Report of the

American Astronomical Society's Task Force on Meetings

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Task Force on AAS Meetings

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Executive Summary

In January 2015, the formation of a Task Force was approved at the AAS Council Meeting to review the objectives, structure, content, and execution of the Society's regular annual Winter and Summer Meetings. The Task Force was charged with coming up with recommendations on how to make AAS Meetings productive and enjoyable for attendees, taking into account the many logistical constraints and challenges in hosting a large scientific conference. A goal of our study was to take as broad a view as possible, by considering the interests and preferences of attendees and the pros and cons of many changes that could be made.

The Task Force commissioned a Member Survey in August, to probe a range of attendee viewpoints. Over 500 responses were received. We used the results to ensure that a range of opinions was heard, and while we did identify some clear trends, we did not analyze the responses statistically. The Survey generated a very large database of write-in comments from which we got a good sense of which issues the membership felt most strongly about. However, the sheer diversity of opinion presented a challenge for us: only a few trends emerged, and for many issues the pros and cons of proposed changes in meeting structure ended up fairly balanced.

The basic structure of the Society's meetings—a large Winter Meeting, and a smaller Summer Meeting, both covering all aspects of our field—is very sound, and effectively serves the needs of our membership. This Report summarizes our discussion of structural changes and makes a number of recommendations for improvements within the current structure.

Astronomy has always been an evolving field, but the pace of change in increasing, driven in large part by vastly more capable instrumentation, big data, and powerful software tools to analyze these data. These changes affect the way astronomers work, how they publish, and how they communicate. AAS Meetings are about communication, so the AAS needs to understand and adapt to changing expectations from members, especially younger astronomers who use social media. These changes are also reflected in the demand for new content at meetings, such as tutorial sessions on analysis packages and the collaborative hack days.

Communication to the membership is also important. Attending AAS Meetings is a major cost concern to many members. Efforts to reduce costs, as well as the fiscal realities of conducting a large scientific conference should be clearly explained to the membership; managing expectations is important. These communications should be done every year or two.

We concluded that the Winter Meeting, structured as a 4-day meeting in early January, and attended by 2000+ members, meets the typical attendee objectives: opportunities to present science results, learning about other research, attending public policy and special interest sessions, and networking with colleagues, in a location that is convenient and affordable. All of these objectives were deemed very valuable by attendees. Although the size of the Winter Meetings poses logistical problems, we concluded that the benefits of having a large fraction of our community interact annually, face to face, continues to be a major draw. More flexibility in the types of meeting content and the organization of sessions is needed. Attendees armed with the program in a smartphone or tablet are able to, and want to, customize their session attendance.

There was more diversity of opinion on Summer Meetings. A minority of members felt that they were not necessary at all, and cited the alternatives of small discipline-oriented conferences (often held in relatively exotic locations). However, most were in favor, preferring the less-densely scheduled format compared with the Winter Meeting, and the ability to participate in longer

themed session (Meeting-in-Meeting) tracks. The smaller size of Summer Meetings, in part a reflection of competition with focused workshops, provides the AAS with an opportunity to select from a wider range of venues, to counter the tendency for the Winter Meetings to be limited to a few locations. Given that the pool of attendees for the Summer Meeting is substantially different from the Winter Meeting attendees, we recommend continuing the Summer Meetings as long as finances and attendance are stable.

The Task Force recommends that Topical Meetings be continued and monitored for measures of their success and impact. The AAS should emphasize the benefits to organizers of non-AAS meetings, especially to local organizers, of having the experience and expertise of the AAS to draw on; this service is not widely appreciated by the membership.

Meeting cost (including travel, hotel, and registration) remains a major concern for members, especially for the Winter Meeting. Meeting city and venue generated a lot of comment by members, many of whom have strong feelings on the subject. The Gaylord locations generated a lot of vocal feedback, mostly negative—the isolated locations made it hard for cost-conscious attendees to find alternative accommodation and meals at lower cost. We enumerate some favored cities, based on the Survey.

We recommend a number of ways in which the meeting programs can be changed to improve the overall experience for attendees. There are many ways in which significant logistical improvements could be made; most of these can be implemented easily, and the more significant ones could be implemented on a trial basis.

Table of Contents

1. Charter

The official Charter for the Task Force, approved by Council on March 15, 2015 includes the following statements:

1. To further the stated mission objective and vision statement of the AAS: "To enhance and share humanity's scientific understanding of the universe." The Society facilitates and strengthens the interactions among members through professional meetings.
2. To identify and recommend enhancements to the meeting experience at AAS Meetings (Winter, Summer, and Topical) for all attendees.
3. To identify and recommend ways to make AAS Meetings as valuable as possible to the widest cross-section of the membership. Meetings should be perceived as strongly value-added by the whole membership.
4. To identify and recommend enhancements to the efficiency of meetings: simpler for meeting organizers, and better use of time during meetings for attendees. Any changes must allow AAS meeting organizers to manage costs effectively, while maintaining the profit margin necessary to support the AAS Executive Office.

An important principle that the Task Force adhered to was that the AAS Meetings activity be self-supporting, in the long term. This implies that the Meetings generate the profit necessary to support the AAS Executive Office meeting staff year-round. We recognize the importance of having a dedicated and experienced full-time staff to plan the events, manage the costs, and run the meetings efficiently. This principle has clear implications for our recommendations, especially in meeting cost (Section 8).

2. Task Force Membership

The Task Force was created at the AAS Council Meeting in January 2–15. Steve Unwin was appointed Chair. Membership comprised 10 people selected to represent a diverse cross-section of the AAS membership, diverse interests, and people with experience in organizing meetings:

- Steve Unwin, JPL (Chair)—Experience organizing meetings, workshops
- Dara Norman, NOAO—Liaison to Demographics Committee
- Jason Wright, Penn State U—Early career faculty; user of social media
- Lee Anne Willson, Iowa State U—Past VP; experience with meeting organization
- David Hogg, NYU—Leader of AAS Hack Days, social media
- James Lowenthal, Smith College—Small University; served on Sustainability Committee
- Nancy Brickhouse, CfA—Employment Committee
- Jean McKeever, New Mexico State U—Graduate student; frequent AAS volunteer
- Bill Purcell, Ball Aerospace—Aerospace industry perspective; astronomy mission experience
- Joel Parriott, AAS (*ex officio*)—Programmatic direction; AAS institutional history

3. Task Force Activities

The Task Force began its deliberations with a kickoff telecon on April 30, 2015. The Task Force conducted most of its business by e-mail and a total of 13 telecons. One in-person meeting, at the Kissimmee AAS Meeting, was held toward the end of the Task Force term. We quickly realized that the task of improving the AAS Meetings is multi-dimensional, and many of the possible changes interact strongly. For instance, reducing the number of parallel sessions would require either limiting the number of contributed papers, or making the meetings longer than the current four days. In order to make progress, we divided up the tasks into major topic areas, with a lead assigned to each. We felt that before making recommendations, it was essential to explore in detail the possible changes and their many interactions.

4. Member Survey

The Task Force conducted a Member Survey, which yielded much valuable data, and which informed our discussions and our recommendations.

We recognized that although the Task Force itself, by construction, represents a diverse cross-section of AAS Meeting attendees, we needed to collect a broader range of opinions before making any recommendations. The AAS has not previously conducted a Member Survey on the topic of the Winter and Summer Meetings; at least, not in a very long time. Accordingly, we focused our efforts in our early telecons, and in many e-mails, on crafting a Survey that would gather opinions on the major topics we had identified. The process of assembling the Survey questions required us to probe into some of the issues so we could ask revealing questions.

Questions were crafted to avoid 'leading' responders to a particular selection. Some questions required checkboxes to be ticked; others are on a 1–4 agree/disagree or 1–5 importance scale. By design it was supposed take no more than 15 minutes to complete. We organized our questions into a number of distinct areas:

1. Length and timing of AAS Meetings
2. Winter Meeting Scheduling
3. Winter Meeting Locations
4. Meeting Content: Presentations
5. Meeting Content: Extras
6. Summer Meetings
7. Demographics

To keep it quick and simple, the survey did not require respondents to do anything more than click boxes. But we felt it was important to allow members to express opinions on meetings that the survey questions may not have raised; this was borne out by the 'Additional Comments' boxes, which produced copious quantities of anecdotal comments and suggestions.

To reduce the burden on members to respond to surveys, we elected to poll only half of the US membership on the topic of meetings (the AAS is planning a major survey in the fall on the topic of demographics). We also reached out to non-US members of the Society, and also the people who have attended meetings as non-members. Rachel Ivey of the AIP, who has a lot of experience with surveys, advised us on the survey content, and generated the distribution list for the survey. The AIP offered to conduct the entire survey, and to generate statistics on responses, but we

decided instead to keep the survey simple, and to do the analysis ourselves, if necessary. This survey does not lend itself to elaborate statistics, due to the complexity of the interactions between different aspects of the questions. It was constructed using Google Forms (thanks to Task Force member Jean McKeever for undertaking this).

The AAS Executive Office sent out the survey invitation; the numbers of people reached were roughly:

- 50% of US Members of the AAS: 2850
- All non-US members of the AAS: 835
- All non-members who attended in the past 3 years: 1200

The survey also went to about 70 exhibitors (mostly non-members), so we could get the perspective of attendees with exhibit-floor booths as their main focus. The survey opened on July 29. Most responses were received within 3 days of the initial invitation; a bump of ~75 responses resulted from a reminder in early September. We closed the survey on September 8, 2015, receiving 550 responses.

A redacted summary of the Member Survey results is in Appendix A. We will not publish the full results of this survey: publishing survey results can be problematic because of privacy laws, especially when the context and small-number statistics might allow the identity of some individuals to be deduced. Appendix A redacts demographic information (except for membership status), and all of the write-in comments.

5. Issues and Recommendations

The Task Force found that many of the possible changes in meeting structure would interact strongly with other aspects of the meetings. Much of our discussion was consumed with untangling these interactions. Below we summarize the issues and our recommendations, sorted according to the main topics that we identified in the Member Survey. For the major issues in the Sections that follow, we framed each issue in terms of:

- Brief statement of the issue or proposed change
- Detailed description of the change
- Pros and cons of the change vs. taking no action
- Recommendation, including the implications elsewhere

We also recommend a number of smaller changes, mostly in logistics, that can be made without interaction with other changes, e.g., more extensive signage for navigating the poster sessions.

6. Meeting Attendance

> *Who attends Meetings? Why and when do they attend? Why and when do people choose not to attend Meetings?*

The Task Force discussed these questions from several different perspectives, and returned to these questions many times, as they are central to making meetings meaningful and productive for attendees. Many considerations go into an individual's decision to attend an AAS Meeting. The following findings are drawn from Task Force discussions and from the Survey.

