

**INT Workshop 14-56W**  
**The r-process: status and challenges**

July 28 - August 1, 2014

**Registration -- 8:00 in Room C411 Physics/Astronomy Building**

All talks will be in **Physics/Astronomy Auditorium A114**

**Monday: supernovae**

8:45 -- 9:00 Welcome (15)  
9:00 -- 9:30 Qian: Introduction (25+5)  
9:30 -- 10:30 Janka: overview core-collapse supernovae (45+15)  
*10:30 -- 11:00 Coffee break*  
11:00 -- 11:30 Roberts: neutrinos (25+5)  
11:30 -- 12:00 MacFadyen: Collapsar Jets (25+5)  
12:00 -- 12:30 Nomoto: review observations & models of hypernova (25+5)  
*12:30 -- 14:00 Lunch*  
14:00 -- 17:30 Janka (thj@MPA-Garching.MPG.DE):  
Discussion + 5 short talks (10+5) + coffee break (30)

**Tuesday: mergers**

9:00 -- 10:00 Rezzolla: overview mergers (45+15)  
*10:00 -- 10:30 Coffee break*  
10:30 -- 11:00 Just: neutron star merger ejecta (25+5)  
11:00 -- 11:30 Perego: Neutrino-driven wind from the aftermath of NS mergers (25+5)  
11:30 -- 12:00 Sekiguchi: neutrinos and neutron star mergers (25+5)  
*12:00 -- 14:00 Lunch*  
14:00 -- 17:30 Lattimer (lattimer@astro.sunysb.edu):  
Discussion + 5 short talks (10+5) + coffee break (30)

**Wednesday: nucleosynthesis**

9:00 -- 10:00 Arcones: Synthesis of heavy elements: r-process (45+15)  
*10:00 -- 10:30 Coffee break*  
10:30 -- 11:00 Banerjee: neutrino-induced nucleosynthesis in He shells (25+5)  
11:00 -- 11:30 Roederer: New Observations of r-process Material in Metal-poor Stars (25+5)  
  
11:30 -- 12:00 Cescutti: Chemical evolution models, the special case of neutron capture elements in the Early Galaxy chemical evolution (25+5)  
*12:00 -- 14:00 Lunch*  
14:00 -- 17:30 Qian (qian@physics.umn.edu):  
Discussion + 5 short talks (10+5) + coffee break (30)

**Thursday: microphysics**

9:00 -- 9:45 Martinez-Pinedo: Nuclear physics input for r-process (35+10)

9:45 -- 10:30 Horowitz: overview EoS, nucleosynthesis (35+10)

10:30 -- 11:00 *Coffee break*

11:00 -- 11:45 Schwenk: Equation of state and neutrino interactions based on nuclear forces

(35+10)

11:45 -- 12:30 Steiner: observational constraints (35+10)

12:00 -- 14:00 *Lunch*

14:00 -- 17:30 Reddy (sareddy@u.washington.edu):

Discussion + 5 short talks (10+5) + coffee break (30)

**Friday: observations**

9:00 -- 10:00 Metzger: overview multi-messenger (45+15)

10:00 -- 10:30 *Coffee break*

10:30 -- 11:00 Kasen: transport, light curve (25+5)

11:00 -- 11:30 Belczynski: binary evolution (25+5)

11:30 -- 12:00 McLaughlin: neutrinos from accretion disks in GRBs

12:00 -- 14:00 *Lunch*

14:00 -- 17:30 Metzger (bmetzger@phys.columbia.edu):

Discussion + 5 short talks (10+5) + coffee break (30)