

**NASA**  
**PROGRAM MANAGEMENT COUNCIL**  
**Meeting Summary, Decisions and Actions**

**VITAL MEETING DATA**

**Date:** 11 October 2017  
**Time:** 1:00 p.m. – 3:00 p.m. (EST)  
**Location:** NASA Headquarters (HQ), 8Q40 & ViTS  
**Agenda:** See attached.  
**Attendance:** See attached.

**Opening Comments**

Robert Lightfoot, National Aeronautics and Space Administration (NASA) Acting Administrator (AA), made the following brief opening comments:

- Starting today, the annual reporting process will be different, in that each Mission Directorate (MD) will brief their perspective of the upcoming Independent Assessment (IA) Manifest and the Agency Mission Program & Project List (AMPL). Subsequently, each MD will report quarterly their respective IA status during the Baseline Performance Reviews (BPR).
- Forensics are being performed on the decision process, as some of the decisions are non-Key Decision Point (KDP) specific. This new process allows some decision memos to be signed only by the AA.

**First Item of Business: Agency Mission Program & Project List (AMPL)**

The AMPL is presented to the APMC on an annual basis, and approved by the NASA AA/Chair for project categorization and governing bodies. The AMPL includes each MD's list of programs and projects derived from the Metadata Manager (Mdm) database. In preparation for the APMC, the MDs update the list, the centers review and comment, and the differences are reconciled. The NASA Procedural Requirement (NPR) 7120.8 research and technology projects are annotated on the list as Research and Technology (R&T), Advanced Technology (AT), or Basic and Applied Research (BAR). Unless delegated, all MD programs are governed by the APMC. It was recommended to delete the independent review organization column on the spreadsheet for the future. Lightfoot agreed.

The AMPL list was reviewed. It covered the Aeronautics Research Mission Directorate (ARMD), Human Exploration and Operations Mission Directorate (HEOMD), Science Mission Directorate (SMD) (Earth Science, Planetary, Astrophysics, Heliophysics, and Joint Agency Satellite), and Space Technology Mission Directorate (STMD). Members identified minor details that need to be updated on the list. The spreadsheet will be updated based on the required minor edits and the memo will be signed for the record.

Lightfoot suggested this review might be done via a purple package in the future and that this possibility would be discussed. However, he was reminded that the AMPL review is usually an add-on to an existing APMC topic. He agreed there was no need to change the process.

This document is made available through the declassification efforts  
and research of John Greenewald, Jr., creator of:

# The Black Vault



The Black Vault is the largest online Freedom of Information Act (FOIA) document clearinghouse in the world. The research efforts here are responsible for the declassification of hundreds of thousands of pages released by the U.S. Government & Military.

**Discover the Truth** at: <http://www.theblackvault.com>

## Second Item of Business: IA Manifest

The purpose of this briefing is to provide a status of the IA Transition Team activities (remaining items) to complete the agency transition to the new IA model. This new model transitions accountability from the former Independent Program Assessment Office (IPAO) to the Mission Directorates with support from the Center Directors. The IA Transition Team has worked over the last two years to formulate, plan, and implement the transition. IA Transition Team members were reviewed and the Transition Team focus was summarized as supporting the steady state implementation through updates to agency guidance and procedures.

Items in work during 2017 include agency guidance (completed); agency-wide communication with project management community (completed); virtual project management event, training, updated Standing Review Board (SRB) organizational/personal conflict of interest (OCI/PCI) vetting approach (completed); external communication on IA; and the IA review manifest (completed). Other items to be completed by the end of 2017 include the MD Independent Review Team (IRT) implementation, performance measurement for the new IA model, and IA “alignment” after the IA transition is complete.

The MD review manifests were summarized by SMD, HEOMD, STMD, and ARMD. A question was asked relating to the frequency of program office reviews. Lightfoot replied that in some cases, the program office reviews have been extended from every three to five years. As long as they are reviewed at least every five years, the frequency is up to each MD. Some recommendations were made for updates to the manifests (SMD and HEOMD); Lightfoot agreed to sign the memo and proceed with the current review manifests.

### Actions:

No new actions were taken. All existing actions were reviewed.

### Closing

A decision memorandum was signed each for the AMPL and the IA Manifest, to include the updated respective attachments.

Meeting was adjourned.

Prepared by:

(b) (6)

Stephanie Sowards

11/2/2017

APMC Executive

# Agency Mission Program and Project List (AMPL) Agency Program Management Council (APMC) Decision Memorandum

**Summary:**

The Agency Mission Program and Project List (AMPL) is presented to the APMC on an annual basis and approved by the NASA Associate Administrator (AA)/Chair. The AMPL is the official list of the Agency programs and projects. The AMPL includes the Mission Directorate's list of programs and projects derived from the Meta Data Manager (Mdm) data base, considered the configuration-managed source of the data. The Mdm data can be dynamic throughout the year, therefore, the AMPL is an annual snapshot of key attributes derived from the Mdm. The AMPL was circulated and coordinated with the Mission Directorates and Centers, as is done annually in preparation for the APMC. The AMPL is primarily used for the purpose to obtain NASA AA/Chair approval on project categorization and governing bodies, and contains additional information to understand the context of key aspects of the programs and projects such as the names of the Program and Project Managers, Mission Directorate, project categorization, governing council, etc. The list is presented to the APMC on an annual basis to ensure agreement and obtain NASA AA/Chair approval.

The FY18 APML is being presented to the APMC for verification of categorization and governing bodies and approval by the NASA Associate Administrator/Chair.

Attachment: AMPL

**Decision:**

The NASA Associate Administrator/Chair approves the FY18 AMPL.

**Approval:**

(b) (6)	10/11/17
Associate Administrator/Chair	Date



# **FY18 Agency Mission Program and Project List (AMPL)**

***October 11, 2017***

***APMC***

***Ellen Stigberg  
Office of the Chief Engineer***



## ***PMC Review of Agency MD Programs and Projects***

Oct '17  
V4

- The Agency Mission Program and Project List (AMPL) is presented to the APMC on an annual basis, and approved by the NASA AA/Chair for project categorization and governing bodies.
- The AMPL includes the Mission Directorate's (MD's) list of programs and projects derived from Meta Data Manager (MdM) data base.
- In preparation for the APMC, the MDs update the list, the Centers review and comment, and the differences are reconciled.
- The backup slides provide context on the NPR 7120.5E space flight programs and projects, annotated on the list as Flight Systems and Ground Support (FSGS).
- The NPR 7120.8 research and technology projects are annotated on the list as Research and Technology (R&T), Advanced Technology (AT) or Basic and Applied Research (BAR).
- Unless delegated, all MD programs are governed by the Agency PMC.

2



# ARMD October 2017

Oct '17  
V4

Program Title	Phase	Program Manager	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Category	Governing PMC	Independent Review Org	Managing Center
Advanced Air Vehicles	IMP	Jay Dryer									HQ
			081876	Advanced Air Transport Technology	Jim Heidman	IMP	N/A	N/A	DPMC	Note (1)	GRC
			664817	Revolutionary Vertical Lift Technology	Susan Gorton	IMP	N/A	N/A	DPMC	Note (1)	LaRC
			110076	Commercial Supersonic Technology	Peter Coen	IMP	N/A	N/A	DPMC	Note (1)	LaRC
			826611	Advanced Composites	Richard Young	IMP	N/A	N/A	DPMC	Note (1)	LaRC
			147016	Aerosciences Evaluation and Test Capabilities	Ron Colantonio	IMP	N/A	N/A	DPMC	Note (1)	GRC
			725017	Hypersonics Technology Project	Charles Leonard	IMP	N/A	N/A	DPMC	Note (1)	LaRC
Airspace Operations and Safety	IMP	Bob Pearce									HQ
			330693	Airspace Technology Demonstrations	Leighton Quon	IMP	N/A	N/A	DPMC	Note (1)	ARC
			334005	UAS Traffic Management	Ron Johnson	IMP	N/A	N/A	DPMC	Note (1)	ARC
			629660	Air Traffic Management – eXploration (ATM-X)	TBD	FRM	N/A	N/A	DPMC	Note (1)	ARC
			340428	System-Wide Safety	TBD	FRM	N/A	N/A	DPMC	Note (1)	LaRC
Transformative Aeronautics Concepts	IMP	John Cavolowsky									HQ
			533127	Convergent Aeronautics Solutions	Isaac Lopez	IMP	N/A	N/A	DPMC	Note (1)	GRC
			109492	Transformational Tools & Technologies	Michael Rogers	IMP	N/A	N/A	DPMC	Note (1)	GRC
			128698	University Innovation and Challenges	TBD	IMP	N/A	N/A	DPMC	Note (1)	N/A
Integrated Aviation Systems	IMP	Edgar Waggoner									HQ
			357672	Unmanned Air Sys. Integration in the Nat'l Airspace Sys.	Laurie Grindie	IMP	N/A	N/A	DPMC	Note (1)	AFRC
			339442	Low Boom Flight Demonstrator	Craig Nickol	B-FRM	N/A	N/A	DPMC	Note (1)	HQ/Virtual
			107210	Flight Demonstrations & Capabilities	Brent Cobleigh	IMP	N/A	N/A	DPMC	Note (1)	AFRC

