## 1.0 PURPOSE

This Advisory Circular (AC) provides guidance to the Aeronautical Meteorological Service Provider (AMSP) on the technical specifications for preparation and issuance of SIGMET messages.

## 2.0 REFERENCES

2.1 The Civil Aviation (Meteorological Services for International Air Navigation) Regulations 2017 (as amended),

2.2 The Civil Aviation (Meteorological Service for International Air Navigation) (Amendment) Regulations, 2023

2.3 ICAO Doc 8896 – Manual of Aeronautical Meteorological Practice.

2.4 WMO No. 306 Manual on codes

## 3.0 GUIDANCE AND PROCEDURES

### 3.1 GENERAL

3.1.1 The Civil Aviation (Meteorological Service for Air Navigation) Regulation, require the AMSP to designate a Meteorological Watch Office (MWO) equipped with tools and facilities, for purposes of maintaining continuous watch over meteorological conditions affecting flight operations within the United Republic of Tanzania Flight Information Region (FIR).

3.1.2 The MWO shall prepare and issue SIGMET messages in accordance with the Civil Aviation (Meteorological Service for Air Navigation) Regulation 2017 (as amended).

### 3.2 SPECIFICATIONS RELATED TO SIGMET INFORMATION

#### 3.2.1 Format of SIGMET messages

3.2.1.1 The content and order of elements in a SIGMET message shall be in accordance with the template shown in Appendix I to this Advisory Circular.

3.2.1.2 Messages containing SIGMET information shall be identified as "SIGMET". Each SIGMET message shall have a sequence number reference corresponding with the number of SIGMET messages issued for the United Republic of Tanzania FIR since 0001 UTC on the day concerned.

3.2.1.3 SIGMET information shall be based on special air-reports; weather satellite data or ground-based observations such as weather radar observations; Volcanic Ash Advisory Centre (VAAC),

Tropical Cyclones Advisory Centre (TCAC) or forecasts. SIGMET messages concerning thunderstorms, tropical cyclones or severe squall lines shall not include references to associated turbulence or icing, since each SIGMET reports one particular weather phenomena.

3.2.1.4 In preparing a SIGMET message, only one of the following phenomena shall be included in a SIGMET message, using the abbreviations below or ICAO approved abbreviations in Appendix II.

i) In SIGMET messages, thunderstorms at cruising levels irrespective of altitude shall be reported with abbreviations as indicated-

| | |
|---|---|
| • Obscured | OBSC TS |
| • Embedded | EMBD TS |
| • Frequent | FRQ TS |
| • Squall line | SQL TS |
| • Obscured with hail | OBSC TSGR |
| • Embedded with hail | EMBD TSGR |
| • Frequent, with hail | FRQ TSGR |
| • Squall line with hail | SQL TSGR |

ii) Reporting tropical cyclone in SIGMET messages at cruising levels irrespective of altitude, TC should be reported when; -

| |
|---|
| • A tropical cyclone has a duration of at least a 10-minute mean. |
| • TC (+ cyclone name) only with a surface wind speed of 17 m/s (34 kt) or more |

iii) Reporting icing in SIGMET messages at cruising levels irrespective of altitude-

| | |
|---|---|
| • severe icing | SEV ICE |
| • severe icing due to freezing rain (Where applicable) | SEV ICE (FZRA) |
| • freezing rain (Where applicable) | FZRA |

iv) Reporting turbulence in SIGMET messages at cruising levels irrespective of altitude only when it's severe-

| | |
|---|---|
| • Severe turbulence | SEV TURB |

v) Reporting other phenomena at cruising levels irrespective of altitude-

| | |
|---|---|
| • severe mountain wave | SEV MTW |
| • heavy dust storm | HVY DS |
| • heavy sandstorm | HVY SS |
| • volcanic ash | VA (+ volcano name, if known) |
| • radioactive cloud | RDOACT CLD |

vi) Only one element from those listed in (i) to (v) above shall be used in a SIGMET. It should be noted that although SIGMET information is required to be issued for cruising levels, there is no stated lower limit regarding the height for which a SIGMET should be issued. MWOs should issue a SIGMET irrespective of the altitude of the phenomenon since the occurrence of the weather phenomena is of importance to aircraft during all phases of flight. This requirement is stated in the Civil Aviation (Meteorological Services for Air Navigation) Regulation, for all SIGMETs.

