International Civil Aviation Organization

FOURTEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION/SURVEILLANCE AND METEOROLOGY SUB-GROUP OF APANPIRG (CNS/MET SG/14)

Jakarta, Indonesia, 19 – 22 July 2010

Agenda Item 12: Implementation of the issuance of TAF and OPMET exchanges:

4) Update on ROBEX Handbook and ICD

ROBEX HANDBOOK AND ICD UPDATES AND RECENT DEVELOPMENTS

(Presented by the Secretariat)

SUMMARY

This paper presents a summary of the ROBEX Handbook and Asia/Pacific OPMET data banks interface control document (ICD) updates and developments impacting a near future amendment to the ROBEX Handbook.

This papers relates to:

Strategic Objectives:
A. Safety – Enhance global civil aviation safety
D. Efficiency – Enhance the efficiency of aviation operations

Global Plan Initiatives:
GPI-18Aeronautical Information
GPI-19 Meteorological systems

1. Introduction

1.1 The Twentieth Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20) adopted Conclusion 20/65 that called for the Regional Air Navigation Plan (Basic ANP and text to the FASID) to reference the ROBEX Handbook for the regional OPMET bulletin exchange (ROBEX) for the collection and dissemination of METAR, SPECI, air-reports (AIREP) and TAF. These tables within the ROBEX Handbook contain information regarding the designated ROBEX centres and their respective areas of responsibility.

1.2 Likewise, APANPIRG/20 Conclusion 20/66 called for the ANP and FASID text to reference the Asia/Pacific OPMET data banks interface control document (ICD) for the collection and dissemination of OPMET bulletins together with procedures to be used in communicating with the data banks to support the ROBEX scheme. Amendment proposals APAC 09/22 and 09/23 approved in the first quarter of 2010 resulted in the removal of FASID Tables 4A, 4B and 4C and replaced by

the ROBEX Handbook and ICD for referencing the exchange of OPMET data in the ASIA/PAC Region (MID Region bulletins included). Therefore, maintaining the ROBEX Handbook and ICD at least on an annual basis is necessary for the proper exchange of OPMET data and measuring the success of OPMET exchange in the Region by the Regional OPMET Data Banks (RODBs) and the International Air Transport Association (IATA).

2. ROBEX Handbook and ICD Updates

2.1 The ICD was amended in June 2010 based on input provided by RODBs Bangkok, Singapore, and Tokyo for their respective appendices. The ICD amended June 2010 can be accessed at the following web site http://www.bangkok.icao.int/edocs/OPMET_DataBanksICD2004.pdf.

2.2 The ROBEX Handbook was amended in June 2010 based on numerous changes to the ROBEX scheme as informed by the States. In addition, real time monitoring by RODB Singapore provided verification on the current OPMET exchange in the Asia, Pacific and Middle East Regions. Furthermore, section 9 of the ROBEX Handbook reflects the removal of the requirement for routine voice reports of weather by aircraft associated with Amendment 75 to Annex 3 applicable 18 November 2010. A list of updates associated with the June 2010 amendment to the ROBEX Handbook is provided in **Attachment 1**. The ROBEX Handbook amended June 2010 can be accessed at the following web site http://www.bangkok.icao.int/edocs/robex2004_e12.pdf.

3. Near Future ROBEX Handbook Updates

3.1 The June 2010 amendment to the ROBEX Handbook needs further updates to Nadi bulletins. RODB Nadi commissioned their AFTN/AIS/OPMET System in April 2010 allowing for Nadi OPMET bulletins to be sent via AFTN to the RODBs. As identified by New Zealand, airline operators would benefit from the inclusion of several more aerodromes in the South Pacific (NFNA, NSFA, NSTU, NTAA and NWWW) in the SAPS31 NFFN bulletin. Furthermore, the inclusion of several more aerodromes (NSTU, NFNA, NTAA, NWWW, NSFA and NLWW) in the FTPS31 NFFN bulletin was also desired by the airline operators. On 16 June 2010, RODB Nadi accommodated this request and the ROBEX Handbook draft for the next amendment updated accordingly.

