In collaboration with Kevin Covey and Marcel Agüeros (when we were graduate students at University of Washington)
A little background ... (back in the early 2000s)

• A white paper for the American Astronomical Society expressed concern that while 25% of the population is underrepresented minorities, only 2-3% of all astronomy Ph.D.s were obtained by underrepresented students.

• Kevin Covey, Marcel Agüeros and I were graduate students at the University of Washington (and were concerned about this issue).

We came up with some strategies.
Strategies (and outline) (in hindsight)

- Prepping the department
- Making external connections
- Presenting real data
- Making internal allies
- Writing the plan
- National conferences
Prepping the Department

• Talking with individual faculty members
• Bringing in speakers (both science and diversity)
• Addressing the entire faculty
• Identifying allies
• Getting other students on board
Presenting Data: Speakers (re-shaping misconceptions)

• Despite affirmative action, underrepresented prize fellows were still obtaining proportionally fewer faculty jobs than their peers

• Large numbers of black students graduate from HBCUs with degrees in physics but don’t go on to Ph.D.s

• Women and underrepresented students are often evaluated differently than white males
Dear Faculty,

Over the past year there have been a number of discussions within the department about diversity. Some have taken place in concert with faculty, in particular over how to augment our recruiting; some have been among the graduate students. No particular incident or immediate concern has triggered these discussions. However, there is the strong sense that we can do more to ensure that our department attracts the best women and minority students and faculty, and to build and maintain an environment that does not impede their success, thereby enriching the education and research of all.

We are writing to invite all of the department to explore how to reach these goals. We don’t come today with specific recommendations, or for that matter specific grievances. We believe that much good work has been done and will continue to be done to make our department a place that attracts and cultivates the best researchers and students and propels them on to great careers. And we are glad to see that recruitment of students and faculty from diverse backgrounds is being discussed. Broadening our applicant pool will require more efforts, however—efforts which still need to be thoroughly defined and perhaps codified to insure their long term success.

We believe that the next step is a serious, introspective look at where we are and who we are as a department. We wish to encourage analysis of the department culture and its impact on women and minorities once they join us, to ensure that the unwritten rules guiding our professional and social interactions are not inadvertently hampering the progress or success of members of the department. To aid us in this difficult process, we are consulting with outside experts. Johnmella Butler (Associate Dean and Associate Vice Provost of the Graduate School, Professor of American Ethnic Studies and Adjunct Professor in the English Department and Women Studies Department) will visit the department in January (after the AAS!) to discuss recruitment and broader issues of departmental culture. Nationally recognized for her active work in curriculum change and development, Dean Butler has received major grants from the Fund for Improvement in Post-Secondary Education, the Ford Foundation, and the National Endowment for the Humanities. We are in the process of identifying additional speakers to add to the astro-lunch schedule in the winter. We plan to schedule a presentation of sociological research by Vega Subramaniam from the Office of Minority Affairs on the opportunities and difficulties women scientists encounter.

Progress towards our goals will be fruitful only if the faculty, staff, and students of the department participate in the forums and workshops we organize. But growth as a department requires more than just attending workshops—it requires additional personal reflection by its members. We hope you will join us in these efforts.

Sincerely,
Making External Connections

Many people thinking about diversity at universities

Me in my office at the Office of Minority Affairs/McNair Program

We identified and met with numerous programs on and off the UW campus including some that are on MIT’s campus
Making Internal Allies

Some people for social reasons
Some people for financial reasons
Some people for status reasons

Eric Agol used Pre-MAP (K. Covey talk) in his NSF CAREER grant

Kelle Cruz won an NSF postdoctoral fellowship that included implementing our diversity plan
Writing the Diversity Plan (2003)

Keivan Stassun came to UW (as one of our speakers)

We sequestered ourselves in a conference room for several days
After those few days, the finished product looked something like this.

And after a few months . . .
To Feed, To Fix: Diversity and the Astronomy Pipeline at the University of Washington

prepared by Marcel Agüeros, Kevin Covey, and Andrew West

Introduction

1. The pipeline

Recently, there has been increasing interest in addressing the under-representation of minorities in science. This is commonly called the order of magnitude problem: the percentage of science PhDs awarded to minorities is far smaller than the percentage of those minorities in the general population. Yet research has consistently shown the benefits of a workplace that reflects the diversity of the broader community, a fact at the heart of the Supreme Court’s recent ruling supporting affirmative action programs. [1]

In our field, the American Astronomical Society (AAS) has sought to address the order of magnitude problem through the creation of two standing committees: the Committee on the Status of Women in Astronomy (CSWA), and the Committee on the Status of Minorities in Astronomy (CSMA). These committees focus on removing barriers preventing participation in astronomy, and communicate their ideas and initiatives through sessions during each AAS meeting, as well as in dedicated workshops. Among the results of the work of these committees are CSWAs decade-old “Baltimore Charter for Women in Astronomy” and the recent CSMA white paper, “Enhancing Diversity in Astronomy.”

These committees often frame discussions using the pipeline model. Students interested in astronomy are carried from one level of participation to more advanced levels via a pipeline built by educational institutions, individual mentors, internships, and other opportunities to gain experience and knowledge. An important feature of the pipeline model is that problems at one level of the pipeline reduce the flow to all subsequent levels. Thus, each segment of the pipeline must address two separate issues: recruitment, in which promising scientists in the previous segment of the pipeline are identified and assisted through the sometimes difficult transition upwards, and retention, in which attempts are made to ensure that no obstacles at the current level are impeding the progress of good scientists.
UW Astronomy Diversity Plan

- 3 sections: K-12, Undergraduate and Graduate students (intentionally left out higher levels)
- Identified existing local resources and contacts at each level
- Pinpointed a few specific recommendations/goals for the department
Some conclusions and recommendations from our plan (nothing new - but all in one place)

- Mentoring is very important (not just one person - and different than advising)
- REU programs can be tools of social engineering
- Focus on transitions (where the leaks occur)
- Diversity training for incoming students
- Establishing relationships with national organizations (important for long term feeding of the pipeline)
Attending National Conferences
(a few we have attended)

- National Society of Black Physicists (NSBP)
- National Society of Hispanic Physicists (NSHP)
- SACNAS (Advancing Latino/Chicano and Native Americans in Science)
- Society of Hispanic Professional Engineers (SHPE)

Establish relationships with students and faculty at Minority Serving Institutions
(began as something for my career more than the UW department)
In 2004, Kevin, Marcel and I attended the National Society of Black Physicists (NSBP) meeting in Washington D.C.

Kevin and I wrote an article about our experience for the “Spectrum” newsletter (June, 2003)

An amazing experience for a white male and the start of many friendships and important connections.

But our initial network was small...
NSBP/NSHP 2005 (I am somewhere writing my thesis)
Our personal network has grown (not to mention UW has a presence)!
A few lessons we have learned

- Programs that help recruit and/or retain women and underrepresented students are generally good for everyone
- Don’t need to convince everyone from the start (need a few allies)
- Real data are powerful
- Personal trust and relationships require time but are the keys to previously locked corridors
A change in culture and some national recognition

February 2009

“I attended [the NSBP/NSHP] meeting . . . to identify steps our University and Physics Department might take to address the challenge of increasing diversity in our field. I can only aspire that we might someday be as successful and influential as UW astronomy in this endeavor.”

Chris Stubbs - Chairman of Physics at Harvard