GEN 3.5 Meteorological services

1 Responsible service

The designated meteorological authority is Civil Aviation Agency.

Post: Georgian Civil Aviation Agency
Beginning of I Kheivani Street
0114 Tbilisi
Georgia
Tel: +995322948027
AFS: UGGUYMYX
E-mail: met@gcaa.ge

The meteorological services for civil aviation are provided by SAKAERONAVIGATSIA Ltd.

Post: SAKAERONAVIGATSIA Ltd
Meteorological Service
TBILISI/Tbilisi Airport
0198 Tbilisi, Georgia
Tel: +995322744310
Tel: +995577345554
AFS: UGTBYMYX
E-mail: metoffice.tbilisi@airnav.ge
URL: https://www.airnav.ge

The service is provided in accordance with the provisions contained in the following documents:

- ***ICAO Annex 3*** *— Meteorological Service for International Air Navigation,* Twentieth edition, July 2018 (Amendment 81);
- ***ICAO Doc 7030*** *— Regional Supplementary Procedures*, EUR Region, Part 3 – Meteorology;
- ***Georgian Government Decree No 325*** *— Rules of Meteorological Provision of Georgian Civil Aviation* (December 9, 2013).

2 Area of responsibility

Area meteorological observation and forecasting is provided for TBILISI FIR.

3 Meteorological observations and reports

Table GEN 3.5.3 Meteorological observations and reports

Name of station/ Location indicator	Type & frequency of observation / automatic observing equipment	Types of MET reports & Supplementary Information included	Observation System & Site(s)	Hours of operation	Climatological information
1	2	3	4	5	6
BATUMI **UGSB**	Half hourly routine Special obs/ Vaisala	METAR, MET REPORT, SPECIAL,TREND, TAF, AD and WS Warning	*1	H24	AVBL**
KUTAISI/ Kopitnari **UGKO**	Half hourly routine Special obs/ Telvent	METAR, MET REPORT, SPECIAL,TREND, TAF, AD and WS Warning	*1	H24	AVBL**
TBILISI/ Tbilisi **UGTB**	Half hourly routine Special obs/ Vaisala	METAR, MET REPORT, SPECIAL,TREND, TAF, SIGMET, AD and WS Warning, GAMET, AIRMET	*1	H24	AVBL**
MESTIA **UGMS**	Half hourly routine Special obs/ Telvent	METAR, TAF	*1	From HR 05:00 - until HR 13:00	AVBL**
AMBROLAURI **UGAM**	Half hourly routine Special obs/ Telvent	METAR, TAF	*1	From HR 05:00 - until HR 13:00	AVBL**

** Climatological Summary of Georgian Airports is available on the official website of Sakaeronavigatsia Ltd **www.airnav.ge** on MET-Office page, under Climatological Characteristics tab.

* 1 The main meteorological elements:

At BATUMI aerodrome:

- Cloud Base Sensor – RWY 12, near the landing markers;
- Wind Sensor – RWY 12 TDZ area;
- Visibility Sensor – RWY 12 TDZ area;
- Pressure Sensor – RWY 12 TDZ area;
- Temperature/Humidity Sensor – RWY 12 TDZ area;
- Thunderstorm Sensor – RWY 12 TDZ area;
- Rain Gage – RWY 12 TDZ area;
- Wind Sensor – RWY 12/30 Middle area;
- Visibility/Present Weather Sensor – RWY 12/30 Middle area;
- Background Luminance Sensor for RVR calculation - RWY 12/30 Middle area;
- Wind Sensor – RWY 30 TDZ area.

Meteorological observations at the aerodrome and on the RWY are being transmitted via AFTN around the clock.

