

The influx rate of long-period comets in the Earth's neighborhood and their debris contribution to the interplanetary medium

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Abstract. We analyze the flux of new and evolved long-period comets (LPCs) reaching the Earth's neighborhood (perihelion distances $q < 1.3$ AU), their physical lifetimes, and their implications as regards to the amount of meteoritic matter that is being deposited in the near-Earth region. The flux of LPCs with $q < 1.3$ au is found to be of about 340 ± 40 , brighter than absolute total magnitude 8.6 (radius $R \sim 0.6$ km) (Fernández and Sosa 2012). Bearing in mind that most of these comets disintegrate into meteoritic matter, this represents a large contribution to the interplanetary dust complex which requires an amount of matter of about 10 tons s^{-1} to keep it in steady state. These aspects, as well as the impact rate with Earth of meteoroids of LPC origin, will be discussed in this presentation.
