



Goddard Space Flight Center

Program Office Organization

Cosmic Origins (COR)

Physics of the Cosmos (PCOS)

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PAG Kick Off meeting

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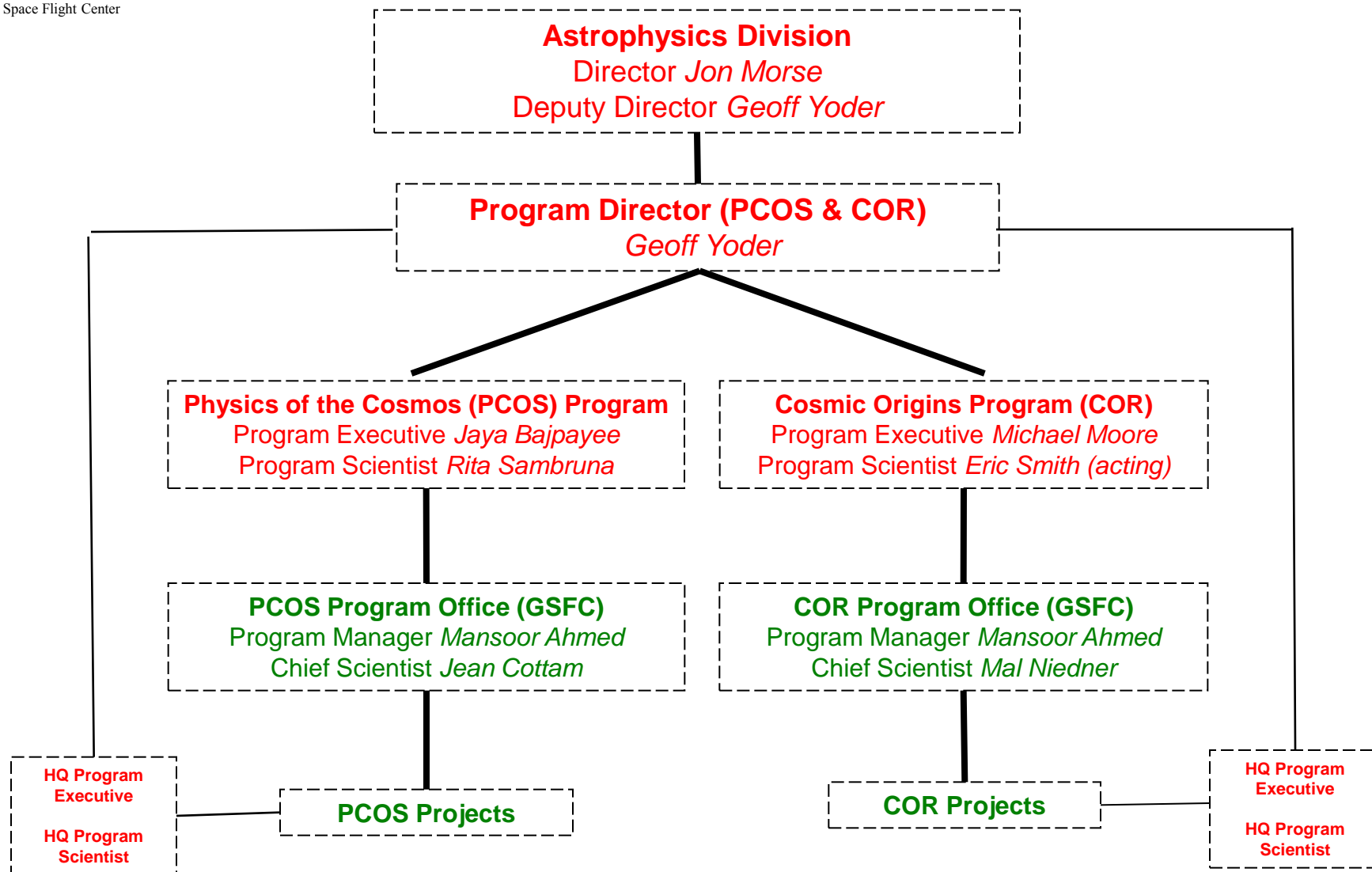
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Current Mission Complement

