GEO | Division of Atmospheric and Geospace Sciences | Geospace Cluster

NSF Updates

Program Directors of AER

Shikha Raizada

Tai-Yin Huang

Program Directors of MAG

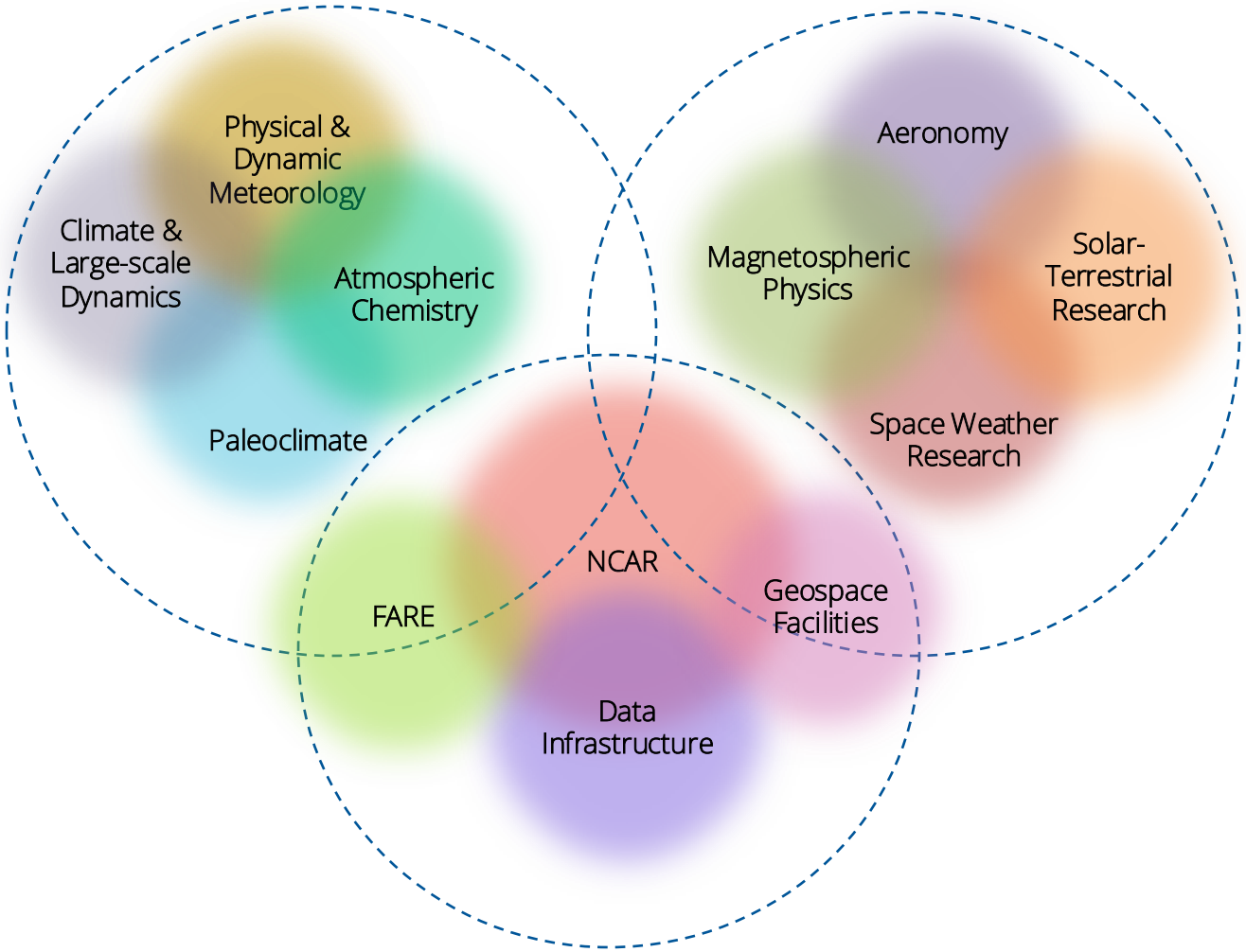
Vania Jordanova

Chia-Lin Huang

