
Workshop

“Science beyond 4 Mbar and using dynamic compression”

October 18th – 19th
DESY, Hamburg

Tentative Schedule

Thursday October 18 th		
8:30 – 8:45	Registration	
8:45 – 9:00	Welcome	E. Weckert (DESY)
9:00 – 9:30	High pressure research using dynamic compression at the European XFEL	T. Tschentscher (European XFEL)
9:30 – 9:45	Coffee Break	
<i>Session 1: Unknown structures and phase diagrams beyond 4 Mbar</i> <i>Chair: H. P. Liermann</i>		
9:45 – 10:30	New structures and data > 4Mbar (tenta.)	R. Collins (LLNL)
10:30 – 11:15	New techniques for exploring interiors of SuperEarths and giant planets	T. Duffy (Princeton U)
11:15 – 11:45	Exploration of structures and properties materials at conditions of large and extraterrestrial planets with static double stage DAC techniques	L. Dubrovinsky (BGI)
11:45 – 13:15	Lunch Break	
13:15 – 13:45	Planetary gases and ices under extreme pressure-temperature conditions	A. Goncharov (GL)
13:45 – 14:15	Metastable silica phases during impact processes (tenta.)	G. Trullenque (U Freiburg)
14:15 – 14:45	Discussion	H. P. Liermann (DESY)
14:45 – 15:15	Coffee Break	

Session 2: Planetary models, simulations, new theory approaches <i>Chair: S. Toleikis</i>		
15:45 – 16:30	Hints of rich science from theoretical experiments on ultra-dense matter	C. Pickard (UCL)
16:30 – 17:15	Interior Structure Models of Solid Exoplanets.	F. Sohl (DLR)
17:15 – 18:00	Planetary models, simulations, new theory approaches: Theoretical astrophysical needs for experimental data	R. Redmer (U Rostock)
18:00 –18:30	Discussion	S. Toleikis
18:30-19:30	Tour of Flash and PETRA III	H. P. Liermann, S. Toleikis
19:30	Workshop Dinner	

Friday October 19 th		
Session 3: Dynamic and irreversible processes and materials properties <i>Chair: T. Tschentscher</i>		
8:45 – 9:00	Announcements	H. P. Liermann
9:00 – 9:45	The Matter Radiation Interactions in Extremes (MaRIE) project, and the science of dynamic compression at Los Alamos National Laboratory	C. Barnes (LANL)
9:45 – 10:30	Time- and angle-resolved X-ray diffraction probing structural and chemical evolutions of single-event phenomena	C.-S. Yoo (Washington State U.)
10:30 – 10:45	Coffee Break	
10:45 – 11:15	Prospects for extreme ultrafast compression	M. Armstrong (LLNL)
11:15 – 11:45	Imaging of shock front propagation in iron at the LCLS (tenta.)	C. Schroer (TU Dresden)
11:45 – 12:30	Final Discussion and Summary	T. Tschentscher (European XFEL)