vii) SIGMET information shall not contain unnecessary descriptive material. In describing the weather phenomena for which the SIGMET is issued, no descriptive material additional to that given in (i) to (v) above shall be included.

viii) The use of text additional to the abbreviations listed in (i) to (v) above should be kept to a minimum. Any additional text should be prepared in abbreviated plain language using approved ICAO abbreviations listed in Appendix II. If no ICAO approved abbreviations are available for any weather phenomena, English plain language text should be used.

ix) SIGMET, if disseminated in the digital form, shall be formatted in accordance with a globally interoperable information exchange model and shall use extensible Markup Language (XML) or Geography Markup Language (GML).

x) SIGMET if disseminated in the digital form, shall be accompanied by the metadata.

### 3.3 Dissemination of SIGMET messages

3.3.1 SIGMET messages shall be disseminated to meteorological watch offices, World Area Forecasting Centres (WAFCs), Air Traffic Service Centres and other meteorological offices in accordance with the AFI regional agreement. In the case of SIGMET messages for volcanic ash and tropical cyclones, the messages shall also be disseminated to the Volcanic Ash Advisory Centre (VAAC) and Tropical Cyclones Advisory Centre (TCAC).

3.3.2 SIGMET messages shall be disseminated to international Operation Meteorological (OPMET) databanks and the centres designated for the operation of Aeronautical Fixed Service (AFS) Internet-based services. In addition, SIGMET messages for volcanic ash cloud and tropical cyclones should be disseminated to VAACs and TCACs respectively.

3.3.3 Airline Operators and crew members should be supplied with SIGMET information, through the aerodrome meteorological offices. They should also obtain this information through the briefing offices automated meteorological information systems or automated information systems for pre-flight planning. Briefing Offices should access SIGMET messages for entire route from the Secure Aviation Data Information Service (SADIS) system and make them available to departing Pilots.

3.3.4 SIGMET information shall be disseminated in IWXXM GML format with the content and order of elements in a SIGMET message shall be in accordance with the template shown Appendix 1 to this Advisory Circular.

**3.4 Criteria related to phenomena included in SIGMET and Special air-reports.**

3.4.1 An area of thunderstorms and cumulonimbus clouds should be considered-

3.4.1.1 Obscured (OBSC) if it is obscured by haze/smoke or cannot be readily seen due to darkness.

3.4.1.2 Embedded (EMBD) if it is embedded within cloud layers and cannot be readily recognized.

3.4.1.3 Isolated (ISOL) if it consists of individual features which affect or are forecast to affect, an area with maximum spatial coverage of less than 50 percent of the area concerned (at a fixed time or during the period of validity); and

3.4.1.4 Occasional (OCNL) if it consists of well-separated features which affect, or are forecast to affect, an area with a maximum spatial coverage between 50 and 75 percent of the area concerned (at a fixed time or during the period of validity).

3.4.2 An area of thunderstorms should be considered frequent (FRQ) if within that area there is little or no separation between adjacent thunderstorms with a maximum spatial coverage greater than 75 percent of the area affected, or forecast to be affected, by the phenomenon (at fixed time or during period of validity).

3.4.3 Squall line (SQL) should indicate a thunderstorm along a line with little or no space between individual clouds.

3.4.4 Hail (GR) should be used as a further description of the thunderstorm, as necessary.

3.4.5 Severe and moderate turbulence (TURB) should refer only to:

3.4.5.1 low-level turbulence associated with strong surface winds,

3.4.5.2 rotor streaming, or

3.4.5.3 turbulence whether in cloud or not in cloud including Clear Air Turbulence (CAT).