Atmospheric and Geospace Sciences (AGS) – Reorganization

Atmosphere Cluster

Unsolicited proposals accepted any time to PD 24-7790



Geospace Cluster

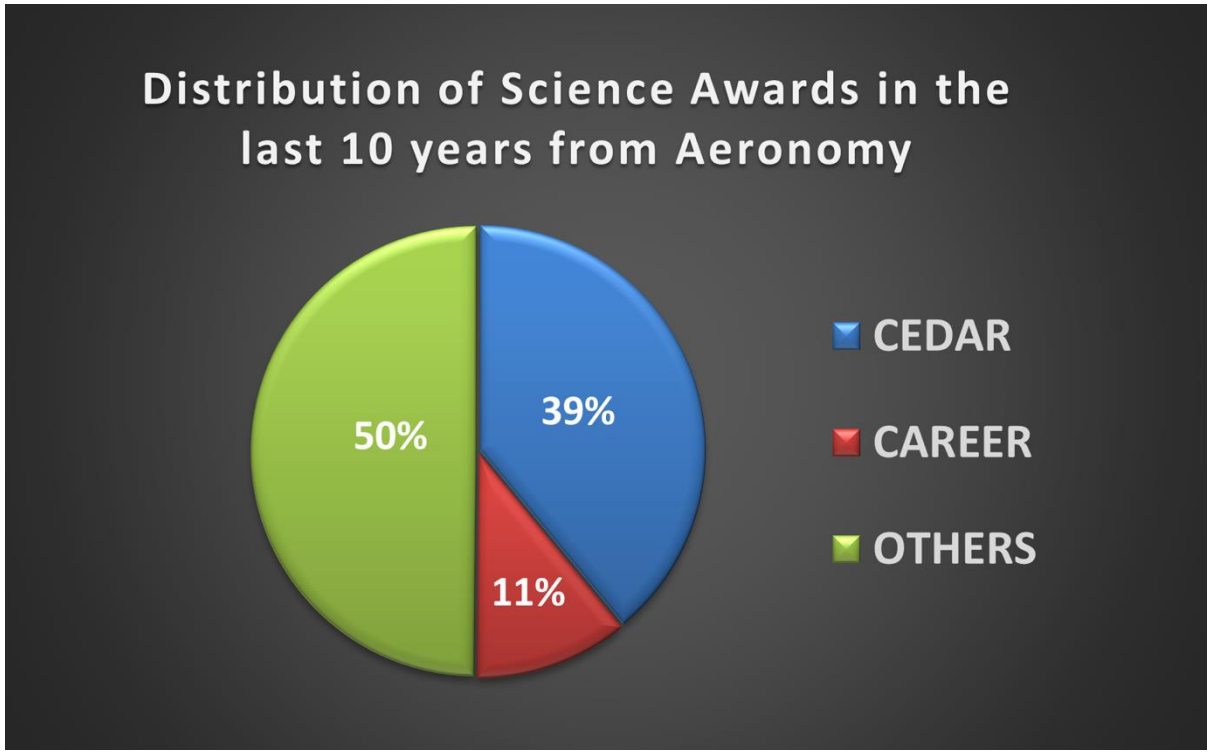
Unsolicited proposals accepted any time to PD 24-7789

