INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE

REPORT OF THE SIXTH MEETING OF THE ASIA/PAC OPMET MANAGEMENT TASK FORCE (OPMET /M TF/6)

26 –28 March 2008

Bangkok, Thailand

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1. Introduction

1.1 The Sixth Meeting of the ASIA/PAC OPMET Management Task Force (OPMET/M TF/6) of the CNS/MET Sub-group of APANPIRG was held in Bangkok, Thailand, from 26 to 28 March 2008.

2. Attendance

2.1 The meeting was attended by 23 experts from Australia, China, Hong Kong China, Fiji Islands, India, Japan, Malaysia, Singapore, Thailand, Viet Nam and IATA. The List of Participants is provided in **Attachment 1** to the report.

3. Opening of the meeting

3.1 Mr. Mokhtar A. Awan, Regional Director, ICAO Asia and Pacific Office opened the meeting and extended welcome to all the participants to the ICAO Regional Office and emphasized the importance of timely exchange of OPMET information through ROBEX scheme for the safety of flight operation. He identified the need to share the experience gained in the other regions with respect to SIGMET testing. He assured his full support to the meeting and wished the meeting all success in its productive deliberations.

3.2 Mr. Rick Houghton from the Bureau of Meteorology, Australia and Rapporteur of the OPMET/M Task Force also welcomed the participants and provided a brief overview of the objectives of the meeting. He also highlighted main tasks for the meeting. He sought continuous support from all participants of the meeting.

4. Officers and Secretariat

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

4.2 Mr. Li Peng, Regional Officer, CNS acted as Secretary of the meeting who was assisted by Dr. Sujan Saraswati, Regional Officer, CNS of ICAO Asia and Pacific Office.

5. Organization and language of the meeting

5.1 The meeting met as a single body. Working language was English including all papers and this report. The meeting considered 18 working papers and 11 information papers. List of papers is provided at **Attachment 2** to this report.

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Adoption of agenda

1.1 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 follow-up action on the TF/5 meeting

Agenda Item 2: Review:
a) Report of 2nd RODB Coordination Meeting – Tokyo
b) Current status of OPMET exchange in the Region
c) Status report of Regional OPMET Data Banks
d) Inter-Regional exchange and new requirements for OPMET information.
- Harmonization of OPMET data on SADIS and ISCS
- New requirements for OPMET (Amendment 74 to Annex 3)
- State plans for implementation of 30 hour TAF

Agenda Item 3: Review of regional guidance material on OPMET exchange:
a) ROBEX Handbook
b) ASIA/PAC ICD
c) OPMET related FASID tables
d) ASIA/PAC OPMET Data Catalogue

Agenda Item 4: Management of OPMET exchange:
a) OPMET monitoring and quality control procedures
b) SIGMET tests

Agenda Item 5: Update on BUFR coded OPMET information – ANC decision

Agenda Item 6: Future Work Programme

Agenda Item 7: Any other business

Terms of Reference (TOR) and Action Items for the Task Force

1.2 The meeting reviewed the Terms of Reference (TOR) of the group which was last adopted by the CNS/MET SG/11 meeting (July 2007). In view of Amendment 74 to Annex 3 and status of BUFR code, consequential amendments to the TORs and work programme were considered necessary. The updated TORs and work programme proposed by the meeting is provided in **Appendix A** to this report. In view of the foregoing, the meeting developed the following draft Decision.

Draft Decision 6/1 - Revised TOR and Work Programme for the OPMET/M TF

That, the revised TOR and the work programme for the OPMET/M TF as shown in the **Appendix A** to the report under Agenda Item 2 be adopted.

Actions taken by the CNS/MET Sub-group and APANPIRG on OPMET/M TF/5 Report

1.3 The group further reviewed the follow-up action taken by CNS/MET SG/11 (July 2007) and APANPIRG/18 (September 2007) meetings on the OPMET/M TF/5 report.

1.4 The meeting noted APANPIRG/18 adopted draft conclusions on OPMET related matters formulated by the Task Force. The meeting also noted follow-up actions taken by States, Secretariat and International Organization with respect to the adopted Conclusions. The following follow-up actions on the OPMET management related issues were highlighted:

- **Conclusion 18/42 – MET Deficiencies Related to OPMET Data Shortfalls**. A follow-up letter has been sent from ICAO Regional Office to the States concerned for verification and remedial action.

- **Conclusion 18/43 – Harmonization of the content and format of Asia/Pacific OPMET Data on the ISCS broadcast**. A follow-up letter was sent to the ISCS provider State on 18 December 2007. The issue was also addressed at the WAFSOPS group meeting held in Cairo in February 2008.

- **Conclusion 18/44 – Implementation of Changes to TAF Provision in Amendment 74 to Annex 3**. WMO has provided code changes and IATA has provided the user's requirements. The OPMET/M TF has undertaken a Regional Survey, with the results presented to this meeting.

- **Conclusion 18/45 – Enhancing Quality Control on OPMET Information by States.** To follow-up, a State Letter was sent on 31 December 2007 encouraging States to undertake systematic monitoring and quality control. Several States have responded that their procedures are in compliance with Annex 3, 2.2.4 and 2.2.5.

Review of the status of follow-up action on OPMET/M TF List of Action Items

1.5 The meeting reviewed the List of Action Items adopted by the OPMET/M TF/5 meeting and took note of the achieved status of each item. The List contained 9 major tasks in 5 fields and 29 sub-tasks. All tasks should be considered as relating to the ICAO Strategic Objectives "A – Safety" and "D – Efficiency". It was identified that 12 tasks have been completed and 6 were ongoing. The meeting agreed to continue with updating the list under Agenda Item 6 – Future work programme.

Agenda Item 2: Review:

a) Report of 2nd RODB Coordination Meeting – Tokyo
b) Current status of OPMET Exchange in the Region
c) Status report of Regional OPMET Data Banks
d) Inter-Regional exchange and new requirements for OPMET information

2.1 Current status of OPMET exchange in the Region

OPMET information from the South Pacific

2.1.1 The group was informed that the planned improvement of the availability of the METAR and TAF bulletins from the South Pacific Island States has not been completed. It was reported at the second RODB meeting held in Tokyo (January 2008), that the new procedures for collecting METAR bulletins by Nadi RODB through e-mail have been tested, however, the operational implementation has been delayed, with Singapore RODB not having received any bulletins since October 2006. Some bulletins were received by ISCS but under a different header FTPA32 KWBC. The Secretariat reminded the group that a technical cooperation project was initiated by ICAO to help resolve MET related issues which would include the problem. The current status of the project has been progressed but MOU is yet to be signed by Fiji and PNG. States concerned were requested to arrange to sign the relevant document as soon as possible.

Other problems related to OPMET data availability

2.1.2 Thailand presented a report of the Back-up exercise of RODBs Bangkok and Singapore, conducted on 19 March between 0200 and 0800 UTC. Bangkok RODB was able to transmit 91% of messages with 9% of routing not generated. It was well coordinated with response within 10 minutes. There was no SADIS Gateway Advisory message NOUK33 EGRR received at Singapore, indicating that the exercise did not interrupt London IROG's operations.

2.1.3 Singapore provided an update on their report to the second RODB Coordination meeting, where the availability of TAF exchanged at Singapore ROBEX Centre following monitoring of data, was noted, especially the infrequent reception of TAF messages from Indonesia for Biak (WABB) and Ujung Pandang (WAAA). The additional monitoring shows little improvement in reception of TAF WABB (Biak).

2.1.4 The meeting noted the report and agreed that the secretariat write to Indonesia seeking an explanation for the inconsistency of the issuance of TAF WABB.

2.2 Status report of Regional OPMET Data Banks

2.2.1 Under this agenda item representatives of the RODBs Bangkok, Brisbane, Singapore and Tokyo presented information on the current status of the operations of their respective centres.

Second RODB Coordination Meeting

2.2.2 The group was informed of the outcome of the second RODB Coordination Meeting hosted by the Japanese Meteorological Agency (JMA) was held at the Headquarters of JMA Tokyo, Japan from 31 January to 1 February 2008. The meeting was attended by experts from RODBs Bangkok, Tokyo, Australia and ICAO Regional Office. The meeting was also attended by participants from JMA and Japan Airlines International Co., Ltd.

2.2.3 The RODB coordination meeting reviewed the operation of data banks, measures to resolve existing deficiencies related the availability of OPMET data, harmonization of the OPMET data on SADIS and ISCS broadcasts. The meeting viewed and reviewed methods of monitoring the OPMET exchange at the RODBs.

2.2.4 The measures to minimize OPMET data shortfalls were discussed, especially the non receipt of bulletins from Nadi and the irregular bulletins from Indonesia. The meeting noted that there had not been much progress in the harmonization of bulletin format and content of OPMET information on the ISCS broadcasts monitored by Singapore IROG.

2.2.5 The change to TAF provision in Amendment 74 to Annex 3 and the regional survey were discussed in detail, with the Rapporteur tasked to develop a plan for the Asia/Pacific Region for presentation at OPMET/M TF/6 meeting.

2.2.6 The future of meetings was discussed with the background to the origination of the meetings unknown, with the location of the next meeting to be decided at OPMET/M TF/6 meeting.

Report of RODB Singapore

2.2.7 Singapore provided information on the retrieval of OPMET information via File Transfer Protocol (ftp), with the development of a web-based Weather Information Portal (WIP) for accessing OPMET Data Bank, via a user-friendly interface which was implemented in December 2007.

2.2.8 The WIP is accessible using individual user account with username and password. ROBEX centres and airlines are welcome to use the service. Singapore RODB will provide the required login information on registration. The temporary user ID and password are provided to the member of the Task Force in IP/11 of OPMET/M TF/6.

Report of RODB Brisbane

2.2.9 Australia provided details of recent changes in their NAIPS that affect OPMET products. The removal of the second point and time in ARP type bulletins. The format of TAF validity period updated to accept nnnn/nnnn – validity period.

2.2.10 Statistical information on the number of “RQM” AFTN requests received by NAIPS was provided, with a significant number being received from Brasilia. The “REQ MET” message while designed for domestic use is also used by International units. Planned changes to the AIS MET system will be de-commissioned later in 2008, with the result that the “REQ MET’ AFTN requests will become invalid.

2.2.11 Australia is planning to provide extended global briefing service during 2008, to achieve this, Brisbane will receive a copy of all MET products stored in Singapore RODB, this will hopefully lead to a 100% mirroring of Singapore RODB data.

Report of RODB Nadi

2.2.12 Fiji reported that some organizational restructure was going on within AFL to ensure proper monitoring and quality control and this would be completed within two months and that Fiji was committed to improving its OPMET/ROBEX services during 2008 in compliance with ICAO requirements.

Report of RODB Bangkok

2.2.13 Thailand informed the meeting of their development of a web-based OPMET Database, which will have two accessibilities, Public by an internet user and Private for registered users. The data will be stored in the database for interactive access search. There will be no difference in web services provided by Singapore and Bangkok.

Report of RODB Tokyo

2.2.14 Japan has introduced a website based on OPMET information for limited domestic users on a trial basis.

2.3 Inter-Regional Exchange and New Requirements for OPMET Information

Update on inter-regional exchange by IROG Singapore

2.3.1 Singapore provided detailed information of non-routine SADIS advisory messages received and SIGMET validation between September 2007 and February 2008. It was noted that discarded SIGMET messages are corrected by SADIS Gateway ranged from 15 per month to as low of 1 in January. The error messages are sent to the originator by Singapore IROG centre.

Harmonization of OPMET data on SADIS and ISCS

2.3.2 The second RODB Co-ordination Group meeting discussed the differences of the OPMET data sets on SADISD and ISCS broadcasts, where it was shown that bulletins were being recompiled by Washington and transmitted under a different WMO header, with often the bulletin content changed. RODB Tokyo and Regional Office have, since the RODB Co-ordination meeting, contacted Washington concerning the issue, but at the time of the meeting had not received a response. The issue was also addressed at the WAFSOPS group meeting held in Cairo in February 2008.

New Requirement for OPMET (Amendment 74 to Annex 3)

2.3.3 Under this agenda item the group discussed the upcoming changes to Amendment 74 to Annex 3 that pertains to the work of the OPMET/M TF.

2.3.4 There were a number of papers presented raising concerns over the use of 30 hour TAF in VOLMET, rather than the current 9 hour TAF, which would make the State compliant with ICAO recommendation in the amendment, by only issuing one TAF for each aerodrome. Most concerns are over the length of time taken to deliver the 30 hour TAF and the affect this will have on the content of the VOLMET broadcasts.

2.3.5 Hong Kong China conducted a study on the feasibility of automatically generating a 9 hour TAF. The results of the study concluded that automatic generation of 9 hour TAF in the TAF code form consistent with the original TAF, by extracting relevant information from the long TAF, was not always feasible.

2.3.6 Singapore presented proposed plans for the implementation of 30 hour TAF and the use of 30 hour TAF WSSS in VOLMET, expressing concerns that with inclement weather the TAF may be truncated, due to time constraints.

2.3.7 The Secretariat detailed the requirements for VOLMET broadcasts; reinforcing the requirement for only one TAF for each aerodrome and that current 9 hour TAF for VOLMET will need to be replaced by 24 hour or 30 hour TAF.

2.3.8 Alternatives were discussed by the group and as the VOLMET is subject to Regional Air Navigation agreement it could be possible to delete the TAF from VOLMET, replacing it with TREND appended to METAR. The need for consultation with VOLMET end users was identified and the IATA representative was asked of his knowledge of the current use of VOLMET.

2.3.9 The meeting agreed that a formal request be sent to IATA to conduct a survey amongst users on the requirement of TAF in VOLMET broadcasts in the ASIA/PAC Region, seeking from the user which is of more use in VOLMET, TAF or METAR. A fixed date for response from IATA be made so that the results can be studied before a recommendation is made to the CNS/MET SG/12 meeting. Members of the group were also tasked to enquire of airlines within their State of their use of VOLMET. Accordingly, the meeting formulated the following Decision.

Decision 6/2 - Regional Survey on TAF in the VOLMET

That, in order to implement Amendment 74 to Annex 3, a survey on the use of TAF information in the VOLMET by the airlines be conducted by the end by April 2008 to seek comments from IATA and IFALPA and other airlines on the removal of TAF from VOLMET. The result of survey will be presented to ATM/AIS/SAR SG/18 and CNS/MET/SG/12 for consideration.

2.3.10 Japan advised that Japan Meteorological Agency will be issuing 27 Hour TAF in accordance with Amendment 74 to Annex 3, with the abolishment of current 9 hour TAF for RJTD. It also advised that it plans to reduce the number of change groups of TAF messages in the Tokyo VOLMET broadcast due to the limited transmission time.

2.3.11 Japan provided information on changes to format of MET bulletins, TCA, VAA, SIGMET and METAR planned for implementation in May 2008, in accordance with Amendments 73 and 74 to Annex 3.

2.3.12 Results from the Regional survey:

- Out of 11 ROBEX centres 11 responded. Out of 36 Contracting States in the Asia/Pacific Region only 17 States responded, although the bulletin requirement for some of these States has been addressed by the State issuing the ROBEX bulletin.

