



NASA Planetary Science Summer School: Preparing the Next Generation of Planetary Mission Leaders

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Summer School for Planetary Sciences | The Mission Lifecycle Process



Students Perform Mission Design Roles with JPL Team X Mentors

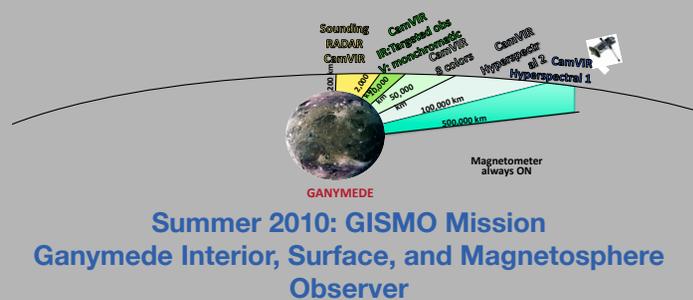


JPL Facility Tours Highlight End-to-End Mission Life Cycle



Students' Mission Concept Presented to NASA HQ/JPL Review Board

NASA Planetary Science Summer School Schedule					
Monday DAY 1	Tuesday DAY 2	Wednesday DAY 3	Thursday DAY 4	Friday DAY 5	
8a Student Check-in	8a Student Check-in	8a Student Check-in	8a Student Check-in	8a Student Check-in	
8:30a PRESENTATION: THE JPL TEAM X MISSION LIFE CYCLE	TEAM X INSTRUMENTS SESSION	TEAM X SESSION	TEAM X SESSION	WORK TIME	
10a PRESENTATION: PROPOSAL PROCESS					
11a PRESENTATION: INTRODUCTIONS TO TEAM X					
12 noon Lunch	Lunch	Lunch	Lunch	Lunch	
1p TEAM X INSTRUMENTS SESSION	TEAM X SESSION	WORK TIME	TOUR	PRESENTATION TO REVIEW BOARD	
3p			Group Photo		
4p			WORK TIME	REVIEW BOARD DISCUSSION / FEEDBACK TO STUDENT TEAMS	
5p	TOUR	WORK TIME	WORK TIME	DEBRIEF AND EVALUATION	
5:30 Dinner	Dinner	Dinner	Dinner		
6p Work on Final Presentation	Work on Final Presentation	Work on Final Presentation	Work on Final Presentation		



Inputs:
18 highly qualified post-doc/PhD candidates per session
JPL Team X mentors
6 weekly preparatory WebExs
1 week JPL concurrent design experience
Student selection of engineering and science team roles
Trade-offs to finalize design and make cost-cap

Outputs:
Peer-reviewed mission concept for NASA Discovery/New Frontiers class mission
Suite of instrumentation and science traceability matrix
Student understanding of interconnectedness of systems and subsystems

Student Applicants

- Program is designed for and accepts:
- Early-career science post-docs
- Science doctoral students
- Engineering graduate students
- Faculty of higher ed students
- Careers in solar system exploration earth science, astronomy
- US citizens or Legal Perm Residents
- Foreign applicants @NASA Centers

Top Feeder Schools

- U Colorado - Brown U - MIT - Georgia Tech - U Michigan - Caltech - U Arizona - Stanford - UCLA - UC Berkeley
- Typical Degrees**
- Astrophysics - Chemistry - Computer Engineering - Electrical Engineering - Environmental Science - Geology/Geophysics/Geoscience - Materials Science - Mechanical Engineering - Physics - Planetary Science - Remote Sensing

"Before this course, I was looking forward to contributing more directly to space missions. Thanks to this course, I know more about how I can work towards this career goal."
--2010 Planetary Science Summer School student



2010: Team Ganymede
"Students should get a crash course in what has taken me a career to learn about missions."
--Prof. James W. Head III, Distinguished Professor of Geological Sciences, Brown University, Providence, RI

Outcomes

- Student Team Mission Concept Paper Presentations Typically to: AGU, DPS, IEEE, LPSC
- Alumni Employment Snapshot 2009:**
- 31 JPL Employees + 28 Affiliates
- 12 NASA Ames Research Center
- 11 Goddard Space Flight Center
- 9 Johnson Space Center
- 7 at other Centers
- (At least 98 employed at NASA, of 300 participants 1999-2008)

Application Process

- 2011 Sessions: July 18-22, August 1-5**
- Applications open January 2011
- Applications due April 1, 2011
- Based on relevance to student's career goals and recommendation by Advisor
- Selections made by NASA review panel
- Selections announced May 1, 2011
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JPL Education Office
- Sponsor**
- NASA Planetary Science Division