Note (1): Independent Review column blank pending review of its relevance.



# HEOMD October 2017 (1 of 2)

Oct '17  
V4

Program Title	Program Phase	Program Manager	Project SAP	Project Title	Project Manager	Project Phase	Product Line	MdM Category	Governing PMC	Ind. Review Org.	Managing Center
Commercial Crew	MP	Kathryn Lueders									KSC
			620215	Commercial Crew	Kathryn Lueders	C	FSGS	CAT1	APMC	Note (1)	KSC
Exploration Systems Development	MP	William Hill									HQ
Orion Multi-Purpose Crew Vehicle	MP	Mark Krasich									JSC
			747797	Orion Multi-Purpose Crew Vehicle	Mark Krasich	C	FSGS	CAT1	APMC	Note (1)	JSC
Space Launch System	MP	John Honeycutt									MSFC
			585777	Space Launch System	John Honeycutt	C	FSGS	CAT1	APMC	Note (1)	MSFC
Exploration Ground Systems	MP	Mike Bolger									KSC
			709031	Ground Systems Dev & Ops	Mike Bolger	C	FSGS	CAT1	APMC	Note (1)	KSC
Human Research Program	MP	Bill Paloski							DPMC		JSC
			046193	Program Science Management (PSM)	Saroj Patel	MP	BAR	CAT 3	N/A	Note (1)	JSC
			836404	Cross-Cutting	Saroj Patel	MP	BAR	CAT 3	N/A	Note (1)	JSC
			444543	Exploration Medical Capabilities (ExMC)	Mike Cenge	MP	BAR	CAT 3	N/A	Note (1)	JSC
			344494	Human Factors & Behavioral Performance (HFBP)	Laura Bollweg	MP	BAR	CAT 3	N/A	Note (1)	JSC
			516724	Human Health Countermeasures (HHC)	David Baumann	MP	BAR	CAT 3	N/A	Note (1)	JSC
			651549	Space Radiation (SR)	Jason Weeks	MP	BAR	CAT 3	N/A	Note (1)	JSC
			068800	ISS Medical Projects (ISSMP)	Suzanne McColum	MP	BAR	CAT 3	DPMC	Note (1)	JSC
Crew and Cargo Program	MP	Kirk Shireman	468A						DPMC		JSC
			575872	ISS Crew Cargo Services	N/A	E	FSGS	N/A	DPMC	Note (1)	JSC
International Space Station Program	MP	Kirk Shireman	733B						DPMC		JSC
			401769	ISS Spacecraft Operations	N/A	E	FSGS	N/A	N/A	Note (1)	JSC
			904211	Biological and Physical Sciences	Angel Otero	MP	BAR	N/A	DPMC	Note (1)	HQ

Note (1): Independent Review column blank pending review of its relevance.





# HEOMD

## October 2017

### (2 of 2)

Oct '17  
V4

Program Title	Program Phase	Program Manager	Project SAP	Project Title	Project Manager	Project Phase	Product Line	MdM Category	Governing PMC	Ind. Review Org	Managing Center
Launch Services	IMP	Amanda Mitskevch									KSC
			725932	Launch Services Program	Amanda Mitskevch	E	FSGS	CAT2	DPMC	N/A	KSC
Alpha Magnetic Spectrometer	IMP	Mark Sistelli									JSC
			464502	LSP Alpha Magnetic Spectrometer Payload	Ken Bollweg	E	FSGS	CAT3	DPMC	N/A	JSC
Human Space Flight Operations	IMP	Benji Neumann									HQ
			170786	Space Flight Crew Operations	Bernie Hajek	IMP	N/A	N/A	DPMC	N/A	JSC
			599891	Crew Health & Safety Project	Brad Rhodes	IMP	N/A	CAT3	DPMC	N/A	JSC
Rocket Propulsion Testing (RPT)	IMP	Roger Simpson									SSC
			750271	Rocket Propulsion Testing Project	Tim White	E	FSGS	N/A	DPMC	N/A	SSC
Space Communications & Navigation	N/A	Badi Younes							DPMC		HQ
			070799	Space Network	Ted Sobchak	E	FSGS	N/A	N/A	N/A	GSFC
			240296	Near Earth Network (NEN)	David Carter	E	FSGS	N/A	N/A	N/A	GSFC
			289972	Networks Integration and Engineering	Sue Chang	E	FSGS	N/A	N/A	N/A	HQ
			342739	SN Ground Segment Sustainment (SGSS)	Dave Littmann	C	FSGS	CAT1	APMC	Note (1)	GSFC
			361065	NASA Integrated Services Network (NISN)	Elizabeth Paschall	E	FSGS	N/A	N/A	N/A	MSFC
			520430	TDRS-M Replenishment	David Littmann	E	FSGS	CAT1	N/A	N/A	GSFC
			553323	Space Comms SCan Test Bed	Dave Chelmins	E	FSGS	CAT3	N/A	N/A	GRC
			795283	Deep Space Network (DSN)	Al Bhanji	E	FSGS	N/A	N/A	N/A	JPL
Advanced Exploration Systems	IMP	Jason Crusan	806K						DPMC		HQ
			089407	AES Habitation Capabilities	Doug Craig	IMP	AT	N/A	DPMC	N/A	HQ
			251546	Exploration Habitation Systems	Robyn Gatens	IMP	AT	N/A	DPMC	N/A	HQ
			291647	Vehicle Systems	Chris Moore	IMP	AT	N/A	DPMC	N/A	HQ
			663323	AES Foundational Systems	Chris Moore	IMP	AT	N/A	DPMC	N/A	HQ
			822174	Robotic Systems	Jitendra Joshi	IMP	AT	N/A	DPMC	N/A	HQ
			845953	AES Future Projects	Jason Crusan	IMP	AT	N/A	DPMC	N/A	HQ
			572365	AES Strategic Operations	Jason Crusan	IMP	AT	N/A	DPMC	N/A	HQ
			961866	NextSTEP BAA	Jason Crusan	IMP	AT	N/A	DPMC	N/A	HQ
Power and Propulsion Element	FRM	Michele Gates, Program Director									GRC
			837933	Power Propulsion Element	Mike Barrett	A	FSGS	CAT1	APMC	Note (1)	GRC

Note (1): Independent Review column blank pending review of its relevance.



