

*International Civil Aviation Organization***WORKING PAPER**

ICAO

**ASIA AND PACIFIC (APAC)**

**Conjoint Session of the Twenty-first Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/21) and Thirteenth Meeting of the Meteorological Services Working Group (MET/S WG/13)**

Bangkok, Thailand, 29 March 2023

**Conjoint session MET/IE WG/21 and MET/S WG/13****Agenda Item 2: SIGMET tests****RESULTS OF SIGMET TESTS 2022 – TC AND VA**

(Presented by Japan)

**SUMMARY**

This paper presents the results of the ASIA/PAC SIGMET tests conducted in November 2022 for tropical cyclone and volcanic ash.

**1. INTRODUCTION**

1.1 The MET Divisional Meeting (2002) formulated Recommendation 1/12 b), Implementation of SIGMET requirements, which called, inter alia, for the relevant Planning and Implementation Regional Groups (PIRGs) to conduct periodic tests of the issuance and reception of SIGMET messages, especially those for volcanic ash.

1.2 The Regional SIGMET tests were conducted on the following dates (month/date) for the last 5 years:

SIGMET for	2018	2019	2020	2021	2022
TC	11/07	11/13	12/02	12/08	11/9
VA	11/14	11/20	12/09	12/15	11/16

**2. DISCUSSION****Schedule and procedure of SIGMET tests**

2.1 In its State letter dated 20 October 2022 on the schedule for SIGMET tests in the Asia/Pacific Region – November 2022, the ICAO Asia Pacific Regional Office notified the following schedule and the procedure of the regional SIGMET tests:

**SIGMET test for tropical cyclone**

**Agenda Item 2**

29/03/23

- 09 November, 0200 UTC or 0500 UTC or 0800 UTC (refer to the attached SIGMET Test Procedures):
  - TCACs issue a tropical cyclone advisory test message;
  - MWOs issue a SIGMET test message (indicating receipt or non-receipt of the advisory test message from the TCACs); and
  - RODBs and WAFCs record all (the above) incoming advisory and SIGMET test messages and send a SIGMET test summary table to the APAC SIGMET test focal points.

SIGMET test for volcanic ash

- 16 November, 0200 UTC:
  - VAACs issue a volcanic ash advisory test message;
  - MWOs issue a SIGMET test message (including receipt or non-receipt of the advisory test message from the VAACs); and
  - RODBs and WAFCs record all (the above) incoming advisory and SIGMET test messages and send a SIGMET test summary table to the APAC SIGMET test focal points.

**SIGMET test message in the IWXXM form**

2.2 MWOs that have implemented the ICAO meteorological information exchange model (IWXXM) should disseminate the SIGMET test messages in the IWXXM form in addition to disseminating the test messages in abbreviated plain language or alphanumeric form.

**Test result and analysis**

2.3 Four RODBs (Bangkok, Brisbane, Singapore and Nadi) and WAFAC London sent the summary of bulletins received during the tests to Tokyo, the rapporteur. The combined information on the reception of the bulletins during the test for each TC (WC) and VA (WV) is shown in the Appendix 6 and 7, respectively. In this paper, the overall availability is represented by the rate of test bulletins received at least at one RODB(s) over all those expected to be reported.

2.4 Tropical cyclone (FK) and volcanic ash advisories (FV) issued at the test are shown in Appendix 1.

2.5 SIGMET test messages (LY, LV) and advisories (LK, LU) in the IWXXM form issued at the test are shown in Appendix 2.

**Summary of WC SIGMET test**

2.6 The total number of WC test bulletins expected to be reported during test was 50 and that received during the test was 39. The overall availability of WC test bulletins was 78.0%, which was better than that of 2021 (76.0%). Appendix 4 shows the availability of WC test bulletins at each RODB and the total since 2009.

2.7 WC test bulletins not issued in the WC SIGMET test are shown in Appendix 3.

**Summary of WV SIGMET test**

2.8 The total number of WV test bulletins expected to be reported during the test was 55 including 6 Russian WV SIGMETs (UIII, UHHH, UNKL, UHMM, UEEE and UHPP). The total number of WV test bulletins received during the test was 48. The overall availability of WV test

bulletins was 87.3%, which was better than that of 2021 (85.7%). Appendix 5 shows the availability of WV test bulletins at each RODB and the total since 2009.