- Of the 17 States who IATA have requested a 30 Hour TAF, Indonesia, 2 States indicated that they would not be issuing a 30 Hour TAF, China and Thailand. Malaysia indicated it would be able to comply in 2009 and the Philippines by 2010. A number of States although not specifically requested by IATA will supply a 30 hour TAF.

- The following States plan to introduce D VOLMET as follows:

    - Singapore June 2008
    - Vietnam 2015
    - China 2009
    - Japan it is under consideration

- The details of contents of the VOLMET and DVOLMET indicate some uncertainty indicate some uncertainty of the requirement for the validity period in VOLMET, with the Amendment 74 clearly stating that there will be only one TAF validity for each aerodrome. States are still planning to use 9 hour, 12 hour, 24 hour, 27 hour and 30 hour TAF in VOLMET broadcasts. This requires further discussion by the OPMET/M TF and CNS/MET SG, to remove the uncertainty that presently exists.

- The tables for OPMET bulletins were presented in a draft form, which will require further revision by States and adoption by CNS/MET SG before final amendment of ROBEX tables.

Detailed information received from survey is provided in the Tables at **Appendix B.**

2.3.13 The suggested timetable for Regional Implementation of 30 Hour TAF was discussed, with several changes suggested, including allowing 3 months for RODBs to change software and incorporation of any changes to VOLMET broadcasts details following the result of the IATA survey. **The meeting agreed to submit the implementation plan for endorsement by CNS/MET SG/12 which may refer the plan for adoption by APANPPIRG through a draft Conclusion.**

ASIA/PAC Plan for implementation of new TAF provision (Amendment 74 to Annex 3)

Action	Resp. Body	Deliverable	Target Date
Information on airline requirements for TAF period of validity	IATA	Letter to RO with proposal	January 2008
Information to States on TAF changes and survey requesting State plans	RO	State letter with survey	18 January 2008
Information from States on their decision for the period of validity of TAF for all aerodromes included in FASID Table Met 2A	States	Response to Rapporteur OPMET/M TF and RO	25 February 2008
Collation of States responses and draft ASIA/PAC new bulleting structure	OPMET/M TF Rapporteur	Draft ASIA/PAC TAF bulleting structure	5 March 2008
First review of the new ASIA/PAC TAF structure by OPMET/M TF6 meeting	OPMET/M TF	Draft ASIA/PAC TAF bulleting structure	27 March 2008
Review of ROBEX tables for ASI/PAC OPMET TAF Bulletins	OPMET/M TF	OPMET TAF Bulletins prepared from survey results	30 April 2008
OPMET TAF Bulletin structure sent to States for correctness	OPMET/M TF	Correct TAF bulletins from States	1 May 2008
Response from IATA on inclusion of TAF in VOLMET	IATA/RO	IATA member requirements	1 May 2008
Response from States	States	Response on correctness of OPMET TAF bulletins	30 May 2008
TAF Bulletin structure presented to CNS/MET meeting	CNS/MET	Final ASIA/PAC OPMET TAF bulletin structure	21-25 July 2008
Second review	CNS/MET	Final ASIA/PAC TAF bulleting structure	21-25 July 2008
States and RODBs informed of new bulleting structures	OPMET/M TF & RO	New ASIA/PAC TAF bulletin structure circulated to States	4 August 2008

Action	Resp. Body	Deliverable	Target Date
Amendment proposal to FASID Table Met 1A and MET 2A	RO	State letter with amendment proposal	18 August 2008
Coordination with other ICAO Regions	RO, OPMET/MTF	Exchange of information on TAF bulletin structure	25 August 2008
Issuance of METNO	RODB's	METNO bulletins sent via AFTN and SADIS/ISCS to all centres concerned	Early October 2008
Implementation date/time	States	Commence issuance of TAF according to new bulletin structure	5 Nov 2008 0000 UTC
Post-implementation monitoring review	RODB's & OPMET/MTF	Monitoring report of traffic Tuesday 9 December	9 December 2008

2.3.14 The meeting agreed that the delivery of the first TAF after 5 November 2008 in the new TAF code format would be any issue of TAF on or after 0000UTC 5 November 2008. Accordingly the meeting formulated the following draft Conclusion.

Draft Conclusion 6/3 - Applicable time for using the new TAF Code

That, States be advised that applicable time for delivery of the first TAF in the new TAF code format is on or after 0000 UTC 5 November 2008.

2.3.15 States not issuing a 30 Hour TAF will need to be advised that all TAF issued after 0000UTC 5 November 2008 will need to conform to the new TAF code format. IATA explained that automated systems would be able to handle both code formats, but States should be advised to conform to the new TAF code format from 5 November 2008.

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

a) ROBEX Handbook
b) ASIA/PAC ICD
c) OPMET related FASID tables
d) ASIA/PAC OPMET Data Catalogue

Updaters to the ASIA/PAC ICD

3.1 Singapore RODB submitted amendment to the Asia/Pacific OPMET Data Banks Interface control document (ICD) which is provided in the **Appendix C** to the Report under Agenda Item 3. The Secretariat will update the web version of the ICD accordingly.

ASIA/PAC OPMET Data Catalogue

3.2 Australia suggested considering establishment of single web access point to provide all OPMET information to OPMET members. It was recognized that no progress had been made in improving the ROBEX Database, due to all ROBD'S developing individual databases. It was stated that at present Bangkok, Singapore and Brisbane to some degree are capturing and maintaining either the content of OPMET data or a database of the products. The logical hosting location would be the ICAO server on which a sample of the ATN Implementation project is currently used by members of ATN Implementation Coordination Group. It is required to be able to get all the bulletin information and then if someone wants to obtain the current real time content of the bulletins. It was suggested that all fragmented information could be pooled and stored at a single location. In such case, if some changes were made in the bulletin content, it would require a single global change rather than changing different sets of data at different locations.

3.2.1 The meeting appreciated and discussed the proposal made by Australia. The meeting also reviewed the sample on the ICAO APAC website. Considering limited capacity of ICAO APAC server leased outside the Office and requirements for help support required during non working hours and the need for the database to host real time operational data, the server employed by the ICAO Regional Officer is considered not suitable for providing operational OPMET service. The meeting was not able to reach an agreement for any State to provide the service.

ROBEX Handbook and FASID Tables

3.3 No amendments to ROBEX Handbook and/or FASID Tables were considered at the meeting. There will be a need for amendment following the Amendment 74 to Annex 3 for implementation on 5 November 2008.

Agenda Item 4: Management of OPMET exchange

Under this agenda item, the meeting considered and discussed four papers on the OPMET monitoring and quality control and five papers on the SIGMET testing conducted in January 2008.

OPMET monitoring and quality control procedures

IATA OPMET monitoring data

4.1 In his presentation on OPMET Data Monitoring, IATA representative provided information about the current number of available airports providing OPMET data on SADIS from the ASIA/PAC Region. The meeting noted the OPMET Data being provided by the aerodromes listed in

SUG Annex 1. Break-up of the types of OPMET data being provided was shown in two separate tables, one for the aerodromes which are also listed in the AOP Table and the other for the non-AOP aerodromes. While, IATA as user agency of the service indicated its appreciation about the OPMET data being provided by aerodromes listed in AOP Table, IATA was of the view that there was a scope for improvements. States were requested to continue their efforts to improve the availability of all possible aerodromes listed in the SUG Annex 1.

4.1.1 In response to a query as to why SUG Annex 1 has been used in place of FASID Table MET 2A, the meeting was informed that it has been proposed to discontinue FASID Table MET 2A for all regional ANPs. The requirements in SUG Annex 1 would be considered as the ultimate requirements for global OPMET exchange. This will be done through next amendment proposals. However the requirements for non-AOP aerodromes (those that are not included in FASID Table MET 1A) are subject to agreement with the Sate concerned. Considering the continuous efforts being made by States and the Secretariat in improving the availability of the OPMET information in the Region, the meeting considered unnecessary to develop duplicated Draft Conclusions.

4.1.2 Viet Nam indicated that the Aerodromes of Viet Nam listed in the attached tables containing IATA requirements for OPMET data are domestic airports. States may not have committed to provide OPMET data regularly. IATA clarified, although those airports are mainly for domestic use but they may be used by the international airlines in case of emergency, ETOPS operations.

SIGMET Validation at SADIS Gateway

4.2 The meeting noted that investigations are still being carried out into SIGMET FIR identification since Amendment 73 to ICAO Annex which mandated the inclusion of the FIR indicator before the FIR name on the 2nd line after the Abbreviated Heading Line (AHL). SIGMET Data were monitored and analysed with a tool for the period from 1 February to the 14 February 2008. The completely non compliant SIGMETs are disregarded. The compliance level of SIGMETs is only 38.3% which does not meet the required compliance level of 80%. The meeting noted that there are 19 SIGMET Bulletin from the Asia and Pacific Regions which are listed in an attached non compliance SIGMETs table.

RODB Bangkok Performance Indices

4.3 RODB Bangkok informed the meeting of their off-line software application for analyzing incoming OPMET data in IA-5 format, which computes the performance indices of this data for availability, regularity and compliance. The demonstration on using the software was presented to the second RODB Coordination meeting. The meeting noted the performance indices (PIs) of incoming OPMET data: SA, FT and FC on 1-29 February 2008.

OPMET Quality Control at Singapore RODB

4.4 A report on the data validation at Singapore RODB on six days between September 2007 and March 2008 was presented to the meeting. The meeting noted with interest the result of OPMET validation. The meeting noted the discrepancies in METAR WSSS messages received from various data streams. The discrepancies are mainly associated with correction messages i.e. CCA which might be caused by the automatic corrections taken by the automation facilities during the process of dissemination of the data. The problems were identified at VOLMET station Singapore.

OPMET Quality Control in China

4.5 China informed the meeting of the outcome of the OPMET information quality control. The meeting noted the statistics data of OPMET messages received and sent by Beijing ROBEX Centre

for the period from 1 to 31 December 2007. Statistics data of incoming OPMET information received by Beijing ROBEX Centre were also noted. The average error messages per day are around 460. Discrepancies identified include errors in heading, format, date time group and location indicators. Number of missing messages and delayed messages against SA, FC and FT was also anal sized.

4.6 Quality control and monitoring needs to be standard across the Region using the uniform procedures and monitoring periods. States were strongly recommended to follow the guidelines provided in the relevant section on Quality control and monitoring included in the ROBEX handbook in 2007.

SIGMET tests

4.7 The meeting reviewed the results of the SIGMET tests taken place in January 2008 in the ASIA/PAC Region presented by the members from Australia and Japan. The tests were conducted according to a schedule, coordinated with the Rapporteur of the ASIA/PAC VA/TC Implementation Task Force, as follows:

- Test for SIGMET for tropical cyclones (WC SIGMET) – 15 January 2009, start time (time of issuance of the triggering tropical cyclone advisory by the TCACs concerned) 0200 UTC;

- Test for SIGMET for volcanic ash (WV SIGMET) – 22 January 2008, start time (time of issuance of the triggering volcanic ash advisory by the VAACs concerned) 0200 UTC; and

- Test for SIGMET for other weather phenomena (WS SIGMET) – 29 January 2008, start time 0200 UTC.

4.7.1 The objective and procedures for conducting the test were provided to the States through ICAO letter T4/7.5 AP0128/07 (MET) dated 26 November 2007. Through the testing, measure to improve the availability of SIGMET to resolve the SIGMET related deficiencies could be identified. The following observations regarding the test SIGMET issuance and dissemination were noted:

SIGMET for volcanic ash and tropical cyclones (WV and WC)

4.8 19 test WC SIGMETs were received while 35 were expected. The overall availability of the test WC SIGMET was about 54%. 33 test WV SIGMETs have been issued. 11 SIGMETs were issued by MWOs in the Russian Federation which are under the area of responsibility of VAAC Tokyo. 22 WV SIGMETs were received while 34 were expected. Thus the overall availability of the test WV SIGMET was about 65%. Number of participation by States for the test is still unsatisfactory.

<u>WC SIGMET test</u>

- availability was better than third test in 2007;

- not all the test TCAs and test SIGMETs issued by TCAC and MWOs did not reach to some RODBs;

- some test SIGMETs did not reach within the set period; and

- some had incorrect CCCC and FIR.

TTAAii	CCCC	YYGGgg	MWO	FIR/UIT
W(C/V)JP31	**RJTD**	150205	RJTD	**RJJJ**
W(C/V)CI31	RCTP	150205	RCTP	**RCAA**

- There were still wrong WMO Headings, e.g WS instead of WC

WV SIGMET test

- 22 out of 34 states in the Asia/Pac Regional SIGMET Guide, Appendix H, 22 States (65%) participated in the test,
- the number of availability was better than third test in 2007.
- the participation of following 11Russian MWOs were satisfactory: UHBB,UIAA,UHNN,UHMM,UHHH,UIII,UHWW,UIKK,UHPP,UELL, RODB Tokyo relayed the Russian VA received from GTS to the other RODBs via AFTN,
- not all the test VAA and test SIGMETs issued by VAAC and MWOs did not reach to some RODBs,
- there were still wrong WMO Headings, e.g WS instead of WV,
- some test SIGMETs test did not reach within the set period.

SIGMET for other MET phenomena

4.9 Four RODBs in the Region provided summary of the reception of the WS tests to Australia, Rapporteur of the OPMET/M T/F. Analysis of the test results is as follows:

- Out of 28 States in the Asia/Pac Region SIGMET Guide, Appendix H, 14 States (50%) participated in the test, by having their MWOs issue a test SIGMET. This was an increase of 2 States from the 2007 test. Note that of the 28 States listed in the SIGMET Guide, 7 States were an MWO has not been established or the details are not confirmed or there is no information or SIGMET is not issued. Taking this into account the participation rate could be stated as 14 of 21 States (66%);
- Of the 14 States who took part, 40 out of 43 (93%) MWOs within those States issued a test WS SIGMET for their FIR of responsibility; this was a vast improvement from 2007 test when the MWO participation rate was 68%. The MWOs within the participating States which did not issue a SIGMET were Sheygang and Urumqi from China and Lahore from Pakistan;
- Not all test SIGMETs issued reached all RODBs, where it had been agreed that all RODB's would mirror each other RODB contents. Of the 4 RODBs who took part in the test, 140 test WS SIGMETs messages were received, the maximum number possible should have been 152. A total of 17% of SIGMETs were not received by RODBs, an improvement of 8% from the 2007 test.

- There was an improvement in the reception by RODB Bangkok received 29 of 38 test WS SIGMETs issued or 76.3% up from 67% in 2007. It received 7 of the 9 SIGMETs from Australia and SIGMETs from New Zealand. The addressing issue has since been corrected by Australia.

- RODB Brisbane received 36 out of 38 test WS SIGMETs issued or 94.7 % up from 94 % in 2007. Missing only from Kota Kinabalu, Malaysia (addressed at the meeting).

- RODB Singapore received 38 of 38 test WS SIGMETs issued or 100% up from 97% in 2007.

- RODB Tokyo received 35 of 38 test WS SIGMETs issued or 92.1% up from 84% in 2007. Missing only from Sydney Australia (addressing has since been corrected) and Kolkata India.

- Once again there were a small number of SIGMET messages with the incorrect priority of GG, though the incorrect priority use was higher in WV SIGMETs.

