Archive data mining – the Lyrids

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Introduction

For recently introduced automatic video observation system MAIA [1] the data processing pipeline was developed. Now the methods were improved to allow also the processing of the archive analogue data recorded on the video tapes.

Methods

The regular double station observations of the meteor showers are carried out at the Ondrejov observatory since 1997 [2]. From the beginning the analogue video systems were employed. The recorded data were stored in the archive. Now we are using new methods to mine the archive data.

New automatic digital system is currently used for the double station observation. The data recorded during the night are search for the meteors using dedicated software. Then the standard methods for the atmospheric trajectories and the heliocentric orbits are used. Such a processing technique can be used also for the archive data when it is converted into appropriate format.

Lyrid meteor shower

The Lyrid meteor shower was among the showers on the list of interesting events since the beginning of the double station experiment. It resulted in big number of double station meteors recorded in recent years.

Summary

Now we employ new methods to processing this archive data. The methods will be shortly presented as well as the results of the double station observations.

References

[1] Koten, P., Fliegel, K., Páta, P., and Vítek, S., Earth, Moon and Planets, Vol. 108, pp. 69-76, 2011.

[2] Koten, P., Borovička, J., Spurný, P., Betlem, H., and Evans, S., Astronomy and Astrophysics, Vol. 428, pp. 683-690, 2004.