

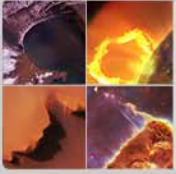
The Role of the Program Scientist

Jeff Grossman, Planetary Science Division, NASA HQ.

Program scientists are scientists!

In my case:

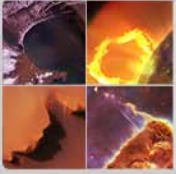
- Sc.B. in Chemistry, Brown University, 1977
- Ph.D. in Geochemistry, UCLA, 1983
- Geochemist, US Geological Survey, 1984-2010
- PI in NASA's Cosmochemistry program, 1988-2010
- Physical Scientist at NASA HQ, 2010-present



The Role of the Program Scientist

There are actually two flavors of PS:

1. Major program lines have Lead Program Scientists (e.g., Michael New, *Discovery*; Curt Niebur, *New Frontiers*). Duties include AO formulation, oversight of proposal evaluation and down-selection processes, PI debriefings. Most visible to teams during pre-Phase A and Phase A activities.
2. Individual missions have Program Scientists. Play largest role beginning with down-selection, Phase B and beyond.

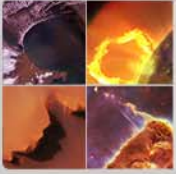


The Role of the Program Scientist

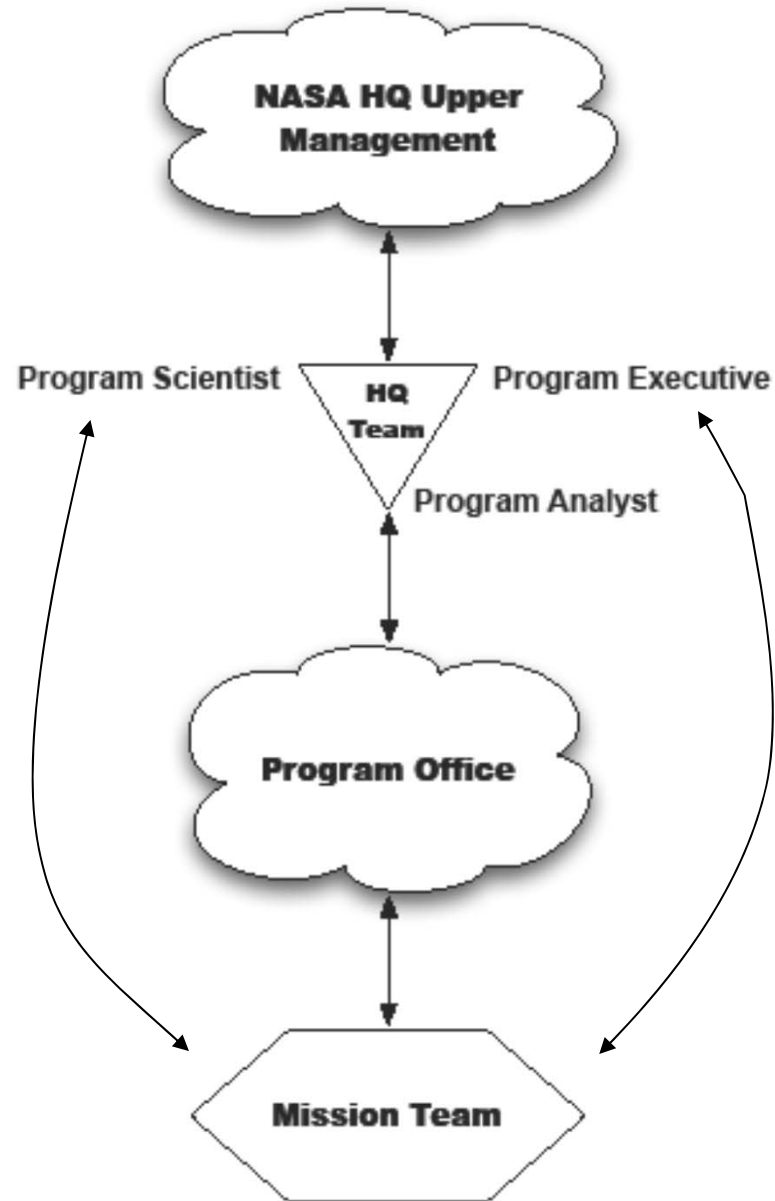
Program scientists are rarely working full-time on one mission!

