Minutes for the 1616th meeting of the Geological Society of Washington

Carnegie Earth and Planets Laboratory

December 3rd, 2025

President Ved Lekić called the meeting to order at 20:10 EST.

Attendance

There were 50 attendees in person and 18 participants online.

Minutes

The meeting began with the reading and approval of the minutes from the previous meeting, the 1615th meeting, which was held on Nov 12th.

Guests and New Members

Three guests were announced, visiting from the UMD. No new members were announced.

Obituaries

A moment of silence was observed in remembrance of Malcolm Ross (USGS), followed by reflections shared by Jane Hamerstrom (USGS). Jane highlighted Malcolm's distinguished career as a mineralogist and his long-standing commitment to professional service, including his tenure as President of MSA (1991), as well as his deep dedication to the GSW. A memorial ceremony will be held on December 5th at Rock Creek Cemetery.

Announcements

The GSW Fall Field Trip was announced for Saturday, December 20th. Peter Valley (USGS) will lead a hike along Difficult Run to the Potomac River below Great Falls. The trip will feature exposures of metagraywackes, migmatites, and petroglyphs. Because parking at Difficult Run Stream Valley Park is limited, carpools will be arranged. Participants should meet at 8:00 a.m. at the Reston Town Center Metro station.

Informal Communications

None.

Formal Program - Presidential Address

The formal program commenced at 20:21. EST. President Ved Lekić (UMD) delivered the Annual Presidential Address, titled "A Tale of Two Worlds: The Core-Mantle Boundaries of Earth and Mars" with incoming president Mike Ackerson (Smithsonian) providing the introduction. The address focused on observations and open questions related to the core-mantle boundaries of Earth and Mars. For Earth, Lekić discussed seismic waveform anomalies that reveal fast regions associated with subducted slabs and slow regions whose composition, activity, and origin remain uncertain. He highlighted ultra-low velocity zones (ULVZs) as small, dense, and extremely slow features that are difficult to image with traditional tomography, and presented machine-learning approaches that sequence seismograms to better interpret signals in poorly sampled regions. Analysis of Pdiff postcursors suggests geographic patterns and

compositional constraints on ULVZs, including evidence that the Hawaiian ULVZ may reflect iron enrichment. For Mars, Lekić described challenges posed by limited seismic coverage from a single seismometer and signal contamination from wind. Using marsquakes associated with fresh impact craters, he showed how core properties can be constrained, suggesting a smaller and denser Martian core than previously thought. *Talk length: 52 minutes.*

Despite immense audience engagement, no questions were permitted, per the bylaws.

President Lekić tearfully adjourned the meeting at 21:15 EST, after which the Annual Meeting took place.

Submitted by Jessie Bersson (Smithsonian), GSW meeting secretary