



MEMORANDUM CIRCULAR NO.: 33-18

TO : ALL CONCERNED
FROM : DIRECTOR GENERAL
SUBJECT : AMENDMENT TO PHILIPPINE CIVIL AVIATION REGULATIONS - AIR NAVIGATION SERVICES (CAR-ANS) PART 3 INCORPORATING AMENDMENT 78 TO ICAO ANNEX 3 AND OTHER SUPPLEMENTARY AMENDMENTS

REFERENCE:

1. Philippine Civil Aviation Regulations- Air Navigation Services Part 3, Issue 3 Amendment No. 3
2. ICAO Annex 3; Amendment 78
3. CAAP Regulations Amendment Procedures
4. Board Resolution No. 2012-054 dated 28 September 2012

Pursuant to the powers vested in me under the Republic Act 9497, otherwise known as the Civil Aviation Authority Act of 2008 and in accordance with the Board Resolution No.: 2012-054 dated 28 September 2012, I hereby approve the incorporation of ICAO Annex 3 No. 78 and other supplementary amendments to the Philippine Civil Aviation Regulations – Air Navigation Services (CAR-ANS) Part 3.

ORIGINAL REGULATION SUBJECT FOR REVIEW AND REVISION:

CAR-ANS Part 3

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3.1 Definitions

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ICAO meteorological information exchange model (IWXXM). A data model for representing aeronautical meteorological information.

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Space weather centre (SWXC). A centre designated to monitor and provide advisory information on space weather phenomena expected to affect high-frequency radio communications, communications via satellite, GNSS-based navigation and surveillance systems and/or pose a radiation risk to aircraft occupants.

Note.— *A space weather centre is designated as global and/or regional.*

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3.2 GENERAL PROVISIONS

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3.2.1 Objective, determination and provision of meteorological service

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3.2.1.4 The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) as the country's designated Meteorological Authority, in coordination with the Civil Aviation Authority of the Philippines (CAAP), hereby assumed the mandate to provide or to arrange for the provision of meteorological service for air navigation on its behalf. Details of the meteorological authority so designated shall be included in the aeronautical information publication (AIP).

Note.— Detailed specifications concerning presentation and contents of the aeronautical information publication is provided in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), Appendix 2.

3.2.1.5 The CAAP shall ensure that the designated meteorological authority complies with the requirements of the World Meteorological Organization (WMO) in respect of qualifications, and competencies, education and training of meteorological personnel providing service for air navigation.

Note.— Requirements concerning the qualifications, competencies, education and training of meteorological personnel in aeronautical meteorology are given in the Technical Regulations (WMO-No. 49), Volume I — General Meteorological Standards and Recommended Practices, Part V — Qualifications and Competencies of Personnel Involved in the Provision of Meteorological (Weather and Climate) and Hydrological Services, Part VI — Education and Training of Meteorological Personnel, and Appendix A — Basic Instruction Packages.

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~~3.3 WORLD AREA FORECAST SYSTEM AND METEOROLOGICAL OFFICES~~ GLOBAL SYSTEMS, SUPPORTING CENTRES AND METEOROLOGICAL OFFICES

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3.3.4 Meteorological watch offices

3.3.4.1 The CAAP, having accepted the responsibility for providing air traffic services within a flight information region or a control area, shall arrange with PAGASA for the establishment and/or operation of one or more meteorological watch offices.

Note.— Guidance on the bilateral or multilateral arrangements between CAAP and PAGASA for the provision of MWO services, including for cooperation and delegation, can be found in the Manual of Aeronautical Meteorological Practice (Doc 8896).

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3.3.5 Volcanic Ash Advisory

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3.3.5.2 VAACs shall maintain a 24-hour watch.

3.3.5.3 In case of interruption of the operation of a VAAC, its functions shall be carried out by another VAAC or another meteorological centre, as designated by the VAAC Provider State concerned.

Note.— Back-up procedures to be used in case of interruption of the operation of a VAAC are included in Doc 9766.

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3.3.8 Space weather centres

3.3.8.1 PAGASA, having accepted the responsibility for providing a space weather centre (SWXC), shall arrange for that centre to monitor and provide advisory information on space weather phenomena in its area of responsibility by arranging for that centre to:

a) monitor relevant ground-based, airborne and space-based observations to detect, and predict when possible, the existence of space weather phenomena that have an impact in the following areas:

- 1) high frequency (HF) radio communications;
- 2) communications via satellite;
- 3) GNSS-based navigation and surveillance; and
- 4) radiation exposure at flight levels;

b) issue advisory information regarding the extent, severity and duration of the space weather phenomena that have an impact referred to in a);

c) supply the advisory information referred to in b) to:

- 1) area control centres, flight information centres and aerodrome meteorological offices in its area of responsibility which may be affected;
- 2) other SWXCs; and
- 3) international OPMET databanks, international NOTAM offices and aeronautical fixed service Internet-based services.

3.3.8.2 SWXC shall maintain a 24-hour watch.

3.3.8.3 In case of interruption of the operation of a SWXC, its functions shall be carried out by another SWXC or another centre, as designated by the SWXC Provider State concerned.

Note.— Guidance on the provision of space weather advisory information, including the ICAO-designated provider(s) of space weather advisory information, is provided in the Manual on Space Weather Information in Support of International Air Navigation (Doc 10100).

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3.4.5 Contents of reports

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3.4.5.3 Optional elements included under supplementary information shall be included in METAR and SPECI in accordance with regional air navigation agreement.

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3.4.6.3 Runway visual range

Note.— Guidance on the subject of runway visual range is contained in the Manual of Runway Visual Range Observing and Reporting Practices (Doc 9328).

3.4.6.3.1 Runway visual range shall be assessed on all runways intended for Category II and III instrument approach and landing operations.

3.4.6.3.2 Runway visual range as defined in 3.1 shall be assessed on all runways intended for use during periods of reduced visibility, including:

a) precision approach runways intended for Category I instrument approach and landing operations; and

b) runway used for take-off and having high-intensity edge lights and/or centre line lights.

Note.— Precision approach runways are defined in CAAP MOS Aerodromes Chapter 2 under “Instrument runway”.

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3.7.1 SIGMET information

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3.7.1.3 The period of validity of a SIGMET message shall be not more than 4 hours. In the special case of SIGMET messages for volcanic ash cloud and tropical cyclones, the period of validity shall be extended up to 6 hours.

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3.9 SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

3.9.1 General provisions

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3.9.1.3 Meteorological information supplied to operators and flight crew members shall be up to date and include the following information, as agreed between the meteorological authority and the operators concerned:

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i) meteorological satellite images; ~~and~~

j) ground-based weather radar information; ~~and~~

k) space weather advisory information relevant to the whole route.

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3.9.3 Flight documentation

3.9.3.1 Flight documentation to be made available shall comprise information listed under 3.9.1.3 a) 1) and 6), b), c), e), f) and, if appropriate, g) ~~and k~~). However, flight documentation for flights of two hours' duration or less, after a short stop or turnaround, shall be limited to the information operationally needed, but in all cases the flight documentation shall at least comprise information on 3.9.1.3 b), c), e), f) and, if appropriate, g) ~~and k~~).

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3.9.4 Automated pre-flight information systems for briefing, consultation, flight planning and flight documentation

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3.9.4.2 Automated pre-flight information systems providing for a harmonized, common point of access to meteorological information and aeronautical information services by operators, flight crew members and other aeronautical personnel concerned shall be as agreed between the meteorological authority and the relevant civil aviation authority or the agency to which the authority to provide service has been delegated *in accordance with CAR-ANS Part 15, 15.2.1.1 c).*

Note.— The meteorological and aeronautical information services information concerned is specified in 3.9.1 to 3.9.3 and Appendix 3.8 and in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), 5.5, respectively.

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APPENDICES AND ATTACHMENTS TO CAR-ANS PART 3

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APPENDIX 3.2 TECHNICAL SPECIFICATIONS RELATED TO ~~WORLD AREA FORECAST SYSTEM~~ GLOBAL SYSTEMS, SUPPORTING CENTRES AND METEOROLOGICAL OFFICES

(See CAR-ANS 3.3.)

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3. VOLCANIC ASH ADVISORY CENTRES (VAAC)

3.1 Volcanic ash advisory information

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3.1.2 ~~Until 4 November 2020, Volcanic ash advisory centres shall issue~~ volcanic ash advisory information shall be disseminated in digital IWXXM GML form in addition to the ~~issuance dissemination~~ dissemination of this advisory information in ~~abbreviated plain language~~ in accordance with 3.1.1.

3.1.3 As of 5 November 2020, volcanic ash advisory information shall be disseminated in IWXXM GML form in addition to the dissemination of this advisory information in accordance with 3.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

~~3.1.3~~ 3.1.4 Volcanic ash advisory information, if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML). The volcanic ash advisory information listed in Table A3.2-1, when prepared in graphical format, shall be as specified in Appendix 3.1 and issued using the portable network graphics (PNG) format.

3.1.4 Volcanic ash advisory information if disseminated in digital form shall be accompanied by the appropriate metadata.

Note.— Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (ICAO Doc 10003).

3.1.5 The volcanic ash advisory information listed in Table A3.2-1, when prepared in graphical format, shall be as specified in Appendix 3.1 and issued using the portable network graphics (PNG) format.

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5. TROPICAL CYCLONE ADVISORY CENTRES (TCAC)

5.1 Tropical cyclone advisory information

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5.1.2 The advisory information on tropical cyclones disseminated in abbreviated plain language, using approved ICAO abbreviations and numerical values of self-explanatory nature, shall be in accordance with the template shown in Table A3.2-2.

5.1.3 Until 4 November 2020, Tropical cyclone advisory centres shall issue tropical cyclone advisory information shall be disseminated in digital IWXXM GML form in addition to the issuance of this advisory information in abbreviated plain language in accordance with 5.1.2.

5.1.4 As of 5 November 2020, tropical cyclone advisory centres shall disseminate tropical cyclone advisory information in IWXXM GML form in addition to the dissemination of this advisory information in abbreviated plain language in accordance with 5.1.2.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

5.1.4 5.1.5 Tropical cyclone advisory information, if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML). The tropical cyclone advisory information listed in Table A3.2-2, when prepared in graphical format, shall be as specified in Appendix 3.1 and issued using the PNG format.

5.1.5 Tropical cyclone advisory information, if disseminated in digital form shall be accompanied by the appropriate metadata.

Note.— Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (ICAO Doc 10003).

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6. SPACE WEATHER CENTRES

6.1 Space weather advisory information

6.1.1 Advisory information on space weather shall be issued in abbreviated plain language, using approved ICAO abbreviations and numerical values of self explanatory nature, and shall

be in accordance with the template shown in Table A3.2-3. When no approved ICAO abbreviations are available, English plain language text, to be kept to a minimum, shall be used.

6.1.2 As of 7 November 2019 and until 4 November 2020, space weather advisory information shall be disseminated in IWXXM GML for, in addition to the dissemination of space weather advisory information in abbreviated plain language in accordance with 6.1.1.

6.1.3 As of 5 November 2020, space weather advisory information shall be disseminated in IWXXM GML form, in addition to the dissemination of this advisory information in abbreviated plain language in accordance with 6.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO–No. 306), Volume I.3, Part D — Representations Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

6.1.4 One or more of the following space weather effects shall be included in the space weather advisory information, using their respective abbreviations as indicated below:

- *HF communications (propagation, absorption)* *HF COM*
- *communications via satellite (propagation, absorption)* *SATCOM*
- *GNSS-based navigation and surveillance (degradation)* *GNSS*
- *radiation at flight levels (increased exposure)* *RADIATION*

6.1.5 The following intensities shall be included in space weather advisory information, using their respective abbreviations as indicated below:

- moderate* *MOD*
- severe* *SEV*

Note.— Guidance on the use of these intensities is provided in the Manual on Space Weather Information in Support of International Air Navigation (Doc 10100).

6.1.6 Updated advisory information on space weather phenomena shall be issued as necessary but at least every six hours until such time as the space weather phenomena are no longer detected and/or are no longer expected to have an impact.

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Table A3.2-1. Template for advisory message for volcanic ash

Key: M = inclusion mandatory, part of every message;

O = inclusion optional;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it shall be placed on the subsequent line.

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Note 4.— The numbers 1 to 189 are included only for clarity and they are not part of the advisory message, as shown in the example.

	Element	Detailed content	Template(s)	Examples
1	Identification of the type of message (M)	Type of message	VA ADVISORY	VA ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST or EXER	STATUS: TEST STATUS: EXER
23	Time of origin (M)	Year, month, day and time in UTC of issue	DTG: nnnnnnnn/nnnnZ	DTG: 20080923/0130Z
34	Name of VAAC (M)	Name of VAAC	VAAC: nnnnnnnnnnnn	VAAC: TOKYO
45	Name of volcano (M)	Name and IAVCEI ² number of volcano	VOLCANO: nnnnnnnnnnnnnnnnnnnnnnnn [nnnnnn] or UNKNOWN or UNNAMED	VOLCANO: KARYMSKY 1000-13 VOLCANO: UNNAMED
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Notes. —

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word “TEST” or the abbreviation “EXER” is included, the message should contain information that should not be used operationally or will otherwise end immediately after the word “TEST”. [Applicable 7 November 2019]

2. International Association of Volcanology and Chemistry of the Earth’s Interior (IAVCEI).

23. A straight line between two points drawn on a map in the Mercator projection or a straight line between two points which crosses lines of longitude at a constant angle.