# STMD

## October 2017

Program Title	Prog. Phase	Program Manager/PE	Project SAP (STMD WBS)	Project Title	Project Manager	Proj. Phase	MdM Category (Cat)	Governing PMC	Independent Review Org.	Project Managing Center
Technology Demonstration Missions (TDM)	IMP	Ginger Flores (PM)/ Tawnya Laughinghouse (Deputy PM)/ Trudy Kortez (PE)	365099	Laser Communications Relay Demonstration (LCRD)	Kevin Carmack	IMP	Cat 3	STMD PMC	Note (1)	GSFC
			621952	Deep Space Atomic Clock (DSAC)	Todd Ely	IMP	Cat 3	STMD PMC	Note (1)	JPL
			448887	Evolvable Cryogenics (eCryo)	Hans Hansen	IMP	N/A	STMD PMC	Note (1)	GRC
			878336	Green Propellant Infusion Mission (GPIIM) (Note: Project completed but not delivered)	Scott Tennant	IMP	Cat 3	STMD PMC	Note (1)	MSFC
			729200	Solar Electric Propulsion (SEP)	David Irimies	FRM	TBD *	STMD PMC	Note (1)	GRC
			000278	Restore-L Satellite Servicing	Bob Smith	FRM	Cat 2	STMD PMC	Note (1)	GSFC
			216894	In-Space Robotic Manufacturing & Assembly (IRMA)	Beth Adams	Pre-FRM	N/A	STMD PMC	Note (1)	MSFC
			182015	Green Propellant Thruster Technology Qualification (GPTTQ)	Ron Spores	Pre-FRM	N/A	STMD PMC	Note (1)	MSFC
			249847	Mars Oxygen ISRU Experiment (MOXIE)	Jeffrey Mellstrom	IMP	N/A	STMD PMC	Note (1)	JPL
			879824	Terrain Relative Navigation (TRN)	Andrew Johnson	IMP	N/A	STMD PMC	Note (1)	JPL
930628	Deep Space Optical Communication (DSOC)	William Klipstein	FRM	N/A	STMD PMC	Note (1)	JPL			
* Note, CAT decision for SEP is TBD. SEP is still in formulation. STMD awaiting understanding definition of mission for SEP.										
Game Changing Development (GCD)		Drew Hope (PM) / LaNetra Tate (PE)	283949	Station Explorer X-ray Navigation & Communication (SEXTANT) (Managed as part of NICER)	Jason Mitchell	IMP	N/A	STMD PMC	Note (1)	GSFC
			394364	Heatshield for Extreme Entry Environment Technology (HEEET)	Raj Venkatapathy	IMP	N/A	STMD PMC	Note (1)	ARC
			469947	Nuclear Thermal Propulsion (NTP)	Sonny Mitchell	IMP	N/A	STMD PMC	Note (1)	MSFC
			161305	High Performance Spaceflight Computing (HPSC)	Wes Powell / Rich Doyle	IMP	N/A	STMD PMC	Note (1)	GSFC / JPL
			389693	Mars Entry Descent and Landing Instrument 2 (MEDL2)	Henry Wright	IMP	N/A	STMD PMC	Note (1)	LaRC
Small Spacecraft Technology (SST)	IMP	Roger Hunter (PM)/ Chis Baker (PE)	680465	Pathfinder Technology Demonstrator	Elwood Agasid	IMP	N/A	STMD PMC	Note (1)	ARC
			579853	Cubesat Proximity Operations Demonstration (CPOD)	Roger Hunter/ Marco Villa	IMP	N/A	STMD PMC	Note (1)	ARC (Tyvak)
			579853	Optical Communications and Sensor Demonstration (OCSD)	Roger Hunter/ Richard Welle	IMP	N/A	STMD PMC	Note (1)	ARC (Aerospace)
			579853	Integrated Solar Array and Reflectarray Antenna (ISARA)	Dorothy Lewis	IMP	N/A	STMD PMC	Note (1)	JPL (Aerospace)

Note (1): Independent Review column blank pending review of its relevance.



# SMD – Earth Science

## October 2017

### (1 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat	Governing PMC	Ind. Review Org.	Managing Center
Earth Systematic Missions	IMP	Jeff Gramling										GSFC
			David Jarrett	372720	Landsat 9	Del Jenstrom	B	FSGS	CAT1	DPMC	Note (1)	GSFC
			Elizabeth Edwards	564349	PACE	Andre Dress	B	FSGS	CAT2	DPMC	Note (1)	GSFC
			Charles Webb	372217	Soil Moisture Active and Passive (SMAP)	Tung-Han You	E	FSGS	CAT2	DPMC	Note (1)	JPL
			Charles Webb	720817	Aqua	Wynn Watson	E-ext	FSGS	CAT1	DPMC	Note (1)	GSFC
			Charles Webb	583998	Aura	Wynn Watson	E-ext	FSGS	CAT1	DPMC	Note (1)	GSFC
			Charles Webb	378289	Global Precipitation Measurement (GPM)	Wynn Watson	E-ext	FSGS	CAT1	APMC	Note (1)	GSFC
			David Jarrett	131630	GRACE- FO	Phil Morton	D	FSGS	CAT2	DPMC	Note (1)	JPL
			Richard Stonaker	883151	Ice, Cloud and Land Elevation Satellite-2 (ICESat-2)	Doug McLennan	D	FSGS	CAT1	APMC	Note (1)	GSFC
			Kevin Murphy	656052	Multi-Mission Operations (MMO)	Andrew Mitchell	E	FSGS	N/A	DPMC	Note (1)	GSFC
			Mitra Dutta	209249	NASA ISRO Synthetic Aperture Radar (NISAR)	Yunjin Kim	C	FSGS	CAT2	DPMC	Note (1)	JPL
			Charles Webb	934394	Ocean Surface Topography Mission (Jason-2)	Glenn Shirliffe	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Jean Wolfe	552897	Ozone Mapping and Profiler Suite Limb (OMPS-L)	Bryan Failful	C	FSGS	CAT3	DPMC	Note (1)	GSFC
			Charles Webb	182893	Quick Scatterometer (QuikSCAT)	Robert Gaston	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Christine Bonnicksen	852671	Radiation Budget Instrument (RBI)	Mike Cisewski	C	FGSS	CAT 2	DPMC	Note (1)	LaRC
			Charles Webb	857865	SAGE III on ISS	Marilee Roell	E	FSGS	CAT3	DPMC	Note (1)	LaRC
			Charles Webb	767136	Solar Radiation & Climate Experiment (SORCE)	Wynn Watson	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Charles Webb	935096	Suomi-National Polar Partnership (S-NPP) Mission operated by NOAA	Harry Solomon (NOAA)	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Steve Neeck	824027	Surface Water & Ocean Topography (SWOT) Mission	Parag Vaze	C	FSGS	CAT2	DPMC	Note (1)	JPL
			Charles Webb	921266	Terra	Wynn Watson	E-ext	FSGS	CAT1	DPMC	Note (1)	GSFC
			Mayra Montrose	789263	TSIS-1 (Total and Spectral Solar Irradiance Sensor - on ISS) (formerly SIDAR)	Candace Carlisle	C	FSGS	CAT3	DPMC	Note (1)	GSFC
			Steve Neeck	833099	Sentinel-6	Parag Vaze	C	FSGS	CAT2	DPMC	Note (1)	JPL
			Christine Bonnicksen	564940	Climate Absolute Radiance and Refractivity Observatory-Pathfinder (CLARREO-PF)	Gary Fleming	A	FSGS	CAT3	DPMC	Note (1)	LaRC

Note (1): Independent Review column blank pending review of its relevance.



