



THE CHINESE UNIVERSITY OF HONG KONG
Department of Physics
SEMINAR

Mini Mergers with Major Consequences for Galaxies in a Cold Dark Matter Universe

by

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Time: 1:30 – 2:30 p.m.

Place: Rm 311, Science Centre North Block, CUHK

ALL INTERESTED ARE WELCOME

Abstract

An overwhelming body of research shows that the gravitational torques experienced in galaxy-galaxy collisions cause galaxies to form stars at an expedited rate and drive changes to galaxy structures. However, much of this research has focused on collisions between galaxies of comparable masses (major mergers) due to observational challenges in detecting small, low-mass galaxies colliding with larger galaxies. In this talk, I focus on "mini" collisions using a large, high-resolution simulation of galaxy formation. I show that collisions between massive galaxies and small satellites have an inconspicuously important role in driving structural change and star formation in massive galaxies. Such collisions are meant to be ubiquitous in cold dark matter models, but are suppressed by warmer and lighter dark matter species.