- A number of MWOs did not use – at the end of the header line, instead they used = to separate the preamble from the text, which can cause problems to automated systems.

- The following States provided SIGMET from MWOs not in Appendix H of the SIGMET Guide Edition 4 of July 2007.

MWO Location	**ICAO**	**SIGMET received for FIR**
Melbourne National Centre - Australia	YMMC	YMMM
Melbourne National Centre - Australia	YMMC	YBBB

- Once again the lack of a report from Nadi RODB was disappointing and it is recommended that Nadi be urged to participate in the next test to gauge the SIGMET issuance and reception of the South Pacific Region.

- It was pleasing to see that the number of errors had fallen since SIGMET Test 1 and that changes were made after SIGMET Test 2.

Result of WS SIGMET Test 3 observed at Singapore

4.10 Singapore informed the meeting of the results of the WS SIGMET test compiled at Singapore RODB. WS SIGMET testing messages were received on 29 January 2008. It was noted that 2 to 3 duplicated SIGMET testing messages were issued from some States including those from India and Pakistan.

Comparison of WS SIGMET TESTS 1, 2 & 3

4.11 The meeting reviewed the report of the comparison work accomplished by the OPMET Management Task Force SIGMET Team presented by Australia. The result of WS SIGMET Tests undertaken on 9 February 2006 and 9 February 2007 and 29 January 2008 was presented to the meeting.

4.12 Comparison of the test results for the three tests is as follows:

- **State participation in tests**

  Test 1 out of 29 States 13 participated in the test or 44%
  Test 2 out of 28 States 12 participated in the test or 42%
  Test 3 out of 28 States 14 participated in the test or 50%

  If the eight States where information is not confirmed or there is no MWO or SIGMET issued then the response rate for participation would become:

  Test 1 out of 21 States 13 participated or 62%
  Test 2 out of 20 States 12 participated or 60%
  Test 3 out of 20 States 14 participated or 70%

- Individual result from RODBs was pleasing in that overall a significant increase in reception of test messages had occurred as follows;

  - There was an improvement with the reception by RODB Bangkok, who received 45% of SIGMETs sent in test 1, this increased to 67% in test 2 and 76% in test 3. It is still missing SIGMETs from 3 MWOs in Australia, New Zealand and United States. *This has since been addressed*.

  - There was also improvement with the reception by RODB Brisbane who received 90% of SIGMETs in test 1, 94% in test 2 and 95% in test 3. It is still missing SIGMETs from Malaysia Kota Kinabalu *(addressed at that meeting)* and Pakistan, Lahore.

  - RODB Singapore as the European gateway showed improvement with 80% reception in test 1, with this improving to 97% in test 2 and 100% in Test 3.

  - RODB Tokyo was the only RODB to record a very small loss from 85% in test 1 to 84% in test 2, improved markedly to 92% in test 3. It is still missing SIGMETs from 1 Australian Sydney MWO, India Kolkata and United States of America, all FIRs.

- Once again the lack of a report from Nadi RODB was disappointing and it is recommended that another test be undertaken to gauge the SIGMET issuance and reception of the South Pacific Region. Representative from Fiji expressed that Fiji would provide the report and participate the tests in 2009; and

- It was pleasing to see that the number of errors had fallen since SIGMET Test 1 and that changes were made after SIGMET Test 1 and 2 to addressing so that now more RODBs are able to mirror their SIGMET holding,

Plans for future SIGMET tests actions aimed at improving the SIGMET services

4.13 The meeting expressed full support to the continuous efforts for improving the availability of SIGMET by the ASIA/PAC States and thanked all those involved in the organization of the SIGMET tests.

4.14 It was noted that there had not been significant improvement regarding the availability of test SIGMET during the 2008 tests. Problems persisted with a number of States not participating. The Secretariat informed in this regard that a regional performance objective had been set up to achieve 95% availability of test SIGMETs.

4.15 It was agreed that the test were valuable and should continue, Australia recommended that the future tests be held away from January as this was the holiday season in Australia, making it difficult for management to prepare for the tests. It was also noted that Chinese New Year in 2009 also falls at the end of January. Therefore the meeting agreed that the SIGMET tests should be conducted in February 2009.

4.16 The meeting suggested that the letters to States on the testing from the ICAO Regional Office should also be copied to the focal contact points listed in the Appendix D of the Regional SIGMET Guide.

4.17 The meeting agreed that the SIGMET tests should be conducted within 2 hours i.e. from 02:00 to 04:00 UTC. The procedure for the SIGMET testing as contained in the regional SIGMET Guide should be amended accordingly.

Volcanic Ash Simulation Exercises in the EUR/NAT Region

4.18 The meeting noted with interest the information presented by the Secretariat regarding the volcanic ash simulation exercises undertaken by ICAO EUR/NAT Region to improve the response to volcanic eruptions and volcanic ash clouds. The exercise was carried out in the EUR region in February 2008.

4.19 Currently, both the EUR and NAT regions have VA contingency plans in place. However, the procedures outline in these plans need to be thoroughly tested and validated. The exercise required coordination and cooperation between MET offices including MWOs , VAACs London and Toulouse, airlines operators, ANSPs and CFMU. The scenario for the exercise was a volcanic eruption of Katla volcano in Iceland with an ash plum up to FL550. VAAC simulated the migration of the volcanic ash cloud towards South-East direction which would affect a large portion of Western Europe air space. CFMU prepared charts on which the clouds is superimposed over the air routes. 5659 flights would have crossed the ash area within 24 hours. The contingency procedure were tested against the above scenario. The EUR/NAV region has planned to continue with at least two exercises per year to involve most of the States in regions.

4.20 The meeting recognized that the SIGMET WV tests are conducted by MET units only including VAACs and WMOs. The objective of the tests is to find out the availability of the SIGMET data and status of format compliance of SIGMET data. Some testing messages were sent to ATCCs for information. The exercises have not involved the participation of ATM and airlines personnel. There would be benefits to expand the testing to exercise with concerned stakeholders. However, this should be brought to the attention of ATM experts of ATM/AIS/SAR for their consideration. It may be considered by the MET/ATM Task Force for detailed discussions. Another concerns expressed at the meeting was that the duration of exercise -2 months and twice per year for conducting the exercises would be difficult for some States in the Asia and Pacific Region. The meeting agreed to forward the information and concerns expressed by the group to the ATM/AIS/SAR and CNS/MET SG for their consideration.

Agenda Item 5: Update of BUFR coded OPMET information – ANC Decision

Air Navigation Commission Decision on BUFR code

5.1 The secretariat informed the meeting that on the 25 October 2007 at the fourth meeting of the 176th Session, the Air Navigation Commission agreed to suspend the migration to the BUFR-coded form for exchange of OPMET information pending a decision from WMO in 2009.

5.2 In response to a query on the progress of the WMO CBS Expert Team study on the use of XML code form in lieu of the BUFR code form, Secretariat informed the meeting that due to the lack of resources, WMO had not yet established the Expert Team (ET) on the use of XML. The latest information from WMO indicates that it may be expected that the ET will be established during 2008. However, the final results would not be available until mid-2009.

5.3 The meeting was also informed by the Secretariat about the parallel development by ICAO on the Net-Centric AIM which initially to include AIS data but would in the longer term also encompass MET data. It appears important that the code to be used for the MET data be compatible to that used for the AIS. A study group is being formed to look into these matters with the first meeting expected to take place in October/November 2008.

Agenda Item 6: Future Work Programme

6.1 The group updated the list of action items which have been tabled during the discussion under the foregoing Agenda Items. The list of action items indicating target dates and responsible person/body is in **Appendix D** to this report.

6.2 The group discussed the possible date and venue for the third RODB coordination meeting. The Rapporteur of the Task Force was requested to coordinate with ICAO Regional Office and the concerned administration whether Australia could host the next meeting.

6.3 The group agreed that its seventh meeting would be held in March 2009 in the ICAO Regional Office, Bangkok. The exact dates for the meeting will be advised after further coordination.

Agenda Item 7: Any other business

7.1 The meeting was informed that Mr. Rick Houghton, the Rapporteur of the Task Force who was the key coordinator for the tasks assigned by APANPIRG and who had chaired the previous six meetings of the group would retire by early 2009. The group recounted various achievements made by the Task Force under the leadership of Mr. Rick Houghton and mentioned in particular the improvements made in the provision of OPMET service and a very good level of coordination achieved between various RODBs. The group expressed thanks to Mr. Rick Houghton for his efforts and leadership in improving the OPMET exchange and management in the ASIA/PAC Region. The meeting expressed best wishes to him for his new chapter of life.

7.2 In concluding the meeting, Mr. Rick Houghton appreciated the support provided by ICAO Asia/Pacific Office in conducting the meeting. He particularly commended the efforts put in by the Secretariat - Regional Officers CNS in providing active and successful support to the meeting. He also thanked the members of the Task Force for their contribution towards the improvement of the OPMET management and exchange. Mr. Rick Houghton wished the Task Force all the success in achieving its objective.

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PROPOSED REVISED

TERMS OF REFERENCE OF ASIA/PAC OPMETMANAGEMENT TASK FORCE (OPMET/M TF)

1. Terms of Reference

- Review the OPMET exchange schemes in the ASIA/PAC and MID Regions and develop proposals for their optimization taking into account the requirements by the aviation users and the current trends for global OPMET exchange;

- Develop standardized quality control, monitoring and management procedures related to ROBEX exchange and other exchanges of OPMET information;

- Regularly update the regional guidance material related to OPMET exchange;

- Liaise with other groups dealing with communication and/or management aspects of the OPMET exchange in ASIA/PAC and other ICAO Regions (ASIA/PAC ATN Implementation Coordination Group, BMG EUR Region, CNS/MET SG MID Region, SADISOPSG).

2. Work Programme

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

(a) to examine the existing and any new requirements for OPMET exchange in ASIA/PAC and MID regions and 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 prepare proposal for updating and optimizing of the schemes;

(c) to review and update the procedures for interregional OPMET exchange and ensure the availability of the required ASIA/PAC and MID OPMET data for the AFS satellite broadcasts (ISCS and SADIS);

(d) to keep under review and provide timely amendments to the regional guidance material on OPMET exchange; to ensure that guidance material contains procedures for the exchange of all required OPMET data types: SA, SP, ~~FC,~~ FT, WS, WC, WV, FK, FV, UA;

(e) to conduct trials and develop procedures for quality control, monitoring and management of the OPMET exchange; to foster implementation of quality management of OPMET data by the ROBEX centres and the RODBs;

(f) to prepare, in coordination with the ATN IC Group, regional plan for the transition to BUFR coded OPMET information in coordination with the relevant APANPIRG contributing bodies;

(g) to participate in the regular regional SIGMET tests;

(h) to further develop quality control guidance material and to promote~~assist in development and~~ implementation of quality control for OPMET management.

~~regional project on related performance objectives.~~

3. Composition

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

Australia (Rapporteur); China; Fiji; Japan; Hong Kong, China; India; Indonesia; Malaysia, Singapore; Thailand; United Kingdom; United States; and Viet Nam;

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

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RESULTS OF ASIA/PAC REGION SUREVY ON 30 HOUR TAF IMPLEMENTATION

Table 1: State plans

STATE	PLANS FOR 30H TAF
New Zealand	No plans no IATA requirement for New Zealand AOP aerodromes
Singapore	Issue 30H TAF for all 3 aerodromes. 30H TAFChangi used in VOLMET
Australia	Issue 30H TAF for all IATA requested Aerodromes
Fiji	No plans no IATA requirement
Vietnam	Issue 30H TAF for 3 international airports
China	No plans to implement 30H TAF at present
Macao, China	Issue 30H TAF for Macau on 5 November
Philippines	Plans to implement tentatively in 2010
Malaysia	Upgrade current switching system to handle 30H TAF ready by mid 2009
Japan	No request for Japanese Aerodromes for issuance 30H TAF
Hong Kong China	As per IATA's request in accordance with Annex 3 30H TAF will be implemented for VHHH, 9H & 24H TAF will cease 5 Nov 2008
Sri Lanka	No capabilities at present, not a requirement in Annex B. It is not possible to state the time frame.
Republic of Korea	30H TAF from 8 November 2008 for Incheon
Thailand	No plans for implementation
India	All aerodromes as listed in Qs3 will issue 30H TAF
Pakistan	Not yet planned, under consideration in coord with Pakistan Met. Department
Taiwan	30H TAF Taibei and Gaoxiong
United State of America	30H TAF as per list

Table 2: Aerodrome Locations of 30 Hour TAF and VOLMET plans

STATE	Q3 30H TAFS	Q4 VOLMET BROADCAST		Q5 D VOLMET		Q6 D-VOLMET PLANS	
		YES	NO	YES	NO	YES	DATE PLANNED
NEW ZEALAND	NIL	YES			NO	NO	
SINGAPORE	Changi Paya Lebar Seletar	YES			NO	YES	Jun-08
AUSTRALIA	Sydney Brisbane Melbourne Adelaide Perth Darwin	YES			NO	NO	
FIJI	NIL		NO		NO	NO	
VIETNAM	No Bai Intl Da nang Intl Tan So Nhat Intl		NO	NO		YES	2015
CHINA	NIL	YES		NO		YES	2009
MACAO, CHINA	Macau	YES		NR			
PHILIPPENES	Manilla Lapu Lapu	CAA Resp		CAA Resp		CAA Resp	
MALAYSIA	Sepang		NO		NO	NO	

STATE	Q3 30H TAFS	Q4 VOLMET BROADCAST		Q5 D VOLMET		Q6 D-VOLMET PLANS	
		YES	NO	YES	NO	YES	DATE PLANNED
JAPAN	NIL	YES		NO		YES	Under consideration
HONG KONG CHINA	Hong Kong Intl	YES		YES		N/A	
SRI LANKA	NIL		NO	YES		N/A	
Republic of KOREA	Incheon		NO		NO	NO	
Thailand	NIL	YES		YES		N/A	
India	Ahmedabad Mumbai Amritsar Delhi Nagpur Kolkata Patna Jaipur Lucknow Agartala Bangalore Hyderabad Chennai Trivandum Bhopal Bhubaneshwar Guwahati	YES			NO	NO	

STATE	Q3 30H TAFS	Q4 VOLMET BROADCAST		Q5 D VOLMET		Q6 D-VOLMET PLANS	
		YES	NO	YES	NO	YES	DATE PLANNED
	Mohanbari						
PAKISTAN	NIL	YES		NO		NO	
TAIPEI	Taipei Gaoxiong	NO			NO	NO	
UNITED STATE OF AMERICA	Atlanta Intl Bradley intl Logan Intl Washington Intl Hopkins Intl Denver Intl Dallas Intl Detroit Intl Newark Intl Dulles Intl Houston Intl Indianapolis Intl JFK Intl Los Angeles Intl General Mitchell Intl Minneapolis Intl Oakland Intl Ontarion Intl O'Hare Intl Philadelphia Intl Pittsburgh Intl	YES			NO	N/A	

STATE	Q3 30H TAFS	Q4 VOLMET BROADCAST		Q5 D VOLMET		Q6 D-VOLMET PLANS	
		YES	NO	YES	NO	YES	DATE PLANNED
	San Diego Intl Louisville Intl Tacoma Intl San Francisco Intl Salt Lake City Intl St Louis Intl Stewrat Intl Anchoirage Intl Honolulu Intl Fairbanks Intl						

