

National Aeronautics and Space Administration



SMD Update on R&A and EPO NAC Astrophysics Sub-committee

Dr. Yvonne Pendleton

Senior Advisor for Research and Analysis (SARA)

January 29, 2008

SARA Team



Max Bernstein, Deputy SARA

Doris Daou, SMD Level R&A and E/PO

Dan Durda, SMD Level R&A

Larry Cooper, SMD Level E/PO

Ruth Netting, SMD Level Public Outreach

Hashima Hasan, Astrophysics Division E/PO

Ming Ying Wei, Earth Science Division E/PO

Eric Christian, Heliophysics Division E/PO

Marilyn Lindstrom, Planetary Science Division E/PO

Our Growing Vision for NASA's Research & Data Analysis Programs



Commitment to:

- **Increase R&A funds**
- **Get more science from our budget through process improvements**
- **Support data analysis and ensure missions fund their science**
- **Provide responsive science leadership at all levels**
- **Increase funding stability**
- **Increase time researchers spend making discoveries**

Changes Already Made That Support R&A:



- **Over-budget missions in 2007 did not, will not take from R&A**
- **Ceased redacting budgets from review panels**
- **Authorized widespread adoption of 4-year grants**
- **Accelerated grant win notifications from months to weeks**
- **Created new opportunities for early career Ph.D.s in panel reviews**
- **Eliminated a backlog of hundreds of no-cost extension requests**
- **Resolved ~200 stalled funding issues**
- **Process improvements for solutions to generic funding issues**
- **Responsive SMD through SARA (more than 1300 e-mails)**
- **SARA website launched for information exchange**



Changes in Progress:

- **Define, Document, & Distribute SMD Panel Review Best Practices**
- **Manage R&A programs to eliminate extreme win and loss ratios**
- **Establish R&A and EPO MOWGs for idea exchange**
- **Commitment to reinvigorate EPO**
- **Building strong bridges with the Office of Education, OMB, and NSF to get the most out of our E/PO resources**
- **Establish easier E/PO funding mechanisms for PIs**
- **Clarify & strengthen current support mechanisms for research students (undergrads, grads, post-docs)**
- **Consider creation of larger funding opportunities (PI teams, Institutes such as Lunar Science, etc.)**

R&A MOWG

Guenter Riegler, Ret. NASA Senior Executive (Astrophysics), Chair

Steve Bougher, University of Michigan (Planetary), Co-Chair

Spiro Antiochos, NASA Goddard Space Flight Center (Heliophysics)

Jonathan (Josh) Grindlay, Harvard University (Astrophysics)

Lynne Hillenbrand, California Institute of Technology (Astrophysics)

Everette Joseph, Howard University (Earth)

James (Jim) Kasting, Penn State University (Earth)

Harold (Hal) Levison, Southwest Research Institute, (Planetary)

Adam Showman, University of Arizona (Planetary)

Margaret (Maggie) Tolbert, University of Colorado (Earth)

Communication

- Site Visits, Townhalls, Advisory Group Meetings
- SARA E-Mail (~1300 since April 2007)
- WEBSITE (Google: NASA SARA)
 - (R&A Info in Details next Slide)
 - Division Corners
 - FAQ, EPO & Advisory Group pages
 - Updated Bi-Weekly
 - Opportunity to Provide Feedback



SMD Research & Data Analysis Info Website

<http://science.hq.nasa.gov/research/sara.html>

- The new SARA (“Senior Advisor for R&A”) website is your one-stop-shop for issues and information about SMD’s R&A programs:
 - Information related to SMD Grant Programs
 - “How To” Guide for Proposers plus other PI issues
 - Bi-Weekly Updates on R&A Process Improvements (subscribe on website)
 - Grant Stats for every R&A program
 - Contact Info for each Program Officer
 - Research Highlights Across SMD’s R&A Programs
 - Direct Communication with NASA for anything R&A related

Please Send Us Your Ideas and Concerns. We are listening.

Email: sara@nasa.gov

New to the SARA web page: Division Corners



SARA

[Home](#) | [Earth](#) | [Sun](#) | [Solar System](#) | [Universe](#)

Site Search:

Division Corner

SARA Home	Letters From SARA	Grant Stats
Program Officer List	Science Matters	Accomplishments
Events Calendar	Contact SARA	How To Guide
Highlights	Library	Acronyms/Dictionary
FAQs	EPO	Division Corner
What's New	NASA Notices	

Related Links...