3.4.6 Turbulence shall be reported as-

3.4.6.1 Severe whenever the peak value of the cube root of Eddy Dissipation Rate (EDR) exceeds 0.7; and

3.4.6.2 Moderate whenever the peak value of the cube root of EDR is above 0.4 and below or equal to 0.7.

3.4.7 A mountain wave (MTW) should be reported as-

3.4.7.1 Severe whenever an accompanying downdraft of 3.0 m/s (600 ft/min) or more and/or severe turbulence is observed or forecast; and

3.4.7.2 Moderate whenever an accompanying downdraft of 1.75–3.0 m/s (350–600 ft/min) and/or moderate turbulence is observed or forecast.

3.4.8 Severe and moderate icing (ICE) should refer to icing other than convective clouds. Freezing rain (FZRA) should refer to severe icing conditions caused by freezing rain.

3.4.9 Turbulence should not be used in connection with convective clouds.

3.4.10 Sandstorm/dust storm should be reported as-

3.4.10.1 Heavy whenever the visibility is below 200m, and the sky is obscured; and

3.4.10.2 Moderate whenever the visibility is:

i) Below 200m and the sky is not obscured; or

ii) Between 200m and 600m.

### 3.5 Issuance and validity of SIGMET Information

3.5.1 Period of validity. The period of validity of a SIGMET should not exceed four hours. In the special case of a SIGMET for volcanic ash cloud or tropical cyclones, period of validity shall be six hours.

3.5.2 Issuance. SIGMETs relating to the expected occurrence of weather phenomena, except for the volcanic ash cloud and tropical cyclones, shall not be issued more than four hours before the expected time of occurrence of such phenomena. In order to provide advance warning of the existence of volcanic ash cloud and tropical cyclones, SIGMETs related to these phenomena shall be issued as soon as practicable but not more than twelve hours before the commencement of the period of validity.

3.5.3 Update. SIGMETs for volcanic ash cloud and tropical cyclones shall be updated at least every six hours. However, if the phenomenon were expected to persist beyond the end of the period of validity, the SIGMET shall be updated. The update should be timed during the period of validity of the previous SIGMET to coincide with the reception of new meteorological information by the MWO (e.g., satellite data, radar data, special air-reports, output from numerical weather prediction models) while complying with the Civil Aviation (Meteorological Services for Air Navigation) Regulation, provision stipulating that SIGMETs are not to be issued more than four hours before the commencement of their period of validity.

3.5.4 SIGMET messages shall be cancelled by the MWO when the phenomena are no longer occurring or are no longer expected to occur in the area.

3.5.5 SIGMETs for tropical cyclones shall be issued by the MWO only when the tropical cyclone is affecting the weather phenomenon (CBs and thunderstorms) in the United Republic of Tanzania FIR. Whenever a neighbouring FIR is influenced by cumulonimbus (CB) clouds and thunderstorms associated with the tropical cyclone, the MWO shall only issue a SIGMET for such phenomena like CBs, thunderstorms and not tropical cyclone.

3.5.6 It should be noted that information on volcanic ash cloud and associated volcanic activity is promulgated to users, including ATS units, by NOTAM or by ASHTAM. NOTAM and ASHTAM

for volcanic ash should include, where necessary, information on diversions or air route closures, due to volcanic ash.

Example 1. SIGMET message and the corresponding cancellations

| SIGMET | CANCELLATION OF SIGMET |
|---|---|
| HTDC SIGMET 01 VALID 101200/101600 HTDA-HTDC DAR ES SALAAM FIR OBSC TS FCST S OF N54 AND E OF W012 TOP FL390 MOV E 20KT WKN | HTDC SIGMET 02 VALID 101345/101600 HTDA-HTDC DAR ES SALAAM FIR CNL SIGMET 1 101200/101600 |

Example 2. SIGMET message for Tropical Cyclone

HTDC SIGMET 03 VALID 251600/252200 HTDA –

HTDC DAR ES SALAAM FIR TC GLORIA PSN N2706 W07306 CB OBS AT 1600Z WI 250NM OF TC CENTRE TOP FL500 NC FCST AT 2200Z TC CENTRE PSN N2740 W07345

Meaning:

The third SIGMET message issued for the DAR ES SALAAM* flight information region (identified by HTDC Dar es Salaam area control centre) by the Dar Es Salaam International* meteorological watch office (HTDA) since 0001 UTC; the message is valid from 1600 UTC to 2200 UTC on the 25th of the month; tropical cyclone Gloria at 27 degrees 6 minutes north and 73 degrees 6 minutes west; cumulonimbus was observed at 1600 UTC within 250 nautical miles of the Centre of the tropical cyclone with top at flight level 500; no changes in intensity are expected; at 2200 UTC the Centre of the tropical cyclone is forecast to be located at 27 degrees 40 minutes north and 73 degrees 45 minutes west.