Table 3: Scheduled VOMET Details

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
NEW ZEALAND	Auckland	NZAA	X	X	X	9 hours	
	Christchurch	NZCH	X	X	X	9 hours	
	Wellington	NSWN	X	X	X		
	Nadi	NFFN	X	X	X	9 hours	
	Faleolo	NFNA	X	X	X		
	Noumea	NWWW	X	X	X	9 hours	
	Pago Pago	NSTU	X	X	X		
	Tahiti	NTAA	X	X	X		
	New Zealand FIR						X
	Auckland Oceanic FIR						X
SINGAPORE	Singapore Changi	WSSS	X		X	30 hours	X
	Kuala Lumpur	WMKK	X			30 hours?	
	Soekarno-hatta	WIII	X			30 hours?	
	Kuching	WBCG	X				
	Brunei	WBSB	X				
	Kota Kinabalu	WBKK	X				
	Bali	WADD	X				
	Penang	WMKP	X				
AUSTRALIA	Sydney/Kingsford Smtih Intl	YSSY			X		
	Melbourne Intl	YMML			X		
	Brisbane	YBBN			X		
	Adelaide	YPAD			X		
	Darwin	YPPH			X		
	Perth	YPDN			X		
	Townsville	YBTL			X		

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
	Cairns	YBCS			X		
FIJI	Nadi	NFFN	X	X	X	9 Hours	
	Noumea	NWWW	X	X	X	9 hours	
	VOLMET broadcast undertaken by New Zealand through Auckland						
VIETNAM	Tan-Son Nhat	VVTS	X				
	VOLMET Broadcast undertaken by Bangkok						
CHINA	BEIJING/Capital	ZBAA	X		X	24 Hours	
	TIANJIN/Binhai	ZBTJ	X		X		
	TAIYUAN/Wusu	ZBYN	X		X		
	GUANGZHOU/Baiyun	ZGGG	X		X	24 Hours	
	HANGZHOU/Xiaoshan	ZSHC	X		X		
	SHANGHAI/Pudong	ZSPD	X		X	24 Hours	
	URUMQI/Diwopu	ZWWW	X		X		
	DALIAN/Zhoushuzi	ZYTL	X		X		
	SHENYANG/Taoxian	ZYTX	X		X		
	NANNING/Wuxu	ZGNN	X		X		
	XIAN/Xianyang	ZLXY	X		X	24 Hours	
	KUNMING/Wujiaba	ZPPP	X		X		
	XIAMEN/Gaoqi	ZSAM	X		X		
	CHENGDU/Shuangliu	ZUUU	X		X	24 Hours	
	HOHHOT/Baita	ZBHH	X		X		
	CHANGSHA/Huanghua	ZGHA	X		X		
	WUHAN/Tianhe	ZHHH	X		X		
	LANZHOU/Zhongchuan	ZLLL	X		X		
	HARBIN/Taiping	ZYHB	X		X		

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
MACAU, CHINA	MACAU	VMMC	X	X	X	2 Hours	
PHILIPPINES	SUBIC BAY/Olongapo	RPLB	X	X	X		
	CLARKES ANGELES	RPLC	X	X	X		
	LAOAG	RPLI	X	X	X		
	MANILA/Ninoy Aquino Intl	RPLL	X	X	X	30 hours	X
	DAVAO/Francisco Bangoy Intl	RPMD	X	X	X		
	ZAMBOANGA	RPMZ	X	X	X		
	LAPU LAPU MACTAN INTL	RPVM	X	X	X	30 hours	
MALAYSIA	Sepang in Singapore Volmet	WMKK	X	X		24 HOURS	X
JAPAN	TOKYO/Narita Intl	RJAA	X		X	27 Hours	
	TOKYO/Tokyo Intl	RJTT	X				
	SAPPORO/New Chitose	RJCC	X				
	NAGOYA/Chuba Centraur Intl	RJCG	X		X		
	KANSAI/Kansai Intl	RJBB	X		X	27 Hours	
	FUKUOKA/Fukuoka	RJFF	X				
	INCHEON/Incheon	RKSI	X		X		
	FUKUOKA FIR	RJJJ					X
	INCHEON FIR	RKRR					X
	Japan plans to limit number of change group of TAF messages in VOLMET briadcast due to time restriction.						

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
HONG KONG CHINA	Hong Kong	VHHH	X	X	X	9 Hours	X
	Guangzhou	ZGGG	X	X	X		
	Naha	ROAH	X	X	X		
	Taibei	RCTP	X	X	X		
	Gaoxiong	RCKH	X	X	X		
	Manila	RPLL	X	X	X		
	Mactan	RPVM	X	X	X		
SRI LANKA	NIL						
Republic of KOREA							
THAILAND	Bangkok/Suvarnabhumi Intl	VTBS	X	X	X	12 Hours	X
	Rayong U-Taphao	VTBU	X	X	X	12 Hours	
	Yangon/Mingakadon	VYYY	X	X	X	12 Hours	
	Vientiane/Wattay	VLVT	X	X	X	12 Hours	
	Phon Penh/Phonm Penh	VDPP	X	X	X	12 Hours	
	Ho-Chi-Minh/Tao-Son Nhat	VVTS	X	X	X	12 Hours	X
	Danang Intl	VVNB	X	X	X	12 Hours	
INDIA - Mumbai	Mumbai	VABB	X	X	X	9 hours	X
	Chennai	VOMM	X	X	X		X
	Ahmadabad	VAAH	X	X	X		
	Colombo	VCBI	X	X	X	9 hours	
	Male	VRMM	X	X	X	9 hours	
	Karachi	OPKC	X	X	X		

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
INDIA - Kolkata	Kolkata	VECC	X	X	X	9 hours	X
	Delhi	VIDP	X	X	X	9 hours	X
	Bhaka	VGFR	X	X	X		
	Yangoon	VYYY	X	X	X		
	Kathmandu	VNKT	X	X	X		
	Ho Chi Minh	VVTS				9 hours	
Pakistan	Karachi	OPKC	X	X		X	
	Lahore	OPLA	X	X		X	
	Nawabshah	OPNH	X				
	Islamabad	OPRN	X				
	Peshawar	OPPS	X				
	Delhi	VIDP	X			X	
	Mumbai	VABB	X			X	
	Singapore	WSSS				X	
TAIPEI	NIL						
UNITED STATE OF AMERICA	Anchorage	PANC	X	X		30	X
	Fairbanks	PAFA	X	X		30	
	Elmendorf AFB	PAED	X	X		24	
	Cold Bay	PACD	X	X		24	
	King Salmon	PAKN	X	X		24	
	Vancouver BC	CYVR	X	X		30	
	Honolulu	PHNL	X	X		30	X
	Hilo	PHTO	X	X		24	
	Guam Intl	PGUM	X	X		24	
	Kahului	PHOG	X	X		24	

Q7 SCHEDULED VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT				
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET
	San Francisco	KSFO	X	X		30	
	Seattle-Tacoma	KSEA	X	X		30	
	Los Angelse	KLAX	X	X		30	
	Portland	KPDX	X	X		24	
	Sacramento	KSMF	X	X		30	
	Ontario	KONT	X	X		30	
	Kansas City	KKCI					X

Table 4: D VOLMET

Q8 D-VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT					SPECIAL AIR REPORT	AIRMET
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET		
NEW ZEALAND	NOT APPLICABLE								
SINGAPORE	Singapore Changi	WSSS	X		X	30 hours	X		
	Kuala Lumpur	WMKK	X			24 hours	X		
	Soekarno-hatta	WIII	X			30 hours?	X		
	Kuching	WBCG	X						
	Brunei	WBSB	X						
	Kota Kinabalu	WBKK	X						
	Bali	WADD	X						
	Penang	WMKP	X						
AUSTRALIA	NOT APPLICABLE								
FIJI	NOT APPLICABLE								
VIETNAM	NIL								
CHINA	NIL								
MACAU, CHINA	NOT APPLICABLE								
PHILIPPINES	SUBIC BAY/Olongapo	RPLB	X	X	X				
	CLARKES ANGELES	RPLC	X	X	X				
	LAOAG	RPLI	X	X	X				
	MANILA/Ninoy Aquino Intl	RPLL	X	X	X	30 hours	X	X	X
	DAVAO/Francisco Bangoy	RPMD	X	X	X				

Q8 D-VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT					SPECIAL AIR REPORT	AIRMET
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET		
	Intl								
	ZAMBOANGA	RPMZ	X	X	X				
	LAPU LAPU MACTAN INTL	RPVM	X	X	X	30 hours			
MALAYSIA	NOT APPLICABLE								
JAPAN	NOT APPLICABLE								
HONG KONG CHINA	Hong Kong	VHHH	X	X	X	9 Hours	X	X	
	Guangzhou	ZGGG	X	X	X				
	Naha	ROAH	X	X	X				
	Taibei	RCTP	X	X	X				
	Gaoxiong	RCKH	X	X	X				
	Manila	RPLL	X	X	X				
	Mactan	RPVM	X	X	X				
SRI LANKA	Colombo/Bandaranaike Intl	VCBI	X	X	X	24H & 9H	X		
	Minnerya/Hingurakgoda	VCCH							
	Colombo/Ratmalana	VCCC	X	X					
	Kankesanturai/Jaffna	VCCJ							
Republic of KOREA									
THAILAND	Bangkok/Suvarnabhumi Intl	VTBS	X	X	X	12 Hours	X		
	Rayong U-Taphao	VTBU	X	X	X	12 Hours			

Q8 D-VOLMET

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	BROADCAST CONTENT					SPECIAL AIR REPORT	AIRMET
			METAR	SPECI	TREND FORECAST	TAF (Provide validity period)	SIGMET		
	Yangon/Mingakadon	VYYY	X	X	X	12 Hours			
	Vientiane/Wattay	VLVT	X	X	X	12 Hours			
	Phon Penh/Phonm Penh	VDPP	X	X	X	12 Hours			
	Ho-Chi-Minh/Tao-Son Nhat	VVTS	X	X	X	12 Hours	X		
	Danang Intl	VVNB	X	X	X	12 Hours			
INDIA	NOT APPLICABLE								
PAKISTAN	NOT APPLICABLE								
TAIPEI	NOT APPLICABLE								
UNITED STATES OF AMERICA	NOT APPLICABLE								

Table 5: ROBEX Bulletins and TAF Validity

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
NEW ZEALAND	**FTCNZ31**					
	Auckland	NZAA	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
	Christchurch	NZCH	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
	Wellington	NZWN	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
FIJI	**FTPS31**					
	Nadi, Fiji	NFFN	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Nausori, Fiji	*NFNA*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Fuamotu, Tonga	NFTF	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Bonriki, Kirribati	NGTA	1000	1200	24 HOUR	Issued only Sunday
	Christmas Isld, Kirrabati	PLCH	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Hihifo, Wallis	*NLWW*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Faleolo, Samoa	NSFA	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Rarotonga, Cook Isld	NCRG	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
SINGAPORE	**FTSR31**					
	Singapore Changi	WSSS	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	Paya Lebar	WSAP	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Seletar Airport	*WSSL*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*30 HOUR*	
AUSTRALIA	**FTAU31**					
	Adelaide/Adelaide		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	Brisbane/Brisbane		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	Darwin/Darwin		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	Melbourne/Melbourne Intl		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	Perth/Perth		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	Sydney/Kingsford Smith Intl		*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*30 HOUR*	
	FTAU32		0500, 1100, 1700, 2300	0600, 1200, 1800, 0000	24 HOUR	
	Alice Springs/Alice Springs	*YBAS*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Avalon/Avalon	*YMAV*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Cairns/Cairns	*YBCS*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Canberra/Canberra	*YSCB*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Kalgoorlie/Kalgoorlie	*YPKG*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Learmonth/Learmonth	*YPLM*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	Tindal/Tindal RAAF	*YPTN*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Townsville/Townsville	*YBTL*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	FTAU33					
	Broome/Broome Intl	*YBRM*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Christmas Island/Christmas Isld	*YPXM*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Cocos Island/Cocos Island	*YPCC*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Coolangatta/Coolangatta	*YBCG*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Dubbo/Dubbo	*YSDU*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Launceston/Launceston	*YMLT*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Pearce/Pearce RAAF	*YPEA*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Port Hedland/Port Hedland	*YPPD*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Richmond NSW/Richmond RAAF	*YSRI*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Rockhampton/Rockhampton	*YBRK*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Williamtown/Williamtown RAAF	*YWLM*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Hobart/Hobart	*YMHB*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Launceston/Launceston	*YMLT*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800, 0000*	*18 HOUR*	
	Norfolk Island/Norfolk Island	*YSNF*	*0500, 1100, 1700, 2300*	*0600, 1200, 1800,*	*18 HOUR*	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
				0000		
	FTAU34					
	Amberley/Amberley RAAF	*YAMB*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Curtin-Derby/Curtin RAAF	*YCIN*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Forrest/Forrest	*YFRT*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Gove/Gove	*YPGV*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Hamilton Isld/Hamilton Isld	*YBHM*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Mount Isa/Mount Isa	*YBMA*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
	Kunnurra/Kunnunurra	*YPKU*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12HOUR*	
EAST TIMOR	**FTTM31**					
	Dili/Komoro	*WPDL*	*0100, 0700, 1300, 1900*	*0200, 0800, 1400, 2000*	*12 HOUR*	
PAPUA NEW GUINEA	**FTNG31**			**VALIDITY**		
	Port Moresby	AYPY	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
	Nauru	ANYN	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
	Honiara	AGGH	0445, 1045, 1645, 2245	0600, 1200, 1800, 0000	24 HOUR	
	FTNG32					
	Nadzab	*AYNZ*	*0045, 0645, 1645, 1845*	*0214, 0820, 1808*		