- Comments on the content of this page should be sent to SARA [+ contact SARA]
- Astrophysics Program Officers [+ more]
- Earth Science Program Officers [+ more]
- Heliophysics Program Officers [+ more]
- Planetary Science Program Officers [+ more]

Astrophysics



Earth Science



Heliophysics



Planetary Science



New to the SARA web page: Division Corners Astrophysics as an example

Division Corner - Astrophysics

Site Search:

Find

[SARA Home](#)

[Letters From SARA](#)

[Grant State](#)

Related Links

[Program Officer List](#)

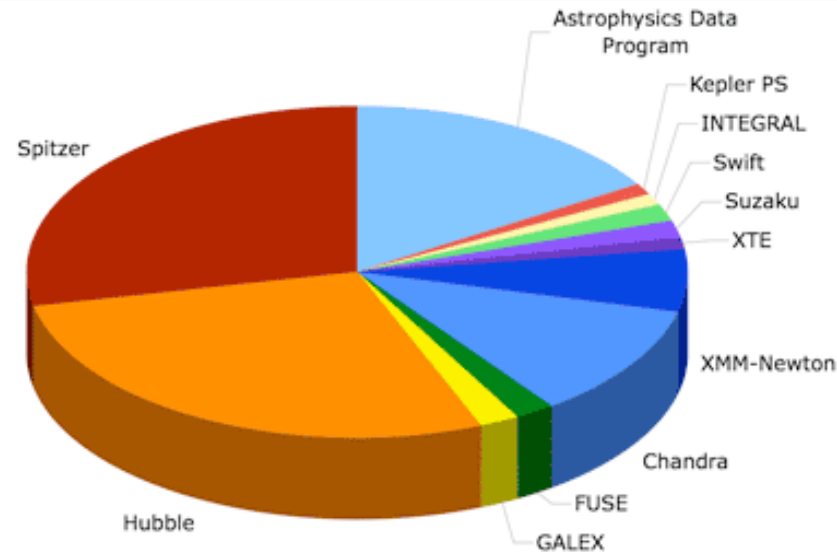
[Events Calendar](#)

[Highlights](#)

[FAQs](#)

[What's New](#)

FY2007 Astrophysics Data Analysis



Total FY07 Funding \$88M

Astrophysics

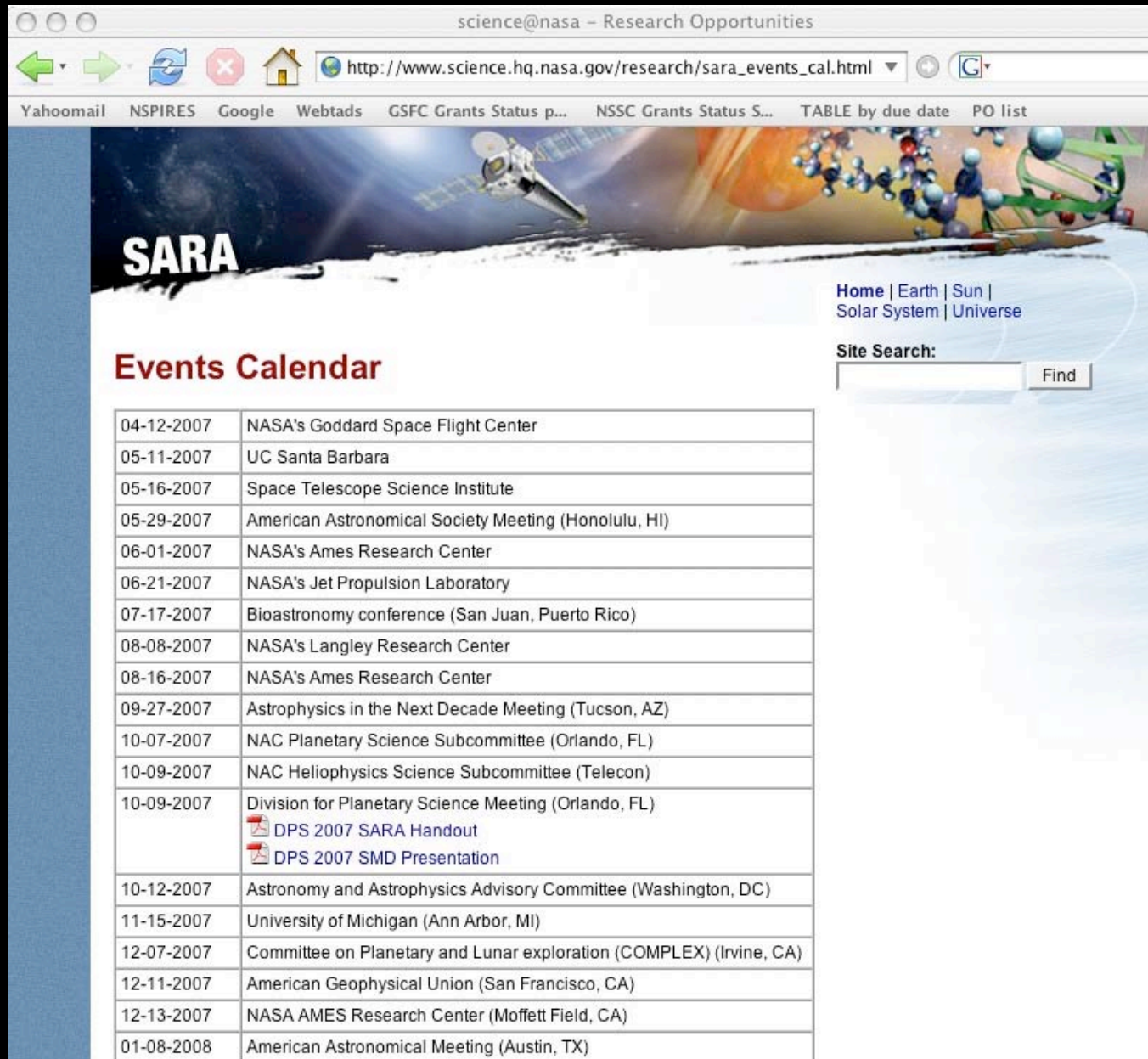
How does the universe search for answers at the beginning of time, planetary systems evolving place, go through a series of physical processes passed between stars? NASA seeks to understand these cycles and how they created the unique conditions that support life.

