Research Opportunities in Space and Earth Science (ROSES) – 2021
Agenda

• Introduction to ROSES
• What's new in ROSES-2021:
  - Biological and Physical Sciences now in Appendix E
  - 7 Planetary Programs have No Due Date (NoDD)
  - Requirement re: letters of resource support from facilities has changed
  - Budget Narrative and Details together (again?)
  - Review of new program elements
• Keeping track of changes after release
• Other (SARA) resources for proposers:
  - FAQs
  - POCs
  - Stats
  - Volunteer for reviews
  - Library of links and PDFs
What is ROSES

"ROSES" = Research Opportunities in Space and Earth Sciences, is an "omnibus" solicitation, which means many topics, many due dates, and the default rules (about all the boring stuff like fonts, policies etc.) is (mostly) relegated to the "ROSES-2021 Summary of Solicitation". See the ROSES-21 landing web page at: http://solicitation.nasaprs.com/ROSES2021

Read the Summary once and then focus on the science or technology in the short call.
Table 1 of ROSES

Table 1 of ROSES is a check list of the parts of the proposal, listing whether various components are excluded, optional, or mandatory, page limits etc.,

<table>
<thead>
<tr>
<th>References: Third component of proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
</tr>
<tr>
<td>Excluded</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Management Plan (DMP) fourth component of proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
</tr>
<tr>
<td>Required</td>
</tr>
<tr>
<td>Content</td>
</tr>
</tbody>
</table>
Table 1 of ROSES may now be downloaded as a stand-alone PDF from the ROSES-2021 NSPIRES page at https://solicitation.nasaprs.com/ROSES2021

Science Mission Directorate
NASA Research Announcement

Research Opportunities in Space and Earth Sciences 2021 (ROSES-2021)
Solicitation: NNH21ZDA001N

<table>
<thead>
<tr>
<th>Dates</th>
<th>Annoucement Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release</td>
<td>DUE DATES: Table 2 lists and links to all program elements in due date order as amended (.HTML)</td>
</tr>
<tr>
<td>Close</td>
<td>DUE DATES: Table 3 lists and links to all program elements in appendix order as amended (.HTML)</td>
</tr>
<tr>
<td></td>
<td>Table 1: ROSES-21 Checklist for Proposers (also part of the Summary of Solicitation and Full ROSES documents) (.PDF)</td>
</tr>
<tr>
<td></td>
<td>ROSES 2021 Summary of Solicitation (.PDF)</td>
</tr>
</tbody>
</table>
Along with…

Links to: HTML Tables 2 and 3 (Due Dates), PDFs of the Summary of Solicitation, Amendments, and Clarifications and Corrections to ROSES. Also, there is a link to the new grants policy page with the 2021 guidebook for proposers.

### Amendment Documents

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amendments (As of: February 23, 2021)</td>
</tr>
</tbody>
</table>

### Other Documents

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROSES 2021 Corrections and Clarifications as of February 18, 2021 (.PDF)</td>
</tr>
<tr>
<td>The NASA 2021 Guidebook for Proposers and other useful information may be found on the Grants Policy web page at <a href="https://www.nasa.gov/offices/ocfo/gpc/regulations_and_guidance">https://www.nasa.gov/offices/ocfo/gpc/regulations_and_guidance</a></td>
</tr>
</tbody>
</table>
Tables 2 and 3 of ROSES

The lists of "Program elements" (calls for proposals) in ROSES may be found in Tables 2 and 3 of ROSES, web pages that list them either by date or by "Division" i.e., A = Earth Science, B = Heliophysics etc.

http://solicitation.nasaprs.com/ROSES2021table2
and
http://solicitation.nasaprs.com/ROSES2021table3
## Table 2 of ROSES-21 (sorted by due date)

ROSES-2021

**TABLE 2: SOLICITED RESEARCH PROGRAMS**

(In Order of Full/Step-2 proposal due dates) [1]

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>PROGRAM</th>
<th>NOI/Step 1 DUE DATE</th>
<th>PROPOSAL DUE DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.15</td>
<td>Planetary Protection Research</td>
<td>04/12/2021</td>
<td>05/13/2021</td>
</tr>
<tr>
<td>F.6</td>
<td>Science Activation Program Integration</td>
<td>04/15/2021</td>
<td>05/14/2021</td>
</tr>
<tr>
<td>B.17</td>
<td>Interdisciplinary Science for Eclipse</td>
<td>04/07/2021 (Step-1)</td>
<td>05/19/2021 (Step-2)</td>
</tr>
<tr>
<td>D.2</td>
<td>Astrophysics Data Analysis</td>
<td>04/01/2021</td>
<td>05/20/2021</td>
</tr>
<tr>
<td>B.7</td>
<td>Space Weather Science Application Research to Operations-to-Research</td>
<td>04/01/2021 (Step-1)</td>
<td>05/25/2021 (Step-2)</td>
</tr>
<tr>
<td>F.3</td>
<td>Exoplanets Research Program</td>
<td>03/26/2021 (mandatory NOI)</td>
<td>05/27/2021</td>
</tr>
</tbody>
</table>

If the NOI column says N/A then NOI is not requested at all
NOI vs Step-1 Proposal

Reminder: Whereas an NOI is submitted by an individual and thus you may dash that off and submit it the evening that its due, a proposal is submitted by your organization, not by you, the Principal Investigator (PI). The PI "releases" a proposal to the organization, but it's an authorized official at the organization who submits a proposal, even a Step-1. Thus, for a Step-1 its imperative that you know your organizations rules about how far in advance a proposal must be released to org. the proposal submission cut off is typically 11:59 pm eastern time on the due date but that late cut off is really just for folks Hawaii. If you are on the east coast and release your proposal to your organization at 10 pm, your AOR will presumably have gone home, and it won't get submitted.
What's New in ROSES-2021

• The Division of Biological and Physical Sciences (BPS), formerly of HEOMD, is now part of SMD and the BPS calls for proposals appear in Appendix E of ROSES-2021.