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	Madang	*AYMD*	*0045, 0645, 1645, 1845*	*0214, 0820, 1908, 2008*		
	Wewak	*AYWK*	*0045, 0645, 1645, 1845*	*0214, 0820, 2008*		
	Vanimo	*AYVN*	*0045, 0645, 1645, 1845*	*0211, 2008*		
	Goroka	*AYGA*	*0045, 0645, 1645, 1845*	*0211, 0820, 2008*		
	Mount Hagen	*AYMH*	*0045, 0645, 1645, 1845*	*0211, 2008*		
	Momote	*AYMO*	*0045, 0645, 1645, 1845*	*0214, 0820, 2008*		
	Daru	*AYDU*	*0045, 0645, 1645, 1845*	*0211, 0820, 2008*		
	Gurney	*AYGN*	*0045, 0645, 1645, 1845*	*0211, 0820, 2008*		
	Hoskins	*AYHK*	*0045, 0645, 1645, 1845*	*0211, 0820, 1808, 1908*		
	Kavieng	*AYKV*	*0045, 0645, 1645, 1845*	*0211, 0820, 1808*		
	Misima	*AYMS*	*0045, 0645, 1645, 1845*	*0211, 0820, 2008*		
	Tokua	*AYTK*	*0045, 0645, 1645, 1845*	*0211, 1808, 1908*		
	Kiungu	*AYKI*	*0045, 0645, 1645, 1845*	*0211, 0820, 2008*		
	FCNG32					
	Mundra	*AGGM*	*0345, 1245, 1745*	*0517, 1402, 1910*		
	Kirakira	*AGGK*	*0345, 1245, 1745*	*0517, 1402, 1910*		
	Santa Cruz	*AGGL*	*0345, 1245, 1745*	*0517, 1402, 1910*		
VIETNAM	**FTAE32**					
	Ho Chi Minh/Yan Son Nhat Intl	VVTS	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000		
	Ha Noi/Noi Bai Intl	VVNB	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000		
	Da Nang/Da Nang Intl	VVDN	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000		
CHINA	**FTCI31**					
	BEIJING/Capital	ZBAA	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	SHIJIAZHUANG/Zhengding	ZBSJ	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	GUANGZHOU/Baiyun	ZGGG	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	CHANGSHA/Huanghua	ZGHA	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	CHENGDU/Shuangliu	ZUUU	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	CHONGQING/Jiangbei	ZUCK	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	DALIAN/Zhoushuizi	ZYTL	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	SHANGHAI/Pudong	ZSPD	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	SHANGHAI/Hongqiao	ZSSS	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	SHENYANG/Taoxian	ZYTX	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	FTC132					
	GUILIN/Liangjiang	ZGKL	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	SHANTOU	ZGOW	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	XIAN/Xianyang	ZLXY	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	KUNMING/Wujiaba	ZPPP	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	XIAMEN/Gaoqi	ZSAM	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	QINGDAO/Liuting	ZSQD	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	FTCI41					
	HOHHOT/Baita	ZBHH	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	ZHENGZHOU/Xinzheng	ZHCC	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	WUHAN/Tianhe	ZHHH	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	HAIKOU/Meilan	ZJHK	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	SANYA/Phoenix	ZJSY	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	LANZHOU/Zhongchuan	ZLLL	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	NANJING/Lukou	ZSNJ	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	HEFEI/Luogang	ZSOF	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	CHANGCHUN/Dafangshen	ZYCC	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	HARBIN/Taiping	ZYHB	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	HANGZHOU/Xiaoshan	*ZSHC*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	KASHI/Kashi	*ZWSH*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	NANNING/Wuxu	*ZGNN*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	SHENZHEN/Bao'an	*ZGSZ*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	TAIYUAN/Wusu	*ZBYN*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	TIANJIN/Binhai	*ZBTJ*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	URUMQI/Diwopu	*ZWWW*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
MACAU, CHINA	**FTHK31** MACAU	VMMC	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
PHILIPPINES						
	SUBIC BAY/Olongapo	RPLB	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	CLARKES ANGELES	*RPLC*	*0400, 1000, 1600, 2200*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	LAOAG	RPLI	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	MANILA/Ninoy Aquino Intl	RPLL	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	DAVAO/Francisco Bangoy Intl	RPMD	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	ZAMBOANGA	RPMZ	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	LAPU LAPU MACTAN INTL	RPVM	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
MALAYSIA	**FTSR32**					
	Sepang	WMKK	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Subang	WMSA	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Penang	WMKP	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	Johor Baharu	WMKJ	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Langkawi	WMKL	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	FTSR33					
	Kot Kinabalu	WBKK	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Kuching	WBGG	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Labuan	WBKL	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
	Tawau	*WNKW*	*0430, 1030, 1630, 2230*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Miri	*WNGR*	*0430, 1030, 1630, 2230*	*0600, 1200, 1800, 0000*	*24 HOUR*	
	Sibu	WBGS	0430, 1030, 1630, 2230	0600, 1200, 1800, 0000	24 HOUR	
JAPAN	**FTJP31**					
	Tokyo/Narita Intl	RJAA	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	Japan plans to issue
	Kansai/Kansai Intl	RJBB	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	27 hour TAF at intervals of
	Tokyo/Tokyo Intl	RJTT	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	6 hours, with period of
	Osaka/Osaka Intl	RJOO	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	validity beginning at
	Naha/Naha	ROAH	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	03, 09, 15, 21 UTC for the convenience of
	Hakodate/Hakodate	RJCH	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	aeronautical
	Sendai/Sendai	RJSS	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	users in Japan.

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	FTJP32					
	Fukuoka/Fukuoka	RJFF	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Nagoya/Chubu Centrair Intl	RJGG	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Sapporor/New Chitose	RJCC	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Kagoshima/Kagoshima	RJFK	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Niigata/Niigata	RJSN	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Nagasaki/Nagasaki	RJFU	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Kumamoto/Kumamoto	RJFT	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Hiroshima/Hiroshima	RJOA	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Okayam/Okayama	RJOB	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Takamatsu/Takamatsu	RJOT	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Oita/Oita	RJFO	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Toyama/Toyama	RJNT	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
	Kanazawa/Komatsu	RJNK	0200, 0900, 1500, 2100	0300, 0900, 1500, 2100	27HOUR	
HONG KONG CHINA	**FTHK31**					
	Hong Kong	VHHH	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Taipei/Taiwan Taoyuan Intl	RCTP	0400, 1000, 1600, 2200	0600, 1200, 1800,	30 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
				0000		
	Gaoxiong	RCKH	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Sungshan	RCSS	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Macau	VMMC	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Manila	RPLL	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Mactan	RPVM	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Davao	RPMD	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Subic Bay	RPLB	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Laoag	RPLI	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Zamboanga	RPMZ	0400, 1000, 1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
SRI LANKA	**FTIN32**					
	Colombo/Bandaranaike Intl	VCBI	0300, 0900, 1500, 2100	0600, 1200,1800, 0000	24 HOUR	
	Colombo/Bandaranaike Intl	*VCBI*	*2hours before validity*	*02, 05,08,11,14,17,20,23*	*9 HOUR*	
Republic of KOREA	**FTKO31**					
	Seoul Incheon Intl	RKSI			30HOUR	
THAILAND	**FTAE31**					
	Bangkok/Suvarnabhumi Intl	VTBS	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Bangkok/Donmueang	VTBD	0400,1000,1600, 2200	0600, 1200, 1800,	24 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
				0000		
	Rayong U-Taphao	VTBU	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Chiang Mai	VTCC	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Hat Yai	VTSS	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
	Phuket	VTSP	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	
INDIA	**FTIN31**					
	Ahmedabad	VAAH	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Mumbai/CSI Airport	VABB	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Nagpur	VANP	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Kolkata/NSCBI Airport	VECC	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Patna	VEPT	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Amritsar	VIAR	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Varanasi	VIBN	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Delhi/Indira Gandhi Intl	VIDP	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Japur	VIJP	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Lucknow	VILK	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	FTIN32					

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
	Cochin	VOCI	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Calicut	VOCL	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Hyderabad	VOHY	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Chennai	VOMM	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Tiruchchirapalli	VOTR	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Trivandrum	VOTV	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
PAKISTAN	**FTPK31**					
	Karachi/Jinnah Intl	OPKC	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
	Islamabad/Chakala	OPRN	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
	Lahore/Allama Iqbal Intl	OPLA	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
	Nawabshah	OPNH	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
	Peshawar	OPPS	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
	Gawadar	OPGD	0400,1000,1600, 2200	0600, 1200, 1800, 0000	18 HOUR	
TAIWAN	Taibei Intl	RCTP	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Gaoxiong	RCKH	0400,1000,1600, 2200	0600, 1200, 1800, 0000	30 HOUR	
	Taipei/Songshan	RCSS	0400,1000,1600, 2200	0600, 1200, 1800, 0000	24 HOUR	

Q 9 ROBEX TAFS VALIDITY

STATE	AERODROME LOCATION	ICAO LOCATION INDICATOR	FILING TIME (UTC)	START VALIDITY (UTC)	VALIDITY PERIOD	COMMENTS
UNITED STATES OF AMERICA	Honolulu Intl	PHNL	2300, 0500, 1200, 1700	0600, 1200, 1800, 0000	30 HOUR	

Table 6: IATA Request vs Asia/Pacific Survey response

ICAO Indicator	Aerodrome name	Country	Region	Response
AOP aerodromes 30H TAF SADIS				
OPKC	KARACHI INTL	Pakistan	ASI	N
OPLA	LAHORE INTL	Pakistan	ASI	N
OPPS	PESHAWAR	Pakistan	ASI	N
RCKH	KAOHSIUNG INTERNATIONAL	China	ASI	N
RCTP	TAIPEI/CHIANG KAI SHEK	China	ASI	N
RKSI	SEOUL INCHEON INTL	Republic of Korea	ASI	Y
VAAH	AHMEDABAD	India	ASI	Y
VABB	MUMBAI/CHHATRAPATI SHIVAJI INT	India	ASI	Y
VHHH	HONG KONG	Hong Kong (China)	ASI	Y
VIAR	AMRITSAR	India	ASI	Y
VIDP	DELHI/INDIRA GANDHI	India	ASI	Y
VMMC	MACAU	Macao (China)	ASI	Y
VTBD	BANGKOK	Thailand	ASI	N
VTCC	CHIANG MAI	Thailand	ASI	N
VTBS	BANGKOK/SUVARNABHUMI INTL	Thailand	ASI	N
VTSP	PHUKET	Thailand	ASI	N
VVTS	HOCHIMINH/TANSONNHAT	Viet Nam	ASI	Y
WIII	JAKARTA/SOEKARNO HATTA	Indonesia	ASI	NR
WMKK	KUALA LUMPUR SEPANG	Malaysia	ASI	N
WMSA	KUALA LUMPUR/SUBANG	Malaysia	ASI	N
WSSS	SINGAPORE/CHANGI	Singapore	ASI	Y
YBBN	BRISBANE	Australia	ASI	Y
YMML	MELBOURNE	Australia	ASI	Y
YPAD	ADELAIDE	Australia	ASI	Y
YPDN	DARWIN	Australia	ASI	Y
YPPH	PERTH INTL	Australia	ASI	Y
YSSY	SYDNEY / KINGSFORD SMITH	Australia	ASI	Y
ZBAA	BEIJING/CAPITAL	China	ASI	N
ZBTJ	TIANJIN/BINHAI	China	ASI	N
ZGGG	GUANGZHOU/BAIYUN	China	ASI	N
ZGSZ	SHENZHEN BAOAN	China	ASI	N
ZSPD	SHANGHAI PUDONG	China	ASI	N
Non-AOP aerodromes 30H TAF SADIS				
ZJHK	HAIKOU/MEILAN	China	ASI	N
Non-AOP aerodromes 30H TAF Non-SADIS				
RCNN	TAINAN	China	ASI	N
PAC REGION AOP aerodromes 30H TAF SADIS				
PHNL	HONOLULU INTL	United States	PAC	Y

NR = No Reply
N = No 30H TAF
Y = 30H TAF

ASIA/PAC ICD OPMET Data Bank Access Producers

Reviewed in Mar 2008

REGIONAL OPMET DATA BANK – SINGAPORE (RODB Singapore)

1. General Information

1.1 Direct access to the Singapore OPMET data bank for automatic response for a request is only possible by using the AFTN address **WSSSYZYX.**

Example: **GG WSSSYZYX**
200700 WBSBYMYX
RQM/SAWSSS,WMKK,WIII=

1.2 A request made to the data bank for a message which is not available in the data bank will receive a **NIL=** reply from the data bank.

Example: GG LFPWYZYX
260906 WSSSYZYX
TAF ZKPY NIL=
TAF ZWTN NIL=

1.3 A request made to the data bank which contains a wrong format or CCCC will receive a **ERR=** reply from the data bank.

Example: GG CYKFXNSB
260510 WSSSYZYX
TAF WSST ERR=

2. Contact Information

For clarification or requires any assistance, please contact the following officer:

Ms. CHUA Guat Mui
Supervisor, Main Meteorological Office
Operational Services Department
Meteorological Services Division
National Environment Agency
Singapore Changi Airport Post Office
P.O. Box 8
Singapore 918141

Tel: +65 65422861
Fax: +65 65425026
e-mail: chua_gaut_mui@nea.gov.sg

ASIA/PAC ICD OPMET Data Bank Access Producers

3. Restrictions

1) One request line shall be less than 69 characters including RQM designator and an '=' signal

2) Each request shall be started by 'RQM' and ended by '='. Only one request line per message is accepted.

Example:
GG WSSSYZYX
210507 LFPWYZYX
RQM/SAWSAP,WMKJ,WMKL**=**

3) Up to three data types of request per line are accepted

Example:
RQM/FTEGLL,SA,SP=

4) Only three bulletins in each RQM line is accepted

Example:
RQM/FTDL31,DN31,CI32=

4. Specific Procedures

1) Request for bulletins and for reports could be made together by single message

Example:
RQM/SAVHHH,ZGGG/FTSR31/SPWSSS=

2) Special request format for WS, WC, and WV,

RQM/ T_1T_2CCCC, …, $C_1C_1C_1C_1$=
RQM/T_1T_2CCCC, $C_1C_1C_1C_1$/T_1T_2CCCC/ T_1T_2 CCCC=

(Where T_1T_2 is WS, WC or WV and CCCC is the **FIR** indicator)

Example:

RQM/WSRCTP,VHHK=
RQM/WCRJTG=
RQM/WVNZKL=
RQM/WSWSJC/WCVHHK/WVRJTG=

RQM/WSXXXX=
RQM/WCXXXX=
RQM/WVXXXX=

(Where XXXX is a dummy Location Indicator)

RQM/WSXXXX=
RQM/WCXXXX=
RQM/WVXXXX=

RQM/ T_1T_2,AA,.....,A_1A_1=

(Where A_1A_1 or A_1A_1ii is the **bulletin identifier or country designator**)

RQM/WSJP,CI31=

3) Special request format for FK and FV bulletins:

Example:

ASIA/PAC ICD OPMET Data Bank Access Producers

RQM/ T_1T_2,AA,.....,A_1A_1=	RQM/FKIO= RQM/FVAU01=
(Where T_1T_2 is FK or FV and AA or A_1A_1 is the **bulletin identifier or country designator**)	
RQM/FVXXXX= **RQM/FKXXXX=**	**RQM/FVXXXX=** **RQM/FKXXXX=**
(Where XXXX is a dummy Location Indicator)	

5. Examples of request formats

Various RQM formats for SA, SP, FC and FT	**Example**
1) Request for one data type at one aerodrome	
RQM/T_1T_2CCCC=	RQM/FTEDDF=
2) Request for one data type at two or more aerodromes	
RQM/T_1T_2CCCC,$C_1C_1C_1C_1$,.....,$C_nC_nC_nC_n$=	RQM/SAWSSS,WMKK,WIII= RQM/FTVHHH,RCTP,RCKH=
3) Request for TAF bulletins	
RQM/$T_1T_2A_1A_1$,.....,A_1A_1ii=	RQM/FTDL31,IN=
4) Other request options for SA bulletin	
RQM/T_1T_2CCCCn= (where n is the number of preceding messages required, n<=3)	RQM/SAVHHH2=
RQM/T_1T_2CCCCn, $C_1C_1C_1C_1$= (where n is the number of preceding messages required, n<=3)	RQM/SAWMKK3,WSSS=
RQM/T_1T_2CCCC,GGgg,.....,GGgg= (where T_1T_2 is SA and GGgg is the standard time of observation)	RQM/SAVVTS,0200,0130=
RQM/T_1T_2**XX**GGgg,CCCC,.....,$C_1C_1C_1C_1$= (where T_1T_2 is SA and GGgg is the standard time of observation)	RQM/SAXX0200,WMKK,VHHH, WSSS,WIIH=

ASIA/PAC ICD OPMET Data Bank Access Producers

5) Request for two or more data types at one aerodrome

RQM/ T_1T_2CCCC, $T_1T_{2,}$ $T_1T_{2=}$	RQM/FTEGLL,SA,SP=

6) Request for two or three data types at more aerodromes

RQM/ T_1T_2CCCC, $C_1C_1C_1C_1$/ T_1T_2 $A_1A_{1,}$ A_1A_1ii/ T_1T_2 CCCC=	RQM/SAVHHH,ZGGG/FTSR31/SP WSSS=

ASIA/PAC ICD OPMET Data Bank Access Producers

RODB Singapore – OPMET Data Catalogue

Legend

TTAAii	First group of the WMO Abbreviated Heading of the bulletin
CCCC	Second group of the WMO Abbreviated Heading of the bulletin – ICAO location indicator of the originator (bulletin compiling centre, aerodrome meteorological office or MWO)
Stations or FIR	List of the aerodromes included in the bulletin for the METAR and TAF bulletins or the FIR for the SIGMET bulletins (if known).

