SMD Science Education Restructuring Strategy and Selections

Presentation to the Planetary Science Subcommittee

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Science Mission Directorate Organization Reflects Increased Education Focus

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- Director, Science Office for Mission Assessments, C. Daniels (LaRC)
- Senior Program Executive for Suborbital Programs, D. Pierce
- Chief Technologist, M. Seablom

Included in SMD Front Office

Definitions

Education.* Comprises those activities designed to enhance learning in science, technology, engineering, and mathematics (STEM) content areas using NASA's unique capabilities.

Communications.* Comprises the comprehensive set of functions necessary to effectively convey - and provide an understanding of - the program, its objectives and benefits to target audiences, the public, and other stakeholders. This includes a diverse, broad, and integrated set of efforts. These efforts are intended to promote interest and foster participation in NASA's endeavors and to develop exposure to - and appreciation for - STEM.

- Media services,
- Multimedia products and services (including Web, social media, and non-technical publications), and
- Public engagement (outreach) activities and events.

Cooperative Agreement. A legal agreement between the federal government and any other entity. A cooperative agreement occurs when the federal government transfers something of value, usually money, to a state government, municipality or private company for a public purpose. In a cooperative agreement, substantial interaction goes on between the federal government and the other party.

Scientific Literacy. The knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity (NRC 1996)

