Internal Scientist Funding Model

All Hands

2:00-2:10 Renewal Process, General Outcomes, Our Responsibilities

2:10-2:40 Scope of renewal packages
EIMM, FLaRe, Geodesy, GIFT, ROCKE-3D, SEEC

2:40-2:50 Financial Updates

2:50-3:00 Q&A

June 29, 2021
Stephanie Getty, Deputy Director of the SSED, and ISFM Lead
SSED’s Now 6! Work Packages +partners

https://ssed.gsfc.nasa.gov/MajorRandAThemes/index.html
SSED’s Now 6! Work Packages +partners

### EIMM, Exosphere-Ionosphere-Magnetosphere Modeling:
Exploration of plasma, dust, and atmospheric escape at various planets and bodies in our Solar System.

- **Leads:** Menelaos Sarantos, O.J. Tucker
- **34 scientists & students**
  - 53% planetary
  - 44% heliophysics
  - 3% astrophysics

### FLaRe, Fundamental Laboratory Research:
Exploration of planetary environments through lab experiments, observations, and simulations.

- **Leads:** Jamie Elsila, Jen Stern
- **15 scientists & students**
  - 73% planetary
  - 7% heliophysics
  - 20% Earth science

### Planetary Geodesy:
Fundamental physical parameters of planetary bodies, including the internal structures of planetary bodies, atmospheric dynamics, and global and local geophysical analysis.

- **Lead:** Erwan Mazarico
- **35 scientists & students**
  - 97% planetary
  - 3% heliophysics
  - 20% Earth science

### GIFT, Goddard Instrument Field Team:
Analysis of rocky analog environments through instrument field campaigns at analog sites on Earth.

- **Leads:** Kelsey Young, Amy McAdam
- **55 scientists & students**
  - 49% planetary
  - 13% heliophysics
  - 18% astrophysics
  - 20% Earth science

### SEEC, Sellers Exoplanet Environments Collaboration:
Improving our ability to characterize exoplanets through interdisciplinary physical modeling, observing and data analysis, and future mission planning.

- **Leads:** Avi Mandell, Ravi Kopparapu
- **10 scientists**
  - 10% planetary
  - 90% Earth science

### ROCK-E-3D, Resolving Orbital and Climate Keys of Earth and Extraterrestrial Environments with Dynamics:
A 3-D climate model that can simulate atmospheres, surfaces, and oceans of terrestrial worlds.

- **Leads:** Mike Way, Nancy Kiang
A Successful Pilot Phase (FY18-21)

Pilot Phase:

<table>
<thead>
<tr>
<th>Scientific Benefits:</th>
<th>No. of active projects</th>
<th>No. of participants</th>
<th>Proposal Reviewers (panel/ext)</th>
<th>Papers and book chapters</th>
<th>Conference presentations</th>
<th>New External Collaborations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Productivity</td>
<td>98+</td>
<td>155+</td>
<td>81+/65+</td>
<td>148+</td>
<td>286+</td>
<td>100+</td>
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Scientific Benefits:
- **Productivity**
  Reclaimed proposal-writing time has led to more time for science and paper-writing.
  One-year pilots enable idea growth for early-careers without burdening R&A programs.
  Flexibility to optimize field campaign opportunities (GIFT).
- **New modeling**
  Approaches and intercomparisons enabled (SEEC, EIMM & Geodesy).
- **Strengthening Cross-divisional Science**
  Our work packages engage scientists across the four divisions to work on common projects.
- **Keeping Science and Missions Integrated**
  Examples: fundamental science to support mission products from MAVEN, OSIRIS-REx, LRO, MSL, Dragonfly, Dawn, MESSENGER, LADEE, Cassini, space telescope design, ground observations.
  Providing fundamental scientific motivation for future concepts for Ocean Worlds, Moon, Large Space Telescope concepts.
- **Improved funding stability helping to promote equality**
  For our soft-money science community.

Note that these are conservative numbers...
Looking Ahead

Continue and Sustain:

• Traceability from winning ROSES awards
• Involvement of early-career scientists
• Dissemination of results through publications, conference abstracts and presentations → Science Nuggets!
• Encouragement of interdisciplinary science, maximizing mission science
• Active planning in light of pandemic impacts
• Maintain strategic coordination across work packages through SSED management, partnering more closely with GSFC Earth Science, Heliophysics, and Astrophysics

Major kudos and big thanks to Avi Mandell for exceptional SEEC leadership throughout the pilot phase!!

Welcome to Mike Barker, who will join Erwan as part of the Geodesy leadership team!
ISFM Responsibilities Going Forward

- **Annual reporting**, including streamlined **End of Year Review** (3 centers, 1 day)

- **Site visit** from HQ/PSD at mid-point (Q4 2024)

- Continue **emphasis on service** in our Internal Scientist community
  - Make sure to **volunteer as review panelists**
  - Continue to **reduce proposal burden** to ROSES

- Continue **communication and collaboration** between divisions and field centers
  - **Restart Virtual Seminar Series**, including GSFC, JSC, and ARC
  - Provide **access to shared resources and expertise** for field work

- Continue **hosting community meetings**: e.g., Annual SEEC Symposium

- Increase **attention on DEI** and accessibility to information, establish Code of Conduct
Opportunities Available!

We will be looking to fill a few positions as we transition into the next phase of ISFM...

Please contact Stephanie Getty if interested

- **SEEC Co-lead**: Join Ravi Kopparapu in leading the SEEC effort!
- **Virtual Seminar Series Coordinator**: Here’s a chance to work with colleagues at JSC and ARC to share our science with the ISFM community
- **DEI Lead**: Help us develop a Code of Conduct for our group to ensure a fair, equitable, and welcoming culture for our SSED ISFM Community