

University of Notre Dame
College of Science
Department of Physics

ASTROPHYSICS SEMINAR

Galaxy Formation with Cosmological Hydrodynamic Simulations

Professor Kentaro Nagamine
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Tuesday, October 26, 2010 12:30 p.m. NSH 184

Large-scale computer simulations have become an invaluable tool for the study of structure formation in the universe. In this talk, I will describe some of the successes and current issues of cosmological hydrodynamic simulations in the field of galaxy formation. The topics include structure formation by dark matter, star formation in high- z galaxies, DLAs, supernovae feedback, radiative transfer, and the reionization of the universe.

I will also discuss our near-future efforts using the peta-scale supercomputer Blue Waters which will come online in 2011.