ASIA/PACIFIC REGION

AUSTRALIA

TTAAii	CCCC	STATIONS or FIR
FTAU31	YBBN	YSSY, YPAD, YBBN, YMML, YBCS, YPPH, YPDN, YBAS, YPTN, YPXM YBRM, YMLT, YMHB, YPTN
FTAU32	YBBN	YSCB, YBCG, YMAV, YBTL, YBRK, YPLM, YPKG, YPPD, YPEA, YPCC, YSRI, YWLM,YFRT, YPWR
FCAU31	YBBN	YSNF, YSDU, YBHM, YBMA, YAMB, YPGV, WPDL
SAAU31	YBBN	YSSY, YMML, YBBN, YPAD, YPDN, YPPH, YBCS, YBAS, YPLM, YBTL, YPCC, YPXM, YPTN, YPKU
SAAU32	YBBN	YSCB, YBCG, YMAV, YBRK, YPKG, YPPD, YBRM, YSNF, YSDU, YSRI, YWLM, YMLT, YMHB, YPEA, YCIN, YFRT, YPGV, YAMB, YBHM, YBMA, YPWR
FVAU01	ADRM	N/A
WCAU01	ADRM	YBBB, YMMM
WCAU01	APRF	YBBB, YMMM
WSAU21	ABRF	YBBB, YMMM
WSAU21	ABTL	YBBB
WSAU21	AMHF	YMMM
WSAU21	AMMC	YBBB, YMMM
WSAU21	AMRF	YBBB, YMMM
WSAU21	APRF	YBBB, YMMM
WSAU21	APRM	YMMM
WSAU21	ASRF	YBBB, YMMM
WVAU01	ADRM	YBBB, YMMM

BANGLADESH

TTAAii	CCCC	STATIONS or FIR
FTBW31	VGZR	VGZR
FTBW31	VGEG	VGEG
WSBW20	VGZR	VGZR

BRUNEI DARUSSALAM

TTAAii	CCCC	STATIONS or FIR
FTBD31	WBSB	WBSB
SABD31	WBSB	WBSB

CAMBODIA

TTAAii	CCCC	STATIONS or FIR
SAAE31	VDPP	VDPP
SAAEP31	VDSR	VDSR

ASIA/PAC ICD OPMET Data Bank Access Producers

CHINA

TTAAii	CCCC	STATIONS or FIR
FTCI31	ZBBB	ZBAA, ZBSJ, ZBTJ, ZBYN, ZGGG, ZSHC, ZSPD, ZSSS, ZWSH, ZWWW, ZYTL, ZYTX
FTCI32	ZBBB	ZGKL, ZGNN, ZGOW, ZGSZ, ZLXY, ZMUB, ZPPP, ZSAM, ZSQD, ZUUU
FTCI41	ZBBB	ZBHH, ZGHA, ZHCC, ZHHH, ZJHK, ZJSY, ZLLL, ZSNJ, ZSOF, ZUCK, ZYCC, ZYHB
FCCI31	ZBBB	ZBAA, ZGGG, ZGSZ, ZHHH, ZJSY, ZMUB, ZLLL, ZPPP, ZSPD, ZSSS, ZWWW, ZYTX
SACI31	ZBBB	ZBAA, ZBSJ, ZBTJ, ZBYN, ZGGG, ZSHC, ZSPD, ZSSS, ZWSH. ZWWW, ZYTL, ZYTX
SACI32	ZBBB	ZGKL, ZGNN, ZGOW, ZGSZ, ZLXY, ZPPP, ZSAM, ZSQD, ZUUU
SACI41	ZBBB	ZBHH, ZGHA, ZHCC, ZHHH, ZJHK, ZJSY, ZLLL, ZSNJ, ZSOF, ZUCK, ZYCC, ZYHB
WSCI33	ZBAA	ZBPE
WSCI34	ZSSS	ZSHA
WSCI35	ZGGG	ZGZU
WSCI35	ZJHK	ZJSA
WSCI36	ZPPP	ZPKM
WSCI37	ZLLL	ZLHW
WSCI39	ZWWW	ZWUQ

FIJI

TTAAii	CCCC	STATIONS or FIR
SAPS31	NFFN	NCRG, NFFN, NFSU, NGFU, NGTA, NIUE, PLCH
SAPS32	NFFN	NFTF, NFTL, NFTV, NLWW, NSAP, NSMA, NVVV, NVSS
WSFJ01	NFFN	NFFF

FRENCH POLYNESIA

TTAAii	CCCC	STATIONS or FIR
FTPF21	NTAA	NTAA
WSPF21	NTAA	NTTT
WCPF21	NTAA	NTTT

HONG KONG

TTAAii	CCCC	STATIONS or FIR
FCHK31	VHHH	VHHH, RCTP, RCKH, RCSS, VMMC, RPLL, RPVM
FTHK31	VHHH	VHHH, RCTP, RCKH, RCSS, VMMC, RPLL, RPVM, RPMD, RPLB, RPLI, RPMZ
SAHK31	VHHH	VHHH, RCTP, RCKH, RCSS, VMMC, RPLL, RPVM, RPMD, RPLB, RPLI, RPMZ
WSSS20	VHHH	VHHK
WCSS20	VHHH	VHHK

INDIA

TTAAii	CCCC	STATIONS or FIR

ASIA/PAC ICD OPMET Data Bank Access Producers

FTIN31	VABB	VAAH, VABB, VANP, VECC, VEPT, VIAR, VIBN, VIDP, VIJP, VILK
FTIN32	VABB	VCBI, VNKT, VOCI, VOCL, VOHY, VOMM, VOTR, VOTV,VRMM
FTIN31	VIDP	VIDP, VILK, VIJP, VIAR, VIBN
FTIN32	VOTV	VOTV, VOCI, VOCL
FCIN31	VABB	VAAH, VABB, VECC, VIDP, VOCI
FCIN32	VABB	VAAH, VAAU, VABB, VABM, VABO, VABP, VABV, VAGN, VAGO, VAID, VAJB, VAJM, VAKJ, VANP, VAPO, VARK, VARP, VCBI, VEVZ, VIGR, VOBG, VOBZ, VOCB, VOCC, VOCI, VOCL, VOHY, VOMD, VOML, VOMM, VOTP, VOTR, VOTV
SAIN31	VABB	VAAH, VABB, VOHY, VOMM, VOTV, VANP, VOTR
SAIN32	VIDP	VIDP, VILK, VIAR, VIBN, VIJP
SAIN33	VECC	VECC, VEPT, VGEG, VGZR, VNKT
WSIN31	VABB	VABF
WSIN31	VECC	VECF
WSIN31	VIDP	VIDF
WSIN31	VOMM	VOMF
WCIN31	VABB	VABF
WCIN31	VECC	VECF
WCIN31	VIDP	VIDF
WCIN31	VOMM	VOMF
FKIN21	VIDP	

INDONESIA

TTAAii	CCCC	STATIONS or FIR
FTAE32	WIMM	WIMM
FTID31	WIII	WIII
FTID31	WIHH	WIHH
FTID31	WADD	WADD
FTID31	WARR	WARR
FCID31	WIII	WIII
FCID31	WIHH	WIHH
SAID31	WIII	WIII, WIHH, WIMM, WAAA, WADD, WARR, WABB, WIPT, WIDD
SAID32	WIII	WAMM, WIBB, WIPK, WIOO, WIPP, WAOO, WALL, WADA
SAID33	WIII	WARS, WIAT, WATT, WALR, WAPP, WAJJ
WSID20	WIII	WIIZ

JAPAN

TTAAii	CCCC	STATIONS or FIR
FTJP31	RJTD	RJAA, RJBB, RJTT, RJOO, ROAH, RJCH, RJSS
FTJP32	RJTD	RJFF, RJGG, RJCC, RJFK, RJSN, RJFU, RJFT, RJOA, RJOB, RJOT, RJFO, RJNT, RJNK
FCJP31	RJTD	RJAA, RJBB, RJTT, RJOO, ROAH, RJCH, RJSS
FCJP32	RJTD	RJFF, RJGG, RJCC, RJFK, RJSN, RJFR, RJFU, RJFT, RJOA, RJOB, RJOT, RJFO, RJNT, RJNK
SAJP31	RJTD	RJAA, RJBB, RJTT, RJOO, ROAH, RJGG
SAJP32	RJTD	RJFF, RJCC, RJFK, RJFU, RJCH, RJSN, RJFT, RJSS, RJOA, RJOB, RJOT, RJFO
WCJP31	RJTD	RJJJ
WSJP31	RJTD	RJJJ
WVJP31	RJTD	RJJJ
FKPQ31	RJTD	N/A
FKPQ32	RJTD	N/A

KOREA, REPUBLIC OF

TTAAii	CCCC	STATIONS or FIR

ASIA/PAC ICD OPMET Data Bank Access Producers

FTKO31	RKSI	RKSI, RKSS, RKPC, RKPK, RKTU, RKNY, RKTN, RKJB
SAKO31	RKSI	RKSI, RKSS, RKPC, RKPK, RKTU, RKNY, RKTN, RKJB
WSKO31	RKSI	RKRR

MALAYSIA

TTAAii	CCCC	STATIONS or FIR
FTMS31	WMKK	WMKK, WMSA, WMKP, WMKJ
FTMS32	WMKK	WBKK, WBGG
FTMS40	WMKK	WBGB, WBGR, WBGS, WBKL, WBKS, WBKW, WMKL, WMKM
FTMS41	WMKK	WMAP, WMBT, WMKA, WMKC, WMKE, WMKI, WMKL, WMKM, WMKN, WMPA
FTMS42	WMKK	WMKB
FTMS43	WMKK	WMKD
FCMS31	WMKK	WMKK
SAMS31	WMKK	WBGG, WBKK, WBSB, WMKK, WMKP, WSSL, WSSS (Half-hourly reports)
SAMS32	WMKK	WBGG, WBKK, WMKJ, WMKK, WMKP, WMSA (Hourly reports)
SAMS33	WMKK	WMAU, WMBA, WMKA, WMKB, WMKC, WMKD, WMKI, WMKL, WMKM, WMKN (Hourly reports)
SAMS34	WMKK	WBGB, WBGR, WBGS, WBGY, WBKL, WBKS, WBKT, WBKW (Hourly reports)
SAMS38	WMKK	WBGB, WBGR, WBGS, WBKL, WBKS, WBKW, WMKD, WMKL, WMKM
WSMS31	WMKK	WBFC, WMFC

NEW ZEALAND

TTAAii	CCCC	STATIONS or FIR
FTNZ31	NZKL	NZAA, NZWN, NZCH
SANZ31	NZKL	NZAA, NZWN, NZCH
WSNZ21	NZKL	NZZC
WVNZ21	NZKL	NZZC

PAKISTAN

TTAAii	CCCC	STATIONS or FIR
FTPK31	OPKC	OPKC, OPLA, OPNH, OPRN, OPPS, OAKB, OAKN
SAPK31	OPKC	OPKC, OPRN, OPLA, OPNH

PAPUA NEW GUINEA

TTAAii	CCCC	STATIONS or FIR
FTNG31	YBBN	AYPY, ANYN, AGGH
FCNG31	YBBN	AYNZ, AYMD, AYWK, AYVN, AYGA, AYMH, AYMO, AYDU, AYGN, AYHK, AYKV, AYMS, AYTK, AYKI
FCNG32	YBBN	AGGM, AGGK, AGGL
SANG31	YBBN	AYPY, AYWK, AYVN, AYNZ, AYMH, AYGN, AYMO, AGGH

PHILIPPINES

TTAAii	CCCC	STATIONS or FIR
FTPH	RPLL	RPLL, RPLB, RPLC, RPLI, RPVM, RPVD, RPVP, RPMD, RPMR, RPML, RPMZ
SAPH31	RPLC	RPLC
WCPH30	RPLL	RPHI

ASIA/PAC ICD OPMET Data Bank Access Producers

RUSSIAN FEDERATION (ASIA)

TTAAii	CCCC	STATIONS or FIR
FTRA31	KWBC	UAFM, UATT, UHMA, UHHH, UHMM, UHPP, UHSS, UHWW, UBBB, UIAA, UIBB, UIII, UIUU, ULAA, USNN, UUEE, UTDD, UTNN, UTNU, UTSB, UTSS, UTST, UTTT, UAAA, UTAA,UEEE, UTDD, UTSS, UTAV

SINGAPORE

TTAAii	CCCC	STATIONS or FIR
FTSR31	WSSS	WSSS, WSAP, WAAA, WABB, WADD, WARR, WIHH, WIII, WIMM
FTSR32	WSSS	WMKJ, WMKK, WMKL, WMKM, WMKP, WMSA
FTSR33	WSSS	WBSB, WBGB, WBGG, WBGR, WBGS, WBKK, WBKL, WBKS, WBKW
FCSR31	WSSS	WSSS, WSAP, WMKK. WIII, WIIH
FCSR31	WSSL	WSSL
SASR31	WSSL	WSSL
SASR31	WSSS	WSSS
WCSR20	WSSS	WSJC
WSSR20	WSSS	WSJC
WVSR20	WSSS	WSJC