At KUTAISI/Kopitnari aerodrome:

- Cloud Base Sensor – RWY 07 TDZ area;
- Wind Sensor – RWY 07 TDZ area;
- Visibility Sensor – RWY 07 TDZ area;
- Background Luminance Sensor for RVR calculation - RWY 07 TDZ area;
- Wind Sensor – RWY 07/25 Middle area;
- Visibility Sensor – RWY 07/25 Middle area;
- Background Luminance Sensor for RVR calculation - RWY 07/25 Middle area;
- Pressure Sensor – RWY 07/25 Middle area;
- Present Weather Sensor – RWY 07/25 Middle area;
- Temperature/Humidity Sensor – RWY 07/25 Middle area;
- Thunderstorm Sensor – RWY 07/25 Middle area;
- Rain Gage – RWY 07/25 Middle area;
- Wind Sensor – RWY 25 TDZ area;
- Visibility Sensor – RWY 25 TDZ area;
- Cloud Base Sensor – RWY 25 TDZ area.

Meteorological observations at the aerodrome and on the RWY are being transmitted via AFTN around the clock.

At TBILISI/Tbilisi aerodrome:

- Cloud Base Sensor – RWY 13R, at Middle Marker 13R;
- Wind Sensor – RWY 13R TDZ area;
- Visibility Sensor – RWY 13R TDZ area;
- Wind Sensor – RWY 13R/31L Middle area;
- Visibility Sensor – RWY 13R/31L Middle area;
- Background Luminance Sensor for RVR calculation - RWY 13R/31L Middle area;
- Present Weather Sensor – RWY 13R/31L Middle area;
- Wind Sensor – RWY 31L TDZ area;
- Visibility Sensor – RWY 31L TDZ area;
- Pressure Sensor – RWY 31L TDZ area;
- Temperature/Humidity Sensor – RWY 31L TDZ area;
- Thunderstorm Sensor – RWY 31L TDZ area;
- Rain Gage – RWY 31L TDZ area;
- Cloud Base Sensor – RWY 31L, at Middle Marker 31L.

Meteorological observations at the aerodrome and on the RWY are being transmitted via AFTN around the clock.

At MESTIA aerodrome:

- Wind Sensor – RWY Middle area;
- Pressure Sensor – RWY Middle area;
- Temperature/Humidity Sensor – RWY Middle area;
- Rain Gage – RWY Middle area;
- Visibility – visual observation only;
- Cloud Base – visual observation only.

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Meteorological observations at the aerodrome and on the RWY are being transmitted via AFTN around the clock. Full METAR is available in the daytime (from HR05:00 - until HR13:00), in the night time AUTOMETAR is transmitted without the VISIBILITY, CLOUDS and WEATHER PHENOMENA groups.

At AMBROLAURI aerodrome:

- Wind Sensor – RWY Middle area;
- Pressure Sensor – RWY Middle area;
- Temperature/Humidity Sensor – RWY Middle area;
- Rain Gage – RWY Middle area;
- Visibility – visual observation only;
- Cloud Base – visual observation only.

Meteorological observations at the aerodrome and on the RWY are being transmitted via AFTN around the clock. Full METAR is available in the daytime (from HR05:00 - until HR13:00), in the night time AUTOMETAR is transmitted without the VISIBILITY, CLOUDS and WEATHER PHENOMENA groups.

4 Types of services

Meteorological Service of SAKAERONAVIGATSIA Ltd provides the following types of service:

- Briefing;
- Consultations for aircraft crews;
- Flight meteorological documentation for different kinds of flights (completed according to the user's request);
- Landing/take-off meteorological service.

Details of meteorological briefing at the aerodromes are given in the individual aerodrome subsection AD 2.

SAKAERONAVIGATSIA Ltd provides meteorological service at the TBILISI/Tbilisi, KUTAISI/Kopitnari, BATUMI, MESTIA and AMBROLAURI aerodromes.

