DESY

Particle and Astroparticle Physics Colloquium



VIDEO Colloquium:

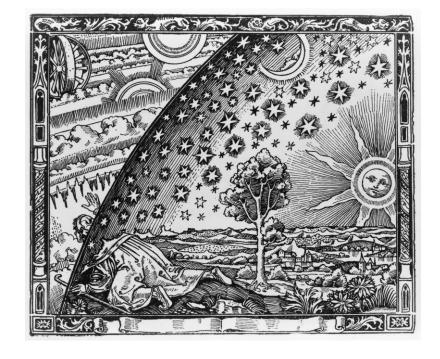
Beyond the cosmological standard model.

Tuesday, 01 December, 2020

Webcast 16:45 h

Subir Sarkar (Univ. of Oxford)

The standard model of cosmology assumes that the universe is (statistically) homogeneous and isotropic, and that the expansion rate of the universe is accelerating at present - as was deduced originally from the Hubble diagram of Type la supernovae. With the bigger dataset now available we find that the inferred acceleration (in the heliocentric frame) is essentially a dipole, aligned with the dipole in the cosmic microwave background, so cannot be due to a Cosmological Constant. Moreover in the standard model the CMB dipole is ascribed to our local motion; if so there should be a similar dipole in the distribution of distant quasars. It is indeed there but much bigger than expected. The observational evidence for these surprising findings will be presented and possible ways forward will be discussed.



Zoom connection details:

Meeting ID: 996 1652 8733 Meeting Password: 733220