Content of this page is available to SARA

Program Officers

[HQ \[+ PDF\]](#)

New to the SARA web page: Downloadable presentations from events page



science@nasa - Research Opportunities



http://www.science.hq.nasa.gov/research/sara_events_cal.html

Yahoo!mail NSPIRES Google Webtads GSFC Grants Status p... NSSC Grants Status S... TABLE by due date PO list

SARA

[Home](#) | [Earth](#) | [Sun](#) | [Solar System](#) | [Universe](#)

Site Search:

04-12-2007	NASA's Goddard Space Flight Center
05-11-2007	UC Santa Barbara
05-16-2007	Space Telescope Science Institute
05-29-2007	American Astronomical Society Meeting (Honolulu, HI)
06-01-2007	NASA's Ames Research Center
06-21-2007	NASA's Jet Propulsion Laboratory
07-17-2007	Bioastronomy conference (San Juan, Puerto Rico)
08-08-2007	NASA's Langley Research Center
08-16-2007	NASA's Ames Research Center
09-27-2007	Astrophysics in the Next Decade Meeting (Tucson, AZ)
10-07-2007	NAC Planetary Science Subcommittee (Orlando, FL)
10-09-2007	NAC Heliophysics Science Subcommittee (Telecon)
10-09-2007	Division for Planetary Science Meeting (Orlando, FL)  DPS 2007 SARA Handout  DPS 2007 SMD Presentation
10-12-2007	Astronomy and Astrophysics Advisory Committee (Washington, DC)
11-15-2007	University of Michigan (Ann Arbor, MI)
12-07-2007	Committee on Planetary and Lunar exploration (COMPLEX) (Irvine, CA)
12-11-2007	American Geophysical Union (San Francisco, CA)
12-13-2007	NASA AMES Research Center (Moffett Field, CA)
01-08-2008	American Astronomical Meeting (Austin, TX)

New to the SARA web page: EPO page

SARA

Education and Public Outreach (EPO) contacts

EPO Role	Name	E-mail (@nasa.gov)	Phone
SMD EPO (Lead)	Yvonne Pendleton	SARA	202.358.1182
EPO Rep.	Larry Cooper	larry.p.cooper	202.358.1531
EPO Rep.	Doris Daou	doris.daou-1	202.358.0422
Outreach Coordinator	Ruth Netting	ruth.a.netting	202.358.0539
Lead for NPP, GSRP & NESSF	Dolores Holland	dolores.holland	202.358.0734
Heliophysics Division			
EPO Lead	Eric Christian	eric.r.christian	202.358.1763
Earth Science Division			
EPO Lead	Ming-Ying Wei	mwei	202.358.0771
EPO Rep.	Ann Coren	ann.l.coren	202.358.2528
Planetary Science Division			
EPO Lead	Marilyn Lindstrom	marilyn.lindstrom-1	202.358.1254
Astrophysics Division			
EPO Lead	Hashima Hasan	hhasan	202.358.0692

for everyone within the SMD E/PO community to provide input to the MOWG, through community teleconferences, surveys, and one-to-one communication. Anyone interested in providing input to the MOWG or having a presentation by the MOWG to their group, please contact the MOWG Chair, Emily CoBabe-Ammann at ecobabe@atlas.colorado.edu.

