

Nor-Amberd Optical mini-observatory for detection of energetic Transient events (NOMOT)

NOMOT is located on the slope of Mount-Aragats in Armenia at Aragats Space Environmental Center (ASEC) belong to Cosmic Ray Division (CRD) of Alikanyan Physics Institute, geographical coordinates (40°25'N, 44°15'E); altitude 2000m.

NOMOT observations planned to be connected with a search of optical transients due to gamma ray bursts (GRB). After photometric verification of the GRB NOMOT telescopes will follow the afterglow down to 22th magnitude. A large fraction of optical afterglows decays as $\sim 1/t$, and $\sim 1/t^2$ after spectra brake (turnover) (<http://grad40.as.utexas.edu/~quimby/tu2006/>).

Operation of NOMOT planned to be correlated with measurements of the Atmospheric Cherenkov Telescope (ACT) MAGIC, located at Canarians. MAGIC is equipped with Active Mirror System (AMS) allowing tuning the detectors huge 17 m. diameter dish in very few minutes for looking at new celestial coordinates.

This made MAGIC very sensitive device for detecting energetic transient phenomena like gamma-ray bursts (GRB). NOMOT, receiving the same alert from satellites will be able to detected afterglow of the same objects in optical diapason, thus providing multivariate observations of GRBs, Supernovae explosions and other energetic phenomena in the Universe.

Typical sky conditions:

- sky background 21.5...22 in "B", 21...21.5 in "V" (mag/sq.sec).
- the seeing: 1.5 (+/- 0.5) sec of arc (2/3 of clear sky available)
- presence of photometric-useful time about 40 % (in Sommer-Fall period: over 50...60 %).

The equipment:

- 25-cm Newtonian for seeing-monitoring.
- 40-cm F/4.5 Newtonian with CCD and UBVRI + LRGB filters (CCD 1040 x 1400 pxl; 0.74 "/pxl; 12.8' x 17' Field of view).

The limiting-magnitudes:

- in "U" 21.5...22 mag
- in "B" 22.5...23 mag
- in "V" 22 ...22.5 mag
- in "R" 21.5...22 mag
- in "I" about 20 mag

(by exposures time = 3 x 1000 sec).

The dome for 40-cm telescope:

- classic hemi-spherical, steel, - thickness 1mm with low thermal capacity.

Dimensions of the tower:

- diameter 305 cm
- hight of corpus 255 cm
- elevation from earth-niveau 5 m
- full height 7 m.