# SMD – Earth Science

## October 2017

### (2 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Earth System Science Pathfinder	IMP	Greg Stover	Eric Ianson									LaRC
			Charles Webb	713404	Orbiting Carbon Observatory -2 (OCO-2)	Mark Garcia	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Charles Webb	653967	Cloud-Aerosol Lidar & Infrared Pathfinder (CALIPSO)	Chip Trepte	E-ext	FSGS	CAT2	DPMC	Note (1)	LaRC
			Charles Webb	978813	Gravity Recovery and Climate Experiment (GRACE)	Robert Gaston	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Charles Webb	983310	CloudSat	Deborah Vane	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Dianne Cheek	213709	Orbiting Carbon Observatory - 3 (OCO-3)	Ralph Basilio	C	FSGS	CAT3	DPMC	Note (1)	JPL
			Charles Webb	375837	Cyclone Global Navigation Satellite System (CYGNSS)	Jillian Redfern	E	FSGS	CAT3	DPMC	Note (1)	LaRC
			Elizabeth Edwards	885683	Tropospheric Emissions: Monitoring of Pollution (TEMPO)	Wendy Pennington	C	FSGS	CAT3	DPMC	Note (1)	LaRC
			Mayra Montrose	415244	Ecosystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS)	Wesley Schmitigel	C	FSGS	CAT3	DPMC	Note (1)	JPL
			Richard Stonaker	306615	Global Ecosystem Dynamics Investigation (GEDI)	Jim Pontius	C	FSGS	CAT3	DPMC	Note (1)	GSFC
			Elizabeth Edwards	324434	Multi-Angle Imager for Aerosols (MAIA)	Kevin Burke	B	FSGS	CAT3	DPMC	Note (1)	JPL
			Christine Bonnicksen	567655	Time-Resolved Observations of Precipitation structure and storm Intensity with a Constellation of Smallsats (TROPICS)	Kris Clark	B	FSGS	CAT3	DPMC	Note (1)	LaRC (Tech Authority); PL-Led Mission
			Mayra Montrose	903965	Geostationary Carbon Cycle Observatory (GeoCARB)	Dean Read (Univ. of OK)	A	FSGS	CAT3	DPMC	Note (1)	LaRC (Tech Authority); PL-Led Mission

Note (1): Independent Review column blank pending review of its relevance.



# SMD - Planetary

## October 2017

### (1 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Mars Exploration	IMP	FUK LJ	James Watzin									JPL
			Ramon DePaula	228485	Mars Odyssey 2001	Dave Lehman	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Ramon DePaula	293945	Mars Atmosphere & Volatile (MAVEN)	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			D. Lavery	361426	Mars Exploration Rover 2003 - Opportunity	John Callas	E-ext	FSGS	CAT1	APMC	Note (1)	JPL
			D. Lavery	535263	Mars Express	Thomas Thompson	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Ramon DePaula	574542	Mars Reconnaissance Orbiter 2005 (MRO)	Martin Johnston	E-ext	FSGS	CAT1	DPMC	Note (1)	JPL
			George Tahu	971200	Mars Rover 2020	John McNamee	C	FSGS	CAT1	APMC	Note (1)	JPL
			D. Lavery	857464	Mars Science Lab (MSL 2011) -Curiosity	Jim Erickson	E-ext	FSGS	CAT1	APMC	Note (1)	JPL
			D. Lavery	464870	Mars Organic Molecule Analyzer (MOMA)	Sridhar Manthiripragada	C	FSGS	CAT3	DPMC	Note (1)	GSFC
New Frontiers	IMP	Allen Bacskay	Diane Brown									MSFC
			A. Ocampo	750769	New Horizons	Helene Winters (JHU/APL)	E	FSGS	CAT1	DPMC	Note (1)	MSFC (JHU/APL)
			D. Brown	804068	Juno	Rick Nybakken	E	FSGS	CAT1	DPMC	Note (1)	JPL
			G. Johnston	828928	OSIRIS-REx	Rich Burns	E	FSGS	CAT1	APMC	Note (1)	GSFC
Solar System Exploration (SSE)	IMP	Allen Bacskay	David Schurr (PD)		Outer Planets and Ocean Worlds (Program budget title in MdM)							
			Tony Carro	376269 (05.01.01)	JUICE-LVVS	S. Persyn	C	FSGS	CAT3	DPMC	Note (1)	MSFC (SwRI)
			Tony Carro	376269 (05.01.02)	JUICE-PEP/JEPI	P. Brandt	C	FSGS	CAT3	DPMC	Note (1)	MSFC (JSU/APL)
			Tony Carro	376269 (05.01.03)	JUICE-RIME	Aiina Mousseghian	C	FSGS	CAT3	DPMC	Note (1)	JPL
			Joan Salute	684499	Europa Clipper	Barry Goldstein	B	FSGS	CAT1	APMC	Note (1)	MSFC
			Gordon Johnston	265759	Double Asteroid Redirection Test (DART)	Cheryl Reed	B	FSGS	CAT2	DPMC	Note (1)	MSFC (JHU/APL)

Note (1): Independent Review column blank pending review of its relevance.



# SMD - Planetary

## October 2017

### (2 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Discovery	IMP	Allen Bacskay	David Schurr (PD) / Joan Salule (PE)									MSFC
			Tony Carro	109226	Dawn	Robert Mase	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Tony Carro	692280	MESSENGER	Helene Winters	F	FSGS	CAT2	DPMC	Note (1)	MSFC (JHU/APL)
			Tony Carro	444390	Strofi	Mark Phillips	D	FSGS	CAT3	DPMC	Note (1)	MSFC (SwRI)
			Gordon Johnston	342556	Lunar Reconnaissance Orbiter (LRO)	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			R. DePaula	448550	Insight	Torn Hoffman	D	FSGS	CAT2	DPMC	Note (1)	JPL
			Diane Brown	302584	Psyche	Henry Stone	B	FSGS	CAT2	DPMC	Note (1)	JPL
			Adriana Ocampo	577236	Lucy	Michael Donnelly	B	FSGS	CAT3	DPMC	Note (1)	GSFC
Planetary Science Research	IMP		Jonathan Rall									HQ
			Tony Carro	155751	Rosetta	Artur Chmielewski	E	FSGS	CAT3	DPMC	Note (1)	JPL
			Lindley Johnson	582622	NEOWISE	Beth Fabinsky	E-ext	FSGS	CAT3	DPMC	Note (1)	JPL
Radiosotope Power Systems (RPS)	IMP	John Hamley	David Schurr (PD) / Len Dudzinski (PE)					FSGS		APMC		GRC
			Len Dudzinski	138494 (.04.01)	Stirling Cycle Technology Development	J. Mark Hickman	N/A	R&T	N/A	DPMC	N/A	GRC
			Len Dudzinski	138494 (.04.02)	Thermoelectric Technology Development	Jean-Pierre Fleurial	N/A	R&T	N/A	DPMC	N/A	JPL
			Len Dudzinski	371268	Plutonium Supply Project	Mary McCune (DOE)	N/A	FSGS	N/A	APMC	N/A	DOE
			Len Dudzinski	565723	Operations and Analysis	Mary McCune (DOE)	N/A	FSGS	N/A	APMC	N/A	DOE

Note (1): Independent Review column blank pending review of its relevance.



# SMD - Astrophysics

## October 2017

### (1 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Exoplanet Exploration	IMP	Gary Blackwood	Andrea Razzaghi (PD)									JPL
			Jeff Hayes	354171	Kepler	Maura Fujieh	F	FSGS	CAT2	DPMC	Note (1)	ARC
			John Gagosian	134180	WFIRST	Kevin Grady	A	FSGS	CAT1	APMC	Note (1)	GSFC
Cosmic Origins	FRM	M. Ahmed	Andrea Razzaghi (PD)									GSFC
			Jeffrey Hayes	315404	Hubble Space Telescope Operations	Pat Crouse	E-ext	FSGS	CAT1	DPMC	Note (1)	GSFC
			Jeffrey Hayes	420579	Spitzer Space Telescope	Lisa Stormie-Lombardi	E-ext	FSGS	CAT2	DPMC	Note (1)	JPL
			Lucien Cox	422335	Stratospheric Observatory for Infrared Astronomy	Eddie Zavala	E	FSGS	CAT1	APMC	Note (1)	ARC
Physics of the Cosmos	FRM	M. Ahmed	Andrea Razzaghi (PD)									GSFC
			Jeff Hayes	397424	Chandra X-Ray Observatory (CXO)	Helen Cole	E-ext	FSGS	CAT1	DPMC	Note (1)	MSFC
			Jeff Hayes	378710	Fermi Gamma-Ray Large Telescope	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	344833	Suzaku (ASTRO-E II)	Rich Burns	F	FSGS	CAT3	DPMC	Note (1)	GSFC
			Jeff Hayes	411021	XMM-Newton	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Shahid Habib	881530	Euclid	Ulf Israelsson	D	FSGS	CAT3	DPMC	Note (1)	JPL
			Shahid Habib	244904	Space Technology 7 (ST7)	Phillip Barela	F	FSGS	CAT3	DPMC	Note (1)	JPL

Note (1): Independent Review column blank pending review of its relevance.



