



Welcome to GEM Student Day!!!

June 14, 2015

Wifi and Checking In

- Wifi!
 - Network: ViceroyMeeting
 - Room: Salon 1
 - Passcode: GEM15
- Check-In
 - The flights for the registration folks was delayed
 - They should be here by 3:00 pm for check-in

Welcome!

- Introductions:
 - Name?
 - Institution?
 - Year in grad school?
 - How many times have you been to GEM before?
 - What is your favorite flavor of ice-cream?

08:00 am – 09:30 am Student Breakfast
09:30 am – 09:40 am Introductions
09:40 am – 09:55 am What is GEM?

Robert C. Allen (robert.allen@swri.edu)

Regions

09:55 am – 10:15 am Sun, the Solar Wind, and Heliosphere

Colin Komar (ckomar@mix.wvu.edu)

10:15 am – 10:35 am Outer Magnetosphere: Magnetopause, Magnetosheath, and Tail

Sarah Vines (svines@swri.org)

10:35 am – 10:55 am Inner Magnetosphere

Ashar Ali (ashar.ali@lasp.colorado.edu)

10:55 am – 11:15 am Ionosphere and Thermosphere

Bruce Fritz (bruce.fritz@wildcats.unh.edu)

11:15 am – 11:30 am Break

Dynamics

11:30 am – 11:50 am Magnetic Reconnection

Colby Haggerty (colbych@udel.edu)

11:50 am – 12:10 am Geomagnetic Storms and Substorms

Alex Boyd (a.j.boyd@unh.edu)

12:10 am – 12:25 am Overview on Generation of Magnetospheric Waves (theory)

Lois Sarno-Smith (loisks@umich.edu)

12:25 am – 02:00 pm Lunch

Data & Modeling

02:00 pm – 02:20 pm Ground based observations

Bing Yang (biyang@ucalgary.ca)

02:20 pm – 02:40 pm Overview of Magnetospheric Missions & Data Sources

Christina Chu (seimanchu@gmail.com)

02:40 pm – 03:00 pm Overview of Models (MHD, inner mag, etc.)

John Haiducek (jhaiduce@umich.edu)

03:00 pm – 03:15 pm Break

03:15 pm – 03:30 pm Elevator Pitch Ice-Breaker

03:30 pm – 03:45 pm Introduction to New Student Representatives

Hot Topics

03:45 pm – 04:05 pm Overview of Hot Topics in CEDAR

Ryan McGranaghan (ryan.mcgranaghan@colorado.edu)

04:05 pm – 04:25 pm New Focus Group: Flow Channels & Substorms

Bea Gallardo-Lacourt (bgallardo@atmos.ucla.edu)

04:25 pm – 04:45 pm New Focus Group: Tail disturbances

Chao Yue (leleyc1015@gmail.com)

04:45 pm – 05:00 pm Break

05:00 pm – 06:00 pm Discussion with Eric Donovan, Mike Wiltberger, & Janet Kozyra

06:00 pm – 09:00 pm Icebreaker reception

This week (things to do)

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
	14-Jun	15-Jun	16-Jun	17-Jun	18-Jun	19-Jun
7:00 AM		Breakfast Buffet	Breakfast Buffet	Breakfast Buffet	Breakfast Buffet	Breakfast Buffet
8:00 AM	Student Breakfast	GEM	GEM	GEM	GEM	GEM
9:00 AM	Student Day					
10:00 AM						
11:00 AM						
12:00 PM						
1:00 PM						
2:00 PM					Student Hike	
3:00 PM						
4:00 PM						
5:00 PM						
6:00 PM		Student Dinner/ Proposal Writing	Poster Session	Banquet	Poster Session	
7:00 PM	Icebreaker Reception					
8:00 PM						
9:00 PM			Student Party			

Wait... where is Ian?

- Last Thursday Ian became a father to Adam Cohen.



Voting and feedback

- In an effort to be more **green**, we are moving to online feedback and voting.
- To get to the Student Day tutorial judging form go to: goo.gl/BhjSD8
- At the end of Student Day, you will also be sent two more links:
 - One for feedback on how Student Day was run
 - Another for the student representative elections
 - The student representative election will be closed Thursday at midnight and the next student representative will be announced along with the student poster competition winners on Friday.

Important Information

- GEM Poster Competition
 - Register at: TBA
- Student website:
 - http://www-ssc.igpp.ucla.edu/gemwiki/index.php/GEM_Student_Forum

Other business

- There has been a request for the GEM community to have a website in which students can post CV's when they are nearing graduation.
- Is this something the GEM students would like to create?
- Would you use it?
- Voting will take place via a question on the Student Day feedback form.

What is GEM?