2.9 WV test bulletins not issued in the WV SIGMET test are shown in Appendix 3.

**Follow-up activity**

2.10 ROCs and RODBs support their relating NOCs which could not issue SIGMET test messages during the test period.

2.11 ROC Wellington has performed the test of SIGMETs from French Polynesia translated from TAC to IWXXM by ROC Wellington since December 2022. RODBs received LSPF22 NTAA successfully on 16 January 2023. The test of LVPF20 NTAA and LYPF20 NTAA will be done in March 2023.

2.12 The Bureau of Meteorology in Australia issued SIGMET test messages in TAC and IWXXM forms on 8 February 2023. RODB Tokyo confirmed that all test messages were received successfully.

2.13 SIGMET test messages of Mongolia did not reach RODB/ROC Brisbane during the test. Beijing ROC coordinated the small SIGMET test with NOC Mongolia and RODB Tokyo in March 2023.

**3. CONCLUSION**

3.1 The availability of WC and WV test bulletins were better than in the test in 2021. It seems to be difficult for some States to issue the test bulletins.

3.2 Both in the WC and WV SIGMET test, there were still incorrect use of the priority and formatting errors in the text.

3.3 Some of WC and WV test bulletins were duplicated or issued by different Date Time Group (DTG) with the same contents, which makes the analysis difficult.

3.4 Some of WC and WV test bulletins were not received by all RODBs in ASIA/PAC region. Participating States should send the test message to all RODBs and WAFCs.

3.5 Some States issued SIGMET and advisory test messages in the IWXXM form but many States are not ready to issue a test message in the IWXXM form yet.

**4. ACTION BY THE MEETING**

4.1 The meeting is invited to:

- a) Note the result of the SIGMET tests presented above;
- b) Discuss on the future importance of the SIGMET exchange in the region; and
- c) Discuss, if necessary, revision of the test procedure.

**Agenda Item 2**

29/03/23

**Appendix 1: TCA and VAA test bulletins in TAC****TCA test bulletins**

TCAC	PI	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
NEW DELHI	FF	FKIN20	VIDP	090200	2:01	2:02	2:03		2:02	2:03
	FF	FKIN20	VIDP	090800	8:01	8:02	8:05		8:03	8:04
	FF	FKIN21	VIDP	090200	2:01	2:02	2:03	2:00	2:02	2:02
	FF	FKIN21	VIDP	090800	8:01	8:02	8:05		8:03	8:02
DARWIN	FF	FKAU03	ADRM	090159	2:01	2:00	2:02		2:00	2:00
NADI	FF	FKPS03	NFFN	090000	2:00	2:02	2:02	2:00	2:00	2:02
TOKYO	FF	FKPQ30	RJTD	090200	2:00	2:00	2:02	2:00	2:00	2:02
UNITED STATES		FKPA21	PHFO	090200		2:07	2:03			2:03

**VAA test bulletins**

VAAC	PI	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
TOULOUSE	FF	FVXX04	LFPW	160201		2:10	2:03		2:02	2:03
DARWIN	FF	FVAU01	ADRM	160200	2:00	2:01	2:02	2:00	2:01	2:02
WASHINGTON	GG	FVXX25	KNES	160200		2:11	2:13		2:11	2:12
WELLINGTON	FF	FVPS01	NZKL	160201	2:01	2:02	2:03	2:01	2:02	2:03
TOKYO	FF	FVFE01	RJTD	160220	2:20	2:20	2:22	2:20	2:20	2:21

**Appendix 2: Test bulletins in IWXXM****TCA and TC SIGMET in IWXXM**

STATE	TCAC	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
JAPAN	TOKYO	LKPQ30	RJTD	090200		2:03			2:03	

