

University of Notre Dame  
College of Science  
Department of Physics

## **ASTROPHYSICS SEMINAR**

### **Searching for High Redshift Galaxies ( $z > 7$ )**

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**Tuesday, November 30, 2010 12:30 p.m. NSH 184**

The Ly-alpha luminosity function of high-redshift Ly-alpha emitters (LAEs) is one of the few observables of the re-ionization epoch accessible to date with 8-10 m class telescopes. The evolution with redshift allows one to constrain the evolution of LAEs and their role in re-ionizing the Universe at the end of the Dark Ages.

During this talk, I will explain which method I used to perform a search for high redshift LAEs. We have performed several narrow-band imaging program at 1.06 microns targeting Ly-alpha emitters at redshift  $z \sim 7.7$  and at 0.97 microns targeting Ly-alpha emitters at  $z \sim 7$ . From these observations we have derived different photometric samples of  $z \sim 7.7$  and  $z \sim 7$  LAEs and possible Ly-alpha luminosity functions at  $z \sim 7$  and  $z \sim 7.7$ .