Findings

1. Few people (~27%) attend if not presenting—so anything that removes the opportunity for people to present will cut down on attendance. About 60% (with ~14% neutral) state that they must present to attend (likely in order to be reimbursed, or to receive permission to attend if they are government employees).
2. Members are not short of results to present: almost nobody recycles previous papers for AAS meetings.
3. Almost no one (< 5%) would attend more AAS meetings if there were more than two per year (see findings on Summer Meetings).
4. Most attendees (61%) stay for the entire meeting, though the survey did not collect any data on what this means exactly. Anecdotally, some members attend only on the day that they are presenting; but these are a minority.
5. Factors affecting the decision to stay for only part of a meeting are: cost, conflicts with duties, completion of presentation, and personal conflicts.
6. 55% do not want the science meeting to be scheduled over the weekend (with 28% neutral)—see findings on Meeting Structure).
7. Meeting duration—The Survey showed that a majority preferred to stick with the current duration of 4 full days. Overhead in traveling to and from the meeting is clearly a factor.
8. Meeting cost—Cost is a driver for most attendees. Everyone wants the meetings to cost less, but it was not clear how many attendees would base their plans on an estimate of the total cost (Travel, hotel, registration, meals). Those paying their own way certainly do; those who are reimbursed are less price-sensitive.
9. Both city and specific venue within the city are important at some level. A key factor is how "embedded" the venue is within the city; this relates to having many hotel and restaurant choices (see findings on venue). Members seem to resent having few alternatives for lodging, food, transportation, etc.
10. Meeting size—The Task Force felt that the numbers of attendees at the Winter and Summer Meetings are 'about right'. There is no specific target size for either. In the survey, the large attendance was seen as a plus, in terms of exposure to more ideas and other astronomers; though for meetings much larger than 2000 people, the logistics start to negatively impact the meeting experience. Summer Meetings are always a lot smaller, but this was not viewed as a concern from the perspective of meeting experience.

Recommendations

1. The Task Force has no specific recommendations regarding meeting attendance. The Meetings are for the most part meeting member expectations, as evidenced by the high attendance at the Winter Meeting. Members are motivated to attend the Meetings, with the only significant negative factors being cost and (for some) location.
2. The AAS should conduct post-meeting surveys, to collect data on whether the attendee stayed for the whole meeting. Meeting attendance is subject to fluctuation, and data are needed for the Executive Office to draw the right conclusions from the attendance numbers.

7. Meeting City and Venue

What criteria determine the best choices of city and venue for AAS Winter Meeting? How are the criteria different for the Summer Meetings? What does feedback from meeting attendees tell us?

The selection of meeting city and venue is one of the hardest choices for meeting organizers. The Task Force recognizes the fiscal and logistical constraints with which the Executive Office must grapple. Meeting venue always generates strong opinions. Many Survey respondents had much to say on this topic, both about the specific conference centers and the choices of city in general. Overall, the choice of city was felt to be "a little important" (50%) to "very important" (37%) and the meeting's location within the city likewise "a little important" (49%) to "very important (33%). The city's non-astronomical amenities were reported to be "not at all important" (38%) to "a little important" (50%), but there was very strong support for multiple transportation options and public transportation (both more than 80% "a little" or "very important"). Accordingly, the Task Force gave more weight to considerations of venue logistics (and of course, cost), and less to the local non-astronomical amenities.

Findings

Below, we list and discuss the many issues that affect the choice of venue, from the perspectives of both organizers and attendees—good choices should satisfy both.

1. Venue—Both the specific venue and the city are important to attendees. The venue has to have good logistics (see findings on meeting logistics) to support the multiple oral sessions, events, and poster sessions.
2. City—The choice of city does impact the meeting experience for attendees, but it has more to do with the total experience than whether the meeting is considered productive scientifically and professionally. Attendees give differing weight to the local environment: some are focused entirely on the professional offerings that fill every day (and evening); others want a break from the densely-packed sessions, and are interested in distractions (e.g., museums, fine dining, nightlife). The best locations encourage stays that are longer than just the AAS meeting.
3. Lodging—Attendees want the flexibility to pick their own hotel or other lodging, with considerable interest in cheaper hotel options (40% "a little" and 48% "very important"). With modern Internet tools, this is easy, and offers a wide range of solutions for attendees—some want to use Airbnb or similar, some want a cheap hotel or motel, some want a hotel where they enjoy frequent traveler status, and some prefer to stay at the meeting-block hotel for the convenience it offers.
4. Room blocks—These work directly against the preference for flexibility, and are increasingly unpopular, especially in cases where there is only one hotel offered (as in Kissimmee). The cost/benefit balance of registration cost vs. hotel room block costs has shifted over the years. See findings on meeting cost for considerations of lodging vs. registration costs.
5. Transportation—The cost of getting to and from the host city was seen as very important. Strong support for multiple transportation options and public transportation (both more than 80% "a little" or "very important"). Attendees want travel choices. For air travel, this means having multiple airlines serving the destination, and affordable local transportation. Many survey respondents cited local transportation as an important consideration.

6. Winter Meeting location—This has been Washington DC frequently. This is a good location for the many astronomers based in DC, Maryland, New York, Connecticut, New Jersey, Pennsylvania, etc. The Task Force recognizes the importance and value of holding meetings in DC on a regular basis. Proximity to the federal agencies and decision makers is a plus. But the main benefit was participation by members of the funding agencies and other decision makers in the meeting, via town halls, and program and project booths on the exhibit floor. A significant fraction of attendees valued the physical presence of agency personnel for one-on-one discussions.
7. Resort location—There was little appetite for all-inclusive resort-style venues (77% "not at all important").
8. Gaylord National Harbor—This location was overwhelmingly unpopular with the membership, as revealed by the Survey. There were over 35 independent comments on Gaylord National Harbor resort, generating much stronger opinions than any other venue. Almost all of them negative, and some very strongly negative. The Task Force found only a handful of people who were very positive; these attendees appeared not to be in a groups that is not cost conscious. Issues included:
    a. Isolated location—Too far from downtown DC to take advantage of the many attractions that DC has to offer. The location negated an intended benefit a DC meeting offers for interactions with agency staff (hard to get to, even for locals).
    b. Hard to get to—Long taxi or shuttle ride from IAD or BWI. DCA not the lowest cost option for most people.
    c. Lack of hotel choices—The Gaylord was expensive, and did not offer amenities commensurate with the cost; fees for Internet, parking etc. seemed exorbitant.
    d. Seemed to be catering to an audience very different from the typical cost-conscious astronomer.
    e. Other hotel choices existed, but significantly cheap hotels could be found only a considerable distance away.
    f. Nearby restaurants and nightlife were expensive.
    g. Almost non-existent local transportation. Nearest Metro station was a taxi ride away. Taxi to anywhere interesting was expensive.
    h. High overall cost, considering all of the issues above.
9. To be fair, the weather in January 2014 was exceptionally cold, making all the issues of being out of the city much harder to deal with. And on the plus side, the logistics support at the venue (meeting rooms, exhibit hall, etc.) was found to be very good.
10. The Sustainability Committee pointed out to the Task Force the significant carbon emission associated with travel to the meetings; noted that some climate scientists are now choosing not to attend their professional meetings out of environmental concern; and suggested that the AAS consider associating carbon offsets with each meeting attendee. We note that the printed AAS Meeting program is now an explicit yes/no option on the Registration page.
11. Popular cities—In the Survey, we asked respondents to list which cities they favor for AAS meetings. Appendix B lists 46 cities with 4 or more (informal) votes. Some favorites include Chicago, San Francisco, Seattle, Austin, Denver, Portland, Boston, and San Diego. AAS meetings are already held in some of these cities. Respondents were not asked to consider the cost implications: the projected low attendance at the June 2016 San Diego AAS Meeting may be influenced by the high cost of the meeting hotel rooms.

12. Transportation is a major factor: the most popular cities were large to medium sized; but many of the less popular cities were also medium sized—but with poorer transportation as a clear discriminant.

Recommendations

1. We recommend that the AAS continue to seek new venues that satisfy as many of the above logistical concerns as possible:
    a. Host cities with large concentrations of astronomers, to minimize travel
    b. Host cities with good intercity bus and rail access, to minimize air travel
    c. Host cities with well-developed public transit and walkable downtowns
    d. Venues that are centrally located in the host city, with easy access by foot and/or public transit to food and lodging options
2. Choice of city for future meetings should include, in addition to the above logistic considerations: minimum (total) cost to attendee; total typical cost to attend; venue suitable for the expected number of attendees; cost of AAS-endorsed lodging; amenities such as choice of restaurants; other benefits like museums and nightlife.
3. The AAS should move away from the longstanding practice of reserving hotel room blocks to guarantee availability for every attendee, when it reduces the typical and minimum (total) costs of attendance and/or reduces uncertainty in the overall budget for meeting planners. A possible compromise is to aim for a block that meets the lodging needs of about 30% of attendees.
4. The AAS plea to utilize the room block is widely ignored. Incentivizing members to utilize the room block is less necessary if the block size is reduced. We do not recommend implementing incentives; the main benefit is convenience, which is obvious to members.
5. The AAS should explain to the membership the considerations and cost/logistics drivers that determine the practical options for cities and venues. Less-popular choices may be accepted more readily if the rationale is explained clearly.
6. Staying at the Meeting hotel is an important benefit for some disabled people. We recommend that the AAS hold a few rooms from the room block in reserve to accommodate members who identify themselves as disabled (see Section 16).
7. Consider terminating the contract with Gaylord Resorts for the planned meeting at National Harbor for January 2022. The January 2018 meeting there should also be canceled (or perhaps deferred?) if it can be done without a large penalty. The dislike revealed by the survey was strong enough that it will likely impact future attendance, and much too strong to reject. The Task Force recognizes that it is too late already to cancel the reservation for the Gaylord Texan in Grapevine. Overall cost (including expensive extras like Internet, parking, breakfast), lack of choice, and lack of enjoyment of the venue are the major factors.
8. The option of future meetings at Gaylord Resorts should be retained, as an occasional Gaylord meeting will likely be accepted by the membership. But long-term commitments should be avoided until the AAS has had experience at the three planned venues (i.e., including Grapevine).
9. Baltimore Inner Harbor should be considered as an alternate to DC for the Winter Meeting, with the Convention Center as the venue. It is convenient to many East Coast astronomers, with good access by air and train, and preferable to National Harbor in most respects, except perhaps accessibility for the staff of federal agencies. Even then, depending on home location, commuting to a Baltimore meeting is not unreasonable. This is a possible, if not ideal, solution

to the meeting size problem that led to the selection of National Harbor as the DC meeting location.
10. If the logistics of accommodating the Winter Meeting in Baltimore cannot be overcome, then hosting the much smaller Summer Meeting there should be considered. If it works out logistically, Baltimore should be a destination for the AAS every few years.
11. Similarly, a Summer Meeting in Washington DC may be a feasible alternative to a Winter Meeting there: the smaller meeting size opens up the choices of venue. June may be more attractive to astronomers wishing to bring their families with them to Washington.
12. Potential meeting cities should be compared with the list in Appendix B. Cities with low scores should be avoided. Cities not mentioned may be risky, unless they are close to locations that were nominated by Survey respondents.
13. Sustainability—We recommend that the AAS consider instituting a system for charging optional carbon offsets, scaled by travel distance, associated with meeting attendance, with collected funds to be applied to sustainability programs at future meetings. Continue to make the printed version of the AAS Meeting program opt-in.

Consequences

1. The Task Force recognizes that there are numerous serious financial pressures the AAS considers in choosing venues and negotiating conference hosting contracts. The changes we recommend will need to be subject to a cost/benefit analysis. Breaking the contract with Gaylord would occur a significant penalty, but the Task Force feels that the Council should be presented with costs of such an action, including the offsetting benefits of incentives offered by the replacement venue.
2. A smaller room block would mean that some who plan their travel late would find the room block already full. As long as there are not large numbers complaining, this is acceptable when other lodging options exist (see findings above). Also see above for accommodations for disabled attendees.
3. For the winter meeting, it may be necessary, long term, to return many times to the same venue. It is preferable to return to a venue that works well; the desire to move to locations around the country is secondary.