• The cross-division programs that, in prior years, were in Appendix E are now in Appendix F.

• The previously separated Budget Narrative and Details sections have been united in a single section, making it consistent with the 2021 Guidebook for Proposers.

• There is a new Guidebook for Proposers. They changed the URL, again. This and other grants related things are at: https://www.nasa.gov/offices/ocfo/gpc/regulations_and_guidance
What's New: ROSES-wide policy continued

• The requirements regarding letters of resource support from facilities have been modified. ROSES no longer requires that a facility or resource be under the "control" of the team member. For any facility required for the proposed effort, the proposal must state which team member has access or provide a letter of resource support from the facility or resource confirming that it is available for the proposed use during the proposed period.

• The order of some sections of the *Summary of Solicitation* have changed, most notably flight-based research investigations are now in Section VIII.
Continuing from prior years

- Data Management Plans will be peer reviewed and will be part of the grade given to the proposal, see https://science.nasa.gov/researchers/sara/faqs/dmp-faq-roses/
- Uniform expectations/requirements across all of ROSES regarding data and software. See Research Overviews (i.e., A.1, B.1, C.1...)  
- Identification and potential special evaluation of some high-(intellectual) risk high-impact proposals,  
- Ban on bilateral work with PRC organizations continue,  
- Accepted manuscript versions of peer-reviewed publications from ROSES awards must be uploaded into "PubSpace" NASA's part of NIH PubMed. NASA Civil Servants and contractors will use the 1676 via https://strives.nasa.gov/, grantees https://sti.nasa.gov/submit-to-pubspace. Help from https://sti.nasa.gov/contact-us.
Dual-anonymous peer review

The dual-anonymous peer review (DAPR) process is one in which, not only are proposers unaware of the identity of the members on the review panel (normal), but the reviewers are not told the identity of the proposers until after the evaluation of the proposals (and only then the selectable ones). For these programs there are special instructions for proposal preparation in the call for proposals, in a file under other documents on the NSPIRES page for DAPR calls, and at

https://science.nasa.gov/researchers/dual-anonymous-peer-review
In ROSES-21 the programs evaluating proposals using DAPR are:

- A.15 Cryospheric Science (new)
- B.4, Heliophysics Guest Investigators-Open
- C.7-11 The Planetary Data Analysis Programs (NFDAP, LDAP, MDAP, CDAP, DDAP) (new)
- D.2 Astrophysics Data Analysis, and
- The Astrophysics Guest Investigator/Observer Calls, i.e., Swift, Fermi, NuSTAR, TESS, and NICER.
- I don't know whether the XRISM Guest Scientist call will be DAPR or not (its TBD).
- Astrophysics Theory (new)
- F.3 Exoplanets Research (new)
Any program element that is using DAPR will:

1) clearly indicate that this is the case in the call,
2) contain a special section with detailed instructions about how to prepare proposals,
3) link to a special web FAQ on this subject, at https://science.nasa.gov/researchers/dual-anonymous-peer-review
4) and the NSPIRES page of any program using DAPR will host "Guidelines for Anonymous Proposals" under "Other documents".
What's New: Appendix A (Earth Science)

Appendix A (Earth Science) Atmospheric Composition Radiation Sciences Program will be soliciting its own program element: A.17 Arctic Radiation-Cloud-Aerosol-Surface Interaction Experiment (ARCSIX). A few program elements are returning after a hiatus, including Remote Sensing of Water Quality as A.21 and Health & Air Quality as A.37. Moreover, A.15 Cryospheric Sciences will evaluate proposals using "dual-anonymous peer review". Finally, a number of programs in Appendix A require proposers use the Earth Science standard templates for the Table of Work Effort and Current and Pending Support. Any programs that require the use of these templates will say so clearly and they may be downloaded from the "SARA" web page at:

In Appendix B there are three new program elements have been introduced in ROSE-2021: B.15 Geospace Dynamics Constellation Interdisciplinary Scientists (TBD will award contracts to non-govt. orgs), B.16 Heliophysics Mission Concept Studies (TBD, draft text released late in 2020) and, added by amendment: B.18 Heliophysics Living With a Star Tools and Methods. Also added by amendment Interdisciplinary Science for Eclipse is back as B.17. Program element B.4, Heliophysics Guest Investigators- Open will continue to evaluate proposals using dual-anonymous peer review.
What's New: Appendix C (Planetary)

In Appendix C (Planetary Science) a new participating scientist program for JAXA's Martian Moons eXploration (MMX) Mission will be solicited in C.24, and Juno PSP returns in C.25.

Seven programs in Planetary Science will accept proposals at any time without any preliminary statement such as a Notice of Intent or Step-1 proposal (details next slide).

All of the data analysis programs (i.e., C.7 NFDAP, C.8 LDAP, C.9 MDAP, C.10 CDAP, and C.11 DDAP), will evaluate proposals using "dual-anonymous peer review".

C.11 Discovery DAP will not request NSPIRES cover page budgets or total budgets with the technical proposal. At submission proposers must identify the cost category: small <$75K/year; medium <$175K/year or large <$300K/year. Budgets will be requested later only for selectable proposals.
Seven programs in Planetary Science will accept proposals at any time without any preliminary statement such as a Notice of Intent or Step-1 proposal. The No Due Date (NoDD) programs are: C.2 Emerging Worlds, C.3 Solar System Workings, C.4 Planetary Data Archiving, Restoration, and Tools, C.5 Exobiology, C.6 Solar System Observations, C.12 Planetary Instrument Concepts for the Advancement of Solar System Observations, and C.16 Laboratory Analysis of Returned Samples.

