DISCCRS VI Symposium
Colorado Springs, CO

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NASA Headquarters

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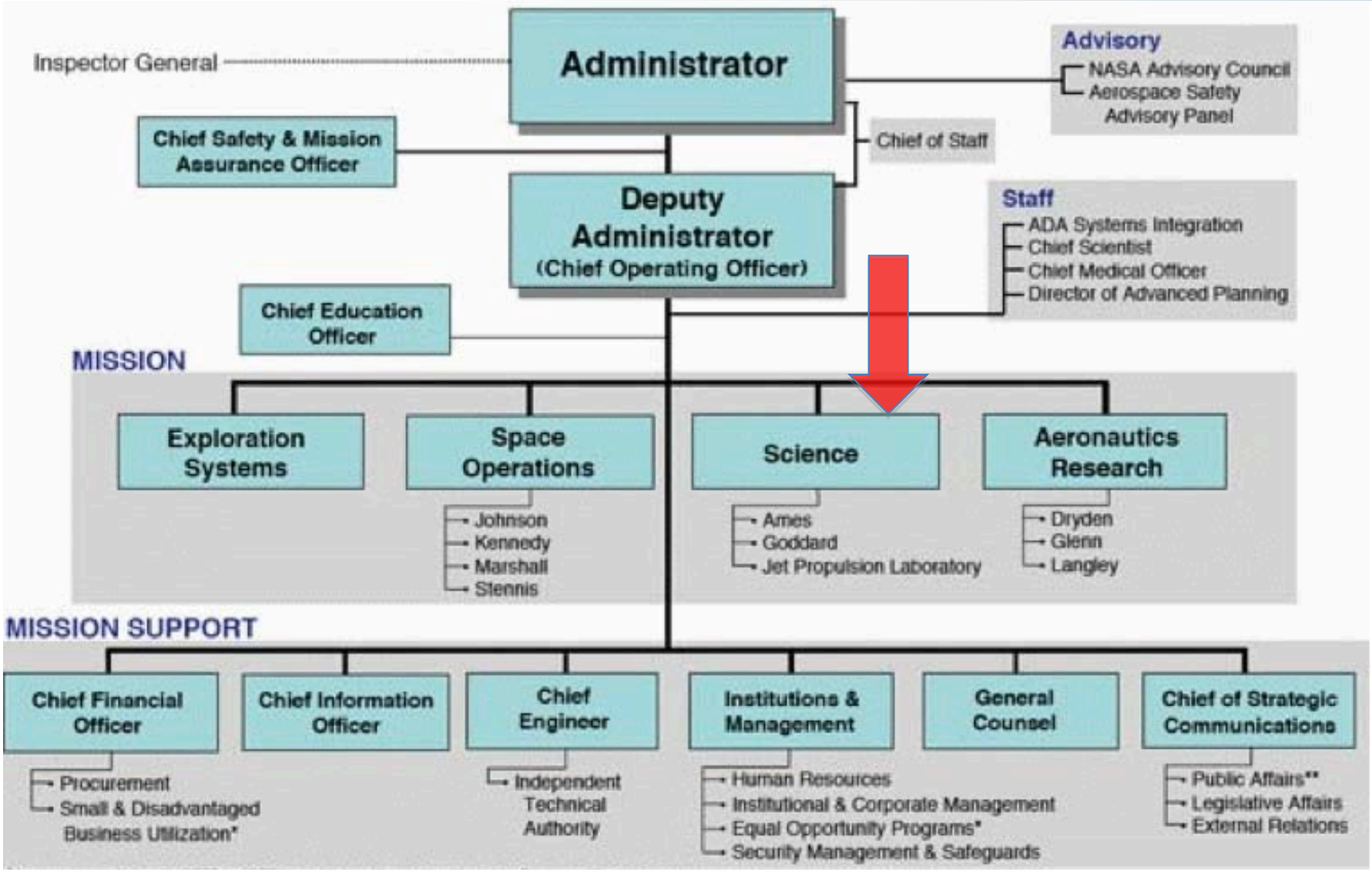
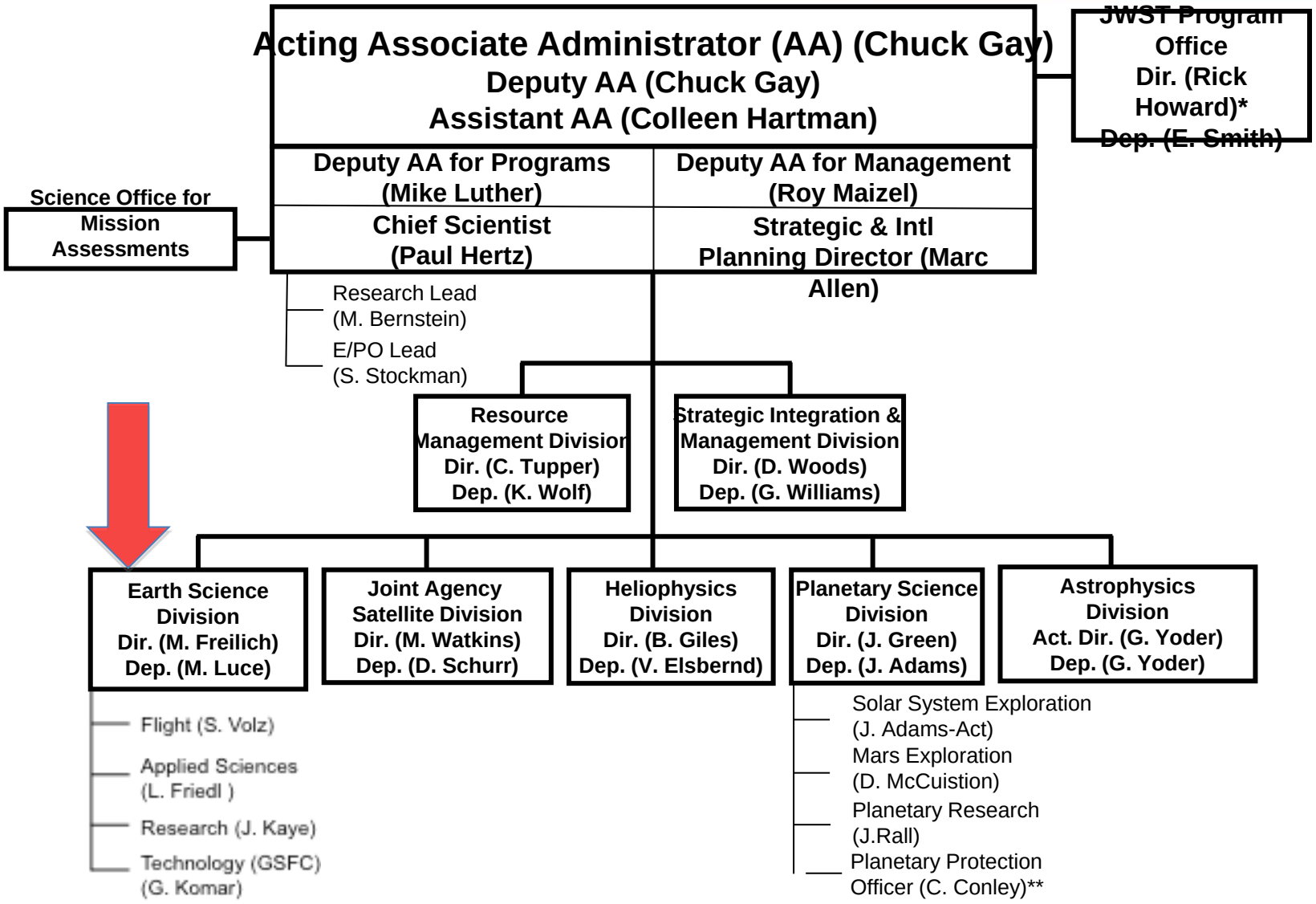
Where is NASA Science?