SRI LANKA

TTAAii	CCCC	STATIONS or FIR
FTSB31	VCBI	VCBI
SASB31	VCCC	VCBI, VRMM
WSSB31	VCBI	VCCC

THAILAND

TTAAii	CCCC	STATIONS or FIR
FTAE31	VTBB	VTBD, VTBS, VTBU, VTCC, VTSS, VTSP, VGZR, VLVT
FTAE32	VTBB	VDPP, VVTS, VVNB, VVDN, VYYY, VYMD, VDSR
FTTH31	VTBB	VTCT, VTCL, VTCN, VTCP, VTPH, VTPM, VTPP, VTPT, VTPO, VTPI, VTPB, VTCH, VTCK
FTTH32	VTBB	VTSB, VTSM, VTSC, VTSK, VTST, VTSR, VTSF, VTSG, VTSE, VTSH
FTTH33	VTBB	VTUD, VTUI, VTUK, VTUU, VTUL, VTUO, VTUW, VTUQ, VTUV, VTUJ, VTBO
FCAE31	VTBB	VTBS, VTBD, VTCC, VTUU, VTSS, VTSP, VTCT
FCTH31	VTSS	VTSS
SAAE31	VTBB	VTBS, VTBD, VTCC, VTBU, VTSS, VTSP, VLVT, VYYY, VVTS, VVNB, VDPP, VVDN, VYMD, VDSR
SATH31	VTBB	VTPB, VTCT, VTCL, VTCN, VTCP, VTCH, VTPH, VTPM, VTPP, VTPO, VTPT
SATH32	VTBB	VTSB, VTSM, VTSC, VTSK, VTST, VTSR, VTSG, VTSF, VTSE
SATH33	VTBB	VTUD, VTUI, VTUK, VTUU, VTUL, VTUO, VTUW, VTUQ, VTUV, VTUJ, VTBO
WCTH31	VTBS	VTBB
WSTH31	VTBS	VTBB
WVTH31	VTBS	VTBB

VIET NAM, SOCIALIST REPUBLIC OF

TTAAii	CCCC	STATIONS or FIR
FTVS31	VVTS	VVTS

SOUTH PACIFIC ASIA

TTAAii	CCCC	STATIONS or FIR
FCPS31	NFFN	NCRG, NFFN, NFNA, NFTF, NIUE, NLWW, NSFA
SAFJ31	NFFN	NFFN
WCPS21	NZKL	NZZO

ASIA/PAC ICD OPMET Data Bank Access Producers

WSPS21	NZKL	NZZO
WVPS31	NZKL	NZZO
FVPS01	NZKL	N/A

PACIFIC AREA

TTAAii	CCCC	STATIONS or FIR
FTPA31	PHFO	PHLI, PHNL, PHJR, PHMK, PHNY, PHJH, PHOG, PHTO, PHKO, PMDY, NTSU
SAPA31	KWBC	AGGG, AGGH, ANAU, AYPY, PGNT, PGRO, PGSN, PGUA, PGUM, PGWT, PHJH, PHJR, PHMK, PJON, PKMJ, PKMR, PKWA, PLCH, PMDY, PTKK, PTKR, PTPN, PTRO, PTSA, PTTP, PTYA, PWAK

OTHERS REGION

EASTERN AND SOUTHERN AFRICAN REGION

MAURITIUS

TTAAii	CCCC	STATIONS or FIR
FTMA31	FIMP	FIMP, FIMR
SAMA20	FIMP	FIMP

SEYCHELLES

TTAAii	CCCC	STATIONS or FIR
FTSC20	FSIA	FSIA

EUROPEAN AND NORTH ATLANTIC REGION

AUSTRIA

TTAAii	CCCC	STATIONS or FIR
FTOS31	LOWM	LOWW
FTOS32	LOWM	LOWL, LOWS, LOWI, LOWG, LOWK

BELGIUM, LUXEMBURG

TTAAii	CCCC	STATIONS or FIR
FTBX31	EBBR	EBBR, ELLX, EBOS, EBLG
SABX31	KWBC	EBAW, EBBE, EBBL, EBBR, EBBT, EBCI, EBCV, EBDT, EBFN, EBFS, EBGB, EBKH, EBKT, EBLB, EBLG, EBMT, EBOS, EBSH, EBSP, EBST, EBTN, EBTY, EBZW, ELLX

DENMARK

TTAAii	CCCC	STATIONS or FIR
FTDN31	EKCH	EKBI, EKCH.EKYT
SADN31	KWBC	EKAH, EKBI, EKCH, EKEB, EKHO, EKKA, EKMB, EKRK, EKRN, EKSB, EKSP, EKVA, EKVD, EKVG, EKVL, EKYT, EKOD, EKSN, EKSV, EKTS, EKVJ

ASIA/PAC ICD OPMET Data Bank Access Producers

FRANCE

TTAAii	CCCC	STATIONS or FIR
FTFR31	LFPW	LFBD, LFML, LFPG, LFPO
FTFR32	LFPW	LFKB, LFLL, LFLS, LFMN, LFQQ, LFSB
FTFR33	LFPW	LFLX, LFMI, LFPB, LFRB, LFJL
FTFR34	LFPW	LFBO, LFOK, LFOT, LFRD, LFRN, LFRS, LFLB
SAFR31	KWBC	LFAC, LFAT, LFBD, LFBH, LFBI, LFBO, LFBP, LFBT, LFBZ, LFGJ, LFKB, LFKC, LFKJ, LFLB, LFLC, LFLL, LFLS, LFLY, LFMD, LFMH
SAFR32	KWBC	LFML, LFMN, LFMP, LFOB, LFOH, LFOT, LFPB, LFPG, LFPB, LFPG, LFPN, LFPO, LFQQ, LFRB, LFRC, LFRD, LFRG, LFRK, LFRN, LFRO, LFRQ, LFRS, LFRT, LFRZ, LFSB, LFSN, LFSR, LFST, LFTW, LFMT, LFSF, LSVP

GERMANY

TTAAii	CCCC	STATIONS or FIR
FTDL31	EDZO	EDDF, EDDH, EDDK, EDDL, EDDM, EDDN, EDDS, EDDT, EDDV
FTDL32	EDZO	EDDB, EDDC, EDDE, EDDG, EDDI, EDDP, EDDR, EDDW
FTDL33	EDZO	EDFH
SADL31	KWBC	EDBB, EDBT, EDCK, EDDF, EDDH, DDK, EDDL, EDDM, EDDN, EDDS, EDDW, EDFE, EDFM, EDHI, EDHL, EDKB, EDKS, EDLE, EDLG, EDLI
SADL32	KWBC	EDLN, EDLP, EDLS, EDLW, EDMA, EDML, EDMO, EDMS, EDQD, EDQM, EDRS, EDRT, EDTB, EDTD, EDTF, EDTK, EDTO, EDTY, EDTZ, EDVE
SADL33	KWBC	EDDB, EDDC, EDDG, EDDI, EDDP, EDDR, EDDT, EDDV, EDDW, EDBM, EDNY, EDVK

GREECE

TTAAii	CCCC	STATIONS or FIR
FTGR31	LGAT	LGAV, LGTS, LGAD, LGRP, LGIR
SAGR31	KWBC	LGAD, LGAL, LGAV, LGEL, LGIR, LGKL, LGKR, LGLM, LGMT, LGRP, LGSA, LGSM, LGTS, LGKO
WSGR31	LGAT	LGGG

IRELAND

TTAAii	CCCC	STATIONS or FIR
FTIE31	EIDB	EIDW, EINN
SAIE31	KWBC	EICK, EIDB, EIDW, EIKN, EINN

ITALY

TTAAii	CCCC	STATIONS or FIR
FTIY31	LIIB	LIRF, LIRP, LIRN, LIRA, LIMC, LIML, LIMJ, LIMF, LIEE
FTIY32	LIIB	LIPZ, LIPR, LIPA, LICC, LICJ, LIBR, LICT
SAIY31	KWBC	LIBC, LIBD, LIBP, LIBR, LICA, LICC, LICG, LICJ, LICR, LICT,LIEA, LIEE, LIEO, LIEU, LIMC, LIME, LIMF, LIMG, LIMJ, LIML
SAIY32	KWBC	LIMW, LIPB, LIPE, LIPH, LIPK, LIPO, LIPQ, LIPR, LIPV, LIPX, LIPY, LIPZ, LIRA, LIRF, LIRJ, LIRP, LIRQ, LIRZ
WSIY31	LIIB	LIRR

NETHERLANDS

TTAAii	CCCC	STATIONS or FIR
FTNL31	EHDB	EHAM, EHBK, EHRD
SANL31	KWBC	EHAM, EHBK, EHDL, EHEH, EHGG, EHGR, EHKD, EHLW, EHRD, EHSB, EHVB, EHVK, EHVL, EHWO,

NORWAY

TTAAii	CCCC	STATIONS or FIR

ASIA/PAC ICD OPMET Data Bank Access Producers

FTNO31	ENMI	ENAN, ENBR, ENBO, ENDU, ENGM, ENOL, ENVA, ENZV
FTNO32	ENMI	ENSB, ENNA
SANO41	KWBC	ENAL, ENAN, ENAT, ENBL, ENBN, ENBV, ENDI, ENDU, ENEK, ENEV, ENFG, ENFL, ENFR, ENGC, ENHF, ENHV, ENKB, ENLI, ENLK, ENMH
SANO42	KWBC	ENML, ENMS, ENNA, ENNK, ENNM, ENNO, ENOA, ENOL, ENOV, ENRA, ENRM, ENRO, ENRS, ENRY, ENSD, ENSG, ENSH, ENSK, ENSN, ENSO, ENSR, ENST, ENSV, ENTO, ENVD
WSNO31	ENMI	ENOR

SLOVENIA

TTAAii	CCCC	STATIONS or FIR
FTLJ31	LJLJ	LJLJ
WSLJ31	LJLJ	LJLA

SWITZERLAND

TTAAii	CCCC	STATIONS or FIR
FTSW31	LSSW	LSZH, LSGG
SASW31	KWBC	LSGC, LSGG, LSGL, LSGN, LSZA, LSZB, LSZD, LSZH, LSZL, LSZS

TURKEY

TTAAii	CCCC	STATIONS or FIR
FTTU31	LTAA	LTAC, LTAF, LTAI, LTAJ, LTAN, LTAU, LTAZ, LTBA, LTBJ, LTBR, LTBS, LTBU, LTCC, LTCE, LTCF, LTCG, LTCI, LTFC, LTFE, LTFH, LTFJ

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

TTAAii	CCCC	STATIONS or FIR
FTUK31	EGGY	EGCC, EGKK, EGLL, EGPF, EGPK, EGSS
FTUK32	EGGY	EGAA, EGBB, EGGW, EGNX, EGPD, EGPH
SAUK31	KWBC	EGAA, EGBB, EGCC, EGFF, EGGD, EGGP EGGW, EGHD, EGHH, EGHI, EGJB, EGJJ, EGKA, EGKB, EGKK, EGLF, EGLL, EGMC, EGMD, EGNH, EGNJ
SAUK32	KWBC	EGNM, EGNS, EGNT, EGNV, EGNX, EGPA, EGPB, EGPC, EGPD, EGPF, EGPH, EGPK, EGSH, EGTE, EGTG

YUGOSLAVIA (SERBIA AND MONTENEGRO)

TTAAii	CCCC	STATIONS or FIR
FTYG31	LYBM	LYBE, LYNI, LYPG, LYTV
WSYG31	LYBM	LYBA

EUROPE

TTAAii	CCCC	STATIONS or FIR
FTEU41	LOWM	EHAM, EBBR, LSGG, LSZH, LFSB, EDDF, EDDM, EDDN, EDDS
FTEU42	LOWM	EGLL, LFML, LFMN, LFPO
FTEU43	LOWM	EKCH, LIMC, LIRF, LGAV, ESSA, EFHK, EFTU
FTEU44	LOWM	LMML, LCLK

EASTERN EUROPE

TTAAii	CCCC	STATIONS or FIR
FTEE31	LOWM	UAAA, UACC, UAFO, UATT
FTEE32	LOWM	UDYZ, UHPP, UTAA, UTAK, UTAV, UTST, UBBG, UNWW
SAEE31	KWBC	EPGD, EPKK, EPKT, EPPO, EPQT, EPRZ, EPSC, EPWA, EYSA, UKBB, UKKK, UKLL, UKOO, UMII, UMMM, UMMS
SAEE32	KWBC	LBBG, LBPD, LBSF, LBWN, LHBP, LHTA, LRAR LRBS, LRCK, LROP, LRTC, LRTM, LRTR, LUCC, LUKK, LURN

ASIA/PAC ICD OPMET Data Bank Access Producers

WESTERN EUROPE

TTAAii	CCCC	STATIONS or FIR
FTEW31	LEMM	LEMD, LEBL, LEPA, LEIB, LEZL, LEVC, LEMG
FTEW32	LEMM	GCLP, GCXO, GCTS, GCRR, GCFV
SAEW31	KWBC	LPAZ, LPFR, LPFU, LPPD, LPPR, LPPS, LPPT, LXGB

EASTERN MEDITERRANEAN AREA

TTAAii	CCCC	STATIONS or FIR
FTME31	OLBA	OLBA, OSDI, OSAP, OJAM, OJAI, OJAQ
SAME31	OLBA	OLBA, OSDI, OSAP, OSLK, OJAM, OJAI, OJAQ

MIDDLE EAST REGION

BAHRAIN

TTAAii	CCCC	STATIONS or FIR
FTBN31	OBBI	OBBI, OTBD, OKBK, OEDR, OEDF
FTBN32	OBBI	OMAA, OMAL, OMDB, OMSJ, OMRK, OMFJ, OOMS, OOSA
SABN31	OBBI	OBBI, OEDF, OEDR, OTBD, OKBK
SABN32	OBBI	OMAA, OMAL, OMDB, OMFJ, OMRK, OMSJ, OOMS

CYPRUS

TTAAii	CCCC	STATIONS or FIR
FTCY31	LCLK	LCLK, LCPH, LCNC

EGYPT

TTAAii	CCCC	STATIONS or FIR
FTEG31	HECA	HEAX, HECA, HELX, HEMA, HESN
WSEG31	HECA	HECC

IRAN, ISLAMIC REPUBLIC OF

TTAAii	CCCC	STATIONS or FIR
FTIR31	OIII	OIII, OIFM, OISS, OIKB, OIZH, OIMM, OITT, OIAW, OIKK
SAIR31	OIII	OIII, OIFM, OISS, OIZH, OIKB, OIMM, OIAW, OITT, OIKK

SAUDI ARABIA

TTAAii	CCCC	STATIONS or FIR
FTSD31	OEJD	OEDF, OEDR, OEJN, OEMA, OERK, OYSN
FTSD32	OEJD	OETF
SASD31	OEJD	OEDF, OEDR, OEJN, OEMA, OERK, OERY, OYSN
WSSD20	OEJD	OEJD

SYRIAN ARAB REPUBLIC

TTAAii	CCCC	STATIONS or FIR
SASY31	OSDI	OSDI, OSAP, OSLK, OSDZ, OSKL

NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN REGION

HAWAIIAN ISLANDS

TTAAii	CCCC	STATIONS or FIR
FTHW31	KWBC	PHJR, PHKO, PHLI, PHNL, PHOG, PHTO
SAHW31	KWBC	PHJR, PHKO, PHLI, PHNL, PHOG, PHTO