This approach has been used successfully in the past for Rapid Response and Novel Research in Earth Science, but never for such large programs. While this will make life more complicated for the program managers, it should be more convenient for proposers. See https://science.nasa.gov/researchers/NoDD.

Caveat: Your normal institutional rules still apply, of course.
Those proposing to NoDD programs are urged to read the NoDD FAQ and "explanatory document" posted on NSPIRES pages of these program elements and on the SARA NoDD page at https://science.nasa.gov/researchers/NoDD.

These explain how the restriction on "duplicate" proposals was updated to account for NoDD and a restriction on "resubmissions" of proposals to NoDD programs has also been added to prohibit immediate resubmission. C.1 The Planetary Science Research Program Overview will be updated very soon.

Though the NSPIRES page for those programs display a (March 29, 2022) "Proposal Dues" date, that is simply the end date for the current ROSES, after which proposals may be submitted to the program element with the same name in the next ROSES. NoDD programs will review proposals throughout the year with a cadence that will depend on the rate at which proposals are submitted.
What's New: Appendix D (Astrophysics)

In Appendix D (Astrophysics), a new program element for Guest Scientists for the X-Ray Imaging and Spectroscopy Mission (XRISM) is planned for this year in D.12, and Nancy Grace Roman Space Telescope Research and Support Participation Opportunities is planned for this year as D.16. Finally, all Astrophysics GO/GI programs, D.2 Astrophysics Data Analysis and D.4 Astrophysics Theory will evaluate proposals using dual-anonymous peer review.
What's New: Appendix E (BPS)

Appendix E is now Biological and Physical Science (BPS). This is the list of BPS program elements:

E.1  BPS Research Program Overview
E.2  Biophysics
E.3  Complex Fluids
E.4  Combustion Science
E.5  Fluid Physics
E.6  Fundamental Physics
E.7  Materials Science
E.8  Physical Sciences Informatics
E.9  Space Biology (this was one program element in ROSES-2020 but may be split out into more than one this year)
What's New: Appendix F (Cross Division)

Changes after release

There are a few ways to keep track of changes after release:

- HTML Tables 2 & 3 of ROSES
- Subscribe to the SMD NSPIRES mailing list(s)
- Subscribe to the Google Calendars
- ROSES-21 Blog on the SARA web page
Changes after release: example from ROSES-20
Bold and red in Tables 2 and 3 means a change

Step-2 due date delayed
but text was not changed

<table>
<thead>
<tr>
<th>Step</th>
<th>Program Area</th>
<th>Step-1 Due Date</th>
<th>Step-2 Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.2</td>
<td>Heliophysics Supporting Research</td>
<td>11/18/2020 (Step-1)</td>
<td>03/03/2021 (Step-2)</td>
</tr>
<tr>
<td>C.8</td>
<td>Lunar Data Analysis</td>
<td>12/01/2020 (Step-1)</td>
<td>03/05/2021 (Step-2)</td>
</tr>
<tr>
<td>B.16</td>
<td>Parker Solar Probe Guest Investigators</td>
<td>02/03/2021 (Step-1)</td>
<td>03/17/2021 (Step-2)</td>
</tr>
<tr>
<td>E.12</td>
<td>Space Biology</td>
<td>12/17/2020 (Step-1)</td>
<td>03/23/2021 (Step-2)</td>
</tr>
<tr>
<td>A.28</td>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2021</td>
</tr>
<tr>
<td>B.15</td>
<td>GOLD-ICON Guest Investigators</td>
<td>03/04/2021 (Step-1)</td>
<td>04/21/2021 (Step-2)</td>
</tr>
</tbody>
</table>

Step-1 and Step-2 due dates delayed

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Totally new
Changes and Additions to ROSES after release: NSPIRES mailing lists

Any other new program elements added, TBD programs that are finalized, or major changes in scope (or due date) will be announced by an Amendment to ROSES. You will get an email if you subscribe to the SMD mailing list in NSPIRES under "Account Management".

5. Science Mission Directorate

- ✔ Astrophysics
- ✔ Heliophysics
- ✔ Planetary Science
- ✔ General Subscription List
- ✔ Earth Science
- ✔ Physical Sciences
- ✔ Space Biology
Example NSPIRES email to SMD General Subscription list: Amendments to ROSES

From: Smd <smd-bounces@listsrv2.nasaprs.com> on behalf of "smd@listsrv2.nasaprs.com" <smd@listsrv2.nasaprs.com>
Reply-To: "smd@listsrv2.nasaprs.com" <smd@listsrv2.nasaprs.com>
Date: Monday, March 8, 2021 at 11:02 AM
To: "smd@listsrv2.nasaprs.com" <smd@listsrv2.nasaprs.com>
Subject: [EXTERNAL] [Smd] ROSES-21 Amendment 5: Final text and due dates for B.15 The Geospace Dynamics Constellation Interdisciplinary Scientists program.

ROSES-21 Amendment 5: Final Text and Due Dates for B.15 The Geospace Dynamics Constellation Interdisciplinary Scientists Program

ROSES-2021 program element B.15 The Geospace Dynamics Constellation (GDC) Interdisciplinary Scientists (IDSs) program seeks individuals to expand the GDC mission science team. Their activities will include both mission-specified and IDS-specific tasks. These activities will build upon the GDC Science and Technology Definition Team (STDT) Final Report and NASA's GDC (pre-) formulation efforts. These IDSs will join the GDC science team for Phases A-D and participate in GDC development activities necessary to move the team towards a successful Key Decision Point B and beyond. The IDSs will work with the GDC project under the management of the GDC Project Scientist.

