

A banner for the Mars Exploration Program Analysis Group (MEPAG). The background is a dark blue, textured surface, possibly representing Mars, with a large, reddish-orange sphere of Mars on the right side. The text is white and bold.

Mars Exploration Program Analysis Group (MEPAG)

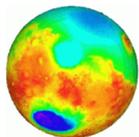
chartered by NASA HQ to assist in planning the scientific exploration of Mars

A wide-angle photograph of the Mars surface. The foreground is a dark, rocky, and dusty terrain. The horizon is a straight line. Above the horizon, the sky is dark with several bright stars visible.

MEPAG Meeting of Mar. 3-4, 2009

Jack Mustard, *MEPAG Chair*

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Developments in Mars Exploration Since September MEPAG Meeting



- Phoenix mission completed is extended mission with great success
- Mars Science Laboratory continues development but due to technical issues the launch has been slipped to 2011
- Mars Atmosphere and Volatile Evolution Mission (MAVEN) is beginning development as the 2013 Scout mission (B. Jakosky PI)
- 3rd Mars Science Laboratory Landing Site Workshop and site evaluation concluded with identification of four landed sites for continued study
- **Report on methane presence and variability published**
- Architecture planning activities in response to changes in the program



Next Decade Mars Exploration Program 2008

Launch Year

2009

2011

2013

2016

2018

2020

Completed Aeronomy
Scout Mission

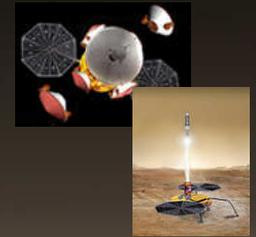


MAVEN

MSO



MSR Lander



or

Mars Science
Laboratory



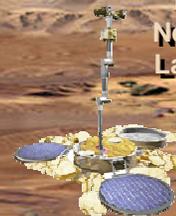
ESA
ExoMars
cooperation

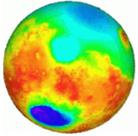


Mars
Science
Prospector



Mars
Network
Landers





Impacts of MSL Slip



- MSL Launch slip to 2011 needed to complete critical technologies and prepare the mission for success
 - Cost for moving launch to 2011 is ≈\$400 million
 - Delete MEP technology development funds for 2010-2014
 - **Reduce funding for** mission in 2016 launch window
 - Reduce support for EDL technical readiness and ongoing MEP missions
- **May** substantially alter the pace of Mars exploration and in particular development of the foundation for sample return



Mars Exploration Program Today

Launch Year

2011

2013

2016

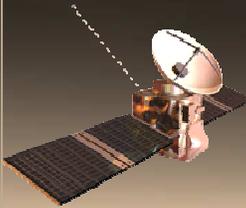
2018

2020

2022

2024

MAVEN



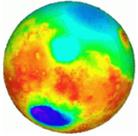
Prepare the optimum program
of Mars Exploration



Mars Science
Laboratory



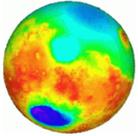
ExoMars
(ESA)



Responses to MSL Slip



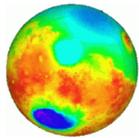
- PSS has asked that the Mars Exploration Program Analysis Group (MEPAG), and the Mars community more broadly, reevaluate the MEP architecture to identify the best options currently available, including MSR, to maximize the opportunities for achieving scientific goals of the highest priority.
- **MEP, through M. Meyer, has asked two groups to reconsider the Mars architecture in the following ways:**
 - The Mars Science Orbiter Science Definition Team (chaired by M. Smith) was asked to reconsider the priorities of that mission in light of the recent methane report and the reduced funding for a 2016 mission
 - The Mars Architecture Tiger Team (MATT, chaired by P. Christensen) was asked to reconsider the Mars architecture previously endorsed by MATT-2 in light of recent changes.
 - These groups were tasked to give interim reports to MEPAG at this meeting and to incorporate results of the discussions in final reports
- **MEP and SMD are in the midst of discussions on possible collaborations with ESA in Mars Exploration**