8. Meeting Cost

> *How to provide the necessary services, and at least some of the desired services, at as low a cost to members as is possible? How to manage the AAS meeting finances to balance income and expenses?*

8.1 Meeting Costs for the AAS

Findings

The AAS balances the income from registration fees, exhibitor fees, fees from splinter sessions, and sponsorships against the costs that are paid directly—meeting rooms, A/V, Wi-Fi, food for events, coffee breaks, meeting support salaries, travel by staff, partial support of council and officers, and so on. The AAS aims to set the fees such that the net income for the two meetings

per year covers the essential costs, including year-round HQ costs of supporting the meetings, plus 3% on average, as requested by the Council. A breakdown of income and of expenses for representative recent meetings appears in Appendix C.

By using in-house staff to organize the meetings, and by having the same staff members organize other AAS-related meetings (including division meetings) the AAS is able to keep the meeting support staff employed year-round. Because there is a firewall between the journal funding and other activities, and because journal budgets are being tuned towards a net balance, the two regular meetings need to support the in-house staff, and to do so must generate about $300–400k. In Appendix C, the direct costs of the meetings (salary for time spent just for that meeting) are listed, but not the full amount that the Executive Office needs to cover salaries and expenses; thus it is less than the above number. In practice, this income comes mostly from the Winter Meeting, with the Summer Meeting breaking even.

This gives the AAS more control over costs, among other reasons because the professional in-house staff negotiates with the hotels and conference centers, making sure that facilities are a match for our needs and that the costs are managed optimally. This is a very complex matter, as negotiating a favorable deal on hotel rooms can result in much higher costs for meeting rooms, food, or Wi-Fi. A bigger room block gives a better deal, but many members prefer to find their own lodging off-site. One task of the Meetings Task Force was to determine how members would prefer these deals to be balanced: Is a higher registration fee reasonable in exchange for better room deals? Is that fair to people lodging outside the AAS hotels? Is a lower registration fee and more services fair to the people who would then pay a higher hotel room cost on-site?

The Task Force also considered items that would add value and cost. This included live-streaming plenary talks, recording and archiving or live-streaming contributed talks and other sessions, and providing additional, more economical or convenient food options (see Section 8.2).

Streaming all the plenary talks would add about $60K for a meeting; if we streamed all the oral sessions, it would be about $500K for a Winter Meeting, perhaps $800K total. Thus, live streaming the plenary talks would add about $40 per attendee; live streaming all talks would be about $300 per attendee assuming 3000 per year attend. Since the attendees are not benefiting as much as those who do not attend, this is a lot to ask them to pay for. Charging members for access to talks would also cut down on their use. Thus these costs might go to membership fees as a benefit of membership, where they would add about $150 per member, assuming 6000 members pay the costs. In contrast, the current system of recording plenary talks and making them available to members after the meeting is relatively low-cost and provides most of the benefits that could be gained by live-streaming in an arguably more convenient form (audio and slides). We recommend no change now, but suggest that the AAS monitor changes in technology or available services that might change this conclusion.

Going to streaming of all sessions might be justified at some point for sustainability considerations, since it could minimize travel, but the financial impact on the AAS of adding costs and reducing attendance could be substantial and dictate a cautious approach. A separate issue regarding streaming is accessibility—enabling individuals who cannot travel to participate in these meetings. That could be handled with much less technology—a volunteer might sit in the front with a cell phone, for example, or an individual might be approved to give a talk from home when attendance is impossible. Note that participation involves being able to ask or answer questions, not just watching passively.

Recommendations

1. The AAS should inform members about the tradeoffs that go into determining the registration fees and reiterate the commitment to keeping meeting attendance costs reasonable for participants. There might be a web page with general considerations and guidelines followed by staff, a page in the meeting handout, or an article in the newsletter. This needs to be done in a way that does not compromise the society's ability to negotiate the best contracts for its meetings.
2. Streaming talks at AAS Meetings is not recommended at this time, but we suggest that the AAS monitor changes in technology or available services that might make this feasible at a cost that members would be willing to pay.

8.2 Meeting Costs for Attendees

Findings—Lodging

This is often the biggest cost if the stay is longer than 2–3 days. 5 days at $200 = $1000 and recently prices have been even higher, including various taxes. GSA per diem rates (available at http://www.gsa.gov/portal/content/104877) let us make broad comparisons (at least city A > city B) assuming people can choose their hotels; but of course at an isolated place (like Gaylord) that does not apply. What we heard from the survey is, "If we are going to pay prime city prices we want access to the city."

The rise of Airbnb and similar lodging options, and the large presence of cost-sensitive members willing to stay at more distant venues, make it unnecessary for the AAS to guarantee every registrant a room at the conference hotel.

Recommendations

The AAS should exploit the lodging flexibility available at many locations and weigh the benefits of smaller room blocks when attempting to minimize both average total cost and minimum total cost for attendees. This is true even in cases where reducing the room block may result in increased meeting expenses (in ways that are hard to generalize, but are real) and result in a necessary increase in registration fee.

1. This approach is more responsive to the membership. Members have said clearly that they want choice when selecting lodging.
2. It can reduce the financial uncertainty for the AAS, even in cases where it increases the overall cost to the membership, by helping the AAS avoid penalties for failing to fill room blocks.
3. It provides more flexibility in distributing cost. Attendees save on lodging (if they are early and/or creative), but pay more for registration and more for transportation to the meeting venue. The AAS can compensate at least partly by adjusting the fee scale for junior members, or negotiating more economical food options. (The principal complaint about the Gaylord venues was the lack of options for reducing costs.)
4. Any change that raises registration fees should be explained clearly to the AAS membership, showing that this was done after a cost-benefit analysis of the venue and lodging costs.
5. The AAS should track the federal per diem rate as a metric against which to compare lodging costs (both meeting hotel and viable alternatives in the area – typically, that means, within walking distance). Meeting cities should have some hotel options for attendees at or below

the federal per diem for the area, as government employees are generally reimbursed only at the federal per diem rate.

Findings—Meals

The city-to-city differences are relatively small, as long as one is free to wander in search of food. That again is an argument against an isolated location, such as Gaylord, with inflated in-hotel food costs, particularly at the low end (one sandwich or a yogurt at double the airport price). Eating at on-site restaurant meals three times per day can easily add another $100/day to the cost; improvising with low cost alternatives to at least one meal per day can bring this down to $50/day or even less (bread and peanut butter, cereal, ramen noodles) if supplies are accessible, and particularly if the rooms have refrigerators or microwave ovens.

Recommendations

1. The Task Force recommends that the AAS experiment with economical alternatives for attendees who are very cost conscious. Food options, depending on locations, may include food trucks, sack-lunch options, nearby low-cost food, and the ability to improvise some meals.
2. The AAS should compare the availability of food options at or below the federal per-diem rate for the area. This is a metric that is of importance to all attendees, as it affects the out-of-pocket cost for all. While expensive food may not directly affect attendance (cost may not be apparent in advance), it can definitely degrade the meeting experience and put an unnecessary burden on cost-conscious attendees, especially junior members.

Findings—Travel

Airfare is quite variable by date, by itinerary, by how carefully and when one reserves space, by destination as well as home airport, and by meeting location (travel distance). Typically, smaller cities have fewer direct connections, higher average airfare, and fewer low-cost options. Their prices are also more volatile, changing on timescales shorter than the 3–5 years ahead that the AAS books its location. To minimize travel costs, choosing major airport locations with significant competition and many flights, moving the meeting around the country, and selecting locations where there are many local or nearby astronomers all are good strategies.

Findings—Registration

This is the part over which the AAS has some control, and that goes up or down with the choices made about refreshments, location, etc. It is currently comparable to the airfare (until one is emeritus or student) at about $500.

Summary, for a 5-day attendee (member, not emeritus or student):

Food and lodging:	$1000 to $1500
Travel:	$100 to $1000 (average ~$500)
Registration:	$500
Total:	**$1600 to $3000 (average ~$2000–$2500)**

From this analysis, it is clear that a slightly higher registration fee would be reasonable if it allowed members to save on food and lodging and/or travel costs.

By design, the present structure of fees and the present choice of locations are carefully constructed to balance the budget. For reference, the paid meeting attendance for AAS Meetings from 2001–2016 is listed in Appendix D. The Task Force looked for possible changes that would retain that balance while reducing the net cost for members. Most of the ideas examined appeared unlikely to have a significant effect. Thus, for example, while there are cities with lower typical hotel rates than those we are currently using, our survey showed that attendance would be down if those were chosen, plus the hotels associated with appropriately sized convention centers are typically not much cheaper in these cities, and air fares to smaller cities may average considerably higher.

We also note that the impact of higher registration fees will affect members differently, depending on funding source. Historical data are not available, but based on the Kissimmee exit survey, 48% of attendees were federal employees, or the fee was covered by the US government through a grant; 8% of members paid personally; and 33% were supported by private or university funds.

Recommendations

1. Offer larger incentives for early registration. As well as helping the Meeting staff in planning, this rewards members who are both cost-conscious and plan ahead. These may be hard to implement, but should be considered:
    a. small discount to registration
    b. access to a set aside room block at slightly lower cost (but might lead to last-minute cancellations)
    c. coupons to local vendors
    d. priority scheduling for talks / posters
    e. priority scheduling for talks within a session (first / last, etc.)
2. Consider more tiers of reduced registration fees. A reduced fee for those who identify themselves as disabled was suggested as a way to acknowledge the higher costs of travel and attendance for those with accessibility issues.
3. More options on the Registration Form would be helpful to members, provided they do not burden the staff supporting the meeting. The AAS could collect data that might reduce cost for attendees, such as interest in local transportation or carpooling arrangements, or interest in side trips to points of interest.
4. Explore options for lunches that might include discounts for junior members—for example, sack lunch available by ticket, perhaps with ticket prices scaled with registration fees.
5. Explain the ‘big-picture’ strategy for registration fees to the membership. The Executive Office has done this from time to time, but educating the membership on the issues needs to be done repeatedly. Many of the survey comments, especially with respect to cost, indicate that the respondents have little idea of the fiscal constraints on meetings.
6. Ensure that minimum food costs are not in excess of the federal per diem for the area.

8.3 Future Winter Meeting Locations and Cost

Findings

Given the volume and strength of the negative feedback from members on the National Harbor location, and (to a slightly lesser extent) the Kissimmee Location, we strongly recommend that the Executive Office reconsider the plans to use Gaylord Resorts for future Winter Meetings. We

recognize the reasons for selecting these resorts, but the membership has made it clear that the AAS should come up with a different solution for the longer term.

In this Section we discuss the financial implications. For a discussion of the specific issues, and some options for alternate locations, see Section 7. For instance, Boston (summer) and Seattle (winter) have been particularly successful venues, so these might be inserted as locations every other or every third year.

We recognize that is it impractical to cancel the contract for the January 2017 Winter Meeting at Grapevine, TX. In addition to high cancellation fees, it is too late to find a viable alternative location.

Whether future Gaylord meetings can be canceled depends on the magnitude of the cancellation fee involved. A fee of $1M cannot be reasonably distributed to attendees or members – it would amount to $400 per attendee or close to $200 per member. For these contracted meetings, postponing or spacing them out in time may be an option, with careful choice as to which locations are selected and with some investment (<< $1M) in ways of lessening the impact of the Gaylord business model on our most cost-conscious members.