ASIA/PAC ICD OPMET Data Bank Access Producers

UNITED STATES OF AMERICA

TTAAii	CCCC	STATIONS or FIR
FTUS31	KWBC	KABQ, KATL, KBGM, KBGR, KBHM, KBNA, KBOS, KBWI, KCHS, KCLE, KCLT, KCVG, KDEN, KDFW, KDTW, KEWR, KFLL, KIAD, KIAH, KIND, KJAX, KJFK, KLAS, KLAX, KLGA, KLIT, KMCI, KMCO, KMEM, KMIA, KMSP, KMSY, KMTH, KOAK, KOKC, KONT, KORD, KORF, KPBI, KPHF, KPHL, KPHX, KPIT, KRDU, KSAN, KSEA, KSFO, KSTL, KSWF, KTEB, KTPA
FTUS41	KWBC	KABE, KAGC, KALB, KART, KAVP, KBAF, KBDL, KBDR, KBTV, KBUF, KCAE, KCAK, KCEF, KCMH, KCRQ, KCRW, KDAY, KERI, KEWB, KGON, KGSO, KGSP, KHPN, KHTS, KHUL, KIAG, KILG, KILM, KINT, KLSV, KLUK, KMDT, KMSS, KORH, KPGA, KPQI, KPSM, KPVD, KPWM, KRIC, KROC, KSYR, KWRI, KWWR
FTUS42	KWBC	KAMA, KAUS, KBPT, KBRO, KBTR, KCHA, KCRP, KDAL, KDRT, KELP, KEYW, KFTW, KFTY, KFXE, KGLS, KGPT, KHOU, KHRL, KHSV, KLCH, KLRD, KMAF, KMFE, KMGM, KMOB, KOPF, KPDK, KPFN, KPIE, KPNS, KRSW, KSAT, KSAV, KSHV, KSSI, KTMB, KTUL, KTYS
FTUS43	KWBC	KAPN, KAZO, KBTM, KCMX, KCOS, KCPR, KDET, KDLH, KDSM, KFAR, KFNT, KGFK, KGRB, KGRR, KICT, KINL, KISN, KLEX, KMBS, KMDW, KMKC, KMKE, KMLI, KMOT, KOAJ, KOMA, KPGV, KPHN, KPIA, KPUB, KSAW, KSDF, KSGF, KSUS, KTOL
FTUS44	KWBC	KBFI, KBIL, KBKE, KBLI, KBOI, KCLM, KCTB, KDUG, KFAT, KGEG, KGGW, KGPI, KGTF, KHLN, KHQM, KHVR, KIPL, KLBB, KMSO, KMWH, KMYL, KOLM, KOLS, KPAE, KPDX, KPMD, KRNO, KSAC, KSCK, KSFF, KSJC, KSLC, KSMF, KTUS, KYUM
SAUS31	KWBC	KABQ, KATL, KBGR, KBHM, KBNA, KBOS, KBWI, KCHS, KCLE, KCLT, KCVG, KDEN, KDFW, KDTW, KEWR, KFLL, KIAD, KIAH, KIND, KJAX, KJFK, KLAS, KLAX, KLGA, KLGC, KLIT, KLOU, KMCI, KMCO, KMEM, KMIA, KMSP, KMSY, KOAK, KOKC, KONT, KORD, KORF, KPBI, KPHF, KPHL, KPHX, KPIT, KRDU, KSAN, KSEA, KSFO, KSTL, KSWF, KTEB, KTPA
SAUS51	KWBC	KACY, KAUG, KAVL, KBGM, KBKW, KCBE, KCHH, KCON, KDCA, KEKN, KESN, KGFL, KGSP, KHAT, KHSS, KIPJ, KIPT, KLYH, KMHT, KMPV, KMWN, KMYR, KNYC, KPNE, KROA, KSMQ, KWAL
SAUS52	KWBC	KAAF, KABR, KACT, KAGS, KAHN, KALI, KAUS, KAYS, KBVE, KCAO, KCDS, KCKL, KCLL, KCNM, KCOT, KCSG, KCTY, KDAB, KDHT, KELD, KELP, KESF, KFCL, KFSM, KFYV, KGAG, KGDP, KHBR, KHDO, KHOT, KHRO, KINK, KIPT, KJAN, KJBR, KJCT, KJQF, KLFK, KLFT, KMCN, KMEI, KELC, KMLU, KMWL, KPBF, KPNC, KPSX, KPWA, KQAO, KRMG, KRSL, KSEP, KSHV, KSPS, KTLH, KTOP, KTRI, KTUP, KVCT, KVGT, KVUJ, KWRB
SAUS53	KWBC	KAIA, KAID, KALO, KALS, KANW, KBBW, KBFF, KBIE, KBIS, KBPI, KBRL, KCAG, KCGI, KCID, KCNK, KCNU, KCYS, KCZD, KDBQ, KDDC, KDVL, KEAR, KEHA, KEVV, KF55, KFNB, KFSD, KFWA, KGCC, KGCK, KGJT, KGLD, KGPZ, KGRI, KHON, KHSI, KHTL, KIML, KIRK, KJAC, KJKL, KJLN, KJNX, KLAN, KLBF, KLIH, KLNC, KLND, KLNK, KLXV, KMCK, KMCW, KMFD, KMHK, KMHN, KMKG, KMMO, KMSN, KODX, KONL, KOTM, KOVN, KPAH, KPKD, KRAP, KRFD, KRIW, KRST, KSBN, KSHR, KSLN, KSPI, KSSM, KSTC, KSUX, KSVM, KTCS, KTDF, KUDG

List of Action Items of OPMET/M TF (as reviewed by OPMET M/TF/6 Meeting)
Appendix D to the Report

Task No.	Field	Description	#	Action	Target date	To be done by	Status
1. OPERATIONAl ISSUES							
1.1 Data Management							
T5-1		**Improve OPMET data availability**	1	Follow-up the reported shortfalls by IATA.	permanent	All ROBEX	On-going
			2	Implement new South PAC bulletins; Fiji to present an action plan with target date. Fiji and PGN to sign MOU of technical cooperation project.	Jul-08	Fiji, Secretariat	On-going. Action being taken by Fiji .
			3	Implement new bulletins from Indonesia and low percentage/incosnsitency of provision of OPMET information from WABB.	TBA	Indonesia	On going. Further follow-up actions to be taken by Secretaria (letter and missions)
			4	Propose to CNS/MET SG inclusion of States with systematic OPMET data shortfalls in the APANPIRG List of Deficiencies.	Jul-07	Secretariat	Completed
			5	Request States to update SUG Annex 1 in regard to non-AOP aerodromes	Mar-08	Secretariat	Regular letters will be sent to States requsting updates to the SUG Annex 1 regard to non-AOP aerodromes. Action closed.
T5-2		**Improve the inter-regional exchange**	1	Coordinate with ICAO AFI, MID and SAM regions in regard to the operation of data banks.	Aug-08	Secretary	On-going. With regard to AFI - no news. A data bank has not been established. For the MID region - the newly established METG/1 of MIDANPIRG to be held 6/08. DM will provide information. The OPMET information from the SAM region is stable - normally.
			2	Continue operational trials of back-up procedures between IROGs BKK and SIN	Jan-08	Bangkok, Singapore	Completed. Backup Ex was conducted on 19 Mar 08
			3	Harmonization of SADIS and ISCS OPMET data content	Dec-07	USA Singapore Tokyo	On-going. Follow-up Letter sent to ISCS provider State Follow-up with USA by Japan but no response has been received. It was addressed at WAFSOPSG meeting in Cairo in Feb.08. A paper from US to be presented at CNS/MET/12.
			4	Relay SIGMET received via WMO GTS to all RODBs	Jan-08	Tokyo Russian Federation	Completed by RODB Japan during the SIGMET Trial
T5-3		**Improve access to RODBs**	1	FTP and Web based access to RODB	Sep-07	Singapore	Completed

	1.2 Procedures						
T5-4		**Further improvement and standardization of ROBEX procedures**	1	Conduct consultation between the RODBs on the implementation of reply messages with "XX" geographical designator and advise TF/6.	8-Dec	RODBs	On-going. Singapore RODB will implement the message format after upgrading the sw in Message Switch
			2	METNO messages and e-mail notifications for changes in ROBEX bulletins to be distributed to SADIS and ISCS Providers.	Jul-07	All ROBEX Centres	Completed Mar 08
			3	Mirroring of RODB content	8-Mar	RODBs ROBEX Centres	Progress made - AU and SIN exchanged routing tables in Mar 08 On-going task
			4	Standardize request message format and inform users	Jul-08	All RODBs IATA Secretary	On-going
	1.3 Standardize formats						
T5-5		**SIGMET format**	1	Advise States that had wrongly formatted WMO header to use correct WMO header and MWO and FIR location indicators in SIGMET.	Jul-08	Secretariat	Up-dated Task On-going
		METAR and TAF	2	Correct format of recompiled METAR and TAF bulletins.	TBA	USA	On-going (T5-2 Item 3 refers)
	2. TESTS AND TRIALS NECESSARY FOR IMPROVEMENT/OPTIMIZATION						
	2.1 SIGMET and advisories						
T5-6		**SIGMET tests**	1	Finalize the analysis of the WV, WC and WS tests held in Jan/Feb 2007, report to CNS/MET SG/11.	Jul-07	Japan, Australia, Secretariat	Completed
			2	Advise all VAACs and TCACs of the correct AFTN addresses for test advisories.	Jun-07	Secretariat	Completed
			3	Conduct next SIGMET tests.	Feb-08	All RODBs Secretariat Japan Australia	Completed
			4	Include validation of FIR CCCC in the SIGMET test procedures .	Jul-08	Secretariat RODBs	On-going
			5	Update Regional SIGMET Guide to reflect changes in Amendment 74 to Annex 3.	Jul-07	Secretariat	Completed
			6	Coordinate with EUR region harmonization of WV test procedures.	TBA	Secretary	On-going, WV exercises in EUR was noted by TF/6

3. REGIONAL GUIDANCE ON OPMET EXCHANGE							
	3.1 ROBEX Handbook						
T5-7		**Update ROBEX Handbook**	1	Update ROBEX Tables with the information received during the meeting.	May-07	Secretariat	Completed
			2	Add information about OPMET bulletin headers for the US bulletins.	Jul-08	USA Secretariat	On-going
			3	Review and update the FT and FC Tables .	Jul-08	TAF Team	On-going to be complted by July 08
	3.2 ICD						
T5-8		**Update ICD**	1	Update with the information received during the meeting.	Jul-08	Secretariat	Completed, Mar 08 ICD was updated
			2	Include information about web and ftp access for RODB Singapore.	Jul-08	Singapore Secretariat	Additional updates was presented TF/6 and will be updated by July 08.
	3.3 ROBEX DB & Catalogue						
T5-9		**ASIA/PAC Catalogue and further test the ROBEX Database (MS Access application)**	1	Coordinate with RODBs and use the Database for preparing OPMET Catalogue.	Mar-08	RODBs, Australia, Secretariat	On-going and coordinate with HQ for action taken globally
4. QUALITY MANAGEMENT PROCEDURES							
	4.1 Quality Control and OPMET data monitoring						
T5-10		**OPMET data monitoring**	1	Regular yearly monitoring of OPMET data by the RODBs using the procedures in ROBEX Handbook.	Mar-08	RODBs	Completed. Status of monitoring in 2007 was provided to the TF/6 by RODBs. Bangkok RODB presented the OPMET monitoring result for February 08.
			2	Post the monitoring results on the web and inform States of identified problems.	Oct-07	Singapore	Completed
T5-11		**QC by originators of OPMET data**	1	Advise States to implement QC procedures for all OPMET data types (by originator).	Jul-07	Secretariat	Completed
5. TRANSITION TO BUFR CODE FOR OPMET INFORMATION – REGIONAL PLANNING							
	5.1 PT BUFR Transition						
T5-12		**Regional Planning**	1	No activities until the results of the WMO study on the use of XML .	Mar-08	Secretariat	Suspended. ANC agreed at 4th meeting of the 176th Session to suspend the migration to BUFR pending a decision from WMO in 2009.
			2	Inform CNS/MET SG/11	Jul-07	Secretariat	Completed. CNS/MET SG/11 and APANPIRG/18 noted the current status.
6. VOLMET BROADCASTING REQUIREMENT ON TAF							
	6.1 Requirement for TAF by Users						
T6-13		**Survey to enquire of airlines of their use of TAF information in the VOLMET (as difficulties in providing 30 h TAF in the VOLMET as time slot constraints.**	1	Conduct a survey and result of which present to CNS/MET/12.	Jul-08	IATA, States, Secretariat	On-going - new task

SIXTH MEETING OF ASIA/PAC OPMET MANAGEMENT TASK FORCE
26 – 28 March 2008, Bangkok, Thailand

Attachment 1

LIST OF PARTICIPANTS

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FIJI ISLANDS (1)		
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JAPAN (2)		

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Attachment 2

INTERNATIONAL CIVIL AVIATION ORGANIZATION

SIXTH MEETING OF THE ASIA/PACIFIC OPMET MANAGEMENT TASK FORCE (OPMET/M TF/6)

Bangkok, Thailand, 26 – 28 March 2008

LIST OF WORKING PAPERS

WP No.	Agenda Item	Subject	Presented by
WP/1	-	Provisional Agenda	Secretariat
WP/2	2)d	Timetable for Regional Implementation	Rapporteur
WP/3	1b)	Terms of Reference and Working Programme of the OPMET Management Task Force	Secretariat
WP/4	1b)	Review of the Progress of Action Item List	Secretariat
WP/5	2a)	Review Report of the Second RODB Co-ordination Meeting	Secretariat
WP/6	2b)	Review of Outcome of CNS/MET SG/11 and APANPIRG/18 Meetings on OPMET Exchange	Secretariat
WP/7	2d)	Use of 30-Hour TAF in VOLMET Broadcast	Hong Kong, China
WP/8	4b)	Progress with SIGMET Tests – WC and WV	Japan
WP/9	2d)	Study on Automatic Generation of 9-H Forecast in TAF Code Form for Inclusion in VOLMET	Hong Kong, China
WP/10	4a)	IATA OPMET Data Monitoring	IATA
WP/11	4a)	RODB Bangkok's Performance Indices	Thailand
WP/12	2d)	Requirement for TAF VOLMET in FASID	Secretariat
WP/13	2d)	An Update on Singapore IROG Operations	Singapore
WP/14	2d)	Implementation of 30-Hour TAF and new TAF Codes	Singapore
WP/15	2b)	TAF Exchange under the ROBEX Scheme	Singapore
WP/16	4a)	OPMET Quality Control Issues	Singapore
WP/17	2d)	ASIA/PAC Regional Survey Results	Rapporteur
WP/19	2d)	Real-time Exercising the Back-up Procedure between RODBs Bangkok and Singapore	Thailand

LIST OF INFORMATION PAPERS

IP No.	Agenda Item	Subject	Presented by
IP/1	-	Meeting Bulletin	Secretariat
IP/2	4b)	Progress with SIGMET Test – WS Test 3	Australia
IP/3	4b)	Comparison of SIGMET Tests 1, 2 & 3	Australia
IP/4	4b)	SIGMET Test for other Weather Phenomena – WS Test 3	Singapore
IP/5	2c)	Current Status of Regional OPMET Data Bank – Brisbane	Australia
IP/6	2d)	Plan for Implementation of 27 Hour TAF by Japan	Japan
IP/7	2d)	Changes of Format of MET Bulletin in Japan	Japan
IP/8	4b)	Volcanic Ash Simulation Exercises in the EUR/NAT Region	Secretariat
IP/10	4a)	Introduction of Quality Control of OPMET Information for International Exchange in China	China
IP/11	2c)	An Update on the Operation of Singapore RODB	Singapore