Where is NASA Earth Science?

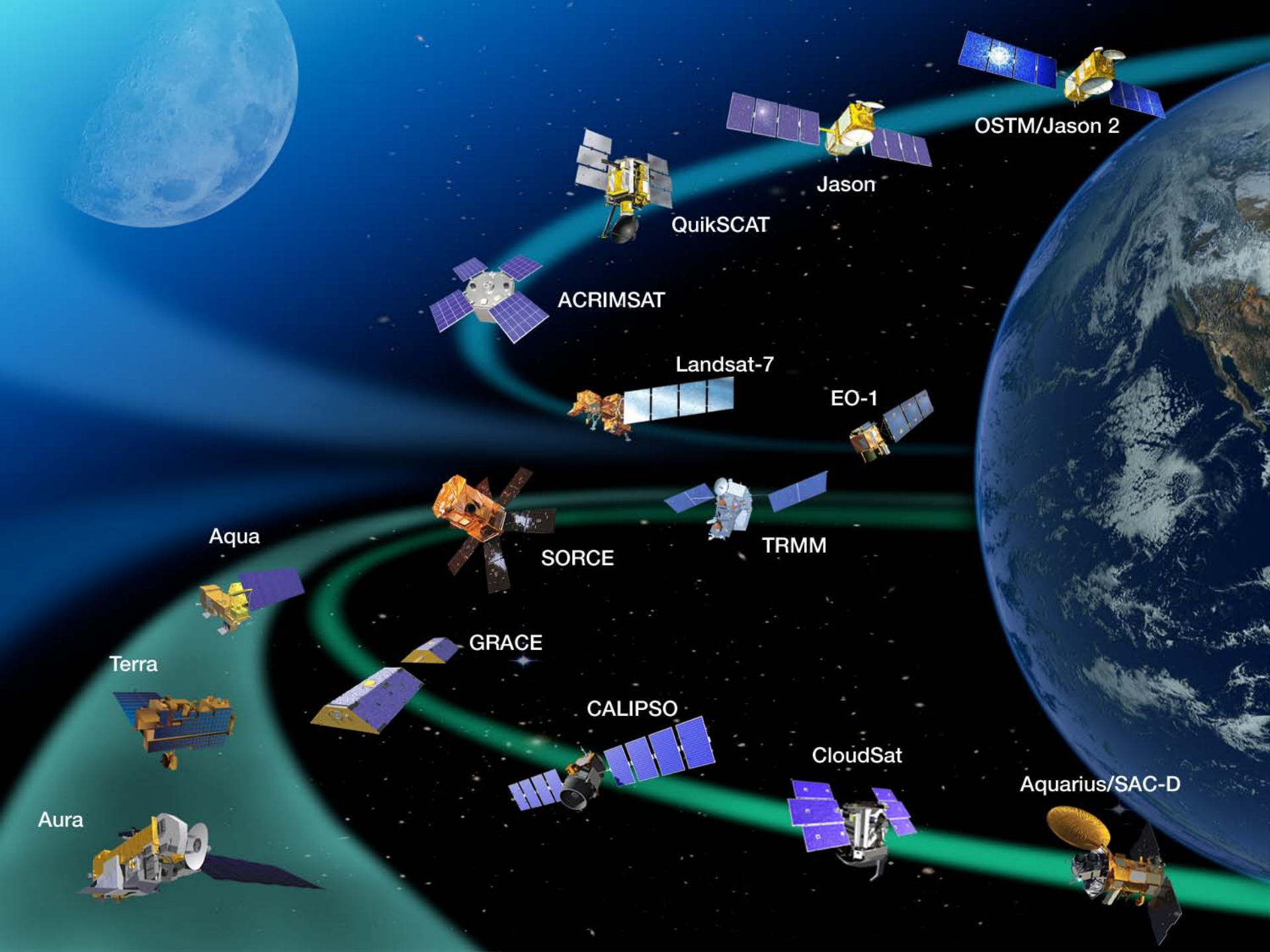


NASA's Earth System Science Endeavor

- The Earth is an integral, complex system
  - Many processes, with varying time and spatial scales
  - Quantitatively describing the ***interactions between processes*** is key
- ***Measurements*** must span all important variables, and all important scales
- ***Research*** leads to greater understanding, which is codified in numerical models – ***prediction***
- Societal benefits result when ***understanding*** is combined with measurements to generate ***useful information products***