ROSES-2021 Amendment 5 releases final text and due dates for B.15 GDC IDS. Step-1 proposals are due April 22, 2021, and Step-2 proposals are due June 8, 2021.

On or about March 8, 2021, this Amendment to the NASA Research Announcement "Research Opportunities in Space and Earth Sciences (ROSES) 2021" (NNH21ZDA001N) will be posted on the NASA research opportunity homepage at http://solicitation.nasaprs.com/ROSES2021 and will appear on SARA's ROSES blog at: https://science.nasa.gov/researchers/sara/grant-solicitations/roses-2021/

Questions concerning B.15 GDC IDS may be directed to Jared Leisner at jared.s.leisner@nasa.gov.
Updates to B.17 Interdisciplinary Science for Eclipse and C.3 Solar System Workings regarding 2021-22 Antarctic access

Based on the 2020-21 Antarctic season cancellations and the likelihood of similar cancellations for the 2021-22 season, notes have been added to B.17 Interdisciplinary Science for Eclipse and C.3 Solar System Workings indicating that proposers should not assume that NSF will provide proposers access to the Antarctic for the 2021-2022 field season.

In addition to the NSF OPP Facebook page, any future announcements regarding NSF field seasons will be posted to the OPP Announcements page at: https://www.nsf.gov/news/announcements.jsp?org=OPP.
Changes to ROSES after release:

ROSES-2021 Amendments, Clarifications, and Corrections

Welcome to SARA's Research Opportunities in Space and Earth Sciences (ROSES)-2021 Blog, a way to keep track of changes to ROSES-2021. To effectively search this page for changes to ROSES relevant to a certain division or keyword you click on the magnifying glass in the upper right corner and search on "ROSES" and the key word or name of the division (e.g., "ROSES Astrophysics" or "ROSES Flight").

Amendment 5: Final text and due dates for B.15
The Geospace Dynamics Constellation
Interdisciplinary Scientists program

[SUN] Mar 8, 2021
ROSES-2021 program element B.15 The Geospace Dynamics Constel

Amendment 4: B.5 LWS Science Final Text and
Due Dates.

[SUN] Feb 26, 2021
B.5 Living With a Star (LWS) Science emphasizes the scien

Amendment 3: B.7 Space Weather Science
Application Research-to-Operations-to-
Research Final Text and Due Dates.

[SUN] Feb 23, 2021
The primary goal of the Space Weather Science Application R

Amendment 2: New Opportunity in ROSES: B.18
Living With a Star Tools and Methods

http://science.nasa.gov/researchers/sara/grant-solicitations/roses-2021/
Changes and Additions to ROSES after release:

How to subscribe to the ROSES Google Due Date Calendar

Library (and useful links)

Documents

- NASA 2018 Strategic Plan
- NASA Plan for Increasing Access to Results of Federally Funded Research (July 2015)
- SMD Policy on Late Proposals
- NSPIRES team member commitment guide
- Preparing conventional ROSES Proposals for DAPR
- ADAP DAPR Town Hall
- ROSES Dual Anonymous Peer Review Virtual Town Hall Slides
- Hertz 2019 Memo regarding Astrophysics Dual-Anonymous Peer Review
- SMD Policy on Peer Review Conflicts of Interest
- SMD Peer Review Policy
- SMD Reconsideration Policy
- SMD Codes of Conduct for Review Panels
- SPD 15 Center Community Service Policy
- SPD-16 Civil Servant Peer Review Conflict of Interest
- SPD-26B Communications for Missions (updated and revised)
- SPD-29 External Websites, Original with Erratum
- SPD 31 Student Collaboration
- SPD-33 Citizen Science
- How to Submit a Step-1 Proposal
- How to Submit a Step-2 Proposal
- How to Subscribe to the ROSES-2021 Due Date Calendars
- Example ROSES Panel evaluation

For Researchers

- COVID and Awards
- SMD Community Town Hall Meetings
- Contact SARA
- Advisory Committees
- ROSES FAQ
- Dual-Anonymous Peer Review
- Grant Solicitations
- Announcement of Opportunity
- Grant Stats
- Program Officers List
- How To Guide
- Letters from SARA
- Library and Useful Links
- Fellowship Opportunities
- Volunteer for Review Panels
- Data & Pubs Rules
- New PI Resources
Other useful things on the SARA web page at https://sara.nasa.gov

- Links to PDFs of Policies in the Library as well as other documents of interest like the new SMD Code of Conduct for Review Panels
- Points of Contact
- Grant Stats
- Volunteer reviewer forms
- Proposal writing advice for early career researchers
- FAQs on ROSES, DMPs, redacted budgets etc.
Links

- Dual-Anonymous Peer Review (DAPR) Web Page
- Link to 2020 Science Plan and other documents
- Proposal writing 101 presentation (Adobe Connect Recording)
  https://www.youtube.com/watch?v=R56T457HdDI (March 2020 Ames Research Center)
- Slides from Proposal writing 101 presentation (PPTX ~8.5 MB)
- The Planetary Data System Data Release calendar
- Link to slides for new proposers to NASA. Presented at the (OSTEM Sponsored) C 
  Proposal Development Workshop
- Christina Richey tips on proposal writing:
  Link to Christina Richey's proposal writing talk on Youtube
Welcome to the volunteer reviewer page!

To increase the pool of un-conflicted reviewers we are seeking subject matter experts (SMEs) to engage in discussions at a virtual panel meeting or provide external (email) reviews. New researchers including post doctoral fellows and sometimes upper level graduate students are welcome. Just follow the links below to the volunteer review forms and indicate the fields in which you consider yourself to be a subject matter expert and click the boxes. If your expertise matches our program needs NASA will contact you to discuss potential review assignments. Qualified SMEs may, and are encouraged, to volunteer to one or more program reviewer call. If you volunteered in a prior year and were not invited or were invited but not available, please complete a new form(s).

