

<p style="text-align: center;"><b>SOUTH AFRICAN</b></p>  <p style="text-align: center;"><b>CIVIL AVIATION AUTHORITY</b></p>	<p><b>REPUBLIC OF SOUTH AFRICA</b></p> <p><b>CIVIL AVIATION AUTHORITY</b></p> <p><b>AERONAUTICAL INFORMATION CIRCULAR</b></p>	<p>CAA Private Bag x73 Halfway House 1685</p>
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**AIR NAVIGATION SERVICES**

**METEOROLOGICAL SERVICES**

**METEOROLOGICAL INFORMATION**

**1. Responsible service**

- 1.1 *The South African Weather Service (SAWS) is designated in terms of the SAWS Act No. 8 of 2001 as the Aeronautical meteorological authority for provision of meteorological service for international air navigation.*

**Contact details:**

*The South African Weather Service  
442 Rigel Avenue South,  
Erasmusrand, 0181  
Private Bag X097  
Pretoria 0001  
Tel: +27 12 367 6000  
Fax: +27 12 367 6200  
AFTN: FAPRYMYX  
Website: www.weathersa.co.za*

- 1.2 *The Meteorological Authority is responsible for providing oversight over the provision of aeronautical meteorological service for international air navigation.*

**Contact details:**

*The Meteorological Authority Office  
442 Rigel Avenue South,  
Erasmusrand, 0181  
Private Bag X097  
Pretoria 0001  
Tel: +27 12 367 6084  
Fax: +27 12 367 6200  
Email: metauthority@weathersa.co.za*

- 1.3 *Meteorological service provided by South African Weather Service is based on the requirements contained in the following ICAO documents:*

- (a) Annex 3 — Meteorological Service for International Air Navigation*
- (b) Doc 7030 — Regional Supplementary Procedures*
- (c) Doc 7474 — Regional Air Navigation Plan — AFI Region*

1.4 *The list of services provided by SAWS includes the following:*

- (a) climatology services for the development and supply of climatological summaries;*
- (b) forecast services for the supply of forecast meteorological information for the specific aerodrome, area or portion of airspace;*
- (c) information dissemination service for the collection and dissemination of meteorological information;*
- (d) meteorological briefing service to aeronautical users (air traffic services, operators and flight crew members) for the supply of written and oral meteorological information on existing and expected meteorological conditions;*
- (e) meteorological reporting service for the supply of aerodrome meteorological reports;*
- (f) meteorological watch services for the monitoring and prediction of meteorological conditions affecting aircraft operations in a specific area and at specific aerodromes;*
- (g) provision of flight documentation;*
- (h) meteorological support for search and rescue; and*
- (i) any other meteorological service which is deemed as desirable by recognized aviation organizations and/or service providers or to which an operational requirement may exist.*

## **2. Area of responsibility**

2.1 *The area of responsibility or flight information region (FIR) over which meteorological services are provided are as follows:*

- (a) Johannesburg FIR;*
- (b) Cape Town FIR; and*
- (c) Johannesburg Oceanic FIR.*

## **3. Meteorological observations and reports**

3.1 *Meteorological observations and reports are provided to cover the operational hours of the local ATS unit.*

3.2 *Reports of meteorological observations are issued as:*

- (a) METAR and SPECI – for dissemination outside the aerodrome of origin (intended for flight planning); and*
- (b) Local routine and local special report – for dissemination at the aerodrome of origin and intended for inbound and outbound aircrafts.*

3.3 *Details of meteorological observations and reports are provided in Table GEN 3.5-1.*

## **4. Types of services**

4.1 *Briefing and consultancy*

4.1.1 *Personal briefing and consultation for flight crew members is provided at all aerodrome meteorological offices.*

**Contact details:**

<b>Name of Office</b>	<b>Tel</b>
Cape Town	+27 21 935 5777
O.R. Tambo	+27 11 309 9329/9330/9332
Port Elizabeth	+27 41 581 0403
Durban	+27 32 436 3813
Bloemfontein	+27 51 433 3281

