

Tethered balloon system AST-2025

AST-2022 includes:

- tethered balloon with a set of balloon holding device;
- optical remote video surveillance system;
- hanging basket with a set of onboard equipment;
- ground control station in a shockproof case.

Purpose of AST-2022:

- expanding the functionality of the border guard, anti-smuggling and anti-terrorist activities of state law enforcement agencies;
- continuous circular or sectoral survey of the earth's surface, detection of moving targets day and night, determination of their coordinates and movement parameters;
- search and detection of sources of threats and violators of illegal activities;
- perimeter control and search for objects such as people at a distance of up to **7 km**, determining their coordinates;
- perimeter control and search for objects such as vehicle at a distance of up to **15 km**, determining their coordinates.



tethered airship



optical remote video surveillance
system GOES MFMGV -15

Name	Value
Maximum working lifting height, m	300
Aerostat dimensions, approximately, mm	Length 13 300 Diameter 4860
Estimated balloon shell volume, m ³	130-160
Suspended load weight (payload and other onboard equipment), kg	around 30
Payload	gyro-stabilized optical-electronic system with an infrared camera, a television camera, with a laser rangefinder
Laser rangefinder:	
measurement range, km	0.1-14**
measurement accuracy, m	±2**
Duration of stay in the air, h	up to 24***
Preparation time for launch (excluding gas refueling time, time of GCS deployment and flight mission input), min, no more	45
Start method	using a bivouac device
Landing method	using a bivouac device
Wind speed, m/s	up to 9
Carrier gas	helium
Working overpressure of gas in the shell of the balloon, kPa, not less than	0.30±0.05
Maximum allowable overpressure of gas in the balloon shell, kPa, not more than	0.65±0.02
Note - * Depending on meteorological conditions.	

Detection and recognition ranges		
	IR MODULE	TV MODULE
Human	2 200 m / 1 000 m	7 500 m / 3 500 m
Car	4 500 m / 2 300 m	11 000 m / 6 500 m
Tank	5 500 m / 2 800 m	15 000 m / 10 000 m

Gyrostabilized platform	
Number of stabilization axes	2 axes (azimuth, elevation)
Effective working range	0-40 Hz
Maximum angular velocity	300°/s
Stabilization accuracy	0.05 °
Movement along the azimuth axis	360°
Movement along the elevation axis	From +2° to - 182°