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

Julio Angel Fernández
Departamento de Astronomia, Facultad de Ciencias, Igua 4225, 11400 Montevideo, Uruguay
email: julio@fisica.edu.uy

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 ∼ 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.