4.2 *Forecasting service*

4.2.1 *Forecasting service is provided by aerodrome meteorological offices and comprises the following:*

(a) *Terminal Aerodrome Forecast (TAF);*

(b) *Landing Forecast (TREND);*

(c) *Forecast for Take-Off (FTO); and*

(d) *Route Forecast.*

4.2.2 *Forecast information is kept up to date through continuous review and cancelled whenever it cannot be kept under review.*

4.2.3 *Terminal aerodrome forecast (TAF)*

(a) *TAFs valid for up to 30 hours are issued at intervals of 6 hours, with the period of validity beginning at one of the main synoptic hours (00, 06, 12, 18 UTC).*

(b) *TAFs are filled at approximately two hours before the start of the period of validity. Only one TAF is valid for an aerodrome at any given time.*

4.2.4 *Landing Forecast (TREND)*

*TREND forecast is used by aircraft within one hour's flying time from the aerodrome. The validity period for a TREND forecast is two hours during which it supersedes the TAF issued for the same aerodrome.*

4.2.5 *Forecast for Take-Off (FTO)*

*Forecast for take-off is provided for international aerodromes 3 hours prior to the expected time of departure (ETD).*

4.2.6 *Route Forecast*

*Route forecast covering domestic and international flight routes is provided by the Johannesburg Meteorological Watch Office (MWO) based at O.R. Tambo International Airport.*

(a) *Route forecast is provided in the form of significant weather charts (SIGWX).*

(b) *SIGWX for international flight routes is issued by the WAFC – London.*

(c) *SIGWX charts for domestic flight routes is issued by the MWO.*

**5. Notification required from operators**

5.1 *Pre-flight information for operators (i.e. briefing, consultancy, flight documentation and other meteorological information) is provided upon request.*

5.2 *The minimum amount of advance notice for pre-flight information should be at least 6 hours before the expected time of departure.*

**6. Aircraft reports**

6.1 *The Aviation Weather Centre is the designated meteorological watch office for collection of air-reports received by voice communications within the following FIR/UIR:*

*(a) Johannesburg FIR;*

*(b) Cape Town FIR; and*

*(c) Johannesburg Oceanic FIR.*

6.2 *Routine aircraft observations must be made (every 15 minutes) during en-route and climb-out phases of the flight and by flights equipped with air-ground data link.*

6.3 *Special and other non-routine aircraft observations must be made during all phases of the flight when the following conditions are observed:*

*(a) moderate or severe turbulence; or*

*(b) moderate or severe icing; or*

*(c) severe mountain wave; or*

*(d) thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or*

*(e) thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or*

*(f) heavy dust storm or heavy sandstorm; or*

*(g) volcanic ash cloud; or*

*(h) Pre-eruption volcanic activity or a volcanic eruption.*

6.4 *Routine aircraft observations (AIREPs) reported by voice communication are required at the ATS collection centre/points described in Table GEN 3.5 – 2*

6.5 *Upon receipt of the air-reports, the ATS unit relays them without delay to the associated MWO for preparation of SIGMET and or AIRMET. Air-reports are also relayed to the WAFC.*

6.6 *The means by which air-reports are reported and relayed must be consistent with the provisions in Table GEN 3.5 – 3.*

**7. VOLMET service**

*VOLMET service is provided by ATS units in accordance with the provisions of ICAO Annex 11.*

**8. SIGMET and AIRMET service**

**8.1 General**

8.1.1 SIGMET and AIRMET are provided by the designated MWO.

8.1.2 The MWO maintains a 24 hour meteorological watch over three flight information regions (Table GEN 3.5 – 4 and GEN 3.5 – 5) and issue SIGMET and AIRMET in accordance with the provisions of ICAO Annex 3.

8.1.3 SIGMET for volcanic ash and tropical cyclones are based on the advisory information received from the volcanic ash advisory centre (VAAC) and tropical cyclone advisory centre (TCAC) respectively.

