

PBO Nucleus Education Update; Becca Walker, Education Specialist

Reminder: What is the Plate Boundary Observatory nucleus? UNAVCO aims to integrate 209 GPS stations from 6 regional networks into a single “nucleus”. The E&O component includes educational modules for middle/high school Earth science and college geoscience classrooms; professional development for instructors; an interactive website; and collaboration among scientists, educators, UNAVCO staff, and other organizations.

Project status. Below are brief updates on selected items that I discussed at the 10/05 meeting. Originally, we anticipated focusing the majority of our early efforts on the college audience, but we have had unexpected opportunities to target the middle/high school audience that we have taken. With respect to the middle/high school audience, we are primarily targeting pre-existing teacher networks. I will discuss how these opportunities have altered our timeline, as well as details of some of the items below, during the standing committee meeting.

- Half-day course for college faculty was accepted for 2006 GSA national meeting, October 2006, Philadelphia. Course title: *Using GPS data to study crustal deformation, earthquakes, and volcanism: a workshop for college faculty.*
- Conducted telephone interviews with 12 faculty members about college-level modules. (Results will be discussed during standing committee meeting.)
- Submitted proposal with IRIS for a joint K-12 teacher workshop at 2006 SACNAS national meeting, October 2006, Tampa. Title: *Using data-rich activities to teach about plate tectonics, Earth structure, and earthquakes.*
- Jessica Murray and I created one-pagers about GPS for K-12 teachers that are available on the web. They are distributed to teachers with whom we interact (roughly 25 to date.)
- Participated in IRIS-sponsored professional development workshop for middle and high school teachers, Yuma, AZ. During the activity, teachers were given a brief introduction to high-precision GPS, completed an activity using the Jules Verne Voyager Jr. map tool entitled *Visualizing relationships between earthquakes, volcanoes, and plate boundaries in the western United States*, and discussed how they could use the activity with their students.
- Worked with middle and high school teachers in Portland, OR in conjunction with Teachers on the Leading Edge (Jules Verne Voyager map tool activity—see previous bullet—and focus group; details will be provided during standing committee meeting.) Discussions regarding a UNAVCO/Teachers on the Leading Edge collaboration have been initiated.
- Worked with PBO nucleus evaluator and developed an extended timeline and evaluation plan. (Details will be provided during standing committee meeting.)
- Jen Yu will be telling you about the work that we have done on the new education and outreach webpage. A PLONE (shared project workspace) was developed last week.

Selected upcoming work:

- **GSA Cordilleran section meeting, May 8-10, Anchorage.** We will contribute to a short course for K-12 teachers. Course title: *Alaska's volcanoes, earthquakes, and subduction zone: real-time Earthly data for classroom use.*
- **AGU spring meeting, May 23-26, Baltimore.** We will hold an informal brainstorming/work session for the introductory/general education module and are looking for participants!

- **NSTA 2007 national meeting, St. Louis.** We will submit a proposal for a short course for middle/high school Earth science teachers. (Deadline: April 15)
- **Master teacher and faculty-in-residence summer program.** In June, we will bring two secondary Earth science teachers (“master teachers”) and one college faculty member (“faculty-in-residence”) to work at UNAVCO headquarters as described in the original proposal. Participants will work for 1-2 weeks to assist us in module development, pilot-test the modules in their classrooms during the 2006-2007 school year, and aid in dissemination. The program will be advertised upon the conclusion of this meeting, and completed applications are due in April. See me for further details or a copy of the announcement.
- **AGU fall meeting.** UNAVCO and IRIS will submit a proposal for a K-12 teacher workshop at the 2006 national meeting in conjunction with the GIFT workshop.
- **General items.** Additional teacher focus groups from target populations (Texas, Colorado, possibly Bay area) and faculty interviews from tribal colleges and HCBU will be held this spring. Work on the webpage will continue, including populating the PLONE and creating a “how GPS works” page. After our brainstorming/work session in Baltimore, summer work by the faculty-in-residence, and further summer work by UNAVCO staff, pilot testing for the introductory/general education module will begin during the fall 2006 semester.

How you can help:

- Recommend a few of your experienced and creative faculty colleagues to work with us at AGU in Baltimore.
- Contribute materials that you use to teach about GPS and plate tectonics.