Mission	Project Center	Partners	Launch Date	Mission Phase	Comments
PCOS					
IXO	GSFC	ESA, JAXA	TBD	Study/Tech Development	
LISA	GSFC	ESA	TBD	Study/Tech Development	
Planck	IPAC	ESA	5/09	Operations	IPAC provides data reduction and analysis support to U.S. based scientists
Fermi	GSFC	DOE, Int'l Team	6/08	Operations	
Integral	GSFC	ESA	10/02	Operations	Integral Guest Observer Facility (GOF) at GSFC provides support to U.S. based scientists
XMM-Newton	GSFC	ESA	12/99	Operations	XMM-Newton GOF at GSFC provides support to U.S. based scientists
Chandra	MSFC		7/99	Operations	Reports through existing MSFC program office
COR					
SOFIA	Dryden/Ames	DLR	5/10 (first light)	Development	Reports through existing DFRC program office
Herschel	IPAC	ESA	5/09	Operations	NASA/Herschel Science Center at IPAC provides support to U.S. science community
Spitzer	JPL		8/03	Operations	
Hubble	GSFC	ESA	4/90	Operations	
JWST	GSFC	ESA, CSA	TBD	Development	Program Management by a new HQ organization



Program Lines of Authority





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Program Office Objectives

- Maximize flight opportunities and science return
 - Deliver on current commitments for operational missions and science products
 - Guide missions:
 - Under study into formulation (KDP A/B);
 - In formulation to successful confirmation (KDP C); and,
 - In implementation to successful transition into operations (KDP E)
 - Maintain key partnerships with partner agencies and science community
 - *Facilitate and initiate the next wave of measurements through development of crosscutting technologies and advanced concept studies*



Program Office Functional Elements

- Program efficiencies achieved through cross-utilization of workforce for both programs in support of the following core functions:
 - Program Management
 - *Future Missions Development*
 - *Advanced Concept Studies*
 - *Research & Technology Support*
 - Business Management
 - Procurement Management
 - Program Support
 - Education & Public Outreach (E&PO)



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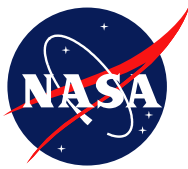
Program Management

- Provide risk-based insight/oversight of the projects
- Perform in-depth assessment of cost & schedule for projects in pre-formulation and formulation phases (as required)
- Ensure all projects are appropriately prepared for KDP's
- Provide technical guidance to projects that have gone off plan
- Find common threads for risks among different missions and facilitate the mitigation of those risks.
- Support HQ in budget prioritization discussions.
- Facilitate international partnerships and negotiations



Future Mission Development Advanced Concepts

- Facilitate development of Science Mission Directorate (SMD) mission concepts that incorporate investments, successes and lessons from previous Astrophysics missions
 - Conduct studies to identify requirements development of new systems.
 - Identify and investigate cross-mission synergies
 - Science
 - Technology
 - Technical risks and lessons
- Provide situational awareness of Agency and science community goals and priorities.
- Perform advanced technology and mission definition studies using institutional facilities and technical experts.
 - Mission Design Laboratory
 - Detector Characterization Laboratory
 - Expertise from NASA centers and industry
 - Etc.



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Future Missions Development SR&T

- Focus on development and infusion of technology elements that may significantly enhance the performance of one or more PCOS/COR missions
- Take advantage of multidisciplinary NASA in-house technical skills and laboratory capabilities
 - Invest in laboratory capabilities for mission-enabling hardware (e.g., fabrication techniques and test-beds for detectors and optics)
 - Leverage project and other NASA resources for cross-cutting technologies
- Encourage technology partnering with community
 - Facilitate access to NASA in-house capabilities and leverage investments by the external community
 - Clearly communicate program technology priorities and achievements to the community to help focus efforts
- Interface with and support technologists in all NASA organizations, including NASA Office of the Chief Technologist, to encourage and advocate teaming on technologies relevant to astrophysics