Recommendations

1. We recommend that the Executive Office actively consider ways of phasing out the contract with Gaylord, over a period of years if necessary, to minimize the adverse financial impacts.
2. If possible the commitment to Gaylord National Harbor in January 2022 should be eliminated or postponed to a later date.
3. The Executive Office should explain to the membership the positive features of the Grapevine location for the January 2017 meeting, and take additional steps to address some of the negative preconceptions of members who are considering not attending, for example:
    a. Novel content attractions, or other features, like extended poster sessions
    b. Posting an outline schedule early
    c. More details on travel logistics, including local transportation
    d. Hotel features, like refrigerators in every room, allowing attendees to plan for breakfast in their room
    e. Local amenities such as cheap(er) restaurants, grocery stores, etc.
    f. For junior members, provide a free shuttle into town; or an on-site subsidized dinner; or subsidized box lunches.
4. We recommend that the Executive Office estimate the costs involved for several plausible scenarios for the Executive Committee to review. Likely cancellation costs and available alternatives should determine whether or when it is reasonable to move to other venues.

9. Meeting Structure

In this Section we discuss the major organizational factors that determine the way meetings are defined, and how they appear to attendees. We focus on Winter Meetings, but many of the recommendations apply to the Summer Meeting also. Findings are culled from responses to the Survey, generated by the Task Force, or brought to the Task Force's attention independently. Page numbers below refer to the Member Survey (Appendix A). The key question we pose is this:

Does the current structure of the Winter Meeting (opening reception on the first Sunday night after January 1, followed by four full days of science content) suit the schedule or preferences of potential participants?

Possible changes to meeting structure include: moving the meeting start date (e.g., later in January or in spring); making the last day (usually Thursday) a half day; making the meeting longer (or shorter) than 4 days; selecting cities and venues that meet expectations of attendees better (see Section 7); and changing the format and organization of the sessions. We next examine each issue in turn.

9.1 Schedule

The Task Force considered how best to pick the starting date, duration, and end dates of the meetings. Problems that Survey respondents raised with the current schedule of the Winter Meeting, including numerous written anecdotes, include:

- Conflicts with the start of classes at some colleges and universities
- Conflicts with holiday travel plans
- Financial pressure to leave before the end of the meeting to avoid another night in a hotel
- Trouble finding long-distance flights (especially west to east) leaving after the closing reception but early enough to avoid another night's stay in a hotel
- A sense of overload from four full days of science content

Findings

1. Starting date for the Winter Meeting—Survey data showed many respondents with conflicts with the start of classes at some colleges and universities. For some, moving a week later would help: easier to miss the second week of class than the first (but need to avoid the MLK holiday). Conflicts with holiday travel plans was also a concern.
2. The Survey showed a clear preference for the meeting to continue to be held starting on the first Monday after January 1 (63% likely to attend), with a strong second choice being the second Monday after January 1 (57% likely to attend). 39% of respondents said they would be likely to attend in late January, 31% in early February, 7.5% between December 25 and January 1, and 3.8% other (see Appendix A, p. 3).
3. Meeting starting day of the week— There was a strong preference for continuing to meet on weekdays (55%) rather than weekends (17%).
4. Meeting cost—For the most cost-sensitive attendees, there is financial pressure to leave before the end of the meeting to avoid another night in a hotel. Related to this, finding long-distance flights after leaving after the closing reception but before another night's stay in a hotel can be a challenge (generally possible only when flying west)
5. The 'Thursday problem'—Attendance has long been observed to drop through the course of the week of the meeting, and various attempts have been made to address that trend: scheduling high-profile invited talks near the end of the fourth day (usually Thursday), and scheduling a closing reception at the end of the day, with raffles and other incentives to attend, etc. These have a positive impact; the closing reception is attended by most attendees still at the venue that evening. It is also impossible for the AAS to accommodate travel schedules for attendees trying to return to locations ranging from 0 to >3000 miles away; shortening the fourth day to

a half-day would likely solve problems for some travelers but create new problems for others, and would likely just move the attrition curve to earlier in the week.

6. Meeting duration—The Survey indicated a spread of opinions. We did not ask whether a 4-day meeting is the right length, but this can be inferred from the responses to questions about 3-day and 5-day meetings. Results show a slight preference for a 3-day meeting (41% in favor vs. 39% neutral, 20% opposed), but not for a 5-day meeting (13% in favor, 41% neutral, 46% opposed; Appendix A, p. 5). There was no clear preference for ending the fourth day early vs. keeping it fully scheduled.
7. Meeting overload—Four full days is as much as many attendees can handle. But the Task Force reiterates the obvious: no one is forced to attend any of the meeting programming, and it is up to attendees themselves to prioritize which of the offerings to attend. Having too much interesting content is a "quality problem"! (See Section 10 for use of meeting time.)

Recommendations

1. We recommend no change to the current schedule: the Winter Meeting should continue to be scheduled starting the first Monday after January 1 and running for four full days. To accommodate professors and instructors whose classes start in early January, we do not recommend moving the meeting any later in January except when it conflicts directly with New Year's travel, i.e., when January 1 falls on Friday, Saturday, or Sunday.
2. Planning staff should consider options for the Summer Meetings that might make them more useful or attractive, such as:
    a. Holding them in conjunction with Division Meetings; we note that this is already done: SPD, LAD, DDA, and HAD meet with us at our Summer Meetings. HEAD and DPS prefer to be independent;
    b. Migrating the dates to allow wider participation; or
    c. Have the Summer Meetings be in DC or other venues that are attractive but pose issues for the larger Winter Meetings.
    d. See Section 12.2 for recommendations on Summer Meeting content and organization.

Consequences

We recognize that even with the Winter Meeting following as soon as possible after January 1, some potential attendees will simply not be able to attend. Unfortunately, any schedule will present conflicts for some members. One possible solution would be to change the timing from year to year (e.g., early January, late January, early spring) to allow more people to attend at least occasionally. A possible risk of that approach is that even more conflicts would arise and overall attendance would suffer.

9.2 Content and Format

> *What is the right mix of parallel sessions, plenary talks, prize talks, and non-science events (town halls, education events, current interests such as dealing with harassment)?*

Comments on the format and content of the Winter Meetings for the Survey were wide-ranging, and there was no strong consensus for any major overhaul.

Findings

1. One of the most common complaints was that five minutes was too short a time for contributed talks. But even on that topic there was far from universal agreement, with numerous respondents saying that the length of all talks (contributed, dissertation, and invited) was about right.
2. Some respondents suggested restricting the number of oral presentations (but not posters), but otherwise there was general agreement that the AAS should keep its current policy of guaranteeing at least one talk/poster per member. There was especially strong support for protecting presentation time for students and postdocs.
3. Respondents overall felt there were too many parallel sessions and too many simultaneous sessions on similar subjects, preventing meeting goers from attending important presentations in their specialty.
4. Survey respondents generally approved of the poster viewing times and formats. There was a healthy appetite for additional poster viewing time in the evening as a way of mitigating daytime conflicts.
5. There were numerous suggestions for additional ways to enhance professional networking and scientific communication and engagement at the Winter Meetings:
    a. "Birds-of-a-feather" sessions – on topics selected by motivated attendees after arrival at the meeting, and utilizing a pre-assigned meeting room
    b. Open forums, perhaps using social media at the meeting to find like-minded colleagues
    c. Move some related talks to posters and center an interactive, discipline-specific discussion forum around them
    d. There was a strong preference for additional time and space for unstructured interaction, especially in the evenings
    e. Hack Day can provide a change of pace from the usual sessions, if it can be integrated into the main schedule
6. Live streaming of talks for members unable to attend in person was generally desired, but 78% of respondents were not aware that plenary talks are already posted on the AAS website after the meetings.
7. There was strong support among survey respondents for sessions on topics other than current science:
    a. Communication (talks, public speaking, publication)
    b. Career services (resume, job interviews)
    c. Teaching/education, more EPO, maybe during (vs. just before) main meeting
    d. Inclusion
8. There was strong support for keeping the Career Center in the Winter Meeting rather than the Summer Meeting. At the same time, some writers opined that the Career Center was in need of updating and computerizing.
9. About 50% of respondents still want paper program books, even with the success of the smartphone app.

Recommendations

1. Continue to offer guaranteed talk or poster opportunities to all attendees.
2. Consider lengthening somewhat the contributed talks from their current five minutes. With the current good presentation management, contributed talks could be advertised as 8+2 minutes rather than 5+5 minutes.
3. Add a well-advertised "how-to" session and/or online material for giving short talks, e.g., "Face the audience; Do not just read your slides verbatim; Less is more; Start with the punch line; Font should be large enough to read easily from the back of the room", etc.
4. Limit dissertation talks to 15 minutes and invited talks to 50 minutes.
5. Expand the list of topics permitted for second abstracts (i.e. in addition to "regular" abstracts) from just history of astronomy, and education. For instance, also allow professional development topics (see Section 10).
6. Consider adding evening poster viewing sessions; or a modest extension of the afternoon closing time.
7. Strive to avoid simultaneous parallel sessions on overlapping topics. Better software to manage parallel session scheduling would help; a start was made on a new tool at Hack Day in January 2016. Similar topics should be adjacent (but not overlap), to allow those that cannot attend the whole meeting to attend the sessions of most interest to them.
8. Consider scheduling one or two "Birds of a feather" sessions at a Winter Meeting, as an experiment. These could be scheduled as placeholders (i.e., without an assigned topic, which could be selected via signup on day 1). Would require active management, and volunteers to facilitate the session.
9. Add and expand opportunities for informal and unstructured interaction (see list above)
10. Consider adding social-type events to let attendees feel they have "permission" to skip a science session.
11. Continue to offer a range of events on career advice. A topic to highlight: astronomy-related positions in industry or government labs, etc.
12. Consider holding a structured scientific debate, when a research topic emerges with major disagreements amongst the experts. This would require strong moderation, and clear ground rules, but would likely be a crowd pleaser. VPs can take the lead, or they can solicit suggestions from our community, in addition to special session topics.
13. Consider integrating Hack Day with the AAS Meeting rather than placing at the end. Is there a way to use Hack Day activities to provide a change of pace from the usual AAS sessions (e.g., collecting hack ideas)? Work with the session organizers to determine their needs (see also Section 14).

Consequences

We recognize that many of the above suggestions have implications for the overall cost and revenue of the meetings. The Executive Office is in a better position than this Task Force to weigh the costs and benefits of each of these recommendations, since most come with no precise dollar value for implementation.

10. Use of Meeting Time

> *What weight should Special Sessions have relative to invited talks and parallel sessions? Is there a way to lighten the load at lunchtime? Restrict the number in parallel? Does it even matter? How to allow time for 'extra sessions' (town halls, working groups, career talks, diversity talks, etc.) and informal meetings?*

The Task Force focused on issues at the Winter Meeting. But many of these findings, based on Survey results and Task Force deliberations, also apply to the Summer Meeting.

