

# 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

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>

Exosphere Ionosphere Magnetosphere Modeling



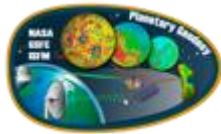
Leads:  
Menelaos Sarantos  
O.J. Tucker

Fundamental Laboratory Research



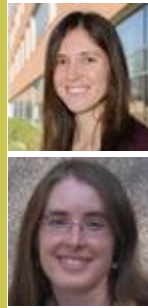
Leads:  
Jamie Elsila  
Jen Stern

Planetary Geodesy



Leads:  
Erwan Mazarico  
Mike Barker

Goddard Instrument Field Team



Leads:  
Kelsey Young  
Amy McAdam

Sellers Exoplanet Environments Collaboration

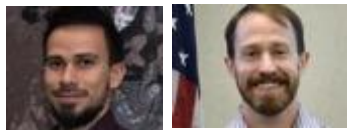


Leads:  
Avi Mandell  
Ravi Kopparapu

ROCKE-3D



Leads:  
Mike Way  
Nancy Kiang



Ricardo Martinez,  
Quinton Nabors  
Business Mgmt  
Officer  
Senior RA

Marley Fleishman  
Admin Support



Shaigh Sisk  
Admin Support

# 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

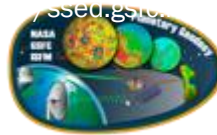


## FLaRe, Fundamental Laboratory Research:

Exploration of planetary environments through lab experiments, observations, and simulations.

Leads:  
Jamie Elsila  
Jen Stern

**75 scientists & students**  
100% planetary



## 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

**15 scientists & students**

73% planetary  
7% 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

**35 scientists & students**  
97% planetary  
3% 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

**55 scientists & students**  
49% planetary  
13% heliophysics  
18% astrophysics  
20% Earth science



## ROCKE-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

**10 scientists**  
10% planetary  
90% Earth science

# A Successful Pilot Phase (FY18-21)

Pilot Phase:

Note that these are conservative numbers...

Scientific Benefits:	No. of active projects	No. of participants	Proposal Reviewers (panel/ext)	Papers and book chapters	Conference presentations	New External Collaborations
<ul style="list-style-type: none"> <li>Productivity</li> </ul>	98+	155+	81+/65+	148+	286+	100+
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>Reclaimed proposal-writing time has led to more <b>time for science and paper-writing</b></li> <li>One-year pilots enable <b>idea growth for early-careers</b> without burdening R&amp;A programs</li> <li>Flexibility to <b>optimize field campaign</b> opportunities (GIFT)</li> <li><b>New modeling</b> approaches and intercomparisons enabled (SEEC, EIMM &amp; Geodesy)</li> </ul> </li> </ul>						
<ul style="list-style-type: none"> <li>Strengthening Cross-divisional Science</li> </ul>	<ul style="list-style-type: none"> <li>Our work packages engage scientists <b>across the four divisions</b> to work on common projects</li> </ul>					
<ul style="list-style-type: none"> <li>Keeping Science and Missions Integrated</li> </ul>	<ul style="list-style-type: none"> <li>Examples: <b>fundamental science to support mission products</b> from MAVEN, OSIRIS-REx, LRO, MSL, Dragonfly, Dawn, MESSENGER, LADEE, Cassini, space telescope design, ground observations</li> <li>Providing fundamental <b>scientific motivation for future concepts</b> for Ocean Worlds, Moon, Large Space Telescope concepts</li> </ul>					
<ul style="list-style-type: none"> <li>Improved funding stability helping to <b>promote equality</b> for our soft-money science community</li> </ul>						

# 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*