Meteorological Office	Telephone	E-mail
1	2	3
TBILISI	(+995 32) 274 43 10	sinoptik.tbilisi@airnav.ge
KUTAISI	(+995 32) 274 43 37 (+995 32) 274 44 77 (303)	meteo.kopitnari@airnav.ge
BATUMI	(+995 577) 11 44 92	meteo.batumi@airnav.ge
MESTIA	(+995 32) 274 43 29 (+995 32) 274 44 77 (173)	meteo.mestia@airnav.ge
AMBROLAURI	(+995 32) 274 43 08 (+995 32) 274 44 77 (701)	meteo.ambrolauri@airnav.ge

Meteorological Office at TBILISI/Tbilisi aerodrome provides consultations for crews in English. Flight meteorological documentation is provided for international and domestic flights. The documentation comprises Significant Weather Chart, Upper Wind and Upper Air Temperature Chart, latest available aerodrome forecasts for the destination and for the alternate aerodromes (including RALT, TALT), latest current weather for the destination and for the alternate aerodromes, Forecasts for take-off and such additional meteorological information as advisory information on space weather events, meteo radar and satellite information (upon request for consultation), AIREP, GAMET, SIGMET and AIRMET. All WAFS products, VAACs and TCACs are available from SADIS receiving system and available from secured meteorological web-site https://www.aviationweather.gov/.

Meteorological Office at KUTAISI/Kopitnari aerodrome provides consultations for crews in English. Flight meteorological documentation is provided for international and domestic flights. The documentation comprises Significant Weather Chart, Upper Wind and Upper Air Temperature Chart, latest available aerodrome forecasts for the destination and for the alternate aerodromes (including RALT, TALT), latest current weather for the destination and for the alternate aerodromes, Forecasts for take-off and such additional meteorological information as advisory information on space weather events, meteo radar and satellite information (upon request for consultation), AIREP, GAMET, SIGMET and AIRMET. All WAFS products, VAACs and TCACs are available from SADIS receiving system and available from secured meteorological web-site https://www.aviationweather.gov/.

Meteorological Office at BATUMI aerodrome provides consultations for crews in English. Flight meteorological documentation is provided for international and domestic flights. The documentation comprises Significant Weather Chart, Upper Wind and Upper Air Temperature Chart, latest available aerodrome forecasts for the destination and for the alternate aerodromes (including RALT, TALT), latest current weather for the destination and for the alternate aerodromes, Forecasts for take-off and such additional meteorological information as advisory information on space weather events, meteo radar and satellite information (upon request for consultation), AIREP, GAMET, SIGMET and AIRMET. All WAFS products, VAACs and TCACs are available from SADIS receiving system and available from secured meteorological web-site https://www.aviationweather.gov/.

5 Notification required from operators

Notifications from operators in respect of briefing consultation, flight documentation and other meteorological information needed by them *(ref. ICAO Annex 3, 2.3)* is normally required for intercontinental flights of more than 3500 KM. Such notifications should be received at least 6 hours before the estimated time of departure.

6 Aircraft reports

Observations and aircraft reports are conducted in accordance with *ICAO Appendix I Doc 4444 RAC /501/12*.

7 VOLMET service

7.1 VOLMET Broadcasts

7.1.1 VOLMET Broadcasts are made in plain language from Tbilisi as detailed in Table GEN 3.5.7. The broadcasts are prefixed by designator TBILISI VOLMET and contain:

a. notification of current SIGMET information;
b. METAR with TREND.

7.1.2 Broadcasts are made on VHF ground-to-air frequencies as detailed in Table GEN 3.5.7.

Table GEN 3.5.7 VOLMET service

Name of transmitting station	Call sign/ IDENT Abbreviation (EM)	FREQ (MHz)	Broadcasting period	Hours of service	Aerodromes included	REP, FCST, SIGMET INFO, Remarks
1	2	3	4	5	6	7
Tbilisi	TBILISI VOLMET (A3E)	129.200	CONS	H24	UGTB UGKO UGSB	METAR+TREND UGGG-SIGMET

