGKOK
PESHAWAR/Peshawar	RS	OPPS	-	FTPK31 OPKC	-	BANGKOK
PALAU						
KOROR/Koror	RS	PTRO	-	-	-	
PAPUA NEW GUINEA						
KIETA/Kieta	RS	AYKT	-	-	-	
PORT MORESBY/Jacksons	RS	AYPY	SAPW31 AYPY	FTAU32 YBBN	-	
VANIMO/Vanimo	RS	AY--				
PHILIPPINES						
DAVAO/Francisco Bangoy Intl	RNS	RPWD	-	-	-	
LAOAG/Laoag Intl	AS	RPML	-	-	-	
LAPU-LAPU/Mactan Intl	RS	RPMT	-	-	-	
MANILA/Nimoy Aquino Intl	RS	RPMM	-	-	-	
OLONGAPO/Cubi Intl	RNS	RPMB	-	-	-	
ZAMBOANGA/Zamboanga Intl	AS	RPMZ	-	FTHK31 VHHH	-	TOKYO

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
REPUBLIC OF KOREA						
PUSAN/Kimhae Intl BUSAN/Gimhae Intl	RS	RKPK	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
CHONGJU/Chongju Intl CHEONGJU/Cheongju Intl	RS	RKTU	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
INCHEON/Incheon Intl	RS	RKSI	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
CHEJU/Cheju Intl JEJU/Jeju Intl	RS	RKPC	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
SEOUL/Kimpo Intl Gimpo Intl	RS AS	RKSS	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
YANGYANG/Yangyang Intl	RS	RKNY	SAKO31 RKSI	FTKO31 RKSI	-	TOKYO
SAMOA						
APIA/Faleolo Intl	RS	NSAP	-	-	-	
SINGAPORE						
SINGAPORE/Changi	AS	WSSS	SAMS31 WMKK	FTSR31 WSSS	-	SINGAPORE
SINGAPORE/Paya Lebar	AS	WSAP	SAMS31 WMKK	FTSR31 WSSS	-	SINGAPORE
SINGAPORE/Seletar	RS	WSSL	-	-	-	
SOLOMON ISLANDS						
HONIARA/Henderson	RS	AGGH	-	-	-	
SRI LANKA						
COLOMBO/Katunayake	RS	VCBI	SASB31 VCCC	FTIN32 VABB	-	BANGKOK
MINNERIYA/Hingurakgodā (1997)	AS	VCCH	-	-	-	
THAILAND						
BANGKOK/Bangkok Intl	RS	VTBD	SAAS31 VTBB	FTAS31 VTBB	FCAS31 VTBB	BANGKOK
CHIANG MAI/Chiang Mai Intl	RS	VTCC	SAAS31 VTBB	FTAS32 VTBB	FCAS31 VTBB	BANGKOK
CHIANG RAI/Chiang Rai Intl	RS	VTCT	-	-	-	
KHON KAEN/Khon Kaen		VTUK	SATH33 VTBB	FTTH33 VTBB	-	BANGKOK
PHITSANULOK	RS	VTTP	SATH31 VTBB	FTTH31 VTBB	-	BANGKOK
PHUKET/Phuket Intl	RS	VTSP	SAAS31 VTBB	FTAS32 VTBB	-	BANGKOK
RAYONG/Utapao	RS	VTBU	SAAS31 VTBB	FTAS32 VTBB	-	BANGKOK
SONGKHLA/Hat Yai Intl	RS	VTSS	SAAS31 VTBB	FTAS32 VTBB	-	BANGKOK
SURAT THANI/Surat Thani	RS	VTSB	SATH32 VTBB	FTTH32 VTBB	-	BANGKOK
UBON RATCHATHANI	RS	VTUU	SATH33 VTBB	FTTH33 VTBB	-	BANGKOK