STATE	MWO	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
CHINA	HONG KONG	LYSS20	VHHH	090202	2:03	2:03	2:04		2:02	
	TAIBEI	LYCI31	RCTP	090200	2:04	2:04	2:05			
FIJI	NADI	LYFJ01	NFFN	090000	2:03	2:03	2:04		2:03	
THAILAND	BANGKOK	LYTH31	VTBS	090201	2:00	2:04	2:05			
SINGAPORE	SINGAPORE	LYSR20	WSSS	090205	2:06	2:06	2:07		2:05	
JAPAN	TOKYO	LYJP31	RJTD	090205		2:07			2:07	
SOLOMON ISLAND	HONIARA	LYSO20	AGGH	090224	2:25	2:25	2:26		2:25	
RUSSIAN FEDERATION	KHABAROVSK/NOVY	LYRA31	RUBH	090201						2:05

**VAA and VA SIGMET in IWXXM**

STATE	VAAC	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
AUSTRALIA	DARWIN	LUAU01	ADRM	160200	2:01	2:01	2:22		2:01	
JAPAN	TOKYO	LUFJ01	RJTD	160200		2:01			2:01	
FRANCE	TOULOUSE	LUXX04	LFPW	160201						2:57

STATE	MWO	TTAAii	CCCC	YYGGgg	Received Time(UTC)					
					VTBB	WSSS	YBBB	NFFN	RJTD	EUR
CHINA	HONG KONG	LVSS20	VHHH	160222	2:25	2:25	2:26		2:25	
	TAIBEI	LVCI31	RCTP	160200	2:25	2:25	2:26			
FIJI	NADI	LVFJ01	NFFN	160000	2:03	2:03	2:05		2:03	
THAILAND	BANGKOK	LVTH31	VTBS	160204	2:04	2:05	2:06			
SINGAPORE	SINGAPORE	LVSR20	WSSS	160205	2:06	2:06	2:07		2:06	
JAPAN	TOKYO	LVJP31	RJTD	160205		2:05			2:05	
SOLOMON ISLAND	HONIARA	LVSO20	AGGH	160205	2:06	2:06	2:07		2:06	
RUSSIAN FEDERATION	IRKUTSK	LVRA31	RUIR	160230						2:57
	KRASNOYARSK	LVRA31	RUKR	160223						2:58
	MAGADAN/SOKOL	LVRA31	RUMG	160222						2:57
	YELIZOVO/PETROPAVLOVSK-KAMCHATSKY	LVRA31	RUPK	160221						2:57
	YAKUTSK	LVRA31	RUYK	160222						2:57

