



PHYSICS AND ASTRONOMY SEMINAR

Dr. Chris Ruiz

TRIUMF

“Radiative Capture for Astrophysics using Radioactive Ion Beams”

Abstract

In both quiescent and explosive stellar burning, radiative capture reactions are inexorably involved in both energy generation and nucleosynthesis at some level. For example, in main sequence or giant-branch stars, or in core collapse supernovae, X-ray bursters or classical novae, these reactions may provide production or destruction mechanisms for important isotopic observables, or be critical ‘bottleneck’ reactions determining explosion energetics. Short-lived radioactive nuclei fusing with hydrogen or helium are studied with radioactive ion beam (RIB) facilities. I will summarize which reactions are important in their respective stellar scenarios, and how they link to astronomical observables.

Monday, December 8, 2014

1:30 p.m.

Elliott Building

Room 162