3.2 Also identified since the June 2010 amendment to the ROBEX Handbook is the range of opinion with regards to the regional exchange of air-reports (AIREPS). Section 9 of the ROBEX Handbook removes text (highlighted in green in **Attachment 2**) that refers to routine voice reporting of weather as it will no longer be required in Amendment 75 to Annex 3. The inconsistencies in section 9 have been identified in that special air-reports by voice communication are referenced in section 9.1 for collection and dissemination by Meteorological Watch Offices, however, the generic AIREP is referenced in section 9.2 and beyond as well as in Table D. This inconsistency is a concern and the group may consider further the regional distribution of air-reports, provided that the guidance is not in conflict with Amendment 75 to Annex 3 applicable on 18 November 2010. The following points may be considered:

- Routine voice air-reports – no longer required in Amendment 75 to Annex 3 – currently in Appendix 4, 3.1.1 of Annex 3
- Special voice air-reports – MWO to send to WAFCs without delay – Appendix 4, 3.1.2 of Annex 3 (is a one-hour bulletin necessary since these reports are urgent?)
- Special air-reports of pre-eruption volcanic activity – MWO to send to VAACs without delay – Appendix 4, 3.1.3 of Annex 3 (is a one-hour bulletin necessary since these reports are urgent?)

- Special air-reports – for those where SIGMET is not warranted, these reports are disseminated like SIGMET (in accordance with Appendix 6, 1.2.1) to MWOs, WAFCs and MET offices (reiterating the above, is a one-hour bulletin necessary since these reports are urgent?)

- If air-reports are received by a MWO (even though voice reports will no longer be required) and/or air-reports are completed after flight and received at a MWO, should these air-reports be disseminated? (note that this will no longer be a requirement and thus the associated tasks will not be covered under cost recovery)

3.3 The meeting could consider utilizing the OPMET/M TF to develop an agreed upon section 9 and Table D with regards to the exchange of weather reports by aircraft in the region that do not conflict with Amendment 75 to Annex 3.

4. Action by the Meeting

4.1 The meeting is invited to:

a) note the information provided in this paper regarding the ROBEX Handbook and ICD updates; and

b) consider review of section 9 to the ROBEX Handbook and possibly utilizing the OPMET/M TF to determine necessary changes.

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Attachment to State letter AP091/10 (MET)

ROBEX HB - list of updates – 8 June 2010

Changes associated with Am 75 to Annex 3 are highlighted in green for ease in identifying changes applicable 18 Nov 2010.

General

- 7910 associated updates (verified with ed 134): Malaysia – remove (RMAF) from WMKD to read Kuantan

Text

- pg 7, made reference in para 4.2 to AFTN PLAN – ASIA/PAC (Char CNS 1), whose illustration inserted after pg 8 (ROBEX Scheme)
- pg 10, para 5.2.5: changed reference to FASID Table MET 7 to SADIS and ISCS websites as noted in the latest Basic ANP, Part VI Meteorology (MET) page VI-4 para 35 (this is due to Amendment Proposal APAC 09/22 which longer references FASID Table MET 7)
- pgs 10-11, para 5.2.5: replaced reference of Internet for backup purposes with: Amendment 75 to Annex 3, para 11.1.9 allows the use of the Internet for non-time critical OPMET information and made reference to Basic ANP, pg MET VI-4, para 34, as well as RODB Singapore enabling of OPMET exchange through email
- pg 18, para 7.4.1.2: replaced “long” and “short” TAFs in one bulletin with TAF with different periods of validity
- pg 21, para 8.2 note: replaced third edition, 2003 with fourth edition, 2007 - amended June 2010
- pg 21, para 8.2 & 8.6: updated the link to the latest SIGMET Guide
- pg 22: paragraph 9.1 removed reference of routine air-report by voice communication as it is no longer required as of 18 November 2010 (Amendment 75 to Annex 3)
- pg 23: removed note in section 9.8 since Annex 3, Appendix 4, 3.4 will change such that the conversion of position to lat/lon no longer applies in Amendment 75
- pg 24: change AYPY to AYPM

Table A (METAR)