34. Up to 4 selected layers.

45. If ash reported (e.g. AIREP) but not identifiable from satellite data.

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Example Table A3.2-2. Template for advisory message for tropical cyclones

Key: M = inclusion mandatory, part of every message;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it should be placed on the subsequent line.

Note 1.— The ranges and resolutions for the numerical elements included in advisory messages for tropical cyclones are shown in Appendix 3.6, Table A3.6-4.

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC, Doc 8400).

Note 3.— All the elements are mandatory.

Note 43.— Inclusion of a “colon” after each element heading is mandatory.

Note 54.— The numbers 1 to 19 are included only for clarity and they are not part of the advisory message, as shown in the example.

	Element	Detailed content	Template(s)	Examples
1	Identification of the type of message (M)	Type of message	TC ADVISORY	TC ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST or EXER	STATUS: TEST STATUS: EXER
23	Time of origin (M)	Year, month, day and time in UTC of issue	DTG: nnnnnnnn/nnnnZ	DTG: 20040925/19600Z
34	Name of TCAC (M)	Name of TCAC	TCAC: nnnn or nnnnnnnnnn	TCAC: YUFO ²

				TCAC: MIAMI
45	Name of tropical cyclone (M)	Name of tropical cyclone or "NN" for unnamed tropical cyclone	TC: nnnnnnnnnnnn or NN	TC: GLORIA
56	Advisory number (M)	Year in full and message number (separate sequence starting with "01" for each cyclone)	ADVISORY NR: nnnn/[n][n]nn	ADVISORY NR: 2004/1304
67	Observed position of the centre (M)	Day and time (in UTC) and position of the centre of the tropical cyclone (in degrees and minutes)	OBS PSN: nn/nnnnZ Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	OBS PSN: 25/1800Z N2706 W07306
8	Observed CB cloud ³ (C)	Location of CB cloud (referring to latitude and longitude (in degrees and minutes)) and vertical extent (flight level)	CB: WI nnnKM (or nnnNM) OF TC CENTRE or W14 Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – TOP [ABV or BLW] FLnnn	CB: WI 250NM OF TC CENTRE TOP FL500
79	Direction and speed of movement (M)	Direction and speed of movement given in sixteen compass points and km/h (or kt), respectively, or moving slowly (< 6 km/h (3 kt)) or stationary (< 2 km/h (1 kt))	MOV: N nnKMH (or KT) or NNE nnKMH (or KT) or NE nnKMH (or KT) or ENE nnKMH (or KT) or E nnKMH (or KT) or ESE nnKMH (or KT) or SE nnKMH (or KT) or SSE nnKMH (or KT) or S nnKMH (or KT) or SSW nnKMH (or KT) or SW nnKMH (or KT) or WSW nnKMH (or KT) or W nnKMH (or KT) or WNW nnKMH (or KT) or NW nnKMH (or KT) or NNW nnKMH (or KT) or SLW or STNR	MOV: NW 20KMH
810	Central pressure (M)	Central pressure (in hPa)	C: nnnHPA	C: 965HPA
911	Maximum surface wind (M)	Maximum surface wind near the centre (mean over 10 minutes, in m/s (or kt))	MAX WIND: nn[n]MPS (or nn[n]KT)	MAX WIND: 22MPS
4012	Forecast of centre position (+6 HR) (M)	Day and time (in UTC) (6 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN nn/nnnnZ +6 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 25/2200Z +6 HR: N2748 W07350
413	Forecast of maximum surface wind (+6 HR) (M)	Forecast of maximum surface wind (6 hours after the "DTG" given in Item 2)	FCST MAX WIND +6 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +6 HR: 22MPS
4214	Forecast of centre position (+12 HR) (M)	Day and time (in UTC) (12 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of	FCST PSN nn/nnnnZ +12 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 26/0400Z +12 HR: N2830 W07430

		the centre of the tropical cyclone		
4315	Forecast of maximum surface wind (+12 HR) (M)	Forecast of maximum surface wind (12 hours after the "DTG" given in Item 2)	FCST MAX WIND +12 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +12 HR: 22MPS
4416	Forecast of centre position (+18 HR) (M)	Day and time (in UTC) (18 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN +18 HR: nn/nnnnZ Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN +18 HR: 26/1000Z N2852 W07500
4517	Forecast of maximum surface wind (+18 HR) (M)	Forecast of maximum surface wind (18 hours after the "DTG" given in Item 2)	FCST MAX WIND +18 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +18 HR: 21MPS
4618	Forecast of centre position (+24 HR) (M)	Day and time (in UTC) (24 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN +24 HR: nn/nnnnZ Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN +24 HR: 26/1600Z N2912 W07530
4719	Forecast of maximum surface wind (+24 HR) (M)	Forecast of maximum surface wind (24 hours after the "DTG" given in Item 2)	FCST MAX WIND +24 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +24 HR: 20MPS
4820	Remarks (M)	Remarks, as necessary	RMK: Free text up to 256 characters or NIL	RMK: NIL
4921	Expected time of issuance of next advisory (M)	Expected year, month, day and time (in UTC) of issuance of next advisory	NXT MSG: [BFR] nnnnnnnn/nnnnZ or NO MSG EXP	NXT MSG: 20040925/2000Z

Note.—

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word "TEST" or the abbreviation "EXER" is included, the message may contain information that should not be used operationally or will otherwise end immediately after the word "TEST". [Applicable 7 November 2019]

2. Fictitious location.

3. In the case of CB clouds associated with a tropical cyclone covering more than one area within the area of responsibility, this element can be repeated, as necessary.

4. The number of coordinates should be kept to a minimum and should not normally exceed seven.

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Example A3.2-32. Advisory message for tropical cyclones

TC ADVISORY	
DTG:	20040925/19600Z
TCAC:	YUFO
TC:	GLORIA
ADVISORY NR:	2004/1304
OBS PSN:	25/1800Z N2706 W07306
CB:	WI 250NM OF TC CENTRE TOP FL500
C:	965HPA
MOV:	NW 20KMH
MAX WIND:	22MPS
FCST PSN +6 HR:	25/2200Z N2748 W07350

FCST MAX WIND +6 HR:	22MPS
FCST PSN +12 HR:	26/0400Z N2830 W07430
FCST MAX WIND +12 HR:	22MPS
FCST PSN +18 HR:	26/1000Z N2852 W07500
FCST MAX WIND +18 HR:	21MPS
FCST PSN +24 HR:	26/1600Z N2912 W07530
FCST MAX WIND +24 HR:	20MPS
RMK:	NIL
NXT MSG:	20040925/2000Z

*Fictitious location

Table A3.2-3. Template for advisory message for space weather information

Key: M = inclusion mandatory, part of every message;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it should be placed on the subsequent line.

Note 1.— The explanations for the abbreviations can be found in the PANS-ABC (Doc 8400).

Note 2.— The spatial resolutions are shown in Attachment E.

Note 3.— Inclusion of a colon after each element heading is mandatory.

Note 4.— The numbers 1 to 14 are included only for clarity and are not part of the advisory message, as shown in the examples.

	Element	Detailed content	Template(s)	Examples
1	Identification of the type of message (M)	Type of message	SWX ADVISORY	SWX ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST or EXER	STATUS: TEST EXER
3	Time of origin (M)	Year, month, day, time in UTC	DTG: nnnnnnnn/nnnnZ	DTG: 20161108/0100Z
4	Name of SWXC (M)	Name of SWXC	SWXC: Nnnnnnnnnnn	SWXC: DONLON
5	Advisory number (M)	Advisory number: year in full and unique message number	ADVISORY NR: nnnn/[n][n][n]	ADVISORY NR: 2016/1
6	Number of advisory being replaced (C)	Number of the previously issued advisory being replaced	NR RPLC: nnnn/[n][n][n]	NR RPLC: 2016/1
7	Space weather effect and intensity (M)	Effect and intensity of the space weather phenomena	SWX EFFECT: HF COM MOD or SEV or SATCOM MOD or SEV or GNSS MOD or SEV or HF COM MOD or SEV AND GNSS MOD or SEV or RADIATIONMOD or SEV	SWX EFFECT: HF COM MOD GNSS SEV HF COM MOD AND GNSS MOD RADIATION MOD SATCOM SEV

8	Observed or expected extent of space weather phenomena (M)	Time: day, time in UTC; Observed (or forecast if phenomena have yet to occur); horizontal extent ² (latitude bands and longitude in degrees) and/or altitude of space weather phenomena	OBS or FCST SWX: nn/nnnnZ DAYLIGHT SIDE or HNH and/or MNH and/or EQN and/or EQS and/or MSH and/or HSH and Wnnn(nn) or Ennn(nn) – Wnnn(nn) or Ennn(nn) and/or ABV FLnnn or FLnnn–nnn or Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or NO SWX EXP	OBS SWX: 08/0100Z DAYLIGHT SIDE 08/0100Z HNH HSH E18000-W18000 08/0100Z HNH HSH W18000 — W09000 ABV FL350
9	Forecast of the phenomena (+ 6 HR) (M)	Day, time (in UTC) (6 hours from time given in item 8, rounded to the next full hour); Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +6 HR: nn/nnnnZ DAYLIGHT SIDE or HNH and/or MNH and/or EQN and/or EQS and/or MSH and/or HSH and Wnnn(nn) or Ennn(nn) – Wnnn(nn) or Ennn(nn) and/or ABV FLnnn or FLnnn–nnn or Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or NO SWX EXP or NOT AVBL	FCST SWX +6 HR: 08/0700Z DAYLIGHT SIDE 08/0700Z HNH HSH W18000 — W09000 ABV FL350 08/0700Z HNH HSH E18000-W18000
10	Forecast of the phenomena (+12 HR) (M)	Day, time (in UTC) (12 hours from time given in item 8, rounded to the next full hour). Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +12 HR: nn/nnnnZ DAYLIGHT SIDE or HNH and/or MNH and/or EQN and/or EQS and/or MSH and/or HSH and Wnnn(nn) or Ennn(nn) – Wnnn(nn) or Ennn(nn) and/or ABV FLnnn or FLnnn–nnn or Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or NO SWX EXP or NOT AVBL	FCST SWX +12 HR: 08/1300Z DAYLIGHT SIDE 08/1300Z HNH HSH W18000 — W09000 ABV FL350 08/1300Z HNH HSH E18000-W18000
11	Forecast of the phenomena (+ 18 HR) (M)	Day, time (in UTC) (18 hours from time given in item 8, rounded to the next full hour). Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +18 HR: nn/nnnnZ DAYLIGHT SIDE or HNH and/or MNH and/or EQN and/or EQS and/or MSH and/or HSH and Wnnn(nn) or Ennn(nn) – Wnnn(nn) or Ennn(nn) and/or ABV FLnnn or FLnnn–nnn or Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]]	FCST SWX +18 HR: 08/1900Z DAYLIGHT SIDE 08/1900Z HNH HSH W18000 — W09000 ABV FL350 08/1900Z HNH HSH E18000-W18000

			or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] or NO SWX EXP or NOT AVBL	
12	Forecast of the phenomena (+ 24 HR) (M)	Day, time (in UTC) (24 hours from time given in item 8, rounded to the next full hour). Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST: nn/nnnnZ SWX: DAYLIGHT SIDE or +24: HNH and/or MNH and/or EQN HR: and/or EQS and/or MSH and/or HSH and Wnnn[nn] or Ennn[nn] – Wnnn[nn] or Ennn[nn] and/or ABV FLnnn or FLnnn– nnn or Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] or NO SWX EXP or NOT AVBL	FCST: 09/0100Z DAYLIGHT SWX +24: SIDE HR: 09/0100Z HNH HSH W18000 – W09000 ABV FL 350 09/0100Z HNH HSH E18000-W18000
13	Remarks (M)	Remarks, as necessary	RMK: Free text up to 256 characters or NIL	RMK: SWX EVENT HAS CEASED WWW.SPACEWEATH ERPROVIDER.COM NIL
14	Next advisory (M)	Year, month, day and time in UTC	NXT ADVISORY: nnnnnnnn/nnnnZ or NO FURTHER ADVISORIES or WILL BE ISSUED BY	NXT ADVISORY: 20161108/0700Z NO FURTHER ADVISORIES

Notes.—

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word “TEST” or the abbreviation “EXER” is included, the message must contain information that should not be used operationally or will otherwise end immediately after the word “TEST”. [Applicable 7 November 2019]

2. Fictitious location.

3. One or more latitude ranges should be included in the space weather advisory information for “GNSS” and “RADIATION”.

Example A3.2-3. Space weather advisory message (GNSS and HFCOM effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/2
NR RPLC :	2016/1
SWX EFFECT:	HF COM MOD AND GNSS MOD
OBS SWX:	08/0100Z HNH HSH E18000 – W18000
FCST SWX +6 HR:	08/0700Z HNH HSH E18000 – W18000
FCST SWX +12 HR:	08/1300Z HNH HSH E18000 – W18000
FCST SWX +18 HR:	08/1900Z HNH HSH E18000 – W18000

FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	LOW LVL GEOMAGNETIC STORMING CAUSING INCREASED AURORAL ACT AND SUBSEQUENT MOD DEGRADATION OF GNSS AND HF COM AVBL IN THE AURORAL ZONE. THIS STORMING EXP TO SUBSIDE IN THE FCST PERIOD. SEE WWW.SPACEWEATHERPROVIDER.WEB
NXT ADVISORY:	NO FURTHER ADVISORIES
* Fictitious location	

Example A3.2-4. Space weather advisory message (RADIATION effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/2
NR RPLC:	2016/1
SWX EFFECT:	RADIATION MOD
FCST SWX:	08/0100Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +6 HR:	08/0700Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +12 HR:	08/1300Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +18 HR:	08/1900Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	RADIATION LVL EXCEEDED 100 PCT OF BACKGROUND LVL AT FL350 AND ABV. THE CURRENT EVENT HAS PEAKED AND LVL SLW RTN TO BACKGROUND LVL. SEE WWW.SPACEWEATHERPROVIDER.WEB
NXT ADVISORY:	NO FURTHER ADVISORIES
* Fictitious location	

Example A3.2-5: Space weather advisory message (HF COM effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/1
SWX EFFECT:	HF COM SEV
OBS SWX:	08/0100Z DAYLIGHT SIDE
FCST SWX +6 HR:	08/0700Z DAYLIGHT SIDE
FCST SWX +12 HR:	08/1300Z DAYLIGHT SIDE
FCST SWX +18 HR:	08/1900Z DAYLIGHT SIDE
FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	PERIODIC HF COM ABSORPTION AND LIKELY TO CONT IN THE NEAR TERM. CMPL AND PERIODIC LOSS OF HF ON THE SUNLIT SIDE OF THE EARTH EXP. CONT HF COM DEGRADATION LIKELY OVER THE NXT 7 DAYS. SEE WWW.SPACEWEATHERPROVIDER.WEB

APPENDIX 3.3 TECHNICAL SPECIFICATIONS RELATED TO METEOROLOGICAL OBSERVATIONS AND REPORTS

(See CAR-ANS 3.4.)