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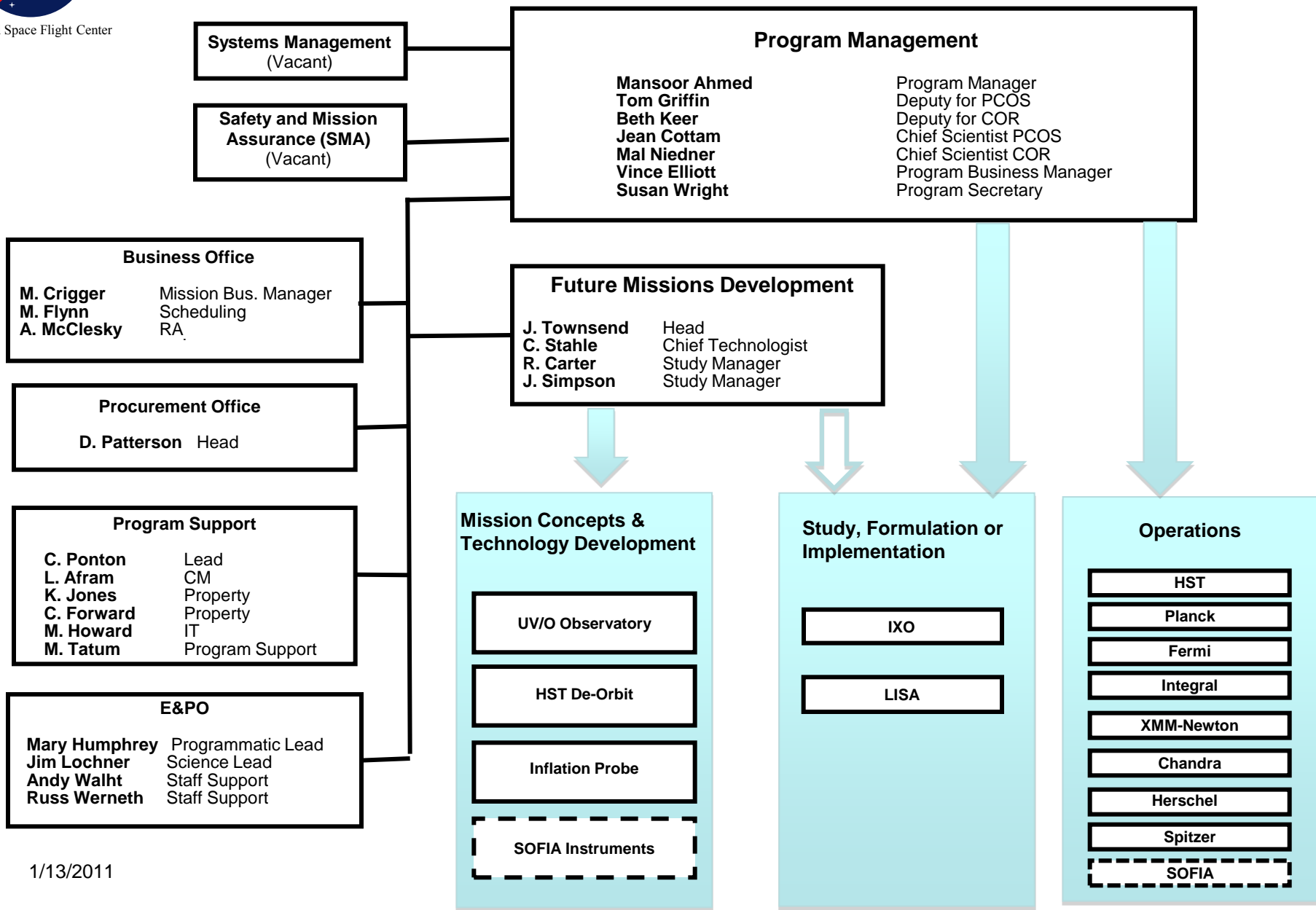
Future Mission Studies Under Consideration

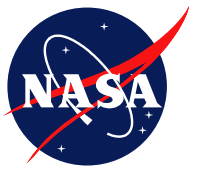
- UV/Optical Observatory & Inflation Probe
 - Develop strategy to mature mission concepts to a pre-phase-A level by the end of this decade
 - Develop preliminary science, mission and budgetary requirements
 - Identify & develop necessary technologies
- Hubble De-Orbit
 - Determine most optimum time frame for HST de-orbit
 - Develop mission technical and budgetary requirements
 - Identify and develop necessary technologies



PCOS/COR Program Office Organization

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Inputs Needed from PAGs Program Office Perspective

- Articulate the key drivers for Inflation Probe & UV/O Observatory
 - Science Requirements
 - Technology development needs
 - Mission architectures
 - etc
- Identify alternative mechanisms for achieving PCOS/COR science goals
 - Suborbital concepts
 - Coordination with ground-based facilities
 - Technology leading to Explorers, etc.
- Identifying important topics enabling Theory and Laboratory Astrophysics tasks for future SAT calls