- SAAE31 VTBB: added VVPB (avail 24 hours HH+00 and HH+30) which became effective 1 May 2010
- SATH31 VTBB: VTCP changed from 2300-1400 to 0000-1100
- SATH31 VTBB: removed VTPB, VTPM
- SATH31 VTBB: added ‘***on request’ footnote
- SATH31 VTBB: applied ‘***’ footnote to VTCL for on request
- SATH32 VTBB: applied ‘**’ footnote to VTSF (Nakhon Si Thammarat)
- SATH32 VTBB: removed VTSE and VTSK
- SATH32 VTBB: applied ‘***’ footnote to VTSR
- SATH32 VTBB: applied ‘*’ footnote to VTSG
- SATH32 VTBB: applied ‘***’ footnote to VTUI
- SATH33 VTBB: removed VTUJ
- SATH33 VTBB: applied ‘***’ footnote to VTUL, VTUO, and VTUV (on request)

- SATH41 VTBB: new bulletin for ‘on request aerodrome’ to include VTPB, VTPM, VTSE, VTSK and VTUJ
- SACI32 ZBBB: added ZSNB
- SAAU31 YBBN: added YSCB, YBCG, YCFS, YHID, YPJT, YSTW
- SAAU32 YBBN: removed YSCB, YBCG
- SAAU32 YBBN: made bulletin time HH+00 and HH+30
- SAAU32 YBBN: added YGEL
- SANG31 YBBN: removed YCFS, YHID
- SANG31 YBBN: made ‘*’ note NIL report and applied to all aerodromes except AYPY and AGGH
- SASB31 VCCC: removed HH+40 in bulletin time
- SAIN32 VIDP: changed HH+10 to HH+00
- SAHK31 VHHH: Applied * note (available 2200-1000) to RPMD, RPLI and RPMZ; Applied ** note (SAHK31 HH+30 bulletins contain VHHH, RCTP, RCKH, RCSS, VMMC, except RCKH and RCSS HH+30 METAR not available 1630-2130) to HH+30 bulletin time
- SAKO31 RKSI: added * to HH+30 and apply to RKSI only
- SAKO31 RKSI: added RKJB (Muan Intl)
- SAID32 WIII: added HH+30 for whole bulletin
- SAID32 WIII: removed WIMG
- SAID33 WIII: added HH+30 to bulletin time for whole bulletin
- SAID33 WIII: removed note
- SAPK31 OPKC: changed bulletin time to HH+00 and HH+30
- SAPK31 OPKC: added OPSK (not listed in 7910)
- SAMS38 WMKK: added bulletin time of HH + 00 for the whole of the bulletin
- SAMS38 WMKK: removed RMAF from Kuantan, WMKD
- SAIN31 VABB: added VOHS
- SAIN31 VABB: applied VANP, VOHY, VOTV to new bulletin time of HH+40
- SAIN31 VABB: applied new footnote “available 0040-2340” to VANP and VOTV
- SAIN31 VABB: applied new footnote “available 0040-1540” to VOHY
- SAPS31 NFFN: removed NFNA
- SAPS32 NFFN: added NSAP
- SAPS32 NFFN: removed NSMA
- SAPS31 and SAPS32 NFFN: removed footnote ‘*’ ‘hours of availability of the aerodromes included in the bulletins to be advised’
- SAJP31 RJTD: removed HH+30 from bulletin time
- SAJP31 and SAJP32 RJTD: added dissemination destination London, EGZZMASI
- SAJP38 RJTD – new bulletin consisting 18 non-AOP aerodromes (*RJCK, RJCM, RJCB, RJOC, RJOH, RJOK, RJFM, ROIG, RJNK, RJNS, RJNT, RJSA, RJSF, RJOM, RJEC, RJSK, RJAH, RJFR*) issued at HH+00 and disseminated to 5 RODBs and Beijing, Brasilia, Hong Kong, Incheon, London and Rayong (note this bulletin will be effective July 2010, which will be announced by RODB Tokyo when the effective date and time is known through a METNO)
- SAAW31 ORBS: removed bulletin
- SABN31 OBBI: changed bulletin time from HH+50 to HH+00
- SABN31 OBBI: removed OOSA
- SABN31 OBBI: added OMAD and OMDW
- SABN32 OBBI: added OOSA
- SAME31 OLBA: changed bulletin number from SALB31 to SAME31
- SAME31 OLBA: added OSAP, OSLK, and OJAQ
- SAME31 OLBA: removed bulletin time HH+30
- SASD31 OEJD: changed bulletin time from HH+50 to HH+00
- SAIR31 OIII: added footnote “available 0330-1130” and apply to HH+30
- SAIR32 OIII: added OIIE, OITR, OIAA, OICC, OIGG, OIBK, OIYY
- SAIR32 OIII: removed OAKB and OAKN. Note that OPMET are obtained on ISCS as SAAH10 (METAR for OAKB) and FTAH10 (TAF for OAKB). Singapore IROG relays this OPMET data