NASA's Approach

- ***Space***-borne measurements feature global coverage, high spatial resolution, and frequent revisit
  - Indirect measurements must be validated
  - Stability and accuracy are essential for trend detection
  - Multiple missions needed for proper sampling
- A comprehensive suite of missions and instruments is required to measure all important quantities
- Inter- and cross- disciplinary research and applications programs are needed to (among other things):
  - Synthesize complementary measurements from multiple missions
  - Advance the use of space-borne measurements by non-mission scientists and other stakeholders


OSTM/Jason 2
Jason
QuikSCAT
ACRIMSAT
Landsat-7
EO-1
TRMM
SORCE
Aqua
GRACE
Terra
CALIPSO
CloudSat
Aquarius/SAC-D
Aura

Earth Science @ NASA

- Overarching goal
  - To advance Earth System Science, including climate studies, through ***space-borne data acquisition, research and analysis, and predictive modeling***
- Six major activities
  - Building and operating Earth observing satellite missions, many with international and interagency partners
  - Making high-quality data products available to the broad science community
  - ***Conducting and sponsoring cutting-edge research in 6 thematic focus areas***
    - Field campaigns to complement satellite measurements
    - Analyses of non-NASA mission data
    - Modeling
  - Applied science
  - Developing technologies to improve Earth observation capabilities
  - Education and public outreach

Thematic Focus Areas

Research and Analysis

- Atmospheric Composition
- Carbon Cycle and Ecosystems
- Climate Variability and Change
- Weather
- Water and Energy Cycle
- Earth Surface and Interior

Applied Sciences

- Ecological Forecasting
- Disaster Management
- Public Health and Air Quality
- Water Management

http://science.nasa.gov/earth-science/

NASA Research Opportunities (NRA)

- All research opportunities from the Science Mission Directorate (SMD) at NASAHQ are posted at http://nspires.nasaprs.com/
- Omnibus ***Research Opportunities in Space and Earth Sciences (ROSES)*** issued annually
- All Earth Science opportunities in ***Appendix A of ROSES***
- Guidebook for Proposers Responding to an NRA

http://www.hq.nasa.gov/office/procurement/nraguidebook/

NRA Evaluation Criteria

- **NASA Relevance**
  - How does the proposed investigation addresses the goals and objectives of the most recent NASA strategy document or a specific program element?
- **Intrinsic Merit**
  - Overall scientific/technical merit, unique/innovative methods, approaches, concepts, or advanced technologies demonstrated by the proposal
  - Offeror's capabilities, related experiences, facilities, techniques, or unique combination of these
  - Qualifications, capabilities, and experiences of the PI and key personnel
  - Evaluation against state-of-the-art
- **Cost**
  - Realism and reasonableness of the proposed cost, and comparison of the proposed cost to available funds

Successful vs. Unsuccessful Proposals

What, Why, How, When, How Much, So What?

Clarity vs.

Tips

- **New to NASA?** Understand what NASA does first by reading the strategic plan, looking at previous selection results or volunteering to be a reviewer.
- When you think you understand the program announcement or solicitation, **read it again**.
- **No need to annoy the reviewers**.
- **No need to take the risk** of finishing and/or submitting the proposal at the last minute.

Other Items of Interest

- The Airborne Science Program and its Student Airborne Science Program (SARP)

  http://airbornescience.nasa.gov/
- NASA Postdoctoral Program

  http://nasa.orau.org/postdoc/
- New Investigator Program (NIP) in Earth Science
  - Single-investigator proposals solicited every two years; maximum $120K/year for 3 years; an education plan required with Research : Education ~ 2 : 1
- NASA Earth and Space Science Fellowship (NESSF) Program
  - Applications solicited annually; $30K/year up to 3 years; approx. 50 new awards per year

BACK-UP

Future Missions timeline