ABSTRACT ORAL CONTRIBUTION

LANIAKEA IN A COSMOLOGICAL CONTEXT

S. D. Hernandez-Charpak[1] and J. E. Forero-Romero[1]

Recent observations used local cosmic flow information to define our local supercluster, Laniakea. In this work we present a study on large cosmological N-body simulations aimed at establishing the significance of Laniakea in a cosmological context. We explore different algorithms to define superclusters from the dark matter velocity field in the simulations. We summarize the properties of the supercluster population by their abundance at a given total mass and its shape distribution. We find that superclusters similar in size and structure to Laniakea are relatively uncommon on a broader cosmological context. We finalize by discussing the possible sources of systematic errors (both in our methods and in observations) leading to this discrepancy.

---

[1] Departamento de Física, Universidad de los Andes, Cra 1 18A-10, Bloque Ip, Bogotá, Colombia. (sd.hernandez204@uniandes.edu.co).