to SADIS which has confirmed receipt. AFTN not expected in near future and inclusion in ROBEX scheme not expected in near future.
- added SAIR33 HH+00 (00-23) for OIBB, OIBL, OIBP, OICK, OICS, OIHH, OINZ, OITL, OIZC
- added SAIR34 HH+00 (00-23) for OIAG, OIAM, OICI, OIKQ, OINN, OINR, OISL, OISY, OITZ
- added SAIR35 HH+00 (00-23) for OIAD, OIBJ, OIBS, OIHR, OIKM, OIKR, OING, OIZB, OIZI
- added SAIR36 HH+00 (00-23) for OIBA, OIBV, OIFS, OIIP, OIMB, OIMN, OIMS, OIMT, OIZJ
- added SAIR37 HH+00 (00-23) for OIBQ, OIIK, OIMC, OIMD, OIMQ, OITK, OITM
- added SAEG31 HECA HH+00 bulletin for HEBL, HEAX, HEMM, HEPS, HELX, HESN, HEGN, HESH, HEBA, HEMA, HETB, HESC

Table B (FT TAF)

- FTAE31 VTBB: changed 24 to 30 in TAF validity and remove '(30)' for VTBS, VTBD, VTCC and VTSP since these aerodromes meet user requirements of 30-hour TAF as of 1 December 2009
- FTAE31 VTBB: removed VGZR and VLVT
- FTAE31 VTBB: added VTCT (24-hour TAF), VTSG and VTUU (24-hour TAF)
- FTAE31 VTBB: removed footnote
- FTAE32 VTBB: added VVPB (24-hour TAF; issuance times 0500/1100/1700/2300) which was implemented 1 May 2010
- FTAE32 VTBB: added VGZR (24-hour TAF, with 30-hour TAF requirement)
- FTAE33 VTBB: added VLLB, VLLN, VLPS, VLSK and VLVT (all are 18-hour TAF of filing times 0330/0930/2200 UTC and start period of validity times 0500/1100/2300)
- FTCI32 ZBBB: added ZSNB with 24-hour period of validity for TAF
- FTCI32 ZBBB: changed ZMUB TAF validity from 24 to 30 hours
- FTAU32 YBBN: added YBCG and YGEL with TAF validity of 24 hours
- FTAU33 YBBN: removed YBCG
- FTAU33 YBBN: added YCFS, YHID, YPJT, YSTW and YPEA (18-hour TAF)
- FTAU34 YBBN: changed filing 0500/1100/1700/2300 for start period of validity 0600/1200/1800/0000
- FTAU35 YBBN: new bulletin effective 29 JULY 2010 (advised to check METNO) that includes YCIN and YFRT with 18-hour TAF (used to be 12 hours) of filing times 0100/0700/1300/1900 and start period of validity 0200/0800/1400/2000 (note that until 29 JULY 2010, YCIN and YFRT are located in bulletin FTAU34)
- FTTM31 YBBN: removed filing time/start of validity 0100/0200
- FTNG31 YBBN: changed filing times to 0400/1000/1600/2200
- FTNG31 YBBN: changed AUUU to ANYN as it is practiced and expected to be changed in Doc 7910 as indicated by the note inserted
- FTHK31 VHHH: updated TAF validity for RPLL and RPVM to 30 hour (implemented 1800Z on 30 May 2010)
- FTKO31 RKSI: changed TAF validity for RKSS, RKPC, RKNY, RKJB to 30-hour TAF
- FTPK31 OPKC: changed TAF validity for OPKC, OPRN, OPLA to 30-hour TAF
- FTPK31 OPKC: changed TAF validity for OPGD and OPNH to 24-hour TAF
- FTPK31 OPKC: added OPSK (SUKKUR) 24-hour TAF
- FTPK31 OPKC: removed note req 31dec09
- FTIN31 VABB: changed filing time to 0300/0900/1500/2100
- FTIN31 VABB: changed TAF validity to 30-hours for VEPT, VIBN
- FTIN31 and FTIN32 – changed VIJP, VILK and VOCI from italics non-AOP aerodromes with regular font (AOP aerodromes)