Use the following the links to current program-specific volunteer review forms. NASA periodically updates this page to remove or add volunteer links.

Please direct questions or corrections on this page to SARA@nasa.gov.

We are currently seeking reviewers for:

- Earth Science Applications: Water Resources
- Earth Surface and Interior and Space Geodesy Programs
- Heliophysics Supporting Research (ROSES B.2)
- Heliophysics Guest investigators (ROSES B.4)
- Parker Solar Probe Guest Investigators (ROSES B.16)
- GOLD-ICON Guest Investigators
- Payloads and Research Investigations on the Surface of the Moon
- Space Biology
- Solar System Workings (ROSES C.3)
- Lunar Data Analysis (ROSES C.8)
- Planetary Protection Research (ROSES C.15)
- Yearly Opportunities for Research in Planetary Defense
- Strategic Research in Space Congress (SARC) and ROSES Workshops

For Researchers

- COVID and Awards
- SMD Community Town Hall Meetings
- Contact SARA
- Advisory Committees
- ROSES FAQ
- Dual-Anonymous Peer Review
- Grant Solicitations
- Announcement of Opportunity
- Grant Stats
- Program Officers List
- How To Guide
- Letters from SARA
- Library and Useful Links
- Fellowship Opportunities
- Volunteer for Review Panels
- Data & Pubs Rules
- New PI Resources
Volunteer to serve on a review panel, continued. Space Biology as an example.
<table>
<thead>
<tr>
<th>SOLICITATION OR PROGRAM ELEMENT TITLE</th>
<th>SUBMITTED</th>
<th>SELECTED</th>
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<th>SMD DIVISION</th>
<th>AVG K$/YR</th>
<th>NOTES</th>
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<td>Exoplanets Research Program</td>
<td>153</td>
<td>26</td>
<td>17%</td>
<td>Cross Division</td>
<td></td>
<td>7 declined not compliant. 16 remain selectable</td>
</tr>
<tr>
<td>Habitable Worlds Step-1</td>
<td>147</td>
<td>71</td>
<td>N/A</td>
<td>Cross Division</td>
<td></td>
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<tr>
<td>Habitable Worlds Step-2</td>
<td>71</td>
<td></td>
<td></td>
<td>Cross Division</td>
<td></td>
<td></td>
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<tr>
<td>Future Investigators in NASA Earth and Space Science and Technology</td>
<td>834</td>
<td>71</td>
<td>22%</td>
<td>Cross Division</td>
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<tr>
<td>Science Activation Program Integration</td>
<td>32</td>
<td>2</td>
<td>100%</td>
<td>Cross Division</td>
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<td></td>
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<tr>
<td>Support for Open Source Tools, Frameworks, and Libraries</td>
<td>61</td>
<td>46</td>
<td>30%</td>
<td>Cross Division</td>
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<tr>
<td>Supplemental Open Source Software Awards</td>
<td>2</td>
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<td></td>
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<td>Citizen Science Seed Funding Program</td>
<td>35</td>
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<td>Cross Division</td>
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<td>Payloads and Research Investigations on the Surface of the Moon Step-1</td>
<td>52</td>
<td>38</td>
<td>N/A</td>
<td>Cross Division</td>
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<td></td>
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<td>Cross Division</td>
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<td></td>
</tr>
<tr>
<td>Astrophysics Research and Analysis</td>
<td>see notes</td>
<td>see notes</td>
<td>see notes</td>
<td>Astrophysics</td>
<td></td>
<td>Not Solicited This Year</td>
</tr>
<tr>
<td>Astrophysics Theory Program</td>
<td>236</td>
<td>52</td>
<td>22%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swift Guest Investigator - Cycle 16</td>
<td>120</td>
<td>44</td>
<td>37%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fermi Guest Investigator - Cycle 13</td>
<td>110</td>
<td>40</td>
<td>36%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Astrophysics Technology</td>
<td>see notes</td>
<td>see notes</td>
<td>see notes</td>
<td>Astrophysics</td>
<td></td>
<td>Not Solicited This Year</td>
</tr>
<tr>
<td>Nancy Grace Roman Technology Fellowships</td>
<td>2</td>
<td>2</td>
<td>100%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NuSTAR General Observer - Cycle 6</td>
<td>173</td>
<td>42</td>
<td>24%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TESS Guest Investigator - Cycle 3</td>
<td>155</td>
<td>46</td>
<td>30%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NICER Guest Observer - Cycle 2</td>
<td>91</td>
<td>52</td>
<td>57%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astrophysics Science SmallSat Studies</td>
<td>32</td>
<td>8</td>
<td>25%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System-Level Segmented Telescope Design - Technology Maturation</td>
<td>3</td>
<td>2</td>
<td>67%</td>
<td>Astrophysics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Cover Land Use Change Step-1</td>
<td>30</td>
<td>29</td>
<td>N/A</td>
<td>Earth Science</td>
<td></td>
<td>Step-1 merely &quot;encouraged&quot; vs. discouraged, but all are funded.</td>
</tr>
<tr>
<td>Land Cover Land Use Change Step-2</td>
<td>25</td>
<td>9</td>
<td>36%</td>
<td>Earth Science</td>
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<td></td>
</tr>
<tr>
<td>Physical Oceanography</td>
<td>40</td>
<td>8</td>
<td>20%</td>
<td>Earth Science</td>
<td></td>
<td>6 full selections 2 partial selections</td>
</tr>
<tr>
<td>Ocean Salinity Science Team</td>
<td>30</td>
<td>11</td>
<td>37%</td>
<td>Earth Science</td>
<td></td>
<td>One declined as non compliant. Two partial selections funded</td>
</tr>
<tr>
<td>Sea Level Change Science Team</td>
<td>15</td>
<td>7</td>
<td>47%</td>
<td>Earth Science</td>
<td></td>
<td>6 out of the 7 selected were not fully funded.</td>
</tr>
<tr>
<td>Surface Water and Ocean Topography Science Team</td>
<td>68</td>
<td>17</td>
<td>25%</td>
<td>Earth Science</td>
<td></td>
<td>The 17 selected includes 2 partial selections.</td>
</tr>
<tr>
<td>Modeling Analysis and Prediction</td>
<td>19</td>
<td>10</td>
<td>53%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aura Science Team</td>
<td>66</td>
<td>17</td>
<td>26%</td>
<td>Earth Science</td>
<td></td>
<td>17 includes one partial selection. One remains selected</td>
</tr>
<tr>
<td>Terrestrial Hydrology</td>
<td>63</td>
<td>11</td>
<td>21%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Soil Moisture Active-Passive Mission Science Team</td>
<td>103</td>
<td>29</td>
<td>28%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weather and Atmospheric Dynamics</td>
<td>85</td>
<td>20</td>
<td>24%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Surface and Interior</td>
<td>60</td>
<td>14</td>
<td>23%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRACE-FO Science Team</td>
<td>38</td>
<td>21</td>
<td>55%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>6</td>
<td>4</td>
<td>67%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airborne Instrument Technology Transition</td>
<td>14</td>
<td>4</td>
<td>29%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary Research in Earth Science</td>
<td>119</td>
<td>35</td>
<td>30%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earth Science Research from Operational Geostationary Satellite Systems</td>
<td>152</td>
<td>27</td>
<td>18%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICESat-2 Research</td>
<td>96</td>
<td>24</td>
<td>25%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Global Navigation Satellite System Research</td>
<td>24</td>
<td>11</td>
<td>46%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACE Science and Applications Team</td>
<td>52</td>
<td>23</td>
<td>44%</td>
<td>Earth Science</td>
<td></td>
<td>Includes 6 partial selections.</td>
</tr>
<tr>
<td>Understanding Changes in High Mountain Asia</td>
<td>38</td>
<td>4</td>
<td>11%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advancing Collaborative Connections for Earth System Science</td>
<td>72</td>
<td>11</td>
<td>15%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instrument Incubator Program</td>
<td>70</td>
<td>19</td>
<td>27%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainable Land Imaging - Technology</td>
<td>12</td>
<td>6</td>
<td>50%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilization of Airborne L- and S- Band Synthetic Aperture Radar Imagery over North America - Joint</td>
<td>45</td>
<td>11</td>
<td>24%</td>
<td>Earth Science</td>
<td></td>
<td>2 were declined as non compliant</td>
</tr>
<tr>
<td>Decadal Survey Incubation Study Teams: Planetary Boundary Layer and Surface Topography and Vegetation</td>
<td>62</td>
<td>25</td>
<td>40%</td>
<td>Earth Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heliophysics Supporting Research Step-1</td>
<td>140</td>
<td>140</td>
<td>N/A</td>
<td>Heliophysics</td>
<td></td>
<td>Step-1 all &quot;Invited&quot;</td>
</tr>
<tr>
<td>Heliophysics Supporting Research Step-2</td>
<td>127</td>
<td>35</td>
<td>25%</td>
<td>Heliophysics</td>
<td></td>
<td>one Step-2 proposal was declined as non compliant</td>
</tr>
</tbody>
</table>
Points of contact for ROSES

