Overview of Instrument Acquisition Strategy

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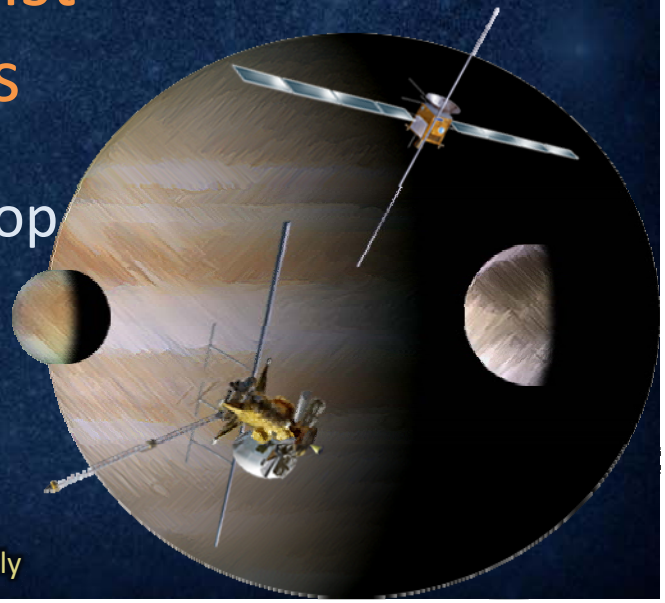
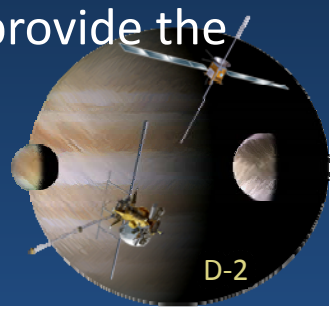
EJSM Instrument Workshop
July 27-29, 2010



Pre-Decisional - For Planning & Discussion Only

Welcome to the JEO AO!

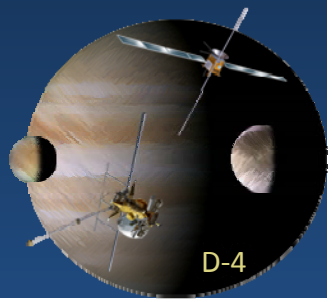
- Purpose of this workshop is twofold
  - Present community with technical and programmatic information to help it prepare to successfully respond to the AO
  - Gather feedback from the community for NASA's consideration as it prepares to release the AO and execute the procurement
- Neither of those goals can be met without your participation over the next three days
- Remainder of today will be spent discussing the AO process and content
  - The AO is currently in draft and subject to change
  - This workshop is an opportunity to be heard and to clarify information
  - Proposers are responsible for reading the final AO, which will provide the governing policies and requirements for all proposals



Today's Agenda

Time	Title
9:45-10:15	Overview of Instrument Acquisition Strategy
10:15-10:30	Science Team Solicitation
10:30-11:00	Step-1 Description
11:00-12:00	AO Draft Policies and Plans
12:00-1:30	Lunch
1:30-2:00	Step-2 Description
2:00-3:00	JEO Project Interactions with Instrument Concept Teams – Pre-Final Selection
3:00-3:30	JEO Project Interactions with Instrument Concept Teams – Post-Final Selection
3:30-3:45	Break
3:45-4:00	Programmatic Resources Approach
4:00-4:45	Evaluation Process Step 1 and Step 2
4:45-5:00	Program Library Documents
5:00-5:30	AO Summary and Discussion

Major AO Issues from 2009 Workshop



Major AO Issues from 2009 Workshop

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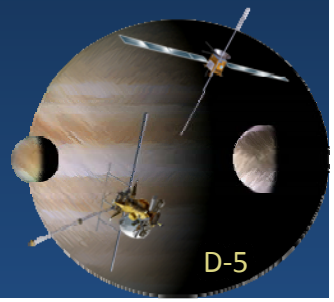
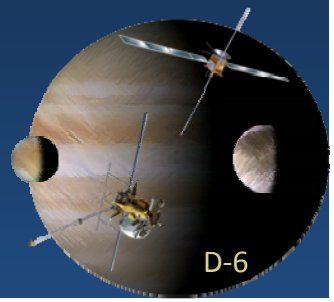