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Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
TONGA						
TONGATAPU/Fua'amotu Intl	RS	NFTF	-	-	-	
VAVA'U/Vava'u	RS	NFTV	-	-	-	
TUVALU						
FUNAFUTI/Funafuti Intl	RS	NGFU	-	-	-	
UNITED STATES						
ANCHORAGE/Anchorage Intl	RS	PANC	-	-	-	
ANCHORAGE/Elmendorf AFB	AS	PAED	-	-	-	
COLD BAY/Cold Bay	AS	PACD	-	-	-	
EVERETT/Snohomish County	AS	KPAE	-	-	-	
FAIRBANKS/Eielson AFB	AS	PAEI	-	-	-	
FAIRBANKS/Fairbanks Intl	RS	PAFA	-	-	-	
FRESNO/Fresno Air Terminal	AS	KFAT	-	-	-	
HILO/General Lyman Field	AS	PHTO	-	-	-	
HONOLULU/Barbers Points NAS	AS	PHNA	-	-	-	
HONOLULU/Honolulu Intl	RS	PHNL	-	-	-	
KAHULUI/Kahului	AS	PHOG	-	-	-	
KING SALMON/King Salmon	AS	PAKN	-	-	-	
LOS ANGELES/Los Angeles Intl	RS	KLAX	-	-	-	
OAKLAND/Metropolitan Oakland	AS	KOAK	-	-	-	
ONTARIO/Ontario Intl	AS	KONT	-	-	-	
PALMDALE/Palmdale P.F.T.I.	AS	KPMD	-	-	-	
PORTLAND/Portland Intl	AS	KPDX	-	-	-	
SACRAMENTO/Metropolitan	AS	KSMF	-	-	-	
SAN DIEGO/Lindbergh Field	AS	KSAN	-	-	-	
SAN FRANCISCO/San Francisco	RS	KSFO	-	-	-	
SAN JOSE/San Jose Intl	RS	KSJC	-	-	-	
SEATTLE BOEING FIELD/King County Intl	AS	KBFI	-	-	-	
SEATTLE/Seattle-Tacoma Intl	RS	KSEA	-	-	-	
SPOKANE/Spokane Intl	AS	KGEG	-	-	-	
STOCKTON/Metropolitan	AS	KSCK	-	-	-	
WASHINGTON/Dulles Intl	RS	KIAD	-	-	-	

Name Of the aerodrome	Use	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin	RODB
1	2	3	4	5	6	7
VANUATU						
PORT-VILA/Bauerfield	RS	NVVV	-	-	-	
SANTO/Pekoa	RS	NVSS	-	-	-	
VIET NAM						
DANANG/Danang	AS	VVDN	SAAS31 VTBB	FTAS32 VTBB	-	BANGKOK
HANOI/Noibai	RS	VVNB	SAAS31 VTBB	FTAS32 VTBB	-	BANGKOK
HO-CHI-MINH/Tan-Son-Nhut	RS	VVTS	SAAS31 VTBB	FTAS31 VTBB	-	BANGKOK
WALLIS ISLANDS (France)						
WALLIS/Hififo	RS	NLWW	-	-	-	

Explanation of The Table*Column*

- 1 Name of the aerodrome or location where meteorological service is required in the ASIA/PAC FASID Table
- 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 (Col.1)
- 4 Name of the monitored METAR (SA) bulletin which the ICAO location indicators (Col.3) contain
- 5 Name of the monitored TAF (FT) bulletin which the ICAO location indicators (Col.3) contain
- 6 Name of the monitored TAF (FC) bulletin which the ICAO location indicators (Col.3) contain
- 7 Name of Regional OPMET Data Bank (RODB) responsible for the provision of the ROBEX SA bulletin (Col.4) and ROBEX FT bulletin (Col.5)

Additional ROBEX Exchange of METARs and TAFs
(All the aerodromes are not listed in ASIA/PAC FASID Table)