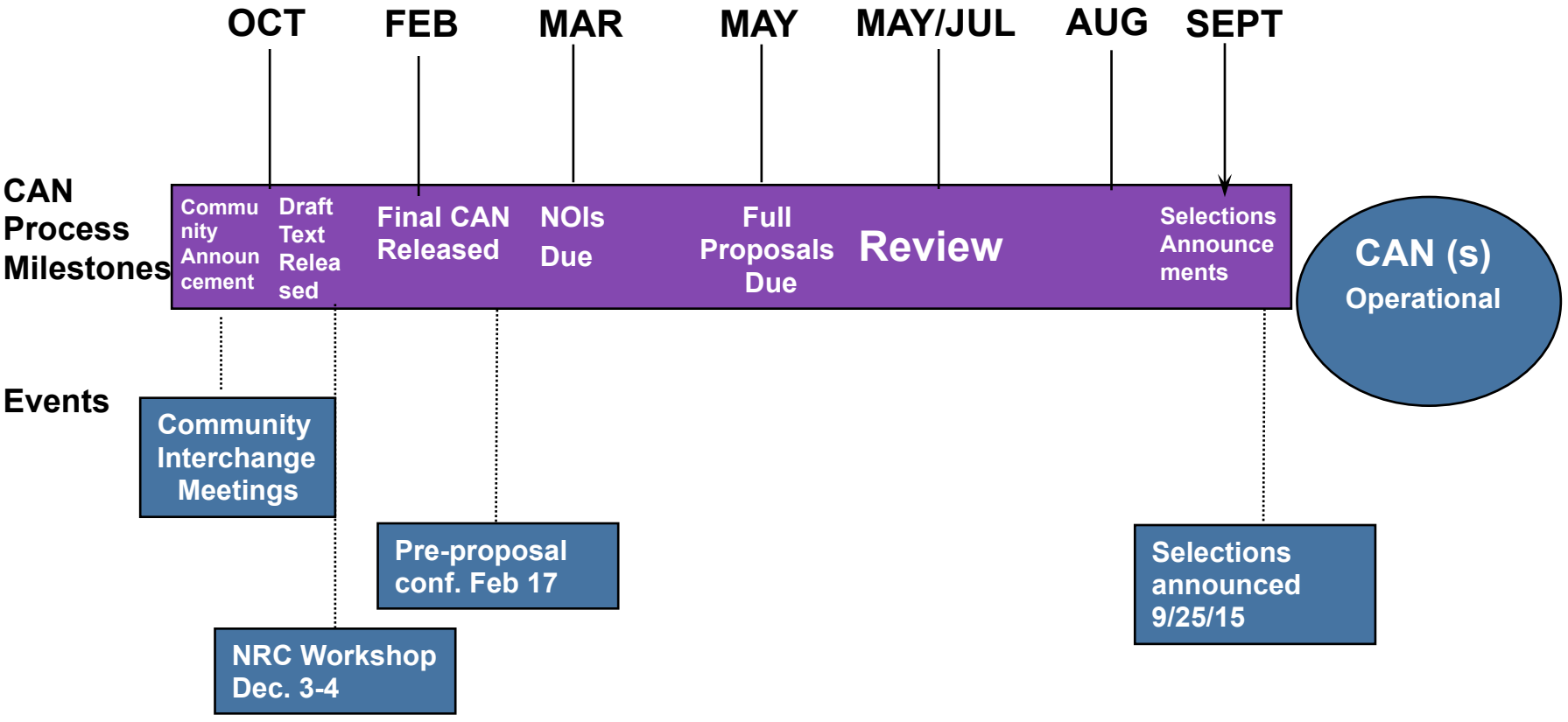
* Per NPD's 1380.1 and 1388.1

SMD Science Education Restructuring

- Background – FY15 Budget provides $42M for NASA Science Education
- Why Restructure? To further enable NASA scientists and engineers to engage more effectively with learners of all ages. SMD will no longer have minimum of 1 percent set-asides through our missions, or issue disparate 3-year grants. But we are taking a strategic approach, building on our science-disciplined based legacy, and looking for new approaches given Stakeholder priorities
- Objectives?
  - Enable STEM Education
  - Improve US Scientific Literacy
  - Advance National Educational Goals
  - Leverage Through Partnerships

- How? Through the competitive selection of organizations that utilize NASA data, products, or processes to meet education objectives; and by enabling our scientists and engineers with education professionals, tools, and processes to better meet user needs. Science Education Cooperative Agreement Notice posted at https://nspires.nasaprs.com/
  - Proposals submitted May 4, 2015
  - Selections announced Sept 25, 2015

