



Earth Science Operating Missions 2017 Senior Review Kickoff Mission Team Q&A

December 11, 2016

AGU 2016 Fall Meeting
San Francisco Marriott Union Square, Savoy Room, 4:15-530pm
Audio Access
1-844-467-6272
Passcode 434967



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Senior Review Objective

- Within available resources, maximize science value of the ESD on-orbit observing assets, while recognizing contribution to National (non-research) goals.
- This is a comparative review in which the primary evaluation factor is the scientific value of the dataset, with attention to the **value of science that will be enabled by the extension of the dataset.**
- The ESD Senior Review explicitly acknowledges
 - the importance of long term data sets and overall data continuity for Earth science research;
 - the direct contributions of mission data to national objectives, such as the routine use of near-real-time products from NASA research missions for applied and operational purposes by U.S. public organizations.



Senior Review Schedule

- Schedule
 - Draft Call Letter to Missions Dec 2
 - Notification to excluded missions Dec 2
 - Mission Scientists Pre-Proposal Briefing @ AGU Dec 11
 - Request for Inclusion due from excluded missions Dec 19
 - Final Call Letter Dec 20
 - Proposals Due Mar 3
 - National Interests Panel and Technical Review Apr 10-14
 - Science Panel (Telecon) Apr 18
 - Questions to the Mission Teams Apr 21
 - Science Panel (Mission Presentations) May 9-11
 - Science Panel Preliminary Findings to ESD May 12
 - Science Panel Report June
 - PPBE2019/Senior Review Budget Decisions May – Jul
 - Program Scientist Review July
 - Results to ESD Steering Committee Aug
 - Guidance Letters to Missions Aug
 - Mission Response Sep 30



Evaluation Criteria

ESD's priority for the Mission Teams for the 2017 Review:

- *Quality standard data products that support scientific use and research.*
- *Support to the user community to ensure appropriate use of products.*

- **Science:**

- Scientific merit of the mission datasets, with special attention to the science that will be enabled by extension. Merit is based on their intrinsic value in research investigations by the community, relevance to ESD science goals, and data product maturity;
- **Quality trends of the standard data products**, value of long term data records and overall data continuity, and projected quality based on continuing mission performance, including any change induced by sensor, platform or orbit degradation;

- **Operational and non-research uses:**

- Utility of the products for “applied and operational uses” that serve national interests, including: operational uses, public services, business and economic uses, military operations, government management, policy making, non-governmental organizations’ uses, etc.
- Evaluation factors: intrinsic value, frequency of use, latency.