Name Of the aerodrome	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin
1	2	3	4	5
Egypt-Luxor	HELX	AF32 OEJD	-	-
Sudan-Khartoum (Civil aviation dept)	HSSS	AF32 OEJD	-	-
Cairo	HECA	AF32 OEJD	-	-
Myanmar-Mandalay	VYMD	AS31 VTBB	-	-
Kununurra	YPKU	AU31 YBBN	AU32 YBBN	-
Canberra	YSCB	AU32 YBBN	AU32 YBBN	-
Coolangatta	YBCG	AU32 YBBN	AU32 YBBN	-
Avalon	YMAV	AU32 YBBN	AU32 YBBN	-
Kalgoorue	YPKG	AU32 YBBN	AU32 YBBN	-
Richmond	YSRI	AU32 YBBN	AU33 YBBN	-
Williamtown	YWLM	AU32 YBBN	AU33 YBBN	-
Launceston	YMLT	AU32 YBBN	AU33 YBBN	-
Pearce	YPEA	AU32 YBBN	AU32 YBBN	-
Curtin	YCIN	AU32 YBBN	AU33 YBBN	-
Forrest	YFRT	AU32 YBBN	AU33 YBBN	-
Gove	YPGV	AU32 YBBN	AU33 YBBN	-
Amberley	YAMB	AU32 YBBN	AU32 YBBN	-
Hamilton Island	YBHM	AU32 YBBN	AU33 YBBN	-
Mountisa	YBMA	AU32 YBBN	AU33 YBBN	-
Bahrain	OBBI	BN31 OBBI	BN31 OBBI	-
Saudi arabia-Dammam	OEDF	SD31 OEJD	SD31 OEJD	-
Dharan	OEDR	BN31 OBBI	SD31 OEJD	-
Qatar-DOHA	OTBD	BN31 OBBI	BN31 OBBI	-
Kuwait	OKBK	BN31 OBBI	BN31 OBBI	-
Jeddah	OEJN	SD31 OEJD	SD31 OEJD	-
Madinah	OEMA	SD31 OEJD	SD31 OEJD	-
Riyadh	OERY	SD31 OEJD	-	-
Yemen-Sanaa	OYSN	SD31 OEJD	SD31 OEJD	-
Riyadh	OERK	SD31 OEJD	SD31 OEJD	-
Bahrain	OBBI	BN31 OBBI	BN31 OBBI	-
United Arab Emirates Abu Dhabi	OMAA	BN32 OBBI	BN32 OBBI	-
Sharjah	OMSJ	BN32 OBBI	BN32 OBBI	-
Oman-Muscat	OOMS	BN32 OBBI	BN32 OBBI	-
Rasal	OMRK	BN32 OBBI	BN32 OBBI	-
Fujairah	OMFJ	BN32 OBBI	BN32 OBBI	-
Alain	OMAL	BN32 OBBI	BN32 OBBI	-
Dubai	OMDB	BN32 OBBI	BN32 OBBI	-
Salalah	OOSA		BN32 OBBI	-
China- Shijiazhuang	ZBSJ	CI31 ZBBB	CI31 ZBBB	-
Shantou	ZGOW	CI32 ZBBB	CI32 ZBBB	-
Kashi	ZWSH	CI41 ZBBB	CI41 ZBBB	-

