

The Joint 28th AIRAPT and 60th EHPRG International Conference 2023

Workshop Programmes

Sunday 23 July 2023

Workshop on the International Practical Pressure Scale (IPPS) 2023 Room: Lowther (Floor -1)		Registration and Workshop on Transport Properties at High Pressure Room: Lammermuir (Floor -2)	
9:30am to 10am	Arrival Refreshments	9:30am to 10am	Arrival Refreshments
10am to 11am	<p>Morning Workshop 1: Equations of State from 100 GPa to TPa pressures 10am-10:10am Introduction by Jon Eggert 10:10am-10:20am Renata Wentzcovitch: How EOS tables should be used by our community 10:20am-10:30am Martin Gorman: Tantalum as an example 10:30am-10:40am Kamil Dziubek: Phase transitions and kinetics 10:40am-11am Discussion</p>	10am to 11:10am	<p>Morning Workshop 1 10:00am-10:10am Stewart McWilliams: Welcome 10:10am-10:40am Longjian Xie: Viscosity measurements of silicate melts to lower-mantle conditions 10:40am-10:55am Bernhard Massani: Synchrotron X-ray microscopy of melting and melt dynamics in the laser-heated diamond cell 10:55am-11:10am Aigerim Karina: Probing dynamics in amorphous ice with X-ray photon correlation spectroscopy</p>
11am to 11:20am	Morning Break	11:10am to 11:30am	Morning Break
11:20am to 1pm	<p>Morning Workshop 2: Equations of State from 100 GPa to TPa pressures Static EOS experiments: 11:20am-11:30am Making accurate static EOS measurements 11:30am-11:40am Discussion</p> <p>Dynamic Compression EOS experiments: 11:40am-11:50am Jean-Paul Davis 11:50am-12:00pm Richard Briggs 12:00pm-12:10pm Discussion</p> <p>EOS table-building: 12:10pm-12:20pm Christine Wu 12:20pm-12:30pm Discussion</p> <p>12:30pm-1pm: Conclusions and Planning</p>	11:30am to 1pm	<p>Morning Workshop 2 11:30am-12pm Sebastien Merkel: Deformation and microstructures of Earth minerals at mantle P and T using multigrain X-ray crystallography 12pm-12:30pm Thomas Meier: Versatility of Extreme NMR: from probing electronic and structural properties to superionicity in matter under extreme conditions 12:30pm-12:45pm Zena Younes: Thermal conductivity measurements using MHz X-ray free electron laser radiation 12:45pm-1pm Eric Edmund: Thermal conductivity of iron with direct thickness measurements at Mbar pressures</p>

1pm to 2pm	Lunch (attendees to provide/buy own)	1pm to 2pm	Lunch sponsored by TRIREME (European Research Council)
2pm to 3:05pm	Afternoon Workshop 1: Pressure Reference Points for Multi-anvil Systems 2:00pm-2:05pm Introduction by Yanbin Wang 2:05pm-2:25pm Agnes Dewaele: DAC isothermal compression data: PV tables and phase transformations 2:25pm-2:45pm Daisuke Yamazaki: High Pressure Generation in a Kawai-type Multianvil Apparatus Equipped with Sintered Diamond Anvils and Electrical Resistance of Fe ₂ O ₃ at High Pressure 2:45pm-3:05pm Mikhail Erements: Universal diamond edge Raman scale to 0.5 terapascal, the implication to metallization of hydrogen	2pm to 3:00pm	Afternoon Workshop 1 2:00pm-2:30pm Kenji Ohta: Pulsed light heating thermoreflectance technique for high pressure and high temperature thermal conductivity measurements: Applications to (Mg,Fe)O, Pt and Fe 2:30pm-2:45pm Eric Lenhart: The thermal conductivity of liquid Fe-S-Si alloys at high pressure and the applicability of the Wiedemann-Franz Law 2:45pm-3:00pm Uwe Kleinschmidt: Electrical and thermal conductivity of fcc and hcp iron under conditions of the Earth's core from ab initio simulations
3:05pm to 3:15pm	Afternoon Break	3:00pm to 3:20pm	Afternoon Break
3:15pm to 5pm	Afternoon Workshop 2: Pressure Reference Points for Multi-anvil Systems 3:15pm-4:30pm Discussion on report of PRP characterisation and calibration practice; Task Force recommendations; Task Force next phase focus. 4:30pm-5pm Next phase planning: election of next Vice Chair and work emphasis for the next two years.	3:20pm to 5:10pm	Afternoon Workshop 2 3:20pm-3:50pm Sven Friedemann: Electrical transport measurements of metals and superconductors at high pressures 3:50pm-4:05pm Israel Osmond: High-Pressure Metallisation of Barium Hydride Compounds 4:05pm-4:35pm Martin Preising: Transport Theory in Warm Dense Matter - An ab initio Perspective 4:35pm-5:05pm Andrew Krygier, Lawrence Livermore National Lab, USA: Heat conduction on micron-nanosecond scales during dynamic loading of condensed matter 5:05pm-5:10pm Christophe Thessieu: Current offerings for transport measurements at ALMAX EasyLab
6pm to 8pm	Registration and Welcome Reception Room: Lennox		