* Fictitious location

Example 3. SIGMET message for Volcanic Ash

HTDC SIGMET 02 VALID 211100/211700 HTDA-HTDC DAR ES SALAAM FIR VA ERUPTION MT ELGON PSN N0010 E03348 VA CLD OBS AT 1100Z APRX 50KM WID LINE BTN N0010 E03348 – N0040 E03342 FL310/450 INTSF FCST AT 1700Z APRX 50KM WID LINE BTN N0006 E03305 – N0018 E03312 – N0212 E03430

Meaning:

The second SIGMET message issued for the DAR ES SALAAM* flight information region (identified by HTDC Dar es Salaam area control centre)) by the Dar Es Salaam International* meteorological watch office (HTDA) since 0001 UTC; the message is valid from 1100 UTC to 1700 UTC on the 21st of the month; volcanic ash eruption of Mount Elgon* located at 0

degrees 10 minutes North and 33 degrees 48 minutes east; volcanic ash cloud observed at 1100 UTC in an approximately 50 km wide line between 0 degrees 10 minutes north and 33 degrees 48 minutes east, and 0 degrees 40 minutes North and 33 degrees 42 minutes east; between flight levels 310 and 450, intensifying at 1700 UTC the volcanic ash cloud is forecast to be located in an approximate 50 km wide line between 0 degrees 6 minutes north and 33 degrees 5 minutes east, 0 degrees 18 minutes north and 33 degrees 12 minutes east, and 2 degrees 12 minutes north and 34 degrees 30 minutes east.

* Fictitious location and eruption

Example 4. SIGMET message for Severe Turbulence

HUEC SIGMET 5 VALID 221215/221600 HUEN –

HUEC ENTEBBE FIR SEV TURB OBS AT 1210Z N0320 E31005 FL250 INTSF FCST AT 1600Z S OF N0320 AND E OF E03150

Meaning:

The fifth SIGMET message issued for the ENTEBBE* flight information region (identified by HUEC Entebbe area control centre) by the Entebbe/International* meteorological watch office (HUEN) since 0001 UTC; the message is valid from 1215 UTC to 1600 UTC on the 22nd of the month; severe turbulence was observed at 1210 UTC 3 degrees 20 minutes north and 31 degrees 5 minutes east at flight level 250; the turbulence is expected to strengthen in intensity; at 1600 UTC the severe turbulence is forecast to be located south of 3 degrees 20 minutes north and east of 3 degrees 50 minutes west.

* Fictitious location and turbulence phenomena

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Tanzania Civil Aviation Authority

**APPENDIX 1**

**TEMPLATE FOR SIGMET**

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.

| Element | Detailed content | SIGMET template | SIGMET message examples | |
|---|---|---|---|---|
| Location indicator of FIR/CTA (M) | ICAO location indicator of the ATS unit serving the FIR or CTA to | nnnn | HUEC1 | |
| Identification (M) | Message identification and sequence | SIGMET [n][n]n | SIGMET 1<br>SIGMET 01<br>SIGMET A01 | |
| Validity period (M) | Day-time groups indicating the period of validity in UTC | VALID nnnnnn/nnnnnn | VALID 010000/010400<br>VALID 221215/221600<br>VALID 101520/101800<br>VALID 251600/252200<br>VALID 152000/160000<br>VALID 192300/200300 | |
| Location indicator of MWO (M) | Location indicator of MWO originating the | nnnn– | HUEN- | |
| Name of the FIR/CTA (M) | Location indicator and name of the FIR/CTA4 for which the SIGMET is issued | nnnn nnnnnnnnnn<br>FIR or UIR or<br>FIR/UIR<br>or<br>nnnn nnnnnnnnnn CTA | HUEC Entebbe FIR<br>FIR/UIR<br>UIR FIR/UIR | HUEC Entebbe FIR |
| Cancellation of SIGMET (C) | Cancellation of SIGMET referring to its identification | CNL SIGMET [n][n]n nnnnnn/nnnnnn<br><br>or<br>CNL SIGMET<br>[n][n]n nnnnnn/nnnnnn<br>VA MOV TO nnnn FIR | CNL SIGMET 2<br>101200/101600<br><br>CNL SIGMET A13<br>251030/251430<br>VA MOV TO<br>YUDO FIR2 | CNL AIRMET 05<br>151520/151800 |