...

2. GENERAL CRITERIA RELATED TO METEOROLOGICAL REPORTS

...

2.1 Format of meteorological reports

...

2.1.3 Until 4 November 2020, METAR and SPECI shall be disseminated, in digital IWXXM GML form, in addition to the dissemination of the METAR and SPECI in accordance with 3.2.1.2.

Note.— The BUFR code form is contained in WMO Publication No. 306, Manual on Codes, Volume I.2, Part B — Binary Codes.

2.1.4 As of 5 November 2020, METAR and SPECI shall be disseminated in IWXXM GML form in addition to the dissemination of the METAR and SPECI in accordance with 2.1.2.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

~~2.1.4 METAR and SPECI if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML).~~

~~2.1.5 METAR and SPECI if disseminated in digital form shall be accompanied by the appropriate metadata.~~

Note.— Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

...

APPENDIX 3.5. TECHNICAL SPECIFICATIONS RELATED TO FORECASTS

(See CAR-ANS 3.6.)

1. CRITERIA RELATED TO TAF

1.1 TAF format

...

1.1.2 Until 4 November 2020, TAF shall be disseminated, in digital IWXXM GML form, in addition to the dissemination of the TAF in accordance with 1.1.1.

1.1.3 As of 5 November 2020, TAF shall be disseminated in IWXXM GML form in addition to the dissemination of the TAF in accordance with 1.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

~~1.1.3 TAF if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML).~~

~~1.1.4 TAF if disseminated in digital form shall be accompanied by the appropriate metadata.~~

Note.— Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

...

APPENDIX 3.6. TECHNICAL SPECIFICATIONS RELATED TO SIGMET AND AIRMET INFORMATION, AERODROME WARNINGS AND WIND SHEAR WARNINGS AND ALERTS

(See CAR-ANS 3.7.)

Note.— Data type designators to be used in abbreviated headings for SIGMET, AIRMET, tropical cyclone and volcanic ash advisory messages are given in WMO Publication No. 386, Manual on the Global Telecommunication System.

1. SPECIFICATIONS RELATED TO SIGMET INFORMATION

1.1 Format of SIGMET messages

...

~~1.1.6 Until 4 November 2020, Meteorological watch offices in a position to do so shall issue SIGMET information shall be disseminated in digital IWXXM GML form, in addition to the issuance dissemination of this SIGMET information in abbreviated plain language in accordance with 1.1.1.~~

~~1.1.7 As of 5 November 2020, SIGMET information shall be disseminated in IWXXM GML form in addition to the dissemination of SIGMET information in accordance with 1.1.1.~~

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (Doc 10003).

~~1.1.7 1.1.8 SIGMET if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML). SIGMET, when issued in graphical format, shall be as specified in Appendix 3.1, including the use of applicable symbols and/or abbreviations.~~

~~1.1.9 SIGMET, when issued in graphical format, shall be as specified in Appendix 3.1.~~

...

2. SPECIFICATIONS RELATED TO AIRMET INFORMATION

2.1 Format of AIRMET messages

...

2.1.6 Until 4 November 2020, Meteorological watch offices shall issue AIRMET information shall be disseminated in digital IWXXM GML form, in addition to the issuance dissemination of this AIRMET information abbreviated plain language in accordance with 2.1.1.

2.1.7 As of 5 November 2020, AIRMET information shall be disseminated in IWXXM GML form in addition to the dissemination of AIRMET information in accordance with 2.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

~~2.1.7 AIRMET if disseminated in digital form shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible markup language (XML)/geography markup language (GML).~~

~~2.1.8 AIRMET if disseminated in digital form shall be accompanied by the appropriate metadata.~~

~~*Note.— Guidance on the information exchange model, XML/GML and the metadata profile is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (ICAO Doc 10003).*~~

...

Table A3.6-1. Template for SIGMET and AIRMET messages and special air-reports (uplink)

Element	Detailed content	SIGMET template	AIRMET template	SIGMET message examples	AIRMET message examples
Location indicator of FIR/CTA (M) ¹	ICAO location indicator of the ATS unit serving the FIR or CTA to which the SIGMET/AIRMET refers	nnnn		YUCC ² YUDD ²	
Identification (M)	Message identification and sequence number ³	SIGMET [n][n]n	AIRMET [n][n]n	SIGMET 1 SIGMET 01 SIGMET A01	AIRMET 9 AIRMET 19 AIRMET B19
Validity period (M)	Day-time groups indicating the period of validity in UTC	VALID nnnnnn/nnnnnn		VALID 010000/010400 VALID 221215/221600 VALID 101520/101800 VALID 251600/252200 VALID 152000/160000 VALID 192300/200300	
Location indicator of MWO (M)	Location indicator of MWO originating the message with a separating hyphen	nnnn-		YUDO ⁻² YUSO ⁻²	
Name of the FIR/CTA (M)	Location indicator and name of the FIR/CTA ⁴ for which the SIGMET/AIRMET is issued	nnnn nnnnnnnnnn FIR/[UIR] or UIR or FIR/UIR or	nnnn nnnnnnnnnn FIR/[n]	YUCC AMSWELL FIR ² YUDD SHANLON ² FIR/UIR ² UIR FIR/UIR	YUCC AMSWELL FIR/2 ² YUDD SHANLON FIR ²

		nnnn nnnnnnnnnn CTA		YUDD SHANLON CTA ²	
IF THE SIGMET OR AIRMET MESSAGE IS TO BE CANCELLED, SEE DETAILS AT THE END OF THE TEMPLATE.					
Status indicator (C) ⁵	Indicator of test or exercise	TEST <i>or</i> EXER	TEST <i>or</i> EXER	TEST EXER	TEST EXER
Phenomenon (M) ⁵⁶	Description of phenomenon causing the issuance of SIGMET/AIRMET	OBSC ⁶⁷ TS[GR ⁷⁸] EMBD ⁸⁹ TS[GR ⁷⁸] FRQ ⁹¹⁰ TS[GR ⁷⁸] SQL ¹⁰¹¹ TS[GR ⁷⁸] TC nnnnnnnnnn PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] CB <i>or</i> TC NN ¹¹² PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] CB SEV TURB ¹²¹³ SEV ICE ¹³¹⁴ SEV ICE (FZRA) ¹³¹⁴ SEV MTW ¹⁴¹⁵ HVY DS HVY SS [VA ERUPTION] [MT nnnnnnnnnn] [PSN Nnn[nn] <i>or</i> Snn[nn] Ennn[nn] <i>or</i> Wnnn[nn]] VA CLD RDOACT CLD	SFC WIND nnn/nn[n]MPS (<i>or</i>) SFC WIND nnn/nn[n]KT) SFC VIS [n][n]nnM (nn) ¹⁵¹⁶ ISOL ¹⁶¹⁷ TS[GR ⁷⁸] OCNL ¹⁷¹⁸ TS[GR ⁷⁸] MT OBSC BKN CLD nnn/[ABV] [n]nnnM (<i>or</i> BKN CLD [n]nnn/[ABV] [n]nnnnFT) <i>or</i> BKN CLD SFC/[ABV] [n]nnnM (<i>or</i> BKN CLD SFC/[ABV][n]nnnnFT) OVC CLD nnn/[ABV] [n]nnnM (<i>or</i> OVC CLD [n]nnn/[ABV] [n]nnnnFT) <i>or</i> OVC CLD SFC/[ABV] [n]nnnM (<i>or</i> OVC CLD SFC/[ABV][n]nnnnFT) ISOL ¹⁶¹⁷ CB ¹⁸¹⁹ OCNL ¹⁷¹⁸ CB ¹⁸¹⁹ FRQ ⁹¹⁰ CB ¹⁸¹⁹ ISOL ¹⁶¹⁷ TCU ¹⁸¹⁹ OCNL ¹⁷¹⁸ TCU ¹⁸¹⁹ FRQ ⁹¹⁰ TCU ¹⁸¹⁹ MOD TURB ¹²¹³ MOD ICE ¹³¹⁴ MOD MTW ¹⁴¹⁵	OBSC TS OBSC TSGR EMBD TS EMBD TSGR FRQ TS FRQ TSGR SQL TS SQL TSGR TC GLORIA PSN N10 W060 CB TC NN PSN S2030 E06030 CB SEV TURB SEV ICE SEV ICE (FZRA) SEV MTW HVY DS HVY SS VA ERUPTION MT ASHVAL ² PSN S15 E073 VA CLD RDOACT CLD	SFC WIND 040/40MPS SFC WIND 310/20KT SFC VIS 1500M (BR) ISOL TS ISOL TSGR OCNL TS OCNL TSGR MT OBSC BKN CLD 120/900M BKN CLD 400/3000FT BKN CLD 1000/5000FT BKN CLD SFC/3000M BKN CLD SFC/ABV 10000FT OVC CLD 270/ABV3000M OVC CLD 900/ABV10000FT OVC CLD 1000/5000FT OVC CLD SFC/3000M OVC CLD SFC/ABV 10000FT ISOL CB OCNL CB FRQ CB ISOL TCU OCNL TCU FRQ TCU MOD TURB MOD ICE MOD MTW
<i>Element</i>	<i>Detailed content</i>	<i>SIGMET template</i>	<i>AIRMET template</i>	<i>SIGMET message examples</i>	<i>AIRMET message examples</i>
Observed or forecast phenomenon (M)	Indication whether the information is observed and expected to continue, <i>or</i> forecast	OBS [AT nnnnZ] <i>or</i> FCST [AT nnnnZ]		OBS OBS AT 1210Z FCST FCST AT 1815Z	
Location (C) ¹⁹²⁰	Location (referring to latitude and longitude (in degrees and minutes))	Nnn[nn] Wnnn[nn] <i>or</i> Nnn[nn] Ennn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Snn[nn] Ennn[nn] <i>or</i> N OF Nnn[nn] <i>or</i> S OF Nnn[nn] <i>or</i> N OF Snn[nn] <i>or</i> S OF Snn[nn] [AND] W OF Wnnn[nn] <i>or</i> E OF Wnnn[nn] <i>or</i> W OF Ennn[nn] <i>or</i> E OF Ennn[nn]		N2020 W07005 N48 E010 S60 W160 S0530 E16530 N OF N50 S OF N5430 N OF S10 S OF S4530 W OF W155	

