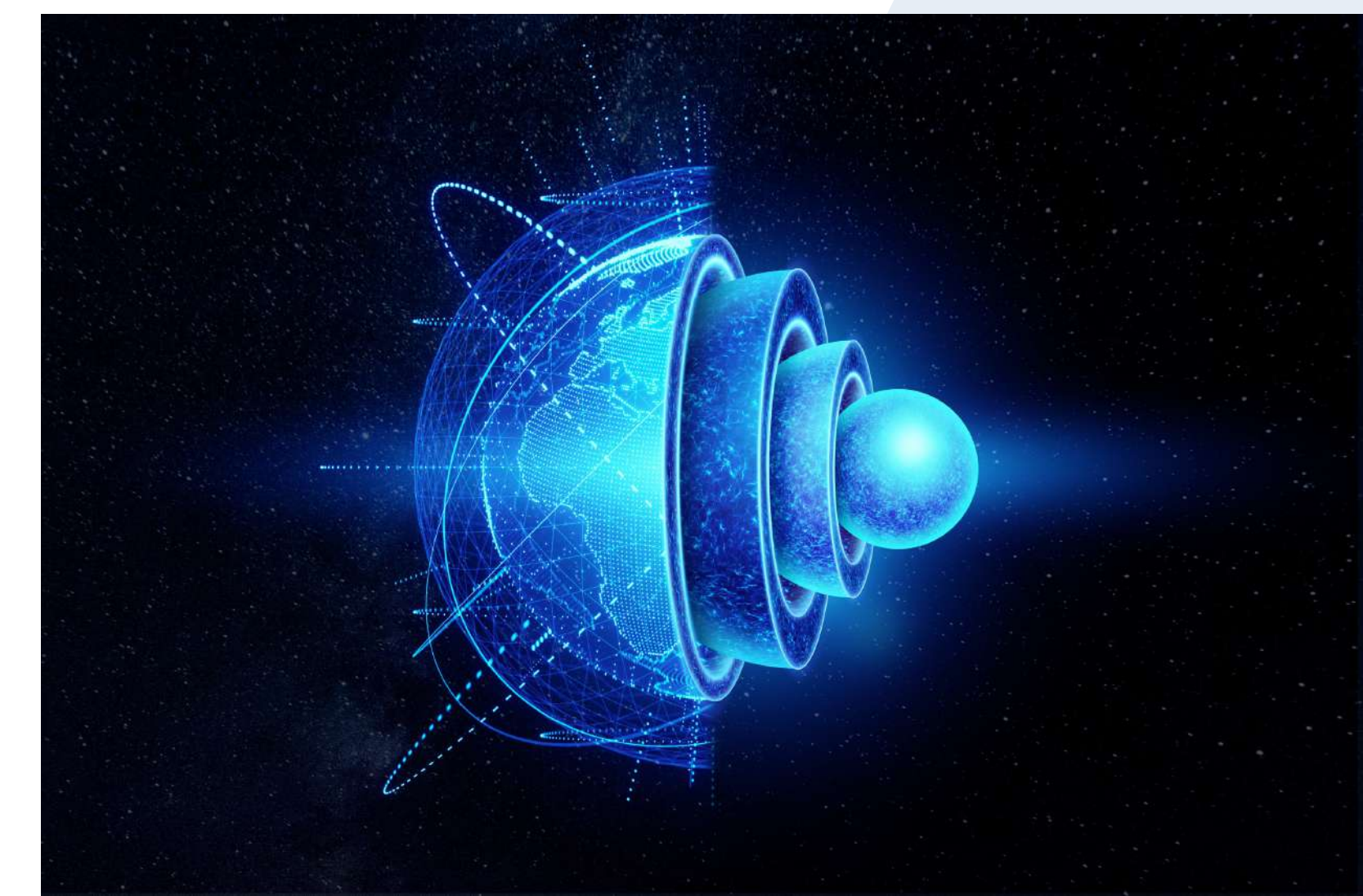


Upcoming Seminars (Summer 2022)

Geological processes deep underneath our feet and on remote planetary objects are inaccessible for our direct observation. Yet, they are tremendously important for our understanding of how planets form and evolve. In the Geo.X series *Topics in Planetary Interiors* we invite diverse experts to highlight forefront research on the properties and processes inside Moons and Planets that provide key insights into planetary evolution.



The presentations will be held via Zoom:

Please contact Dr. Sergey Lobanov (lobanov1@uni-potsdam.de) for details.



31 May, 2022 at 14:15

Prof. Dr. Carmen Sanchez-Valle

Institut für Mineralogie, Westfälische Wilhelms-Universität Münster

Mobility of carbonate melts within the deep carbon cycle

In this presentation, I will provide an overview of our recent efforts to determine the mobility of carbonate-rich melts in the upper mantle and their associated geodynamic signatures. First, I will illustrate progress in constraining the density and viscosity of carbonate-rich melts under pressure using a combination of synchrotron-based experiments and molecular dynamic simulations. Further, I will introduce a new global density model for multi-component mantle-derived carbonate-rich melts that permits accurate density predictions down to the mantle transition, i.e. 30 GPa, 800 – 2300 K. Finally, I will discuss how the new data and models provide new constraints on the timescales of carbonate melt extraction, the upward migration of carbonate melts and their geodynamic signature within the deep carbon cycle.



27 June, 2022 at 16:15

Dr. Mark P Panning

Jet Propulsion Laboratory, California Institute of Technology

Planetary Seismology: Results from InSight on Mars and a trip to the farside of the Moon

InSight has been recording seismic data on Mars nearly continuously since landing in November, 2018. This mission has not been without challenges, including work to get the heat flow probe to depth, and a fight to keep energy going in the absence of dust cleaning through dust devils. In this time on the surface, we've observed over 1300 seismic events, which have let us determine key characteristics of the martian crust, mantle, and core. Meanwhile, NASA has recently selected a set of geophysical instruments, including the Farside Seismic Suite with instruments derived from InSight, to fly on a commercial lander to Schrödinger Crater on the far side of the Moon. This will be the first seismic data recorded anywhere on the Moon since the Apollo instruments were turned off in 1977, on the most sensitive seismometer ever to record on the Moon, and the first ever on the far side of the Moon.

The TiPI seminar series is organized by Sergey S. Lobanov (Uni Potsdam), Ana Plesa (DLR), Ingrid Blanchard (Uni Potsdam) and Christoph Sens-Schönfelder (GFZ). Contact: lobanov1@uni-potsdam.de