Education and Public Outreach Program Update
Fermi User’s Group 6/16/11

Prof. Lynn Cominsky
Sonoma State University
**NASA Education Framework – new!**

- **Blue area** is for strategic partners such as SSU E/PO

- **Red area** is designated recommendations for NASA Center Education offices and Office of Education

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**Higher Education**

*Outcome:* Identify, cultivate, and sustain a diverse workforce and inclusive work environment that is needed to conduct NASA missions.

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**Elementary/Secondary Education**

*Outcome:* Attract and retain students in STEM disciplines along the full length of the education pipeline.

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**Informal Education**

*Outcome:* Engage the public in NASA’s missions by providing new pathways for participation.

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**Strategic Partnerships**

*Outcome:* Build strategic partnerships that promote STEM literacy through formal and informal means.

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*Science, Technology, Engineering and Mathematics (STEM)*
E/PO group News

• E/PO plan for FY11-13 is now approved and signed by HQ
  – This was a major effort – plan is 45 pages long
  – I will send it to anyone on the FUG that would like to read it

• Due to impending funding cutbacks by other SSU missions (not Fermi), I have had to layoff all (four of) the part-time consultants as well as Logan Hill
Epo’s Chronicles

• Continues weekly
• 2011 Calendars were made from IYA “eposodes” – were be distributed at AAS
• In 2011 we are doing special “eposodes” about Cosmology
• Now approved by NASA Product Review! And (soon to be) linked from HQ Kids’ Page (if not already)
Cosmology Course Development underway

- Still working with lawyers to try to get a contract signed with Great River Technologies (Kendall Hunt) – our original partner in the proposal, prior to the (now 1.5 year long delay due to the state-mandated RFP process)
- Meanwhile, development continues – we have 3 chapters ready for the publisher and are mid-way through chapter 4.
- Work should speed up this summer
SSU is hosting a two-week professional development course for educators: NASA’s *Multiwavelength Universe* during July 11-22

Cominsky is instructor of record

This is an Astrophysics-division wide collaboration, facilitated by the Forum (STScI)

- Fermi, Swift, XMM-Newton, NuSTAR (SSU)
- SOFIA, Kepler, (SETI Institute)
- WISE (UCB CSE)
- WMAP (Adler)
Multiwavelength Course Flyer at NSTA

July 11-22, 2011

Online Professional Development for Educators

Explore NASA resources in a combination of online synchronous and asynchronous formats to understand how astronomers use their knowledge of light to investigate the universe.

1 Credit for EDUC 490 or 1.5 Continuing Education Credits through Sonoma State University

For more information and to register, go to:
http://epo.sonoma.edu/multiu.php

NASA's
Multiwavelength Universe
Multiwavelength Course

- http://epo.sonoma.edu/multiu.php - for information and to register
- Uses many of the Flash assets we developed for Cosmo Course Chapter 2
- Will be limited to 25 teachers
  - Some are taking for Continuing Education Credit
  - Others are taking for Academic Credit
  - Approved by SSU’s Department of Education
- Course Moodle login at:
  http://universe.sonoma.edu/cosmo/login/index.php
Sonoma State University Education and Public Outreach

NASA's Multiwavelength Universe
Online Professional Development for Educators

Read Me

Creating a Moodle Account
WebEx Tutorial
Welcome Letter

Site news

Unsubscribe from this forum

NASA's Multiwavelength Universe course starts July 11
by Lynn Cominsky - Tuesday, 14 June 2011, 01:50 PM

Our first session will begin at 1 PM EDT (10 AM PDT) on Monday July 11.

Please make sure you have created your Moodle login account. If not, see instructions for further information. Once you have created your login account, you can click on the course listing below to enter the course Moodle site.
Welcome to NASA's Multiwavelength Universe! - Mon July 11 1 pm ET (10 am PT)

This 1 hour LIVE session will be held on Monday July 11 at 1 pm Eastern / 12 pm Central / 11 am Mountain / 10 am Pacific

Session Overview: Instructors and participants will meet synchronously to:
- discuss course objectives
- explore our virtual online learning environment
- share instructor and participant backgrounds
- review participation and course requirements.

Our time together will include an engagement activity that you can do in your classroom: "What's Getting Through?"