**Contact details:**

Aviation Weather Centre

Office NL61, Lower Roof (3rd floor)

O.R. Tambo International Airport

Postal address:

O.R. Tambo International Airport

P.O. Box 1194

O.R. Tambo International Airport

1627

Tel: +27 11 390 9329

Fax: +27 11 390 9332

Website: <https://aviation.weathersa.co.za>

Email: [fajsf@weathersa.co.za](mailto:fajsf@weathersa.co.za)

[fajs@weathersa.co.za](mailto:fajs@weathersa.co.za)

8.1.4 SIGMET is issued whenever the following weather conditions occur or are expected to occur:

(a) thunderstorm

(b) tropical cyclone

(c) turbulence

(d) icing

(e) mountain wave

(f) duststorm

(g) sandstorm

(h) volcanic ash

(i) radioactive cloud

8.1.5 The criteria for issuance of SIGMET are consistent with the provisions of ICAO Annex 3.

8.1.6 AIRMET is issued whenever the following weather conditions occur and in accordance with the criteria defined in ICAO Annex 3:

(a) surface wind speed

(b) surface visibility

- (c) *thunderstorms*
- (d) *mountain obscuration*
- (e) *cloud*
- (f) *icing*
- (g) *turbulence*
- (h) *mountain wave*

8.1.7 *SIGMET and AIRMET are cancelled whenever the observed or expected weather information no longer exist or is no longer expected.*

8.2 *Dissemination of SIGMET/AIRMET*

8.2.1 *SIGMET and AIRMET information in both text and graphical formats are available on AFTN (FAPRYMYX) and also on the website: <https://aviation.weathersa.co.za>.*

8.2.2 *SIGMET for volcanic ash and tropical cyclone is based on advisory information prepared and issued by the Volcanic Ash Advisory Centre (VAAC) and Tropical Cyclone Advisory Centre (TCAC).*

8.2.3 *SIGMET/AIRMET information to aircraft in flight is disseminated by the ATS unit responsible for the FIR for which the SIGMET/AIRMET is issued.*

9. *Aerodrome warnings*

9.1 *Aerodrome warning for the protection of parked aircraft, aerodrome facilities and services are issued by the designated aerodrome meteorological offices whenever one of the following weather phenomena occurs or expected to occur at an aerodrome:*

- (a) *strong surface winds and gusts*
- (b) *thunderstorm*
- (c) *hail*
- (d) *frost*
- (e) *hoar frost or rime*
- (f) *snow*
- (g) *freezing precipitation*

9.2 *The aerodrome meteorological office keeps aerodrome warnings under continuous review and cancels the warnings whenever conditions are no longer occurring or no longer expected to occur at an aerodrome.*  
*Note 1: The warning is designated as "storm warning" and will be issued when the mean speed of the surface wind is expected to exceed 34KT (Beaufort Scale 8) or when gusts in excess of 41KT (Beaufort Scale 9) are expected to occur.*

*Note 2: A "frost warning" will be issued when the air temperature is expected to fall below 0°C on those dates when protective measures have generally not yet been taken and also when a substantial deposit of hoarfrost, e.g. on wing surfaces, is expected.*

10. *Other automated meteorological service (Refer to Table GEN 3.5 – 6)*

**Table GEN 3.5 - 1**  
**List of meteorological observations and reports**

<b>Name of station/Location indicator</b>	<b>Frequency of observations</b>	<b>Type of report</b>	<b>Hours of operation</b>	<b>Climatological tables</b>
BLOEMFONTEIN/ Bram Fischer FABL	Routine half hourly plus special observations  AUTO: 18:00 – 23:30	MET REPORT, METAR, SPECI, TREND	03:00 – 18:00	AVLB
CAPE TOWN/ Cape Town FACT	Routine half hourly (02:00 -18:30) plus special observations and hourly (19:00- 02:00)  AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVLB
DURBAN/King Shaka FALE	Routine half hourly plus special observations  AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVLB
JOHANNESBURG/ O.R. Tambo FAOR	Routine half hourly plus special observations  AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVLB
LANSERIA/ Lanseria FALA	Routine hourly plus special observations  AUTO: 21:00 – 02:00	MET REPORT, METAR, SPECI, TREND	03:00 - 20:00	AVLB
NELSPRUIT/ Kruger Mpumalanga FAKN	Routine hourly plus special observations  AUTO: 19:00 – 02:00	METAR, SPECI, TREND	03:00 – 18:00	AVLB
PILANESBURG/ Pilanesburg FAPN	Routine hourly observations	AUTO METAR	-	AVLB
POLOKWANE/ Polokwane FAPP	Routine hourly plus special observations  AUTO: 19:00 – 02:00	METAR, SPECI, TREND	03:00 – 18:00	AVLB
PORT ELIZABETH/ Port Elizabeth FAPE	Routine half hourly (02:00 – 18:30) & Hourly (19:00 – 01:00) plus special observations  AUTO: NIL	MET REPORT, METAR, SPECI, TREND	H24	AVLB
UPINGTON/ Upington FAUP	Routine hourly plus special observations  AUTO: 19:00 – 22:00	METAR, SPECI, TREND	23:00 – 18:00	AVLB

