"Flyby, Orbit, Land, Rove, and Return Samples"

NASA's Planetary Science

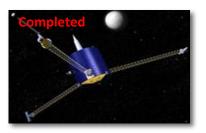
Advance scientific knowledge of the origin and history of the solar system, the potential for life elsewhere, and the hazards and resources present as humans explore space

Discovery Program

Mars evolution: Mars Pathfinder (1996-1997)



Lunar formation: Lunar Prospector (1998-1999)



NEO characteristics: NEAR (1996-1999)



Solar wind sampling: Genesis (2001-2004)



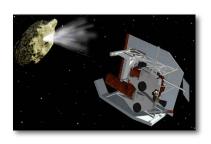
Comet diversity: CONTOUR



Nature of dust/coma: Stardust(1999-2006)



Comet internal structure: Deep Impact (2005-2011)



Mercury environment: MESSENGER (2004-2012)



Main-belt asteroids: Dawn (2007-2015)



Lunar Internal Structure GRAIL (2011-2012)



New Frontiers Program

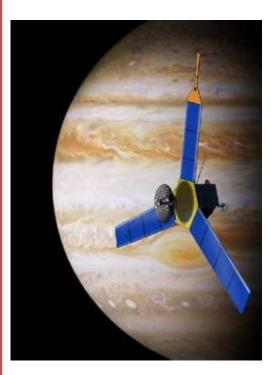
1st NF mission New Horizons:

Pluto-Kuiper Belt Mission



Launched January 2006 Arrives July 2015 2nd NF mission JUNO:

Jupiter Polar Orbiter Mission



August 2011 launch

3rd NF mission opportunity

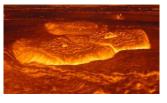
MoonRise South Pole-Aitken Basin Sample Return



OSIRIS-Rex Asteroid Sample Return



SAGE Venus In Situ Lander



CSRs received 1/28/2011

Down Select decision Summer 2011

Launch 2016

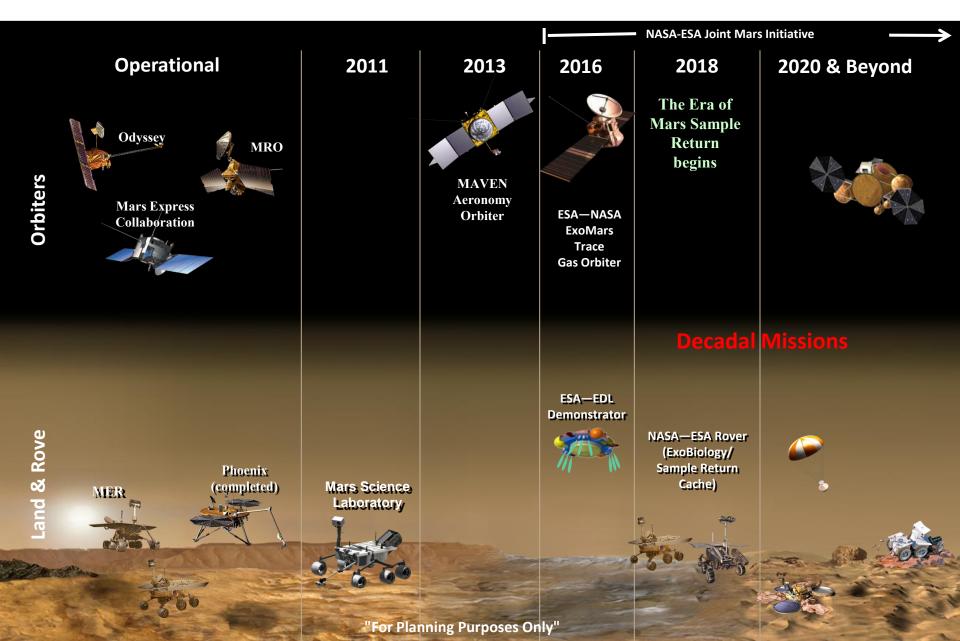
Cassini Mission Overview Four-Year Prime Tour, Equinox Mission, and Solstice Mission (Proposed), May 2004 - September 2017

	Fauino	Equinox Mission Solstice Missi						o n					
Year of Tour	Pri 1	2	Miss 3	4	5	6	7	8	9	10	11	12	13
	'04-'05	'05-'06	'06-'07	'07-'08	'08-'09	'09-'10	'10-'11	'11-'12	'12-'13	'13-'14	'14-'15	'15-'16	'16-'17
Orbits	11	15	22	27	39	21	16	19	25	12	12	20	56
Titan	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •
Huygens	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •	• •
	• •		• •	• •		• •	• •	•	• •	• •	•	•	• •
						• •	•	3.00	•	• •		• •	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			• •										Proximal Orbits
		MA				•							D
	1		• •										0) 0)
			• •						W				000
									Tall				
Enceladus	90	9		•	0.0	0 0	0.0	00				00	
					0	0 0	0	00	FY.			0	
								0.0					
Other Icy	Phoebe	Tethys		Rhea		Mimas	Rhea	Dione	Rhea		Dione	Dione	000
Satellites		# Hyperion		apetus		Rhea	Helene	Dione			Tethys	Epimetheus	0) 0)
(under 10,000 km)	COLUMN A	DioneTelesto		S Epimetheus		Helene		Tethys				∫G arc	3 3
	1 13	Rhea				● Dione JG arc		Methone Telesto					Sep 15,
THE STATE				7) daile		relesto					2017

Saturn (seen from Sun)



Planned Joint NASA-ESA Mars Initiative Portfolio Overview



Year of the Solar System Planetary Science Mission Events



2010

- * September 16 Lunar Reconnaissance Orbiter in PSD
- * November 4 EPOXI encounters Comet Hartley 2
- * November 19 Launch of O/OREOS
- * December 7- Venus Climate Orbiter (JAXA) arrives at Venus

* Completed

2011

- * February 14 Stardust NExT encounters comet Tempel 1
- * March 7 Planetary Science Decadal Survey released
- * March 17 MESSENGER orbit insertion at Mercury (8:45 pm Eastern)

July - Dawn orbit insertion at asteroid Vesta

August 5 - Juno launch to Jupiter

September 8 - GRAIL launch to the Moon

November 25 - MSL launch to Mars

2012

Mid 2012 -- Mars Opportunity Rover gets to Endeavour Crater Mid-year -- Dawn leaves Vesta starts on its journey to Ceres August - MSL lands on Mars

http://solarsystem.nasa.gov/2013decadal

Decadal Documents and Presentations

Town Hall Schedule

Livestream of LPSC presentations