- FTIN32 VABB: changed TAF validity to 24-hours for VCBI (which has a requirement of 30-hours)
- FTIN32 VABB: added VOHS and VOHY
- FTIN32 VABB: changed 24 to 30 in TAF validity for VRMM and remove '(30) ^' for VRMM
- FTIN32 VABB: removed footnote '*' - not confirmed part of bulletin
- FTIN32 VABB: removed footnote '**'– 30-h TAF issued only at 2100Z
- FTIN32 VABB: added VRMG to FTIN32 with period of validity of 30-hour TAF and issuance times the same as stated in the bulletin
- FTPS31 NFFN: removed footnote '*' – not confirmed part of bulletin
- FTPS31 NFFN: removed NWWW, NSTU, NSFA, NFNA, NLWW and NGFU
- FTSR31 WSSS: changed TAF validity for WAAA, WABB, WADD and WIII to 30 hours
- FTSR32 WSSS: changed 24-hour TAF to 30-hour TAF (no need for parenthesis with requirements of 30 hours) for WMKK which implemented 30-hour TAF on 1 May 2010
- FTSR33 WSSS: changed TAF validity for WBSB to 30 hours
- FTJP31 RJTD: added the following AFTN addresses: EGZZFRXX, LIIBYMYX, and NWCCYMYX, and OPZZYPYX
- FTJP32 RJTD: added the following AFTN addresses: EGZZFRXX, KWBCYMYX, NWCCYMYX, and OPZZYPYX
- FTJP32 RJTD: changed AFTN address in dissemination to Hong Kong from VHZZYPXX to VHZZYPYX
- FTJP38 (added new bulletin): *RJSA, RJSF, RJSK, RJOM, RJNS, RJEC, RJAH, RJCM, RJCK, RJCB, RJOC, RJOH, RJOK, RJFM, ROIG, RJFR* with filing time 0200, 0800, 1400 and 2000 and start of validity 0300, 0900, 1500 and 2100 with a TAF validity of 27 hours for all aerodromes and disseminated to VTBBYPYX, YBBBYPYX, NFZZRFXX, WSZZYPYX, RJTDYPYX, RKSIYPYX and ZBBBYPYX (note this bulletin will be effective July 2010, which will be announced by RODB Tokyo when the effective date and time is known)
- FTNZ31 NZKL: changed AFTN address for Port Moresby from AYPPYMYX to AYPMYMYX
- FTBN31 OBBI: added OEDF
- FTBN31 OBBI: changed filing times to 0500/1100/1700/2300
- FTBN31 OBBI: added TAF validity times of 30 hours for all aerodromes listed in bulletin
- FTBN32 OBBI: added OMAD and OMDW
- FTBN32 OBBI: added TAF validity times of 30 hours for all aerodromes listed in bulletin
- FTME31 OLBA: added OSAP, OSLK, OJAI, OJAM, OJAQ
- FTME31 OLBA: removed OJAM, OJAI, ORBI and ORMM
- FTME31 OLBA: added TAF validity times of 24 hours for all aerodromes listed in bulletin except for OLBA and OSDI which have TAF validity of 30 hours
- FTSD31 OEJD: removed OYAA
- FTSD31 OEJD: added OEDF
- FTSD31 OEJD: changed filing times to 0500/1100/1700/2300
- FTSD31 OEJD: added TAF validity time of 30-hours to all aerodromes in bulletin
- FTIR31 OIII: removed OIIE, OITR, OIBK
- FTIR31 OIII: changed filing times to 0500/1100/1700/2300
- FTIR31 OIII: added TAF validity time of 24-hours to all aerodromes in bulletin
- FTIR32 OIII: added OIIE, OITR, OIBK
- FTIR32 OIII: changed filing times to 0500/1100/1700/2300
- FTIR32 OIII: added TAF validity time of 24-hours to all aerodromes in bulletin
- FTEG31 HECA: New bulletin for Cairo consist HEAX, HECA, HELX, HEMA, HESN, HEBL, and HETB with filing times 0400/1000/1600/2200 and start of validity times 0600/1200/1800/0000 and TAF validity of 30 hours
- FTEG32 HECA: New bulletin for Cairo consist HEAR, HEBA, HEGN, HEMM, HEPS, HESH and HESC with filing times 0400/1000/1600/2200 and start of validity times 0600/1200/1800/0000 and TAF validity of 30 hours

