GEN 3.5 Meteorological services

1 Responsible service

1.1 The meteorological authority for civil aviation is the Ministry of Environment of the Republic of Armenia.

Post:
Republic Square, Government House 3
0010 Yerevan,
Republic of Armenia
Tel:+37411 818559
Email:minenv@env.am

1.2 The meteorological services for civil aviation are provided by the “Zvartnots” aviameteorological center closed joint-stock company.

Post:
Airport “Zvartnots”, former HCS complex No. 2
0042 Yerevan, Republic of Armenia
Tel:+37460 373360
Tel:+37460 373362 (H24)
Email:info@zamc.com
URL:www.zamc.com
AFS:UDYZYMYX

1.3 The meteorological services of the "Shirak" international airport are provided by the "Shirak" meteorological service of the "Zvartnots" aviameteorological center closed joint-stock company.

Post:
Gyumri-11, Republic of Armenia
Tel:+37460 373361 (H24)
Email:info@zamc.com
URL:www.zamc.com
AFS:UDSGYMYX

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

- *Annex 3 — Meteorological Service for International Air Navigation*
- *Doc 7030 — Regional Supplementary Procedures*
- *Doc. 7754 Air Navigation Plan, EUR. Region*
- *Doc. 9365 — Manual of All-Weather Operations*
- *Doc. 9377 — Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services*
- *Doc. 8896 — Manual of Aeronautical Meteorological Practice*
- *RA Government Decree N 383-N dated 15.02.2007 “On approval of aviameteorological regulations of civil aviation of the Republic of Armenia”.*

2 Area of responsibility

2.1 "Zvartnots" aviameteorological center closed joint-stock company is the supervisory body for the Yerevan FIR (Flight Information Region).

2.2 "Zvartnots" aviameteorological center closed joint-stock company provides meteorological services concerning current and/or expected weather conditions for "Zvartnots" aerodrome.

2.3 "Shirak" meteorological service provides meteorological services concerning current and/or expected weather conditions for "Shirak" aerodrome.

3 Meteorological observations and reports

3.1 Yerevan “Zvartnots” aerodrome.

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Table GEN 3.5.3.1 Meteorological observations and reports

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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
Zvartnots UDYZ	Regular and special observations, Half hourly routine, Meteorological Zvartnots AMIS-RF System	METAR, SPECI, MET REPORT, SPECIAL, TAF, TREND, SIGMET, GAMET, ARMET	Zvartnots AMIS-RF system includes the following sensors: **Wind sensors:** Mechanical anemometers and bump meter (WAA15A/151 WAV15A/151) on the left side of threshold 08 at a distance of 129 m FM THE axis of the RWY (height 10 m). Ultrasonic wind direction and speed sensor (WMT700) in the middle of THE RWY on the three-point antenna tower (height 30 m). Ultrasonic wind direction and speed sensor (WMT700) on the left side of THE RWY 26 threshold at a distance of 158 m FM THE axis of the RWY (height 10 m). **Visibility and RVR:** FD12P Visibility distance and actual weather sensor. 08 on the left side of the threshold at a distance of 110 m FM THE axis of the RWY (height 2 m). FD70 sensor on the left side of THE RWY 127 m FM THE axis of the RWY (height 2.3 m). FD70 sensor 26 on the left side of the threshold at a distance of 153 m FM THE axis of the RWY (height 2 m). **Ceiling:**Ceilometer (CL-31) 08 in the direction of threshold, 977 m FM THE axis of the RWY. **Humidity and Temperature Probe:**(HMP45D) at THE RWY 08 threshold meteorological observation center on the wind sensors mast (height 2 m). **Barometer** (PTB220) at THE RWY 08 threshold meteorological observation building, on the elevation combined with the 08 threshold	H24	AVBL*

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
			elevation. **Thunderstorm Local Lightning Sensor:** (TSS928) on the left side of RWY 08 threshold at a distance of 100 m FM THE RWY.		

* The Climatological Summary of "Zvartnots" and "Shirak" International Airports of the Republic of Armenia is available on the following website:

