

Slovak video meteor network — meteor spectra

R. Rudawska¹, J. Tóth¹, D. Kalmančok¹, and P. Zigo¹¹Faculty of Mathematics, Physics and Informatics, Comenius University, Mlynská dolina, Bratislava, SK-84248 Slovakia

After the great success of the All-Sky Meteor Orbit System (AMOS) [1,2], we upgraded the system by adding the AMOS-Spec camera for recording meteor spectra.

The long-term AMOS-Spec program aims to measure the main element abundances of meteors detected by AMOS. Installed at the Modra Observatory station, the camera is based on the AMOS camera, equipped with 30 mm f/3.5 lens and 500 grooves/mm grating. Having the trajectory and orbit from AMOS and merging it with the simultaneously measured spectrum from AMOS-Spec allows us to identify the source of the meteoroid.

Here, we report on preliminary results from a sample of meteor spectra collected by the AMOS-Spec camera since November 2013. The figure shows an example emission spectrum produced by the sigma Hydrid captured by the AMOS-Spec camera on December 4, 2013.

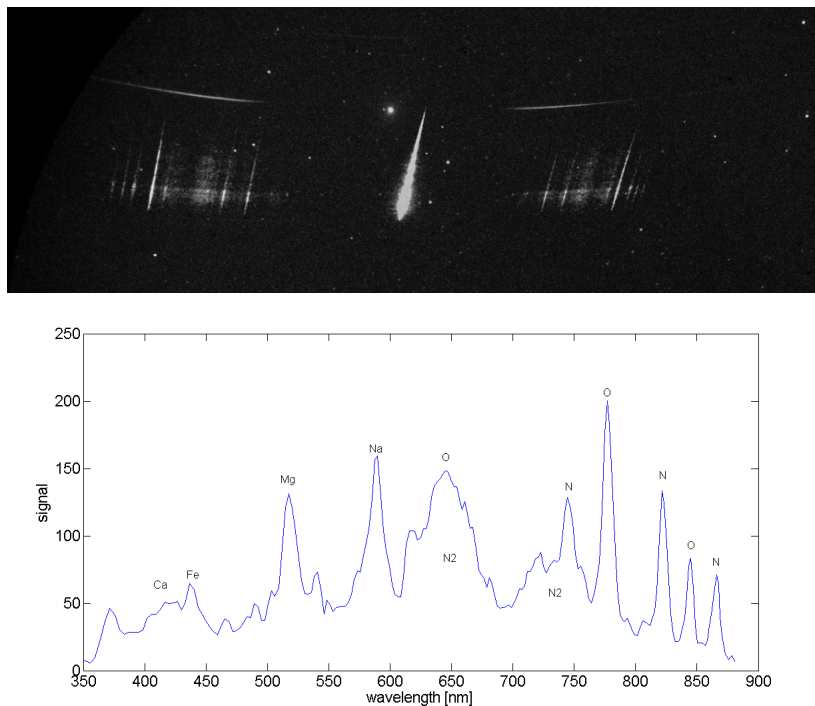


Figure: The sigma Hydrid observed at $02^{\text{h}}10^{\text{m}}33^{\text{s}}$ on December 4, 2013 (together with the Jupiter spectrum). The spectrum profile (below) was not corrected for the spectral response of the camera.

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References: [1] Tóth, J. et al., 2011, Publications of the Astronomical Society of Japan, 63, 331. [2] Zigo, P., Toth, J., Kalmancok, D., 2013, Proceedings of the International Meteor Conference, 31st IMC, La Palma, Canary Islands, Spain, 2012, 18.