EPSC Abstracts
Vol. 7 EPSC2012-639 2012
European Planetary Science Congress 2012

Spectroscopic observations of the 2011 Draconids meteor shower

R. Rudawska (1), J. Zender (2), P. Jenniskens (3) and J. Borovicka (4)
(1) IMCCE – Observatoire de Paris, 77 avenue Denfert-Rochereau, 75014 Paris, France (rrudawska@imcce.fr), (2) ESA – ESTEC, Noordwijk, Netherlands (Joe.Zender@esa.int), (3) Carl Sagan Center, SETI Institute, 515 N. Whisman Road, Mountain View, CA 94043, USA (pjenniskens@mail.arc.nasa.gov) (4) Astronomical Institute, Academy of Sciences, CZ-25165 Ondrejov, Czech Republic(jiri.borovicka@asu.cas.cz).

Spectroscopic observations of meteors reveals the chemical composition of parent bodies and interplanetary dust. Draconids are an example of most fragile meteoroids, bringing us information about physical properties of the comet 21P/Giacobini-Zinner.

During the 2011 Draconids meteor shower, airborne and ground-based meteor spectroscopic observations carried out. Here, we report on the results for spectra captured by cameras provided by the IMCCE, ESA, SETI Institute, and Ondrejov Observatory. Collected by us spectra show two dominant emissions of sodium line at 5890 Å and the magnesium line at 5180 Å. Moreover, other emision lines belong to iron and the N_2 molecule.

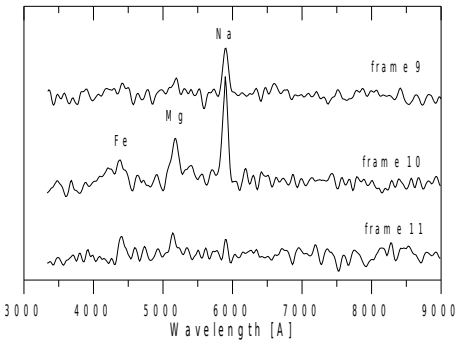

Figure 1: Time variation of the spectra of Draconid meteor observed at 20:52 UT on October 8, 2011.