

The European Fireball Network 2011 – Status of Cameras and Observation Results in Germany

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Abstract

The European Fireball Network (EN) has been continuously operating since 1966 (Figure 1). Beginning in 1995, observing stations in Germany have been managed and operated by the DLR Institute of Planetary Research, Berlin.

The stations in Germany are of the classical type, consisting of cameras on a tripod, looking down and taking images of a paraboloidal mirror. Rotating shutters mounted in front of the camera lens provide velocity information for the fast-moving meteors. Cameras are equipped with film. Typically, one long-exposure image is taken every night, covering the whole sky (Figure 1).

In 2011, 14 cameras were in regular operation. 59 fireballs on 81 photographs could be recorded, representing an extraordinary “fireball yield”. The number of 78 fireball co-registrations with other central-European camera systems was extraordinary as well. Data reduction and orbit reconstruction (carried out at Ondřejov Observatory, P. Spurný and team) was possible for 6 meteors. The brightest meteor, registered on May 4, had a magnitude of -10.

In the area monitored by the cameras, one fireball was recorded (Figure 1), following which, with high probability, a meteorite fall occurred. Unfortunately, due to terrain conditions within the urban area of Berlin no meteorites could be recovered.

Acknowledgements

We wish to thank the fireball station operators for endurance, patience, and dedicated work.

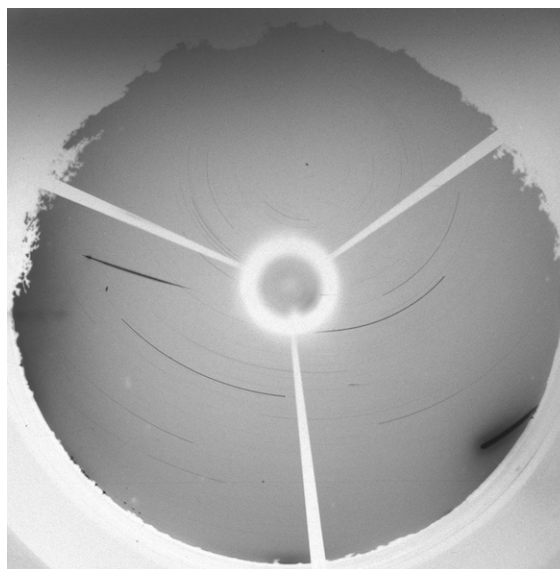
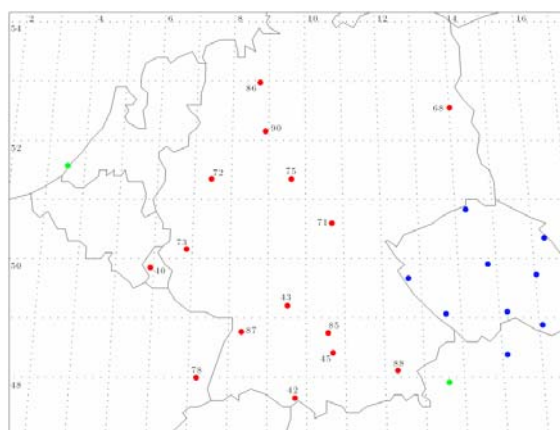


Figure 1: DLR camera stations (red), contributing to the European Fireball Network (top), and fireball registered by EN station 68 on May 23, 2011 (below).