Existing Mechanisms for Student Support

- Undergraduate:
 - R&A (SMD)
 - USRP (OE)
- Graduate:
 - NESSF (SMD)
 - GSRP (OE and Centers)
- Postdocs:
 - NPP (SMD)
 - Named Fellowships (SMD)

EPO Challenges

Outreach opportunities for scientists are more burdensome than need be.

Diverse education portfolio is vulnerable and unsustainable in the current funding climate.

Increased professionalism of E/PO personnel across the country means that the kinds of support infrastructure needed by SMD E/PO is shifting.

EPO MOWG Charter

- Evaluate the fiscal viability of SMD E/PO programs and support structures.
- Balance the SMD E/PO portfolio to meet the needs of NASA and the SMD directorate.
- Generate pathways to long-term SMD E/PO stability
- Establish more accessible outreach mechanisms for researchers
- Evaluate the model of the SMD Support Groups.



Emily CoBabe-Ammann (CHAIR)	UC-Boulder
Edna DeVore	SETI
Jennifer Grier	PSI
Mario Livio	STScI
Leslie Lowes	JPL
Mike Newchurch	UA-Huntsville
Patricia Reiff	Rice University
Stephanie Stockman	GSFC

SMD EPO Budget in 2007: (A) + (B) ~50M



(A) Mission E/PO ~30M

Area	Examples
Higher Education	* HST -- Pre-Service Teacher Professional Development * Multi-Mission -- Center for Astronomy Education – College Teachers
E & S Education	* Spitzer Student and Teachers Observations Program
Informal Education	* Multi-Mission – Alien Earths Traveling Exhibit
Outreach	* Multi-Mission – Night Sky Network

(B) Non-Mission E/PO ~20M

* Mid-Size Grants Program, GLOBE, Support Groups, Supplemental Grants

Another way to look at it: (C)+ (D) ~50M



(C) Education (Mission + Non-Mission) ~25M

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Higher Education	* HST -- Pre-Service Teacher Professional Development * Multi-Mission -- Center for Astronomy Education – College Teachers
E & S Education	* Spitzer Student and Teachers Observations Program
Informal Education	* Multi-Mission – Alien Earths Traveling Exhibit

(D) Public Outreach (Mission + Non-Mission) ~25M

- Night Sky Network
- NASA Family Science Nights

FY08 SMD Education Portfolio (~25M)



~300 education projects embedded in 56 SMD missions.

15 competitively selected education projects.
Mid-sized projects, ~150K/year grants
(selected in Nov 2007)

GLOBE (Hands-on Earth Science Projects)

Actions Taken Since November 2007



Suspended EPO supplements to ROSES R&A science awards.

Postponed CAN for Division Support Groups.

Selected Mid-sized E/PO Projects

Extended Forums (these connect communities) through calendar year

EPO MOWG Formed

Weekly telecons started January 14

In person meeting March 7 in DC



Selected 15 proposals for SMD EPO.