**Agenda Item 2**

29/03/23

**Appendix 3: WC and WV test bulletins not issued during the test period****WC test bulletins not issued**

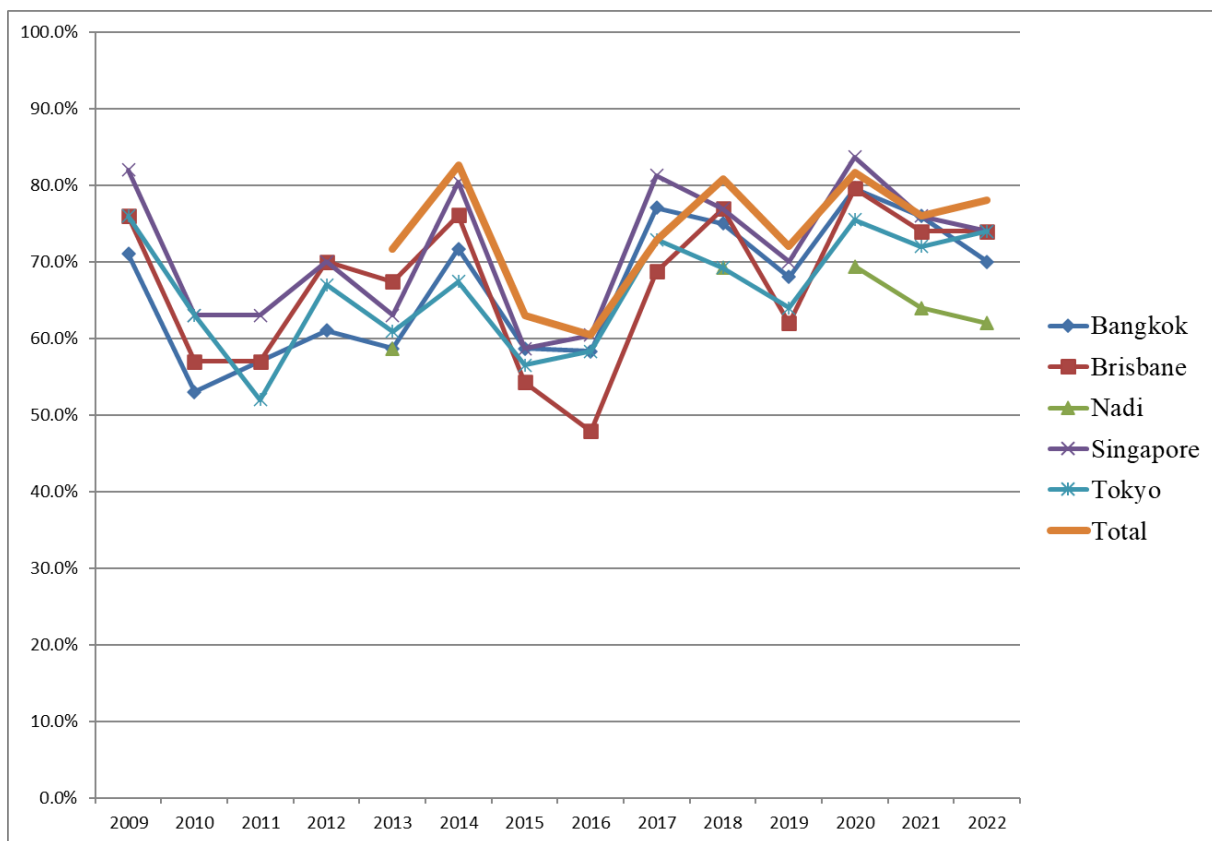
State	MWO	TTAAii	CCCC	FIR	2021
DPR KOREA	SUNAN	WCKR31	ZKPY	ZKKP	○
MYANMAR	YANGON	WCBM31	VYYY	VYYF	
NAURU	NAURU	WCNW20	ANYN	ANAU	
PAPUA NEW GUINEA	PORT MORESBY	WCNG20	AYPY	AYPY	
UNITED STATES	ANCHORAGE	WCAK01-09	PAWU	PAZA	
	KANSAS CITY	WCNT01-13	KKCI	KZNY, KZMA, KZHU, TJZU	
BAHRAIN	BAHRAIN	WCBN31	OBBI	OBBS	
IRAN	TEHRAN	WCIR31	OIII	OIX	
UNITED ARAB EMIRATES	ABU DHABI	WCAE20	OMAA	OMAE	
YEMEN	SANNA	WCYE31	OYSN	OYSC	

**WV test bulletins not issued**

State	MWO	TTAAii	CCCC	FIR	2021
AFGHANISTAN	KABUL	WVAH31	OAKB	OAKX	
CAMBODIA	PHNOM PENH	WVKP31	VDPP	VDPP	○
DPR KOREA	SUNAN	WVKR31	ZKPY	ZKKP	○
NAURU	NAURU	WVNW20	ANYN	ANAU	
PAPUA NEW GUINEA	PORT MORESBY	WVNG20	AYPY	AYPY	

**Appendix 4: Availability of the WC SIGMET test**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bangkok	71.0%	53.0%	57.0%	61.0%	58.7%	71.7%	58.7%	58.3%	77.1%	75.0%	68.0%	79.6%	76.0%	70.0%
Brisbane	76.0%	57.0%	57.0%	70.0%	67.4%	76.1%	54.3%	47.9%	68.8%	76.9%	62.0%	79.6%	74.0%	74.0%
Nadi					58.7%					69.2%		69.4%	64.0%	62.0%
Singapore	82.0%	63.0%	63.0%	70.0%	63.0%	80.4%	58.7%	60.4%	81.3%	76.9%	70.0%	83.7%	76.0%	74.0%
Tokyo	76.0%	63.0%	52.0%	67.0%	60.9%	67.4%	56.5%	58.3%	72.9%	69.2%	64.0%	75.5%	72.0%	74.0%
Total					71.7%	82.6%	63.0%	60.4%	72.9%	80.8%	72.0%	81.6%	76.0%	78.0%

