Planetary Science Division Update

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Outline

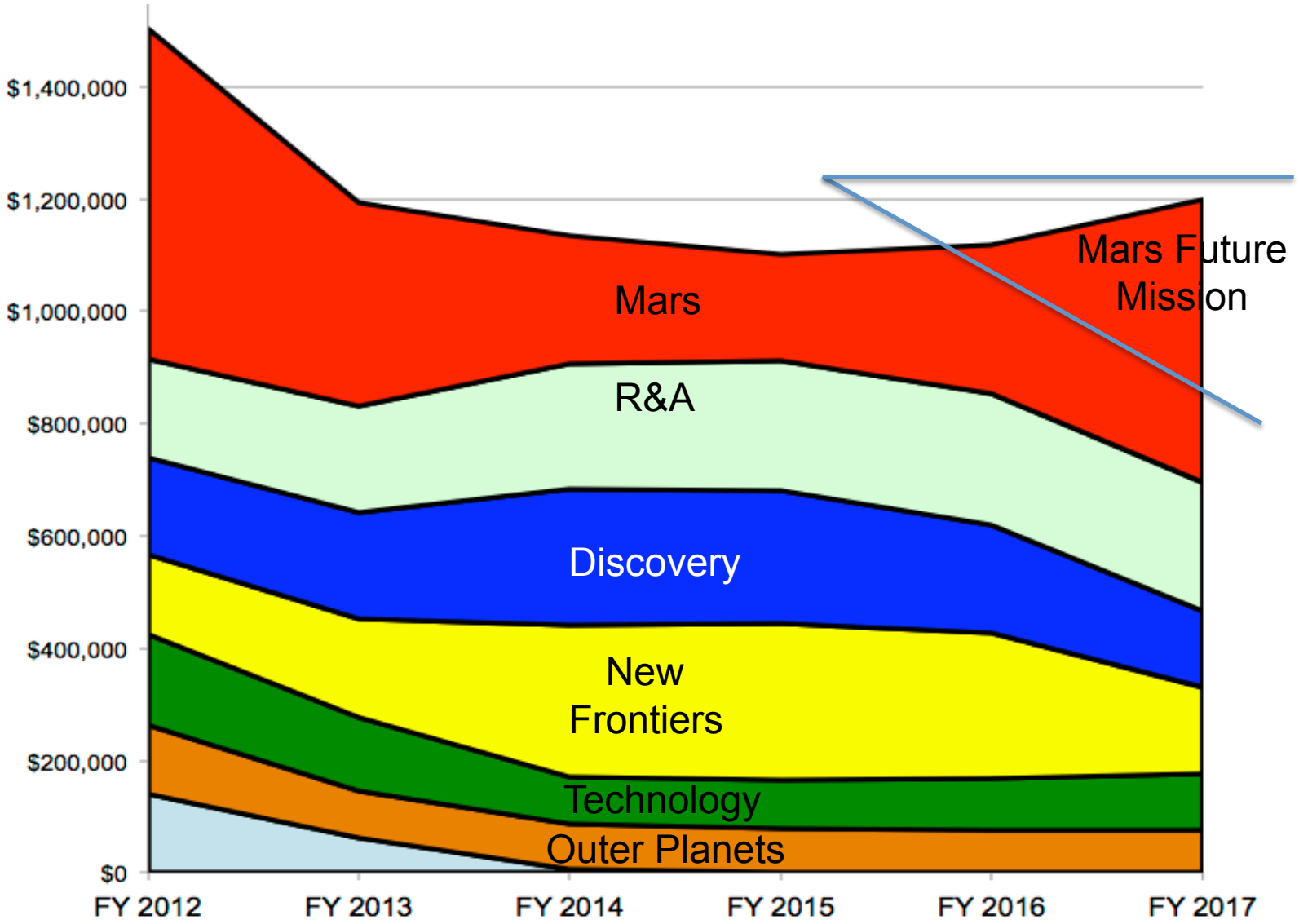
- Planetary Budget
- Mars 2020 mission
- R&A Management Principles

