

Program

Wednesday, 21 October 2020

08:30 – 08:45 Gerd Steinle-Neumann **Welcome**

Session 1: Experiments (Chair: Carmen Sanchez Valle)

08:45 – 09:25 Leonid Dubrovinsky **Structural studies above 100 GPa: surprises and challenges**

09:25 – 10:05 Hauke Marquardt **Experiments on planetary materials in dynamically-driven diamond anvil cells**

10:05 – 10:30 *BREAK*

10:30 – 11:30 Stewart McWilliams **Being there : What to do with TeraPascal pressure experiments**

11:30 – 11:50 Sergey Lobanov **Time-resolved measurements of optical properties at extreme P-T conditions**

11:50 – 12:10 Johannes Kaa **High pressure and temperature X-ray emission and diffraction studies of iron containing minerals at the European XFEL**

12:10 – 12:30 **Discussion**

12:40 *LUNCH*

Program

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Session 2 : Ionized Matter (Chair: Thomas Tschentscher)

14:00 – 15:00	Dominik Kraus	Studying Ionization in Dense Plasmas
15:00 – 15:40	Ulf Zastrau	Time-resolved XUV and X-ray methods at high-intensity laser facilities
15:40 – 16:10	Oliver Humphries	Mapping the Electronic Structure of Warm Dense Nickel via Resonant Inelastic X-ray Scattering
16:00 – 16:30	<i>BREAK</i>	
16:30 – 17:10	June Wicks	Shock experiments on and off the Hugoniot
17:10 – 17:50	Nick Hartley	High-pressure hydrocarbon chemistry relevant to planetary interiors
17:50 – 18:10	Trevor Hutchinson	How dense z-pinch velocimetry can constrain models of warm dense aluminum
18:10 – 18:30	Discussion	

Program

Thursday, 22 October 2020

Poster Session: (Chair: Ronald Redmer)

08:30	Poster flash
10:00 – 10:30	<i>BREAK</i>
10:30	Poster flash continued
12:30	<i>LUNCH</i>
14:00 – 15:00	Poster Session

Session 3: Exoplanets: (Chair: Gerd Steinle-Neumann)

15:00 – 16:00	Ansgar Reiners	A guided tour through observations of planets outside the solar system
16:30 – 17:00	<i>BREAK</i>	
17:00 – 17:40	Szilard Csizmadia	Constraining the interiors of exoplanets by measuring the Love number k_{2f}
17:40 – 18:20	Nadine Nettelmann	Constraining the interior of fluid planets by using Love number measurements
18:20 – 19:00	Sabrina Schwinger	Interior evolution models as link between planetary composition and structure
19:00 – 19:20	Philipp Baumeister	Shaping the atmospheres of terrestrial planets with interior-atmosphere feedback processes

Program

Friday, 23 October 2020

Session 4: Ab-initio (Chair: Ronald Redmer)

08:30 – 09:30	Taku Tsuchiya	Physical properties of Minerals in the Ultrahigh—ressure Planetary Interior Conditions from Ab Initio Computations
09:30 – 10:10	Martin French	Ab initio simulations for physical properties of molecular HCNO mixtures
10:10 – 10:40	<i>BREAK</i>	
10:40 – 11:20	Gerd Steinle-Neumann	Phase transitions in silicates at the conditions of super-Earth interiors
11:20 – 11:40	Liang Yuan	Hydrogen in the Earth's core
11:40 – 12:10	Discussion	
12:10 – 12:30	Ronald Redmer	Closing remarks

End of the seminar