

SAN DIEGO STATE UNIVERSITY DEPARTMENT OF PHYSICS AND DEPARTMENT OF
ASTRONOMY COLLOQUIUM

Speaker: Prof. Takashi Moriya (National Astronomical Observatory of Japan)

Topic: Supernovae Exploding in Dense Circumstellar Media

Time: *1:00 PM* (note special time!), Friday, March 3, 2017 (refreshments
served at 12:45 PM)

Place: Room 215, Physics-Astronomy Building (PA-215)

Abstract:

Some supernovae show signatures of interaction between supernova ejecta and dense circumstellar media. In this talk, I discuss effects of dense circumstellar media on early emissions of supernovae. I first discuss the early emissions of Type IIP supernovae. Rise times and early spectra of Type IIP supernovae indicate the existence of dense circumstellar media around their progenitors. I show numerical light-curve models of the early emission and discuss the origin of the dense circumstellar media. I also discuss more extreme cases of the interaction which can lead to more luminous supernovae including superluminous supernovae.