**APPENDIX II**

**COMMONLY USED ICAO ABBREVIATIONS IN METEOROLOGICAL MESSAGES**

(Extract from the Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS-ABC, Doc 8400))

| | |
|---|---|
| A | |
| AAA | (or AAB, AAC … etc., in sequence) Amended meteorological message (message type designator) |
| ABV | Above |
| ADS-C‡ | Automatic dependent surveillance — contract |
| AFTN‡ | Aeronautical fixed telecommunication network |
| AIREP† | Air-report |
| AIRMET† | Information concerning en-route weather phenomena which may affect the safety of low-level aircraft operations |
| ALT | Altitude |
| AMD | Amend or amended (used to indicate amended meteorological message; message type designator) |
| APCH | Approach |
| ASHTAM | A special series NOTAM notifying, by means of a specific format, changes in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations |
| AT… | At (followed by time at which weather change is forecast to occur) |
| ATS | Air traffic services |
| B | |
| BCFG | Fog patches |
| BECMG | Becoming |
| BKN | Broken |
| BL … | Blowing (followed by DU = dust, SA = sand or SN = snow) |
| BLW | Below … |
| BR | Mist |
| BTN | Between |
| BUFR | Binary universal form for the representation of meteorological data |
| C | |
| … C | Centre (preceded by runway designation number to identify a parallel runway) |
| C | Degrees Celsius (Centigrade) |
| CALM | Calm |
| CAT | Clear air turbulence |
| CAVOK† | (to be pronounced “KAV-OH-KAY”) Visibility, cloud and present weather better than prescribed values or conditions |
| CB‡ | (to be pronounced “CEE BEE”) Cumulonimbus |
| CCA | (or CCB, CCC … etc., in sequence) Corrected meteorological message (message type designator) |
| CLD | Cloud |
| CLIMB-OUT | Climb-out area |
| COR | Correct or correction or corrected (used to indicate corrected meteorological message; message type designator) |
| CPDLC‡ | Controller-pilot data link communications |
| CTA | Control area |
| CU | Cumulus |

D

| | |
|---|---|
| D | Downward (tendency in RVR during previous 10 minutes) |
| DEG | Degrees |
| DEPO | Deposition |
| DIF | Diffuse |
| DP | Dew point temperature |
| DR… | Low drifting (followed by DU = dust, SA = sand or SN = snow) |
| DS | Duststorm |
| DU | Dust |
| D-VOLMET | Data link VOLMET |
| DZ | Drizzle |

E

| | |
|---|---|
| E | East or eastern longitude |
| EMBD | Embedded in a layer (to indicate cumulonimbus embedded in layers of other clouds) |
| END | Stop-end (related to RVR) |
| EQN | Equatorial latitudes northern hemisphere |
| EQS | Equatorial latitudes southern hemisphere |
| EXER | Exercises or exercising or to exercise |

F

| | |
|---|---|
| FBL | Light (used to indicate the intensity of weather phenomena, interference or static reports, e.g. FBL RA = light rain) |
| FC | Funnel cloud (tornado or water spout) |
| FCST | Forecast |
| FEW | Few |
| FG | Fog |
| FIR‡ | Flight information region |
| FL | Flight level |
| FLUC | Fluctuating or fluctuation or fluctuated |
| FM … | From (followed by time weather change is forecast to begin) |
| FRONT† | Front (relating to weather) |
| FT | Feet (dimensional unit) |
| FU | Smoke |
| FZ | Freezing |
| FZDZ | Freezing drizzle |
| FZFG | Freezing fog |
| FZRA | Freezing rain |

