

## PROFILES OF SCIENTISTS IN EDUCATION AND PUBLIC OUTREACH

*This profile is based on excerpts of an interview with Dr. Kathryn Flanagan, about her involvement in Education and Public Outreach (E/PO), specifically her role in the Chandra Science After School Pilot at the Center for Space Research at MIT. Dr. Cherilynn Morrow (Space Science Institute – SSI) designed the interview questionnaire. SSI's Preston Dyches conducted and edited the interview in April, 2003.*



### **Current Professional position:**

I'm a research scientist at the Center for Space Research at MIT. I am part of the instrument team for the Chandra High Energy Transmission Gratings. My primary background is in instruments and hardware. My current science interest is high resolution X-ray spectroscopy of supernova remnants.

### **Description of Kathryn's featured E/PO role:**

I direct the education efforts at the Center for Space Research, and my E/PO role is both managerial and direct. We're just finishing the Chandra Science After School Pilot, a program that merged seven successful E/PO grants for Chandra into one coherent program. We brought about 70 students from Boston area after-school programs to the Museum of Science for several visits. Each time, a different scientist would give a talk on his or her specialty, and we worked with the students on an activity that illustrated that particular specialty of the day. The follow-on to this program will be a two week summer program at MIT and the Museum of Science. The students get to research a project and present it at the end.

### **Comments on her time commitment to the project:**

On this particular project, my direct involvement hasn't really been at any higher level than the other scientists who are presenters. I'm giving my own talk on supernova remnants in a few weeks. We have a remarkable individual, Irene Porro, who is 100% dedicated to facilitating and taking care of the day-to-day details, so I get to work in the program as a contributing scientist. My oversight level doesn't take a huge amount of my time.

### **How she balances her E/PO effort with other professional activities:**

First, I have an extremely supportive PI, Prof. Claude Canizares, who is now Associate Provost of MIT. It was important to him to have a central figure for E/PO at the Center for Space Research. The new director at the Center for Space Research, Prof. Jacqueline Hewitt, is also very supportive of our E/PO efforts. In fact, she has been the PI on several proposals! With E/PO activities, there is as much opportunity as you have energy to provide, so you have to reign yourself in if you want to find balance with the science that you're doing.

### **Challenges to her E/PO involvement:**

The challenges are twofold. From an individual scientist's point of view, the challenge is to balance it with your other responsibilities. E/PO is very seductive – it takes everything you've got and gives it back.

The second challenge, from a management point of view, is finding a way to keep an anchorperson who can make it easy for the individual scientists to give a little of their time on a regular basis. It's so helpful to have somebody with expertise, who can steer you toward the difference between formal and informal education and help you forge partnerships; someone who can help implement it on a local level.

### **The most important positive impact she has had on the program:**

When we do E/PO we're feeding the spirit, but it's really hard to measure that. The payoff is really in individuals. You'd be amazed at the kind of impact it can make on a child, just to see the possibility of becoming a scientist. Remember, we are older versions of the kids sitting in front of us.

### **Kathryn's words of wisdom about E/PO:**

You just have to start somewhere. It's quite amazing. The next thing you know, somebody is coming to you and giving you an opportunity, and another and another. It depends on the level of involvement and what you'd like to do. If you'd like to speak in a classroom, I guarantee you'll find a classroom to speak in. If you want an organized effort, start with your Broker and the local folks that do this sort of thing. There's no dearth of opportunities that come once you open your eyes to it.