		<p><i>or</i> N OF Nnn[nn] <i>or</i> N OF Snn[nn] AND S OF Nnn[nn] <i>or</i> S OF Snn[nn]</p> <p><i>or</i> W OF Wnnn[nn] <i>or</i> W OF Ennn[nn] AND E OF Wnnn[nn] <i>or</i> E OF Ennn[nn]</p> <p><i>or</i> N OF LINE²⁰²¹ <i>or</i> NE OF LINE²⁰²¹ <i>or</i> E OF LINE²⁰²¹ <i>or</i> SE OF LINE²⁰²¹ <i>or</i> S OF LINE²⁰²¹ <i>or</i> SW OF LINE²⁰²¹ <i>or</i> W OF LINE²⁰²¹ <i>or</i> NW OF LINE²⁰²¹ Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [AND N OF LINE²⁰²¹ <i>or</i> NE OF LINE²⁰²¹ <i>or</i> E OF LINE²⁰²¹ <i>or</i> SE OF LINE²⁰²¹ <i>or</i> S OF LINE²⁰²¹ <i>or</i> SW OF LINE²⁰²¹ <i>or</i> W OF LINE²⁰²¹ <i>or</i> NW OF LINE²⁰²¹ Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]]]</p> <p><i>or</i> WI²⁰²¹, ²⁴²² Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]]</p> <p><i>or</i> APRX nnKM WID LINE²⁰²¹ BTN (<i>or</i> nnNM WID LINE²⁰²¹ BTN) Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]]</p> <p><i>or</i> ENTIRE FIR/[UIR]</p> <p><i>or</i> ENTIRE FIR</p> <p><i>or</i> ENTIRE FIR/UIR</p> <p><i>or</i> ENTIRE CTA</p> <p><i>or</i>²²²³ WI nnnKM (<i>or</i> nnnNM) OF TC CENTRE</p> <p><i>Or</i>²⁴ WI nnKM (<i>or</i> nnNM) OF Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]</p>	<p>E OF W45 W OF E15540 E OF E09015</p> <p>N OF N1515 AND W OF E13530 S OF N45 AND N OF N40</p> <p>N OF LINE S2520 W11510 – S2520 W12010 SW OF LINE N50 W005 – N60 W020 SW OF LINE N50 W020 – N45 E010 AND NE OF LINE N45 W020 – N40 E010</p> <p>WI N6030 E02550 – N6055 E02500 – N6050 E02630 – N6030 E02550</p> <p>APRX 50KM WID LINE BTN N64 W017 – N60 W010 – N57 E010</p> <p>ENTIRE FIR ENTIRE UIR ENTIRE FIR/UIR</p> <p>ENTIRE CTA</p> <p>WI 400KM OF TC CENTRE WI 250NM OF TC CENTRE WI 30KM OF N6030 E02550†</p>
Level (C) ^{4920, 24}	Flight level <i>or</i> altitude	<p>[SFC]/FLnnn <i>or</i> [SFC]/nnnnM (<i>or</i> [SFC]/[n]nnnnFT) <i>or</i> FLnnn/nnn <i>or</i> TOP FLnnn <i>or</i> [TOP] ABV FLnnn <i>or</i> (<i>or</i> [TOP] ABV [n]nnnnFT) [nnnn]/nnnnM (<i>or</i> [[n]nnnn]/[n]nnnnFT) <i>or</i> [nnnnM]/FLnnn (<i>or</i> [[n]nnnnFT]/FLnnn)</p> <p><i>or</i> ²²²³</p>	<p>FL180 SFC/FL070 SFC/3000M SFC/10000FT FL050/080 TOP FL390 ABV FL250 TOP ABV FL100 ABV 7000FT TOP ABV 9000FT</p>

		TOP [ABV <i>or</i> BLW] FLnnn		TOP ABV 10000FT 3000M 2000/3000M 8000FT 6000/12000FT 2000M/FL150 10000FT/FL250 TOP FL500 TOP ABV FL500 TOP BLW FL450	
Movement or expected movement (C) ^{+920, 25}	Movement <i>or</i> expected movement (direction and speed) with reference to one of the sixteen points of compass, <i>or</i> stationary	MOV N [nnKMH] <i>or</i> MOV NNE [nnKMH] <i>or</i> MOV NE [nnKMH] <i>or</i> MOV ENE [nnKMH] <i>or</i> MOV E [nnKMH] <i>or</i> MOV ESE [nnKMH] <i>or</i> MOV SE [nnKMH] <i>or</i> MOV SSE [nnKMH] <i>or</i> MOV S [nnKMH] <i>or</i> MOV SSW [nnKMH] <i>or</i> MOV SW [nnKMH] <i>or</i> MOV WSW [nnKMH] <i>or</i> MOV W [nnKMH] <i>or</i> MOV WNW [nnKMH] <i>or</i> MOV NW [nnKMH] <i>or</i> MOV NNW [nnKMH] (<i>or</i> MOV N [nnKT] <i>or</i> MOV NNE [nnKT] <i>or</i> MOV NE [nnKT] <i>or</i> MOV ENE [nnKT] <i>or</i> MOV E [nnKT] <i>or</i> MOV ESE [nnKT] <i>or</i> MOV SE [nnKT] <i>or</i> MOV SSE [nnKT] <i>or</i> MOV S [nnKT] <i>or</i> MOV SSW [nnKT] <i>or</i> MOV SW [nnKT] <i>or</i> MOV WSW [nnKT] <i>or</i> MOV W [nnKT] <i>or</i> MOV WNW [nnKT] <i>or</i> MOV NW [nnKT] <i>or</i> MOV NNW [nnKT]) <i>or</i> STNR		MOV SE MOV NNW MOV E 40KMH MOV E 20KT MOV WSW 20KT STNR	
Changes in intensity (C) ⁺⁹²⁰	Expected changes in intensity	INTSF <i>or</i> WKN <i>or</i> NC		INTSF WKN NC	
Forecast time (C) ²⁴	Indication of the forecast time of phenomenon	FCST AT nnnnZ	—	FCST AT 2200Z	—
TC forecast position (C) ²³	Forecast position of TC centre at the end of the validity period of the SIGMET message	TC CENTRE PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]	—	TC CENTRE PSN N1030 E1600015	—
Forecast position (C) ^{+920, 25, 26}	Forecast position of phenomenon at the end of the validity period of the SIGMET message	Nnn[nn] Wnnn[nn] <i>or</i> Nnn[nn] Ennn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Snn[nn] Ennn[nn] <i>or</i> N OF Nnn[nn] <i>or</i> S OF Nnn[nn] <i>or</i> N OF Snn[nn] <i>or</i> S OF Snn[nn] [AND] W OF Wnnn[nn] <i>or</i> E OF Wnnn[nn] <i>or</i> W OF Ennn[nn] <i>or</i> E OF Ennn[nn] <i>or</i> N OF Nnn[nn] <i>or</i> N OF Snn[nn] AND S OF Nnn[nn] <i>or</i> S OF Snn[nn] <i>or</i> W OF Wnnn[nn] <i>or</i> W OF Wnnn[nn]	—	N30 W170 N OF N30 S OF S50 AND W OF E170 S OF N46 AND N OF N39 NE OF LINE N35 W020 – N45 W040 SW OF LINE N48 W020 – N43 E010 AND NE OF LINE N43 W020 – N38 E010 W1 N20 W090 – N05 W090 – N10 W100 – N20 W100 – N20 W090 APRX 50KM WID LINE BTN N64 W017 – N57	—

		<p>W OF Ennn[nn] AND E OF Wnnn[nn] <i>or</i> E OF Ennn[nn]</p> <p><i>or</i></p> <p>N OF LINE²⁰²¹ <i>or</i> NE OF LINE²⁰²¹</p> <p><i>or</i></p> <p>E OF LINE²⁰²¹ <i>or</i> SE OF LINE²⁰²¹ <i>or</i> S OF LINE²⁰²¹ <i>or</i> SW OF LINE²⁰²¹</p> <p><i>or</i></p> <p>W OF LINE²⁰²¹ <i>or</i> NW OF LINE²⁰²¹</p> <p>Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [AND N OF LINE²⁰²¹ <i>or</i> NE OF LINE²⁰²¹</p> <p><i>or</i></p> <p>E OF LINE²⁰²¹ <i>or</i> SE OF LINE²⁰²¹ <i>or</i> S OF LINE²⁰²¹ <i>or</i> SW OF LINE²⁰²¹</p> <p><i>or</i></p> <p>W OF LINE²⁰²¹ <i>or</i> NW OF LINE²⁰²¹</p> <p>Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]]]</p> <p><i>or</i></p> <p>WI^{2021,2422}Nnn[nn]</p> <p><i>or</i></p> <p>Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]</p> <p><i>or</i></p> <p>APRX nnKM WID LINE²⁰²¹ BTN (nnNM WID LINE²⁰²¹ BTN)</p> <p>Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i></p>	<p>W005 – N55 E010 – N55 E030</p> <p>ENTIRE FIR ENTIRE UIR ENTIRE FIR/UIR</p> <p>ENTIRE CTA</p> <p>TC CENTRE PSN N2740 W07345</p> <p>NO VA EXP</p> <p>WI 30KM OF N6030 E02550 †</p>	
--	--	---	---	--

		Snn[nn] Wnnn[nn] or Ennn[nn] [- Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or ENTIRE FIR{/UIR} or ENTIRE UIR or ENTIRE FIR/UIR or ENTIRE CTA or ²² TC CENTRE PSN Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] or ²⁶ NO VA EXP or ²⁴ WI nnKM (or nnNM) OF Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]			
Repetition of elements (C) ²⁸	Repetition of elements included in a SIGMET message for volcanic ash cloud or tropical cyclone	[AND] ²⁸	—	AND	—
OR					
Cancellation of SIGMET/AIRMET (C) ²⁹	Cancellation of SIGMET/AIRMET referring to its identification	CNL SIGMET [n][n]n nnnnnn/nnnnnn or ²⁶ CNL SIGMET [n][n]n nnnnnn/nnnnnn VA MOV TO nnnn FIR	CNL AIRMET [n][n]n nnnnnn/nnnnnn	CNL SIGMET 2 101200/101600 CNL SIGMET A13 251030/251430 VA MOV TO YUDO FIR ²	CNL AIRMET 05 151520/151800

Notes.—

~~1. No wind and temperature to be uplinked to other aircraft in flight in accordance with 3.2.~~

~~21. See 4.1.~~

~~32. Fictitious location.~~

~~43. In accordance with 1.1.3 and 2.1.2.~~

~~5. See 3.1.~~

~~64. See 2.1.3.~~

5. Used only when the message issued to indicate that a test or an exercise is taking place. When the word "TEST" or the abbreviation "EXER" is included, the message may contain information that should not be used operationally or will otherwise end immediately after the word "TEST". [Applicable 7 November 2019]

~~76. In accordance with 1.1.4 and 2.1.4.~~

~~87. In accordance with 4.2.1 a).~~

~~98. In accordance with 4.2.4.~~

~~109. In accordance with 4.2.1 b).~~

~~110. In accordance with 4.2.2.~~

~~121. In accordance with 4.2.3.~~

- ~~12~~. Used for unnamed tropical cyclones.
- ~~13~~. In accordance with 4.2.5 and 4.2.6.
- ~~14~~. In accordance with 4.2.7.
- ~~15~~. In accordance with 4.2.8.
- ~~16~~. In accordance with 2.1.4.
- ~~17~~. In accordance with 4.2.1 c).
- ~~18~~. In accordance with 4.2.1 d).
- ~~19~~. The use of cumulonimbus, CB, and towering cumulus, TCU, is restricted to AIRMETs in accordance with 2.1.4.
- ~~20~~. In the case of ~~the same phenomenon~~ volcanic ash cloud or cumulonimbus clouds associated with a tropical cyclone covering more than one area within the FIR, these elements can be repeated, as necessary.
- ~~21~~. Only for SIGMET messages for volcanic ash cloud and tropical cyclones. A straight line is to be used between two points drawn on a map in the Mercator projection or between two points which crosses lines of longitude at a constant angle.
22. The number of coordinates should be kept to a minimum and should not normally exceed seven.
23. Only for SIGMET messages for tropical cyclones.
24. ~~Only for SIGMET messages for volcanic ash.~~ Only for SIGMET messages for radioactive cloud. When detailed information on the release is not available, a radius of up to 30 kilometres (or 16 nautical miles) from the source may be applied; and a vertical extent from surface (SFC) to the upper limit of the flight information region/upper flight information region (FIR/UIR) or control area (CTA) is to be applied. [Applicable 7 November 2019]
25. ~~A straight line between two points drawn on a map in the Mercator projection or a straight line between two points which crosses lines of longitude at a constant angle. The elements "forecast time" and "forecast position" are not to be used in conjunction with the element "movement or expected movement".~~
26. ~~To be used for two volcanic ash clouds or two centres of tropical cyclones simultaneously affecting the FIR concerned. The levels of the phenomena remain fixed throughout the forecast period.~~
27. ~~The number of coordinates shall be kept to a minimum and shall not normally exceed seven. Only for SIGMET messages for volcanic ash.~~
28. ~~Optionally can be used in addition to Movement or Expected Movement. To be used for two volcanic ash clouds or two centres of tropical cyclones simultaneously affecting the FIR concerned.~~
29. ~~To be used for hazardous phenomena other than volcanic ash cloud and tropical cyclones.~~
- ~~29~~. End of the message (as the SIGMET/AIRMET message is being cancelled).
31. ~~The levels of the phenomena remain fixed throughout the forecast period~~

APPENDIX 3.8. TECHNICAL SPECIFICATIONS RELATED TO SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

(See CAR-ANS 3.9.)

...

4. SPECIFICATIONS RELATED TO FLIGHT DOCUMENTATION

4.1 Presentation of information

...

4.1.3 METAR and SPECI (including trend forecasts as issued in accordance with regional air navigation agreement), TAF, GAMET, SIGMET, and AIRMET, and volcanic ash, and tropical cyclone and space weather advisory information shall be presented in accordance with the templates in Appendices 3.1, 3.2, 3.3, 3.5 and 3.6, respectively. Such meteorological information received from other meteorological offices shall be included in flight documentation without change.

...

APPENDIX 3.9. TECHNICAL SPECIFICATIONS RELATED TO INFORMATION FOR AIR TRAFFIC SERVICES, SEARCH AND RESCUE SERVICES AND AERONAUTICAL INFORMATION SERVICES

...

3.1 List of information

The following information shall be supplied, as necessary, to an aeronautical information services unit:

a) information on meteorological service for international air navigation, intended for inclusion in the aeronautical information publication(s) concerned;

Note.— Details of this information are given in ~~CAR-ANS Part 15~~ Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066) Appendix ~~15A3~~, Part 1, GEN 3.5 and Part 3, AD 2.2, 2.11, 3.2 and 3.11.

b) information necessary for the preparation of NOTAM or ASHTAM including, in particular, information on:

1) the establishment, withdrawal and significant changes in operation of aeronautical meteorological services. This information is required to be provided to the aeronautical information services unit sufficiently in advance of the effective date to permit issuance of NOTAM in compliance with CAR-ANS Part 15, ~~15.5.1.1~~ 15.6.3.2.2 and ~~15.5.1.1.1~~ 15.6.3.2.3;

...