at https://science.nasa.gov/researchers/sara/program-officers-list/

Astrophysics | Earth Science | Cross Division | Heliophysics | Planetary Science | Biological and Physical Science Programs

Astrophysics Programs

- Astrophysics R&A Lead: Stefan Immler: email, 202-358-0615, bio
- Astrophysics Data Analysis (ADAP): Doug Hudgings: email, 202-358-0988, bio
- Astrophysics Research and Analysis (APRA): Dominic Benford: email, 202-358-1261, bio
- Particle Astrophysics: Thomas Hams: email, 202-358-5162
- Fundamental Physics: Thomas Hams: email, 202-358-5162
- Ultraviolet and Visible Astrophysics: Michael Garcia: email, 202-358-1053, bio
- Infrared, Submillimeter, and Radio Astrophysics: Eric Tollestrup: email, 202-358-0907
- Laboratory Astrophysics: William B. Latter: email, 202-358-0734, bio
- Nancy Grace Roman Technology Fellowships (RTF): Mario Perez: email, 202-358-1535, bio
- Astrophysics Theory (ATP): Evan Scannapieco: email, 202-358-3730
- Theoretical and Computational Astrophysics Networks (TCAN): Evan Scannapieco: email, 202-358-3730
- Roman Space Telescope Research and Support Opportunities: Dominic Benford: email, 202-358-1261, bio
- Astrophysics "Pioneers": Michael Garcia: email, 202-358-1053, bio

Programs Related to Astrophysics Missions

- Astrophysics Science SmallSat Studies: Michael Garcia: email, 202-358-1053
See what won in the past: program selections

If there is a particular program of interest to you, simply visit the NSPIRES page of that program element from past years and look under "Selections"

A.2 Land Cover/ Land Use Change

Number: NNH20ZDA001N-LCLUC
Directorate: Science Mission Directorate
Type: NASA Research Announcement