**Table GEN 3.5 – 2**

<b>AIREP Collection centre</b>	<b>Collection points/area</b>
Johannesburg	Johannesburg
	Bloemfontein
	Cape Town
	Beira
	Gaborone
	Routes
Johannesburg (routes crossing FIR/UIR)	Harare
	Manzini
	Lilongwe
	Lusaka
	Maputo
	Maseru
	Windhoek

**ATS collection centre/points**

**Table GEN 3.5 – 3**

**Relaying of air-reports by ATS units**

<b>Type of report</b>	<b>Means of reporting</b>	<b>Relayed to:</b>
Special air-reports	Voice communication	MWO <sup>1</sup>
Routine and special air-reports	Data link	MWO and WAFC <sup>2</sup>

**Table GEN 3.5 – 4**

**Flight Information Region served**

<b>Name of MWO</b>	<b>Hours of Service</b>	<b>FIRs served</b>	<b>ICAO ID</b>	<b>SIGMET</b>	<b>AIRMET (valid 4 hrs)</b>
Aviation Weather Centre	H24	Johannesburg FIR	FAJA	AVLB	AVLB
		Cape Town FIR	FACA	AVLB	AVLB
		Johannesburg Oceanic FIR	FAJO	AVLB	-

**Table GEN 3.5 – 5**

**Issuance and validity of SIGMET/AIRMET**

<b>Responsible MWO</b>	<b>Type of information</b>	<b>Time of issue (before start of validity)</b>	<b>Validity (hrs)</b>
Aviation Weather Centre	AIRMET	up to 4	up to 4
	SIGMET <sup>3</sup>	up to 4	up to 4
	Volcanic Ash SIGMET	up to 12	up to 6
	Tropical Cyclone SIGMET	up to 12	up to 6

<sup>1</sup> Aviation Weather Centre

<sup>2</sup> WAFC London

<sup>3</sup> SIGMET for any other weather phenomenon except tropical cyclone and volcanic ash.



**Table GEN 3.5 – 6**  
**Other automated meteorological services**

<b>Service name</b>	<b>Information available</b>	<b>Area, route and aerodrome coverage</b>	<b>Contact details</b>
<i>Meteorological briefing service (oral and written information)</i>	<i>OPMET; satellite imagery; METAR QNH Analysis; Webcams, Graphical SIGMET/AIRMET,</i>	<i>Africa, Africa/Asia, Asia, Australia, Europe, Middle East, North America, South America</i>	<i>Aviation Weather Centre  Tel: +27 11 390 9329 Fax: +27 11 390 9332  Website: <a href="https://aviation.weathersa.co.za">https://aviation.weathersa.co.za</a></i>
	<i>International fixed time prognostic charts (FL250 – FL630)</i>		
	<i>Domestic fixed time prognostic charts:</i>	<i>Johannesburg FIR, Cape Town FIR and most parts of Southern Africa</i>	
	<ul style="list-style-type: none"> <li>• <i>Additional (surface to FL100)</i></li> <li>• <i>Low-level (up to FL180)</i></li> <li>• <i>High level (above FL180)</i></li> </ul>		



**DIRECTOR OF CIVIL AVIATION**