

A STUDY OF MULTISCALE DENSITY FLUCTUATIONS*

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We have in earlier work¹ reported on intriguing parallels between density fluctuation power versus wavenumber on small (mm) and large (Mpc) scales. In this contribution we expand upon our previous studies of measurements made in fusion plasmas and using cosmological data, respectively. Based on predictions from classical fluid turbulence theory, we argue that our observations are consistent with 2D turbulence. The similar dependencies of density fluctuations on these disparate scales might indicate a common origin

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1. N. P. Basse, "Density fluctuations on mm and Mpc scales", Phys. Lett. A, vol. 340, p. 456, 2005.

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