

Seventh Biennial AAS Astronomy Chairs Meeting
November 6, 2010
Summary – John Hawley, Meeting Chair

The seventh biennial AAS Astronomy Chairs meeting was held at the Chicago O'Hare Hilton on Saturday, November 6, 2010. About 27 Astronomy chairs or program directors were present, along with Jim Ulvestad from the NSF, Dale Frail from NRAO, and Kevin Marvel from the AAS.

On the Friday evening before the meeting, interested chairs gathered for an informal discussion on issues related to undergraduate instruction and the curriculum. **The Friday session** began with a discussion of new pedagogies that might be enabled by new IT tools, e.g., remote conferencing. There was a discussion of using computer planetarium (e.g. Starry Night, Voyager) software for teaching. At least one chair reported successfully incorporating exercises based on that software into the curriculum.

One person told of a novel approach where the lectures were recorded in advance and made available via Youtube. Traditional lecture times were then used to work on problems sets or small projects, often in collaboration. A variety of approaches were discussed on how to optimize participation in collaborative exercises.

There was a consensus that students didn't like "clickers" when they were used to take attendance but they did like them for answering questions in class. One person reported that he labeled questions as "nc", "sc", or "c" for no calculation, simple calculation and "calculation required" in an effort to reduce the tendency of students to immediately attempt to find "the formula" and plug in the numbers.

There was a discussion of how to recruit science students and astronomy majors. One group reported having graduate students run a telescope on the quad during enrollment period to encourage students to take astronomy. There was a discussion of the need to engage the admissions office in order to recruit students who were "science nerds" and might otherwise be passed over for admission.

Saturday's main session began with introductions by each chair with a brief statement of their term as chair, their institution, and their leading concern. Among these concerns were deadlines and recruitment issues related to postdoctoral hiring and graduate students, demographic concerns regarding the faculty (an aging faculty), tensions within Physics-Astronomy programs, particularly regarding the curriculum and graduate qualifier examinations.

The first main topic was the recently released NRC ratings. The discussion centered on how to understand the data and the methodology, and how to use that data constructively to further one's graduate program. There was a strong feeling that the data were largely of little significance, particularly for rating a program, but that

administrators and other officials might need guidance in their interpretation nevertheless.

The next main topic of discussion was the issue of budgets. Many programs are under considerable budget pressure in the current economy with both state (for public schools) and endowment revenues down. Hiring freezes, actual or de facto, were in place in many of the represented schools. This contributes to concern in addressing demographic issues, namely replacing an aging cohort of astronomers either currently or soon eligible for retirement. The current low level of tenure-track hiring is continuing to increase the number of applicants for postdoctoral positions.

Jim Ulvestad, director of the NSF Astronomy Division gave a presentation on the current state of the NSF and the response of his division to the recently released decadal survey. The chairs expressed their appreciation for the clear and frank presentation of the challenges facing the discipline within the next decade.

Following lunch, Kevin Marvel gave a presentation on activities at the AAS. A new "AstroGPS" web service is in the development stage. There was a discussion of how the application process is evolving with a general consensus that there might be a role for the AAS here. The recent changes in publication of the society journals were discussed. Some chairs expressed concern with the speed of IOP's billing and the perception that the quality of copyediting had declined. The trend toward electronic only publishing continues.

Dale Frail gave a presentation on ALMA and EVLA. These telescopes represent significant new observational facilities that will become available to the community over the next few years. He described the time line for the arrival of new capabilities at each site, and when there would be opportunities to propose science projects.

The chairs engaged in a round table discussion on several topics of interest. These included how to balance the chair's administrative duties with their research and teaching programs. Suggestions included blocking out dedicated research time, delegating, being very organized about time management, holding "office hours" to limit interruptions.

Issues in computing were discussed. Generally departments are understaffed in the IT area, and astronomy has many unique IT requirements including diverse (and difficult to maintain) software for data analysis, a preference for Unix/Linux rather than Windows, a need for high performance computing. Perhaps best practices could be developed for astronomy programs? A growing trend within administrations is to develop a central data facility and insist that units move their computers to that facility. On the one hand this was seen as a loss of control over a group's (say) research cluster and increased difficulty of support - who would reboot the system for example? What would the charge to the departments be for

use of this space? On the other hand, departments already pay a price in converting space into (not optimal) machine rooms for clusters, and in devoting faculty and graduate student time to administering those machines. The expense of maintaining cooling equipment was specifically noted.

Post-bac and bridge programs were discussed with an eye toward increasing the participation of historically underrepresented groups in astronomy and physics. Columbia University has been running a successful program for a number of years now. The Vanderbilt-Fisk model was recalled. A perceived problem is that while there is considerable interest in these sorts of programs there is little funding and no good metrics to indicate what is particularly successful. The NSF has only limited funding for this type of program and the Education division in NSF is interested in research into education, not actual educational programs.

There was a brief discussion of the importance of small university telescopes to engaging students and building viable undergraduate programs in astronomy. It was suggested that the chairs should develop a general statement endorsing the importance of these telescopes to the science education mission, both to students and the public, and to the development of viable astronomy and astronomy physics programs. There was general consensus in support of such a resolution.

The meeting adjourned at 4 PM with a general consensus as to the value of these biennial meetings and a commitment to holding another one in 2012.