ATTACHMENT 3.E. SPATIAL RANGES AND RESOLUTIONS FOR SPACE WEATHER ADVISORY INFORMATION

(See Appendix 3.2, 6.1 of CAR-ANS Part 3)

<i>Element to be forecast</i>		<i>Range</i>	<i>Resolution</i>
Flight level affected by radiation		250 – 600	30
Longitudes for advisories (degrees)		000 – 180	15
Latitudes for advisories (degrees)		00 – 90	10
Latitude bands for advisories:	High latitudes northern hemisphere (HNH)	N9000 – N6000	30
	Middle latitudes northern hemisphere (MNH)	N6000 – N3000	
	Equitorial latitudes northern hemisphere (EQN)	N3000 – N0000	
	Equitorial latitudes southern hemisphere (EQS)	S0000 – S3000	
	Middle latitudes southern hemisphere (MSH)	S3000 – S6000	
	High latitudes southern hemisphere (HSH)	S6000 – S9000	

— END —

AMENDED REGULATION AFTER REVISION:

CAR-ANS PART 3:

...

3.1 Definitions

...

ICAO meteorological information exchange model (IWXXM). A data model for representing aeronautical meteorological information.

...

Space weather centre (SWXC). A centre designated to monitor and provide advisory information on space weather phenomena expected to affect high-frequency radio communications, communications via satellite, GNSS-based navigation and surveillance systems and/or pose a radiation risk to aircraft occupants.

Note.— A space weather centre is designated as global and/or regional.

...

3.2 GENERAL PROVISIONS

...

3.2.1 Objective, determination and provision of meteorological service

...

3.2.1.4 The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) as the country's designated Meteorological Authority, in coordination with the Civil Aviation Authority of the Philippines (CAAP), hereby assumed the mandate to provide or to arrange for the provision of meteorological service for air navigation on its behalf. Details of the meteorological authority so designated shall be included in the aeronautical information publication (AIP).

Note.— Detailed specifications concerning presentation and contents of the aeronautical information publication is provided in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), Appendix 2.

3.2.1.5 The CAAP shall ensure that the designated meteorological authority complies with the requirements of the World Meteorological Organization (WMO) in respect of qualifications, competencies, education and training of meteorological personnel providing service for air navigation.

Note.— Requirements concerning the qualifications, competencies, education and training of meteorological personnel in aeronautical meteorology are given in the Technical Regulations (WMO-No. 49), Volume I — General Meteorological Standards and Recommended Practices, Part V — Qualifications and Competencies of Personnel Involved in the Provision of Meteorological (Weather and Climate) and Hydrological Services, Part VI — Education and Training of Meteorological Personnel, and Appendix A — Basic Instruction Packages.

...

3.3 GLOBAL SYSTEMS, SUPPORTING CENTRES AND METEOROLOGICAL OFFICES

...

3.3.4 Meteorological watch offices

3.3.4.1 The CAAP, having accepted the responsibility for providing air traffic services within a flight information region or a control area, shall arrange with PAGASA for the establishment and/or operation of one or more meteorological watch offices.

Note.— Guidance on the bilateral or multilateral arrangements between CAAP and PAGASA for the provision of MWO services, including for cooperation and delegation, can be found in the Manual of Aeronautical Meteorological Practice (Doc 8896).

...

3.3.5 Volcanic Ash Advisory

...

3.3.5.2 VAACs shall maintain a 24-hour watch.

3.3.5.3 In case of interruption of the operation of a VAAC, its functions shall be carried out by another VAAC or another meteorological centre, as designated by the VAAC Provider State concerned.

Note.— Back-up procedures to be used in case of interruption of the operation of a VAAC are included in Doc 9766.

...

3.3.8 Space weather centres

3.3.8.1 PAGASA, having accepted the responsibility for providing a space weather centre (SWXC), shall arrange for that centre to monitor and provide advisory information on space weather phenomena in its area of responsibility by arranging for that centre to:

a) monitor relevant ground-based, airborne and space-based observations to detect, and predict when possible, the existence of space weather phenomena that have an impact in the following areas:

- 1) high frequency (HF) radio communications;
- 2) communications via satellite;
- 3) GNSS-based navigation and surveillance; and
- 4) radiation exposure at flight levels;

b) issue advisory information regarding the extent, severity and duration of the space weather phenomena that have an impact referred to in a);

c) supply the advisory information referred to in b) to:

- 1) area control centres, flight information centres and aerodrome meteorological offices in its area of responsibility which may be affected;
- 2) other SWXCs; and
- 3) international OPMET databanks, international NOTAM offices and aeronautical fixed service Internet-based services.

3.3.8.2 SWXC shall maintain a 24-hour watch.

3.3.8.3 In case of interruption of the operation of a SWXC, its functions shall be carried out by another SWXC or another centre, as designated by the SWXC Provider State concerned.

Note.— Guidance on the provision of space weather advisory information, including the ICAO-designated provider(s) of space weather advisory information, is provided in the Manual on Space Weather Information in Support of International Air Navigation (Doc 10100).

...

3.4.5 Contents of reports

...

3.4.5.3 Optional elements included under supplementary information shall be included in METAR and SPECI in accordance with regional air navigation agreement.

3.4.6.3 Runway visual range

Note.— Guidance on the subject of runway visual range is contained in the Manual of Runway Visual Range Observing and Reporting Practices (Doc 9328).

3.4.6.3.1 Runway visual range shall be assessed on all runways intended for Category II and III instrument approach and landing operations.

3.4.6.3.2 Runway visual range as defined in 3.1 shall be assessed on all runways intended for use during periods of reduced visibility, including:

a) precision approach runways intended for Category I instrument approach and landing operations; and

b) runway used for take-off and having high-intensity edge lights and/or centre line lights.

Note.— Precision approach runways are defined in CAAP MOS Aerodromes, Chapter 2, under “Instrument runway”.

...

3.7.1 SIGMET information

...

3.7.1.3 The period of validity of a SIGMET message shall be not more than 4 hours. In the special case of SIGMET messages for volcanic ash cloud and tropical cyclones, the period of validity shall be extended up to 6 hours.

3.9 SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

3.9.1 General provisions

...

3.9.1.3 Meteorological information supplied to operators and flight crew members shall be up to date and include the following information, as agreed between the meteorological authority and the operators concerned:

...

i) meteorological satellite images;

j) ground-based weather radar information; and

k) space weather advisory information relevant to the whole route.

...

3.9.3 Flight documentation

3.9.3.1 Flight documentation to be made available shall comprise information listed under 3.9.1.3 a) 1) and 6), b), c), e), f) and, if appropriate, g) and k). However, flight documentation for flights of two hours' duration or less, after a short stop or turnaround, shall be limited to the information operationally needed, but in all cases the flight documentation shall at least comprise information on 3.9.1.3 b), c), e), f) and, if appropriate, g) and k).

...

3.9.4 Automated pre-flight information systems for briefing, consultation, flight planning and flight documentation

...

3.9.4.2 Automated pre-flight information systems providing for a harmonized, common point of access to meteorological information and aeronautical information services by operators, flight crew members and other aeronautical personnel concerned shall be as agreed between the meteorological authority and the relevant civil aviation authority or the agency to which the authority to provide service has been delegated *in accordance CAR-ANS Part 15, 15.2.1.1 c).*

Note.— The meteorological and aeronautical information services information concerned is specified in 3.9.1 to 3.9.3 and Appendix 3.8 and in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), 5.5, respectively.

...

APPENDICES AND ATTACHMENTS TO CAR-ANS PART 3

...

APPENDIX 3.2 TECHNICAL SPECIFICATIONS RELATED TO GLOBAL SYSTEMS, SUPPORTING CENTRES AND METEOROLOGICAL OFFICES

(See CAR-ANS 3.3.)

...

3. VOLCANIC ASH ADVISORY CENTRES (VAAC)

3.1 Volcanic ash advisory information

...

3.1.2 Until 4 November 2020, volcanic ash advisory information shall be disseminated in IWXXM GML form in addition to the dissemination of this advisory information in accordance with 3.1.1.

3.1.3 As of 5 November 2020, volcanic ash advisory information shall be disseminated in IWXXM GML form in addition to the dissemination of this advisory information in accordance with 3.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

3.1.4 The volcanic ash advisory information listed in Table A3.2-1, when prepared in graphical format, shall be as specified in Appendix 3.1 and issued using the portable network graphics (PNG) format.

...

5. TROPICAL CYCLONE ADVISORY CENTRES (TCAC)

5.1 Tropical cyclone advisory information

...

5.1.2 The advisory information on tropical cyclones disseminated in abbreviated plain language, using approved ICAO abbreviations and numerical values of self-explanatory nature, shall be in accordance with the template shown in Table A3.2-2.

5.1.3 Until 4 November 2020, tropical cyclone advisory information shall be disseminated in IWXXM GML form in addition to the dissemination of this advisory information in accordance with 5.1.2.

5.1.4 As of 5 November 2020, tropical cyclone advisory centres shall disseminate tropical cyclone advisory information in IWXXM GML form in addition to the dissemination of this advisory information in abbreviated plain language in accordance with 5.1.2.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO–No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

5.1.5 The tropical cyclone advisory information listed in Table A3.2-2, when prepared in graphical format, shall be as specified in Appendix 3.1 and issued using the PNG format.

...

6. SPACE WEATHER CENTRES

6.1 Space weather advisory information

6.1.1 Advisory information on space weather shall be issued in abbreviated plain language, using approved ICAO abbreviations and numerical values of self explanatory nature, and shall be in accordance with the template shown in Table A3.2-3. When no approved ICAO abbreviations are available, English plain language text, to be kept to a minimum, shall be used.

6.1.2 As of 7 November 2019 and until 4 November 2020, space weather advisory information shall be disseminated in IWXXM GML for, in addition to the dissemination of space weather advisory information in abbreviated plain language in accordance with 6.1.1.

6.1.3 As of 5 November 2020, space weather advisory information shall be disseminated in IWXXM GML form, in addition to the dissemination of this advisory information in abbreviated plain language in accordance with 6.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO–No. 306), Volume I.3, Part D — Representations Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

6.1.4 One or more of the following space weather effects shall be included in the space weather advisory information, using their respective abbreviations as indicated below:

- | | |
|--|-----------|
| - HF communications (propagation, absorption) | HF COM |
| - communications via satellite (propagation, absorption) | SATCOM |
| - GNSS-based navigation and surveillance (degradation) | GNSS |
| - radiation at flight levels (increased exposure) | RADIATION |

6.1.5 The following intensities shall be included in space weather advisory information, using their respective abbreviations as indicated below:

moderate *MOD*

severe *SEV*

Note.— *Guidance on the use of these intensities is provided in the Manual on Space Weather Information in Support of International Air Navigation (Doc 10100).*

6.1.6 Updated advisory information on space weather phenomena shall be issued as necessary but at least every six hours until such time as the space weather phenomena are no longer detected and/or are no longer expected to have an impact.

...

Table A3.2-1. Template for advisory message for volcanic ash

Key: M = inclusion mandatory, part of every message;

O = inclusion optional;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it shall be placed on the subsequent line.

...

Note 4.— *The numbers 1 to 19 are included only for clarity and are not part of the advisory message, as shown in the examples.*

	<i>Element</i>	<i>Detailed content</i>	<i>Template(s)</i>	<i>Examples</i>
1	Identification of the type of message (M)	Type of message	VA ADVISORY	VA ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST or EXER	STATUS: TEST STATUS: EXER
3	Time of origin (M)	Year, month, day and time in UTC of issue	DTG: nnnnnnnn/nnnnZ	DTG: 20080923/0130Z
4	Name of VAAC (M)	Name of VAAC	VAAC: nnnnnnnnnnnn	VAAC: TOKYO
5	Name of volcano (M)	Name and IAVCEI ² number of volcano	VOLCANO: nnnnnnnnnnnnnnnnnnnnnn [nnnnnn] or UNKNOWN or UNNAMED	VOLCANO: KARYMSKY 1000-13 VOLCANO: UNNAMED
...

Notes.—

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word "TEST" or the abbreviation "EXER" is included, the message should contain information that should not be used operationally or will otherwise end immediately after the word "TEST". [Applicable 7 November 2019]

2. International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI).

3. A straight line between two points drawn on a map in the Mercator projection or a straight line between two points which crosses lines of longitude at a constant angle.

4. Up to 4 selected layers.

5. If ash reported (e.g. AIREP) but not identifiable from satellite data.

...

Table A3.2-2. Template for advisory message for tropical cyclones

Key: M = inclusion mandatory, part of every message;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it should be placed on the subsequent line.

Note 1.— The ranges and resolutions for the numerical elements included in advisory messages for tropical cyclones are shown in Appendix 3.6, Table A3.6-4.

Note 2.— The explanations for the abbreviations can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC, Doc 8400).

Note 3.— Inclusion of a “colon” after each element heading is mandatory.

Note 4.— The numbers 1 to 19 are included only for clarity and they are not part of the advisory message, as shown in the example.

