Probing the meteoroids environnment of planets

J. Vaubaillon, CalTech, SSC, 1200 East California Boulevard, Pasadena, CA91125, USA

The detection of the first Martian meteor in 2004 by Selsis et al. (Nature, 435, Issue 7042, pp. 581, 2005) opened the doors to the detection of meteoroids in other places tan in the vicinity of the Earth. The interest resides in the fact that meteoroids are very hard to detect by other means than meteors or direct infrared observations of cometary trails. If the meteoroid environnement of the Earth is known thanks to the study of meteor showers, it is very poorly known in other planets, or in the whole Solar System to be true. Nature offers us sevral planets having an atmosphere able to reveal the meteoroids through the creation of meteors. We will list all the scientific interests of the detection of meteoritic activities in other atmospheres, i.e. the detection of not only meteors but also their signature in the atmospheric layers. This emerging topic is studied through the collaboration of scientist from NASA, ESA, UWO (Canada) and Armagh Observatory (UK).