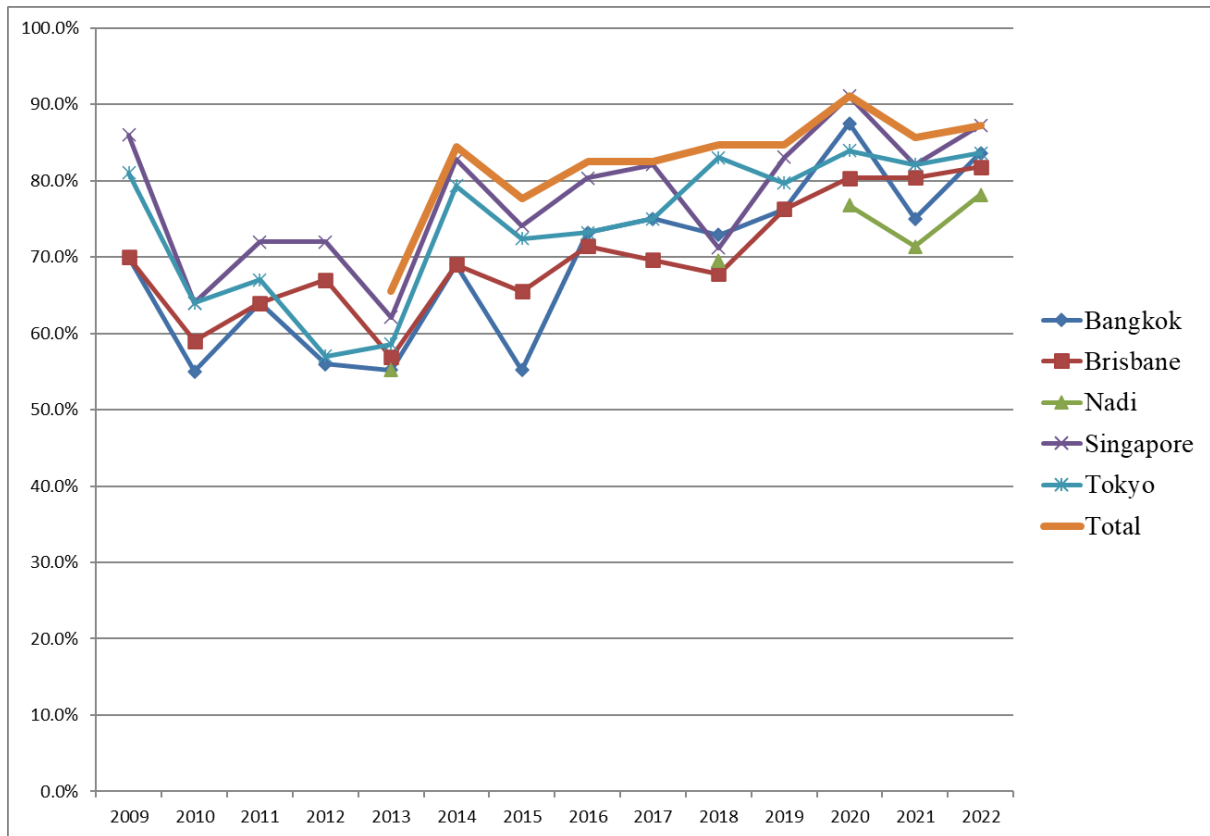


**Agenda Item 2**

29/03/23

**Appendix 5: Availability of the WV SIGMET test**

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bangkok	70.0%	55.0%	64.0%	56.0%	55.2%	69.0%	55.2%	73.2%	75.0%	72.9%	76.3%	87.5%	75.0%	83.6%
Brisbane	70.0%	59.0%	64.0%	67.0%	56.9%	69.0%	65.5%	71.4%	69.6%	67.8%	76.3%	80.4%	80.4%	81.8%
Nadi					55.2%					69.5%		76.8%	71.4%	78.2%
Singapore	86.0%	64.0%	72.0%	72.0%	62.1%	82.8%	74.1%	80.4%	82.1%	71.2%	83.1%	91.1%	82.1%	87.3%
Tokyo	81.0%	64.0%	67.0%	57.0%	58.6%	79.3%	72.4%	73.2%	75.0%	83.1%	79.7%	83.9%	82.1%	83.6%
Total					65.5%	84.5%	77.6%	82.5%	82.5%	84.7%	84.7%	91.1%	85.7%	87.3%