# SMD - Astrophysics

## October 2017

### (2 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Explorer Astro Program	IMP	Nick Chrissotimos	Andrea Razzaghi (PD)									GSFC
			Jeff Hayes	273493	Neutron Star Interior Composition Explorer (NICER)	Keith Gendreau	E	FSGS	CAT3	DPMC	Note (1)	GSFC
			Mark Sistilli (PE)	222501	Nuclear Spectroscopic Telescope Array (NuSTAR)	Lisa Storrie-Lombardi	E-ext	FSGS	CAT3	DPMC	Note (1)	JPL
			Jeff Hayes	789737	Swift Gamma-Ray Burst Explorer	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Mark Sistilli	985788	Transiting Exoplanet Survey Satellite (TESS)	Jeff Volosin	D	FSGS	CAT2	DPMC	Note (1)	GSFC
			Mark Sistilli	976348	Imaging X-ray Polarimetry Explorer (IXPE)	Randy Baggett	B	FSGS	CAT3	DPMC	Note (1)	MSFC
			Lucien Cox	951330	Galactic/Extragalactic ULDB Spectroscopic Terahertz Observatory (GUSTO)	Dewey Adams	B	BAR	N/A	DPMC	Note (1)	GSFC
Astrophysics Research	IMP	Dan Evans	Paul Hertz (PD)									HQ
			Mark Sistilli	911542	Balloon Projects	Debbie Fairbrother	IMP	BAR	N/A	CPMC	Note (1)	GSFC (WFF)
			Jeff Hayes	399131	Cosmic Ray Energetics and Mass (CREAM)	Linda Thompson	E	FSGS	N/A	Astrophysics Div. DPMP	Note (1)	GSFC (WFF)
JWST (Program)	IMP	Ray Taylor	Eric Smith (PD)									HQ
			Eric Smith (PD)	411672	James Webb Space Telescope	William Ochs	C	FSGS	CAT1	APMC	Note (1)	GSFC

Note (1): Independent Review column blank pending review of its relevance.





# SMD - Heliophysics

## October 2017

### (1 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM CaL	Governing PMC	Ind. Review Org.	Managing Center
<b>Explorer Helio Program</b>	<b>IMP</b>	<b>Nick Chrysotimos</b>	<b>Peg Luce</b>									<b>GSFC</b>
			Jeff Hayes	649056	Interface Region Imaging spectrometer (IRIS)	Rich Bums	E-ext	FSGS	CAT3	DPMC	Note (1)	GSFC
			Jeff Hayes	576706	Interstellar Boundary Explorer (IBEX)	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	953004	Two Wide-angle Imaging Neutral-atom Spectrometers (TWINS)	Rich Bums	E-ext	FSGS	CAT3	DPMC	Note (1)	GSFC
			Jeff Hayes	956269	Aeronomy of Ice in the Mesosphere (AIM)	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	960804	Time History of Events & Macroscale Interactions (THEMIS)	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	667339	RHESSI	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			William Stabnow	496787	Global Scale Observations of Limb & Disk (GOLD)	Joyce King	D	FSGS	CAT3	DPMC	Note (1)	GSFC
			Willis Jenkins	581067	Ionospheric Connection (ICON) Explorer	Art Jacques	D	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	910989	Advanced Composition Explorer (ACE)	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
<b>Living with a Star</b>	<b>IMP</b>	<b>Nick Chrysotimos</b>	<b>Joe Smith</b>									<b>GSFC</b>
			Joe Smith	499999	LWS Space Environment Testbeds (SET)	Reginald Eason	D	FSGS	CAT3	DPMC	Note (1)	GSFC
			Jeff Hayes	605745	Van Allen Probes	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC (JHU/APL)
			Jeff Hayes	939252	Solar Dynamics Observatory (SDO)	Rich Bums	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Alan Zide	996805	Solar Orbiter Collaboration (SOC)	Haydee Maldonado	D	FSGS	CAT2	DPMC	Note (1)	GSFC
			Joe Smith	996805	Parker Solar Probe (PSP) - formerly Solar Probe Plus (SPP)	Andy Driesman	D	FSGS	CAT1	DPMC	Note (1)	GSFC

Note (1): Independent Review column blank pending review of its relevance.



# SMD - Heliophysics

## October 2017

### (2 of 2)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org.	Managing Center
Solar Terrestrial Probes	IMP	Nick Christotimos	Peg Luce									GSFC
			Jeff Hayes	511432	Hinode (Solar B)	Steve Elrod	E-ext	FSGS	CAT2	DPMC	Note (1)	MSFC
			Jeff Hayes	619595	Solar Terrestrial Relations Observatory (STEREO)	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	370544	TIMED	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	943396	Magnetospheric Multiscale (MMS)	Rich Burns	E	FSGS	CAT1	APMC	Note (1)	GSFC
Heliophysics Research	N/A		Peg Luce									HQ
			Jeff Hayes	789743	Solar & Heliospheric Observatory (SoHO)	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	925575	Voyager	Suzanne Dodd (TBD)	E-ext	FSGS	CAT1	DPMC	Note (1)	JPL
			Jeff Hayes	943305	GEOTAIL	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC
			Jeff Hayes	958044	WIND	Rich Burns	E-ext	FSGS	CAT2	DPMC	Note (1)	GSFC

Note (1): Independent Review column blank pending review of its relevance.



# SMD – Joint Agency Satellite

## October 2017

### (1 of 1)

Oct '17  
V4

Program Title	Phase	Program Manager	Program Executive	Project SAP	Project Title	Project Manager	Phase	Product Line	MdM Cat.	Governing PMC	Ind. Review Org	Managing Center
Reimbursable Projects Prog.	MP	Thomas McCarthy	Cathy Lapenta									GSFC
			Quang-Viet Nguyen	828792	Jason-3 (Reimbursable)	Jeff Gramling	E	FSGS	CAT2	DPMC	Note (1)	JPL
			Quang-Viet Nguyen	340917	MetOp (Reimbursable)	Karen Halterman	D/E	FSGS	N/A	CMC	Note (1)	GSFC
GOES R Series Program	MP	Michael Stringer, Acting (NOAA)	Cathy Lapenta							NOAA / NASA		GSFC
			Cathy Lapenta	506706	GOES-S (Reimbursable)	Pam Sullivan	D	FSGS	CAT1	NOAA / NASA	Note (1)	GSFC
			Cathy Lapenta	506706	GOES-T (Reimbursable)	Pam Sullivan	C	FSGS	CAT1	NOAA / NASA	Note (1)	GSFC
			Cathy Lapenta	506706	GOES-U (Reimbursable)	Pam Sullivan	C	FSGS	CAT1	NOAA / NASA	Note (1)	GSFC
Joint Polar Satellite Systems	MP	Greg Mandt (NOAA)	Jean Wolfe									GSFC
			Jean Wolfe	313229	JPSS-1	Brian Fafaul	D	FSGS	CAT1	APMC	Note (1)	GSFC
			Jean Wolfe	313229	JPSS-2	Brian Fafaul	B	FSGS	CAT1	APMC	Note (1)	GSFC
			Jean Wolfe	700974	JPSS-3	Brian Fafaul	B	FSGS	CAT1	APMC	Note (1)	GSFC
			Jean Wolfe	700974	JPSS-4	Brian Fafaul	B	FSGS	CAT1	APMC	Note (1)	GSFC
			Jean Wolfe	313229	JPSS Ground	Daniel Devito	D	FSGS	CAT1	APMC	Note (1)	GSFC

Note (1): Independent Review column blank pending review of its relevance.