<table>
<thead>
<tr>
<th>Label</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection</td>
<td>Oct 07, 2020</td>
</tr>
<tr>
<td>LCLUC2020 Proposals Due</td>
<td>Jun 01, 2020</td>
</tr>
<tr>
<td>LCLUC2020 NOIs Due</td>
<td>Mar 16, 2020</td>
</tr>
<tr>
<td>Release</td>
<td>Feb 14, 2020</td>
</tr>
</tbody>
</table>

Notices

- The description of the specific proposal opportunity on this page is contained in the document 'A.2 Land Cover/ Land Use Change'. The document 'A.1 Earth Science Research Overview' describes research activities within the NASA science division that is managing the specific proposal opportunity on this page and may impose requirements upon proposals submitted to this program element. The document 'Summary of Solicitation' describes the common requirements for all ROSES-2020 proposal opportunities. The documents 'Table 2' and 'Table 3' contain the list of all proposal opportunities and their due dates, sorted by due date or appendix number, respectively. All of these documents are kept up to date and incorporate amendments, clarifications, and corrections in a clearly identifiable manner.

Documents

- DUE DATES: Table 2 lists and links to all program elements in due date order as amended (.HTML)
- DUE DATES: Table 3 lists and links to all program elements in appendix order as amended (.HTML)
- Summary of Solicitation ROSES-2020 as clarified July 6, 2020 (.PDF)
- Full ROSES-2020 complete solicitation as amended and clarified February 19, 2021 (.PDF)
- A.1 Earth Science Research Overview (.PDF)
- A.2 Land Cover/ Land Use Change (.PDF)

Selections

- Land Cover/Land Use Change
See what won in the past

But if you don't know of a particular program, you may search the NSSC grant status database to get a list of grants (only) based on key word from the title, university, PI etc., but this is grants only.

https://www.nssc.nasa.gov/grantstatus
Links for Later

- Section I(c) of the ROSES Summary of Solicitation and
- [http://science.nasa.gov/researchers/sara/faqs](http://science.nasa.gov/researchers/sara/faqs)
- Instructions for Google due date calendar and other useful things may be found at: [https://science.nasa.gov/researchers/sara/library-and-useful-links](https://science.nasa.gov/researchers/sara/library-and-useful-links)
- [https://www.nasa.gov/open/researchaccess/pubspace](https://www.nasa.gov/open/researchaccess/pubspace)
Thank you

Questions?

If you think of a question later, you may always send it to SARA@nasa.gov
Back up slides follow
Research Access for Civil Servants and Contractors* on site at NASA Centers (but not not coop scientists)

Submit your Accepted Manuscript through the STRIVES NF-1676 at
https://strives.nasa.gov/

Need help?
STI Information Desk
https://sti.nasa.gov/contact-us
Center STI Managers Select "Contact/Help" at
https://nasa.sharepoint.com/sites/NASASTIProgram/

NEW
You can supply a researcher persistent identifier (PID), like ORCID.

*Contractors approach is based on data rights, but onsite contractors tend to use the NF-1676.
Research Access for Grantees (and coop scientists)

To submit your Accepted Manuscript
Start at the STI Research Access page
https://sti.nasa.gov/submit-to-pubspace

Need help?
STI Information Desk =
https://sti.nasa.gov/contact-us

Coming Soon!
NASA submission portal for external grantees to submit Accepted Manuscripts and other STI research products.

NASA-funded researchers will be required to supply a researcher persistent identifier, like ORCID, when submitting documents. Get one now!
High Risk/High Impact Review

We asked most of the ROSES-2018 panelists to assess the impact and (intellectual) risk of each proposal. We found that ~10% of proposals were high risk/high impact and those were selected at a higher rate than average (34 vs. 24%).

We were happy to see that, but last year surveyed proposers and reviewers and the Divisions have nominated a few high-risk/high-impact proposals not selected for funding through the normal review process for a second look by a special panel. That will occur spring 2021.

High risk = "reputational" or intellectual risk, not hardware that is likely to fail.
Whereas in past years most DMPs were collected in a mandatory plain text box on the NSPIRES cover pages, starting last year in ROSES-2020 the new default was that the data management plan must be placed in a 2-page section in the proposal PDF immediately following the references and citations for the S/T/M section of the proposal. This is how planetary has been doing it for years. In most cases the DMP does not count against the page limit for the S/T/M section.

Both Planetary and Helio have templates for the DMP (see notes for this slide)
The exceptions that don't follow the default will say so explicitly and they are the programs for which the nature of the work is inexorably linked to the handling of data so DMP is part of the page-limited S/T/M section of the proposal. B.7 Space Weather Science Applications, B.12 Heliophysics Data Environment Emphasis, C.4 Planetary Data Archiving, Restoration, and Tools, D.2 Astrophysics Data Analysis, and E.3 The Exoplanets Research Program.
People have told me that this will not work because they will be able to tell who wrote the proposal even without the name on it.

You may be surprised to learn that, according to the folks who ran the Hubble review, in the vast majority of cases (like 90%) the reviewers were not able to correctly identify the authors of the proposal. Please don't assume you have correctly identified the authors of the proposals, because you are wrong 9 times out of 10.

Moreover, social science shows that even just removing the names helps reviewers focus more on the science.
Proposers to these programs must provide two separate documents: an anonymized version of the proposal for peer review and a non-anonymized document that contains components of the proposal that would reveal the identities and affiliations of participating researchers, such as expertise, facilities and resources. The latter will be revealed to the panel only after the evaluation of all proposals and only for a subset of selectable proposals (typically the top third). If there are clear, compelling deficiencies in the expertise required to see through the goals of the proposal, the panel may note this in its comments to NASA. This review may not be used to upgrade proposals for having particularly strong team qualifications, nor may it be used to re-evaluate proposals.
Redaction Continues

• The parts of ROSES proposals seen by reviewers must not show salary, fringe or overhead.