- **Technical & Cost:**

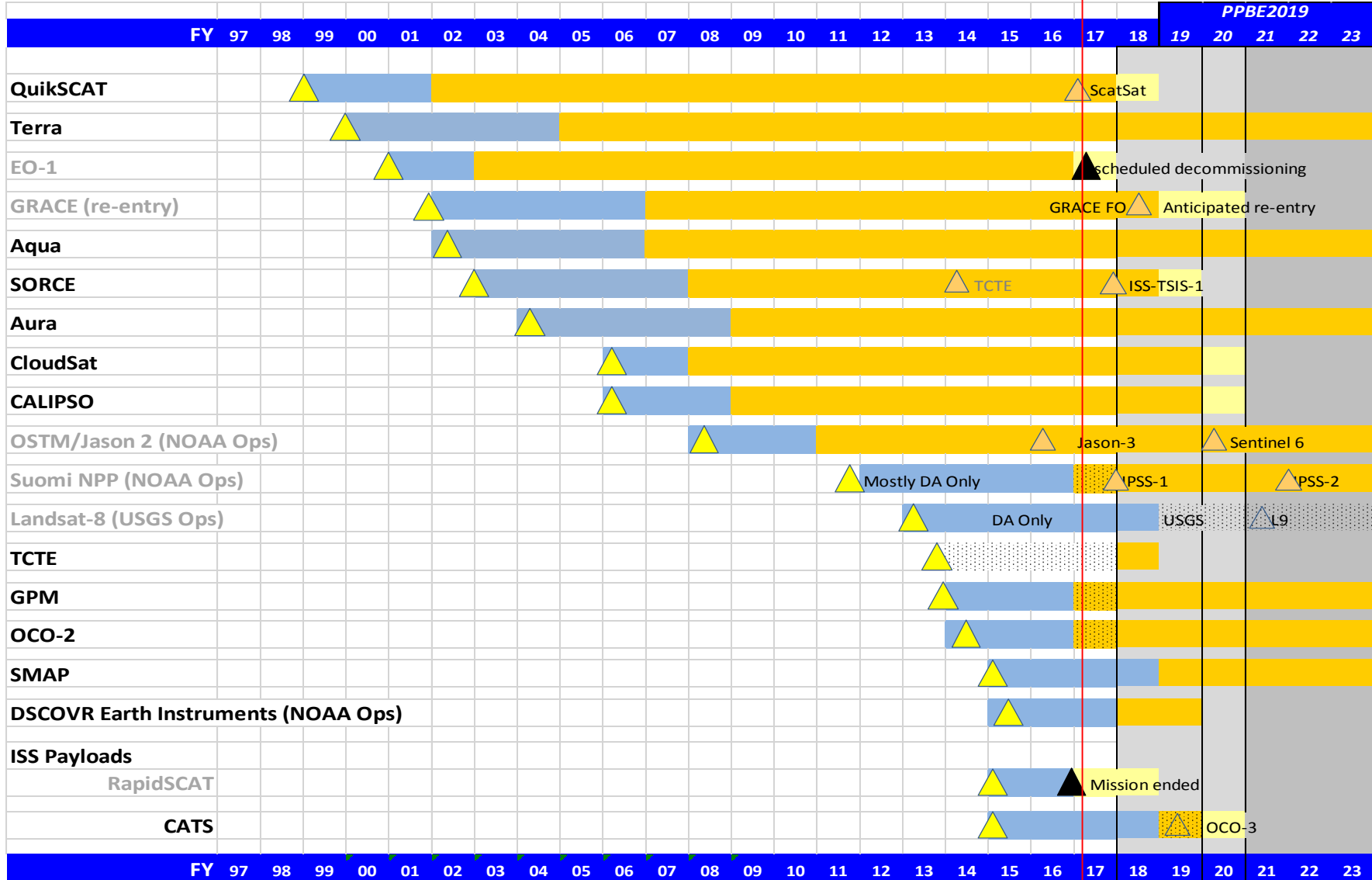
- Hardware status and performance, life expectancy.
- Mission operations plans for health, safety and data collection.
- Cost realism.

No Change



ESD Operating Missions

Prime
Extension
Phase F



TODAY



Mission List: 13 missions in this year's Senior Review

Missions Included:

- Extended missions invited to propose: Aqua, Aura, CALIPSO, CloudSat, QuikSCAT, SORCE, Terra
- Missions new to the Senior Review process: DSCOVR EPIC & NISTAR, GPM, ISS-CATS, OCO2, SMAP, TCTE



Senior Review Timeframe/Cadence

- Academy review of the SMD Senior Review process recommended 3-year cadence, and congressional language has been drafted to modify the original requirement for biennial reviews. This will not affect the 2017 review, but may affect future reviews.
- Proposals are requested for a 3+3 year timeframe, and the SR Panel will be asked to provide findings for 3+3 years. ESD's guidance in the summer likely will be for 2 years, but having the review for 3+3 will allow ESD to switch to 3-year cadence with minimal effort.
- The 3+3 timeframe aligns with the PPBE, so we anticipate minimal effect on the Senior Review proposal and evaluation process.



