



ID de Contribution: 86

Type: **Poster**

Gravitational instability in self gravitating filamentary structures

mardi 10 mai 2016 10:15 (20 minutes)

Cosmological numerical simulations suggest that the Universe has a web-like structure, the nodes of which are galaxy clusters. These clusters are supplied with matter by gas flowing along the filaments interconnecting them. Part of this accretion occurs intermittently, which indicates that dense clumps of matter do not only form inside clusters themselves, but also either in voids, walls and/or filaments.

Here we investigate the possibility that these clumps formed inside filaments, through gravitational instability. We perform a normal mode analysis and derive both general instability criteria and dispersion relations, to predict under which conditions and in which areas inside the filaments such clumps may form, and also predict their typical size and growth rate.

Auteurs principaux: M. DURRIVE, Jean-Baptiste (Institut d'Astrophysique Spatiale); Dr LANGER, Mathieu (Institut d'Astrophysique Spatiale)

Orateur: M. DURRIVE, Jean-Baptiste (Institut d'Astrophysique Spatiale)

Classification de Session: Poster session

Classification de thématique: Cosmology & Astroparticles