URL:http://www.gdca.am/page/127

3.2 Gyumri “Shirak” aerodrome.

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Table GEN 3.5.3.2 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
Shirak UDSG	Regular and special observations, Half hourly routine, Meteorological Shirak AMIS-RF System	METAR, SPECI, MET REPORT, SPECIAL, TAF, TREND.	Shirak AMIS-RF system includes the following sensors: **Wind sensors:** Ultrasonic wind direction and speed sensor (WMT700) on the left side of THE RWY 02 threshold at a distance of 123 m FM axis of the THE RWY (height 10 m). Wind sensor on the left side of THE RWY 02 threshold at a distance of 138 m FM THE axis of the RWY (height 30 m). Ultrasonic wind direction and speed sensor (WMT700) on the left side of THE RWY 020 threshold at a distance of 128 m FM THE axis of the RWY (height 10 m). **Visibility and RVR:**FD70 on the left side of the 02 threshold at a distance of 86 m FM THE axis of the RWY (height 2 m). FD70P Visibility distance and actual weather sensor. On the left side of THE RWY 020 threshold, 100 m FM THE axis of the RWY (height 2 m). **Ceiling:** Ceilometer 02 in the direction of the threshold, 996 m FM THE axis of the RWY. **Humidity and Temperature Probe** (HMP155) at THE RWY 02 threshold meteorological observatory, on the wind sensors mast (height 2 m). **Barometer** (PTB330) at the observation building, on at a height combined with the height of THE RWY 02 threshold. **Thunderstorm Local Lightning Sensor:** (TSS928) on the left side of THE RWY 02	H24	AVBL*

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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
			threshold at a distance of 118 m FM THE RWY.		

* The Climatological Summary of "Zvartnots" and "Shirak" International Airports of the Republic of Armenia is available on the following website:

URL:http://www.gdca.am/page/127

4 Types of services

4.1 Meteorological Service of “Zvartnots” Aviameteorological center CJSC provides the following types of service:

1. Briefing,
2. Consultations for aircraft crews,
3. Flight meteorological documentation for international, local and transit flights (completed according to the user's request),
4. Landing/take-off meteorological service.

Details of meteorological briefings at the aerodromes are provided in the individual aerodrome subsections (AD-part).

4.2 The Meteorological “Zvartnots” Aviameteorological center CJSC and “Shirak” Meteorological Service for Aerodromes provides consultations for crews in English. Flight meteorological documentation is provided for both international and domestic flights. The documentation comprises the Significant Weather Chart, Upper Wind and Upper Air Temperature Chart, the latest current weather for the destination and alternate aerodromes, and additional meteorological information such as SIGMET and AIRMET. All WAFS products, VAACs, and TCACs are available from the SADIS receiving system and available from secured meteorological web-site

URL:https://www.aviationweather.gov/

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5 Notification required from operators

5.1 The notification required from operators is provided in accordance with the *ICAO Annex 3* part 2.3.

6 Aircraft reports

6.1 Observations and aircraft reports are conducted in accordance with *ICAO Annex 3* chapter 5.

7 VOLMET service

NIL

8 SIGMET service

Table GEN 3.5.8 SIGMET service

Name of MWO/ location indicators	Hours	FIR or CTA served	Type of SIGMET/validity	Specific procedures	ATS unit served	Additional information
1	2	3	4	5	6	7
“Zvartnots” MET. Center UDYZ	H24	Yerevan FIR	SIGMET/4 HR	AIRMET/4HR, upon availability	Yerevan ACC/APP	NIL

8.1 General

For the safety of air traffic, the meteorological services for civil aviation are provided by the “Zvartnots” Aviameteorological Center CJSC maintains an area meteorological watch and warning service. The service consists of the continuous weather watch within the Armenia FIR and if necessary, the issuance of appropriate SIGMET, AIRMET and GAMET information.

8.2 Area meteorological watch service

The area meteorological watch service is performed by the by the “Zvartnots” Aviameteorological Center CJSC. The meteorological watch services issues SIGMET, AIRMET and GAMET information in accordance with ICAO Annex 3.

8.2.1 SIGMET

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

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a. thunderstorm:

- obscured;
- embedded;
- frequent;
- line squall;
- obscured with heavy hail;
- embedded with heavy hail;
- frequent with heavy hail;
- line squall with heavy hail.

b. turbulence:

- severe turbulence.

c. icing:

- severe icing;
- severe icing due to freezing rain.

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

8.2.2 AIRMET

AIRMETs are prepared for the Yerevan FIR, which consists of four different areas: A1, A2, A3, and A4 including sub-areas A1.1, A2.1, A2.2, A4.1 and A4.2 (according to GEN 3.5-8 Chart AIRMET/GAMET AREAS). They cover weather phenomena from the surface up to FL150, concerning the occurrence and/or expected occurrence of specified weather phenomena as follows:

1. Strong surface winds and gusts above 30 KT
2. Surface visibility reduced to less than 5000 M in widespread areas
3. Thunderstorms: ISOL TS, OCNL TS, ISOL TSGR, OCNL TSGR
4. Clouds:

   - Widespread areas of broken or overcast clouds with a base height of less than 1000 FT
   - ISOL, OCNL, or FRQ cumulonimbus (CB) or towering cumulus (TCU)

5. Moderate turbulence (MOD TURB)
6. Moderate icing (MOD ICE)
7. Moderate mountain wave (MOD MTW)

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

8.2.3 GAMET

The content and order of elements in a GAMET area forecast adhere to the template shown in Table A5-3 of ICAO Annex 3.
Section I includes:

1. Surface wind speed (SFC WSPD group)
2. Horizontal surface visibility (SFC VIS group)
3. Significant weather phenomena (SIGWX group)
4. Mountain obscuration (MT OBSC group)
5. Cloud information (SIG CLD group)
6. Icing (ICE group)
7. Turbulence (TURB group)
8. Mountain wave (MTW group)
9. SIGMET (SIGMET applicable)
10. AIRMET (AIRMET applicable).
    Additionally, the amount of valid SIGMET information is included in the GAMET zonal forecast. Number of applicable AIRMET messages for Yerevan FIR for which the GAMET forecast is valid.