• The separately uploaded "Total" budget includes those details, but that is not seen by peer reviewers.

• See Section IV(b)iii of the ROSES Summary of Solicitation and the FAQ at https://science.nasa.gov/researchers/sara/how-to-guide/nspires-CSlabor

• Screen Captures follow.
Cover Page Budget

There are three lines for Co-Is at other organizations. First, put funds for Co-I government organizations in lines 8 & 9. Put the funds that pass through your organization in line 5.

<table>
<thead>
<tr>
<th>Item</th>
<th>Funds Requested ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Materials and Supplies</td>
<td>1500</td>
</tr>
<tr>
<td>2. Publication Costs</td>
<td>2000</td>
</tr>
<tr>
<td>3. Consultant Services</td>
<td></td>
</tr>
<tr>
<td>4. ADP/Computer Services</td>
<td>300</td>
</tr>
<tr>
<td>5. Subawards/Consortium/Contractual Costs</td>
<td>600000</td>
</tr>
<tr>
<td>6. Equipment or Facility Rental/User Fees</td>
<td></td>
</tr>
<tr>
<td>7. Alterations and Renovations</td>
<td></td>
</tr>
<tr>
<td>8. Portion of award for NRL</td>
<td>150000</td>
</tr>
<tr>
<td>9. Portion of award for GSFC</td>
<td>80000</td>
</tr>
<tr>
<td>10. Don't use this line, its not redacted</td>
<td></td>
</tr>
</tbody>
</table>

**Total Other Direct Costs:** $ 833800

**Total Period 1:** $ 833800

**Total Budget:** $ 833800

Cover Page Budget

I used Section F line 5, the generic subaward line, for my $60K subcontract to Miskatonic University, not that you can tell, because I could not modify the description of line 5. That this is for M-U will only become apparent later when you read the actual proposal.

Next, I used customizable line 8 for the $150K that will be sent directly to my Co-I at Naval Research Lab and I entered "NRL portion of this award" in the description.

In line 9 I put the GSFC portion of the award and labeled it appropriately.

When the proposal is evaluated by the peer-review panel, they will not see any of the $ numbers in the Personnel Sections or in Section F lines 5, 8 & 9, all of that will be automatically redacted.

Include costs of things (including those in a sub award) in the budget detail/justification in the main proposal PDF e.g., explain why does your Co-I need a $3.5K MDO4000C oscilloscope, vs. a $450 TBS1000B? Also, make reference to the subaward e.g., "0.5 FTE are allocated for Co-I Dr. H. West (Miskatonic, Arkham, Mass) as can be seen the summary table of work effort and full costs are in Section F line 5 of the cover page budget and in the separately uploaded Total Budget pdf file. Costs for labor, fringe and overhead are omitted consistent with ROSES instructions."
Ditto consultants, no salary, fringe and overhead costs in the main proposal PDF. In the budget justification in the main proposal PDF you explain only the part that is not labor e.g., "The total cost of the consultants Goldshtik and Whorfin of the Banzai Institute is provided in the NSPIRES cover page budget in Section F line 3. The consultancy includes the cost of the rental of an oscillation overthruster from Professor Tohichi Hikita of Nagoya university at $157/hour. This cost is quite reasonable given that similar facilities are twice as expensive."
Total Budget Upload

• The Total Budget PDF is uploaded in exactly the same way that the proposal PDF is uploaded, but by choosing document type "Total Budget", see figure below. This Total Budget file will not be seen by peer reviewers. In general, these budget files are for Step-2 proposals only.
Table of Work Effort

Table of work effort in the main proposal PDF is merely a reporting of the planned work commitment for all participants, funded by NASA or not. A very simple example from Section IV(b)iii of the ROSES summary of Solicitation will appear on the next slide. Note, this table is outside of and is distinct from budget and the page limited main part of proposal, which must describe what work each team member will be doing. That doesn't belong here.

Templates for the planetary science division may be found at http://tinyurl.com/hbnff8u (refer to #2). And for the Earth Science Division here.
## (Simple) Table of Work Effort

<table>
<thead>
<tr>
<th>Person and/or Role</th>
<th>Time charged to this proposal</th>
<th>Time not charged to this proposal</th>
<th>Total Time per person/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI, Edwina Mercer</td>
<td>3 months/year</td>
<td>N/A</td>
<td>3 months/year</td>
</tr>
<tr>
<td>Co-I, Kelley Grayson</td>
<td>4 months/year</td>
<td>N/A</td>
<td>4 months/year</td>
</tr>
<tr>
<td>Co-I, Dr. C. Finn.*</td>
<td>N/A</td>
<td>1.5 months/year</td>
<td>1.5 months/year</td>
</tr>
<tr>
<td>Collaborator, Alara Kitan</td>
<td>N/A</td>
<td>de minimis</td>
<td>de minimis</td>
</tr>
<tr>
<td>Grad Student, P. Bortus°</td>
<td>N/A</td>
<td>12 months/year</td>
<td>12 months/year</td>
</tr>
</tbody>
</table>

* A letter of support is provided from the (foreign organization) Saturnian School of Medical Sciences for Dr. Claire Finn, participating at no cost to this proposal.

° The Graduate student from Moclan College is funded by a FINESST award and thus participating at no cost to this proposal.
Order of Precedence

• There is a section I(h) in the Summary of Solicitation, called Order of Precedence: The Guidebook vs. ROSES vs. Program Elements which tells you what to do if ROSES SOS, the guidebook, and or an individual program element disagree: Program element > Division Research Overview (e.g., B.1) > SOS > Guidebook.

• FAQs should merely elaborate, not surprise you or contravene a rule in the program element.