G

| | |
|---|---|
| G … | Variations from the mean wind speed (gusts) (followed by figures in METAR/SPECI and TAF) |
| GAIN | Airspeed or headwind gain |
| GAMET | Area forecast for low-level flights |
| GR | Hail |
| GRIB | Processed meteorological data in the form of grid point values expressed in binary form (meteorological code) |
| GS | Small hail and/or snow pellets |

H

| | |
|---|---|
| H | High pressure area or the centre of high pressure |
| HNH | High latitudes northern hemisphere |
| HPA | Hectopascal |
| HR | Hours |

| | |
|---|---|
| HSH | High latitudes southern hemisphere |
| HURCN | Hurricane |
| HVY | Heavy (used to indicate the intensity of weather phenomena, e.g. HVY RA = heavy rain) |
| HZ | Haze |
| | |
| I | |
| IAVW | International airways volcano watch |
| ICE | Icing |
| INC | In cloud |
| INTSF | Intensify or intensifying |
| ISOL | Isolated |
| | |
| K | |
| KM | Kilometres |
| KMH | Kilometres per hour |
| KT | Knots |
| | |
| L | |
| L | Low pressure area or the centre of low pressure |
| LAT | Latitude |
| LCA | Local or locally or location or located |
| LINE | Line (used in SIGMET) |
| LONG | Longitude |
| LOSS | Airspeed or headwind loss |
| LTD | Limited |
| LVL | Level |
| LYR | Layer or layered |
| M | |
| … M | Metres (preceded by figures) |
| M … | Minimum value of runway visual range (followed by figures in METAR/SPECI) |
| MAX | Maximum |
| MBST | Microburst |
| MET† | Meteorological or meteorology |
| METAR† | Aerodrome routine meteorological report (in meteorological code) |
| MET | REPORT Local routine meteorological report (in abbreviated plain language) |
| MID | Mid-point (related to RVR) |
| MIFG | Shallow fog |
| MNH | Middle latitudes northern hemisphere |
| MNM | Minimum |
| MOD | Moderate (used to indicate the intensity of weather phenomena, interference or static reports, e.g. MODRA = moderate rain) |
| MOV | Move or moving or movement |
| MS | Minus |
| MSH | Middle latitudes southern hemisphere |
| MSL | Mean Sea level |
| MT | Mountain |
| MTW | Mountain waves |
| MWO | Meteorological watch office |
| | |
| N | |
| N | No distinct tendency (in RVR during previous 10 minutes) |
| N | North or northern latitude |
| NC | No change |
| NE | North-east |

| | |
|---|---|
| NIL*† | None or I have nothing to send to you |
| NM | Nautical miles |
| NOSIG† | No significant change (used in trend-type landing forecasts) |
| NOTAM† | A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations |
| NR | Number |
| NSC | Nil significant cloud |
| NSW | Nil significant weather |
| NW | North-west |
| NXT | Next |
| | |
| O | |
| OBS | Observe or observed or observation |
| OBSC | Obscure or obscured or obscuring |
| OCNL | Occasional or occasionally |
| OPMET† | Operational meteorological (information) |
| OVC | Overcast |
| | |
| P | |
| P … | Maximum value of wind speed or runway visual range (followed by figures in METAR/SPECI and TAF) |
| PL | Ice pellets |
| PO | Dust/sand whirls (dust devils) |
| PRFG | Aerodrome partially covered by fog |
| PROB† | Probability |
| PS | Plus |
| PSN | Position |
| PSYS | Pressure system(s) |
| | |
| Q | |
| QFE‡ | Atmospheric pressure at aerodrome elevation (or at runway threshold) |
| QNH‡ | Altimeter sub-scale setting to obtain elevation when on the ground |
| | |
| R | |
| R … | Runway (followed by figures in METAR/SPECI) |
| RA | Rain |
| RAG | Ragged |
| RE | Recent (used to qualify weather phenomena, e.g. RERA = recent rain) |
| RNAV† | (to be pronounced “AR-NAV”) Area navigation |
| ROBEX† | Regional OPMET bulletin exchange (scheme) |
| RPLC | Replace or replaced |
| RRA | (or RRB, RRC … etc., in sequence) Delayed meteorological message (message type designator) |
| RTD | Delayed (used to indicate delayed meteorological message; message type designator) |
| RVR‡ | Runway visual range |
| RWY | Runway |
| | |
| S | |
| S | South or southern latitude |
| S … | State of the sea (followed by figures in METAR/SPECI) |
| SA | Sand |
| SCT | Scattered |