Funding Environment

- Funding environment : 2017 review covers the budget years 2018-2023. (PPBE2019 covers 2019-2023)

<u>FY 18</u>	<u>FY 19</u>	<u>FY 20</u>	<u>FY 21</u>	<u>FY 22</u>
\$157,000	\$147,378	\$147,781	\$145,989	\$141,231

- Optimal proposals will be accepted, but must be clearly associated with sustaining the current scope of the mission. This will include missions requesting a longer extension than currently funded and missions requesting augmented funding to prevent critical descopes. The science value of the additional dataset extension and/or the critical nature of descoped work must be fully justified. No new scope is requested.
 - In both cases, your PPBE submits must include an in-guide submission and an overguide submission that matches the Senior Review Proposals.



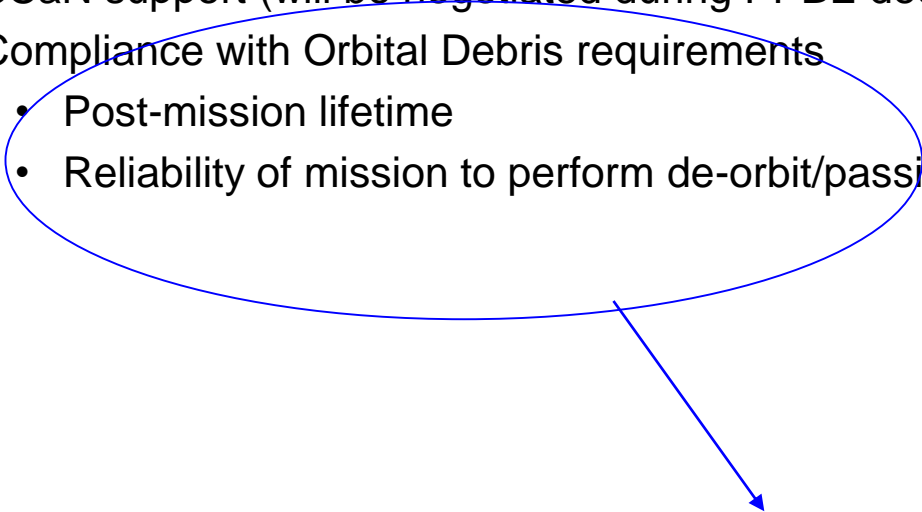
Transition of Terra & Aqua Existing Algorithm Maintenance

- ESD will be following through on our six year plan to transition the ROSES 2013 A.46 Terra and Aqua: Algorithms – Existing Data Product selectees to the Senior Review. Lead Paula Bontempi
- There are 32 grantees, and \$3M (total) is being set aside to transfer to Terra & Aqua mission budgets.
- The scope of the transitioned work is constrained to
 - routine quality assessment of the product
 - assessment of the impact of any instrument performance or ancillary data changes on the product
 - working with the relevant DAAC to address user inquiries concerning the algorithm/product,
 - minor refinements to the algorithm product based on user feedback, and
 - working with the appropriate SIPS concerning issues associated with product reprocessing, etc.
 - Proposals should contain no calibration/validation activities beyond the minimal. NO new field data collection should be proposed.
- PI's are being asked to submit 3pp mini-proposals for each algorithm/data product. These will be sent to the Terra and Aqua Project Scientists, also the Senior Review Program Officer, and appended to the Terra and Aqua proposals. Proposals applicable to both missions will be for the total and identical proposals submitted to both missions (for the total). Formats in PDF, with the budget spreadsheets also in Excel.
 - One page Statement of Work
 - One Page Budget
 - One Page Budget Justification



Other Considerations

- Other items for ESD to consider during mission extension decisions:
 - SCaN support (will be negotiated during PPBE decisions)
 - Compliance with Orbital Debris requirements
 - Post-mission lifetime
 - Reliability of mission to perform de-orbit/passivation



The call letter will be revised to include language to request an updated assessment of your expected post-mission lifetime and an updated reliability estimate, to be included in Appendix E



Senior Review Process



Process: FACA-Imposed Changes

NASA OGC has determined that Senior Reviews are advisory in nature, and FACA rules apply.

