



# SPRING '08 Colloquia

Refreshments at 3:15 PM, Talks at 3:30 PM in the John N. Bahcall Auditorium

[www.stsci.edu/institute/sd/talks/Colloquia](http://www.stsci.edu/institute/sd/talks/Colloquia) for updates

**Wednesday April 30, 2008**

**Maryam Modjaz, UC Berkeley**

**Elucidating the Supernova-GRB Connection:  
Metallicities & Host Galaxy Properties**

Supernovae of Type Ib/c are core-collapse supernovae whose massive progenitors have been stripped of progressively larger amounts of their hydrogen and helium envelopes. The link between long-duration Gamma-Ray Bursts (GRBs) and Type Ic supernovae is now well established, but we still do not fully understand the conditions that produce each kind of stellar explosion.

I will present a selection of very well time-sampled optical and near-infrared data of SNe Ib/c that will double the world-supply of well-observed events. I will discuss their implications for the SN-GRB connection. In particular I will show clues that asphericity is common during the explosion of even normal SNe Ib/c and not an exclusive property of GRB-SN. Furthermore, I will discuss the host-galaxy environments and the metallicities of the sites of SN with and without observed GRBs, and their implications for GRB progenitor scenarios. I will conclude with the most promising venues of upcoming research that can clarify how massive stars die.