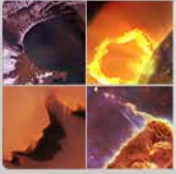
In my case:

- Discipline Scientist, Cosmochemistry Program
- Discipline Scientist, Laboratory Analysis of Returned Samples Program
- Discipline Scientist, Planetary Major Equipment Program
- Manager of NASA Curation activities
- Representative for NASA in interagency Antarctic meteorite activities
- **Program Scientist for Osiris-REx (New Frontiers Program)**



The Role of the Program Scientist



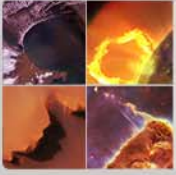


The Role of the Program Scientist

What does a Program Scientist do? [PI-Led Missions]

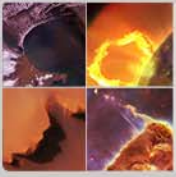
- Is the senior NASA scientist responsible for the science content of an SMD science investigation.
 - SMD's interface with the PI (upper management ↔ team).
 - Ensures that the science NASA selected is the science NASA gets. (The PS is the steward of Level-1 science requirements.)
- Partners with the PE and PA on decisions relevant to mission formulation, design, development, and oversight.
- Advocates at HQ for the science of the mission; ensures that the team has the resources it needs (e.g., fight budget cuts, promote the accomplishments of the mission team).
- Supports public affairs activities

The PS and PE maintain regular communication. Both participate fully in decisions and meetings relevant to mission planning, including those involving the implementing Centers.



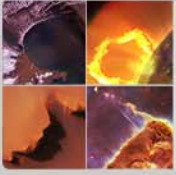
Role of Program Scientist in Phase A

- SMD's interface with the PI.
- Answers questions, helps provide clarification on CSR guidelines.
- When necessary, advocates at HQ for all competing teams.
- Participates in public affairs activities (especially at the time of down-selection).



Role of Program Scientist in Phase B (Formulation)

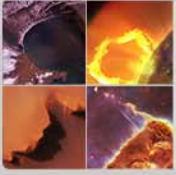
- Works with science team to establish Level-1 science requirements and “rules of the road” for the project; works with the PE to achieve their documentation.
- Works with the team to oversee completion of the Project Data Management Plan.
- Provides guidance to the team in the development of a prioritized science de-scope plan.
- Works with the PE to review progress and evaluate changes that may influence the scientific capability of the mission.



Role of Program Scientist in Phase C/D (Implementation)

MONITORS IMPLEMENTATION

- Works with PE and updates plans and program commitment documentation; monitor/reviews finalization of agreements.
- Works with PE and assesses progress against program-level requirements, schedule, and budget.
- Oversees and monitors development of the plan for science implementation and science operations.
- Oversees and evaluates calibration/validation planning activities.
- Monitors evolution of the project to ensure that scientific capabilities are maintained.
- Keeps NASA advisory bodies informed of progress.
- Supports preparation of launch documentation.
- As launch approaches, reminds upper management on the project's scientific capabilities and participates in public affairs activities.
- Participates in the final mission reviews prior to launch, to ensure that program-level science requirements will be satisfied and that the project is ready to enter the operations phase.



Role of Program Scientist in Phase E (Operation)

SUPPORTS SCIENCE MISSION OPERATIONS

- Works with PE and assesses project performance against program-level requirements, schedule, and budget.
- Monitors science operations for instruments and data.
- Ensures proper data delivery and archiving, according to the approved Project Data Management Plan.
- Oversees development and issuance of solicitations for data analysis programs, and other related science investigations.
 - Oversees evaluation and selection process for proposals received.
- Plays a role in education, public outreach, and public affairs during science operations, including support for public affairs events such as NASA Science Updates.
- Participates in lessons-learned forums.

