

# **Interstellar Meteoroids and Hyperbolic Meteors; 25 years of research**

**M. Hajdukova**

Astronomical Institute of the Slovak Academy of Sciences (astromia@savba.sk)

## **Introduction**

Interaction of our solar system with the interstellar medium should lead to the presence of interstellar particles. The search for them, provoked by the high presence of hyperbolic orbits among detected meteors, started 25 years ago. Using different observational techniques, research into interstellar particles produced controversial results about their occurrence in the vicinity of the Earth. The proportion of possible interstellar particles to interplanetary ones was found to be much higher for small particles obtained from high power radars and cosmic dust detectors in comparison with results of photographic and video meteors in the range of larger meteoroid particles. This might be partly caused by different mass distributions of interstellar and interplanetary particles [1]. However, the vast majority of hyperbolic orbits were found to be as a consequence of measurement errors [2, 3].

We present here an overview of studies related to interstellar particles, showing a gradually descending value of their flux within the time period. Naturally, interest in this research field declined over this period.

## **Acknowledgements**

This work was supported by the Slovak Research and Development Agency, project No APVV-0517-12 and by the Slovak Grant Agency for Science VEGA, grant No. 1/0225/14.

## **References**

- [1] Hajdukova. M., Hajduk, A., Contrib. Astron. Obs. Skalnaté Pleso, 36, 15, 2006
- [2] Hajdukova, M., EM&P, 102, 67, 2008
- [3] Hajdukova, M., Kornos, L., Toth, J., M&PS, 49, 2014