- FACA committee meetings are advertised in the Federal Register and open to the public.
- All committee members are either 'Special Government Employees' or 'Regular Government Employees' who must be registered in IdMAX, and complete financial disclosure forms and ethics training.

However, the Senior Review is a ***mission assessment via evaluation of proprietary proposals***. It cannot be conducted in an open meeting. The proposals cannot be public documents.

SMD's Approach: The Senior Review panel will be a subordinate group of the new Earth Science Advisory Committee (ESAC) being established under FACA. The panel will provide its report to the ESAC, and the ESAC will deliberate it in a public FACA meeting and issue recommendations to the ESD Division Director.

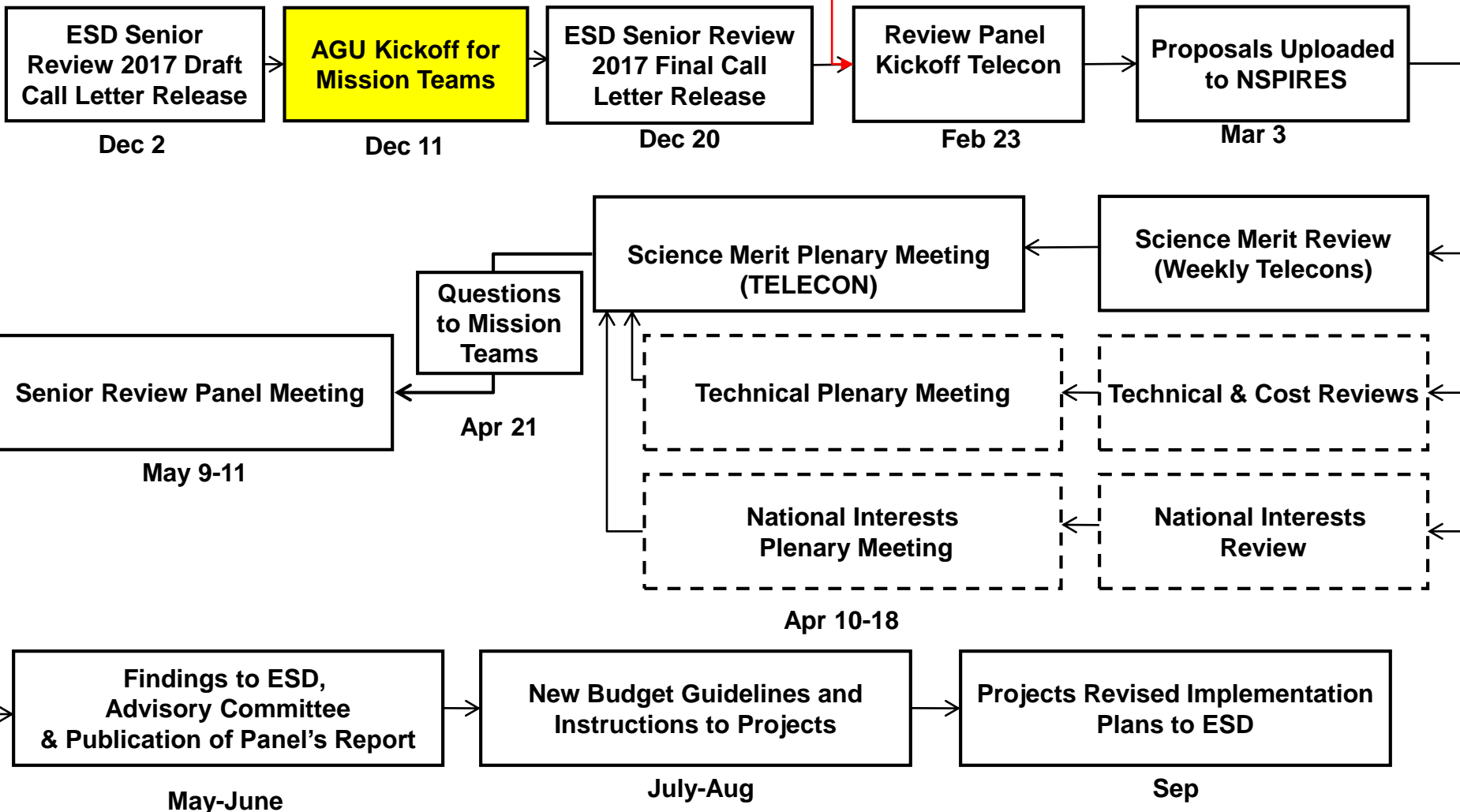
- Paperwork will be submitted to make panelists SGE's if they are not already RGEs.
- A Terms of Reference for the panel will be written and approved by the ESD DD.

