

PROFILES OF SCIENTISTS IN EDUCATION AND PUBLIC OUTREACH

This profile is based on excerpts of an interview with Dr. Phil Scherrer, about his involvement in Education and Public Outreach (E/PO). Dr. Cherilynn Morrow (Space Science Institute – SSI) designed the interview questionnaire. SSI’s Preston Dyches edited the responses in May, 2003.



Current Professional position:

Professor of Physics (research faculty) at Stanford University. I’m the PI for two instruments: the Michelson Doppler Imager on the SOHO spacecraft and the Helioseismic and Magnetic Imager for the Solar Dynamics Observatory. I’m also director of the Wilcox Solar Observatory.

Description of Phil’s work in E/PO:

Essentially all of the projects I’m involved with have E/PO components. It amounts to a reasonable base of funding, so we’re able to do a lot. Fortunately there are a number very dedicated staff members to assist with the various projects.

I also act as coordinator for several press releases per year, including Space Science Updates for NASA. These are significant efforts that take a good deal of preparation.

Phil’s time commitment:

I spend about five percent of my time doing the paid part of my E/PO work. On the volunteer side, I do about one public lecture per year. There’s also a 4-H astronomy club here that draws kids from about four different schools, and I meet with them once a month.

The biggest challenges to his E/PO involvement:

Learning how to present things to people who don’t have a detailed science background is a challenge. You have to put your material into a form that is valuable to someone, without doing it in a condescending way.

I think it’s important to go to classrooms and give talks from time to time, to see where the target is, just like it’s important to talk to the press. We’re not journalists. Sometimes you’ll realize that, for example, you’re talking about flows underneath sunspots that you’re able to measure, and their

question is, “What’s a sunspot?” You need the contact to keep the context, so that you can communicate.

It’s a struggle sometimes to get others to use language and metaphors that are accurate. It’s unfortunate when a story gets a good deal of coverage but contains visualizations or language that aren’t correct.

But there is an advantage that we have as “Sun-Earth connection” people that many areas of physics don’t have. The things we’re talking about *can* be described to somebody, and the audience can see how it relates to their lives. Many of the things done in the physics department are so obscure that it would be very difficult to peak somebody’s interest, but you can look at the Sun and see a sunspot.

Keeping balance is also important, because it’s fun to do E/PO and you can get carried away.

His greatest positive impact on the project:

It’s hard to tell the impact you’re having on the grand scale, but on the individual scale you can. There are several kids that we’ve really connected with, and I think the work we’ve done with them has been an important part of their education. It doesn’t matter whether they grow up to be scientists or not, because we’ve given them a focus of interest outside of school and shown them what they are capable of.

What he gets out of his participation:

It’s certainly more personally satisfying than some of the things we have to do!

We’ve distributed about 15,000 hand-held spectrometers to students across the country. They’re simple – just a poster that you cut, fold and tape together – but the thought that so many kids can go out and look at a streetlight and see what it’s made of is great. It says that something’s cooking out there.

Phil’s words of wisdom about E/PO:

As the PI of a major project, take E/PO not simply as a duty, but embrace it as a key part of your activities. With a larger project you have an opportunity to actually make a big impact.

The challenge we all have is how to deal with the little bits of funding that are available and how to make them useful. That’s difficult with smaller projects, but you just have to be proactive and look for ways to get your stuff out there, because people are interested. They want to know.

Stanford Solar Center:

<http://solar-center.stanford.edu/>