	<i>Element</i>	<i>Detailed content</i>	<i>Template(s)</i>	<i>Examples</i>
1	Identification of the type of message (M)	Type of message	TC ADVISORY	TC ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST <i>or</i> EXER	STATUS: TEST EXER
3	Time of origin (M)	Year, month, day and time in UTC of issue	DTG: nnnnnnnn/nnnnZ	DTG: 20040925/1900Z
4	Name of TCAC (M)	Name of TCAC (location indicator <i>or</i> full name)	TCAC: nnnn <i>or</i> nnnnnnnnnn	TCAC: YUFO ² MIAMI
5	Name of tropical cyclone (M)	Name of tropical cyclone <i>or</i> “NN” for unnamed tropical cyclone	TC: nnnnnnnnnnnn <i>or</i> NN	TC: GLORIA
6	Advisory number (M)	Year in full and message number (separate sequence for each cyclone)	ADVISORY NR: nnnn/[n][n]nn	ADVISORY NR: 2004/13
7	Observed Position of the centre (M)	Day and time (in UTC) and Position of the centre of the tropical cyclone (in degrees and minutes)	OBS PSN: nn/nnnnZ Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]	OBS PSN: 25/1800Z N2706 W07306
8	Observed CB cloud ³ (C)	Location of CB cloud (referring to latitude and longitude (in degrees and minutes)) and vertical extent (flight level)	CB: WI nnnKM (or nnnNM) OF TC CENTRE or WI4 Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] TOP [ABV <i>or</i> BLW] FLnnn	CB: WI 250NM OF TC CENTRE TOP FL500
9	Direction and speed of movement (M)	Direction and speed of movement given in sixteen compass points and km/h (<i>or</i> kt), respectively, <i>or</i> stationary (< 2 km/h (1 kt))	MOV: N nnKMH (or KT) <i>or</i> NNE nnKMH (or KT) <i>or</i> NE nnKMH (or KT) <i>or</i> ENE nnKMH (or KT) <i>or</i> E nnKMH (or KT) <i>or</i> ESE nnKMH (or KT) <i>or</i> SE nnKMH (or KT) <i>or</i> SSE nnKMH (or KT) <i>or</i>	MOV: NW 20KMH

			S nnKMH (or KT) or SSW nnKMH (or KT) or SW nnKMH (or KT) or WSW nnKMH (or KT) or W nnKMH (or KT) or WNW nnKMH (or KT) or NW nnKMH (or KT) or NNW nnKMH (or KT) or STNR	
10	Central pressure (M)	Central pressure (in hPa)	C: nnnHPA	C: 965HPA
11	Maximum surface wind (M)	Maximum surface wind near the centre (mean over 10 minutes, in m/s (or kt))	MAX WIND: nn[n]MPS (or nn[n]KT)	MAX WIND: 22MPS
12	Forecast of centre position (+6 HR) (M)	Day and time (in UTC) (6 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN nn/nnnnZ +6 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 25/2200Z +6 HR: N2748 W07350
13	Forecast of maximum surface wind (+6 HR) (M)	Forecast of maximum surface wind (6 hours after the "DTG" given in Item 2)	FCST MAX WIND +6 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +6 HR: 22MPS
14	Forecast of centre position (+12 HR) (M)	Day and time (in UTC) (12 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN nn/nnnnZ +12 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 26/0400Z +12 HR: N2830 W07430
15	Forecast of maximum surface wind (+12 HR) (M)	Forecast of maximum surface wind (12 hours after the "DTG" given in Item 2)	FCST MAX WIND +12 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +12 HR: 22MPS
16	Forecast of centre position (+18 HR) (M)	Day and time (in UTC) (18 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN nn/nnnnZ +18 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 26/1000Z +18 HR: N2852 W07500
17	Forecast of maximum surface wind (+18 HR) (M)	Forecast of maximum surface wind (18 hours after the "DTG" given in Item 2)	FCST MAX WIND +18 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +18 HR: 21MPS
18	Forecast of centre position (+24 HR) (M)	Day and time (in UTC) (24 hours from the "DTG" given in Item 2); Forecast position (in degrees and minutes) of the centre of the tropical cyclone	FCST PSN nn/nnnnZ +24 HR: Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]	FCST PSN 26/1600Z +24 HR: N2912 W07530
19	Forecast of maximum surface wind (+24 HR) (M)	Forecast of maximum surface wind (24 hours after the "DTG" given in Item 2)	FCST MAX WIND +24 HR: nn[n]MPS (or nn[n]KT)	FCST MAX WIND +24 HR: 20MPS
20	Remarks (M)	Remarks, as necessary	RMK: Free text up to 256 characters or NIL	RMK: NIL
21	Expected time of issuance of next advisory (M)	Expected year, month, day and time (in UTC) of issuance of next advisory	NXT MSG: [BFR] nnnnnnnn/nnnnZ or NO MSG EXP	NXT MSG: 20040925/2000Z

Note.—

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word “TEST” or the abbreviation “EXER” is included, the message may contain information that should not be used operationally or will otherwise end immediately after the word “TEST”. [Applicable 7 November 2019]

2. Fictitious location.

3. In the case of CB clouds associated with a tropical cyclone covering more than one area within the area of responsibility, this element can be repeated, as necessary.

4. The number of coordinates should be kept to a minimum and should not normally exceed seven.

...

Example A3.2-2. Advisory message for tropical cyclones

TC ADVISORY	
DTG:	20040925/1900Z
TCAC:	YUFO
TC:	GLORIA
ADVISORY NR:	2004/13
OBS PSN:	25/1800Z N2706 W07306
CB:	WI 250NM OF TC CENTRE
C:	965HPA
MAX WIND:	22MPS
FCST PSN +6 HR:	25/2200Z N2748 W07350
FCST MAX WIND +6 HR:	22MPS
FCST PSN +12 HR:	26/0400Z N2830 W07430
FCST MAX WIND +12 HR:	22MPS
FCST PSN +18 HR:	26/1000Z N2852 W07500
FCST MAX WIND +18 HR:	21MPS
FCST PSN +24 HR:	26/1600Z N2912 W07530
FCST MAX WIND +24 HR:	20MPS
RMK:	NIL
NXT MSG:	20040925/2000Z
*Fictitious location	

Table A3.2-3. Template for advisory message for space weather information

Key: M = inclusion mandatory, part of every message;

C = inclusion conditional, included whenever applicable;

= = a double line indicates that the text following it should be placed on the subsequent line.

Note 1.— The explanations for the abbreviations can be found in the PANS-ABC (Doc 8400).

Note 2.— The spatial resolutions are shown in Attachment E.

Note 3.— Inclusion of a colon after each element heading is mandatory.

Note 4.— The numbers 1 to 14 are included only for clarity and are not part of the advisory message, as shown in the examples.

Element	Detailed content	Template(s)	Examples
---------	------------------	-------------	----------

1	Identification of the type of message (M)	Type of message	SWX ADVISORY	SWX ADVISORY
2	Status indicator (C) ¹	Indicator of test or exercise	STATUS: TEST <i>or</i> EXER	STATUS: TEST EXER
3	Time of origin (M)	Year, month, day, time in UTC	DTG: nnnnnnnn/nnnnZ	DTG: 20161108/0100Z
4	Name of SWXC (M)	Name of SWXC	SWXC: Nnnnnnnnnnn	SWXC: DONLON ²
5	Advisory number (M)	Advisory number: year in full and unique message number	ADVISORY NR: nnnn/[n][n][n]	ADVISORY NR: 2016/1
6	Number of advisory being replaced (C)	Number of the previously issued advisory being replaced	NR RPLC: nnnn/[n][n][n]	NR RPLC: 2016/1
7	Space weather effect and intensity (M)	Effect and intensity of the space weather phenomena	SWX EFFECT: HF COM MOD <i>or</i> SEV <i>or</i> SATCOM MOD <i>or</i> SEV <i>or</i> GNSS MOD <i>or</i> SEV <i>or</i> HF COM MOD <i>or</i> SEV AND GNSS MOD <i>or</i> SEV <i>or</i> RADIATIONMOD <i>or</i> SEV	SWX EFFECT: HF COM MOD GNSS SEV HF COM MOD AND GNSS MOD RADIATION MOD SATCOM SEV
8	Observed or expected extent of space weather phenomena (M)	Time: day, time in UTC; Observed (or forecast if phenomena have yet to occur); horizontal extent ² (latitude bands and longitude in degrees) and/or altitude of space weather phenomena	OBS <i>or</i> FCST SWX: nn/nnnnZ DAYLIGHT SIDE <i>or</i> HNH <i>and/or</i> MNH <i>and/or</i> EQN <i>and/or</i> EQS <i>and/or</i> MSH <i>and/or</i> HSH <i>and</i> Wnnn(nn) <i>or</i> Ennn(nn) – Wnnn(nn) <i>or</i> Ennn(nn) <i>and/or</i> ABV FLnnn <i>or</i> FLnnn–nnn <i>or</i> Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] <i>or</i> NO SWX EXP	OBS SWX: 08/0100Z DAYLIGHT SIDE 08/0100Z HNH HSH E18000-W18000 08/0100Z HNH HSH W18000 — W09000 ABV FL350
9	Forecast of the phenomena for the next 6 hours (M)	Day, time (in UTC) (6 hours from time given in item 8, rounded to the next full hour); Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +6 HR: nn/nnnnZ DAYLIGHT SIDE <i>or</i> HNH <i>and/or</i> MNH <i>and/or</i> EQN <i>and/or</i> EQS <i>and/or</i> MSH <i>and/or</i> HSH <i>and</i> Wnnn(nn) <i>or</i> Ennn(nn) – Wnnn(nn) <i>or</i> Ennn(nn) <i>and/or</i> ABV FLnnn <i>or</i> FLnnn–nnn <i>or</i> Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] <i>or</i> NO SWX EXP <i>or</i> NOT AVBL	FCST SWX +6 HR: 08/0700Z DAYLIGHT SIDE 08/0700Z HNH HSH W18000 — W09000 ABV FL350 08/0700Z HNH HSH E18000-W18000

10	Forecast of the phenomena for the next 12 hours (M)	Day, time (in UTC) (12 hours from time given in item 8, rounded to the next full hour); Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +12 HR:	nn/nnnnZ DAYLIGHT SIDE <i>or</i> HNH <i>and/or</i> MNH <i>and/or</i> EQN <i>and/or</i> EQS <i>and/or</i> MSH <i>and/or</i> HSH <i>and</i> Wnnn(nn) <i>or</i> Ennn(nn) – Wnnn(nn) <i>or</i> Ennn(nn) <i>and/or</i> ABV FLnnn <i>or</i> FLnnn– nnn <i>or</i> Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] <i>or</i> NO SWX EXP <i>or</i> NOT AVBL	FCST SWX +12 HR:	08/1300Z DAYLIGHT SIDE 08/1300Z HNH HSH W18000 — W09000 ABV FL350 08/1300Z HNH HSH E18000-W18000
11	Forecast of the phenomena for the next 18 hours (M)	Day, time (in UTC) (18 hours from time given in item 8, rounded to the next full hour); Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +18 HR:	nn/nnnnZ DAYLIGHT SIDE <i>or</i> HNH <i>and/or</i> MNH <i>and/or</i> EQN <i>and/or</i> EQS <i>and/or</i> MSH <i>and/or</i> HSH <i>and</i> Wnnn(nn) <i>or</i> Ennn(nn) – Wnnn(nn) <i>or</i> Ennn(nn) <i>and/or</i> ABV FLnnn <i>or</i> FLnnn– nnn <i>or</i> Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] <i>or</i> NO SWX EXP <i>or</i> NOT AVBL	FCST SWX +18 HR:	08/1900Z DAYLIGHT SIDE 08/1900Z HNH HSH W18000 — W09000 ABV FL350 08/1900Z HNH HSH E18000-W18000
12	Forecast of the phenomena for the next 24 hours (M)	Day, time (in UTC) (24 hours from time given in item 8, rounded to the next full hour); Forecast extent and/or altitude of the space weather phenomena for the fixed valid time	FCST SWX +24 HR:	nn/nnnnZ DAYLIGHT SIDE <i>or</i> HNH <i>and/or</i> MNH <i>and/or</i> EQN <i>and/or</i> EQS <i>and/or</i> MSH <i>and/or</i> HSH <i>and</i> Wnnn(nn) <i>or</i> Ennn(nn) – Wnnn(nn) <i>or</i> Ennn(nn) <i>and/or</i> ABV FLnnn <i>or</i> FLnnn– nnn <i>or</i> Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – [Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] <i>or</i> NO SWX EXP <i>or</i> NOT AVBL	FCST SWX +24 HR:	09/0100Z DAYLIGHT SIDE 09/0100Z HNH HSH W18000 — W09000 ABV FL 350 09/0100Z HNH HSH E18000-W18000
13	Remarks (M)	Remarks, as necessary	RMK :	<i>Free text up to 256 characters</i> <i>or</i> NIL	RMK:	SWX EVENT HAS CEASED WWW.SPACEWEATH ERPROVIDER.COM NIL
14	Next advisory (M)	Year, month, day and time in UTC	NXT ADVISORY:	nnnnnnn/nnnnZ <i>or</i> NO FURTHER ADVISORIES <i>or</i> WILL BE ISSUED BY	NXT ADVISORY:	20161108/0700Z NO FURTHER ADVISORIES

Notes.—

1. Used only when the message issued to indicate that a test or an exercise is taking place. When the word "TEST" or the abbreviation "EXER" is included, the message must contain information that should not be used operationally or will otherwise end immediately after the word "TEST". [Applicable 7 November 2019]