Goals for this Meeting



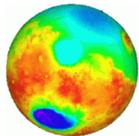
- Update the community on progress in the exploration of Mars including NASA, ESA, Japan, and Canada
- Update the community on outcomes of critical meetings in the past 6 months
- Develop inputs from the Mars community to the Planetary Science Decadal Survey now beginning
- Discussion and inputs to the science goals and mission objectives for the next decade of Mars exploration
- Initiate activities from MEPAG to develop positions and inputs to future MEP activities



MEPAG Agenda, Day 1



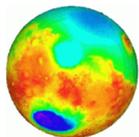
Start	Time	Agenda Item	
Note: Unless otherwise indicated, all time speakers should assume that 30-50% of their time allocation is for discussion.			
Day 1 – Tuesday March 3, 2009			
08:00 AM	00:15	Welcome; MEPAG Purpose, Scope, Expected Results	J. Mustard
08:15 AM	00:30	Mars Program Director's Comments	D. McCuistion
08:45 AM	00:30	Mars Exploration Program Update	F. Li
09:15 AM	00:20	Mars Science Status	M. Meyer
09:35 AM	00:20	European Space Agency Update	J. Vago
09:55 AM	00:15	Break	
10:10 AM	00:15	Canadian Space Agency Update	Alain Berinstain
10:25 AM	00:15	Japanese Aerospace Exploration Agency Update/MELOS	S. Sasaki/T. Satoh
10:40 AM	00:20	MSL Science Status (including landing site)	J. Grotzinger
11:00 AM	00:20	ExoMars Status	J. Vago
11:20 AM	00:20	Discussion	
11:40 AM	01:30	Lunch	
01:10 PM		MEPAG inputs to Decadal Survey	
01:10 PM	00:20	Decadal Survey Introduction and Process	D. Smith
01:30 PM	00:30	Planning and draft MEPAG inputs to Decadal Survey with discussion	J. Johnson
02:00 PM		Next Decade Planning--Mission Opportunities for '16, '18, '20	
02:00 PM	00:20	Introduction	M. Meyer
02:20 PM	00:25	MSO SDT Update	Mike Smith
02:45 PM	00:15	Break	
03:00 PM	01:20	MATT-3 report and discussion: Next decade planning	P. Christensen
04:20 PM	00:30	Daily wrap-up	J. Mustard
04:50 PM		Adjourn	