## Appendix 6: Table of WC SIGMET test

MWO details in APEC Regional SIGMET TEST Procedures 2022 / SIGMET Guide													Test Result						
State	MWO name	MWO	TTAAii	CCCC	FIR	TCAC	PI	TTAAii	CCCC	YYGGgg	MWO	FIR	TCAC	Received Time(UTC)					
														VTBB	WSSS	YBBB	NFFN	RJTD	EUR
AUSTRALIA	MELBOURNE	YMMC	WCAU01	YMMC	YBBB	Darwin/Nadi/La Réunion	FF	WCAU01	YMMC	090220/090223	YMMC	YBBB	Darwin/Nadi	2:20/2:23	2:21/2:24	2:22/2:25	2:20/x	2:21/2:24	2:22/2:25
						Darwin/Nadi/La Réunion	FF	WCAU01	YMMC	090206	YMMC	YMMM	Darwin	2:07	2:08	2:18	2:07	2:07	2:08
BANGLADESH	DHAKA	VGHS	WCBW20	VGHS	VGFR	New Delhi	FF	WCBW20	VGHS	090230	VGHS	VGFR	-	2:30	2:31	2:32	2:30	2:30	2:32
CAMBODIA	PHNOM PENH	VDPP	WCKP31	VDPP	VDPP	Tokyo	KK	WSKP31	VDPP	090450	VDPP	VDPP	-			4:51		4:49	
CHINA	BEIJING	ZBAA	WCCI33	ZBAA	ZBPE	Tokyo	FF	WCCI33	ZBAA	090205	ZBAA	ZBPE	Tokyo	2:02	2:02	2:03	2:01	2:01	2:03
	CHENGDU	ZUUU	WCCI36	ZUUU	ZPKM	Tokyo	FF	WCCI36	ZUUU	090202	ZUUU	ZPKM	Tokyo	2:02	2:03	2:04	2:03	2:03	2:04
	GUANGZHOU	ZGGG	WCCI35	ZGGG	ZGZU	Tokyo	FF	WCCI35	ZGGG	090205	ZGGG	ZGZU	Tokyo	2:05	2:06	2:07	2:05	2:06	2:05
	HAIKOU	ZJHK	WCCI35	ZJHK	ZJSA	Tokyo	FF	WCCI35	ZJHK	090203	ZJHK	ZJSA	Tokyo	2:04	2:04	2:06	2:03	2:04	2:04
	HONG KONG	VHHH	WCSS20	VHHH	VHHK	Tokyo	FF	WCSS20	VHHH	090202	VHHH	VHHK	Tokyo	2:02	2:02	2:04	2:02	2:02	2:04
	SHANGHAI	ZSSS	WCCI34	ZSSS	ZSHA	Tokyo	FF	WCCI34	ZSSS	090205	ZSSS	ZSHA	Tokyo	2:05	2:05	2:07	2:05	2:05	2:07
TAIBEI	RCTP	WCCI31	RCTP	RCAA	Tokyo	-	WCCI31	RCTP	090200	RCTP	RCAA	-			2:04	2:17			
DPR KOREA	SUNAN	ZKPY	WCKR31	ZKPY	ZKPP	Tokyo													
FIJI	NADI	NFFN	WCFJ01.02...	NFFN	NFFF	Nadi/Tokyo	FF	WCFJ01	NFFN	090000	NFFN	NFFF	Nadi	2:03	2:03	2:05	2:03	2:03	2:04
FRENCH POLYNESIA	TAHITI	NTAA	WCPF21	NTAA	NTTT	Nadi/Honolulu/Miami	FF	WCPF20	NTAA	090200	NTAA	NTTT	Nadi	2:04	2:04	2:05	2:03	2:04	2:04
INDIA	CHENNAI	VOMM	WCIN31	VOMM	VOMF	New Delhi	FF	WCIN31	VOMM	090201	VOMM	VOMF	New Delhi	2:04	2:04	2:35	2:03	2:04	2:05
	MUMBAI	VABB	WCIN31	VABB	VABF	La Réunion/New Delhi	FF	WCIN31	VABB	090200	VABB	VABF	New Delhi	2:03	2:03	2:05	1:57	2:03	2:04
