

Mini-GEM Steering Committee Minutes – December 10, 2023

Minutes taken by Ian Cohen and edited by Christine Gabrielse

Present: Mouikis, Walsh, Gabrielse, Vines, Young, Cohen, Welling, Riley, Lyon, Borovsky, Bashir, Smith, T-Y Huang (NSF), Kuznetsova, Rastaetter, Oliveira-Cantú, , Kellerman (virtual), Singer (virtual), Huang (virtual), L. Chen (virtual), H. Chen (virtual), Liao (virtual)

1. Welcome/Agenda (Christine, Adam)

2. Focus Group Selection (All)

Two FGs ended in 2023; there are currently 9

Arnold et al. FG (Kinetic Plasma Processes in the Magnetotail during Substorm Dynamics) – **PASSED**

- Steering Committee's thoughts:
 - Felt like proposed activities & organization/implementation were good and what we want to see to keep workshop-style
 - Like experimentation of different session styles, appreciate attempt; like the clear, targeted questions
 - DIP FG ended in FY23, 3 more FGs will end in FY24 (incl. Rx) – thus, the only MPS session left is MESO, which focuses inside the Transition Region. Thus, we are currently lacking any FG that looks tailward of $R \sim 12$ RE.
 - KiTS would fill in a gap left by the “Tail at lunar distances” FG from a couple years ago, which was probably a few years before its time
 - Unique timeliness with the MMS string-of-pearls campaign starting July 2024
 - The proposal has a coherent response to what a GEM challenge might look like
 - Clarification: the challenge as described in the proposal itself was lacking, but it was clarified during discussion
 - The proposal demonstrated timeliness, relevance, and fit with other focus groups
 - Unique topic to GEM and they put together a nice plan to address it

Connor et al. FG (Machine Learning) – **DEFEATED**

- After long discussion (summarized below), motion to approach the ML proposing team and ask them to be a limited-term Resource Group – defining what it is – and allow them to define the term length
 - Action: Go back to the proposing team to ask if they would like to be a Resource Group – and offer SC support to help facilitate collaboration w/ CEDAR and SHINE
 - **PASSED**

- Assumption that RGs are indefinite is inaccurate; they could be year-to-year or at the discretion of the SC
- Discussion:
 - Some background history:
 - Four years ago, Matt Argall submitted a ML FG proposal. The Steering Committee felt they didn't address science, and recommended a 2-year trial ML session. Idea was to decide then whether or not to make ML a FG. Matt has requested a session each GEM for ML since then.
 - This ML proposal did not address the lack of an overarching science topic--but there is a lot of energy and momentum behind the topic and it would be good to have a forum for these discussions. The ML session is always highly attended at GEM for the past four years.
 - Steering Committee's thoughts:
 - Don't see this as a FG, seems like it should be a Resource Group or something at higher level than GEM (maybe NSF-higher level)
 - Didn't see a coherent explanation of what knowledge the potential FG will gain from the effort besides coupling models
 - One person asked, "One of the RAs is Global System Modeling, which is not science focused like the others, so if we don't select this should we get rid of that RA?"
 - No, GSM is still science-focused – it asks, "how do all the pieces fit together"
 - This science focus was missing from the ML proposal
 - System science is general – but you still need to address part of a question and it needs to have a purpose
 - The SC liked the diversity of institutions and different backgrounds and EC leadership (note though that emphasizing diversity *too much* during the presentation was more of a demerit)
 - The "Discussion-only" session idea was an interesting idea, and the proposal to bring in an outside speaker (though has been difficult in the past) as well as training (similar to SPEDAS sessions) is also intriguing
 - If we select it as a FG, can we recommend that they pick a couple of science topics to develop and show relevance/application to the community?
 - There was big turnout in ML sessions during "trial period", Something like 4-5 sessions last summer or summer before
 - Does high attendance in their sessions demonstrate community demand?
 - They will exist...they're here to stay. We should support.

- ML is a catch-all term that's much larger than just models (also analysis technique) – we don't have a data analysis FG
 - Are we convinced that these "models" will all be able to be coupled?
- The unclear methodology was a demerit for previous FG proposals that were not selected.
- We're using language similar to how we review research proposals – these are much more about bringing together discussion spaces
- It's more of a method-based FG than science-based; NSF will ask which FG your research falls into...which would limit all proposals to have to use ML (as opposed to science-based, which any approach can propose to)
 - There is already an NSF call specifically for ML proposals
 - ML is one of the 4 topics already encouraged by NSF outside of FG topics
 - This could be tied to NSF-wide solicitations/opportunities, above GEO
 - What's the difference of funding and time allocations to Resource Group vs. Focus Group? Maybe give them tenured chance as FG instead of indefinite term for RG
 - NSF has weakened tie of GEM proposals to GEM FGs in recent solicitations
- Could we push this to a cross-community (GEM, CEDAR, SHINE) across GEO? (Mentioned in ML proposal.)
 - CEDAR is planning some sort of task force for ML
 - Would SC be committed to providing support to help make this happen? Could our SC reach out to CEDAR & SHINE SCs to help facilitate cross-community collaborations?
- Would be very useful as a Resource Group – maybe take part, or repurpose, MMV?
 - Proposers didn't answer question about why it shouldn't be a Resource Group – justification that ML community isn't discussing amongst themselves seemed weak, especially given a 4-year window
 - If we decide to make it a Resource Group, we should make it clear that it wouldn't limit them to not having sessions
- We call for Focus Groups but we are now making Resource Groups...is that inclusive instead of soliciting proposals for Resource Groups?
 - There's only one example so far (MMV), which really does have broad, long-term application to the whole community
 - Do we need to define what makes something an RG?
- Could we create a probationary or ad hoc Resource Group?

- Historical note: Transition to RG from FG was proposed/requested by MMV FG leadership, not suggested by SC
 - No current bylaw to create - or remove – RGs
 - Would like to see how ML will work – or not – in various areas, but how will ML topics fit into FGs that already exist
 - Can we have ML as part of challenges for different topical FG?
 - Would like to see it demonstrated as FG first before making it a RG
 - Can we make it a RG with a 2-4 year term?
 - If so, we need to present them with options...nothing or RG
 - Vote on FG vs. no (then maybe offering something else)
 - Need to be clear on differences between RG & FG (we should probably update bylaws to clarify)
 - RG can have their own sessions
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- The SC voted on whether or not to make the ML proposal a FG. This failed (ML would not be a new FG).
 - After that vote failed, the SC voted on whether or not to make the ML proposal a RG. This passed, and it was decided that Adam would reach out to them to offer the RG status (see details above).

The following topics were on the agenda but were not addressed due to time constraints:

3. Addition FG Member Selection (Christine, Adam)

4. GEM Climate Survey (Brian)

5. Transparency Taskforce (Chris, Christine, Adam)

6. GEM Antiharassment Updates/Announcements (Christine, Adam)

7. Other items as time permits