JEO Instrument Procurement Strategy

- The current Decadal Survey lists Europa as the highest priority large planetary mission for implementation in 2003-2013
- Goal of any AO process is to provide the best information possible to NASA to enable it to select a payload that maximizes the likelihood of mission success
- As a long-lived flagship mission with stringent radiation and planetary protection requirements, the JEO AO has several additional objectives, namely
  - Mitigating the risk (especially cost risk) of instruments that need to address unique and demanding radiation and planetary protection requirements;
  - Organizing a single cohesive science team that works together to perform collaborative science; and
  - Striving for the transparency and broad science community involvement necessary for any long-lived and long-awaited flagship mission
- The AO and associated Phase A strategy has been designed with these objectives in mind

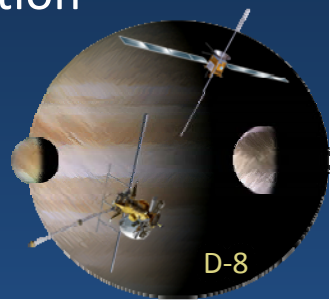


Two Step Instrument Acquisition

- Significant uncertainty still exists in the areas of instrument development and instrument cost estimates
- The familiar two step acquisition process can reduce this uncertainty and benefit both NASA and proposers
  - For proposers, it provides an opportunity to increase their understanding of implementation issues and cost risk under NASA funding and technical guidance
  - For NASA, it provides a more informed selection of final flight instruments and their associated cost risk before committing to fly the instruments (and consequently committing to fund any subsequent cost overruns)
- The Step 1 AO will call for proposals for PI-led science investigations utilizing a single instrument. The proposals will be expected to describe instrument concepts with a strong focus on providing a detailed plan describing the instrument concept development during Step 2
  - NASA will **overselect** (by instrument category) concepts for further development during Step 2
- During Step 2 overselected teams will continue to develop their instrument concepts with technical guidance from the Project and scientists

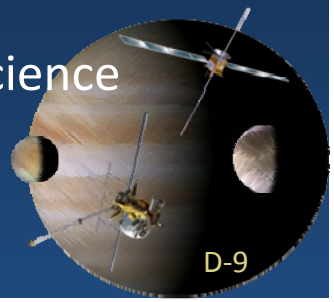
Overview of Step 1

- A traditional Step 1 process will be used to solicit and identify instrument teams that possess:
  - a scientifically compelling investigation(s),
  - an instrument concept to obtain the data necessary to conduct those investigations,
  - an understanding of the technical challenges involved in designing the instrument, especially related to radiation hardening and sterilization for planetary protection
- The Step 1 proposal will be required to present a detailed plan for the Step 2 formulation effort that will address the challenging planetary protection and radiation issues for JEO
  - Evaluation of this plan will play a major role in the Step 1 selection process



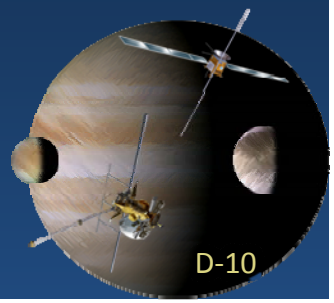
Overview of Step 2

- During Step 2 the selected instrument concept teams will revise their plans based on the review results and execute them
  - Access to the technical expertise of the Project Office will be critical to a successful Step 2 effort
- The Project Office will designate Subject Matter Experts in specific areas who are behind the firewall to answer questions from the selected instrument teams (e.g., radiation design, shielding, instrument accommodation) on technical issues
  - All communication will be in writing between designated Points of Contact on the Project and instrument teams
  - This also allows the Project Office to conduct Phase A activities required of all flight projects
  - Non Disclosure Agreements will contain language safeguarding information from one-on-one exchanges with individual proposal teams
- Instrument concept teams will also work with the broader EJSM Science Team independently selected by NASA to refine the science scope

