



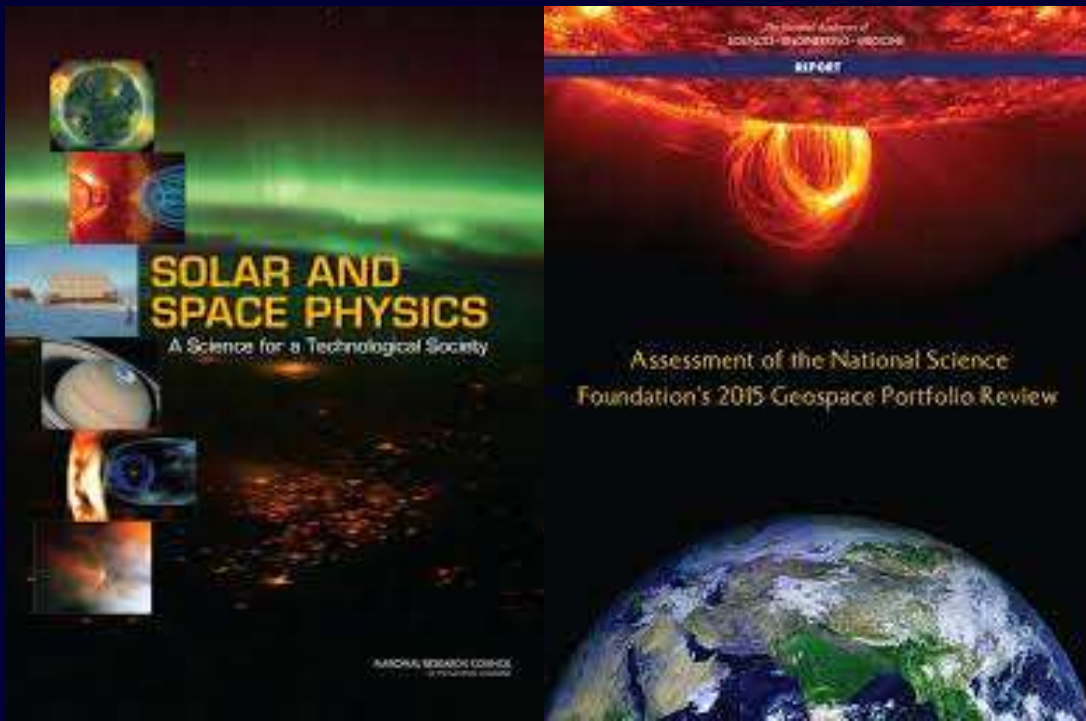
Solar and Space Physics Decadal

Participating NSF Programs

- Division of Atmospheric and Geospace Sciences
- Division of Astronomical Sciences
- Division of Physics
- Office of Polar Programs

To Define:

- The **SCIENCE** Priorities
- The **INFRASTRUCTURE** needed to achieve the science
- Support for the diverse range of the **PEOPLE** we want to be engaged in science



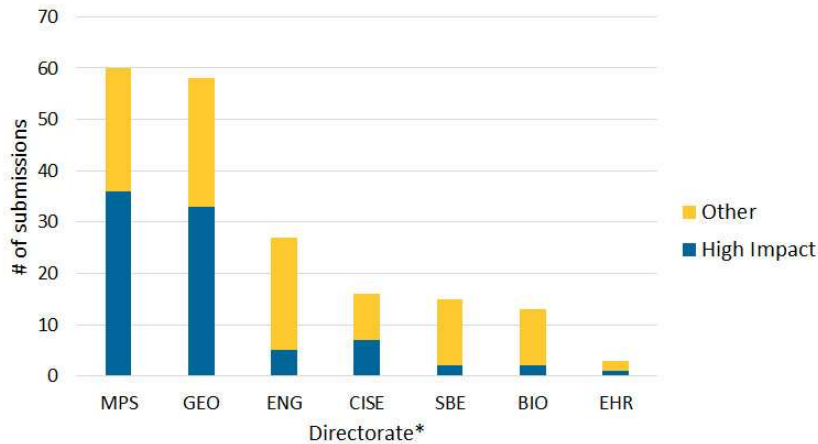
Community Input is sought by NSF through both the Decadal Review and the NSF Geospace Portfolio Review