Findings

1. Town Halls—These are a unique service to the astronomy community. Town halls are very well attended, and deemed substantially more valuable than other extra sessions. The Task Force believes this is because town halls are where people interact with agency and observatory staff directly. These are probably the only venues where policy, future plans and issues/concerns from those groups are shared in an interactive way with the community. These are also scheduled generally at lunchtime, thus having quick/easy lunch available for pre-order would facilitate attendance at town halls.
2. Parallel sessions—The Survey results were almost exactly evenly split on whether there are too many. Most likely, respondents are well aware of the direct impact on allowing everyone to present a paper if they wish.
3. Parallel session scheduling—There was a strong sense that there are too many sessions on similar topics at the same time. We could make the oral abstract deadline earlier than the poster abstract deadline. This would likely decrease oral numbers and increase poster numbers, but could also facilitate Vice President requests to move oral presentations to posters if too many parallel sessions on a topic. This could also help to satisfy the large fraction (49%) that thinks AAS should restrict the number of oral presentations (suggestions on how to implement this were not offered!).
4. Scope and scheduling of plenary sessions—Many Survey respondents felt that the time slots for plenary talks should be opened up to include 'extra' topics, giving VPs more flexibility in scheduling than they normally exercise. Others suggested replacing plenary sessions with a small number (2-3) of large, parallel sessions on non-science topics. Major science talks should always be plenary.
5. Incentivizing poster papers over oral presentations—Survey respondents were ambivalent on this. Larger poster sessions imply new logistical issues, perhaps with cost implications.
6. Evening poster sessions—The fact that the Exhibit Hall is always crowded when the official closing time rolls around is an indication there is a schedule problem, and demand that is not being met. Even a 30 minute extension would be a significant benefit; longer than 60 minutes and the posters will conflict with dinner plans and scheduled evening sessions.
7. Having posters viewable for significantly longer each day was favored by Survey respondents, though an equal number were neutral or disliked the idea. Poster sessions are, of course, not schedule-driven the same way as the rest of the meeting offerings. Evenings offer more flexibility for those not able to see enough of the posters during the day; having posters viewable only for a single day serves to emphasize this issue.

8. Contributed talk durations—Many, but by no means all, felt that 5+5 minutes is too short. A possible strategy to manage this could be to have earlier abstract deadlines for longer (10+5 minutes?) talks, but only if this does not imply fewer talk opportunities. Given the pressure on meeting time, this does not seem to be practical.
9. Evening events—Survey responses on priorities for evening events were divergent between science-related, social, and programmatic events. Respondents strongly favored some unstructured evening time (but see comment in Section 9.1 on 'meeting overload'). The bottom line is that many people attend evening events, but the enthusiasm for them after a long day is weak.
10. Longer lunch breaks are desired—Perhaps this could be moderated by having the option to pre-order lunches at the meeting venue at cost
11. Lunch slots should not be given to new instruments (or missions) whose main purpose is promotion; these are best served by evening sessions. Meeting VPs should be made aware of this.
12. 'Extra sessions'—These varied a lot in priority, from the Survey. From most popular to least were: Technical, Career, Inclusion, Communication, Teaching, Leadership, Workforce development. One of the higher-priority extra sessions should be promoted to be a plenary talk at each Winter Meeting.
13. Professional development opportunities—Especially at Winter Meetings, these are popular: Topics include: teaching, writing, mentorship, speaking, advocating, data management, statistics, grant/article/ fellowship/reviewing, recruitment and retention. Very popular (at the Kissimmee meeting) was the 3-hour session on "The Performing Art of Scientific Presentation".
14. Scheduling 'extra' (typically, non-science) talks—Mornings were not favored, but those interested in career sessions were more willing to be flexible.
15. The Career Center—This should stay at Winter Meeting, with its function guided by the Employment Committee. We note that the Career Center is used less for interviews than in the past, but still serves a valuable function by providing a venue for informal discussion of opportunities with perspective employers. While the timing may not be not ideal with respect to postdoc applications, staff positions at observatories and institutes can open up at any time of year.
16. Teaching/outreach sessions—There was acceptance for these sessions to be held (on a weekend) prior to the start of the main meeting, but still a preference to scheduling during the main sessions.

Recommendations

1. Town Halls are popular and valuable, so they should continue to be given priority in scheduling.
2. Town Halls should preferentially be scheduled during lunchtime slots.
3. The number of parallel sessions should not be changed significantly.
4. Convenient and rapid lunch options are needed to enable attendance at all events during the lunch hour—attendees should not have to choose between eating and attending (see Section 10).
5. One or two of the higher-priority 'extra sessions' should be promoted to be plenary talks at each Winter Meeting.

6. The AAS should investigate the cost of extending poster viewing into the evening. This should be done on a trial basis for one or two meetings to judge the demand.
7. Meeting VPs should exercise greater flexibility in managing the meeting program, as implied by the findings and recommendations above.

Press Conferences

The AAS Press Conferences that the AAS conducts at each Meeting deserve special mention. These events differ from others at AAS Meetings in that the primary audience is the Press, not the membership. The events are well-attended because the topics covered are newsworthy, and many members enjoy interactions with the media.

The Task Force recognizes that this is a very important function for the Society—communicating our understanding of the universe to the public—and strongly encourages the Executive Office to continue its support of the Press Officer and staff. This includes the Press Office, Briefing Room, Interview Room, Internet connectivity and audio feeds for reporters, and the audio-visual facilities for real-time webcasting.

We note that this is the only AAS event that is routinely webcast. We fully support this function for press events, even though our findings elsewhere in the Report lead us to recommend that this not (yet) be extended to other sessions at the Meetings.

11. Meeting Logistics

The logistics of a meeting is an area where many small changes can be made that will drastically improve the quality of meeting for attendees. Below are the recommendations by the Task Force to address some of the issues that arose in our discussions. We recognize that there may be cost implications for some of these recommendations but strongly suggest looking into these options.

Recommendations

1. Make sure that the Meeting website always contains up-to-date, useful information. This includes, for instance, travel (including local transportation), hotels, points of interest, location of downtown, grocery stores, restaurant district, etc. Should also provide general information on lodging choices.
2. Very important to post information on the meeting content, not just meeting dates, before the early registration deadline. People who like to plan well ahead require some info on the program in order to decide whether to register. For the Summer Meeting, a list of approved Meeting-in-Meetings would be helpful; exact days during the meeting window when sessions are scheduled is less important.
3. Spread topics over at least two days, perhaps three for subjects with a large volume of talks—avoid parallel sessions on common topics (but keep similar topics consecutive).
4. Provide “Ask me about …” badges that would attach to the regular badge at Registration. These should be left blank so that attendees can customize at will (or choose not to participate). Provide non-lanyard (pin) options. Offer optional “first timer” buttons at Registration.
5. Provide more informal collaboration space such as more seating in common areas.

6. Continue to ensure that the projectors are color-calibrated, in focus, bright, high resolution, and in good working order.
7. Consider providing power towers (perhaps through sponsorship) that can be distributed around the venue.
8. Further develop the meeting app. Things to possibly add:
    a. Links to local food options, especially quick and/or inexpensive options
    b. Possible chat function to assist people, similar to the 'ask me' ribbons, but digital
    c. A social section for non-science-related tasks and meet-ups
9. Advertise (likely) child care options prior to early registration deadline. Right now, link to "child care options" on website typically says "coming soon" until just before meeting, which is too late for people who need to plan before they decide to attend.

Exhibit Hall

The Exhibit Hall is necessarily large, which can make it hard to navigate and find topics of interest.

1. Display a 'map' of the posters at the entrance showing areas by subject for each day.
2. Add signage to aid navigation within the hall. A prominent sign should be placed at the end of each row, showing the topic (not just the session number).
3. Add additional seating around the room. This is highly utilized by attendees and provides excellent space for informal collaboration (see also Section 16 on Accessibility).
4. Make full use of all board space on all days, i.e., spread out if needed to cover all areas around exhibitors.
5. On days with less-than-full poster boards, do not leave exhibitors next to blank poster boards; distribute posters around exhibitors.
6. Find a way to allow poster participants to archive their posters in a way that can be linked on ADS. This might involve asking IOP to host and curate Web space for attendees to (optionally) upload their poster PDFs, and working with ADS to link to the appropriate URLs.
7. More opportunities to use electronic media as well as traditional paper?

Informal Meetings

1. Provide more extensive open seating areas for small informal meetings. Customize according to available space at each venue.
2. Configure one or small meeting rooms, or unused space elsewhere, with round tables, instead of rows.
3. Allow attendees to reserve a small room during the meeting, perhaps by the hour, on a space-available basis. This serves a need for small meetings that do not require the long lead time for planned Splinter Meetings. Include power for electronic devices. This need not cost the Society more, unless one or two rooms were reserved for this use throughout the meeting; this should not be necessary if available small rooms can be tightly managed.

Meeting Services

1. Make more cost-effective lunch options available inside the venue. Options include pre-ordering a meal (how far in advance?) or using food trucks (how viable is this in cities and

does it interfere with venue contracts?). Circulate advice from locals on food, shopping, and entertainment options outside of the immediate venue.
2. Consider reducing the size of the cyber café, but retain the ability to print. Place it in the cheapest available place within the venue. Technology in our pockets is ever increasing and will likely decrease the need for the cyber café in the future. This assumes the Internet connectivity can handle the expected volume. Review the need for the cyber café annually.

Post-Meeting Suggestions

1. Advertise better the availability of plenary talks—presentation slides plus audio (but not synchronized)—as many members are unaware of this benefit.
2. Continue to conduct post-meeting surveys. These should be viewed as a way to track the effectiveness of changes in the way we run the Meetings. Questions should be geared toward feedback on meeting features that have changed.

Remote Streaming

There was some interest in being able to view a stream of the meeting remotely. Most options for this are very expensive. We recommend not doing this now, but the possibility should be revisited in a few years.

12. Summer Meetings

12.1 Should the AAS Discontinue the Summer Meeting?

> *The Winter Meeting is the major meeting of our Society—it is heavily attended, and features sessions and activities for the entire membership. Is there enough demand for a Summer Meeting? Do members want the option of two AAS meetings per year, when they are planning conference travel?*

Findings

While the Winter Meetings are successful revenue generators, the Summer Meetings tend, on average, to be revenue neutral. Attendance is more variable and harder to predict. Given the lower attendance and higher financial risk to the AAS, do the Summer Meetings add enough value to justify continuing them?

A large majority (63%) of the survey respondents agreed or strongly agreed that the Summer Meeting is qualitatively different from the Winter Meeting, and that this is a good thing. Only 19% felt that the summer and Winter Meetings should be more similar. In particular, the Winter Meetings offer numerous career development activities and workshops and thus probably have higher appeal for junior members. The larger attendance at the Winter Meetings also provides many more opportunities for networking.

The survey includes many comments from Winter Meeting attendees stating that the Summer Meeting could be abandoned. Winter Meeting attendees also commented that they are more likely to attend international meetings in their area of specialty in the summer. Those members feel the Winter Meeting is too ‘dilute’, in terms of their specific science interests. The AAS Meeting-in-a-Meeting format at the Summer Meetings, discussed in the next Section, may not fill the need for

international participation. There were very few survey respondents suggesting the AAS hold a single meeting, in the summer.

On the other hand, it is not clear that the members who prefer the Summer Meetings would attend the Winter Meetings if no Summer Meeting were offered. Only 6.6% of the survey respondents attend both meetings. A majority of the survey respondents agreed or strongly agreed that smaller meetings are better for sharing ideas (60%) and cost the same (52.2%). A large minority agreed or strongly agreed that smaller meetings are better for networking (48.2%), with another 30.6% neutral. Thus it seems that the sheer size of the Winter Meeting is viewed as an impediment to interacting, even though there are more opportunities. In short, many members appreciate the smaller scale of the Summer Meeting.

Although the Summer Meetings conflict with many international topical meetings, they align better with teaching responsibilities and family vacation planning. While family vacations align better at some locations than others, only 39.3% agreed or strongly agreed that location is the most important factor.

We note that projected attendance at the 2016 Summer Meeting in San Diego is lower than planned. From feedback received, this may be due to the high cost of attending. San Diego was called out in the Survey as a popular destination, and the meeting hotel is in an excellent location; but the hotel rooms are very expensive. This is a factor for members who are considering attending a specialist non-AAS meeting that may be cheaper. While there may be a financial impact to the AAS of the low attendance in San Diego, this does not change our recommendation that the Summer Meetings continue, provided the attendances and finances are viable. Also see our recommendations in Section 7.