SMD Science Education Cooperative Agreement Notice (CAN) Process FY 2015

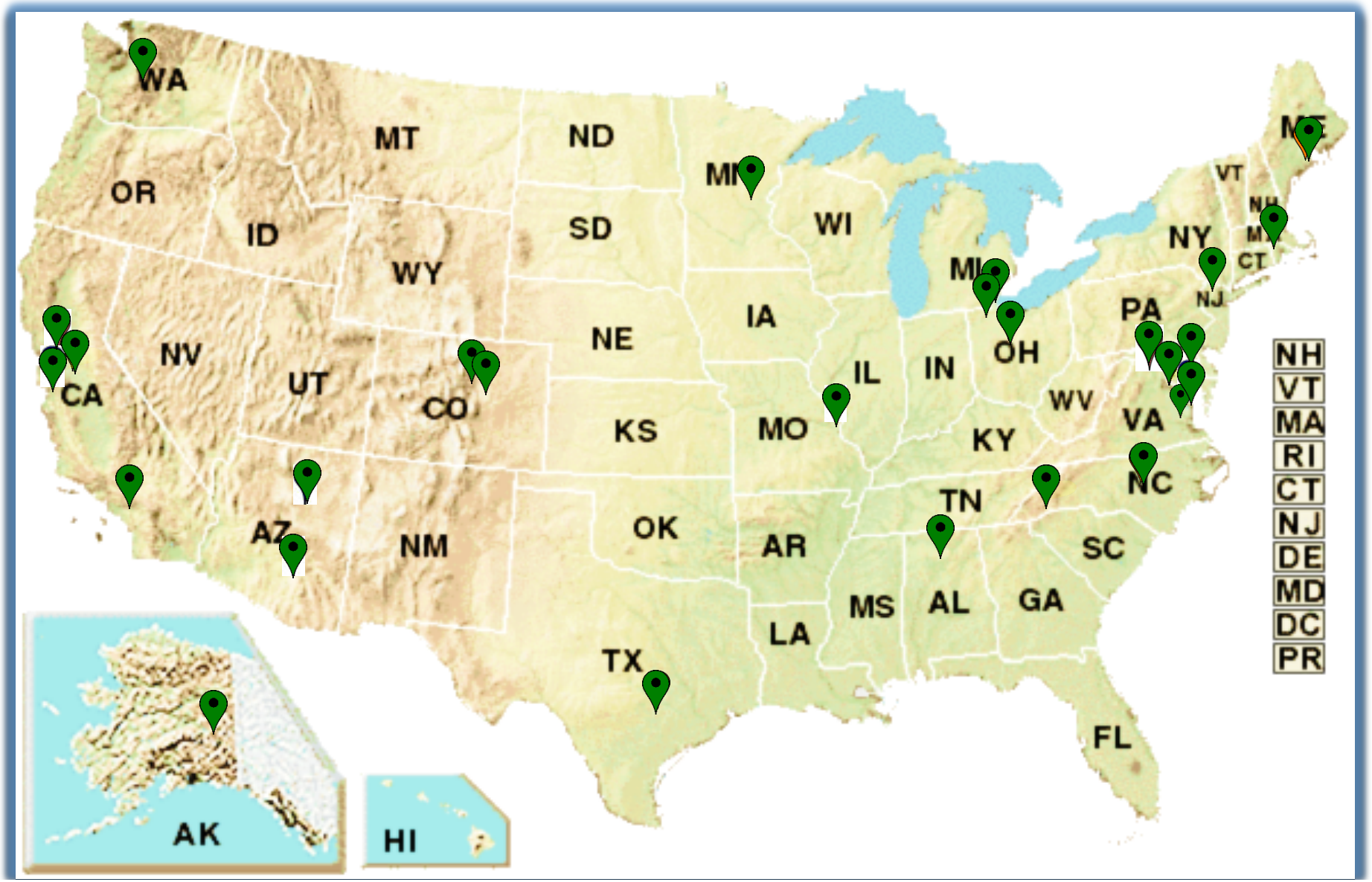


http://www.nasa.gov/press-release/nasa-selects-science-education-partners-for-stem-agreements

Top Level Overview

- Selections build upon legacy of excellence, balanced across diverse audiences, and fit within annual budget of $42M/year towards meeting NASA Science Mission Directorate's desired Outcome and Objectives
- 27 of 73 compliant proposals selected (37%) for negotiations leading to cooperative agreement awards
- 15 are from "Legacy" institutions (56%)
- 3 selections support the 2017 Total Solar Eclipse, allowing for one full academic year of preparation
- Negotiations will be based on either full selection or partial selections based on peer evaluations or funding limitations
- Awards planned to be completed by the end of calendar year 2015

Map of NASA Science Mission Directorate Science Education Selections



How Will Awards be Evaluated/ Managed?

- Negotiations leading to awards are scheduled to commence soon
- Included in negotiations will be the requirements for needs assessments, logic models, baselining, reporting and evaluation
- After baselines are established consistent with SMD's desired outcome and objectives, the more extensive SMD agreements will include internal evaluation functions
- All of the agreements will be evaluated by external independent evaluators through NASA's Office of Education and perhaps other outside groups
- Annual review by internal and external experts will occur in November of each year to:
  - Assess performance
  - Set priorities for upcoming year
  - Effort that does not meet evaluation criteria will be transitioned out before end of performance period and/or not extended for option period
  - New effort can migrate into agreements on a existing science-discipline, or audience basis

Other Opportunities

- All existing education efforts will be transitioned into the cooperative agreements that result from this solicitation
- However, there are other opportunities that will work with the Selectees for student collaboration experiences. See http://nspires.nasaprs.com:
  - Solicitation NNH15ZDA010C, "Undergraduate Student Instrument Project (USIP) Student Flight Research". Closes 10/15. Similar announcements are planned annually
  - Solicitation NNH15ZHA001N, "2015 Competitive Program for Science Museums, Planetariums and NASA Visitors Centers Plus Other Opportunities (CP4SMPVC+). Closes 12/8

Office of Education Lines of Business and SMD Science Education (SE) CAN Synergies - UPDATED

NASA Education Business Lines	NASA SMD SE CAN Scope
•**NASA Internships, Fellowships, and Scholarships (NIFS)**: Utilize NASA facilities and assets to provide work experiences and research and educational opportunities to improve retention in STEM and prepare students for employment in STEM jobs;	• **Not specifically included. SMD is supporting OEd efforts**
•**STEM Engagement (SE)**: Provide opportunities for participatory and experiential learning activities to connect learners to NASA-unique resources;	• **Primary focus – Enable STEM Education**
•**Educator Professional Development (EPD)**: Prepare STEM educators and leaders to deliver quality STEM instruction utilizing unique NASA assets and content; and,	• **Primary focus, *but with targeted implementation guidelines* – Advance National (Educational) Goals**
•**Institutional Engagement (IE):** Improve the capacity of U.S. institutions to deliver effective STEM education.	• **TBD – Leverage Through Partnerships**

Thank You ALL for your interest, attention, support, and continued passion for NASA Science Education!

May NASA Science Education continue to be held in the same esteem as all NASA Science in the pursuit of our Desired Outcome