| | |
|---|---|
| SE | South-east |
| SEA | Sea (used in connection with sea-surface temperature and state of the sea) |
| SECN | Section |
| SEV | Severe (used e.g. to qualify icing and turbulence reports) |
| SFC | Surface |
| SG | Snow grains |
| SH … | Shower (followed by RA = rain, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. SHRASN = showers of rain and snow) |
| SIG | Significant |
| SIGMET† | Information concerning en-route weather and other phenomena in the atmosphere which may affect the safety of aircraft operations |
| SN | Snow |
| SNOCLO | Aerodrome closed due to snow (used in METAR/SPECI) |
| SPECI† | Aerodrome special meteorological report (in meteorological code) |
| SPECIAL† | Local special meteorological report (in abbreviated plain language) |
| SQ | Squall |
| SQL | Squall line |
| SS | Sandstorm |
| STNR | Stationary |
| SW | South-west |
| SWX | Space weather |
| SWXC | Space weather centre |
| | |
| T | |
| T | Temperature |
| TAF† | Aerodrome forecast (in meteorological code) |
| TC | Tropical cyclone |
| TCAC | Tropical cyclone advisory centre |
| TCU | Towering cumulus |
| TDO | Tornado |
| TEMPO† | Temporary or temporarily |
| TL … | Till (followed by time by which weather change is forecast to end) |
| TN … | Minimum temperature (followed by figures in TAF) |
| TO | To … (place) |
| TOP† | Cloud top |
| TREND† | Trend forecast |
| TS | Thunderstorm (in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome) |
| TS … | Thunderstorm (followed by RA = RAIN, SN = snow, PL = ice pellets, GR = hail, GS = small hail and/or snow pellets or combinations thereof, e.g. TSRASN = thunderstorm with rain and snow) |
| TURB | Turbulence |
| TX … | Maximum temperature (followed by figures in TAF) |
| | |
| U | |
| U | Upward (tendency in RVR during previous 10 minutes) |
| UIR‡ | Upper flight information region |
| UTC‡ | Coordinated Universal Time |
| | |
| V | |
| …V… | Variations from the mean wind direction (preceded and followed by figures in METAR/SPECI, e.g. 350V070) |
| VA | Volcanic ash |
| VAAC | Volcanic ash advisory centre |

| | |
|---|---|
| VC | Vicinity of the aerodrome (followed by FG = fog, FC = funnel cloud, SH = shower, PO = dust/sand whirls, BLDU = blowing dust, BLSA = blowing sand, BLSN = blowing snow, DS = duststorm, SS = sandstorm, TS = thunderstorm or VA = volcanic ash, e.g. VCFG = vicinity fog) |
| VER | Vertical |
| VHF‡ | Very high frequency [30 MHz to 300 MHz] |
| VIS | Visibility |
| VOLMET† | Meteorological information for aircraft in flight |
| VRB | Variable |
| VV… | Vertical visibility (followed by figures in METAR/SPECI and TAF) |
| W | |
| W | West or western longitude |
| W… | Sea-surface temperature (followed by figures in METAR/SPECI) |
| WAFC | World area forecast centre |
| WAFS | World area forecast system |
| WI | Within |
| WID | Wide |
| WIND | Wind |
| WKN | Weaken or weakening |
| WRNG | Warning |
| WS | Wind shear |
| WSPD | Wind speed |
| WX | Weather |
| Z | |
| Z | Coordinated Universal Time (in meteorological messages) |

NOTE

† When radiotelephony is used, the abbreviations and terms are transmitted as spoken words.

‡ When radiotelephony is used, the abbreviations and terms are transmitted using the individual letters in non-phonetic form.

* Signal is also available for use in communicating with stations of the maritime mobile service.