

## Meteor project — AMOS Cam

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Slovak Video Meteor Network (SVMN) is a project of Comenius University in Bratislava for continuous monitoring of meteor activity [1] over Slovakia. The network is based on AMOS (All-sky Meteor Orbit System) Cameras [2], which astrometric precision was calibrated using several commonly observed fireballs within European Fireball Network [3]. The field of view of the AMOS is  $180^\circ \times 140^\circ$  and the output digital resolution  $1280 \times 960$  px with the frame rate of 15 f/s. Limiting sensitivity is +5.5 mag for stellar objects and about +4 mag for moving objects. The whole system is protected by outer and inner housing and monitoring by detectors of temperature, rain and illumination of the sky. The system is portable and suitable for expeditions from the ground or research planes. The AMOS cameras are working at four locations (SVMN) at present: AGO Modra, Arboretum T. Mlyňany, Kysucké Nové Mesto Obs. and Važec stations. The operation of cameras is semi-automatic and needs electric power and internet connection. The standard astrometric error is within an interval of 0.03–0.05 deg resulting in several tens or hundreds of meters for meteor atmospheric trajectory determination. The internal precision of the AMOS cameras is even better, especially when the precise all-sky reduction described in [4] is used. The first prototype has been working at the AGO Modra Observatory since 2007. Each AMOS camera records about 10 000 meteors per year as well as about 50 transient luminous events (sprites, elves) in Central Europe sky conditions. The results from the observational expedition on Tenerife and La Palma (Canary Islands 2014) showed higher efficiency of AMOS cameras at high altitudes and dark sites. The analyses of selected meteor streams (SPE, ACO, Lyrids and others) from AMOS cameras will be presented.



**Figure:** All-sky composite image from AMOS Cam — Perseids 2012 (Aug.12/13, KNM, SVMN, Slovakia).

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**References:** [1] Tóth J. et al., (2011) PASJ, 63:311–314. [2] Zigo P. et al., (2013) in Proc. IMC 2012. [3] Spurný P., Borovička J., and Šrbený L., (2007) in Proc. of IAU Symposium 236, pp. 121–130. [4] Borovička J., (1993), A&A Suppl. Ser., 112, 173.