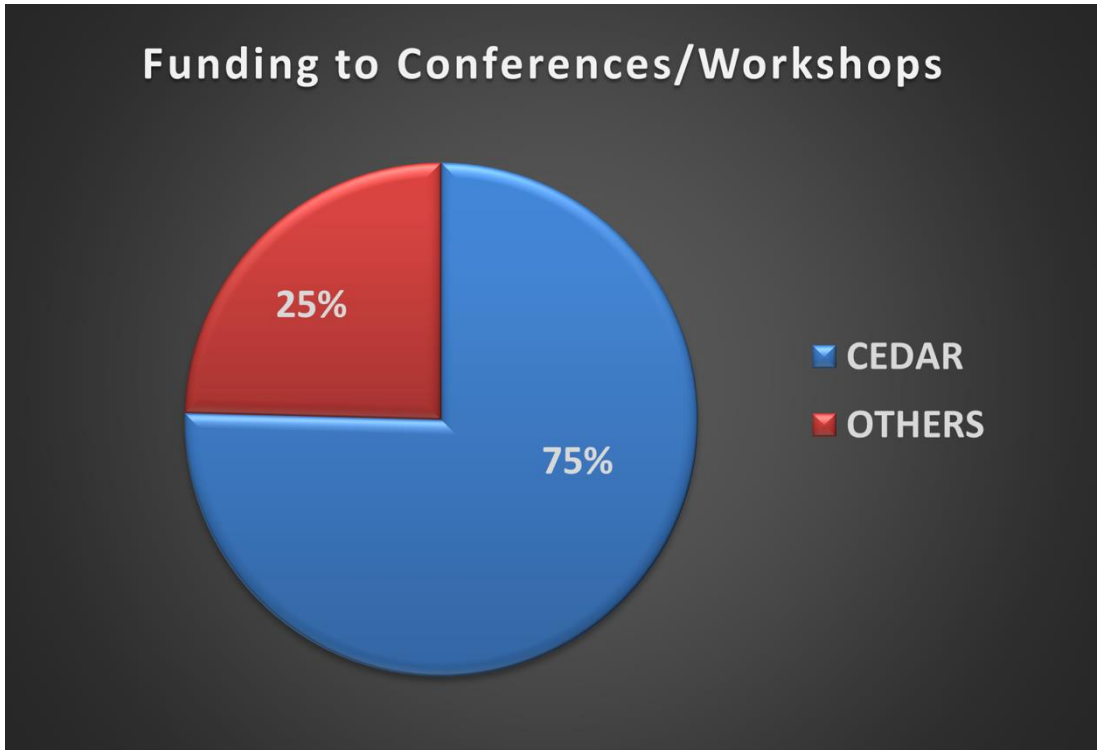
Infrastructure Cluster

NSF Geospace Cluster Funding Opportunities

Solicitations
NSF 22-575: **Coupling, Energetics, and Dynamics of Atmospheric Regions (CEDAR)** **March 4, 2026**
NSF 22-537: **Geospace Environment Modeling (GEM)** **September 30, 2025**
NSF 22-570: **Solar, Heliospheric, and INterplanetary Environment (SHINE)** **October 7, 2025**