	NEW DELHI	VIDP	WCIN31	VIDP	VIDF	-	FF	WCIN31	VIDP	090200/090800	VIDP	VIDF	New Delhi	2:02/8:03	2:02/8:03	2:04/8:05		2:02/8:03	2:03/8:04
	KOLKATA	VECC	WCIN31	VECC	VECF	-	FF	WCIN31	VECC	090205	VECC	VECF	New Delhi	2:05	2:05	2:07		2:05	2:07
INDONESIA	JAKARTA	WIII	WCID20	WIII	WIIF	Darwin/New Delhi/Tokyo	FF	WCID20	WIII	090205/090205/ 090207	WIII	WIIF	Darwin/New Delhi/Tokyo	x/x/2:08	2:04/2:08/ 2:11	2:06/2:08 /2:10	2:04/2:05 /2:06	2:04/2:06/ 2:08	x/2:06/2: 09
	MAKASSAR	WAAA	WCID21	WAAA	WAAF	Darwin/Tokyo	FF	WCID21	WAAA	090204/090215	WAAA	WAAF	Tokyo/Darwin	2:04/2:15	2:04/2:15	2:06/2:17	2:04/2:15	2:04/2:15	2:06
JAPAN	TOKYO	RJTD	WCJP31	RJTD	RJJJ	Tokyo	FF	WCJP31	RJTD	090205	RJTD	RJJJ	Tokyo	2:05	2:06	2:07		2:05	2:07
LAO PDR	VIENTIANE	VLVT	WCLA31	VLVT	VLVT	Tokyo	FF	WCLA31	VLVT	090205	VLVT	VLVT	Tokyo	2:01	2:01	2:04	2:05	2:01	2:02
MALAYSIA	KUALA LUMPUR	WMKK	WCMS31	WMKK	WMFC	New Delhi/Tokyo	FF	WCMS31	WMKK	090202/090210	WMKK	WMFC	Tokyo/New Delhi	2:02/2:11	2:02/2:11	2:04/2:13	2:04/2:10	2:02/2:11	2:03/2:12
	KOTA KINABALU				WBFC	New Delhi/Tokyo	FF	WCMS31	WMKK	090203	WBKK	WBFC	Tokyo	2:04	2:04	2:06	2:04	2:04	2:06
MALDIVES	MALE	VRMM	WCMV31	VRMM	VRMF	La Réunion/New Delhi	FF	WCMV31	VRMM	090205	VRMM	VRMF	New Delhi	2:10	2:10	2:11	2:05	2:10	2:10
MYANMAR	YANGON	VYYY	WCBM31	VYYY	VYYF	New Delhi													
NAURU	NAURU	ANYN	WCNW20	ANYN	ANAU	Nadi													
NEW ZEALAND	WELLINGTON	NZKL	WCNZ21	NZKL	NZZC	Nadi	FF	WCNZ21	NZKL	090207	NZKL	NZZC	Nadi	2:12	2:12	2:14	2:11	2:12	2:13
			WCPS21	NZKL	NZZO	Nadi	FF	WCPS21	NZKL	090201	NZKL	NZZO	Nadi	2:07	2:08	2:09	2:07	2:07	2:08
PAKISTAN	KARACHI	OPKC	WCPK31	OPKC	OPKR	New Delhi	FF	WCPK31	OPKC	090235	OPKC	OPKR	-	2:36	2:37	2:38		2:37	2:38
PAPUA NEW GUINEA	PORT MORESBY	AYPY	WCNG20	AYPY	AYPY	Darwin													
PHILIPPINES	MANILA	RPLL	WCPH31	RPLL	RPHI	Tokyo	FF	WCPH31	RPLL	090200	RPLL	RPHI	Tokyo		2:01	2:02	2:00	2:01	2:02
REPUBLIC OF KOREA	INCHEON	RKSI	WCKO31	RKSI	RKRR	Tokyo	FF	WCKO31	RKSI	090200	RKSI	RKRR	Tokyo	2:04	2:04	2:06	2:04	2:04	2:06