Science Priorities



Research Infrastructure

NSF Mid-Scale Infrastructure RFI Responses

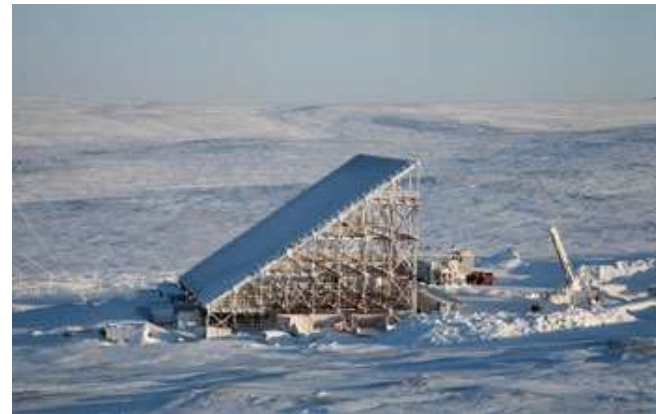


* MPS = Mathematical and Physical Sciences; GEO = Geosciences; ENG = Engineering; CISE = Computer & Information Science & Engineering; SBE = Social, Behavioral, and Economic Sciences; BIO = Biological Sciences; EHR = Education and Human Resources

Data drawn from the National Science Board's 2018 report titled "Bridging the Gap: Building a Sustained Approach to Mid-scale Research Infrastructure and Cyberinfrastructure at NSF."

American Institute of Physics | aip.org/fyi

- Defining the Next Generation Ground-based Facilities
- NSF Mid-Scale Research Infrastructure
 - Mid-Scale RI 1: \$6-20M
 - Mid-Scale RI 2: \$20-100M



Research Infrastructure

- NSF Federally Funded Research Centers: National Solar Observatory, High Altitude Observatory (NCAR)
- Geospace Facilities
 - AMISR, Arecibo, Mill Stone Hill, AMPERE, SuperDARN, ...
 - Neutron Monitoring Network, Expanded Owens Valley Solar Array, HAARP
 - What's Next?
- CubeSats
- Special Solicitations: Distributed Array of Small Instruments
- Instrumentation Projects and Support
 - Magnetometers + SuperMag
 - CCMC

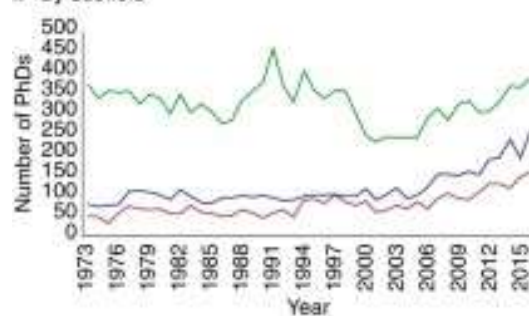


Support for the Community of Researchers

- Early-career scientists
- Diversity, Equity, and Inclusion
- **Broader Impacts**
- Where are we and how can we be better?

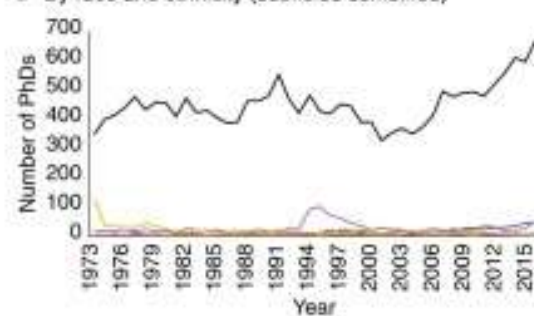
Total PhDs earned over time

a By subfield



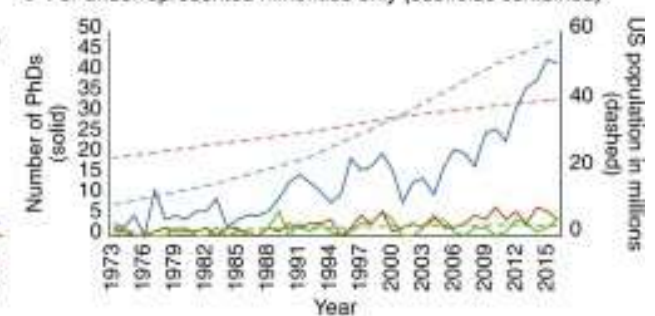
— Earth
— Ocean
— Atmospheric

b By race and ethnicity (subfields combined)



— White, non-Hispanic
— Native American, non-Hispanic
— Asian, non-Hispanic
— Black, non-Hispanic
— Hispanic or Latino
— Other or unknown

c For underrepresented minorities only (subfields combined)



— Geoscience PhDs ——— US Population
— Hispanic or Latino
— Native American, non-Hispanic
— Black, non-Hispanic

Bernard & Cooperdock, 2018, Nature,
“No progress on diversity in 40 years”



Supporting the Geospace Community

- Existing On-going programs: REUs, GRFP, AGS PRF, CAREER
- Science workshops with student focus: GEM, CEDAR, SHINE
- Special Solicitations: Faculty Development in the Space Sciences, Mid-Career DCL

NSF's Diversity and Inclusion Mission Statement:

To recruit, retain, and develop a diverse, high-performing workforce that draws from all segments of society and values fairness, diversity and inclusion to promote the progress of science.

