

Bold indicates plenary session.

*Asterisk by name indicates student/post-doc speaker.

				Plenary or Session 1	Session 2
PDT	MDT	CDT	EDT	https://unm.zoom.us/meeting/register/tJ0ud-juriwoE9EpHuTey7qlqfFQu3oVjRAz	https://unm.zoom.us/meeting/register/tJYkf-ugrzoogNLTnFVjC9pgT19SBafiWDQA
8:00 AM	9:00 AM	10:00 AM	11:00 AM	Carl Agee, President of COMPRES, University of New Mexico Welcome and Introduction	

Contributed Talks

				Iron Workers Convention Session Chair - Tom Sharp, Arizona State University	Out of This World: From Meteorites to Exoplanets Session Chair - Tom Duffy, Princeton University
8:10 AM	9:10 AM	10:10 AM	11:10 AM	*Matthew Brennan, Harvard University <u>High-pressure deformation and texturing of Fe–Ni–Si alloys</u>	*Yilong Pan, Western University <u>Electrical conductivity of aqueous magnesium sulfate at high pressure and low temperature with applications to Ganymede</u>
8:22 AM	9:22 AM	10:22 AM	11:22 AM	*Claire Zurkowski, University of Chicago <u>A hexagonal Fe₃S phase at Earth's core conditions</u>	*Junjie Dong, Harvard University <u>Phase equilibria and water storage capacities of Martian mantle materials</u>
8:34 AM	9:34 AM	10:34 AM	11:34 AM	*Joshua Martin, The Ohio State University <u>A Statistical Reanalysis of the Thermal Equation of State of hcp-Iron</u>	*Meryem Berrada, University of Western Ontario <u>Mercury Heat Flow with a Fe-8.5wt%Si Core</u>
8:46 AM	9:46 AM	10:46 AM	11:46 AM	*Emma Stoutenburg, The Ohio State University <u>Systematic uncertainties in experimental temperature and the impact on the iron equation of state</u>	*Harrison Allen-Sutter, Arizona State University <u>Effects of Water on the Mineralogy of Carbon-rich Exoplanets</u>
8:58 AM	9:58 AM	10:58 AM	11:58 AM	*Brent Delbridge, Harvard University <u>Reconciling Elasticity Tensor Constraints from Mineral Physics and Seismological Observations</u>	Matthew Whitaker, Stony Brook University <u>Quantifying Shock Effects in Geologic Materials – A Multi-Modal Synchrotron Study</u>
9:10 AM	10:10 AM	11:10 AM	12:10 PM	Break	

Facilities Project Reports

9:20 AM	10:20 AM	11:20 AM	12:20 PM	Ercan Alp, Argonne National Laboratory Nuclear Resonant and Inelastic X-Ray Scattering Facility
---------	----------	----------	----------	--

9:30 AM	10:30 AM	11:30 AM	12:30 PM	Matthew Whitaker, MPI Stony Brook University <u>MAXPD: Multi-Anvil X-ray Powder Diffraction at NSLS-II</u>
9:40 AM	10:40 AM	11:40 AM	12:40 PM	Haiyan Chen, Brookhaven National Laboratory <u>COMPRES Multi-Anvil Facility at Beamline 6BM-B of the Advanced Photon Source</u>
9:50 AM	10:50 AM	11:50 AM	12:50 PM	Bora Kalkan, University of California, Santa Cruz <u>COMPRES Facility Update: Beamline 12.2.2 at the Advanced Light Source</u>
10:00 AM	11:00 AM	12:00 PM	1:00 PM	Dongzhou Zhang, APS <u>Updates on the Partnership for eXtreme Xtallography (PX2) Project</u>
10:10 AM	11:10 AM	12:10 PM	1:10 PM	Zhenxian Liu, Brookhaven National Laboratory <u>COMPRES IR-DAC Facilities at NSLS-II: Progress and Perspective</u>
10:20 AM	11:20 AM	12:20 PM	1:20 PM	Kurt Leinenweber, Arizona State University <u>COMPRES Multi-Anvil Cell Assembly Project</u>
10:30 AM	11:30 AM	12:30 PM	1:30 PM	Mark Rivers, University of Chicago <u>Gas Loading at APS</u>
10:40 AM	11:40 AM	12:40 PM	1:40 PM	Mark Rivers - GSECARS, APS <u>GSECARS</u>
10:50 AM	11:50 AM	12:50 PM	1:50 PM	Break