Overview of Aeronomy related Awards: 2015 - 2025

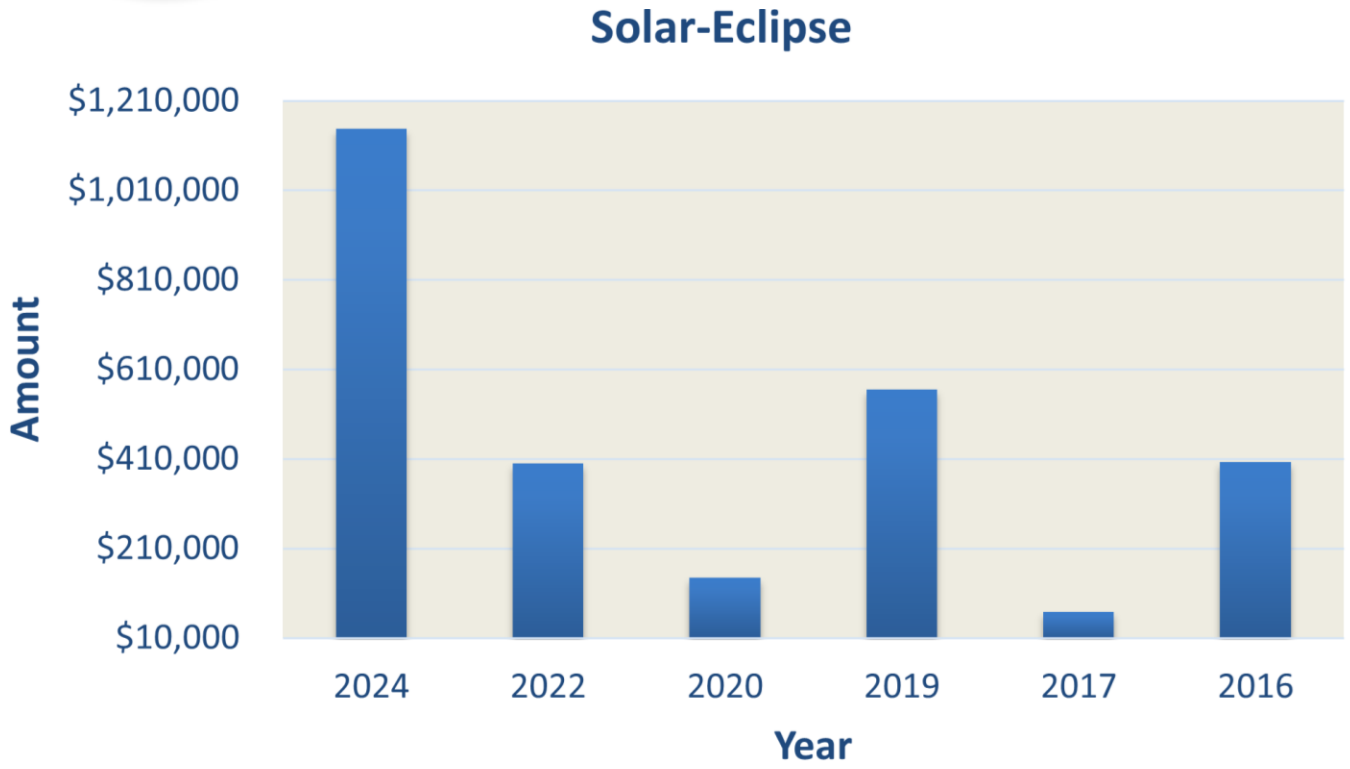




Other	$47 Million
CAREER	$10.5 Million
CEDAR	$37 Million

CEDAR Workshop: ~ $2.7 Million
OTHERS: **~ 900 K**

Contributions to Solar-Eclipse: Aeronomy



Total Awarded Amount :
~ $2.7 Million

- 8 April 2024, Total solar eclipse
- 14 October 2023, Annular solar eclipse
- 21 August 2017, Total solar eclipse

AGU Meeting:

SH53F: Solar Eclipse Science: What We Learned from the Great American Eclipses and What is Next

Major Research Instrumentation Program (MRI)
NSF 23-519 (Oct 15 – Nov 14, 2025)

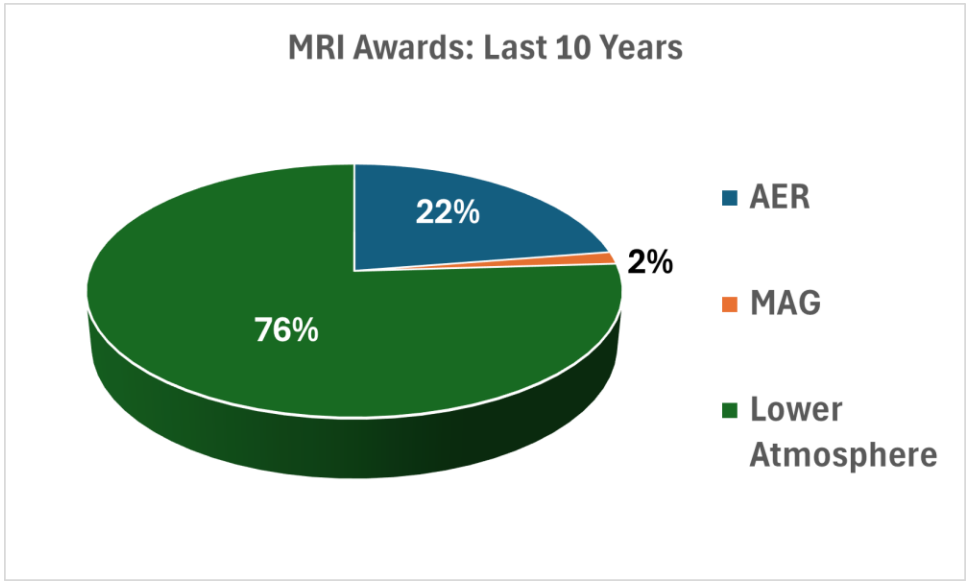
2024 PI: Dr. R. Kumar
$800 K

2022 PI: Dr. F. Rodriguez
$2.8 M

2022 PI: Dr. Meriwether
$587K

2020 PI: Dr. M. Conde
$2.5 M

Program	Total Amount ($) Millions
AGS	~ 30
AER	~ 9
MAG	~ 0.7



Statistics of MRI awards: Last 10 years

Faculty Early Career Development Program (CAREER)

GS FY 2024 total funding: **$1.5 Million**

GS Funds Obligated in last 5 yrs: **$8.8 Million**

NSF-wide, most prestigious awards to support early career faculty

Builds lifetime leadership in integrating education and research

NSF Geospace awarded >**$25 M** in CAREER awards to 38 Assistant Professors in the past 10 years

MAG Awardees

Dr. Victoria Wilder

UTA

Dr. Lauren Blum

LASP Laboratory for Atmospheric and Space Physics University of Colorado Boulder

AER Awardees

Dr. Stefan Kaeppler

CLEMSON

Dr. Roger Varney

UCLA

NSF

Faculty Development in GeoSpace Science (FDSS)