President's FY13 In-Guide Budget

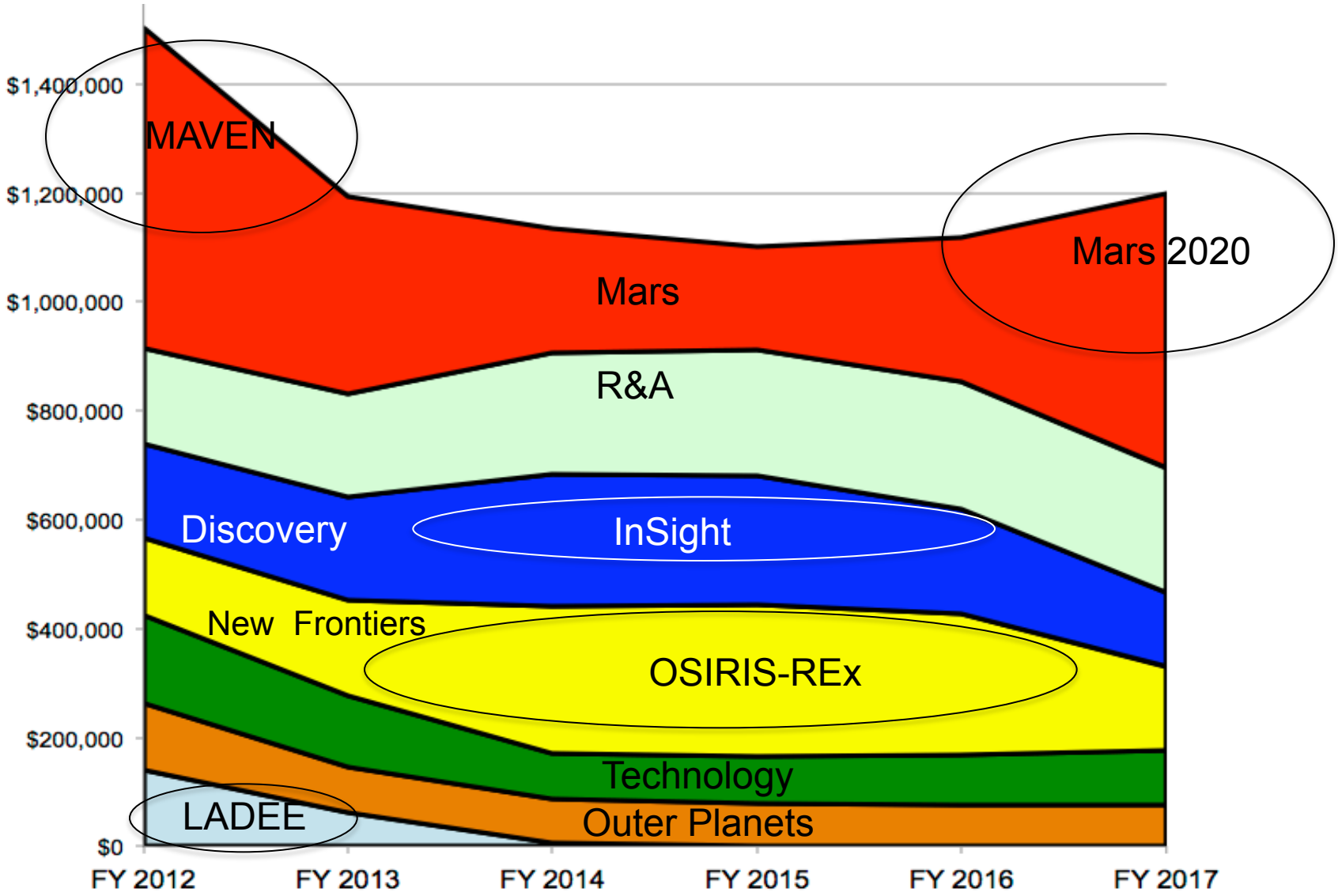
Planetary Science Division	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Planetary Research	$174,087	$188,546	$222,544	$233,377	$231,683	$230,339
Lunar Quest	$139,972	$61,469	$6,167	$0	$0	$0
Discovery	$172,637	$189,556	$242,162	$235,643	$193,771	$134,335
New Frontiers	$143,749	$174,967	$269,802	$279,598	$259,912	$155,085
Mars Exploration	$587,041	$360,804	$227,722	$188,671	$266,885	$503,086
Technology	$161,899	$132,902	$84,557	$85,867	$90,915	$99,624
Outer Planets	$122,054	$84,041	$80,782	$78,796	$76,238	$76,314
	$1,501,439	**$1,192,285**	**$1,133,736**	**$1,101,952**	**$1,119,404**	**$1,198,783**

- For FY13 Congress has passed a "Continuing Resolution"
- Under the CR PSD's FY13 budget is $1.19B
  - 21% decrease from FY12 level