# Backup Material



# Category Determination Space Flight Projects

## 2.1.4 NASA Projects

2.1.4.1 As with programs, projects vary in scope and complexity and thus require varying levels of management requirements and Agency attention and oversight. Consequently, project categorization defines Agency expectations of project managers by determining both the oversight council and the specific approval requirements. Projects are Category 1, 2, or 3 and shall be assigned to a category based initially on: (1) the project life-cycle cost (LCC) estimate, the inclusion of significant radioactive material, and whether or not the system being developed is for human space flight; and (2) the priority level, which is related to the importance of the activity to NASA, the extent of international participation (or joint effort with other government agencies), the degree of uncertainty surrounding the application of new or untested technologies, and spacecraft/payload development risk classification. (See NPR 8705.4, Risk Classification for NASA Payloads.) Guidelines for determining project categorization are shown in Table 2-1, but categorization may be changed based on recommendations by the Mission Directorate Associate Administrator (MDAA) that consider additional risk factors facing the project. The NASA Associate Administrator (AA) approves the final project categorization. The Office of the Chief Engineer (OCE) is responsible for the official listing of NASA programs and projects. For purposes of project categorization, the project life-cycle cost estimate includes phases A through F and all Work Breakdown Structure (WBS) Level 2 elements and is measured in real-year (nominal) dollars.

Nuclear safety launch approval is required by the Administrator or Executive Office of the President when significant radioactive materials are included on board the spacecraft and/or launch vehicle. (Levels are defined in NPR 8715.3, NASA General Safety Program Requirements.) This data is maintained by the Office of Chief Financial Officer in a database called the Meta-Data Manager (MDM). This database is the basis for the Agency's work breakdown and forms the structure for program and project status reporting across all Mission Directorates and Mission Support Offices.

Priority Level	LCC < \$250M	\$250M ≤ LCC ≤ \$1B	LCC > \$1B, significant radioactive material, or human space flight
High	Category 2	Category 2	Category 1
Medium	Category 3	Category 2	Category 1
Low	Category 3	Category 2	Category 1



## ***Governing PMC Determination Space Flight Programs & Projects***

### **2.3 Program and Project Oversight and Approval**

2.3.1 Each program and project shall have a Decision Authority, the Agency's responsible individual who determines whether and how the program or project proceeds through the life cycle and the key program or project cost, schedule, and content parameters that govern the remaining life-cycle activities. For programs and Category 1 projects, the Decision Authority is the NASA AA. The NASA AA may delegate this authority to the MDAA for Category 1 projects. For Category 2 and 3 projects, the Decision Authority is the MDAA. The MDAA may delegate some of their Programmatic Authority to appropriate Mission Directorate staff or to Center Directors. Decision authority may be delegated to a Center Director for determining whether Category 2 and 3 projects may proceed through KDPs into the next phase of the life cycle. However, the MDAA will retain authority for all program-level requirements, funding limits, launch dates, and any external commitments. All delegations are documented and approved in the applicable authority document (PCA or Program Plan) depending on which Decision Authority is delegating.

2.3.1.1 The NASA AA shall approve all Agency Baseline Commitments (ABCs) for programs requiring an ABC and projects with a life-cycle cost greater than \$250 million. The NASA Administrator's agreement is required for the ABCs for all programs and projects with a life-cycle cost greater than \$1 billion and all Category 1 projects. (See paragraph 2.4.1.5 for more information on ABCs.)

2.3.2 To ensure the appropriate level of management oversight, NASA has established two levels of PMCs—the Agency PMC (APMC) and Mission Directorate PMCs (MDPMCs). The PMCs have the responsibility for periodically evaluating the technical, safety, and programmatic performance (including cost, schedule, risk, and risk mitigation) and content of a program or project under their purview. These evaluations focus on whether the program or project is meeting its commitments to the Agency. Each program and project shall have a governing PMC. For all programs and Category 1 projects, the governing PMC is the APMC; for Category 2 and 3 projects, the governing PMC is the MDPMC. The PMC function may be delegated by the Decision Authority to the Center Management Council (CMC) in the event the Decision Authority is delegated to the Center.

# Independent Assessment (IA) Manifest Agency Program Management Council (APMC) Decision Memorandum

## Summary:

The Independent Assessment (IA) Manifest is presented to the APMC on an annual basis and approved by the NASA Associate Administrator/Chair. The purpose of the IA Manifest is to provide a plan of project and program independent reviews for the upcoming fiscal year, as set forth by Agency Project Management Policy Requirements in NPR 7120.5 and NPR 7120.8.

Per the NASA Associate Administrator October 26, 2015 "Independent Assessment of NASA Programs and Projects" Memorandum and as detailed in the May 2016 "NASA Independent Assessment Principles and Approach" White Paper, accountability for establishing independent assessment of projects and programs was transitioned to the Mission Directorates with support from the Center Directors. Hence, upon coordination with the applicable Center Directors as performed annually in preparation for the APMC, the Mission Directorates develop the IA Manifest for their respective projects and programs.

The Mission Directorates' manifests are approved annually at the APMC. Mission Directorates report on the status of their yearly manifest as part of their periodic Baseline Performance Review (BPR) reports to include any potential changes over the year.

The FY18 Independent Assessment (IA) Manifest by each Mission Directorate was presented to the APMC for approval by the NASA Associate Administrator/Chair on October 11, 2017. In addition, the approach for providing status of the IA manifest during the year of execution by the Mission Directorates during their periodic BPR reports was presented for approval.

Attachments: Mission Directorate IA approved Manifests

## Decision:

The NASA Associate Administrator/Chair approves the FY18 IA Manifest, and approach for BPR status reporting.

## Approval:

 (b) (6)  
\_\_\_\_\_  
Associate Administrator/Chair

10/11/17  
\_\_\_\_\_  
Date

# ARMD Independent Assessment Manifest

## FY2018

### 1) Low Boom Flight Demonstrator (LFBD)

- **Utilize Standing Independent Review Board (IRB)**
  - IA on entire scope of project including technical, cost, schedule and risk.
  - Support from Project Review Team (PRT)
- **Next Review late summer/fall 2018 to support KDP-C**

### Planned FY19 and FY20 Reviews

- **FY19**            **CDR - 4<sup>th</sup> Quarter FY19**
- **FY20**            **FRR - 4<sup>th</sup> Quarter FY20**





# FY 18 HEOMD Reviews

Program/Project	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Space Communications and Navigation (SCaN)	Last PIR was conducted in FY16											
SGSS		APMC ▲						KDP-D ▲				SAT* ▲
International Space Station (ISS)	Last PIR was conducted in FY 2013											
Launch Services Program (LSP)	Last PIR was conducted in FY 2014											
Exploration Systems Development (ESD) Division Cross Program Integration*												
ORION/Multi-Purpose Crew Vehicle (MPCV)		▲ EM-1 Schedule Change Notification to APMC										Orion EM-2 Delta CDR (UIR) ▲
Space Launch System (SLS)		▲ KDP-C Replan										
Ground Systems Development and Operations (GSDO)												
Power and Propulsion Element (PPE)												▲ SRR**
Commercial Crew Program (CCP)		▲ AR										
SLPSRA/Human Research Program (HRP)												▲ PSR
Rocket Propulsion Test (RPT)		▲ MSC										

\*Note: Site Acceptance Test - GD Factory Testing

\*\*PPE dates for FY 18-20 are notional for planning purposes



# Planned FY19-20 HEOMD Reviews

Human Exploration and Operations Mission Directorate (HEOMD) Program/Project	FY19				FY20			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Space Communications and Navigation (SCaN)				PIR ▲				
SGSS			Initial ORR ▲					
International Space Station (ISS)	Last PIR was conducted in FY 2013							
Launch Services Program (LSP)							▲ PIR*	
Exploration Systems Development (ESD) Division Cross Program Integration**		▲ EM-1 IR (U/R) ▲ EM-2 B1B Int Sync (U/R)					▲ EM-2 B1B** Integration	
ORION/Multi-Purpose Crew Vehicle (MPCV)								
Space Launch System (SLS)						▲ SLS B1B Delta		
Ground Systems Development & Operations (GSDO)		▲ EM-2 B1B Delta CDR (U/R)					CDR (U/R)	
Power and Propulsion Element (PPE)		▲ PDR			▲ CDR			
Commercial Crew Program (CCP)	▲ AR				▲ AR***			
SLPSRA/Human Research Program (HRP)								▲ PSR
Rocket Propulsion Test (RPT)	▲ MSC				▲ MSC			

\*Note: Per the APMC Decision Agreement dated September 17, 2014, the 2019 milestone for LSP will be a "PIR Assessment" by the HEOMD AA as to whether or not a PIR is required, or if it can be delayed another 2 years. The 3rd quarter 2019 milestone is also subject to change depending on LSP's manifest/launch schedule for that year.

