December 12, 2021, GEM Steering Committee Meeting Minutes

(Hybrid meeting, conducted at mini-GEM and via Zoom)

Attendance:

In-person: Vania Jordanova (Chair), Alex Glocer, Allisson Jaynes, Chris Mouikis, Elizabeth Vandegriff, Sarah Vines, Umbe Oliveira-Cantú

Virtual: Adam Kellerman (Vice Chair), Brian Walsh, Chih-Ping Wang, Chia-Lin Huang, Hyunju Connor, Joe Borovsky, Kevin Genestreti, Howard Singer, Lisa Winter, Lunjin Chen, Mei-Yun Lin, Steve Petrinec, Yihua Zheng, Ying Zou

1. **Welcome/Agenda (Vania Jordanova)**

The Steering Committee (SC) welcomes Elizabeth Vandegriff to the position of student representative and Ying Zou as the new Liaison to CEDAR. The SC thanks Agnit Mukhopadhyay and Shasha Zou for their service as the previous student representative and Liaison to CEDAR, respectively.

2. **NSF GEM Program Director Report (Lisa Winter)**

The NSF GEM program solicitation has been revised (NSF 22-537) with a Target Date Call for Proposals of March 30, 2022, and was posted in the GEM Messenger. The revised topic areas are as follows:

(1) Currently active GEM Focus Groups (FG). Information about the currently active GEM FGs can be found at the GEMwiki.

(2) Connections of the magnetosphere with climate. This includes understanding how the magnetosphere affects the lower atmosphere and longer term trends between the magnetosphere, weather, and climate.

(3) Modeling and/or observational projects incorporating machine learning/artificial intelligence techniques. Observational data sets may be included from any relevant source/federal agency but are particularly encouraged to include NSF funded observations (e.g., ground magnetometer measurements, incoherent scatter radars, and/or AMPERE).

(4) Comparative magnetosphere studies between the Earth's magnetosphere and those of other planetary or extra-solar planetary bodies. Such studies must inform on the physical processes of the geospace system in order to be considered for GEM funding.

NSF has a new CAREER awardee this year, Yi-Hsin Liu from Dartmouth. He has an excellent research program on magnetic reconnection, and with a broader impact that integrates art and science to create accessible videos about complex space physics topics.

3. Meeting Organizer Report (Chris Mouikis and Chia-Lin Huang)

GEM Logo

There were 16 proposals received from which one design concept was selected at the end of the GEM summer workshop. Working with a professional designer, the final logo was created, with many color variations explored. The GEM community is encouraged to start using the new GEM logo.

Summer 2022 GEM Workshop + Joint GEM-SHINE meeting

The meeting will be June 19 – 24, 2022 at Alohilani Resort Waikiki Beach Hotel. The joint meeting will be on the weekend of June 25, prior to the start of the SHINE meeting. A possibility to visit the DKIST Observatory on Maui during this weekend is being explored for GEM and SHINE students. Financial support will be available for families. A question was asked regarding support for students, post docs and early-career researchers; currently, GEM supports students first. A GEM-SHINE coordination subcommittee was created including Joe Borovsky (chair), Alex Glocer, Sarah Vines, and Yihua Zheng, as well as the GEM SC Chair, Vice-Chair, and MO as ex-officio.

Summer 2023 GEM Workshop

The preference is for it to occur somewhere in Colorado, probably in June with a back-to-back GEM-CEDAR meeting. The MOs started looking at venues.

4. GEMEE Survey Results (Hyunju Connor)

The inaugural GEMEE Mentoring Program occurred in 2021, prior to and during the summer GEM meeting. The GEMEE survey provided a lot of information to help improve the program. A few details were as follows. Most participants rated the program as excellent and described very good relationships, and found the guidelines/material helpful. The most popular topic was career development, and were most satisfied with the interaction with the mentor/mentee and sharing experiences. The DEI subcommittee will work on improving the GEMEE program. The students would benefit from advertisements on the student Discord server. It was suggested to put it in the blurb when signing up for student support. Another idea that came up was to ask participants whether they would like to participate in a group or not, as we received some feedback that some participants would have benefited from that format.

5. GEM Liaisons Reports & Status (Vania Jordanova)

The SC was approached to provide more information about the position of International Liaison to the GEM SC. The SC considered whether the international liaisons should be invited to all virtual telecons or only to the in-person meetings at the GEM workshops, since many international liaisons have difficulty joining the telecons due to the time difference. It was recognized that the international liaisons could benefit GEM by bringing international folks to the GEM community. Another point raised was to connect the international liaisons with

international student participation. One solution brought up was to include international liaisons for only a few meetings per year. The GEM SC voted to amend the bylaws such that the international liaison should be living and working within the country to which they desire to be a liaison for.

During the discussion, it was found that some people might not be receiving the GEM-SC emails from the Google Groups account. The GEM SC will work to rectify this.

6. **Upcoming workshops**

   a) **Ground-based observations (Allison Jaynes)**

Recent conversations with NSF regarding an upcoming virtual workshop on ground-based observations were discussed. This workshop ties directly with the GEM/Mag community and its purpose is to support new and ongoing efforts to write white papers for the Decadal Survey. Ideas for ground-based platforms needed to address outstanding solar and space weather science questions are solicited.

   b) **Space Weather Workshop (Howard Singer)**

Space Weather Workshop, sponsored by NOAA, NASA and NSF and run by UCAR will be held April 26-28 in a virtual format. Registration information will be available soon on the UCAR website. Last year's virtual meeting was a huge success with 1095 registrants from 47 nations and including 248 students. We look forward to your participation.

7. **GEM Focus Group Proposal Selection & Feedback (Vania Jordanova)**

The GEM SC received six Focus Group (FG) proposals that were discussed publicly (in the order of their receiving) at a Virtual GEM session on Friday December 10:

I. System science of meso-scale processes: impacts and coupling across regions and scales throughout the SW-M-I-T system (Lead: Larry Lyons)

II. Understanding the causes of geomagnetic disturbances in geospace for hazard analysis on geomagnetically induced currents (Lead: Xueling Shi)

III. Magnetospheric Sources of Particle Precipitation and Their Role on Electrodynamic Coupling of Magnetosphere-Ionosphere-Thermosphere Systems (Lead: Dogacan Su Ozturk)

IV. Atmospheric Particle Precipitation (Lead: Mykhaylo Shumko)

V. Multi-scale Heating and Acceleration Processes during Plasma Transport across the Magnetopause (Lead: Xuanye Ma)

VI. The Nightside Transition Region (Lead: Bea Gallardo-Lacourt)

After hearing all presentations, the SC proceeded with a closed session for further discussion, voting and selection (details redacted). The SC accepted three new FGs starting in 2022 – proposals II, III, and VI. There was much discussion over email regarding the final form of the feedback for the FG proposers, with some discussion as to whether more detailed feedback should be provided. These comments were brought forward for discussion during the meeting. There was a consensus that, due to the time limitations, providing general feedback that thanks the proposers would be most appropriate.

8. **Meeting Adjourned**