Name Of the aerodrome	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin
1	2	3	4	5
Ninbo	ZSNB	CI41 ZBBB	-	-
Nanchang	ZSCN	CI41 ZBBB	-	-
Xinzhu	ZSWY	CI41 ZBBB	-	-
Guilin	ZGKL	CI32 ZBBB	CI32 ZBBB	-
Wenzhou	ZSWZ	CI41 ZBBB	-	-
Haikou	ZJHK	CI41 ZBBB	CI41 ZBBB	-
Tunxi	ZSTX	CI41 ZBBB	-	-
Sanya	ZJSY	CI41 ZBBB	CI41 ZBBB	-
Changchun	ZYCC	CI41 ZBBB	CI41 ZBBB	-
Cyprus-Larnak	LCLK	-	CY31 LCLK	-
Pafo/Intl	LCPH	-	CY31 LCLK	-
Germany-Berlin/Schonefeld	EDDB	-	DL32 EDZO	-
Dresden	EDDC	-	DL32 EDZO	-
Erfurt	EDDE	-	DL32 EDZO	-
Munster/Osnabruck	EDDG	-	DL32 EDZO	-
Berlin-Tempelhof	EDDI	-	DL32 EDZO	-
Leipzig/Halle	EDDP	-	DL32 EDZO	-
Saarbrucken	EDDR	-	DL32 EDZO	-
Bremen	EDDW	-	DL32 EDZO	-
Philippines-Manila/Nnoy Aquino Intl	RPLL	HK31 VHHH	HK31 VHHH	-
Lapulapu/Mactan,Cebu	RPVM	HK31 VHHH	HK31 VHHH	-
Davao/Francisco Bangoy Intl	RPMD	HK31 VHHH	HK31 VHHH	-
Subic Bay, Subic Bay Intl	RPLB	HK31 VHHH	HK31 VHHH	-
India-Hyderabad	VOHY	IN31 VABB	-	-
Jaipur	VIJP	IN32 VIDP	IN31 VABB	-
Lucknow	VILK	IN32 VIDP	IN31 VABB	-
Iran-Tehran/Mehrabad Intl	OIII	IR31 OIII	IR31 OIII	-
Zahedan Intl	OIZH	IR31 OIII	IR31 OIII	-
Mashhad/Shahid Hasheminejad Intl	OIMM	IR31 OIII	IR31 OIII	-
Esfahan/Shahid Beneshti Intl	OIFM	IR31 OIII	IR31 OIII	-
Shiraz/Shahid Dastghaib Intl	OISS	IR31 OIII	IR31 OIII	-
Bandar Abbass Intl	OIKB	IR31 OIII	IR31 OIII	-
Ahwaz	OIAW	IR31 OIII	IR31 OIII	-
Kerman	OIKK	IR31 OIII	IR31 OIII	-
Tabriz Intl	OITT	IR31 OIII	IR31 OIII	-
Afghanistan-Kandahar	OAKN	-	PK31 OPKC	-
Kabulad	OAKB	-	PK31 OPKC	-
Bandar Abbass Intl	OIKB	IR31 OIII	IR31 OIII	-
Daegu	RKTN	KO31 RKSI	KO31 RKSI	-
Cambodia-Siem Riap	VDSR	KP31 VDSR	-	-
Lebanon-Beirut/Beirut Intl	OLBA	ME31 OLBA	ME31 OLBA	-
Syrian Arab Republic-damascus	OSDI	ME31 OLBA	ME31 OLBA	-
Jordan-Amman	OJAM	ME31 OLBA	ME31 OLBA	-
Amman	OJAI	ME31 OLBA	ME31 OLBA	-
Aleppo	OSAP	ME31 OLBA	ME31 OLBA	-

Name Of the aerodrome	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin
1	2	3	4	5
Bassel Al Assad	OSLK	ME31 OLBA	-	-
Aqaba	OJAQ	ME31 OLBA	ME31 OLBA	-
Malaysia-Subang	WMSA	-	-	-
Sandakan	WBKS	-	-	-
Netherlands-Denhelder	EHKD	-	-	-
Enschede	EHTW	-	-	-
Newzealand-Ohakea(mil)	NZOH	-	-	-
Austria-Wien-Schwechat	LOWW	-	OS31 LOWN	-
Linz	LOWL	-	OS31 LOWN	-
Salzburg	LOWS	-	OS31 LOWN	-
Innsbruck	LOWI	-	OS31 LOWN	-
Graz	LOWG	-	OS31 LOWN	-
Klagenfurt	LOWK	-	OS31 LOWN	-
Saudi Arabia-Jedda	OEJN	SD31 OEJD	SD31 OEJD	-
Madinah	OEMA	SD31 OEJD	SD31 OEJD	-
Riyadh/King Khaled Intl	OERK	SD31 OEJD	SD31 OEJD	-
Riyadh	OERY	SD31 OEJD	-	-
Dhahran	OEDR	SD31 OEJD BN31 OBBI	SD31 OEJD BN31 OBBI	-
Yemen-Sanaa	OYSN	SD31 OEJD	SD31 OEJD	-
Saudi Arabia-Dammam	OEDF	SD31 OEJD BN31 OBBI	SD31 OEJD BN31 OBBI	-
Yemen-Aden	OYAA	SD31 OEJD	SD31 OEJD	-
Dammam	OEDF	SD31 OEJD BN31 OBBI	SD31 OEJD BN31 OBBI	-
Dhahran	OEDR	SD31 OEJD BN31 OBBI	SD31 OEJD BN31 OBBI	-
Jeddah	OEJN	SD31 OEJD	SD31 OEJD	-
Madinah	OEMA	SD31 OEJD	SD31 OEJD	-
Riyadh	OERK	SD31 OEJD	SD31 OEJD	-
Riyadh	OERY	SD31 OEJD	-	-
Switzerland-Zurich Flughaffn	LSZH	-	SW31 LSSW	-
Geneve	LSGG	-	SW31 LSSW	-
Chiang Rai	VTCT	TH31 VTBB	FT31 VTBB	-
Nan	VTCT	TH31 VTBB	-	-
Phrae	VTCP	TH31 VTBB	-	-
Mae Hong Son	VTCH	TH31 VTBB	-	-
Hua Hin	VTPH	TH31 VTBB	-	-
Tak-Mae Sot	VTPM	TH31 VTBB	-	-
Sukhothai	VTPO	TH31 VTBB	-	-
Lampang	VTCL	TH31 VTBB	-	-
Phetchabun	VTPB	TH31 VTBB	-	-
Tak	VTPT	TH31 VTBB	-	-
Samui	VTSM	TH32 VTBB	TH32 VTBB	-
Nakhon Si Thammarat	VTSF	TH32 VTBB	TH32 VTBB	-

