

A new EN bolide stations in Slovakia

Ján Svoreň, Pavel Spurný, Marek Husárik, Dušan Tomko, Igor Kudzej, Pavol Rapavý

The European Fireball Network (EN) founded by Dr. Z. Ceplecha of the Astronomical Institute in Ondřejov (AI CAS) is operating since 1963 and over 50 years of activity, bolide cameras were located also in various places of Slovakia. In 1964-1985, all-sky cameras were operated in 9 locations in Slovakia. These simple fireball cameras consisted of commercial cameras (Praktica or Zenit) mounted above the convex spherical mirrors. The disadvantage of this system was a relatively low sensitivity, low accuracy of a meteor position, the need for frequent coating of mirror surfaces, and absence of information about the time of meteor flight. Since 1973, a new generation of cameras with large format fish-eye lenses (3.5/30mm Opton-Distagon and Hasselblad) giving much higher precision of data has been installed. The automated version of this camera was in operation at one Slovak station since October 2007. In December 2014, the first digital automated fireball observatory (DAFO) developed in previous years by the AI CAS in cooperation with the Czech company Space Devices Ltd., containing except the all-sky high resolution imaging system also a sensitive high speed (5000 samples/s) all-sky brightness detector – photometer began working at Stará Lesná, Slovakia. The second DAFO was installed in Slovakia in October 2016 at the Observatory at Kolonica saddle and the third one at the Observatory at Rimavská Sobota in June 2018. These cameras cover the sky over Slovakia and the adjacent areas of Poland, Ukraine and Hungary. In the west, they are joining a large network of these cameras, working in the Czech Republic (14) and Austria (1) for several years. The cameras are managed and the results evaluated from one center - the Astronomical Institute of the CAS in Ondřejov by the team led by the second author.