

Colloquium Notice

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Theory and Models of Type Ia Supernovae

Supernovae are spectacular explosions that signal the violent death of a star. Supernovae produce and disseminate heavy elements, trigger star formation, and in some cases may be used as distance indicators for cosmological studies. These fascinating events encompass a broad range of physics, and realistically modeling these requires the largest supercomputers. I will give an overview of supernovae and our theoretical understanding of these events and present results from our research into type Ia (thermonuclear) supernovae. Our models and statistical framework allow the systematic study of how properties of the host galaxy can influence the brightness of an event. I will present the results from ensembles of simulations addressing the influence of age and metallicity on the brightness of an event and compare our results to observed trends in brightness with age and color of the host galaxy.

Monday

October 15, 2012

Starts at 12:15 PM

Physics Conference Room, SB B326