President's FY13 In-Guide Budget



President's FY13 Budget - Missions

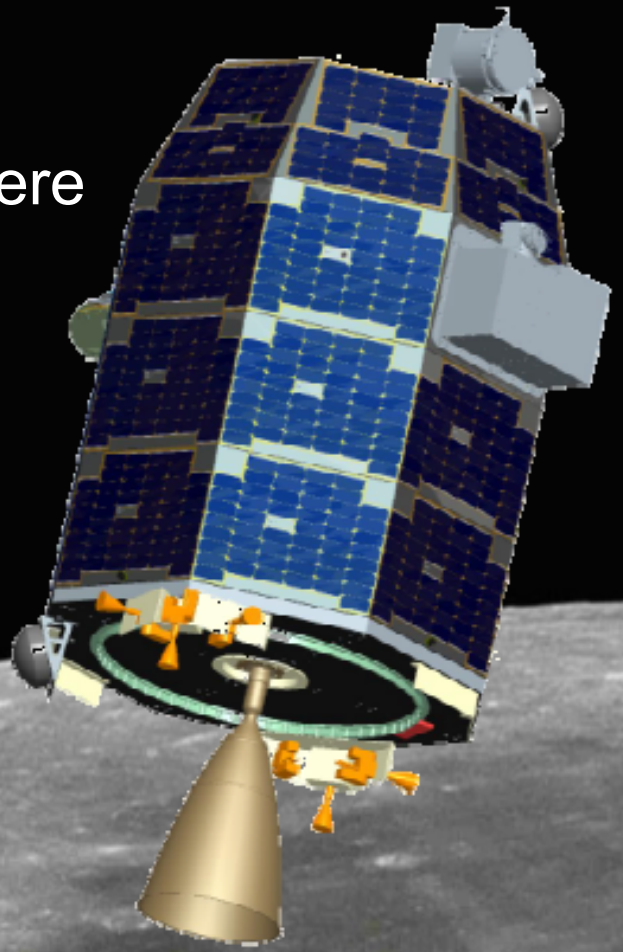


Lunar Atmosphere and Dust Environment Explorer

Objective:
- Measure the lofted Lunar dust
- Composition of the thin Lunar atmosphere

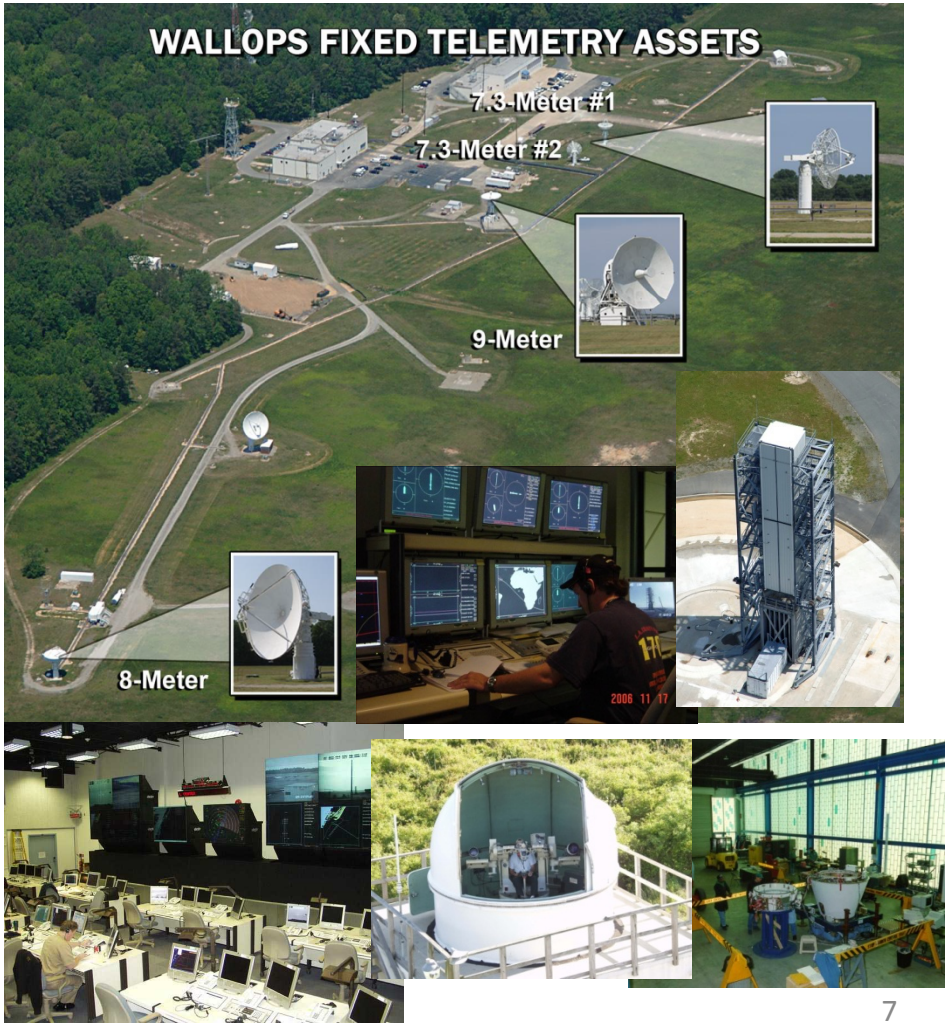
Instruments:
- Science: NMS, UVS, and LDEX
- Technology: Laser Communications

