Landing Sites for Exploration Missions Program

Monday January 17th

9:00-10:00	Registration/coffee	
10:00-10:15	Intro Lorentz Center	
10:15-10:45	Intro organizers	
10:45-12:00	Landing site lessons from NASA Critical data products program	Charles Budney
12:00-13:00	Lunch	
13:00-13:45	Perspective of a science mission/Beagle2	John Bridges
13:45-14:30	Perspective of Project team, engineering constraints, design decisions	Leila Lorenzoni
14:30-16:00	Hands-on Session 1: define goals & approach per team (incl. coffee break)	Scenario
16:00-16:45	Perspective of lander project scientist	Jorge Vago
16:45-17:15	End-to-End Mars Sample Return	Nicolas Mangold
17:15	DRINK	

Tuesday January 18th

9:00 - 9:30	ESA Lunar lander	Diego de la Rosa
9:30 – 10:15	Perspective of Instrument Scientist Moon.	Erik Laan/Wim v. Westrenen:
10:15-12:00	Hands-on session 2: Discuss criteria for landing site (incl. coffee break)	Teams
12:00-13:00	Lunch	
13:00-13:45	Perspective of Instrument Scientist: Astrobiology/Mars.	Pascale Ehrenfreund
13:45–14:30	Perspective of Instrument Scientist: Orbiter instrument	Francois Poulet/Ernst Hauber
14:30-16:00	Hands-on Session 3: Mapping criteria (incl. coffee break)	Teams
16:00-17:00	Brief reports on Scenario sessions/discussion	Discussion

Wednesday January 19th

9:00-9:45	Perspective of Field Geologist	Frances Westall
9:45-10:30	Perspective of Space craft industry engineer	Alessandra Marcer
10:30-12:00	Hands-on session 4: Data required, data formats (incl. coffee break)	Teams
12:00-13:00	Lunch	
13:00-13:45	Perspective of Geological Survey: Mars mapping pilot project	BGS rep.
13:45-16:00	Hands-on Session 5: Tools in support of landing site selection (incl. coffee break)	Teams
16:00-17:00	Brief reports on Scenario sessions/discussion	Discussion
19:00	Conference dinner	

Thursday January 20th

9:00-9:45	Perspective of remote sensing scientist	Angelo Rossi
9:45-10:30	PlanetaryGIS	Roderik Koenders
10:30-11:15	Scenario teams discuss and summarize (incl. coffee break)	
11:15-12:00	Discuss general points for position paper, list of required products, tools	
12:00-13:00	Lunch and travel to ESTEC	
13:30-14:00	Registration for Conference at ESTEC	
14:00-14:15	Introduction	Agustin Chicarro
14:15-14:45	ESA Mars Exploration program	Jorge Vago
14:45-15:15	ESA Lunar and human exploration	Bruno Gardini
15:15-15:45	Break	
15:45-16:15	Japanese Exploration missions	Takehiko Satoh
16:15-16:45	NASA exploration program	Charles Budney
16:45-17:15	Russian exploration program	[tbd]
17:15-18:30	Posters and Drinks	
18:00-19:30	For Scenario organizers: discuss conclusions and prepare presentations for Friday	

Friday January 21st

9:00-9:30	Commercial missions: Lunar Google X-Prize	Andrew Barton
9:30-10:00	EU-ESF-ESA perspective	J.C. Worms [tbc]
10:00-10:15	Summary of results workshop	Tanja Zegers
10:15-10:45	Presentation of workshop scenarios	
10:45-11:15	Break	
11:15-12:00	Presentation of workshop scenarios	
12:00-13:00	Keynote: MER rovers ground operations, importance of landing site selection and characterization	Steve Squyres
13:00-14:30	Lunch	
14:30-15:30	Future missions, Sample Return	Frances Westall
15:30-16:15	Panel discussion	A. Chicarro

Scenario

The goal of the hands-on scenario sessions is to explore the process of landing site selection and characterization for different style missions (science driven, technology driven, commercial, preparation for human missions, etc.). The work on the different scenarios will be done in small teams (~7 persons) during the workshop, with regular plenary discussion sessions. For each scenario this will result in:

1. Discussion on the criteria (scientific, engineering, exploration) for landing site selection
2. Approach to landing site selection, e.g. by proposals from community, by mapping criteria, or other approaches.
3. Analysis of the required data and formats (maps or GIS data bases)
4. Analysis of required tools and infrastructure, i.e. web interfaces, virtual observatories, etc.
5. Analysis of specifics associated with that particular scenario (link to other missions, collaboration with partner) and how this may affect the process of landing site selection.

Each scenario team can choose an approach during the workshop that best fits the particular scenario and the team members.

In combination, the results of the various scenarios should give an overview of the potential European role in future exploration mission landing site selection and characterization.
Two persons will coordinate the scenario analysis prior to the workshop (via PlanetaryGIS), during the workshop sessions, and will present the results at the concluding conference at ESTEC.

1) Mars 2016 Demonstration lander
Mission type: technology driven
SC1: Angelo Rossi
SC2: Leila Lorenzoni

2) Mars 2018 rover landed with NASA system
Mission type: Science/Astrobiology driven
SC1: Frances Westall
SC2: Damien Loizeau

3) Mars Sample Return
Mission type: Science and technology driven, part of global exploration program
SC1: Nicolas Mangold
SC2: John Bridges

4) Lunar X-prize
Mission type: commercial, non-agency mission
SC1: Erik Laan/Maria Sovago
SC2: Wim van Westrenen

5) Asteroid/Phobos
Mission type: small body
SC1: Konrad Wilner
SC2: Jürgen Oberst