



東北大学 宇宙創成物理学国際共同大学院プログラム

## GP-PU (Graduate Program on Physics for the Universe) Seminar セミナー

# “Dark Waves in the Galaxy and the Axiverse”

by T. Broadhurst

University of Basque Country

Time and Date : 15:00 - 17:00, 7th August (Tue) 2018

Venue : Room N507, the Science Complex C (H-04)

Language : English    Free admission    参加は無料です

The first simulations of "Wave Dark matter" in a Bose-Einstein state, interprets the vast network of structure in the Universe is an interference pattern, of smooth sheets and filaments, where ancient stars (population 2) were generated. We predict a standing, solitonic wave at the center of every galaxy, representing the ground state, that matches gas and star motions at the centre of our Galaxy and within Globular Clusters, with implications for the "Axiverse" of String Theory. The competing "primordial black hole" interpretation of Dark Matter, revived by LIGO, is limited by our new discovery of individual stars detected through huge columns of dark matter in Galaxy Clusters and we conclude that LIGO sources can be better explained as cosmologically distant black holes of stellar origin, that are lensed by intervening galaxies.

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