

Draft Minutes for the 1623rd meeting of the Geological Society of Washington

October 7, 2026

John Wesley Powell Auditorium, Cosmos Club, DC

President Ackerson called the meeting to order at 8:05 PM ET.

Attendance

There were 52 attendees in-person (no online).

Minutes

The meeting began with announcements, then moved on to the approval of the minutes from the previous meeting (1622nd). The minutes of the 1622nd meeting had been posted online and a Minutes Minute was read aloud and approved.

Guests and New Members

5 guests were announced: Dylan Seal & Mi Hung Huang (Carnegie), Eric Schoonaber (Smithsonian NHM), Kim Sotkins (USGS), Kevin Bretz (NOVA Parks & FCPA). 5 new members were announced.

Obituaries

None

Announcements

Annual poster session on October 21 at Carnegie EPL, sign up using google form.

Barbara Romabowicz is giving the Helz lecture tomorrow at UMD. Lecture at 5, reception at 6.

Informal Communications

Kevin Wong: Carnegie EPL open house October 24th 1-4.

Formal Program

The formal program commenced at 8:20 PM ET and consisted of three speakers: George Guice (Towson University), Michael Toomey (USGS), and Moshammat Mijjum (Smithsonian).

1st formal talk: The Paleozoic Ocean Beneath Baltimore (And Beyond)

George discussed the formation history of the mafic and ultramafic rocks found along the east coast of the US, which may have formed as either magmatic layered intrusions or ophiolites. The bulk rock geochemistry and the zoning of spinel-group minerals indicates a mantle origin, while the field appearance and geochemistry of adjacent units indicates a lower crust origin, and geochemistry of the

upper units matches that of modern subduction zones. He is searching for the mantle-crust boundary in the northern section of these rocks, as well as a reason for big differences in structure and geology on either side of the Susquehanna.

Richard Walker (UMD): why do people think it's a LMI; how would you reconcile that with the presence of chromites?

Mong Han Huang (UMD): are these the deeper parts of the basalts in the blue ridge?

Liz Cottrell (Smithsonian NHM): why do you need the drill core when there are plenty of subaerial ophiolite sequences that are well established? How does the geochemistry of these east coast sequences compare with those ophiolites?

Ross Salerno (USGS): is the ophiolite record biased towards hotter material?

8:20-8:39

2nd formal talk: Extreme Potomac Floods at Washington D.C.

Michael spoke about the flood history of the Potomac River in DC, as recorded by instruments, historical documents, and sediment cores. Several large floods were identified at Georgetown, with most occurring in the late 19th/early 20th century, corresponding with heavy rainfall and major land use and river bottom changes. An additional large flood occurred in 1784 due to ice jamming. Additional large floods were identified from cores dating to the little ice age, which accompany an ongoing rise in sea level. There's also geomorphic and sedimentological evidence of high discharge flooding at other sites along the Potomac and the Chesapeake Bay.

Mong Han Huang (UMD): what was special about the Johnstown Flood?

Mike Ackerson (Smithsonian NHM): what's the zirconium/rubidium ratio, and what does it tell you?

Ved Lekić (UMD): how relevant is subsidence to the sea level estimates?

Mark Tyra (NIST): is the cesium dating from nuclear testing?

8:47-9:06

3rd formal talk: Old noble gases in young meteorites

43 guests remaining

Mo discussed the noble gas record in meteorites, which can be produced in either trapped or in situ settings, to learn how they might have been incorporated into early earth. She performed compositional analysis on the metals and noble gases from samples from two meteorites, and calculated cosmic ray exposure ages on the metal of each to compare with other CB chondrites. She was able to identify the source of the noble gases and metals and found that they don't match, supporting a trapping origin, possibly related to the sulfur that was also found in the meteorites.

Alex Kling (JHU APL): when is the solar wind component getting incorporated?

Richard Walker (UMD): would the Bencubbin chondrules have formed differently than other types of ordinary chondrites?

Ved Lekić (UMD): why do you see different signatures in metal vs noble gases?

Mark Tyra (NIST): are there sulfide grains (or other minerals) large enough to do this analysis on?

9:13-9:33

President Ackerson adjourned the meeting at 9:41.

Respectfully submitted by Karin Lehnigk, GSW meeting secretary