- Creation of new tenure-track faculty positions
- Integrate topics in Geospace science into natural sciences or engineering or related departments at U.S. institutions
- Salary, benefits, and training for newly recruited tenure-track FDSS faculty; up to five years and $1,500,000 total
- TOTAL Funds: >$8 million over 5 years

Clemson · Georgia Tech · University of Delaware · Bates · UMass Lowell · UTA

- 2024 FDSS awardees, hires are in progress
- 2025 FDSS proposals, reviews are in progress

AGS Geospace Data Infrastructure Activities

Interagency Heliophysics Data Working Group

- Held agency townhalls at TESS and AGU, 2024

Travel funds to:

- NSF NCAR Community Expectations for a Geoscience Data Commons, 2024.
- Python in Heliophysics Summer School, 2024.
- CCMC Workshop, 2024.

Partnering with other programs

across NSF directorates and divisions on solicitations

- CSSI (NSF 22-632) and FAIROS (NSF 25-533), led by CISE Directorate.
- CAIG (NSF 25-530) and GEO OSE (NSF 25-506), led by GEO Directorate.

Contributing to NSF DMSP webform design, development, and implementation.

AGS Geospace Data Infrastructure Activities

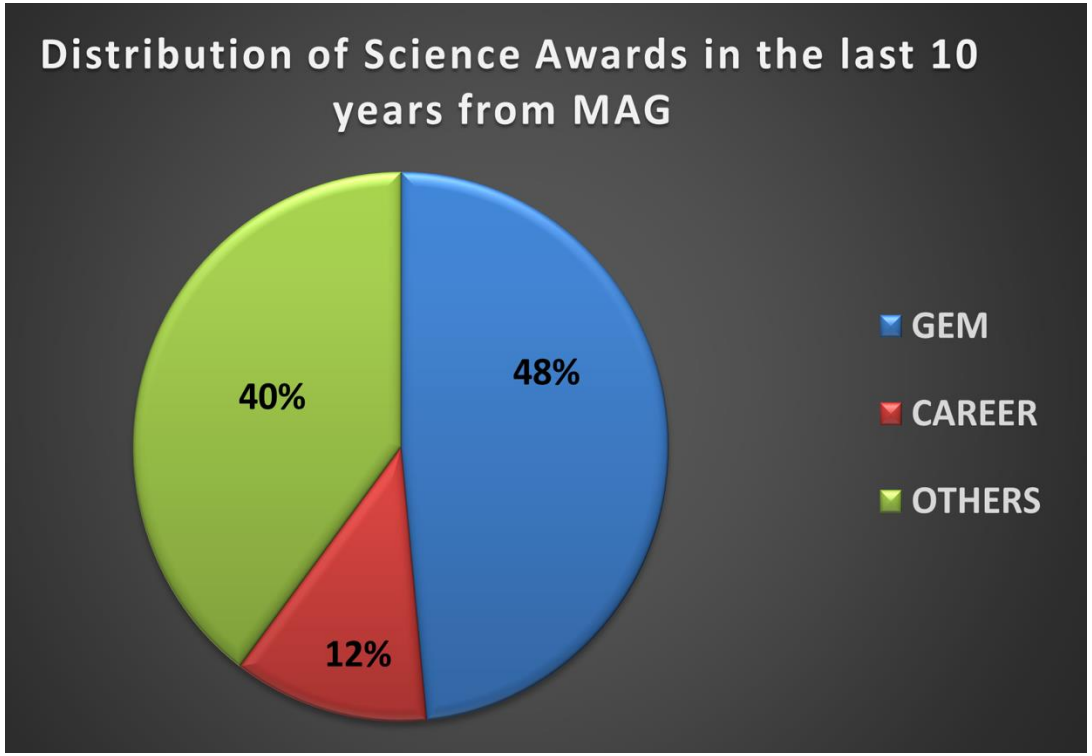
Projects Funded by Aeronomy

