

Washington Needs Astrophysicists

Julia Kregenow

Everybody knows about the Hubble, NSF, Chandra, and Spitzer fellowships, but you may not know about fellowships in science policy which are just as prestigious and competitive. I recently took one called the Christine Mirzayan Science & Technology Policy Graduate Fellowship in Washington, DC, and it expanded my career options tremendously. A science policy fellowship can be an effective stepping stone in your career in OR outside of academia.

You can get involved in science policy at any stage in your career, and stay for as little as a couple of months or as long as retirement. Fellowships make a great introduction to the DC policy scene, and you don't have to have a strong interest in politics to be good at policy. Some are designed for mid- or late-career scientists, who bring a great deal of accumulated experience and wisdom from their field. Others are pitched specifically to postdocs and grad students. Investigating the latter turned up several established science policy fellowships, including those with the AAAS, AIP, APS, and sometimes AAS, usually lasting 12 months. I was fortunate enough to receive the Mirzayan Fellowship, which is shorter—only ten weeks. I spent Fall 2007 working at the National Academies in Washington DC along with 16 other fellows from around the country, including medical doctors, engineers, physicists, an evolutionary biologist, and a lawyer, all at the same stage in their careers, all of us trying something entirely new. It blew my mind.

I had a great experience in DC. I got to see the intricate details of how the National Academies assembles experts to research and report on all kinds of science and technology issues, and how their authoritative consensus reports directly influence policy. In the spirit of “completely different,” I chose to work in a field outside my graduate training and so I got to learn all about environmental sustainability and biofuels: a very hot topic in DC these days! I spent about a third of my time on this project: researching and writing briefs on current sustainability projects, organizing a national meeting to discuss these projects, writing a summary report, and researching and proposing new ideas. Another third of my time was spent on an unrelated project, also at the Academies, planning and hosting an educational seminar on a topic of our choice: the 2007 Farm Bill and public nutrition. That was exhilarating, and provided the opportunity to learn all about yet *another* new topic. The remaining third of my time was probably the most illuminating. We fellows were encouraged to attend events outside the Academies to broaden our exposure to policy. I got to tromp all around the city, attending Congressional hearings and briefings, seminars at local think tanks and universities, roundtable discussions, breakfast with a Representative from my home state, observing the House and Senate in session (and voting!), sitting in on committee meetings, hearing a leading Presidential candidate announce their science and education platform, attending dozens of science policy happy hours, and more. The fellows

went to any events we could find and get invited to, and just crashed the others. It was phenomenal; a great view of policy and of Washington, DC.

An unexpected picture emerged through all that tromping: Washington needs astrophysicists. To be sure, our government needs more input from scientists in general—that is essential to good science policy. But I think astronomers are particularly well-suited as liaisons between science and policymakers: Who is more accustomed to looking for the big picture of issues than we who study the whole Universe? We also necessarily have a very broad science background encompassing many subdisciplines, since we have to understand size scales from subatomic particles to billions of light years. I can attest that this is a great preparation for science policy in DC, where often your research specialty doesn't matter and you could be asked to work on any science or technology issue that comes up.

Finally, you will gain perspective. Science policy is a way to see (AND INFLUENCE) how our work in science fits in to the larger scope of society—something hard to do from a single vantage point within science. Expanding your perspective to see the connection between science and society will make you more informed about the implications of your work, and highlight the importance of communicating it. Learning how science is shaped by policy, how science progresses, what obstacles it faces, and how government approaches it, working in policy will help you understand the whole problem better so you can make your own science and teaching goals more concrete, and therefore be more effective. I even found that simply working with the other fellows—brilliant, articulate scientists, and not an astronomer among them—exposed me to perspectives, patterns of thinking, and approaches to problems I would not have otherwise seen. After six years in grad school, it was instructive to work with non-astronomers for a while!

A majority of new astronomy PhDs consider non-academic jobs, and the Mirzayan Fellowship is the perfect way to investigate one such career without abandoning academia. It is short enough to do during graduate school or a postdoc without throwing you off track. If afterward you decide to pursue policy further, the experience is invaluable because the Mirzayan serves as a feeder program for other policy fellowships and gives you a serious “in” and connections throughout DC. Even if you intend to continue in academia, a stint in policy in DC will enrich your experience as a scientist and/or educator (not to mention your resume). Even if you're not interested in politics or not planning to leave research, I encourage late stage grad students and recent graduates to consider a science policy fellowship as a stepping stone in your career, no matter what you want to be when you grow up.