\*\*Note: The EM-2/block 1B plan are tentative as they have yet to be formally vetted through ESD, HEOMD, and the Agency

\*\*\*Note: Depending if CCP is operational



## STMD IA Review Manifest

<b>FY18 Reviews</b>	<b>Date</b>
Restore-L PDR/PSR	Nov 2017
Restore-L KDP-C	Mar 2018
LCRD SIR	July 2018
LCRD KDP-D	Sept 2018
<b>FY19 Reviews</b>	<b>Date</b>
Restore-L CDR	Nov 2018
LCRD ORR	Mar 2019
LCRD KDP-E	May 2019
Restore-L SIR	Aug 2019
Restore-L KDP-D	Sept 2019
<b>FY20 Reviews</b>	<b>Date</b>
Restore-L ORR	Mar 2020
Restore-L KDP-E	Dec 2020

SMD SRB Site Reviews

Updated: 10/5/17

Science Mission Directorate (SMD)			FY17				FY18				FY19				FY20				FY21				FY22				
Program/Project	Cat	Center	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<b>Earth Systematic Missions Program (ESMP)</b>		GSFC																									
ICESat-2	1	GSFC			SIR			PIR		ORR		LRD															
Landsat 9	1	GSFC			PDR				CDR						SIR/PER			ORR/PSR		LRD							
Surface Water Ocean Technology (SWOT)	2	JPL							CDR						SIR							PSR		ORR		LRD	
GRACE Follow-On	2	JPL							PSR				ORR/MRR/LRD														
NISAR	2	JPL											CDR				SIR									ORR/MRR/LRD	
Plankton, Clouds, and ocean Ecosystem (PACE)	2	GSFC			SRR/MOR												CDR								SIR		
RBI	2	LaRC							CDR			PER															
TSIS-1	3	GSFC			PER				PSR		ORR		LRD														
Sentinel-6	2	JPL			PDR					CDR					SIR/PSR											ORR	
CLARREO-PF	3	LaRC							SRR																PER		LRD
Earth System Science Pathfinder (ESSP)		LaRC																									
GEDI	3	GSFC			CDR																						
ECOSTRESS	3	JPL							TRR																		
MAIA	3	JPL							SRR/IDR																		
TROPICS	3	LaRC																									
OCO-3	3	JPL							ETRR																		
TEMPO	3	LaRC																									
GeoCarb	3	LaRC							SRR/MOR																		
<b>Discovery Program</b>		MSFC																									
InSight	2	JPL							SIR																		
Strobo	3	GSFC																									
Psyche	2	JPL																									
Lucy	2	GSFC																									
<b>New Frontiers Program</b>		MSFC																									
<b>Solar System Exploration Program (SSE)</b>		MSFC																									
Europa Clipper	1	JPL																									
DART	2	ARL																									
JUICE UVS	3																										
JUICE PEP-HI	3																										
JUICE RIME	3	JPL																									
<b>Radioisotope Power Systems (RPS) Program</b>		GRC																									
<b>Mars Exploration Program (MEP)</b>		JPL																									
MOMA-MS	3	GSFC																									
Mars 2020	1	JPL																									

### SMD SRB Site Reviews

Updated: 10/5/17

Science Mission Directorate (SMD)			FY17				FY18				FY19				FY20				FY21				FY22			
Program/Project	Cal	Center	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>HelioPhysics</b>																										
Explorers (Helio)		GSFC								PIR ▲																
GOLD	3	GSFC	▲ PSR							ORR ▲	▲ LRD	▲ PLAR														
ICON	2	GSFC		▲ PER	▲ ORR	▲ PSR				▲ PLAR																
Solar Terrestrial Probes (STP)		GSFC								PIR ▲																
Living With a Star (LWS)		GSFC								PIR ▲																
Parker Solar Probe	1	GSFC				PER ▲				PSR ▲	▲ ORR		LRR/LRD													
Solar Orbiter Collaboration (SOC)	2		▲ PER	PSR ▲									FRR/LRR/LRD ▲													
<b>Autophysics</b>																										
Explorers (Astro)		GSFC								PIR ▲																
NICER	3		▲		LRD ▲	▲ PLAR																				
XARM	3				PDR/CDR ▲																					
IXPE	3	MSFC			SRR ▲					PDR ▲			CDR ▲			SIR ▲	ORR ▲		FRR/LRR/LRD ▲							
TESS	2	GSFC	MOR ▲		MOR ▲	SIR ▲	PER ▲			ORR/RFR/LRR																
Exoplanet Exploration								PIR ▲																		
WFIRST (Under Review)	1	GSFC								SRR/MDR ▲									PDR ▲		PIR ▲					CDR ▲
Cosmic Origins (COR)		SMD																								
Physics of the Cosmos (PCOS)		GSFC																								
James Webb Space Telescope (JWST)		GSFC		MOR ▲						SIR ▲			PSR ▲	FRR ▲	ORR/PLAR ▲											
Joint Polar Satellite System (JPSS)		GSFC																								
JPSS-1	1	GSFC				ORR ▲	▲			FRR/LRR/LRD																
JPSS-2	1	GSFC						MCDR ▲			MCDR ▲	SIR ▲							PSR ▲		ORR ▲		▲		FRR/LRR/LRD	
JPSS-3	1	GSFC			SRR ▲					PDR ▲												SIR ▲				
JPSS-4	1	GSFC			SRR ▲					PDR ▲																
<b>JASD</b>																										
GOES-R Series Program																										
GOES-R	1	GSFC	▲	FRR/LR	▲	PLAR																				
GOES-S	1	GSFC			PSR/ORR/MRR ▲	▲				▲	FRR/LRR/LRD	▲	PLAR													
GOES-T	1	GSFC				SIR ▲						PSR ▲							ORR/TRR ▲		LRR/LRD		PLAR ▲			
GOES-U	1	GSFC																		SIR ▲		PSR ▲				
Reimbursables Projects Program		GSFC																								

### SMD SRB Site Reviews

Updated: 10/5/17

Science Mission Directorate (SMD)			FY2017			FY2018											
Program/Project	Cat	Center	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
<b>Earth Systematic Missions Program (ESMP)</b>		GSFC								PIR ▲							
ICESat-2	1	GSFC	SIR ▲										ORR ▲				LRD ▲
Landsat 9	1	GSFC			PDR ▲					CDR ▲							
Surface Water Ocean Technology (SWOT)	2	JPL							CDR ▲								
GRACE Follow-On	2	JPL				PSR ▲		ORR ▲		MRR ▲	LRD						
NISAR	2	JPL															
Plankton, Clouds, and ocean Ecosystem (PACE)	2	GSFC															
RBI	2	LaRC			CDR ▲								PER ▲				
TSIS-1	3	GSFC	PSR ▲		ORR ▲	LRD ▲											
Sentinel-6	2	JPL				CDR ▲											
CLARREO-PF	3	LaRC	SRR ▲									ΔSRR ▲					
<b>Earth System Science Pathfinder (ESSP)</b>		LaRC									PIR ▲						
GEDI	3	GSFC									PER ▲					ORR ▲	
ECOSTRESS	3	JPL								PSR (TBD) ▲		ORR (TBD) ▲					
MAIA	3	JPL							PDR (TBD) ▲							CDR (TBD) ▲	
Tropics	3	LaRC					PDR ▲				CDR ▲						
OCO-3	3	JPL							Storage Review ▲			ORR/MRR/Preship (TBD) ▲					
TEMPO	3	LaRC							PSR ▲								
GeoCarb	3	LaRC	SRR/MDR ▲						PDR ▲								CDR ▲
<b>Discovery Program</b>		MSFC															
InSight	2	JPL							ORR ▲	PSR ▲		FRR ▲	LRD		PLAR ▲		
Strofia	3	GSFC															
Psyche	2	JPL															
Lucy	2	GSFC							SDR/SRR ▲								PDR ▲
<b>New Frontiers Program</b>		MSFC															
<b>Solar System Exploration Program (SSE)</b>		MSFC															
Europa Clipper	1	JPL															PDR ▲
DART	2	APL								PDR ▲							
JUICE UVS	3	Sw RI			CDR ▲											PER ▲	
JUICE PEP-Hi	3	APL									CDR ▲						
JUICE RIME	3	JPL						CDR ▲									
<b>Radioisotope Power Systems (RPS) Program</b>		GRC			PIR ▲												
<b>Mars Exploration Program (MEP)</b>		JPL									PIR ▲						
MOMA MS	3	GSFC	PER ▲						PSR ▲								
Mars 2020	1	JPL								SIR ▲							

