

INT Program INT-16-2b Workshop Week 2

Laboratory and astronomical observations of dense matter

July 18 - 22, 2016

Monday, July 18, 2016

8:00 AM Registration in PAT C411

Morning Session (9:00-12.30): Neutron Star Structure (EOS and Mass-Radius)

TALKS WILL BE HELD IN PAA A114

9:00 AM	Welcome from David Kaplan, INT Director	
9:05-9:45 AM	"Constraining the properties of neutron star matter using X-ray oscillations" Frederick Lamb, University of Illinois	Session chair: Mark Alford
10:00-10:30 AM	Coffee Break	
10:30-11:10 AM	"Determining neutron star parameters from cooling phases of X-ray bursts" Juri Poutanen, University of Turku	
11:25-12:05 PM	"Effects of rotation on neutron star radius determinations" Sharon Morsink, University of Alberta	
Afternoon Session (2:00-5.00): Gravitational Waves and EOS		
2:00-2:40 PM	"Dense matter in gravitational wave sources" Jocelyn Read, California State University Fullerton	Session chair: Chuck Horowitz
3:00-3:30 PM	Coffee Break	
3:30-4:10 PM	"Future X-ray and gravitational wave measurements of neutron star masses and radii" Cole Miller, University of Maryland	
4:25-5:00 PM	"Dense Matter Equation of State from Observations" James Lattimer, Stony Brook University	

Tuesday, July 19, 2016

Morning Session (9:00-12.30): Advances in Dense Matter Theory

TALKS WILL BE HELD IN PAA A114

9:05-9:45 AM	"Neutron matter equation of state from Chiral EFT" Ingo Tews, Institute for Nuclear Theory	Session chair: Thomas Schaefer
10:00-10:30 AM	Coffee Break	
10:30-11:10 AM	"Dense baryonic matter and functional renormalisation group" Wolfram Weise, Technical University of Munich	
11:25-12:05 AM	"Finite density QCD from a three-dimensional effective lattice theory" Owe Philipsen, Goethe University of Frankfurt	
Afternoon Session (2.00-5.30): Experimental Probes of Dense Matter		
2:00-2:40 PM	"Symmetry energy at supersaturation density" Betty Tsang, Michigan State University	Session chair: Wolfram Weise
3:00-3:30 PM	Coffee Break	
3:30-4:10 PM	"Isoscalar and Iovector Densities and Symmetry Energy" Pawel Danielewicz, Michigan State University	
4:25-5:05 PM	"Neutron skin measurements and its constraints for neutron matter" Chuck Horowitz, Indiana University	

Wednesday, July 20, 2016

Morning Session (9.00-12.30): Transient Phenomena in Neutron Stars

TALKS WILL BE HELD IN PAA A114

9:05-9:45 AM	"Using quasi-persistent transients to constrain properties of the neutron star crust /Neutrino cooling reactions in the accreted neutron star crust" Edward Brown, Michigan State University	Session chair: Frederick Lamb
10:00-10:30 AM	Coffee Break	
10:30-11:10 AM	"** QED and neutron stars * / Reconnection in SGR bursts" Jeremy Heyl, University of British Columbia	
11:25-12:05 PM	"Towards an Interpretation of Neutron Star Seismology" Anna Watts, Anton Pannekoek Astronomical Institute	
Afternoon Session (2.00-5.30): Transport Properties of Dense Matter		
2:00-2:40 PM	"Neutron star seismology/ X-ray burst oscillation" Simin Mahmoodifar, NASA/GSFC	Session chair: James Lattimer
3:00-3:30 PM	Coffee Break	
3:30-4:10 PM	"Transport coefficients of npemu matter in NS cores / Neutron star cooling" Petr Shternin, Ioffe Institute	
4:25-5:05 PM	"Shear viscosity of crystalline superconductors" Rishi Sharma, Tata Institute of Fundamental Research	

Thursday, July 21, 2016

Morning Session (9.00-12.30): Glitches and R-modes

TALKS WILL BE HELD IN PAA A114

9:05-9:45 AM	"R-mode astronomy" Kai Schwenzer, University of Tuebingen	Session chair: Anna Watts
10:00-10:30 AM	Coffee Break	
10:30-11:10 AM	"Observational constraints on superfluid parameters" Nils Andersson, University of Southampton	
11:25-12:05 PM	"Extraction of pinning force between quantized vortex and nucleus in superfluid nuclear matter" Gabriel Wlazlowski, Warsaw University of Technology	
Afternoon Session (2:00-5.00): Superfluidity in Cold Dense Matter		
2:00-2:40 PM	"Hydrodynamics and instabilities of multi-(super)fluids" Andreas Schmitt, University of Southampton	Session chair: Nils Andersson
3:00-3:30 PM	Coffee Break	
3:30-4:10 PM	"Transport properties of superfluids" Thomas Schaefer, North Carolina State University	
4:25-5:00 PM	Discussion	

Friday, July 22, 2016

Morning Session (9.00-12.30): Maximum Mass and Phase Transitions at Supra-nuclear Density

TALKS WILL BE HELD IN PAA A114

9:05-9:45 AM	"Neutron Stars Masses" Scott Ransom, National Radio Astronomy Observatory	Session chair: Betty Tsang
10:00-10:30 AM	Coffee Break	
10:30-11:10 AM	"Quark Matter in Neutron Stars" Mark Alford, Washington University	
11:25-12:05 PM	"Neutron star radii and core-crust transition" Morgane Fortin, N. Copernicus Astronomical Center, Polish Academy of Sciences	

Afternoon Session (2.00-5.30): Microphysics for Supernova and Neutron Star Mergers

2:00-2:40 PM	"Supernova neutrinosphere; neutrino transport; protoneutron star formation and evolution" Tobias Fischer, Institute of Theoretical Physics	Session chair: Sanjay Reddy
3:00-3:30 PM	Coffee Break	
3:30-4:10 PM	"Deconfinement phase transition in hot and dense matter" Veronica Dexheimer, Kent State University	
4:25-5:05 PM	"Nuclear structure beyond the stability valley and its impact on electron capture rates during core-collapse" Adriana Raduta, IFIN	