

Mars Exploration Program Analysis Group (MEPAG)

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

MEPAG Meeting
February 27 & 28, 2012
Washington, DC

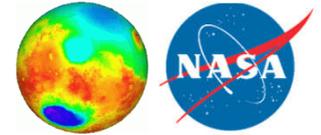


*MRO HiRISE/ CRISM / Brown/ U. Arizona
/ APL/ JPL/ NASA*

Dave Des Marais, *MEPAG Chair*

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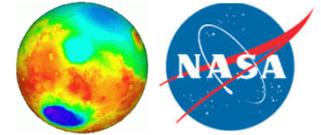
MEPAG Agenda, Day 1



Day 1 – Monday, February 27, 2012

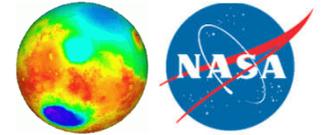
08:30 AM	0:15	Welcome; Desired Outcomes of this Meeting, Introduction to the Agenda	D. Des Marais, MEPAG Chair
08:45 AM	1:00	SMD AA remarks	J. Grunsfeld
09:45 AM	0:30	Discussion	
10:15 AM	0:15	Break	
10:30 AM	0:45	Mars in the Planetary Decadal Survey	S. Squyres
11:15 AM	0:45	HEO priorities and context	M. Wargo
12:00 PM	1:30	Lunch	
01:30 PM	0:30	Mars Science	M. Meyer
02:00 PM	1:00	MEPAG Excom led discussion	MEPAG Excom
03:00 PM	0:30	Break	
03:30 PM	0:30	Future MEPAG actions	D. Des Marais
04:00 PM	0:30	European Perspective	R. de Groot
04:30 PM	0:15	Japanese missions	T. Satoh
04:45 PM	0:30	Status of NASA led operating and developmental missions	F. Li
05:15 PM	0:15	Day 1 discussion and wrap-up	D. Des Marais
05:30 PM		Adjourn	

MEPAG Agenda, Day 2



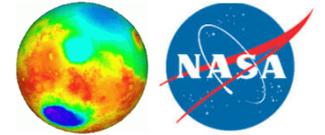
Day 2 – Tuesday, February 28, 2012			
08:30 AM	0:15	Agenda for today and Goals committee update	D. Des Marais
08:45 AM	1:30	The 2013 MAVEN Mission	B. Jakosky et al.
10:15 AM	0:15	JSWG Report delivery	D. Beaty/G. Kminek
10:30 AM	0:15	Break	
10:45 AM	0:15	Mars Exploration Program Geodesy and Cartography Working Group	T. Duxbury
11:00 AM	0:30	Proposed future landing site process	M. Golombek/J. Grant
11:30 AM	0:30	Discussion/Future Planning for MEPAG Activities	D. Des Marais
12:00 PM		Adjourn	

MEPAG Business Items (1 of 2)



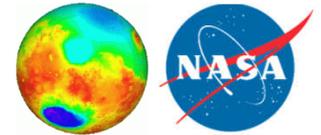
1. Next Meeting: Suggest late Sept. 2012 in Pasadena
2. Change in Leadership Positions
 - ❖ Goals Committee:
 - Jeff Johnson retires from Goals committee chair after long and meritorious service
 - Vicky Hamilton is the new chair
 - Subcommittee co-chairs are rotated—if you would like to volunteer or would like to suggest someone, send names to Vicky Hamilton

MEPAG Business Items (1 of 2)

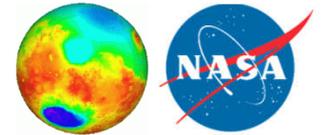


- Change in Leadership Positions (cont)
 - ❖ MEPAG Chair:
 - Dave Des Marais' consciousness will meld with MSL on August 1; send your suggested names for successor as MEPAG chair to Rich Zurek
 - New chair would start this summer; first major meetings may be fall MEPAG and PSS meetings
- PSAG members
 - ❖ An exciting new adventure!
 - ❖ Send names of possible participants (possibly including yourself) to Dave Beaty

MEPAG Statement for PSS--*Draft*

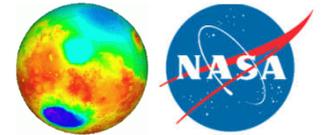


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- ✓ MEPAG remains committed to its prioritized goals, objectives and investigations in the areas of Life, Climate, Geology/Geosciences and Preparation for Human Exploration, with Life first amongst equals in the science areas
 - ✓ The Mars Program architecture of orbiters, rovers, sample return and research analysis remains the most effective approach for Mars exploration.
 - ✓ MEPAG goals and objectives are well-represented in the science rationale of the current Planetary Decadal Survey
 - ✓ MEPAG reaffirms its consensus that the Decadal Survey had it right: "The analysis of carefully selected and well-documented samples from a well-characterized site [on Mars] will provide the highest science return on investment for understanding Mars ..."