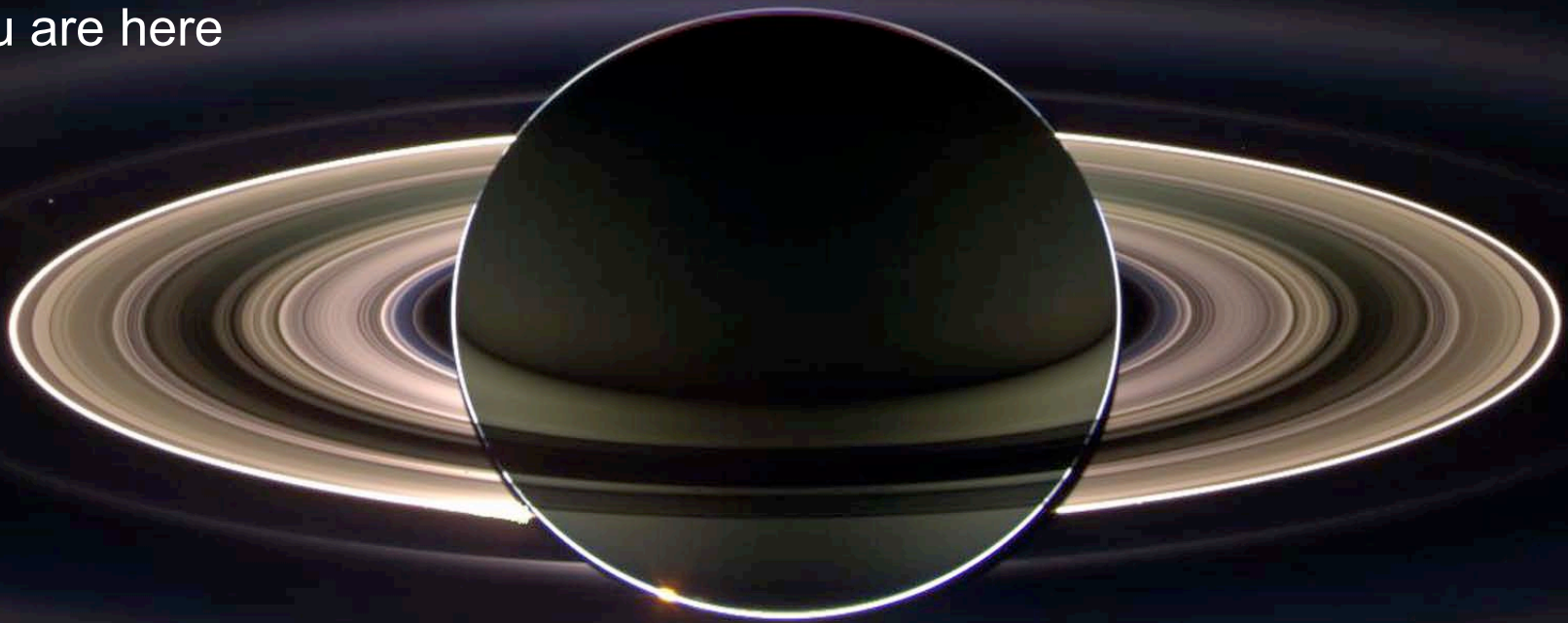
Area	Proposals
Higher Education	1
E & S Education	6
Informal Education	5
Outreach	3

Abstracts at
[http://science.hq.nasa.gov/research/sara_docs/EPO
ESS06_Selections.pdf](http://science.hq.nasa.gov/research/sara_docs/EPO_ESS06_Selections.pdf)

New Vistas, New Perspectives . . .



You are here

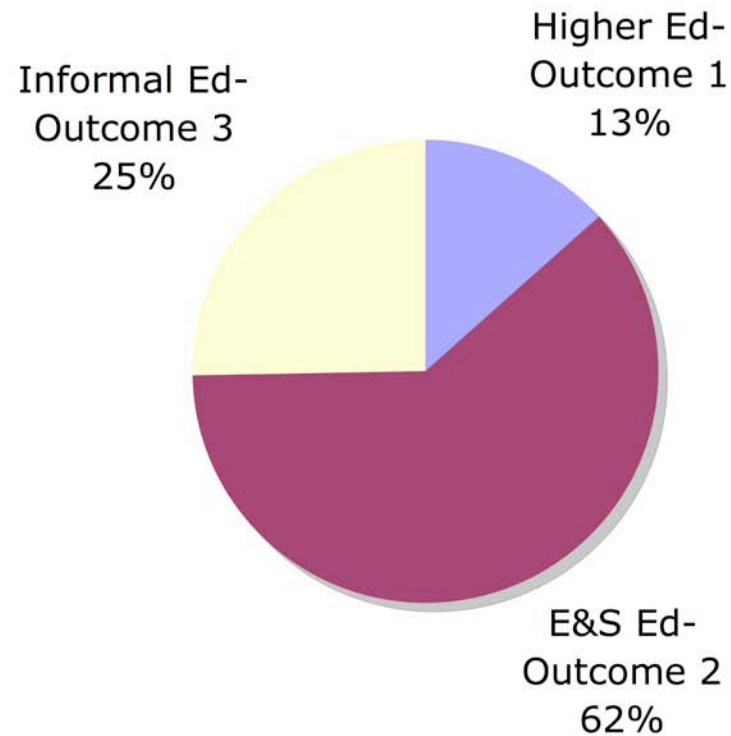


Back-Up Slides

SMD FY08 Education Budget



Mission + Non-Mission ~25M



EXAMPLES

Outcome 1: Center for Astronomy Education – College Teachers

Outcome 2: Spitzer Student and Teachers Observations Program

Outcome 3: Alien Earths Traveling Exhibit

SMD FY08 Education Budget



Missions + Non-Missions + R&A (~515M)