8 SIGMET and AIRMET service

Table GEN 3.5.8 SIGMET service

Name of MWO/ location indicators	Hours	FIR or CTA served	Validity	Specific SIGMET procedures	AIRMET procedures	ATS unit served	Additional information
1	2	3	4	5	6	7	8
TBILISI UGTB	H24	TBILISI FIR	SIGMET/4 HR SIGMET VA/TC: Validity 6 HR	Issued H24		TBILISI TWR, APP, ACC; BATUMI TWR, APP; KUTAISI TWR, APP; AFIS UGAM; AFIS UGMS	NIL
TBILISI UGTB	H24	TBILISI FIR	AIRMET/4 HR		Issued during daytime only	TBILISI TWR, APP, ACC; BATUMI TWR, APP; KUTAISI TWR, APP; AFIS UGAM; AFIS UGMS	NIL

8.1 Area meteorological watch service

8.1.1 SIGMET

Information is issued in the form of SIGMET messages about occurrence or possible occurrence of one or several of the following significant meteorological phenomena:

a. thunderstorm:

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  - obscured (OBSC TS);
  - embedded (EMBD TS);
  - frequent (FRQ TS);
  - line squall (SQL TS);
  - obscured with hail (OBSC TSGR);
  - embedded with hail (EMBD TSGR);
  - frequent with hail (FRQ TSGR);
  - line squall with hail (SQL TSGR);

b. turbulence:
  - severe turbulence (SEV TURB);

c. icing:
  - severe icing (SEV ICE);
  - severe icing due to freezing rain (SEV ICE FZRA);

d. tropical cyclone (to be included if the 10-minute mean surface wind speed at the aerodrome is expected to be 34 KT or more);

e. mountain wave:
  - severe mountain wave (SEV MTW);

f. sandstorm:
  - heavy sandstorm (HVY SS);

g. duststorm:
  - heavy duststorm (HVY DS);

h. volcanic ash:
  - volcanic ash (VA + name of the volcano, if known);

i. radioactive cloud (RDOACT CLD).

SIGMETs are issued in English in abbreviated plain language and are numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to less than 4 hours from the time of issuance.

8.1.2 AIRMET

Information is issued in the form of AIRMET messages about occurrence or possible occurrence of one or several of the following significant meteorological phenomena:

- strong surface wind and gusts above 30 KT (SFC WSPD + wind speed above 30 KT on the widespread areas);
- surface visibility to less than 5000 M on the widespread areas (SFC VIS + BR, DS, DU, DZ, FC, FG, FU, GR, GS, HZ, IC, PL, PO, RA, SA, SG, SN, SQ, SS or VA);
- thunderstorms: ISOL TS, OCNL TS, ISOL TSGR, OCNL TSGR;
- mountain obscuration:
  - mountain obscured MT OBSC;
- cloud:
  - widespread areas of broken or overcast cloud with height of base less than 1000 FT above ground level:
    - broken BKN CLD (+ height of the base and top and units);
    - overcast OVC CLD (+ height of the base and top and units);
  - cumulonimbus clouds which are:
    - isolated ISOL CB;
    - occasional OCNL CB;
    - frequent FRQ CB;
  - towering cumulus clouds which are:
    - isolated ISOL TCU;
    - occasional OCNL TCU;
    - frequent FRQ TCU;
- moderate turbulence (except for turbulence in convective clouds) - MOD TURB;
- moderate icing (except for icing in convective clouds) - MOD ICE;
- moderate mountain wave - MOD MTW.

AIRMETs are issued in English in abbreviated plain language and are numbered consecutively for each day commencing at 0001. Their period of validity is generally limited to less than 4 hours from the time of issuance.

8.1.3 GAMET

GAMET area forecasts contain two sections: *Section I* related to information on en-route weather phenomena hazardous to low-level flights (below FL150), prepared in support of the issuance of AIRMET information, and *Section II* related to additional information required by low-level flights. The content and order of elements in a GAMET area forecast are in accordance with the template shown in Table A5-3 of ICAO Annex 3. Elements which are already covered by a SIGMET message are omitted from GAMET area forecast.