Robert C. Allen and Ian J. Cohen
GEM Student Representatives

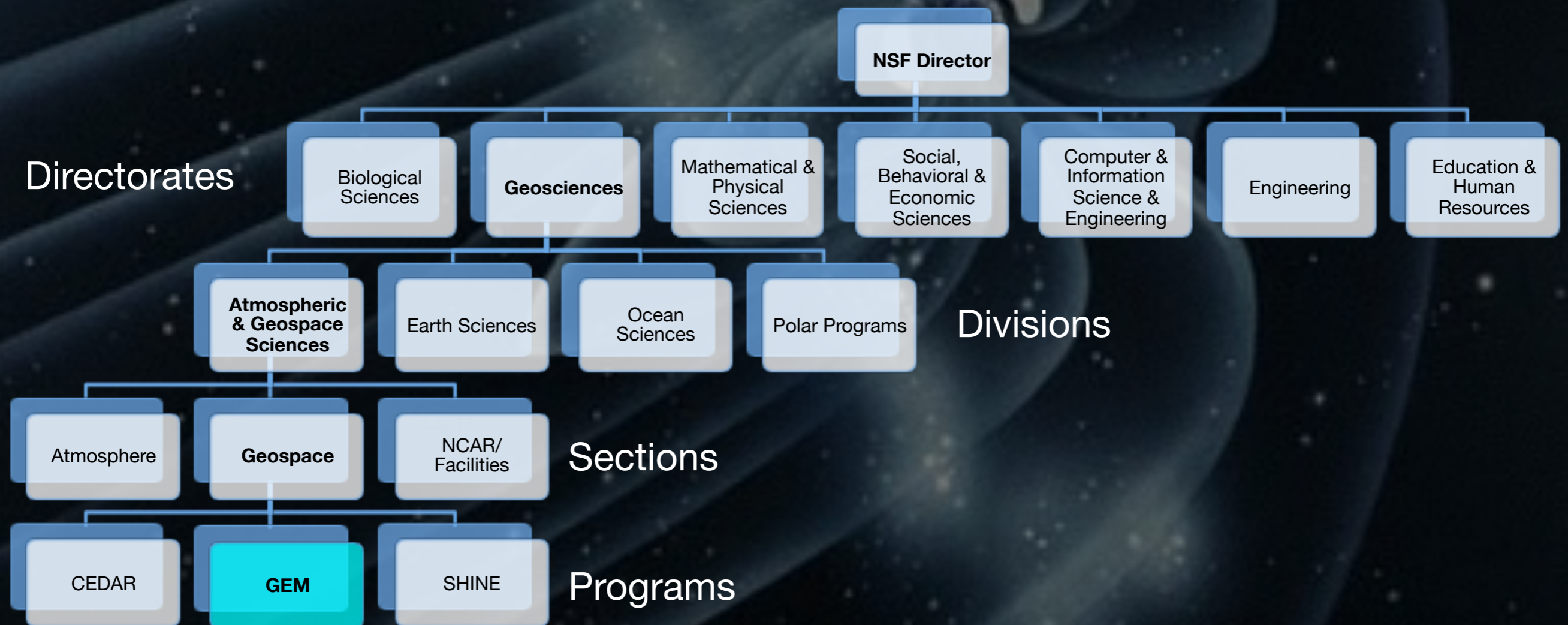


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GEM

- Geospace Environment Modeling
 - A National Science Foundation (NSF) funding program