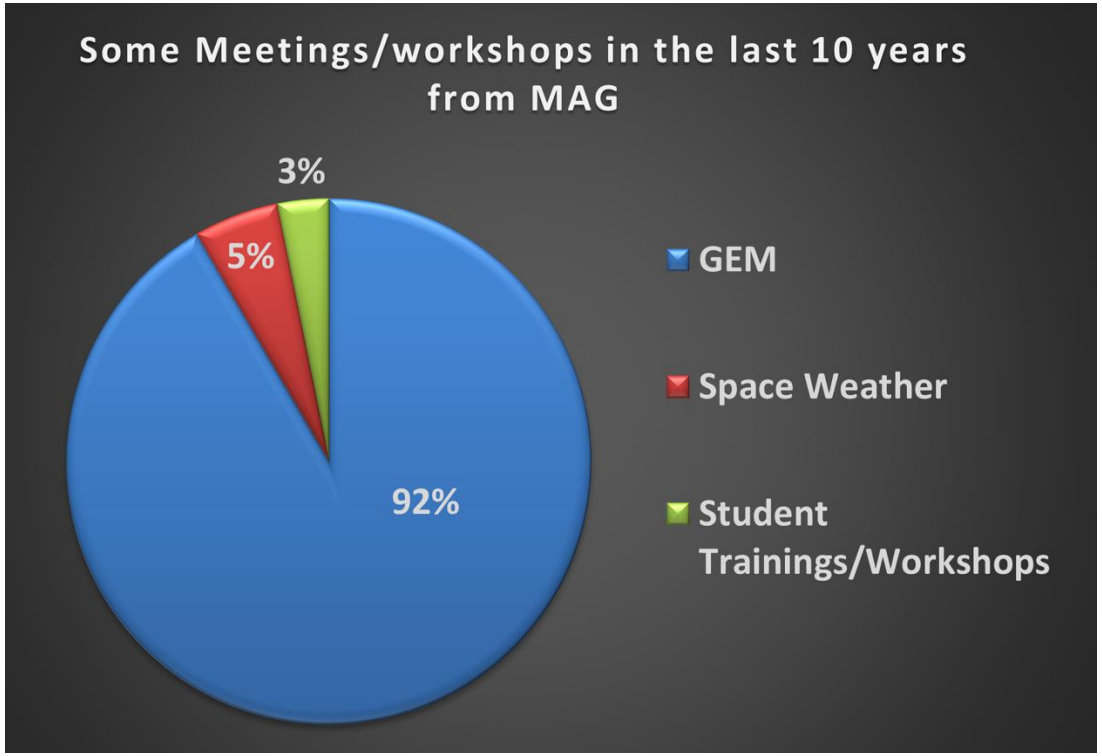
Swarm over Poker 2023: An auroral system-science campaign exemplar of archiving and sharing heterogeneously-derived data products (AGS-2329979, PI Kristina Lynch; AGS-2329980, PI Donald Hampton; AGS-2329981 PI Leslie Lamarche). $1,179K

RAPID: Reprocessing DMSP SSIES-3 ionospheric data to level-2 Quality (AGS-2437055, PI Marc Hairston). $99K

Collaborative Research: An observational network to enable investigations of gravity-wave and storm-time impacts on the mid-latitude thermosphere-ionosphere (AGS-2426523. PI Asti Bhatt; AGS-2426524, PI Jonathan Makela; AGS-2426525 PI Brian Harding). $1,448K

Overview of MAG related Awards: 2015 - 2025





GEM Awards: ~ $37 Million

CAREER Awards: ~ $9.2 Million

OTHERS: MAG Base Program, RAPID, EAGER

GEM Workshop: ~ $2.2 Million

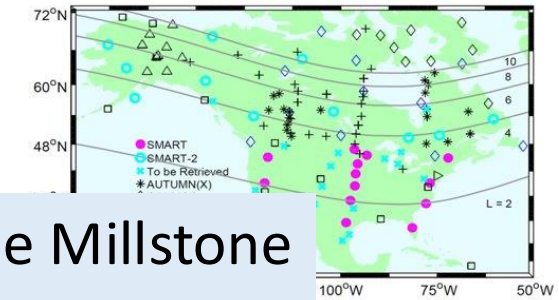
NSF-funded Ground Magnetometers

- **MACCS** Mark Moldwin (Michigan), Mark Engebretson (Augsburg College)
- **SMART** Peter Chi (UCLA)
- **MagStar** Jenn Gannon* (CPI)
- **Conjugate magnetometers in Antarctica** Mike Hartinger (SSI), Joseph Baker (VT), James Weygand (UCLA)
- **MICA** Marc Lessard (UNH) and Hyomin Kim (NJIT)