Launch: November 2013 (Manifested –August)
Wallops Flight Facility



WFF preparing to launch ● 1st Deep Space/Lunar mission from WFF ●Ames' 1st in-house built spacecraft ● 1st Minotaur IV/V (Peace Keeper family) launch from WFF ●1st Minotaur V anywhere ●1st for WFF to provide the Launch Vehicle service- coordinator role ● Guest Ops planning getting underway with kick off meeting Nov. 19 at WFF.

LADEE Pathfinder activities - View towards the south after gantry roll-away on newly enlarged Pad 0B w/ Min V mockup.



Mars Atmosphere and Volatile EvolutioN (MAVEN) Mission

Launch November, 2013 Cape Canaveral

- Mars orbit insertion in Sept. 2014

Science:

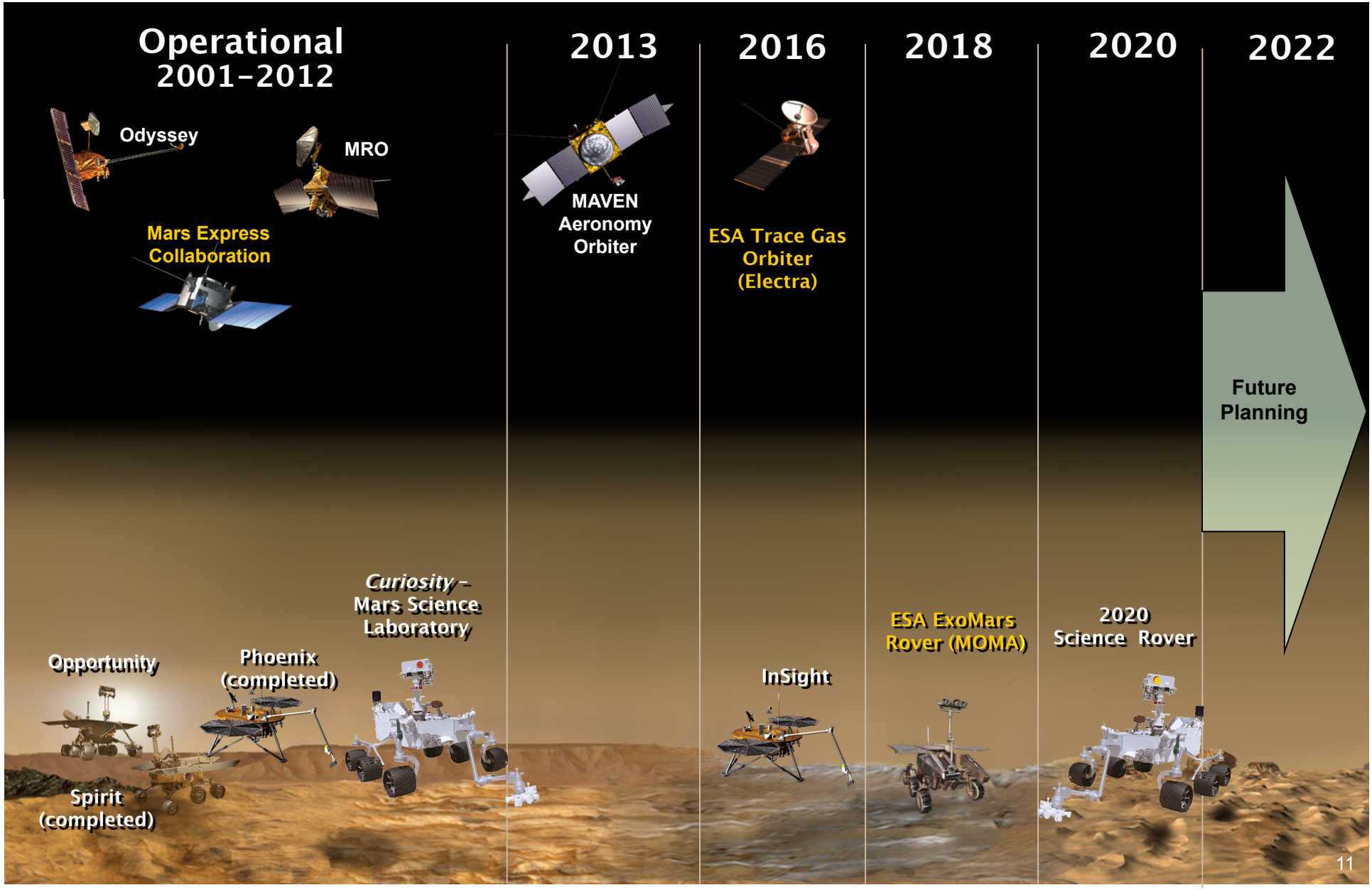
- Determine the structure and composition of the Martian upper atmosphere today
- Determine rates of loss of gas to space today
- Measure properties and processes that will allow us to determine the integrated loss to space through time

