EPO UPDATE

STUC – October 2013

Hussein Jirdeh

PROPOSED ACTION BY THE ADMINISTRATION

- The President proposed in the FY14 budget to consolidate 90 EPO programs and to realign ongoing STEM education activities.

- The funding for most of these programs would be removed from the Agencies (e.g., NASA, NOAA, NIH, etc) and be transferred to NSF, Smithsonian & Department of Education.

- None of these other agencies have any known plans for continuing any of the existing programs.

NASA EPO Budget

$ in Millions	FY2012 Budget	Change	FY2014 Budget Request
TOTAL	202.5	(93.1)	109.4
Education	**138.4**	**(44.2)**	**94.2**
Aerospace Res. & Career Development	58.4	(25.4)	33.0
Space Grant	40.0	(16)	24.0
EPSCoR	18.4	(9.4)	9.0
STEM Education and Accountability	80.0	(18.8)	61.2*
Mission Directorates Subtotal	**64.1**	**(48.9)**	**15.2**
Science	41.9	(41.9)	0.0
Aeronautics Research	3.3	(3.3)	0.0
Space Technology	10.4	4.8	15.2
Exploration	4.4	(4.4)	0.0
Space Operations	0.0	0.0	0.0
Cross Agency Support	4.1	(4.1)	0.0

*30 MUREP, 4.5 GLOBE, 6.8 Coordination, 19.9 Facilitation

STATUS OF SMD EPO

SMD memo giving direction for EPO Projects under Continuing Resolution – Sept 20, 2013

- SMD projects are directed to continue all EPO activities in the approved EPO plans
- Carry over funds from FY13 reserves may be used for approved FY14 EPO activities
- There is no augmentation for the projects above the FY14 budget guidelines
- No guidance for FY15 EPO yet

OPO Activities

- Presentation to the NAC Education Subcommittee
- Met with the NASA offices of Education and Communications
- Worked with the AAS in creating an SMD EPO website with metrics
- Met with the National Science Teachers Association management
- Coordinated ideas and actions with Spitzer & Chandra
- Wrote position papers including an EPO article for the Institute newsletter

A sample list of education partners that raised concerns about the STEM reorganization proposal

- IMAX Corp
- Astronomical Society of the Pacific
- Pennsylvania STEM Grant for Math and Science
- Delaware Aerospace Education Foundation
- Johns Hopkins School of Education, Center for Education and Technology
- Maryland Science Center
- STEM Innovation Project Educators in the states of California, New York, and Florida
- Maryland Business Round Table for Education
- Ohio Resource Center

NEWS AND PUBLIC AFFAIRS

News of Hubble's discoveries

For 2013:

- 31 Science News Releases
- 2,850 online articles with total circulation ~ **3.8 billion***
- The average news release is exposed to **138 million potential readers**

Comet ISON

* *Meltwater News*

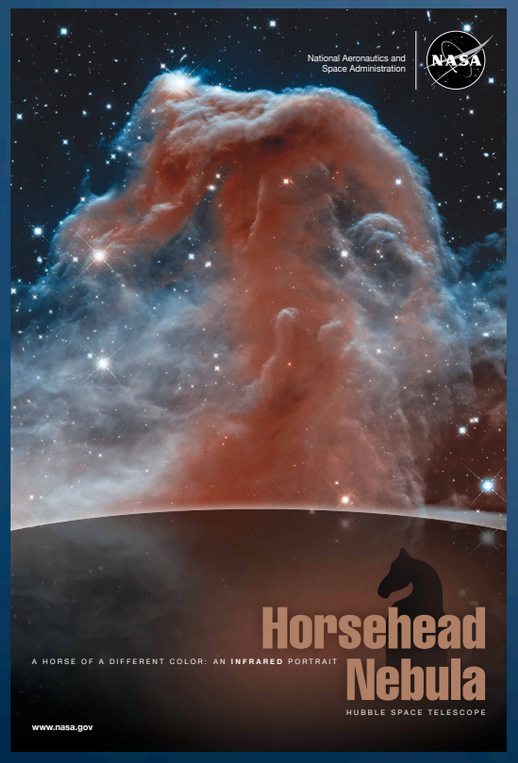
ViewSpace

- We are up to 205 museums and science centers using ViewSpace
- Developed 3 new ViewSpace programs in 2013
- 50 science themes in circulation