Contributed Talks

				Advances in High-Pressure Techniques			Lower Mantle
				Session Chair - JJ Dong, Harvard University			Session Chair - Tom Duffy, Princeton University
11:00 AM	12:00 PM	1:00 PM	2:00 PM	*Nick Farmer, Macquarie University <u>The Macquarie D-DIA facility at the Australian Synchrotron: a tool for high-pressure, high-temperature experiments</u>			*Anne Davis, University of Chicago <u>Computational insights on carbonate-silicate-metal melt behavior in the lower mantle</u>
11:12 AM	12:12 PM	1:12 PM	2:12 PM	*Dongyuan Zhou, University of Michigan <u>Melting Curve of Potassium Chloride from in situ Ionic Conduction Measurements</u>			*Jemila Edmond, Case Western Reserve University <u>The fate of banded iron formations in the deep mantle: Oxide reduction kinetics at high pressure</u>
11:24 AM	12:24 PM	1:24 PM	2:24 PM	*Genevieve Kidman, University of Nevada, Las Vegas <u>Experimental polycrystal stress mapping using Raman spectroscopy</u>			*Kellie Swadba, University of Chicago <u>Investigating the disproportionation of iron in the lower mantle</u>

11:36 AM	12:36 PM	1:36 PM	2:36 PM	*Britany Kulka, Arizona State University <u>Toward Oxygen Fugacity Control in Laser-Heated Diamond Anvil Cell</u>	*Byeongkwan Ko, Arizona State University <u>Temperature-dependent Solubility of Uranium in Silicate Perovskites in the Earth's Lower Mantle</u>
11:48 AM	12:48 PM	1:48 PM	2:48 PM	*Taryn Traylor, University of Nevada, Las Vegas <u>Steady State Deformation and Ultrasonics: A Study on the Elasticity of Polycrystalline Olivine</u>	*Vasilije Dobrosavljevic, California Institute of Technology <u>Investigating the Compositions and Characteristics of Ultralow Velocity Zones</u>

12:00 PM	1:00 PM	2:00 PM	3:00 PM	Break	
----------	---------	---------	---------	-------	--

12:10 PM	1:10 PM	2:10 PM	3:10 PM	Updates from NSF	Student/Postdoc Breakout "Conducting Research and Managing Your Career in the Time of a Pandemic" Panel members: Matt Brennan (Harvard University), Cara Vennari (University of Chicago) and Susannah Dorfman (Michigan State University)
12:15 PM	1:15 PM	2:15 PM	3:15 PM	COMPRES Business Meeting and Election	

1:10 PM	2:10 PM	3:10 PM	4:10 PM	Break	
---------	---------	---------	---------	-------	--

Contributed Talks

Water, Water Everywhere Session Chair - JJ Dong, Harvard University

Putting the Squeeze on Minerals Session Chair - Dan Shim, Arizona State University