Mars Future Missions

Timeline of Key Events in 2013

- February – President's FY13 budget contains an unspecified mission in the Mars Exploration program with significant funding starting in FY16
- March – A Mars Program Planning Group (MPPG) was chartered
  - Representative from SMD, HEOMD, and Space Technology
- Late March – LPI community workshop
- August/Sept. – MPPG presentations to NASA and NAS-CAPS
- September - Mars Program Planning Group (MPPG) final report was delivered to NASA
  - Integrated with other Agency factors to create a Mars future mission Plan
- Sept – October - Mission formulation
- Nov-December – Internal presentations & final Administration approval
- December – Rollout of the Mars 2020 Rover at AGU; Call for SDT members
  - http://mepag.jpl.nasa.gov/Announcements/index.html

This Decade's Exploration of Mars



Mars Exploration Program- Next Steps

Key Components of the In-Guide Plan:

1. Support MAVEN and Mars extended missions through 5-year budget horizon
2. Provide Electra telecom relay and engineering support for ESA's 2016 Trace Gas Orbiter and Entry, Descent and Landing (EDL) Demonstration Module
3. Provide critical components to the Mars Organic Molecule Analyzer (MOMA) experiment plus engineering/telecom support for ESA's 2018 ExoMars rover
4. Initiate Science Rover mission for 2020 launch:
   - Leverage MSL design, residual hardware, and experienced team—reduces cost/cost risk
   - Build on MSL/Curiosity results by investigating a new site for possible bio-signature preservation in full geologic context
   - Expand EDL capability and accuracy (improves access to compelling landing sites)
   - Provide OCT/Space Technology Program and HEOMD opportunities to participate
   - Provide opportunities for international collaboration

