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# Earth Science Operating Missions 2020 Senior Review Preview

November 20, 2019

MODIS/VIIRS Science Team Meeting



## Senior Review Objective

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- Within available resources, maximize science value of the ESD on-orbit observing assets, [within the constraints of the overall Program of Record and ESD's commitment to the Decadal Survey](#).
- 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

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- Schedule
  - ESD Steering Committee Kickoff Nov 13
  - Notification to ESAC TBD
  - Draft Call Letter to Missions Dec 2
  - Notification to excluded missions Dec 2
  - [Mission Scientists Pre-Proposal Briefing @ AGU](#) Dec 8
  - Request for Inclusion due from excluded missions Dec 19
  - [Final Call Letter](#) Dec 20
  - [Proposals Due](#) Mar 6
  - National Interests Panel and Technical Review Apr 14-16
  - Science Panel (Telecon) Apr 21
  - [Questions to the Mission Teams](#) Apr 24
  - [Science Panel \(Mission Presentations\)](#) May 12-14
  - Science Panel Report to ESAC June
  - PPBE2022/Senior Review Budget Decisions May – Aug
  - 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 2020 Review:*

#### ➤ *Relevance of the Extended Mission to the 2017 Decadal Survey*

- **Science:**
  - Scientific merit of the mission datasets with the proposed years of additional data collection, 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 Decadal Survey](#), and [uniqueness of the data among the global observing resources](#);
  - **Quality trends of the standard data products**, with a focus on the projected quality for the years of the requested extension, including any change induced by sensor, platform or orbit changes, and the effect of such changes on the overall consistency of the dataset, recognizing the value of long-term data records;
- **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, 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, [and share of the overall budget projected for the Program of Record as specified in the Decadal Survey](#)



## Terra & Aqua Senior Review Proposals

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- The Terra and Aqua Senior Review Proposals should include any orbit changes predicted during the review period and how those changes will impact the consistency of the dataset and the long-term record.
- Missions update End of Mission Plans within 60 days of submitting Senior Review extension proposal and 30 days before the ESD decision (per requirement 3.3.1(f) of 8715.6B)



## Terra & Aqua Existing Algorithm Maintenance

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- The Terra and Aqua Project Scientists now manage the existing algorithm grants, formerly managed under ROSES, within the Flight Project. To facilitate the Project Scientists' renewal of the non-NASA PI grants, mini-proposals will be requested and appended to the Terra and Aqua proposals and the ESD decision letter at the end of the Senior Review will list each of the PI/products to be continued.
- The format and requirements for the mini-proposals will be set by the Terra and Aqua Project Scientists, with the concurrence of ESD Operating Missions Program Executive.
- The Terra and Aqua proposals will summarize the mini-proposals in the body of the missions' main proposals and report progress since last SR. Individual assessments by the panel of each algorithm mini-proposal will not be required, but reviewers may comment on an individual product/algorithm (as for any other mission and its products).
- The inclusion in the Senior Review process of the EOS Data Continuity Products using the S-NPP and JPSS mission data is being considered.
  - S-NPP instrument teams will need to provide an overall status of the quality of the data products and readiness for transition.
  - If S-NPP is ready to be included in the Senior Review process we will most likely follow a process similar to MODIS, but that is TBD and will be included in the guidance letter.
  - JPSS is under discussion.



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**Questions?**

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