SINGAPORE	SINGAPORE	WSSS	WCSR20	WSSS	WSJC	Tokyo	FF	WCSR20	WSSS	090205	WSSS	WSJC	Tokyo	2:05	2:05	2:07	2:05	2:05	2:06
SOLOMON ISLANDS	HONIARA	AGGH	WCSO20	AGGH	AGGG	Darwin/Nadi	FF	WCSO20	AGGH	090224/090228	AGGH	AGGG	Darwin/Nadi	2:25/2:29	2:25/2:30	2:27/2:31	2:25/2:29	2:25/2:30	2:26/2:31
SRI LANKA	COLOMBO	VCBI	WCSB31	VCBI	VCCF	Darwin/New Delhi	FF	WCSB31	VCBI	090230	VCBI	VCCF	-	2:38	2:38	2:40		2:38	2:39
THAILAND	BANGKOK	VTBS	WCTH31	VTBS	VTBB	Tokyo	FF	WCTH31	VTBS	090001	VTBS	VTBB	Tokyo	2:03	2:04	2:05	2:04	2:03	2:05
VIET NAM	GIA LAM	VVGL	WCVS31	VVGL	VVHM	Tokyo	FF	WCVS31	VVGL	090202	VVGL	VVHM	Tokyo	2:03	2:02	2:05	2:01	2:02	2:03
			WCVS31	VVGL	VVHN	Tokyo	FF	WCVS31	VVGL	090201	VVGL	VVHN	Tokyo	2:03	2:02	2:05	2:01	2:02	2:03
UNITED STATES	HONOLULU	PHFO	WCPA01-13	PHFO	KZAK	Nadi/Tokyo/Honolulu/Miami	GG	WCPA01	PHFO	090200	PHFO	KZAK	PHFO	2:00	2:00		2:10	2:00	2:02
	ANCHORAGE	PAWU	WCAK01-09	PAWU	PAZA	Honolulu/Miami													
	KANSAS CITY	KKCI	WCNT01-13	KKCI	KZAK	Tokyo/Honolulu/Miami	DD	WCPN11/12	KKCI	090215/090217	KKCI	KZAK	Honolulu/Tokyo	2:16/2:18	2:17/2:19	2:18/2:20	2:16/2:18	2:17/2:19	2:18/2:20
BAHRAIN	BAHRAIN	OBBI	WCBN31	OBBI	OBBS	New Delhi													
IRAN	TEHRAN	OIII	WCIR31	OIII	OILX	New Delhi													
KUWAIT	KUWAIT	OKBK	WCKW10	OKBK	OKAC	New Delhi	GG	WCKW10	OKBK	090808	OKBK	OKBK	-	8:10	8:11				8:11
OMAN	MUSCAT	OOMS	WCOM31	OOMS	OOMM	New Delhi	FF	WCOM31	OOMS	080804	OOMS	OOMM	-						
SAUDI ARABIA	JEDDAH	OEJN	WCSD20	OEJD	OEJD	New Delhi	GG	WCSD20	OEJD	090800	OEJD	OEJD	-		8:00	8:01		8:00	8:01
UNITED ARAB EMIRATES	ABU DHABI	OMAA	WCAE20	OMAA	OMAE	New Delhi													
YEMEN	SANNA	OYSN	WCYE31	OYSN	OYSC	New Delhi													
Not listed in SIGMET GUIDE																			
RUSSIAN FEDERATION	YELIZOVO/PETROPAVLOVSK-KAMCHATSKY						FF	WCRA31	RUPK	090202	UHPP	UHMM	Tokyo		2:04			2:03	2:03
RUSSIAN FEDERATION	KHABAROVSK/NOVY						FF	WCRA31	RUHB	090201	UHPP	UHMM	Tokyo		2:03				2:04
MONGOLIA	ULAANBAATAR						FF	WCMA31	ZMUB	090209	ZMUB	ZMUB	-	2:11	2:11		2:09	2:10	