Mars 2020 Rover Overview

- Scientific Intent of the 2020 Rover Mission

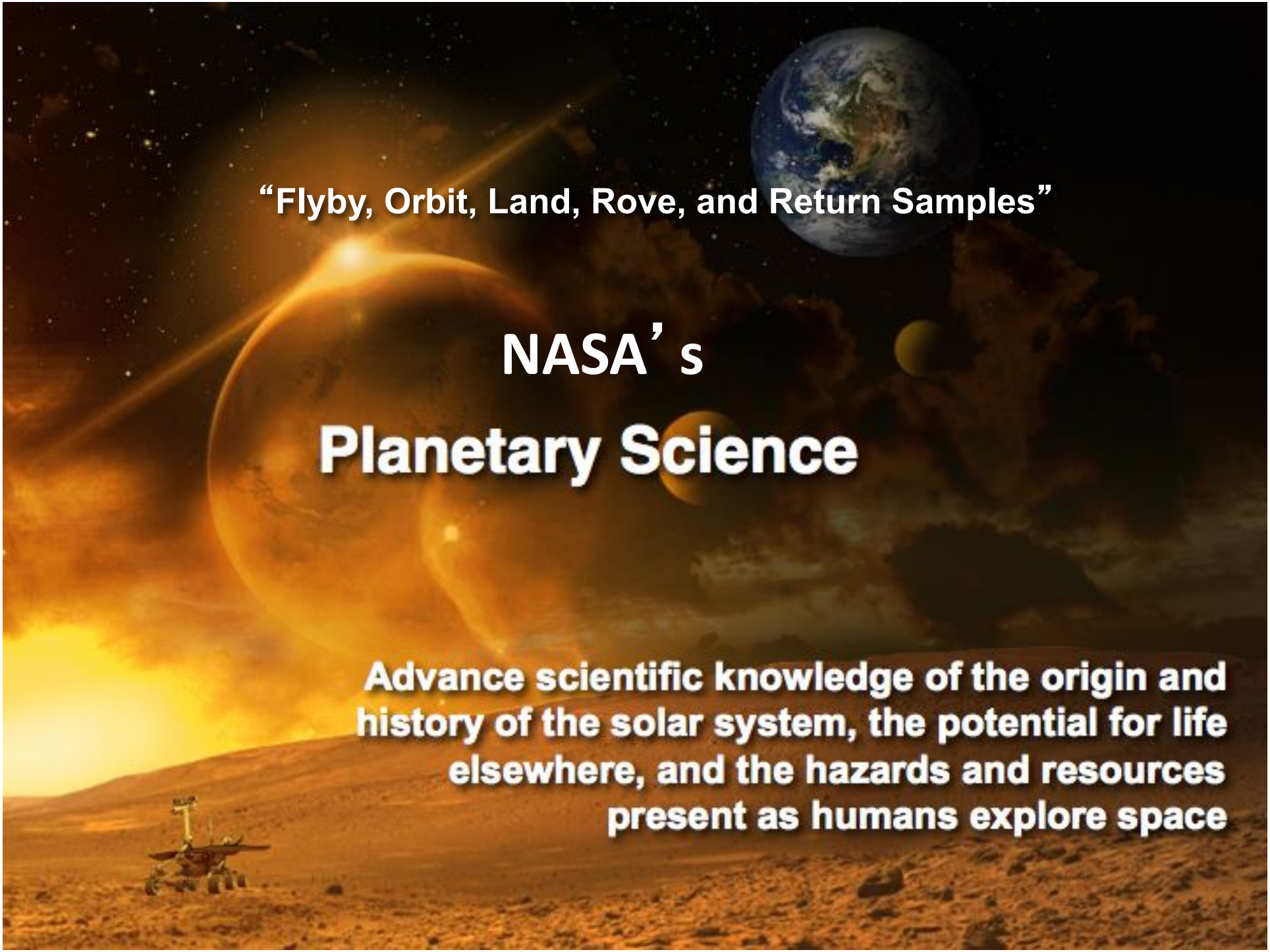
  Conduct mobile surface-based science at a site selected for its ability to preserve evidence of life, and prepare for the future return of samples per the NRC Planetary Decadal Survey

- Payload acquisition through an open, competitive process
  - Community-based Science Definition Team (SDT)
    - ✓ Open letter to the community for membership in SDT
    - Establish mission science objectives in priority order
    - Draft example payload/instrument suite as proof of concept
    - Identify opportunities for contributed Human Exploration and Operations Mission Directorate payloads and technology infusion and/or demonstrations
    - Propose threshold objectives/measurements
  - Announcement of Opportunity (AO) derived from SDT findings
    - Release in early summer 2013
    - Open to international contributions

Research and Analysis Program

PSD R&A Management Principles

- The PSD is following closely previous recommendations and findings of the Planetary Science Subcommittee (PSS)
- The following are the PSD R&A management principles:
  1. FY13 funding targets have been provided to all program officers (PO) for each of the PSD ROSES program elements. These targets will be posted on the NASA SARA website.
  2. All POs will meet current ongoing grants commitments before new selections can be made.
  3. Awards will be made and announced beginning one month after the review panels have met.
  4. Award announcements will be either: selected, not selected, or selectable.
  5. Proposals in the selectable category will be selected as funding becomes available throughout the fiscal year. This means that selection rates for a program will increase as additional selections are announced.


"Flyby, Orbit, Land, Rove, and Return Samples"
NASA's
Planetary Science
Advance scientific knowledge of the origin and history of the solar system, the potential for life elsewhere, and the hazards and resources present as humans explore space