Recommendations

1. The AAS should continue to hold Summer Meetings. Summer Meetings are not losing revenue overall, and they have their own constituency.
2. The Sustainability Committee representative noted that some societies have moved to one meeting per year to cut the carbon footprint; we recommend that this issue be revisited in three years.
3. Total cost to attendees should remain an important factor in planning Summer Meetings, as noted elsewhere in this Report. Because of fixed costs, there may be a minimum attendance level for financial viability, and this should be assessed after each Summer Meeting.

12.2 Improvements to Summer Meetings

> *Given the recommendation to continue the Summer Meetings, what meeting improvements can be made?*

Findings—Logistics and Finances

The AAS office appears to successfully manage the finances of the Summer Meetings. Survey responses and comments suggest that many of the attendees prefer the Summer Meeting because of the size and season and the cost to the attendee is viewed as similar to Winter Meetings. The Summer Meetings have attendance between 600 and 1000, whereas the Winter Meetings have attendance between 2200 and 2400. Location is not the primary reason for survey respondents deciding whether to attend, though it is likely that extreme locations affect the actual attendance

numbers. There are no major logistical changes that seem likely to make a difference in attendance, though tweaks based on experience may help mitigate the financial risk.

Summer Meeting location—Since the Summer Meetings are much smaller than the Winter Meeting, many better choices of city are available. Appendix B lists many cities that are candidates for the Summer Meetings. In fact, it is an opportunity to avoid favoring the East and West coasts.

Recommendations

1. We have no major recommendation on finances for the Summer Meeting. The AAS should continue to monitor the attendance and their overall financial impact.
2. Summer Meetings should continue to move to a number of different locations, for the convenience of astronomers distributed across the country. We note however, that given the problems with finding a suitable venue in the DC area for the Winter Meeting, holding a Summer Meeting there occasionally is a good option (see Section 7 recommendations 10, 11). This may be attractive to those bringing families; but DC is hot in the summer, and policy makers are less likely to be in town after June; though good access to national agency staff remains.

Findings—Summer Meeting Structure

The AAS has introduced two new formats over the past few years.

1. Meeting-in-a-Meeting—a series of two to seven 90-minute sessions in parallel with other science talks. These are held only at the Summer Meetings. Organizers submit a proposal to the Vice Presidents. The survey suggests that members are not fully aware of how this format works or how it differs from the Topical Conferences.
2. AAS Topical Conferences are stand-alone meetings sponsored and supported by the AAS but are not now associated with the Summer Meeting itself. One suggestion is to hold several Topical Conferences together as a replacement for the regular AAS meeting. Given our recommendation to retain the Summer Meeting, this seems premature.
3. AAS Division Meetings (HEAD, DPS, DDA, SPD, HAD, LAD) are outside the scope of this Task Force. However, we note that the Division Meetings represent a partial overlap set with the audience for Topical Meetings.

Recommendations

1. The AAS should continue with the Meeting-in-a-Meeting format at the Summer Meetings, with improved communications about this—emphasizing the benefits of AAS meeting logistics support for organizers. The AAS should consider soliciting Meeting-in-a-Meeting proposals in hot research areas. The plenary speakers could be encouraged to propose a Meeting-in-a-Meeting in their research area to build excitement.
2. AAS Topical Conferences should be continued, but their viability (measured in terms of financial success, and attendance numbers) should be reviewed every year or two. The AAS should advertise the benefits of AAS support to potential organizers of summer conferences and workshops. The scope and timing should be coordinated with the AAS Divisions to make sure that serious clashes in topics or timing may be avoided.

Findings—Summer Meeting Additional Activities

Adding new and/or tried-and-true activities to the Summer Meeting might improve attendance.

1. The Survey did not strongly support moving career activities, the Washington DC venue, or other "winter" activities to the Summer Meeting.
2. The Employment Committee focuses its career and professional development activities on the Winter Meeting, which aligns with academic appointments (after fellowship and many faculty deadlines and before decisions). On the other hand, the Winter Meeting is nearing saturation with EC activities while the demand continues to be high.
3. The Executive Office staff might be able to support a limited number of activities, for instance, the popular one-on-one career counseling sessions with a professional career counselor or a longer workshop that might fit into the more relaxed meeting schedule. If these activities were available during times when the Meeting-in-a-Meetings were not in session, they might draw from those attendees. Very rough scaling from the survey respondents to the actual attendance numbers suggests that only about 100 junior scientists (undergraduates, graduate students, and postdocs) typically attend the Summer Meeting. Using the survey data on meeting attendance, the ratio of junior respondents at Winter Meetings to those at Summer Meetings was about twice that ratio for faculty and research scientists. Many Research Experiences for Undergraduates (REU) programs also facilitate undergraduate attendance at the Winter Meeting.

Recommendation

The AAS should try adding a small number of career and professional development activities to the Summer Meeting to judge their popularity. The Employment Committee conducts surveys of all its workshops and can advise as to the ones most likely to be successful.

13. Other Societies' Meetings

A number of scientific societies struggle with the issue of how to improve the overall efficiency and value of meetings to their membership. This has been especially true in recent years due to changes in membership demographics and rapid changes in communication technologies. We reached out to several scientific organizations similar to the AAS for discussions on how they are addressing these issues. Organizations contacted included the SPIE, APS, ASP, and AGU. While some were non-responsive or not willing to share their experiences, the AGU leadership was extremely helpful and open in discussing their current approaches and plans for "experiments" at future meetings.

Below, we capture recommendations from other societies in the context of how they conduct their meetings. Please note that these are primarily the recommendations of the organizers of other meetings, not the Meetings Task Force. Recommendations by the Task Force on these topics are covered elsewhere in this Report.

1. Increase the value of poster presentations

   At many professional meetings, posters are often considered as "consolation prizes" for presentations that are not worthy of oral sessions. At the AAS, and some organizations such as the AGU, posters are viewed as important, if not more important, than oral presentations since

it offers the author more direct interactions with other members. AAS members have the choice of an oral or poster slot at every meeting. Increasing the value of poster presentations would ease the pressure on oral presentations and perhaps allow fewer parallel sessions.

2. Creative ways to support short talks
    a. "Lightning talks"—2 slides max
    b. Pico-talks—combination of Poster and brief 2-minute summary. These could be held in the Exhibit Hall, but would be challenging to administer.
    c. Short (1-minute) poster summary talks linked to oral sessions? These could be added at the end of oral sessions. As an experiment, this could be tried at just a few sessions at a future meeting.
3. More effectively utilize mobile applications for improved participant networking
    a. Mobile apps are available that provide much more than calendars, and in particular enable individuals to set up, manage, and facilitate networking activities.
    b. Make sure that the app includes back-end integration with the meeting scheduling and registration software.
    c. Make sure people install the app before the meeting. It may be useful to actively promote the use of the app for the meeting. Any apps should default to opt-in features rather than opt-out.
    d. Support for gatherings not planned in advance (room + social media to advertise?).
4. Negotiating meetings contracts
    a. Continue to stay informed on best practices for conferences in the non-profit sector, including how best to negotiate with meeting vendors.
    b. Continue to provide venue representatives with feedback on the meeting experience (for both organizers and attendees). We understand this has been done with Gaylord Resorts already.
5. Other observations/experience from comparable societies
    a. Making videos of talks was found not to be worth the time and expense.
    b. Bottled water, cookies, apples, etc. Relatively inexpensive but perceived as high value. Longer coffee breaks are desired (but have major schedule consequences).
    c. A society's meeting should be a reflection of the organization's values and the membership's interests.

14. Considerations for Young Astronomers

It is essential for the long-term future of the AAS that its meetings are seen as services that are valued and utilized by its younger members.

Findings

In general, younger members responding to informal surveys by Task Force members made suggestions of a general nature, and these have been included in the recommendations of other Sections. In particular, these included recommendations to improve inclusiveness and access, focus on keeping minimum total costs low, and to broaden the scope of the meetings to include

more professional development opportunities, including programming skills and professional service topics. Specific concerns include:

1. Total cost of attending—Young astronomers are much more likely to be cost-sensitive than other attendees, and look for less convenient, cheaper options for food, transportation, and lodging. As such, they are benefitted by the minimum practical total cost of attendance, as opposed to the typical total cost of attendance. The AAS should consider both of these total costs of attendance when selecting cities for meetings, the size of guaranteed room blocks, etc.
2. Social media—Many younger astronomers (including those not attending) follow meetings on social media, especially Twitter and Facebook, using the hashtag #aas??? (where the question marks are the meeting number). AAS officers and staff also participate in this using the official AAS Twitter accounts, and many of the standing committees have their own social media presence that is used during meetings as well. The AAS should continue its social media presence, especially during meetings, and engage meeting attendees across a range of social media.
3. Hack Day—This is an example of where the AAS can reach out to younger astronomers and remain relevant. To be effective it needs to be in-person, so an AAS Meeting is the right venue.
4. Harassment—Junior members of our society are disproportionately likely to be the targets of harassment, and they are also less likely to be familiar with the standards of professional behavior at AAS meetings. We commend the AAS for developing a code of conduct for meetings, providing a well-advertised mechanism for reporting and documenting violations, and prominently advertising it at the Kissimmee Meeting. The Astronomy Allies are very prominent at AAS Meetings as a resource for handling harassment questions.
5. Junior members care that harassment issues be given meeting time when requested. For example, a vocal minority felt that a parallel session devoted to harassment issues should have been elevated to a plenary session at the 2016 Winter Meeting (they felt it missed its target audience); in the end it was given a Town Hall spot.
6. Inclusion—The AAS strives to be inclusive, as evidenced by the official policy on the website. Younger astronomers clearly feel strongly about this issue. There are many steps the AAS can take at meetings to fulfill this intent and foster inclusiveness.

Recommendations

1. The AAS should continue to validate, encourage, and support the use of social media by AAS members, staff, officers, and committees, and continue to engage meeting attendees across a range of social media.
2. Better integration (or at least support) for Hack Day type activities.
3. Continue to advertise prominently mechanisms for documenting and reporting violations of the Society's code of conduct at AAS Meetings.
4. Consider formally recognizing the Astronomy Allies effort. We note that the AAS supported a dinner at the Kissimmee meeting, and this should be done regularly.
5. Promote inclusion at AAS Meetings, by continuing to advertise the code of conduct, and making acknowledgment a requirement for registration.
6. Estimate the *minimum* practical total cost of attendance (i.e. what's the least one can spend, taking the cheapest of every option for travel, lodging, meals etc.). For some junior astronomers, this is a more useful metric than, say, the median cost. This should be tracked long-term, to develop a baseline of which cities are the cheapest for those on a limited budget.

7. Hack Day should be integrated into the AAS Meeting agenda, and not treated as an outside event. The most recent event (Kissimmee) was well-attended even though 42% of Survey respondents were not aware; it should be better advertised.

15. 'Add-on' Meetings

> *What policy should the AAS adopt for 'add-on' meetings (usually held on the weekend prior to the main meeting)? Should they be regarded as an integral part of the main Meeting?*

Meetings scheduled on the weekend prior to the AAS Meetings (referred to in this Section as 'weekend meetings'—workshops, agency working groups, mission-oriented sessions, etc.) present both a meeting policy issue and a logistic issue:

Policy issue—Should weekend meetings be regarded as part of the AAS Meeting? Or are they separate meetings that are scheduled on the weekend before the AAS Meeting for the convenience of attendees?

Logistic issue—Should access to weekend meetings be controlled, and if so, how?