INSTALLATION AT CLARK PLANETARIUM, SALT LAKE CITY

Formal Education

- Star Witness News – 2 stories produced in FY13 40,000 printed each
- Partnerships (over 500 local, regional and national)
- Lithographs – 4 lithos w/ educational guides
- Inquiry Based Education Poster – Horsehead Nebula



Activities with local Baltimore Schools

- New partnership with the Dream Academy – After school program
- Astronomy & Engineering Club activities
- Community outreach events at the Institute

ONLINE OUTREACH

THE WEBBY AWARDS

ONLINE OUTREACH

- **2 million** visits/month
- **150 million** hits/month
- Inbox Astronomy

  ~40,000 subscribers

- **160** questions/month
- **HubbleSite is 10% of NASA's online traffic**

THE WEBBY AWARDS

Outreach


ISON blog
COMET ISON,
AS ONLY HUBBLE CAN SEE IT
Subscribe
August 13, 2013
Hubble Hangout: How To Get Comet ISON Hubble Data
by Tracy Vogel
Did you know you have access to Hubble observations of Comet ISON? Join our host Tony Darnell and a bevy of astronomers at 4 p.m. EDT Aug. 14 for an online discussion of how to obtain and use Hubble data on the comet. A must-see Google Hangout for both new and experienced astrophotographers, as well as people curious to see how Hubble data becomes images.
Ever wondered how to get images and original data from the Hubble Space Telescope yourself? Here's your chance, we're holding a hangout to show you how you can access and download Hubble data of the Comet #ISON.
Please join Tony Darnell, Alberto Conti and Scott Lewis as they work with Zolt Levay, Max Mutchler and Bonnie Meinke to show you how to get data for the comet yourself!
August 13, 2013
Insights on ISON: A Chat with Dean C. Hines
by Josh Sokol
Astronomer Dean C. Hines of the Space Telescope Science Institute is using the Hubble Space Telescope to study Comet ISON in polarized light. This technique offers new insight into ISON's structure and composition – factors that will play a key role in the comet's eventual fate. We sat down with Dean to discuss his recent results.
ISONblog: Can you briefly explain polarization?
Dean Hines: Sure. Polarization is a property of light that happens most frequently wh
light scatters off particles like dust or reflects off a surface. We use polarization to te
us about the scattering material or the reflective surface. Different materials will scatt
or reflect light differently, and will impart different polarization signatures. If you're
looking at snow with polarized sunglasses, for example, that's a lot different than
looking at the surface of water. You can put on polarized sunglasses, which filter out
polarized light, and see the fish in the pond without the glare from the reflected sunlig
But putting on polarized sunglasses when you're snow skiing reduces the brightness,
but doesn't do much else because the snow doesn't polarize the scattered sunlight.
Dean Hines
When you look at a comet with polarization data, what can you see?
You can determine the particle sizes and their structure. Is it made of rocky material? Are the particles big or small? Are
they round? Are they fluffy like snowflakes, or hard like little hailstones?
What does polarization show for ISON specifically?


HUBBLE
hangouts
LIVE TALKS EACH MONTH!
We have a lot of great hangouts planned, all designed to get everyone engaged in astronomy research and outreach. Comment, present your questions, or just watch. We hope to see you there!
All Hubble Hangout events will also be announced on the Hubble Space Telescope Google Plus page
Find Future Events Here


skype in the classroom
Search
Connect your classroom to the world with Skype
Choose a subject

Frontier Fields - News, Education, and Public Outreach

Engaging the public, educators, and students

Enhance understanding of light, optics, and gravity

Engage students, educators, and the public in the search for the earliest galaxies, which will culminate with Webb

