The Catholic University of America
Department of Physics
Colloquium

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Results on Cosmic Evolution of Galaxies and Black Holes from Large Surveys with the Hubble Space Telescope

Over the past decade, large and deep cosmological surveys with the Hubble Space Telescope and other observatories have revolutionized our understanding of the formation and growth of galaxies and their central black holes over cosmic time, pushing back the observational frontiers to epochs when the universe was just a few percent of its present age. The numbers of galaxies discovered at redshifts 7-11, when the universe was just a few hundred million years old, has increased dramatically from only a handful of galaxies to several hundred at present, which for the first time is enabling robust constraints to be obtained on their star formation rates, luminosities, and their role in cosmic reionization. In this talk, I review current progress on our studies of these earliest galaxies together with the populations of supermassive black holes that appear to be present in the centers of most galaxies, from the perspective of previous and current large multi-wavelength surveys, as well as the prospects for resolving a number of remaining questions in the near future, with the launch of the James Webb Space Telescope which is expected to provide a view of the very first populations of galaxies and their central black holes.

Wednesday, November 11, 2015
4:00pm
106 Hannan Hall
Refreshments will be served at 3:45

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