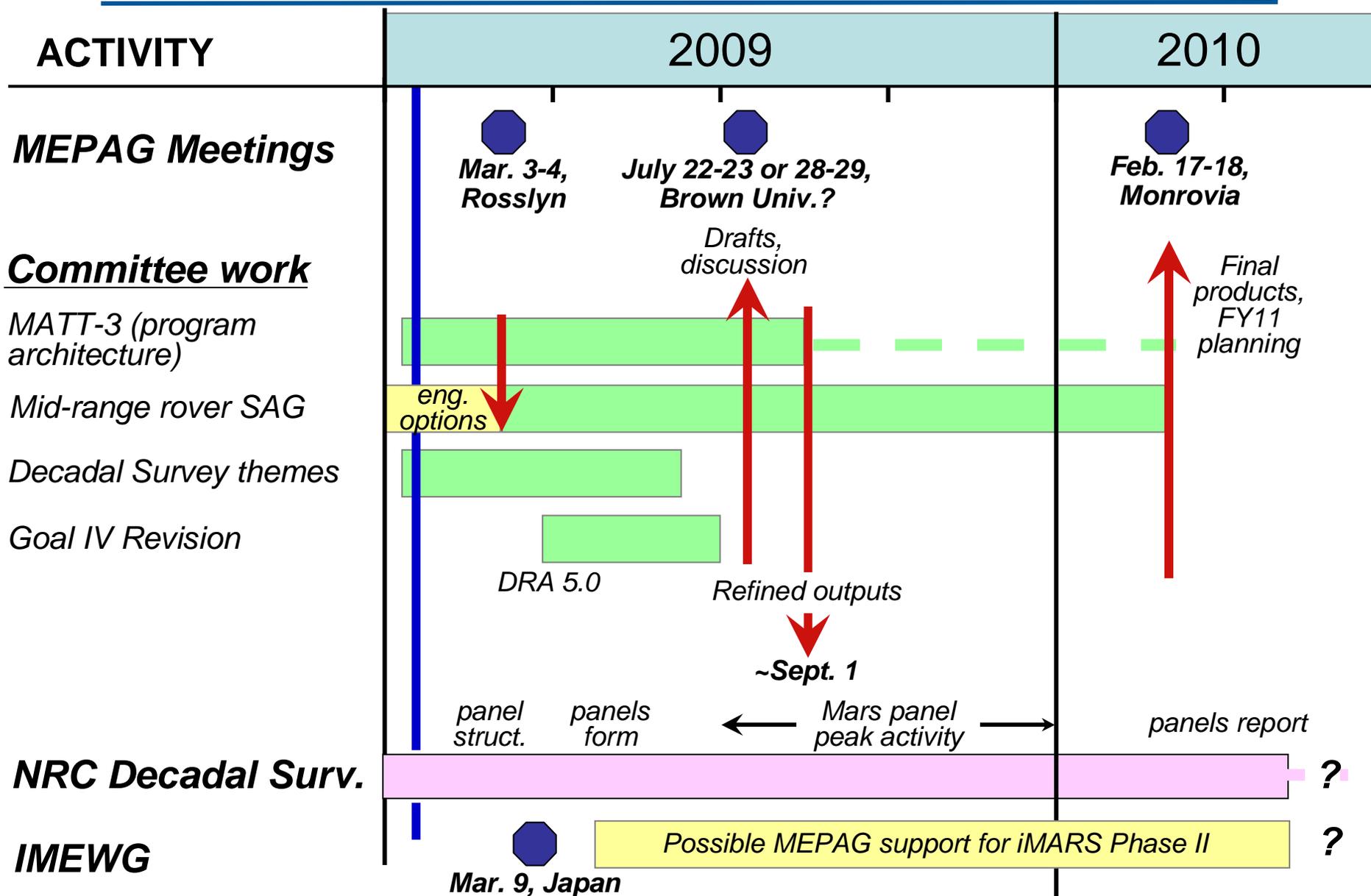
MEPAG Agenda, Day 2

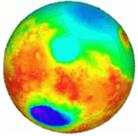


Start	Time	Agenda Item	
Note: Unless otherwise indicated, all time speakers should assume that 30-50% of their time allocation is for discussion.			
Day 2 – Wednesday March 4, 2009			
08:30 AM	00:30	2016-18-20 Building Blocks--Definition, Forward Planning	TBD
09:00 AM	00:30	Discussion	
09:30 AM		Meeting reports	
09:30 AM	00:30	Lunar Roadmap	J. Volosin
10:00 AM	00:10	Discussion	
10:10 AM	00:15	Break	
10:25 AM		Meeting reports	
10:25 AM	00:20	Mars Climate Modeling Center (MCMC)	J. Hollingsworth
10:45 AM	00:20	Mars Atmospheric Modeling Workshop	J. Levine
11:05 AM	00:20	Report on Ground Truth from Mars Workshop	C. Shearer
11:25 AM	00:20	Second Workshop on Mars Valley Networks	R. Craddock
11:45 AM	01:30	Lunch	
01:15 PM	00:20	Workshop on Martian Phyllosilicates	Jean-Pierre Bibring
01:35 PM	00:20	Planetary Dunes Workshop	L. Fenton
01:55 PM	00:35	Open discussion	
02:30 PM	00:30	Future Planning for MEPAG Activities	J. Mustard
03:00 PM		Adjourn	



MEPAG Planning, 2009





Goals Document



Active Goals Document location: <http://mepag.jpl.nasa.gov/reports/index.html>

Must be up to date when submitted to Decadal Survey

- At our last meeting (09-18-08) we completed a major revision process
 - Substantial changes to Goals II and III
- Major new information since then—are our priorities and descriptions of scientific objectives and investigations still current?
 - methane in martian atmosphere
 - Other?
- Goal IV: Revision process tabled until availability of Design Reference Architecture 5.0. This has not been reconsidered in ~5 years