Table C (ROBEX exchange of METAR and TAF compared with ASIA/PAC FASID Table MET 1A)

- Aligned Table C to information in Tables A and B

Appendix D – ROBEX Collection and Dissemination of AIREP Bulletins

- UAJP31: changed UAJP31 to UAFE31
- UAFE31: added the following AFTN addresses: PANCYMYX and PGUMCOAX

Appendix E – Use of WMO Abbreviated Heading

- removed reference to optional group Pxx for split bulletins, except for the note that explains history of change to RRx

Appendix I – ROBEX Focal Points

- updated focal point for India
- updated Japan focal point

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9 AIREP EXCHANGE

9.1 The meteorological watch offices (MWO) are responsible for collection through their associated ATS units of ~~routine (received by voice communications) and~~ special air-reports ~~(AIREP and AIREP SPECIAL)~~ received from aircrafts within their FIR or CTA.

Note: – Routine air-reports received by data-link communications should be relayed directly to the WAFCS by the ATS unit.

Note: - Amendment 75 to Annex 3, applicable 18 November 2010, no longer requires routine voice reporting of weather reports by aircraft.

9.2 MWOs should collect all air-reports (AIREP) and prepare one-hour collectives in the form of a UA bulletin for transmission to the responsible ROBEX centre at the time specified by the ROBEX centre.

Notes: *1) The transmission of air-reports to the WAFCs as required by Annex 3 should be arranged by the meteorological authorities concerned.*

2) MWOs should follow the special requirements for the dissemination of special air-reports as defined by Annex 3.

9.3 Each ROBEX centre should collect AIREP messages from the MWOs within its area of responsibility, as shown in **Appendix D**. A cut-off time for the reception of AIREPs at the ROBEX centre from MWOs should be determined to allow for preparation of the hourly AIREP bulletins.

9.4 ROBEX centres should compile hourly AIREP bulletins containing all air-reports received from the MWOs in their area of responsibility during the preceding hour. AIREP bulletins should be disseminated to the RODBs and other ROBEX centres, as indicated in **Appendix D**.

9.5 If no AIREP special air-reports are received at the bulletin compilation time, AIREP bulletin should not be prepared (there is no need for a "NIL" message).

9.6 ROBEX centres should distribute their own AIREP bulletins and those received from other ROBEX centres to the aeronautical meteorological offices in the area of responsibility as agreed with the meteorological authorities concerned.

9.7 The correction procedure is also applicable to AIREP bulletins.

9.8 Examples of AIREP ROBEX bulletin is given below:

302350 YBBBZEZX
UAAU31 YBBN 302350
VHFNY KAGUX 2256 F350 ROSEY 2322 MS47 245/65=
ANZ123 MIKEL 2325 F360 GEMAC 0012 MS60 193/44=
PAO855 OLREL 2250 F380 MAGDA 2343 180/68 MS66=
PBI42 PLUGA 2320 F390 SASRO 0020 MS66 160/40=
ANZ123 SASRO 2249 F360 MIKEL 2325 MS60 188/80=

~~*Note: In the example above the positions of the aircrafts is given by reference to ATS reporting points. According to Annex 3, Appendix 4, 3.4, the MWOs should convert the position into latitude/longitude before disseminating the air-report.*~~

210014 RJAAYPYX
UAFE31 RJTD 210000
JAL601 4144N 14813E 2312 F340 MS39 280/65=
JAL640 4144N 14813E 2322 F320 MS33 270/65=
FDX87 4900N 16001E 2321 F380 MS55 320/47=
NWA907 4223N 14729E 2328 F360 MS47 265/60=
NCA103 4223N 14729E 2330 F370 MS47 275/55=
FDX79 4144N 14813E 2341 F340 MS40 280/60=
JAL606 4144N 14813E 0002 F360 MS44 280/65=
NWA78 2100N 14259E 0006 F360 MS46 050/37KT=
NWA912 2835N 13349E 0011 F290 MS25 230/15KT=

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