TOTAL Funds: >$7 million over 10 years

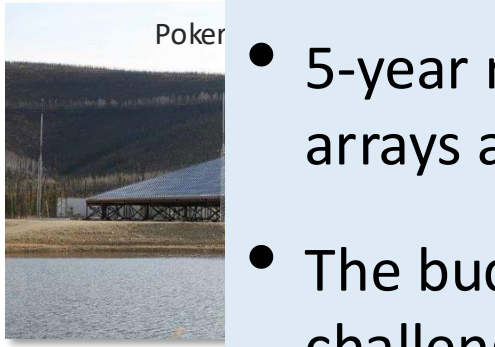
By Jenn Gannon

Geospace Facilities

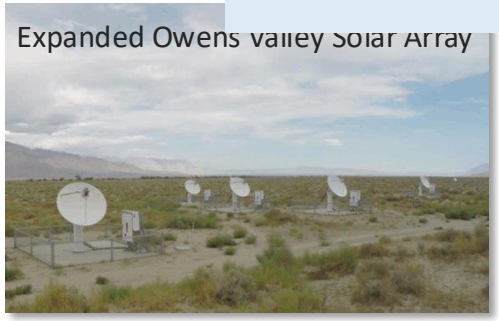


er Networks

- 5-year renewal grant awarded to MIT to operate the Millstone Hill Geospace Facility: PI Larisa Goncharenko
- 5-year renewal grant awarded to NJIT to operate 2 solar radio arrays at the Owens Valley Radio Observatory: PI Bin Chen
- The budget situation is currently and will continue to be challenging in the near future



on Monitors



AMPERE iridium

SuperMAG

FY24 Distributed Array of Small Instruments (DASI)

Deployment and Operations of the Ham Radio Science Citizen Investigation (HamSCI) Personal Space Weather Station Network

Nathaniel Frissell (University of Scranton), Travis Atkison (University of Alabama Tuscaloosa), Hyomin Kim (New Jersey Institute of Technology), Christian Zorman (Case Western Reserve University) - $644k

A Distributed Meteor Radar and Optical Network in South America

Alan Liu (Embry-Riddle Aeronautical University), Jonathan Makela (University of Illinois at Urbana-Champaign), Asti Bhatt (SRI International) - $661k

Student-Led Development of an Advanced yet Low-cost Multi-Constellation, Triple Frequency Ionospheric Scintillation and Electron Content Monitor

Fabiano Rodrigues (University of Texas at Dallas) - $416k

AUtonomous Remote geospace Observation and Research Array (AURORA)

Zhonghua Xu (Virginia Polytechnic Institute and State University), Michelle Salzano (Space Science Institute) - $1.4 Million

16

GEO Funding Opportunities & NSF-Wide Solicitations

- Cyberinfrastructure for Sustained Scientific Innovation (CSSI) NSF 22-632
- Collaborations in Artificial Intelligence and Geosciences (CAIG) NSF 25-530
- Findable Accessible Interoperable Reusable Open Science (FAIROS) NSF 25-533
- Geosciences Open Science Ecosystem (GEO OSE) NSF 25-506
- Graduate Research Fellowship Program (GRFP) NSF 24-591
- Research Experiences for Undergraduates (REU) NSF 23-601
- ECosystem for Leading Innovation in Plasma Science and Engineering (ECLIPSE) PD 24-110Z
- NSF Scholarships in Science, Technology, Engineering, and Mathematics Program (S-STEM) NSF 25-514

- Directorate for Technology, Innovation and Partnerships (TIP): To foster regional innovation and economic growth, accelerate technology translation and development, and prepare the US workforce
- Updates on NSF Priorities: NSF's broadening participation activities must aim to create opportunities for all Americans everywhere

President's NSF FY26 Budget Request to Congress

➢ The President's NSF FY26 Budget Request of $3.903 billion reflects a strategic alignment of resources in a constrained fiscal environment (www.nsf.gov/cj)