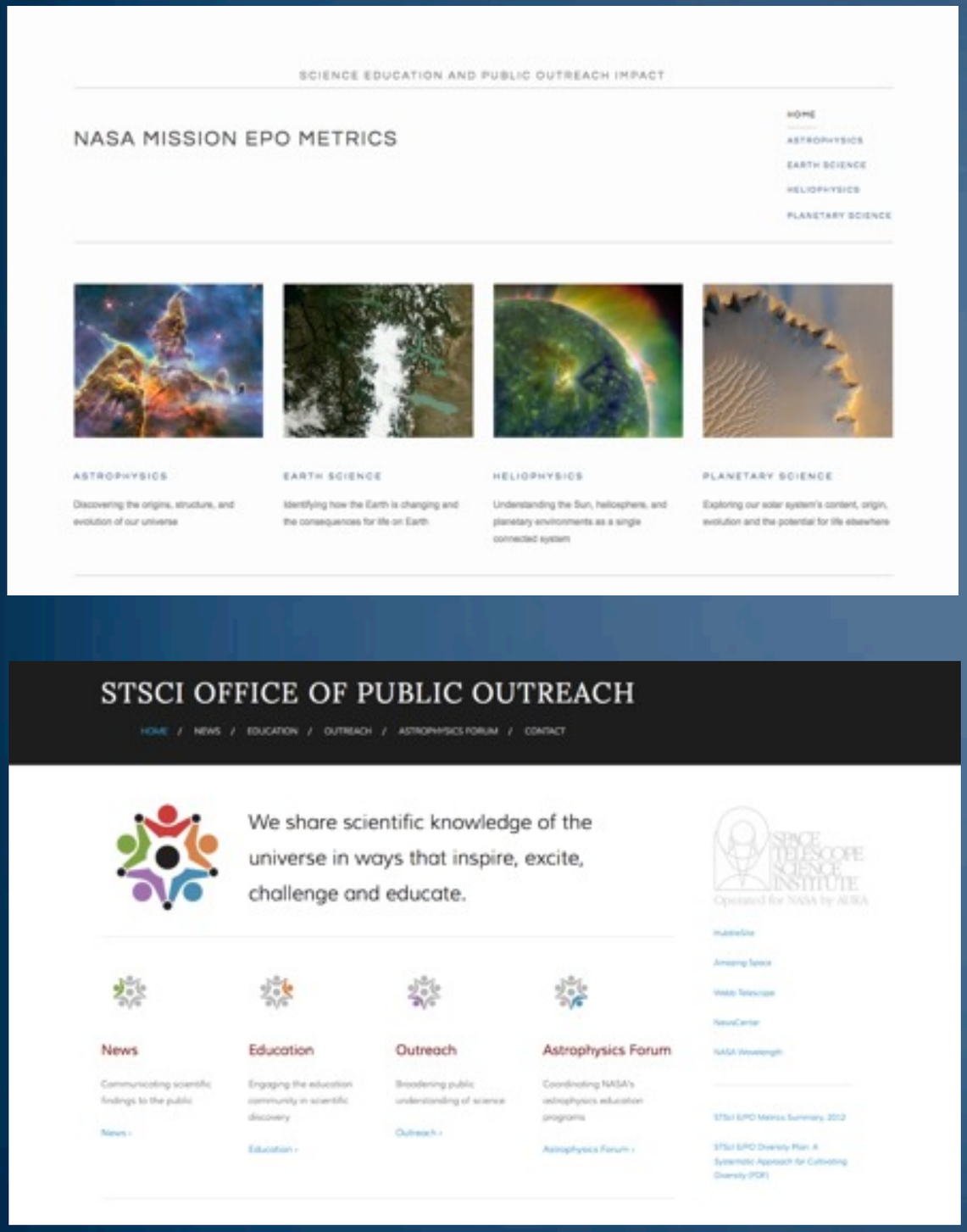
Convey the process of science and how science works

Provide an accurate portrayal of the diversity of people and experiences that comprise a successful science team

Engage citizen scientists in the process of discovery

Scientific visualization of a black hole passing through Baltimore's Inner Harbor

MORE INFORMATION



NASA SMD Missions:
http://nasamissionepometrics.org

STSCI Office of Public Outreach:
http://outreachoffice.stsci.edu