2. Fictitious location.

3. One or more latitude ranges should be included in the space weather advisory information for "GNSS" and "RADIATION".

Example A3.2-3. Space weather advisory message (GNSS and HF COM effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/2
NR RPLC :	2016/1
SWX EFFECT:	HF COM MOD AND GNSS MOD
OBS SWX:	08/0100Z HNH HSH E18000 – W18000
FCST SWX +6 HR:	08/0700Z HNH HSH E18000 – W18000
FCST SWX +12 HR:	08/1300Z HNH HSH E18000 – W18000
FCST SWX +18 HR:	08/1900Z HNH HSH E18000 – W18000
FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	LOW LVL GEOMAGNETIC STORMING CAUSING INCREASED AURORAL ACT AND SUBSEQUENT MOD DEGRADATION OF GNSS AND HF COM AVBL IN THE AURORAL ZONE. THIS STORMING EXP TO SUBSIDE IN THE FCST PERIOD. SEE WWW.SPACEWEATHERPROVIDER.WEB
NXT ADVISORY:	NO FURTHER ADVISORIES
* Fictitious location	

Example A3.2-4. Space weather advisory message (RADIATION effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/2
NR RPLC:	2016/1
SWX EFFECT:	RADIATION MOD
FCST SWX:	08/0100Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +6 HR:	08/0700Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +12 HR:	08/1300Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +18 HR:	08/1900Z HNH HSH E18000 – W18000 ABV FL 350
FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	RADIATION LVL EXCEEDED 100 PCT OF BACKGROUND LVL AT FL350 AND ABV. THE CURRENT EVENT HAS PEAKED AND LVL SLW RTN TO BACKGROUND LVL. SEE WWW.SPACEWEATHERPROVIDER.WEB
NXT ADVISORY:	NO FURTHER ADVISORIES
* Fictitious location	

Example A3.2-5: Space weather advisory message (HF COM effects)

SWX ADVISORY	
DTG:	20161108/0100Z
SWXC:	DONLON*
ADVISORY NR:	2016/1
SWX EFFECT:	HF COM SEV

OBS SWX:	08/0100Z DAYLIGHT SIDE
FCST SWX +6 HR:	08/0700Z DAYLIGHT SIDE
FCST SWX +12 HR:	08/1300Z DAYLIGHT SIDE
FCST SWX +18 HR:	08/1900Z DAYLIGHT SIDE
FCST SWX +24 HR:	09/0100Z NO SWX EXP
RMK:	PERIODIC HF COM ABSORPTION AND LIKELY TO CONT IN THE NEAR TERM. CMPL AND PERIODIC LOSS OF HF ON THE SUNLIT SIDE OF THE EARTH EXP. CONT HF COM DEGRADATION LIKELY OVER THE NXT 7 DAYS. SEE WWW.SPACEWEATHERPROVIDER.WEB
NXT ADVISORY:	20161108/0700Z
* Fictitious location	

...

APPENDIX 3.3 TECHNICAL SPECIFICATIONS RELATED TO METEOROLOGICAL OBSERVATIONS AND REPORTS

(See CAR-ANS 3.4.)

...

2. GENERAL CRITERIA RELATED TO METEOROLOGICAL REPORTS

2.1 Format of meteorological reports

...

2.1.3 Until 4 November 2020, METAR and SPECI shall be disseminated, in IWXXM GML form, in addition to the dissemination of the METAR and SPECI in accordance with 2.1.2.

2.1.4 As of 5 November 2020, METAR and SPECI shall be disseminated in IWXXM GML form in addition to the dissemination of the METAR and SPECI in accordance with 2.1.2.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

...

APPENDIX 3.5. TECHNICAL SPECIFICATIONS RELATED TO FORECASTS

(See CAR-ANS 3.6.)

1. CRITERIA RELATED TO TAF

1.1 TAF format

...

1.1.2 Until 4 November 2020, TAF shall be disseminated, in IWXXM GML form, in addition to the dissemination of the TAF in accordance with 1.1.1.

1.1.3 As of 5 November 2020, TAF shall be disseminated in IWXXM GML form in addition to the dissemination of the TAF in accordance with 1.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the

implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

...

APPENDIX 3.6. TECHNICAL SPECIFICATIONS RELATED TO SIGMET AND AIRMET INFORMATION, AERODROME WARNINGS AND WIND SHEAR WARNINGS AND ALERTS

(See CAR-ANS 3.7.)

1. SPECIFICATIONS RELATED TO SIGMET INFORMATION

1.1 Format of SIGMET messages

...

1.1.6 Until 4 November 2020, SIGMET information shall be disseminated in IWXXM GML form, in addition to the dissemination of SIGMET information in accordance with 1.1.1.

1.1.7 As of 5 November 2020, SIGMET information shall be disseminated in IWXXM GML form in addition to the dissemination of SIGMET information in accordance with 1.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the ICAO Meteorological Information Exchange Model (IWXXM) (Doc 10003).

1.1.8 SIGMET, when issued in graphical format, shall be as specified in Appendix 3.1, including the use of applicable symbols and/or abbreviations.

2. SPECIFICATIONS RELATED TO AIRMET INFORMATION

2.1 Format of AIRMET messages

...

2.1.6 Until 4 November 2020, AIRMET information shall be disseminated in IWXXM GML form, in addition to the dissemination of AIRMET information in accordance with 2.1.1.

2.1.7 As of 5 November 2020, AIRMET information shall be disseminated in IWXXM GML form in addition to the dissemination of AIRMET information in accordance with 2.1.1.

Note.— The technical specifications for IWXXM are contained in the Manual on Codes (WMO-No. 306), Volume I.3, Part D — Representation Derived from Data Models. Guidance on the implementation of IWXXM is provided in the Manual on the Digital Exchange of Aeronautical Meteorological Information (Doc 10003).

...

Table A3.6-1. Template for SIGMET and AIRMET messages and special air-reports (uplink)

...

Element	Detailed content	SIGMET template	AIRMET template	SIGMET message examples	AIRMET message examples
Location indicator of FIR/CTA (M) ¹	ICAO location indicator of the ATS unit serving	nnnn		YUCC ² YUDD ²	

	the FIR or CTA to which the SIGMET/AIRMET refers				
Identification (M)	Message identification and sequence number ³	SIGMET [n][n]n	AIRMET [n][n]n	SIGMET 1 SIGMET 01 SIGMET A01	AIRMET 9 AIRMET 19 AIRMET B19
Validity period (M)	Day-time groups indicating the period of validity in UTC	VALID nnnnnn/nnnnnn		VALID 010000/010400 VALID 221215/221600 VALID 101520/101800 VALID 251600/252200 VALID 152000/160000 VALID 192300/200300	
Location indicator of MWO (M)	Location indicator of MWO originating the message with a separating hyphen	nnnn-		YUDO ⁻² YUSO ⁻²	
Name of the FIR/CTA (M)	Location indicator and name of the FIR/CTA ⁴ for which the SIGMET/AIRMET is issued	nnnn nnnnnnnnnn FIR[UIR] <i>or</i> UIR <i>or</i> FIR/UIR <i>or</i> nnnn nnnnnnnnnn CTA	nnnn nnnnnnnnnn FIR[UIR]	YUCC AMSWELL FIR ² YUDD SHANLON ² FIR/UIR ² UIR FIR/UIR YUDD SHANLON CTA ²	YUCC AMSWELL FIR/ ² YUDD SHANLON FIR ²
IF THE SIGMET OR AIRMET MESSAGE IS TO BE CANCELLED, SEE DETAILS AT THE END OF THE TEMPLATE.					
Status indicator (C) ⁵	Indicator of test or exercise	TEST <i>or</i> EXER	TEST <i>or</i> EXER	TEST EXER	TEST EXER
Phenomenon (M) ⁶	Description of phenomenon causing the issuance of SIGMET/AIRMET	OBSC ⁷ TS[GR ⁸] EMBD ⁹ TS[GR ⁸] FRQ ¹⁰ TS[GR ⁸] SQL ¹¹ TS[GR ⁸] TC nnnnnnnnnn PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] CB <i>or</i> TC NN ¹² PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] CB SEV TURB ¹³ SEV ICE ¹⁴ SEV ICE (FZRA) ¹⁴ SEV MTW ¹⁵ HVY DS HVY SS [VA ERUPTION] [MT nnnnnnnnnn] [PSN Nnn[nn] <i>or</i> Snn[nn] Ennn[nn] <i>or</i> Wnnn[nn]] VA CLD RDOACT CLD	SFC WIND nnn/nn[n]MPS <i>(or</i> SFC WIND nnn/nn[n]KT) SFC VIS [n][n]nnM (nn) ¹⁶ ISOL ¹⁷ TS[GR ⁸] OCNL ¹⁸ TS[GR ⁸] MT OBSC BKN CLD nnn/[ABV] [n]nnnM <i>(or</i> BKN CLD [n]nnn/[ABV] [n]nnnnFT) <i>or</i> BKN CLD SFC/[ABV] [n]nnnM <i>(or</i> BKN CLD SFC/[ABV][n]nnnnFT) OVC CLD nnn/[ABV] [n]nnnM <i>(or</i> OVC CLD [n]nnn/[ABV] [n]nnnnFT) <i>or</i> OVC CLD SFC/[ABV] [n]nnnM <i>(or</i> OVC CLD SFC/[ABV][n]nnnnFT) ISOL ¹⁷ CB ¹⁹ OCNL ¹⁸ CB ¹⁹ FRQ ¹⁰ CB ¹⁹ ISOL ¹⁷ TCU ¹⁹ OCNL ¹⁸ TCU ¹⁹ FRQ ¹⁰ TCU ¹⁹	OBSC TS OBSC TSGR EMBD TS EMBD TSGR FRQ TS FRQ TSGR SQL TS SQL TSGR TC GLORIA PSN N10 W060 CB TC NN PSN S2030 E06030 CB SEV TURB SEV ICE SEV ICE (FZRA) SEV MTW HVY DS HVY SS VA ERUPTION MT ASHVAL ² PSN S15 E073 VA CLD RDOACT CLD	SFC WIND 040/40MPS SFC WIND 310/20KT SFC VIS 1500M (BR) ISOL TS ISOL TSGR OCNL TS OCNL TSGR MT OBSC BKN CLD 120/900M BKN CLD 400/3000FT BKN CLD 1000/5000FT BKN CLD SFC/3000M BKN CLD SFC/ABV 10000FT OVC CLD 270/ABV3000M OVC CLD 900/ABV10000FT OVC CLD 1000/5000FT OVC CLD SFC/3000M OVC CLD SFC/ABV 10000FT ISOL CB OCNL CB FRQ CB

<i>Element</i>	<i>Detailed content</i>	<i>SIGMET template</i>	<i>AIRMET template</i>	<i>SIGMET message examples</i>	<i>AIRMET message examples</i>
			MOD TURB ¹³ MOD ICE ¹⁴ MOD MTW ¹⁵		ISOL TCU OCNL TCU FRQ TCU MOD TURB MOD ICE MOD MTW
Observed or forecast phenomenon (M)	Indication whether the information is observed and expected to continue, or forecast	OBS [AT nnnnZ] or FCST [AT nnnnZ]		OBS OBS AT 1210Z FCST FCST AT 1815Z	
Location (C) ²⁰	Location (referring to latitude and longitude (in degrees and minutes))	Nnn[nn] Wnnn[nn] or Nnn[nn] Ennn[nn] or Snn[nn] Wnnn[nn] or Snn[nn] Ennn[nn] or N OF Nnn[nn] or S OF Nnn[nn] or N OF Snn[nn] or S OF Snn[nn] [AND] W OF Wnnn[nn] or E OF Wnnn[nn] or W OF Ennn[nn] or E OF Ennn[nn] or N OF Nnn[nn] or N OF Snn[nn] AND S OF Nnn[nn] or S OF Snn[nn] or W OF Wnnn[nn] or W OF Ennn[nn] AND E OF Wnnn[nn] or E OF Ennn[nn] or N OF LINE ²¹ or NE OF LINE ²¹ or E OF LINE ²¹ or SE OF LINE ²¹ or S OF LINE ²¹ or SW OF LINE ²¹ or W OF LINE ²¹ or NW OF LINE ²¹ Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] [AND N OF LINE ²¹ or NE OF LINE ²¹ or E OF LINE ²¹ or SE OF LINE ²¹ or S OF LINE ²¹ or SW OF LINE ²¹ or W OF LINE ²¹ or NW OF LINE ²¹ Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]]] or WI ^{21,22} Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – [Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or APRX nnKM WID LINE ²¹ BTN (or nnNM WID LINE ²¹ BTN) Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or ENTIRE FIR/[UIR] or	N2020 W07005 N48 E010 S60 W160 S0530 E16530 N OF N50 S OF N5430 N OF S10 S OF S4530 W OF W155 E OF W45 W OF E15540 E OF E09015 N OF N1515 AND W OF E13530 S OF N45 AND N OF N40 N OF LINE S2520 W11510 – S2520 W12010 SW OF LINE N50 W005 – N60 W020 SW OF LINE N50 W020 – N45 E010 AND NE OF LINE N45 W020 – N40 E010 WI N6030 E02550 – N6055 E02500 – N6050 E02630 – N6030 E02550 APRX 50KM WID LINE BTN N64 W017 – N60 W010 – N57 E010 ENTIRE FIR ENTIRE UIR ENTIRE FIR/UIR ENTIRE CTA WI 400KM OF TC CENTRE WI 250NM OF TC CENTRE WI 30KM OF N6030 E02550†		