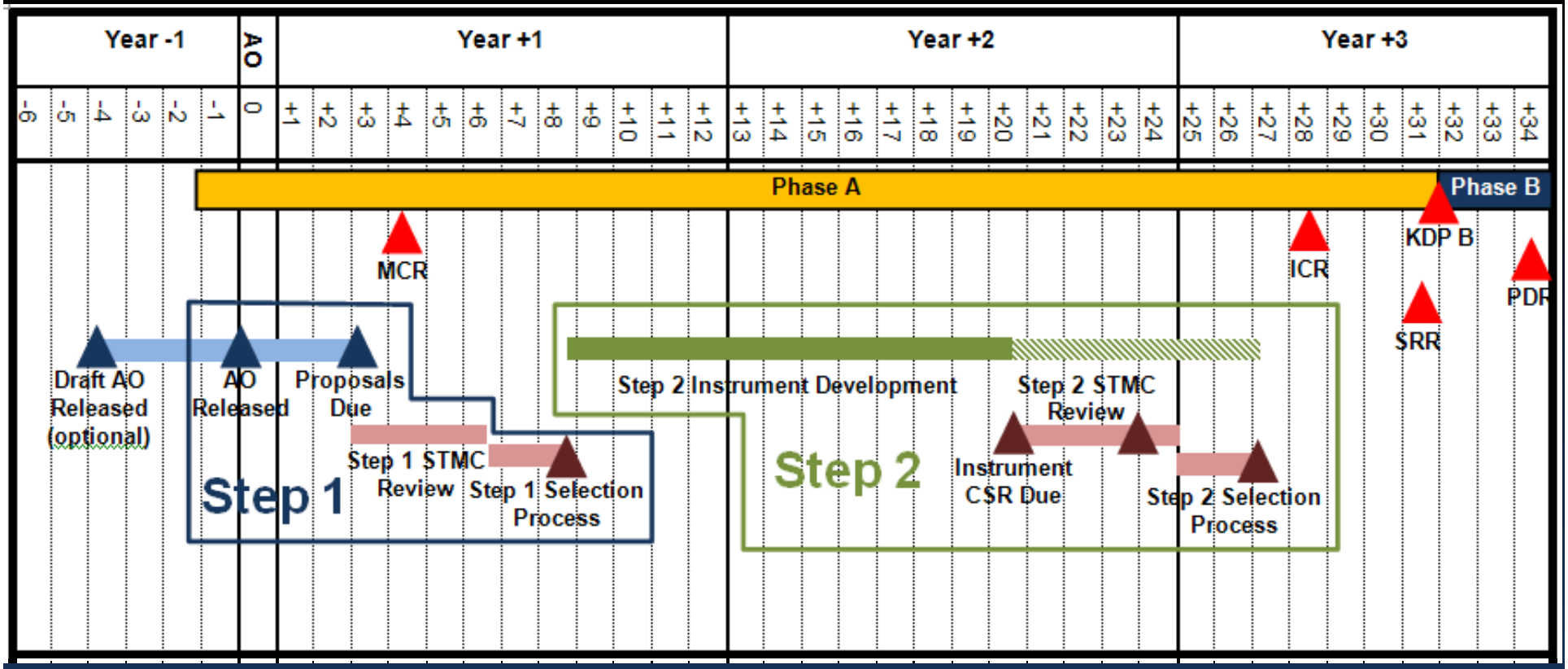


Project Office Involvement

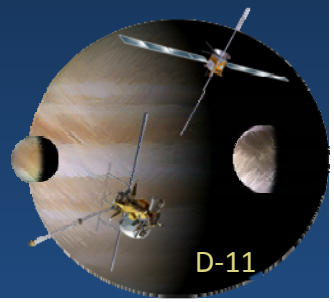
- The Project Office will play a role in the evaluation of selected portions of proposals and in the execution of Step 2
  - Further details in the ***Step 1, AO Draft Policies and Plans, Step 2, and JEO Project Interaction presentations***
- This involvement will be documented in a Organization Conflict of Interest Avoidance Plan and a waiver
  - The necessary precautions, including the firewalling of personnel, will be enacted to protect proprietary information and assure a fair selection process

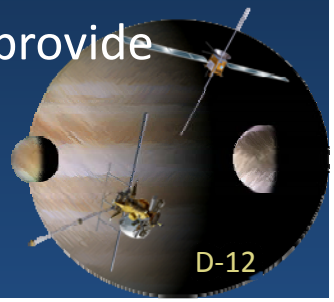


Instrument Acquisition Schedule



- All dates are notional and fixed relative to AO release date
- Release of draft AO is optional



Opportunities for Community Input

- Community feedback on this topic is essential to both a successful acquisition and a successful mission
- Opportunity for *discussion* is during public meetings (e.g., this workshop and the September OPAG meeting)
  - All presentations are intended to provide ample opportunity for questions and discussion
  - You may also submit written questions at any time that will be discussed at the end of each day
- After public meetings *feedback* can also be sent directly to the Program Scientist via email (curt.niebur@nasa.gov)
- At the appropriate time a Q&A opportunity will be provided on the procurement website
  - All responses will be publicly posted
- A pre-proposal conference will be held after the AO is released to provide clarifications