Name Of the aerodrome	ICAO Loc.ind.	ROBEX SA bulletin	ROBEX FT bulletin	ROBEX FC bulletin
1	2	3	4	5
Narathiwat	VTSC	TH32 VTBB	TH32 VTBB	-
Pattani	VTSK	TH32 VTBB	TH32 VTBB	-
Trang	VTST	TH32 VTBB	TH32 VTBB	-
Ranong	VTSR	TH32 VTBB	-	-
Krabi	VTSG	TH32 VTBB	TH32 VTBB	-
Chumphon	VTSE	TH32 VTBB	TH32 VTBB	-
Trat/Khao Saming	VTBO	TH33 VTBB	-	-
Sakon Nakhon/Ban Khai	VTUI	TH33 VTBB	TH33 VTBB	-
Loei	VTUL	TH33 VTBB	TH33 VTBB	-
Buri Ram	VTUO	TH33 VTBB	TH33 VTBB	-
Nakhon Phanom	VTUW	TH33 VTBB	TH33 VTBB	-
Nakhon ratchasima	VTUQ	TH33 VTBB	TH33 VTBB	-
Roi Et	VTUV	TH33 VTBB	TH33 VTBB	-
Surin	VTUJ	TH33 VTBB	TH33 VTBB	-
Udon Thani	VTUD	TH33 VTBB	TH33 VTBB	-
Izmir	LTBJ	-	TU31 LTAA	-
Bursa/Yenisehir	LTBR	-	TU31 LTAA	-
Mugla	LTBS	-	TU31 LTAA	-
Tekird	LTBU	-	TU31 LTAA	-
Trabzon	LTCG	-	TU31 LTAA	-
Isparta	LTFC	-	TU31 LTAA	-
Milas	LTFE	-	TU31 LTAA	-
Nevsehir	LTAZ	-	TU31 LTAA	-
Istanbul/Sabiha Gokcen	LTFJ	-	TU31 LTAA	-
Samsun/Carsamba	LTFH	-	TU31 LTAA	-
Manchester	EGCC	-	UK31 EGGY	-
London Gatwick	EGKK	-	UK31 EGGY	-
Glasgow	EGPF	-	UK31 EGGY	-
Glassglow Prestwick	EGPK	-	UK31 EGGY	-
London Stansted	EGSS	-	UK31 EGGY	-

Explanation of The Table*Column*

- 1 Name of the aerodrome or location, which is not listed in ASIA/PAC FASID Table
- 2 ICAO location indicator of the aerodrome (Col.1)
- 3 Name of the monitored METAR (SA) bulletin which the ICAO location indicators (Col.2) contain
- 4 Name of the monitored TAF (FT) bulletin which the ICAO location indicators (Col.2) contain
- 5 Name of the monitored TAF (FC) bulletin which the ICAO location indicators (Col.2) contain

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