1:20 PM	2:20 PM	3:20 PM	4:20 PM	*Johannes Buchen, California Institute of Technology <u>The Equation of State of δ-(Al, Fe)OOH and the Behavior of Ferric Iron in High-Pressure Oxyhydroxide Phases</u>	*Terry-Ann Suer, Harvard University <u>Phase stability and equation of state of MgAl₂O₄ at lower mantle pressures and temperatures</u>
1:32 PM	2:32 PM	3:32 PM	4:32 PM	Michael J. Brown, University of Washington <u>Water Thermodynamics at High Pressure in 2020: The Knowns and the Known Unknowns</u>	*Olivia Pardo, California Institute of Technology <u>High-Pressure Polymorphs and Elastic Properties of the Iron-Endmember Hydrated Sulfate, Szomolnokite</u>
1:44 PM	2:44 PM	3:44 PM	4:44 PM	Qingyang Hu, Center for High Pressure Science and Technology Advanced Research <u>Metallic hydrous phase with implication to mantle electrical heterogeneity</u>	*Tianqi Xie, University of Western Ontario <u>High-pressure and high-temperature study of intermediate plagioclase feldspar</u>
1:56 PM	2:56 PM	3:56 PM	4:56 PM	*Baptiste Journaux, University of Washington <u>SeaFreeze, a new framework to represent the thermodynamic of water and the water phase diagram at extreme conditions.</u>	*Cara Vennari, University of Chicago <u>Fermi Resonance Observed in High-Pressure Ilmenite (FeTiO₃)</u>

2:08 PM	3:08 PM	4:08 PM	5:08 PM	*Elise Liebow, Union College <u>Freezing point depression of water-salt mixtures with implications for Europa's crust</u>	*Jianjun Jiang, Princeton University <u>High-Pressure X-Ray Diffraction Study of ZrSiO₄</u>
---------	---------	---------	---------	--	---

2:20 PM	3:20 PM	4:20 PM	5:20 PM	Break	
---------	---------	---------	---------	-------	--

Contributed Talks

Shocking Developments

Session Chair - Tom Sharp, Arizona State University

Upper Mantle

Session Chair - Dan Shim, Arizona State University

2:30 PM	3:30 PM	4:30 PM	5:30 PM	*Hannah Shelton, Lawrence Livermore National Laboratory <u>Multimodal Temperature Determination of Shock Compressed Single Crystal Forsterite</u>	*Barbara Ratschbacher, California Institute of Technology <u>Volcanic amphibole single-crystal synchrotron Mössbauer spectroscopy as a function of mineral composition, magmatic oxygen fugacity</u>
2:42 PM	3:42 PM	4:42 PM	5:42 PM	*Travis Volz, Washington State University <u>Effects of graphite crystal structure and microstructure on the shock-formation of cubic and hexagonal diamond</u>	*Wenyi Zhou, University of New Mexico <u>Single-Crystal Elasticity of the Hydrous Fe-bearing Wadsleyite at High Pressure-Temperature Conditions</u>
2:54 PM	3:54 PM	4:54 PM	5:54 PM	*Sirus Han, Princeton University <u>High-pressure behavior of soda-lime glass under shock and static loading to 104 GPa</u>	*Man Xu, University of Chicago <u>Density and sound velocity of dolomite melt under upper mantle conditions: Implications for the seismic signature of melting of a carbonated upper mantle</u>
3:06 PM	4:06 PM	5:06 PM	6:06 PM	*Tyler Perez, Johns Hopkins University <u>Measuring the Thermal Conductivity of Iron at Extreme Conditions Using Laser-driven Ramp Compression</u>	*Ming Hao, University of New Mexico <u>High temperature-pressure single-crystal elastic properties of omphacite</u>
3:18 PM	4:18 PM	5:18 PM	6:18 PM	*Ian Ocampo, Princeton University <u>Stability of the (Mg_{0.6},Fe_{0.4})O B1 phase under laser-driven ramp compression to 561 GPa</u>	*Reynold Silber, Yale University <u>Effects of pressure and water content on diffusion creep of olivine aggregates</u>

3:30 PM	4:30 PM	5:30 PM	6:30 PM	COMPRES: Looking Ahead	
---------	---------	---------	---------	-------------------------------	--

4:00 PM	5:00 PM	6:00 PM	7:00 PM	Adjourn	
---------	---------	---------	---------	---------	--