Currently, weekend meetings are regarded as part of the main AAS Meeting. The rationale is that a large meeting provides benefits for attendees in terms of interactions with colleagues. They are viewed as an integral part of the overall package, with the only difference being that one needs to travel a day or two earlier in order to attend. Meeting room reservation and scheduling are absorbed into the overall meeting organization. Thus weekend meeting organizers bear only the incremental cost, and weekend meeting attendees are expected to register for the full AAS Meeting. The policy is known to meeting organizers, as it has to be acknowledged as part of the reservation process. But this causes two problems:

1. People attending only a weekend meeting resent having to pay the full meeting rate just to attend. It is not enforced, though meeting organizers are encouraged to ensure that their attendees register. In practice, although only a handful of people simply ignore it, this generates complaints of unfairness among those who follow the AAS requirement. The unfairness must be addressed.
2. The AAS currently does not open up the registration desk until Sunday afternoon, when the weekend meetings are winding up. It's a major time commitment for the AAS Staff to set up registration no later than first thing on Saturday morning, and also an expense in having venue staff to enforce the badging requirement.

The Task Force Chair discussed this at length with AAS Staff. Our recommendation preserves the policy that weekend meetings continue to be viewed as part of the AAS Meeting, not as separate entities. Below, we record the recommendations on policy for the Council to approve, and note that the Meeting Staff are already implementing changes to resolve the issues noted above:

1. The AAS will require weekend meetings attendees to register, at a minimum, at the Monday one-day rate.
2. The AAS sets a deadline for weekend-only registrations early enough for badges to be printed
3. A registration desk will be set up on Saturday to distribute badges for weekend meetings (only) and help with meeting logistics.
4. When available, AAS volunteers will be assigned to weekend meetings to assist with registration, badge enforcement, etc.

5. Meeting organizers agree to remind prospective attendees of the AAS policy to when they advertise and provide logistic info for their meeting.
6. Meeting organizers can negotiate a number of paid registrations as part of the cost of the weekend meeting. This works for organizers from federal agencies, who can use these for their invited speakers, bearing that cost as part of their overall budget.
7. A member of AAS staff will verify that the badging rule is being followed, at some point during the weekend meeting.
8. Members registering for the entire AAS Meeting, but attending the weekend meeting, will receive a weekend-only badge from the organizer. After the weekend meeting, they will pick up their AAS badge in the usual way.

16. Accessibility

AAS Meetings should of course be welcoming to all astronomers without regard to race, religion, gender identity, and disabilities. The Task Force received a number of suggestions specifically on accessibility. Most of these are reasonable, and we list them without comment. But we note that many require more logistic support, or cost money, so they have consequences for the overall meeting experience.

The newly constituted AAS Working Group on Accessibility and Disability (WGAD) is charged with identifying, documenting, and eliminating barriers to access to disabled astronomers and students. We encourage the AAS to make use of this resource by soliciting additional recommendations and implementation details from WGAD.

Disabilities take many forms, besides those that are obvious to the observer. The AAS may be aware (via questions on the registration form), but many disabled people choose not to advertise this fact and the AAS should respect that by making access a default position wherever practical.

Recommendations

1. Reserved front row seating for people with disabilities and spaces marked near front for wheelchairs.
2. All events, including events hosted by AAS committees, should have seating.
3. Attendees reminded at start of session to keep pathways clear of bags.
4. Microphone use should be mandatory for speakers, session chair, and for questions. Cordless mics should always be available, and checked for functionality before each session starts.
5. Session Chair breakfasts should remind chairs of the accommodations that the AAS already provides, but to be alert for issues that require chair action.
6. Presentations should use plots that are colorblind friendly (there exist websites that check this). Fonts should be dyslexia friendly, and there should be minimum font guidelines for people with vision loss. Could provide an “accessible presentation template” available to presenters.
7. Limit flash photography during sessions and talks, and verify flicker-free lighting at venues (possible epilepsy or migraine triggers).
8. Stools or other seating option for poster presenters (stools could slide under poster tables); roughly one for every 6–8 posters (one double row) should be sufficient.
9. Food items (e.g., at lunch carts) should be marked clearly for common allergens.

Additional Considerations

1. Hold some hotel rooms from the room block specifically for disabled attendees who identify their need (see Section 8.2); rooms could be released to the other attendees if not needed.
2. Provide an expedited line for coffee and food (e.g., at receptions and lunch carts). This could be implemented as an option on the registration form, perhaps receiving tokens at registration. Alternatively, some accommodation for the likely small number of people affected could be done on an individual basis.
3. Hold a Workshop on disability/accessibility issues in astronomy, with content determined with input from WGAD.
4. Consider grants for disabled attendees whose total cost of meeting attendance is higher due to disability (e.g., requiring business class airplane seats, specialized taxis, attendants, or special food options).
5. For the visually impaired, specific presentations of interest could be made available prior to the talk, preferably in screen reader accessible formats with detailed captions for images. The most practical way to implement this is for the Speaker ready-room staff to provide this as a service.

17. Conclusion

The Task Force found that cost considerations enter into almost all recommendations that we discussed. The challenge of balancing expectations and costs is one of hitting a moving target. We assessed the current constraints and opportunities and generated recommendations accordingly. However, some facets will require continued monitoring and adjustment. We also suggested some experiments that will need to be evaluated after they are implemented; post-meeting surveys should be customized to collect needed data. The in-house staff and the Council will need to continue to be creative in meeting the challenge. This may be adequately addressed through the current tradition of involving the VPs in all aspects of meeting planning; but it may a require more global review on a roughly decadal cadence.

Appendix A—Summary of the Meetings Survey Results

A summary of the Meeting Survey, entitled "AAS Questionnaire to Improve Meetings: Summary of Survey Responses" is attached to this Report as a 24-page PDF. Redacted from this summary are all write-in comments, and most of the respondent demographic data.

Appendix B—Member Preferences for AAS Meeting Cities

The Questionnaire asked the following question: *Please list cities that you would like to see host a meeting of the AAS. Not all locations have the facilities to support such a large meeting, but suggestions are welcome.*

Approximately 50% of respondents offered one or more city suggestions. The table below lists the 46 cities (or areas) with 4 votes or more. An additional 19 cities received 2–3 votes, with a further 38 receiving a single vote. The considerations that went into these preferences are discussed in Section 7. These numbers should only be taken as a rough guide, as no attempt was made to constrain these suggestions with practical considerations of cost, venue availability, etc., or between summer and winter locations. Nevertheless, some trends emerge:

1. Most of the favored cities are medium to large
2. All of the most favored cities are easy or very easy to get to
3. Many medium to large cities with poorer transportation options got only 1–2 votes
4. Favored cities feature good options for recreation, entertainment, or culture—though these considerations did not figure prominently in the responses to other Survey questions.

City	Vote Count	City	Vote Count	City	Vote Count
Chicago	60	Albuquerque	16	Long Beach	7
San Francisco	50	Baltimore	15	Toronto	7
Seattle	47	Los Angeles	14	Charleston	6
Austin	40	Minneapolis	12	Cleveland	6
Denver	37	Pittsburgh	12	Honolulu	6
Portland OR	35	Salt Lake City	12	Milwaukee	6
Boston	31	Boulder	11	Dallas	5
San Diego	30	Las Vegas	11	Indianapolis	5
Tucson	27	Madison	11	Oakland	5
New York City	25	Miami	11	Raleigh	5
New Orleans	24	St. Louis	11	Bozeman	4
Nashville	19	San Antonio	9	Charlotte	4
Phoenix	19	Pasadena	8	Louisville	4
Washington DC	19	San Jose	8	Memphis	4
Atlanta	18	Vancouver	8	Orlando	4
Philadelphia	18				

Appendix C—Income and Expenses for Meetings

The table shows the major income expense categories, and their relative importance in balancing the Meeting budget. Note that the salary numbers shown are those from employees who log what they are working on—AAS Kissimmee or other meeting—and does not include support for Renee Battle, Kevin Marvel, Joel Parriott, or Kelly Clark. Once all costs are accounted for, meetings are a smaller source of support for HQ operations than are the membership dues.

	Winter Meetings				Summer Meetings				
	Austin (2012)	Long Beach (2013)	National Harbor (2014)	Winter Average	Anchorage (2012)	Indianapolis (2013)	Boston (2014)	Summer Average	Overall Average
Revenue Percentages									
Registration fees	78%	75%	76%	76%	78%	65%	78%	73%	75%
Exhibit space fees	22%	21%	19%	21%	18%	26%	17%	20%	20%
Sponsorships	0%	4%	5%	3%	4%	9%	5%	6%	5%
Expense Percentages									
Food and beverage	25%	28%	30%	27%	30%	24%	39%	31%	29%
Salaries and benefits	25%	23%	22%	24%	18%	21%	17%	19%	21%
Audio-Visual	15%	16%	18%	16%	22%	14%	17%	18%	17%
Facility costs	19%	19%	15%	18%	15%	26%	11%	17%	18%
Travel & transportation	8%	6%	8%	8%	10%	11%	13%	11%	9%
Printing, credit card fees, childcare	7%	7%	7%	7%	5%	3%	3%	4%	5%
Net Revenue Calculation									
Total Revenue	$995,210	$1,298,384	$1,186,737		$445,570	$236,556	$477,183		
Total Expenses	$786,267	$890,810	$960,875		$417,618	$369,182	$474,496		
Net	**$208,943**	**$407,574**	**$225,862**		**$27,952**	**–$132,626**	**$2,687**		

Appendix D—Recent Meeting Attendance

The numbers shown below reflect the paid attendance, not total attendance, at AAS Meetings from 2001 through 2016.

Year	Winter Meeting	Attendance	Summer Meeting	Attendance
2001	San Diego	2,101	Pasadena *	1,382
2002	Washington, DC	2,161	Albuquerque	1,393
2003	Seattle	2,041	Nashville	677
2004	Atlanta	1,468	Denver *	1,065
2005	San Diego	1,960	Minneapolis	631
2006	Washington, DC	3,068	Calgary	605
2007	Seattle	2,234	Hawaii *	1,206
2008	Austin	2,471	St. Louis	650
2009	Long Beach	2,278	Pasadena	864
2010	Washington, DC	2,681	Miami	625
2011	Seattle	2,303	Boston	1,009
2012	Austin	2,421	Anchorage	948
2013	Long Beach	2,272	Indianapolis	458
2014	Washington	2,499	Boston	940
2015	Seattle	2,308	Honolulu**	1,682
2016	Kissimmee	2,071		

** Joint with Solar Physics Division (SPD)*
*** IAU General Assembly, hosted by the AAS*

Task Force on AAS Meetings

Appendix A—Summary of the Meetings Survey Results

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The research described in this publication was carried out by the Jet Propulsion Laboratory, California Institute of Technology, and was sponsored by NASA.

Prepared for

American Astronomical Society (AAS)

by

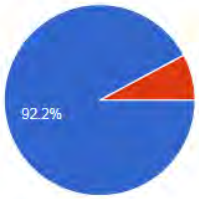
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

April 2016

AAS Questionnaire to Improve Meetings

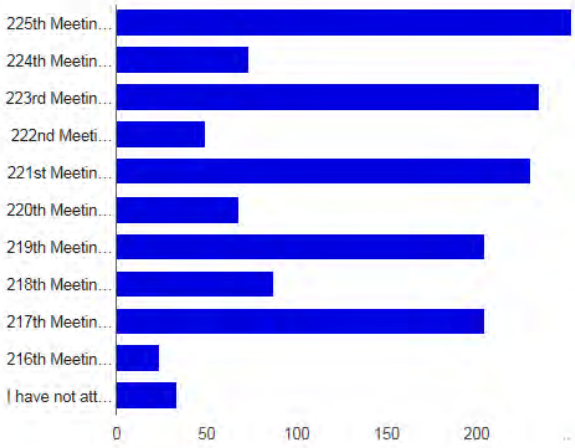
Summary of Survey Responses

Have you attended a meeting of the AAS within the past 5 years?