### SMD SRB Site Reviews

Updated: 10/5/17

Science Mission Directorate (SMD)			FY2017			FY2018											
Program/Project	Cat	Center	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
<b>Heliophysics</b>																	
<b>Explorers (Helio)</b>		GSFC												PIR ▲			
GOLD	3	GSFC					ORR ▲		▲ LRD			▲ PLAR					
ICON	2	GSFC	▲ PSR			FRR ▲	▲ LRD	▲ PLAR									
<b>Solar Terrestrial Probes (STP)</b>		GSFC												PIR ▲			
<b>Living With a Star (LWS)</b>		GSFC												PIR ▲			
Parker Solar Probe	1	GSFC			PER ▲					PSR ▲		ORR ▲		LRR/LRD ▲			
Solar Orbiter Collaboration (SOC)	2	GSFC															
<b>Astrophysics</b>																	
<b>Explorers (Astro)</b>		GSFC												PIR ▲			
NICER	3	GSFC	▲ PLAR														
XARM	3	GSFC				PDR/CDR ▲											
IXPE	3				SRR ▲									PDR ▲			
TESS	2	GSFC	▲ SIR ▲ PER			FOR ▲			ORR ▲		▲ FRR/LRR						
<b>Exoplanet Exploration</b>																	
WFIRST	1	GSFC												SRR/MDR ▲			
<b>Cosmic Origins (COR)</b>		SMD															
<b>Physics of the Cosmos (PCOS)</b>		GSFC															
<b>James Webb Space Telescope (JWST)</b>		GSFC										SIR ▲					
<b>JASD</b>																	
<b>Joint Polar Satellite System (JPSS)</b>		GSFC															
JPSS-1	1	GSFC		ORR ▲			▲▲ FRR/LRR/LRD										
JPSS-2	1	GSFC					PDR ▲										
JPSS-3	1	GSFC								PDR ▲							
JPSS-4	1	GSFC								PDR ▲							
<b>GOES-R Series Program</b>																	
GOES-S	1	GSFC					ORR ▲			▲▲ FRR/LRR/LRD							
GOES-T	1	GSFC		SIR ▲													
GOES-U	1	GSFC															
<b>Reimbursables Projects Program</b>		GSFC															

## Agenda

**Agency Program Management Council  
October 11, 2017 1:00pm – 3:00pm ET  
NASA Headquarters, Room 8Q40 & ViTS**

- |      |  |                            |
|------|--|----------------------------|
| 1:00 | Roll Call and General Admin                  | PMC Exec/Stephanie Sowards |
| 1:05 | Opening Remarks                              | AA/Robert Lightfoot        |
| 1:10 | Agency Mission Program & Project List (AMPL) | Ellen Stigberg             |
| 2:00 | Independent Assessment (IA) Manifest         | James Ortiz                |
|      | ➤ SMD Manifest                               | Greg Robinson              |
|      | ➤ HEOMD Manifest                             | Toni Mumford               |
|      | ➤ STMD Manifest                              | Prasun Desai               |
|      | ➤ ARMD Manifest                              | Tony Springer              |
| 2:50 | Review Actions                               | PMC Exec/Stephanie Sowards |
| 2:55 | Closing remarks and summary                  | AA/Robert Lightfoot        |
| 3:00 | Adjourn                                      |                            |



**PROGRAM MANAGEMENT COUNCIL**  
**NASA Headquarters - 8Q40/VITS**  
**11-Oct-2017**  
**MEMBERS**

Position	Name	Signature (b) (6)
Associate Administrator	Robert Lightfoot, Jr	(b) (6)
Deputy Associate Administrator	Krista Paquin, Acting	
Chief Financial Officer	Andrew Hunter, Acting	
Chief Information Officer	Renee Wynn	
Chief Engineer	Ralph Roe	
Deputy Chief Engineer	Dawn Schaible	
Chief Health & Medical Officer	James (J.D.) Polk <i>Mark Weyland</i>	
Chief Safety & Mission Assurance	Terry Wilcutt	
Chief Scientist	Gale Allen, Acting	
Chief Technologist	Douglas Terrier, Acting	
General Counsel	Jay Steptoe (for)	
Associate Administrator, ARMD	Tony Springer (for)	
Associate Administrator, HEOMD	Toni Mumford (for)	
Associate Administrator, SMD	Thomas Zurbuchen	
Associate Administrator, STMD	Prasun Desai (for)	
Associate Administrator, Mission Support	Dan Tenney, Acting	
ARC Center Director	Tina Panontin (for)	
AFRC Center Director	David McBride	
GRC Center Director	Janet Kavandi	
Deputy GRC Center Director	Marla Perez-Davis	
GSFC Center Director	George Morrow (for)	
JPL Center Director	Chris Jones (for)	
JSC Center Director	Vanessa Wyche/Melanie Saunders (for)	
KSC Center Director	Sandeep Wilkhu (for)	
LaRC Center Director	David Bowles	
MSFC Center Director	Jody Singer (for)	
SSC Center Director	Randy Galloway (for)	
APMC Executive	Stephanie Sowards	

**PROGRAM MANAGEMENT COUNCIL  
NASA Headquarters - 8Q40/VITS  
11-Oct-2017**

**Other Invitees and Presenters**

Position	Name	Signature
Administrator	Robert Lightfoot, Acting	(b) (6)
Deputy Administrator	Krista Paquin, Acting	
Associate Administrator, Strategy and Plans	Tom Cremins	
Director, OCFO/SID	Cristina Guidi	
Associate Administrator, Communications	Jen Rae Wang	
Associate Administrator, OLIA	Rebecca Lee, Acting	
Associate Administrator, Small Business	Glenn Delgado	
Assistant Administrator, Human Capital	Bob Gibbs	
Assistant Administrator, Procurement	Bill McNally	
Assistant Administrator, Strategic Infrastructure	Calvin Williams	
Director, NASA Management Office	Marcus Watkins	
Labor Management Liaison	Ben Robbins (for)	
OACS	Cheryl Robertson	
OSMA	Deirdre Healey	
Director, OACS	Dennis Boccippio	
APMPL Presenter OCE	Ellen Stigberg	
OSMA	Gerald Schumann	
SMD	Greg Robinson	
SMD <i>e</i>	Greg Robinson <i>e</i>	
Deputy Chief Safety & Mission Assurance	Hal Bell	
Office of the Associate Administrator	James Ortiz	
Presidential Appointments Team	Jeff Waksman	
OCE	Lee Edwards	
Office of the Administrator, Senior Advisor, Technical	Lisa Guerra	
HEOMD	Mark Geyer	
L KSC LXB	Peggy Masters	
OACS	Robert Hanley	
Presidential Appointments Team	Rodney Liesveld	
OACS MSC Executive	Sarah Murray	