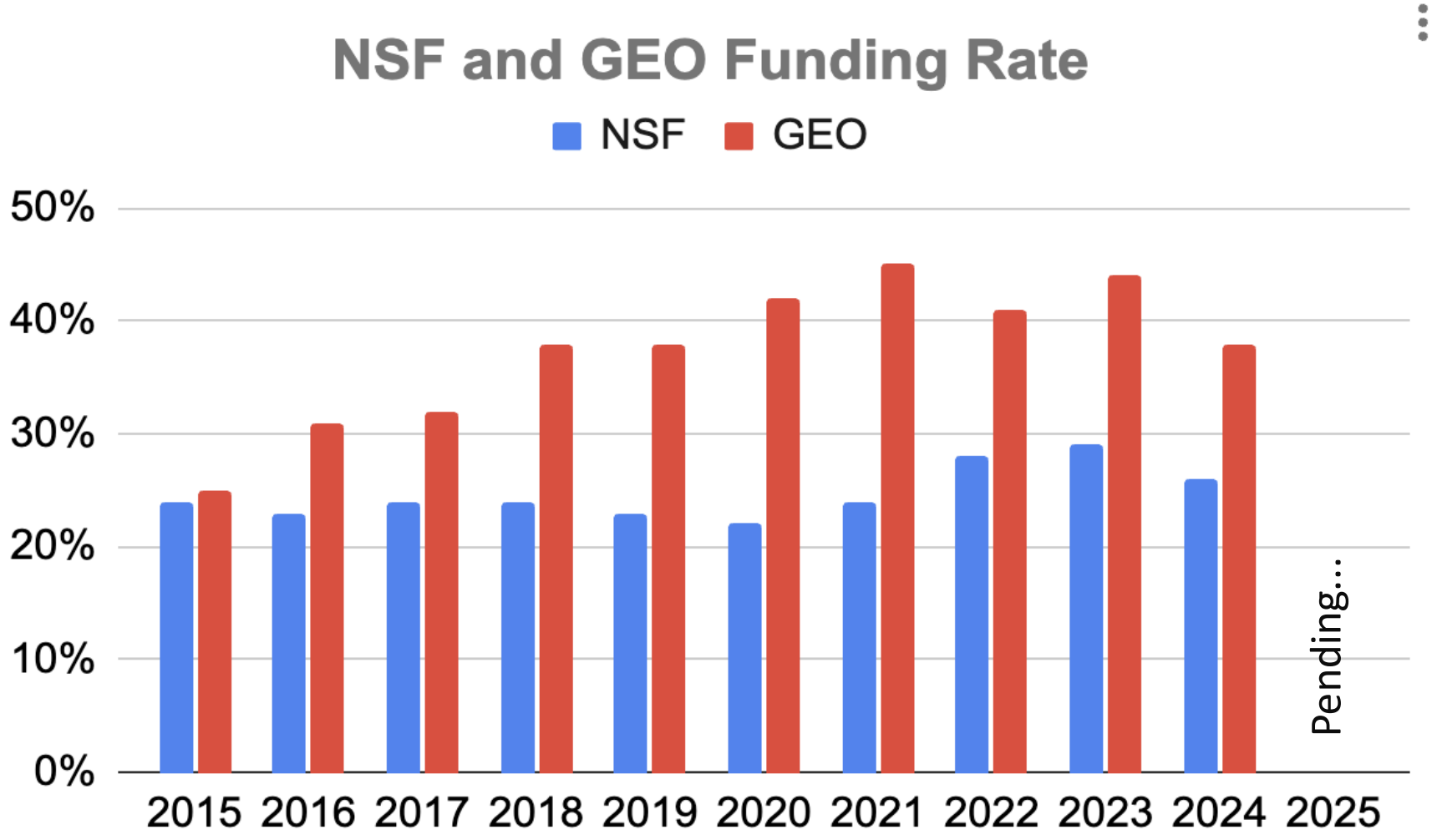
➢ NSF investments fuel groundbreaking discoveries, accelerate translational solutions, and expand participation in STEM fields by prioritizing:

1) artificial intelligence 2) quantum computing

3) advanced biotechnology 4) national security

NSF by Account	FY 2024 Current Plan	FY 2025 Estimate (TBD)	FY 2026 Request	Change over FY 2024 (%)
GEO	$1,577.08 M		$873.57 M	-44.6%
GEO OPP	$559.76 M		$497.22 M	-11.2%
US Antarctic	$109.31 M		$109.31 M	---
GEO Research	$503.32 M		$125.10 M	-75.1%
GEO Education	$40.42 M		$3.68 M	-90.9%
GEO Infrastructure	$473.58 M		$247.57 M	-47.7%

Summary of Awards Activities



Find updates and FAQs on NSF priorities and the agency's implementation of recent Executive Orders at: https://www.nsf.gov/executive-orders

THANK YOU!

Aeronomy & CEDAR

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Magnetospheric Physics & GEM

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