

# **Seminar - Physics Dept. -Spring 2010**

**Science Institute, University of Iceland**

**Speaker:** Ingólfur Ágústsson, Boston University, USA

**Title:** "Probing Dark Matter Halos Using Satellite Galaxies"

**Time:** Friday – February 19, 2010 - 15:00 h

**Place:** VR-II - room 157

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## **Abstract:**

The existence of dark matter (DM) halos surrounding large, bright field galaxies is well established. However, the structure of these halos remains poorly constrained, as does the relationship between the halos and the luminous galaxies that they surround. In the case of relatively isolated host galaxies, satellite galaxies can be used to probe the DM halos of the hosts.

I will talk about the observed angular (spatial) distribution of satellites relative to the major axes of their hosts (from SDSS) and compare how they are distributed in a LCDM universe (Millennium Run Simulation) depending on how the host galaxy is oriented within the much larger DM halo. I will talk about how with a simple prescription of shapes the observed trends can be replicated in the simulation. This comparison is in itself a direct observational test of the LCDM model on galactic scales."