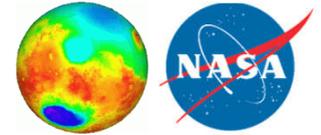
Impacts of the President's FY13 Budget

- ❑ With the deferral of flagships missions and delays in NF & DSC future competitions, achievement of many of the Planetary community's highest priority goals and objectives for future exploration is lost
- ❑ As a sample caching mission was the highest rated priority of the Decadal Survey, this loss is particularly acute
- ❑ The momentum of the past decade's highly successful Mars Exploration Program is also jeopardized with deferral of MSR
- ❑ Termination of NASA's participation in ExoMars means close-out of the TGO and MOMA instruments and the loss of their scientific objectives which did address important MEPAG goals
- ❑ The absence of a mission or instruments as part of the MEP program for 2016 means loss of a science opportunity, unless serendipitously filled by the ongoing DSC Step 2 process



Sustained in the President's FY13 Budget

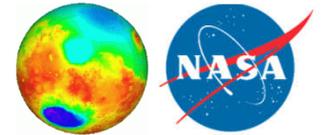
- Support for MAVEN development and the MSL prime mission, both addressing high priority science goals of atmospheric escape and habitability
- Support for continuing Mars Missions (ODY, MEX(US), MER-B, MRO) which addresses important science objectives in all 4 MEPAG Goal areas
- While the apparent decrease in Mars R&A funding in the FY13 budget is in conflict with exploiting ongoing and near-term future data return, it is hoped that this can be remedied within operating plan priorities



Other Considerations

□ The opening of the Discovery Mission competition to Mars missions provides important opportunities to address MEPAG goals by PI-led missions. The potential of such missions for Mars has been demonstrated by successful Mars Scouts, the completed mission of PHOENIX and the ongoing development of MAVEN. However, a long-term program addressing fundamental science questions cannot be built on such missions alone, but rather requires the balance of small, medium and large missions advocated by the Decadal Survey

- ❖ A particular concern is the loss of the technical capability to safely access the surface, needed to address many of the highest priority goals



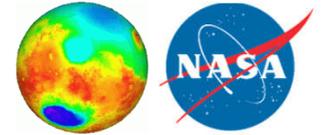
Other Considerations (cont)

□ MEPAG has responded to NASA's request to analyze concepts and synergies that could emerge from an integrated program of science and human exploration objectives. MEPAG is in the process of setting up a Precursor SAG to do this.

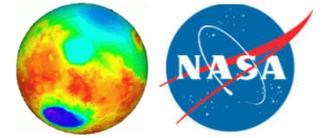
- ❖ This is consistent with seeking synergy between the science goals (Goals I-III) and human exploration (Goal IV)
- ❖ This is consistent with HEOMD's expressed need to define Strategic Knowledge Gaps and which measurement capabilities (missions and payloads) might address these

□ MEPAG will also support efforts by the HQ-led team to reformulate the Mars Program

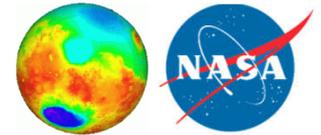
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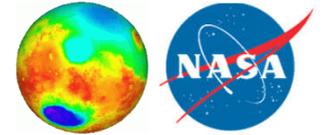


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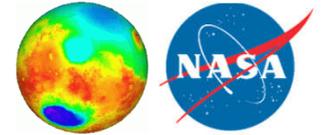
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- ✓ The President's FY13 budget defers all Decadal Survey flagship missions and delays NF & DIS future opportunities to the extent that most of the objectives of the Decadal Survey cannot be achieved
 - ✓ MEPAG commends the ongoing support for MAVEN, MSL, and the continuing Mars Missions (ODY, MEX(US), MER-B, MRO) in the FY13 budget—*these are/will return great science*
 - ✓ The inclusion of Mars candidates in the Discovery line is appreciated, allowing competition for an otherwise lost 2016 Mars launch opportunity
 - ✓ The 2016 TGO mission would have greatly expanded our knowledge of the atmosphere's physical and chemical state and therefore serves goals and objectives of SMD and HEO

MEPAG Statement for PSS--*Draft*



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- ❑ The decrease in Mars R&A funding in the FY13 budget is inconsistent with the need to interpret ongoing and near-term future returned data —*needs language to reflect PSD intent*

Goals for this Meeting



1. Understand the implications of the President's proposed budget
 - ❖ Listen to Science Mission Directorate's plan to go forward
 - ❖ Hear reaction from the Decadal Survey
 - ❖ Learn about some HEO needs
2. Capture the community's reaction for PSS
3. Discuss how to respond to any analysis requests
 - ❖ There may be both near-term and longer-term actions that MEPAG should take