		ENTIRE FIR <i>or</i> ENTIRE FIR/UIR <i>or</i> ENTIRE CTA <i>or</i> ²³ WI nnnKM (<i>or</i> nnnNM) OF TC CENTRE <i>or</i> ²⁴ WI nnKM (<i>or</i> nnNM) OF Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]			
Level (C) ^{20, 24}	Flight level <i>or</i> altitude	[SFC/]FLnnn <i>or</i> [SFC/]nnnnM (<i>or</i> [SFC/][n]nnnnFT) <i>or</i> FLnnn/nnn <i>or</i> TOP FLnnn <i>or</i> [TOP] ABV FLnnn <i>or</i> (<i>or</i> [TOP] ABV [n]nnnnFT) [nnnn/]nnnnM (<i>or</i> [[n]nnnn/][n]nnnnFT) <i>or</i> [nnnnM/]FLnnn (<i>or</i> [[n]nnnnFT/]FLnnn) <i>or</i> ²³ TOP [ABV <i>or</i> BLW] FLnnn		FL180 SFC/FL070 SFC/3000M SFC/10000FT FL050/080 TOP FL390 ABV FL250 TOP ABV FL100 ABV 7000FT TOP ABV 9000FT TOP ABV 10000FT 3000M 2000/3000M 8000FT 6000/12000FT 2000M/FL150 10000FT/FL250 TOP FL500 TOP ABV FL500 TOP BLW FL450	
Movement or expected movement (C) ^{20, 25}	Movement <i>or</i> expected movement (direction and speed) with reference to one of the sixteen points of compass, <i>or</i> stationary	MOV N [nnKMH] <i>or</i> MOV NNE [nnKMH] <i>or</i> MOV NE [nnKMH] <i>or</i> MOV ENE [nnKMH] <i>or</i> MOV E [nnKMH] <i>or</i> MOV ESE [nnKMH] <i>or</i> MOV SE [nnKMH] <i>or</i> MOV SSE [nnKMH] <i>or</i> MOV S [nnKMH] <i>or</i> MOV SSW [nnKMH] <i>or</i> MOV SW [nnKMH] <i>or</i> MOV WSW [nnKMH] <i>or</i> MOV W [nnKMH] <i>or</i> MOV WNW [nnKMH] <i>or</i> MOV NW [nnKMH] <i>or</i> MOV NNW [nnKMH] (<i>or</i> MOV N [nnKT] <i>or</i> MOV NNE [nnKT] <i>or</i> MOV NE [nnKT] <i>or</i> MOV ENE [nnKT] <i>or</i> MOV E [nnKT] <i>or</i> MOV ESE [nnKT] <i>or</i> MOV SE [nnKT] <i>or</i> MOV SSE [nnKT] <i>or</i> MOV S [nnKT] <i>or</i> MOV SSW [nnKT] <i>or</i> MOV SW [nnKT] <i>or</i> MOV WSW [nnKT] <i>or</i> MOV W [nnKT] <i>or</i> MOV WNW [nnKT] <i>or</i> MOV NW [nnKT] <i>or</i> MOV NNW [nnKT]) <i>or</i> STNR		MOV SE MOV NNW MOV E 40KMH MOV E 20KT MOV WSW 20KT STNR	
Changes in intensity (C) ²⁰	Expected changes in intensity	INTSF <i>or</i> WKN <i>or</i> NC		INTSF WKN NC	
Forecast time (C) ²⁴	Indication of the forecast time of phenomenon	FCST AT nnnnZ	—	FCST AT 2200Z	—
TC forecast position (C) ²³	Forecast position of TC centre at the end of the validity period of the SIGMET message	TC CENTRE PSN Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]	—	TC CENTRE PSN N1030 E1600015	—
Forecast position (C) ^{20, 25, 26}	Forecast position of phenomenon at the end of the validity period of the SIGMET message	Nnn[nn] Wnnn[nn] <i>or</i> Nnn[nn] Ennn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Snn[nn] Ennn[nn]	—	N30 W170 N OF N30 S OF S50 AND W OF E170	—

		<p><i>or</i></p> <p>N OF Nnn[nn] <i>or</i> S OF Nnn[nn] <i>or</i> N OF Snn[nn] <i>or</i> S OF Snn[nn] [AND] W OF Wnnn[nn] <i>or</i> E OF Wnnn[nn] <i>or</i> W OF Ennn[nn] <i>or</i> E OF Ennn[nn]</p> <p><i>or</i></p> <p>N OF Nnn[nn] <i>or</i> N OF Snn[nn] AND S OF Nnn[nn] <i>or</i> S OF Snn[nn]</p> <p><i>or</i></p> <p>W OF Wnnn[nn] <i>or</i> W OF Ennn[nn] AND E OF Wnnn[nn] <i>or</i> E OF Ennn[nn]</p> <p><i>or</i></p> <p>N OF LINE²¹ <i>or</i> NE OF LINE²¹ <i>or</i> E OF LINE²¹ <i>or</i> SE OF LINE²¹ <i>or</i> S OF LINE²¹ <i>or</i> SW OF LINE²¹ <i>or</i> W OF LINE²¹ <i>or</i> NW OF LINE²¹ Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]] [AND N OF LINE²¹ <i>or</i> NE OF LINE²¹ <i>or</i> E OF LINE²¹ <i>or</i> SE OF LINE²¹ <i>or</i> S OF LINE²¹ <i>or</i> SW OF LINE²¹ <i>or</i> W OF LINE²¹ <i>or</i> NW OF LINE²¹ Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] [– Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn]]] <i>or</i> WI^{21,22}Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i> Snn[nn] Wnnn[nn] <i>or</i> Ennn[nn] – Nnn[nn] <i>or</i></p>		<p>S OF N46 AND N OF N39</p> <p>NE OF LINE N35 W020 – N45 W040</p> <p>SW OF LINE N48 W020 – N43 E010 AND NE OF LINE N43 W020 – N38 E010</p> <p>WI N20 W090 – N05 W090 – N10 W100 – N20 W100 – N20 W090</p> <p>APRX 50KM WID LINE BTN N64 W017 – N57 W005 – N55 E010 – N55 E030</p> <p>ENTIRE FIR ENTIRE UIR ENTIRE FIR/UIR</p> <p>ENTIRE CTA</p> <p>NO VA EXP</p> <p>WI 30KM OF N6030 E02550 †</p>	
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		Snn[nn] Wnnn[nn] or Ennn[nn] or APRX nnKM WID LINE ²¹ BTN (nnNM WID LINE ²¹ BTN) Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] – Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] [– Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]] or ENTIRE FIR or ENTIRE UIR or ENTIRE FIR/UIR or ENTIRE CTA or ²⁶ NO VA EXP or ²⁴ WI nnKM (or nnNM) OF Nnn[nn] or Snn[nn] Wnnn[nn] or Ennn[nn]			
Repetition of elements (C) ²⁸	Repetition of elements included in a SIGMET message for volcanic ash cloud or tropical cyclone	[AND] ²⁸	—	AND	—
OR					
Cancellation of SIGMET/AIRMET (C) ²⁹	Cancellation of SIGMET/AIRMET referring to its identification	CNL SIGMET [n][n]n nnnnnn/nnnnnn or ²⁷ CNL SIGMET [n][n]n nnnnnn/nnnnnn VA MOV TO nnnn FIR	CNL AIRMET [n][n]n nnnnnn/nnnnnn	CNL SIGMET 2 101200/101600 CNL SIGMET A13 251030/251430 VA MOV TO YUDO FIR ²	CNL AIRMET 05 151520/151800

Notes.—

1. See 4.1.

2. Fictitious location.

3. In accordance with 1.1.3 and 2.1.2.

4. See 2.1.3.

5. Used only when the message issued to indicate that a test or an exercise is taking place. When the word “TEST” or the abbreviation “EXER” is included, the message may contain information that should not be used operationally or will otherwise end immediately after the word “TEST”. [Applicable 7 November 2019]

6. In accordance with 1.1.4 and 2.1.4.

7. In accordance with 4.2.1 a).

8. In accordance with 4.2.4.

9. *In accordance with 4.2.1 b).*
10. *In accordance with 4.2.2.*
11. *In accordance with 4.2.3.*
12. *Used for unnamed tropical cyclones.*
13. *In accordance with 4.2.5 and 4.2.6.*
14. *In accordance with 4.2.7.*
15. *In accordance with 4.2.8.*
16. *In accordance with 2.1.4.*
17. *In accordance with 4.2.1 c).*
18. *In accordance with 4.2.1 d).*
19. *The use of cumulonimbus, CB and towering cumulus, TCU, is restricted to AIRMETs in accordance with 2.1.4.*
20. *In the case of volcanic ash cloud or cumulonimbus clouds associated with a tropical cyclone covering more than one area within the FIR, these elements can be repeated, as necessary.*
21. *A straight line is to be used between two points drawn on a map in the Mercator projection or between two points which crosses lines of longitude at a constant angle.*
22. *The number of coordinates should be kept to a minimum and should not normally exceed seven.*
23. *Only for SIGMET messages for tropical cyclones.*
24. *Only for SIGMET messages for radioactive cloud. When detailed information on the release is not available, a radius of up to 30 kilometres (or 16 nautical miles) from the source may be applied; and a vertical extent from surface (SFC) to the upper limit of the flight information region/upper flight information region (FIR/UIR) or control area (CTA) is to be applied. [Applicable 7 November 2019]*
25. *The elements "forecast time" and "forecast position" are not to be used in conjunction with the element "movement or expected movement".*
26. *The levels of the phenomena remain fixed throughout the forecast period.*
27. *Only for SIGMET messages for volcanic ash.*
28. *To be used for two volcanic ash clouds or two centres of tropical cyclones simultaneously affecting the FIR concerned..*
29. *End of the message (as the SIGMET/AIRMET message is being cancelled).*

...

APPENDIX 3.8. TECHNICAL SPECIFICATIONS RELATED TO SERVICE FOR OPERATORS AND FLIGHT CREW MEMBERS

(See CAR-ANS 3.9.)

...

4. SPECIFICATIONS RELATED TO FLIGHT DOCUMENTATION

4.1 Presentation of information

...

4.1.3 METAR and SPECI (including trend forecasts as issued in accordance with regional air navigation agreement), TAF, GAMET, SIGMET and AIRMET, volcanic ash, tropical cyclone and space weather advisory information shall be presented in accordance with the templates in Appendices 3.1, 3.2, 3.3, 3.5 and 3.6. Such meteorological information received from other meteorological offices shall be included in flight documentation without change.

...

APPENDIX 3.9. TECHNICAL SPECIFICATIONS RELATED TO INFORMATION FOR AIR TRAFFIC SERVICES, SEARCH AND RESCUE SERVICES AND AERONAUTICAL INFORMATION SERVICES

...

3. INFORMATION TO BE PROVIDED FOR AERONAUTICAL INFORMATION SERVICES UNITS

3.1 List of information

The following information shall be supplied, as necessary, to an aeronautical information services unit:

a) information on meteorological service for international air navigation, intended for inclusion in the aeronautical information publication(s) concerned;

Note.— Details of this information are given in the Procedures for Air Navigation Services — Aeronautical Information Management (PANS-AIM, Doc 10066), Appendix 3, Part 1, GEN 3.5 and Part 3, AD 2.2, 2.11, 3.2 and 3.11.

b) information necessary for the preparation of NOTAM or ASHTAM including, in particular, information on:

1) the establishment, withdrawal and significant changes in operation of aeronautical meteorological services. This information is required to be provided to the aeronautical information services unit sufficiently in advance of the effective date to permit issuance of NOTAM in compliance with CAR-ANS Part 15, 15.6.3.2.2 and 15.6.3.2.3;

...

ATTACHMENT 3.E. SPATIAL RANGES AND RESOLUTIONS FOR SPACE WEATHER ADVISORY INFORMATION

(See Appendix 3.2, 6.1 of CAR-ANS Part 3)

<i>Element to be forecast</i>		<i>Range</i>	<i>Resolution</i>
Flight level affected by radiation		250 – 600	30
Longitudes for advisories (degrees)		000 – 180	15
Latitudes for advisories (degrees)		00 – 90	10
Latitude bands for advisories:	High latitudes northern hemisphere (HNH)	N9000 – N6000	30
	Middle latitudes northern hemisphere (MNH)	N6000 – N3000	
	Equitorial latitudes northern hemisphere (EQN)	N3000 – N0000	
	Equitorial latitudes southern hemisphere (EQS)	S0000 – S3000	
	Middle latitudes southern hemisphere (MSH)	S3000 – S6000	
	High latitudes southern hemisphere (HSH)	S6000 – S9000	

— END —

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- i. **Separability Clause.** - If, for any reason, any provision of this Memorandum Circular is declared invalid or unconstitutional, the other part or parts thereof which are not affected thereby shall continue to be in full force and effect.
- ii. **Repealing Clause.** - All orders, rules, regulations and issuances, or parts thereof which are inconsistent with this Memorandum Circular are hereby repealed, superseded or modified accordingly.
- iii. **Determination of changes.** – To highlight the amendments and/or revisions in the Memorandum Circular, the deleted text shall be shown with strikethrough and the new inserted text shall be highlighted with grey shading, as illustrated below:
1. Text deleted: ~~Text to be deleted is shown with a line through it.~~
 2. New text inserted: New text is highlighted with grey shading.
 3. New text replacing existing text: ~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading.
- iv. **Effectivity Clause.** - This Memorandum Circular shall take effect fifteen (15) days after publication in a requisite single newspaper of general circulation or the Official Gazette and a copy filed with the U.P. Law Center - Office of the National Administrative Register.

So Ordered. Signed this 27th day of December 2018, at the Civil Aviation Authority of the Philippines, MIA Road, Pasay City, Metro Manila, 1301.


CAPTAIN JIM C. SYDIONGCO