

## **JDEM Programmatic Information**

### NASA and DOE Partnership

Key aspects of the partnership between NASA and DOE include:

- NASA will be the lead agency for JDEM, responsible for the success of the overall space mission.
- JDEM will be a medium-class strategic mission with competitively selected, Principal Investigator (PI)-led dark energy science investigations, targeted for launch by the middle of next decade. The selected PI-led science investigation teams will not include the provision of flight hardware.
- Cost control will be a central tenet of JDEM project management and mission design. DOE will contribute a significant fraction of the overall mission costs.
- Both DOE and NASA will develop scientific instrumentation for the observatory and will participate in the science operations and data analysis phase of the mission. NASA will provide the telescope, spacecraft bus, and launch services. The agencies will follow their usual means for assigning work within their agency workforce and use standard practices for procuring and/or fabricating mission components for which they are responsible. NASA's Goddard Space Flight Center (GSFC) has been assigned the JDEM Project Office, with overall responsibility for the mission.

The mission architecture will be consistent with the recommendation of the National Research Council's Beyond Einstein Program Assessment Committee that the mission should strive (1) to determine the properties of dark energy with high precision and (2) to enable a broad range of astronomical investigations. DOE will participate in the prime dark energy science investigation part of the mission only.

### Timeline

A timeline of events over the next several months, culminating in selection of PI-led dark energy science investigations:

- A community-based ad hoc science working group is currently updating the discussion of a dark energy science investigation "figure of merit," first described in the report of the Dark Energy Task Force, established by the Astronomy and Astrophysics Advisory Committee and High Energy Physics Advisory Panel. The updated findings will be presented to the agencies on September 25, 2008.
- The agencies will convene a community-based Science Coordination Group (SCG) to aid in establishing preliminary science requirements for a JDEM facility which is capable of conducting dark energy science investigations using several techniques. The JDEM Project Office, in coordination with the science coordination group, will develop a pre-conceptual design for JDEM that meets the mission's programmatic constraints. A Dear Colleague letter to solicit expressions of interest to serve on the

SCG will be issued by September 12, 2008, with selection of the group members and the first meeting to be held in October, 2008. The results will be delivered to the agencies in mid-December and the SCG will then be disbanded. DOE will also establish a project office during this timeframe, to plan and coordinate DOE's contributions to JDEM.

- NASA will release an Announcement of Opportunity (AO), jointly written with DOE, anticipated for release by the end of 2008, which will be an open solicitation for proposals for PI-led dark energy investigations using the JDEM facility. A Letter to the Community will be released to the community in mid-October and will provide certain advance information regarding the AO.
- The selected investigations will be announced in summer 2009. The PIs of the selected investigations and their collaborators will participate on the science team for the prime dark energy mission, will work with the project offices at both agencies throughout the development of the mission, and will conduct the dark energy science investigations after launch and commissioning of the observatory.