This will allow the 2017 Senior Review evaluation to proceed without disrupting the process.



ESD Senior Review 2017 Flow

ESAC to charter Senior Review Panel as Working Group





Process Improvement: What Stays the Same

Evaluations:

- Evaluation process continues to be based on the standard ROSES evaluation process. Each mission will have an assigned Lead Reviewer with 2 secondary reviewers. Major differences: (1) the result is a comparative review, so we must eliminate conflicts of interest prior to panel formation; and (2) we hold pre-panel meetings.
- All-day telecon 2 weeks before mission presentations, to develop questions & topics for clarification by mission teams
- Subpanels:
 - Continue National Interests panel, chaired by Applied Sciences
 - Continue technical sub-panel, chaired by SOMA.
 - Cost assessment will be led by the Program Offices, with assistance from Mark Jacobs, using the forms and evaluation approach developed by Voleak Roeum & Jacobs in 2015 review.

Science Panel:

- Will continue pre-panel background briefings
- Chairman and approximately half the panel will have served on prior Senior Review panels, rest will be new.

Your Program Scientist remains a resource to the Mission Team, as well as the Panel. The PS will help clarify ESD priorities for the mission team, and facilitate the panel/mission interaction, as needed to ensure mutual understanding.



Process Improvement - Changes

- More time between subpanels, 1st science panel (telecon) and 2nd science panel (mission presentations)
 - There is now 1 working day between the conclusion of the subpanels and the first meeting of the science panel.
 - There are now 3 working days after the science panel telecon before the question set is sent to the missions.
 - There are now 11 full working days for the missions to prepare their panel presentations.
- Panel questions to missions: I will provide a core set that all missions will answer to keep the focus of the questions on useful information, and to ensure consistent level of input data across the missions.
 - Technical question answers may be provided separately to technical panel chair.
- Terra & Aqua Existing Algorithms Transition
 - New appendix containing 3pp mini-proposals from the current ROSES2013.A46 grantees.
 - Additional reviewers (mail?) may be assigned to assist the assigned panel reviewers, since this adds 50 pp or more to the proposal.
- National Interests SubPanel will be limited to other federal agencies, to simplify its operation under FACA rules.



Call Letter



Call Letter Outline

- Objectives
- Panels
- Extended Mission Scope
- Funding Environment
- Instructions to Proposers
 - Science Section: science merit, data products, applied & operational use, programmatic elements (Terra & Aqua to include paragraph on managing the transitioned existing algorithm projects – do you want additional pages for your proposal?).
 - Technical/Budget Section: technical status (inc. technical data appendix) & mission operations, budget narrative (inc. mandatory forms).
- Appendices & Attachments (additional appendix for Terra & Aqua)
- Proposal Submission
- Instructions to the Panel/Review Criteria → Do we need additional review criteria and scoring definitions, like Helio/Astro?
Feedback so far is NO
- Panel meetings
- Presentations to Panel
- After Panel Meets
- Schedule
- Further Information & Attachments (e.g. WBS dictionary, budget template)
- Cost Templates – Table V reformatted (templates available from Program Offices)
- Supplemental Call Letter for Terra & Aqua Existing Algorithm Transition



Questions, comments, suggestions?

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