GEM

- Geospace Environment Modeling
 - A Community of magnetospheric researches



GEM

- Geospace Environment Modeling
 - An annual summer workshop



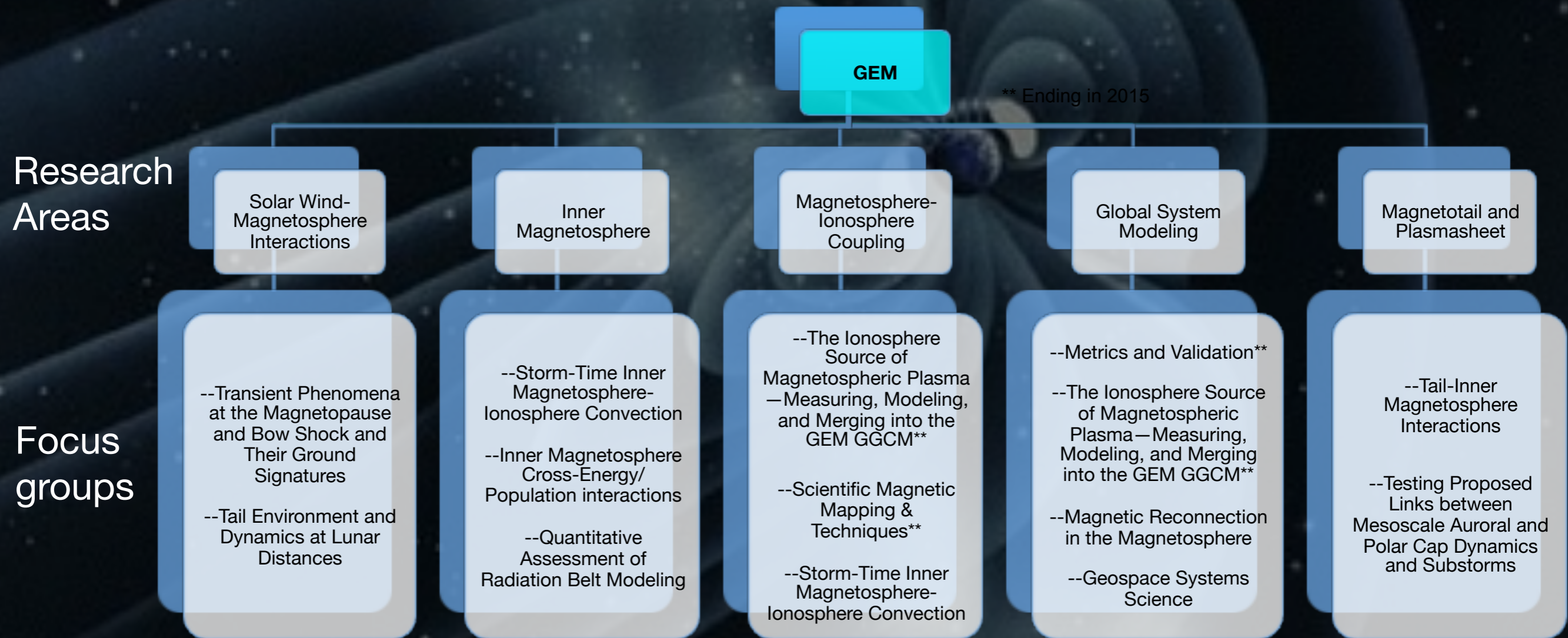
GEM History

- 1985: Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR) founded
- 1986: GEM program proposed to NSF Director
- 1988-1991: Four planning workshops held
 - “As humans extend their frontiers beyond the surface of their home planet – moving technological systems, observatories, and colonies into space – accurate predictions of weather and climate in space become increasingly important. New scientific data and theoretical models are required to achieve this predictive capability. Therefore a major new research initiative is proposed entitled Geospace Environment Modeling (GEM).” – *Geospace Environment Modeling: A Program of Solar-Terrestrial Research in Global Geosciences* – May 1988
- 1991: First GEM campaign (Funding)
- 1992: First GEM summer workshop
- 1999: Solar Heliospheric & Interplanetary Environment (SHINE) founded
- 2015: The GEM summer workshop is still going strong

Evolution of GEM

- 1991:
 - Boundary Layer Campaign
 - WG 1: Boundary Magnetic & Electric Fields
 - WG 2: Particle Entry, Boundary Structure & Transport
 - WG 3: Current Systems & Mapping
- 2015:
 - Current Research Areas
 - Dayside, including boundary layers & plasma/energy entry (Dayside)
 - Inner Magnetosphere and storms (IMS)
 - Tail, including plasma sheet and substorms (Tail)
 - Magnetosphere- ionosphere coupling, aurora (MIC)
 - Geospace General Circulation Model (GGCM)

GEM Focus Groups



** Ending in 2015

What makes GEM special

- Community-initiated: Run by Steering Committee
 - Comprised of community scientists
 - Controls everything except the funding
- Focused on the Earth's magnetosphere
 - Coupling to the atmosphere and solar wind
 - Dynamic properties of geospace
- Strategic: Operates via focus groups
 - Focus on particular aspects of the space environment
- Ultimate Goal: GGCM with predictive capabilities

GEM Steering Committee

- President: Eric Donovan
- President-elect: Mike Wiltberger
- At-large members: Robyn Millan, Drew Turner, Jacob Bortnik, Margaret Chen
- Research area coordinators: Karlheinz Trattner, Katariina Nykyri, Anthony Chan, Scot Elkingon, Larry Kepko, Bill Lotko, Marc Lessard, Slava Merkin, Frank Toffoletto
- Agency liaisons: NSF, NOAA, NASA
- Community liaisons: SHINE, CEDAR, CCMC
- National liaisons: Canada, Europe, Japan, China, Korea, Mexico, Argentina, Taiwan, Australia
- Communications coordinator: Peter Chi
- Student representatives: Ian Cohen and Robert Allen

Be part of the community

- Communications
 - GEMwiki: website
 - http://www-ssc.igpp.ucla.edu/gemwiki/index.php/GEM_Student_Forum
 - GEM Messenger: electronic newsletter
 - subscribe by emailing Peter Chi <editor@igpp.ucla.edu>
- Meetings
 - Summer workshop (Where we are now)
 - Mini-GEM at AGU (Sunday before AGU)

Thank you

- Questions
- Download this and other student tutorials at the GEMwiki Student Forum:
 - http://www-ssc.igpp.ucla.edu/gemwiki/index.php/GEM_Student_Forum