Before the session, you should:

Read the following materials:
- introductory letter
- Background material

After-school clubs

• SSU clubs finished the year with a tour of SSU by kids from Cali Calmecac

Cali student Richard with his prize-winning science fair project (in Spanish!)
Make Your Own Pulsar at the Mini-Maker Faire

April 2, 2011

Sonoma State University E/PO sponsored a booth at Sonoma County’s “Mini-Maker Faire” held on the Sonoma Country Day school campus.

The Maker Faire concept was started by local hi-tech company O’Reilly Media. This “Mini-Maker Faire” concentrated on bringing the Maker Do-it-Yourself culture to children.

Our booth featured the activity “Make Your Own Pulsar.” This approved activity is part of both the Supernova Educator’s Guide and also appears on the back of the Fermi satellite lithograph.

http://fermi.sonoma.edu/teachers/FermiLitho09pt.pdf

About 100 children made pulsars from 2 LEDs, a battery, some string and some modeling clay.

Lynn Cominsky
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Other kids events

• MESA Day at SSU – Kamal Prasad helped to coordinate this event which brought over 700 local kids to campus to compete in STEM challenges (April 30, 2011)
Other kids events

- Latino Family Summit Day at SSU – Kathy Morrison and Richard Klein did workshops with over 100 6-8\textsuperscript{th} graders (3/26/11)
- Kathy also did Expanding Your Horizons 4/2/11
Other SSU Workshops & Talks

• Fermi-content talks by Cominsky:
  – University of San Francisco – 2/9/11
  – Sonoma County Amateur Astronomers – 2/9/11
  – APS April Meeting – Cosmology course – 4/2/11
  – Petaluma Historical Museum BEYOND exhibition – 6/11/11
  – No Name Womens’ Group 6/15/11

• Fermi-related talks by Kevin McLin
  – Petaluma Museum – 4/22/11
Conference Presentations since 12/10

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- “Using the Big Ideas in Cosmology to Teach College Students,” L. Cominsky, K. McLin, K. Coble, J. Bailey & A. Metevier, BAPS.2011.APR.R12.4
- NSTA nationals in San Francisco – we took the booth and handed out many Fermi models, card games.
Global Telescope Network 6/11

• We now have 38 members in the GTN (up from 25)
• We have five high school students this summer (three are volunteers) who will be working on analyzing telescope data from GORT and other GTN facilities (PROMPT in Chile)
• We are adding 20 new AGN to our list for monitoring in part to support an HST proposal for which McLin is a Co-I: “Probing Weak Intergalactic Absorption with Flaring Blazar Spectra” (J. Stocke, PI from U of Colorado)
E/PO Summer Interns - 2011

- HS Volunteers working on GTN observations

Anna Aaronson  Adrian Chan  Jacob Gollub
E/PO Summer Interns - 2011

- Dillon Jackson
- Sponsored by SCOE to work on GTN observations

- Dominic Nicholson
- Working on Flash development
GRB Skymap News

- Website approved by NASA Product Review
- iPhone app in Alpha Testing – beta volunteers?
Fermi All-sky Poster

• Designed by Aurore Simonnet
• Debuted at Fermi Symposium in Rome
Next E/PO Plans

- New litho set featuring first sky map and discoveries for each type of object – not yet
- AER publications in progress: Cosmology Understanding, Educator Ambassador program, Black Hole show audience learning
PR Update

Press releases and web features since last FUG (11/10):

• 11/9/10: NASA's Fermi Telescope Finds Giant Structure in our Galaxy – NASA media telecon – YouTube video was a big hit

• 1/10/11: NASA's Fermi Catches Thunderstorms Hurling Antimatter into Space – press conference at AAS moderated by LRC – YouTube video was even bigger hit

• 1/12/11: NASA Satellites Find High-Energy Surprises in 'Constant' Crab Nebula – press conference at AAS
PR Update

Press releases and web features since last FUG (11/10):

• 5/11/11: NASA's Fermi Spots 'Superflares' in the Crab Nebula
• 5/20/11: Radio Telescopes Capture Best-Ever Snapshot of Black Hole Jets – more than 180,000 YouTube hits in 3 days! Plus an additional 100K hits on GSFC and other sites

• Press at the Fermi Symposium
  – We did not do any organized press conferences
  – Several reporters attended and wrote stories, including Jason Palmer from BBC who is still trying to follow up on catalog story.
Future PR projects

• Millisecond pulsar in Globular Cluster – awaiting Science paper acceptance
• PSR 1259-63 – delaying ApJ online publication so we can get out a press release