Section I

1. Surface wind speed - SFC WSPD group - Widespread surface wind exceeding 30 KT.

2. Horizontal surface visibility - SFC VIS group - Widespread surface visibility below 5000 M including the weather phenomena causing the reduction in visibility.

3. Significant weather phenomena - SIGWX group - ISOL TS or OCNL TS or FRQ TS or OBSC TS or EMBD TS or HVY DS or HVY SS or SQL TS or ISOL TSGR or OCNL TSGR or FRQ TSGR or OBSC TSGR or EMBD TSGR or SQL TSGR or VA.

4. Mountain obscuration - MT OBSC group.

5. Cloud - SIG CLD group - Widespread areas of broken or overcast cloud with height of base less than 300 M (1000 FT) above ground level (AGL) or above mean sea level (AMSL) and/or any occurrence of cumulonimbus (CB) or towering cumulus (TCU) clouds.

6. Icing - ICE group - Icing (except for that occurring in convective clouds and for severe icing for which a SIGMET message has already been issued).

7. Turbulence - TURB group - Turbulence (except for that occurring in convective clouds and for severe turbulence for which a SIGMET message has already been issued).

8. Mountain wave - MTW group - Mountain wave (except for severe mountain wave for which a SIGMET message has already been issued).

9. SIGMET - SIGMET applicable - SIGMET messages applicable to the FIR/CTA concerned or a sub-area thereof, for which the area forecast is valid.

Section II

10. Pressure centres and fronts - PSYS group - Pressure centres and fronts and their expected movements and developments.

11. Upper winds and upper-air temperatures - WIND/T group - Mean values of wind direction and speed are provided for the following altitudes: 2000, 5000, 10000 and 15000 FT.

12. Cloud - CLD group - Cloud information not included in Section I giving type, height of base and top above ground level (AGL) or above mean sea level (AMSL).

13. Freezing level - FZLVL group.

14. Sea surface temperature - SEA group - Sea surface temperature and state of the sea if required by regional air navigation agreement.

15. Forecast QNH - MNM QNH - Forecast lowest QNH during the period of validity.

16. Volcanic eruptions - VA - Name of volcano.

All heights in forecasts are expressed as altitudes above mean sea level (AMSL) or in flight levels (FL).

The validity period of GAMET forecasts is 6 hours (from 06:00 till 12:00; from 12:00 till 18:00 UTC), these forecasts are prepared and published twice per day for the following areas: A1, A2, A3, A4, A5 (according to chart GAMET AREAS which is available on the Sakaeronavigatsia Ltd official web-site www.airnav.ge on MET-OFFICE page).

Amendments to GAMET

When a weather phenomenon hazardous to low-level flights has been included in the GAMET area forecast and the phenomenon forecast does not occur, or is no longer forecast, a GAMET AMD is issued, amending only the weather element concerned.

8.2 Aerodrome Warning service

Aerodrome warning is provided by all MET offices at the aerodromes. Warnings for the protection of parked and fastened aircraft or other equipment at the aerodrome will be issued by all MET offices, if one or several of the following phenomena are expected to occur at the local aerodrome:

- tropical cyclone (to be included if the 10-minute mean surface wind speed at the aerodrome is expected to be 34 KT or more);
- thunderstorms;
- squall;
- freezing precipitation;
- hail;
- snow (including the expected or observed snow accumulation);
- rime;
- sandstorm;
- duststorm;
- rising sand or dust;
- strong surface wind and gust;
- frost;
- volcanic ash;
- volcanic ash deposition;
- toxic chemicals;
- other phenomena as agreed locally.

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9 Other automated meteorological services

NIL.

Index chart GAMET Areas on page GEN 3.5-9

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