    Section II includes:
11. Pressure centers and fronts (PSYS group)
12. Surface wind (SFC WIND group)
13. Upper winds and temperatures (WIND/T group). Mean values of wind direction and speed are provided.
14. Cloud information (CLD group)

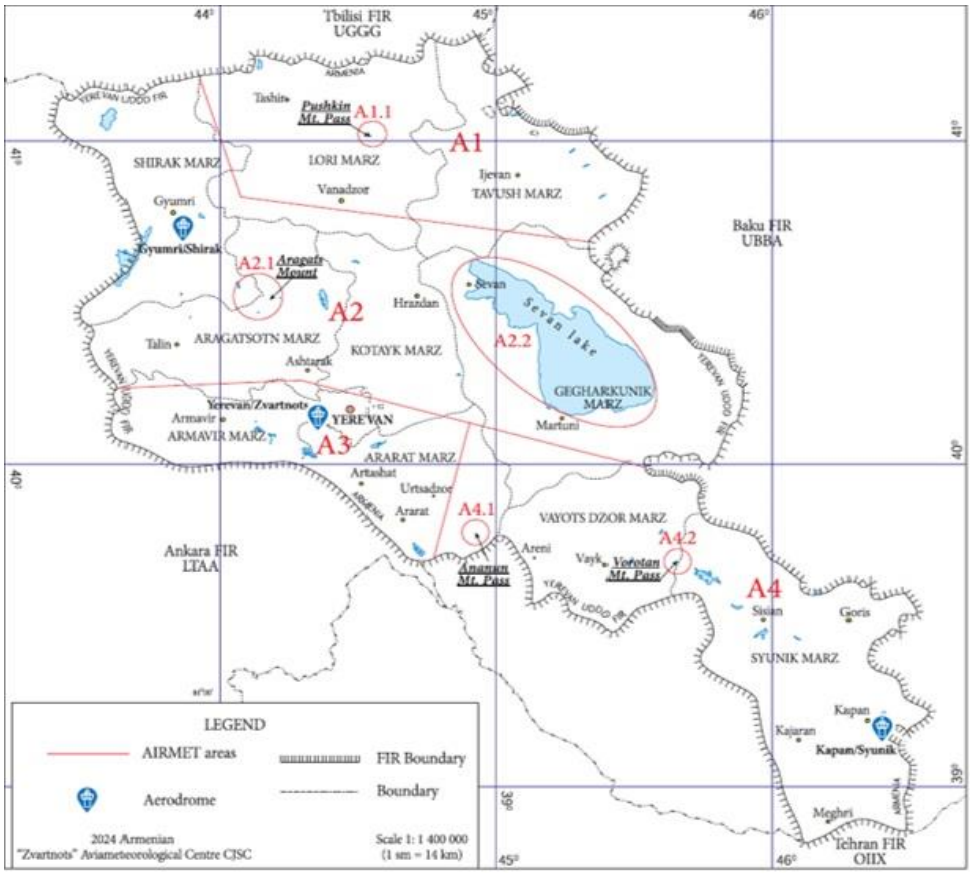
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15 Freezing level (FZLVL group)

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. These forecasts are prepared and published twice per day for the following areas: A1, A2, A3, A4 (according to GEN 3.5-8 Chart AIRMET/GAMET AREAS).

8.2.4 Chart AIRMET/GAMET AREAS

AIRMET/GAMET AREAS



8.3 Warning service

8.3.1 Warnings for “Zvartnots” aerodrome is provided by the “Zvartnots” Aviameteorological CJSC and for “Shirak” aerodrome is provided by the "Shirak" meteorological service. Warnings for the protection of parked aircraft or other equipment at the airport will be issued if one or more of the following phenomena occur:

1. thunderstorm
2. hail
3. freezing precipitation
4. snow during more than 2 hours
5. hoar frost or rime
6. squall
7. dust-storm
8. rising storm or dust
9. frost
10. air temperature falls to -15°C or below, or rises to +40°C or above
11. surface wind speed is 15 meters per second (30 KT) and more (irrespective of direction)
12. strong surface wind and gusts.

9 Other automated meteorological services

NIL

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