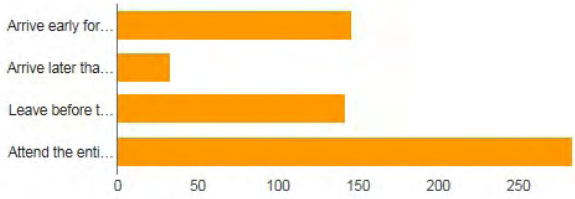
Yes	**436**	92.2%
No	**37**	7.8%

Please indicate which of the following meetings you have attended recently:



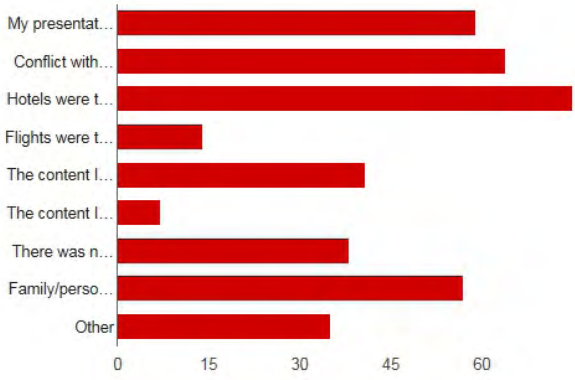
225th Meeting; Seattle, WA; January 2015	**253**	53.9%
224th Meeting; Boston, MA; June 2014	**74**	15.8%
223rd Meeting; Washington, DC; January 2014	**235**	50.1%
222nd Meeting; Indianapolis, IN; June 2013	**49**	10.4%
221st Meeting; Long Beach, CA; January 2013	**230**	49%
220th Meeting; Anchorage, AK; June 2012	**68**	14.5%
219th Meeting; Austin, TX; January 2012	**205**	43.7%
218th Meeting; Boston, MA; May 2011	**87**	18.6%
217th Meeting; Seattle, WA; January 2011	**205**	43.7%
216th Meeting; Miami, FL; May 2010	**24**	5.1%
I have not attended a meeting of the AAS in the last 5 years	**33**	7%

At the last meeting you attended, did you:



Arrive early for the weekend sessions	**146**	31.7%
Arrive later than Monday	**33**	7.2%
Leave before the end of the meeting	**142**	30.9%
Attend the entire meeting	**284**	61.7%

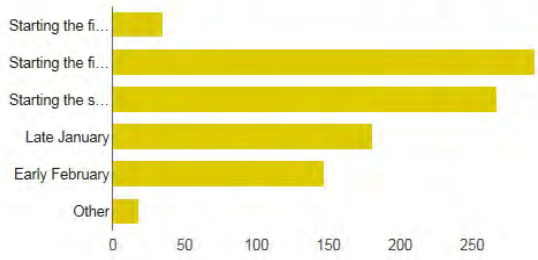
If you did not attend the entire meeting, which of the following may have affected your decision to leave early or arrive late?



My presentation was over	**59**	30.3%
Conflict with school or classes	**64**	32.8%
Hotels were too expensive for the entire duration	**75**	38.5%
Flights were too expensive at the start or end of the conference	**14**	7.2%
The content I wanted was at the beginning of the meeting	**41**	21%
The content I wanted was at the end of the meeting	**7**	3.6%
There was no useful content on the last day	**38**	19.5%
Family/personal reasons	**57**	29.2%
Other	**35**	17.9%

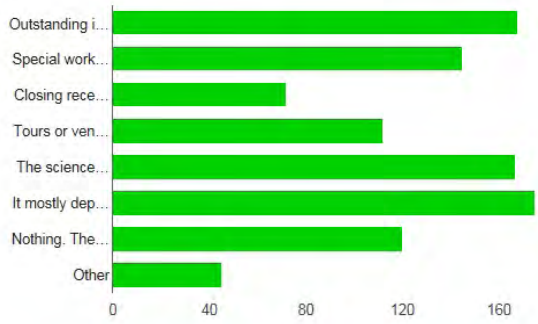
Winter Meeting Scheduling

The winter meetings are usually held the first Monday–Thursday after January 2, with some receptions and workshops the weekend before (or after, if they conflict with New Year's). During which of the following timeframes would you be likely to attend a meeting?



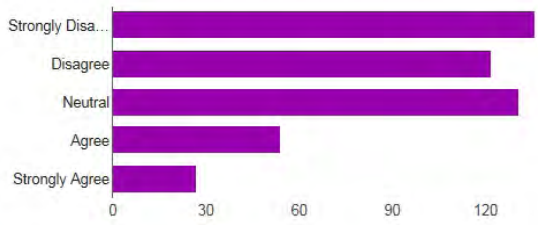
Starting the first Monday after Dec. 26	**35**	7.5%
Starting the first Monday after Jan. 2	**294**	62.8%
Starting the second Monday after Jan. 2	**267**	57.1%
Late January	**181**	38.7%
Early February	**147**	31.4%
Other	**18**	3.8%

Attendance at the meetings typically declines strongly on the last day. The final talk of the Winter meeting is the Berkeley Prize lecture followed by the closing reception, both of which are designed to reward those who stay. Which of the following alternatives would persuade you to stay through the end of the meeting?



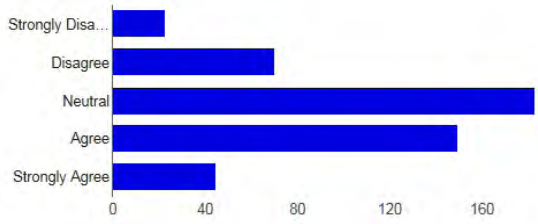
Outstanding invited lectures in the afternoon of the final day	**168**	36%
Special workshops or activities	**145**	31%
Closing reception with door prizes	**72**	15.4%
Tours or venues of interest to astronomers	**112**	24%
The science program was scheduled through the evening of the last day	**167**	35.8%
It mostly depends on the dates	**175**	37.5%
Nothing. The meeting should end no later than mid-afternoon on the last day	**120**	25.7%
Other	**45**	9.6%

I am more likely to attend a meeting if the science program occurred over a weekend [The following statements relate to the length and timing within the week of the AAS Meetings. Currently, the science program is four days long (Monday-Thursday)]



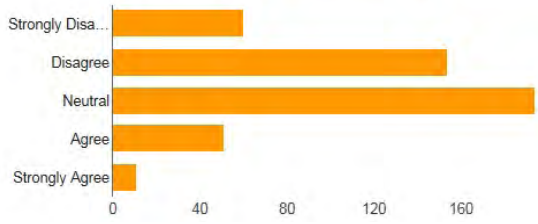
Strongly Disagree	**136**	28.9%
Disagree	**122**	26%
Neutral	**131**	27.9%
Agree	**54**	11.5%
Strongly Agree	**27**	5.7%

I am more likely to attend a meeting if the science program were 3 days long [The following statements relate to the length and timing within the week of the AAS Meetings. Currently, the science program is four days long (Monday-Thursday)]



Strongly Disagree	**23**	4.9%
Disagree	**70**	14.9%
Neutral	**183**	38.9%
Agree	**150**	31.8%
Strongly Agree	**45**	9.6%

I am more likely to attend a meeting if the science program were 5 days long [The following statements relate to the length and timing within the week of the AAS Meetings. Currently, the science program is four days long (Monday-Thursday)]



Strongly Disagree	**60**	12.8%
Disagree	**154**	32.8%
Neutral	**194**	41.3%
Agree	**51**	10.9%
Strongly Agree	**11**	2.3%

Winter Meeting Locations

The city itself [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**60**	12.7%
A little important	**235**	49.9%
Very important	**176**	37.4%

Location of the venue within the city [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**86**	18.3%
A little important	**229**	48.6%
Very important	**156**	33.1%

The city's nearby non-astronomical attractions [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**179**	37.8%
A little important	**237**	50.1%
Very important	**57**	12.1%

Having multiple transportation options [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**71**	15%
A little important	**223**	47.1%
Very important	**179**	37.8%

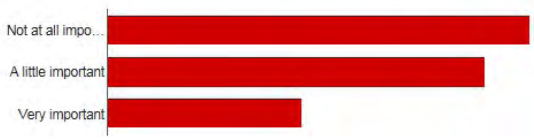
Having public transportation options [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**82**	17.4%
A little important	**190**	40.3%
Very important	**199**	42.3%

Having cheaper hotel options near the venue [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**56**	11.8%
A little important	**190**	40.2%
Very important	**227**	48%

The option to commute for local attendees [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]



Not at all important	**197**	42.5%
A little important	**176**	37.9%
Very important	**91**	19.6%

Cost of getting to/from the city [How important are the following factors about the host city in your choice of attending a meeting of the AAS?]

Not at all important	**68**	14.4%
A little important	**179**	37.8%
Very important	**226**	47.8%

The venue is all-inclusive, resort-style, with hotels and restaurants on site [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

Not at all important	**361**	76.8%
A little important	**85**	18.1%
Very important	**24**	5.1%

The venue is close to multiple hotel choices [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

Not at all important	**22**	4.7%
A little important	**173**	36.6%
Very important	**278**	58.8%

The venue is close to multiple food options [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

Not at all important	**21**	4.4%
A little important	**120**	25.4%
Very important	**331**	70.1%

The venue is centrally located within the city [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

Not at all important	**93**	19.7%
A little important	**224**	47.5%
Very important	**155**	32.8%

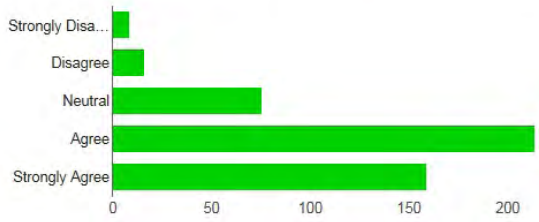
The venue is accessible by public transit [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

Not at all important	**59**	12.6%
A little important	**185**	39.4%
Very important	**226**	48.1%

The choice of venue minimizes registration costs [How important are the following factors about the venue in your choice of attending a meeting of the AAS?]

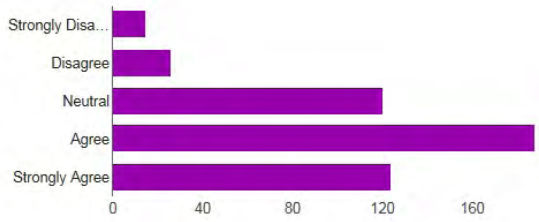
Not at all important	**52**	11%
A little important	**226**	47.9%
Very important	**194**	41.1%

It is important to me to give policy makers the chance to attend our meetings [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



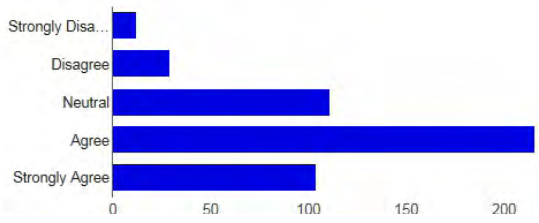
Strongly Disagree	**9**	1.9%
Disagree	**16**	3.4%
Neutral	**76**	16%
Agree	**214**	45.1%
Strongly Agree	**159**	33.5%

It is important to me to have an occasional meeting in Washington D.C. [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



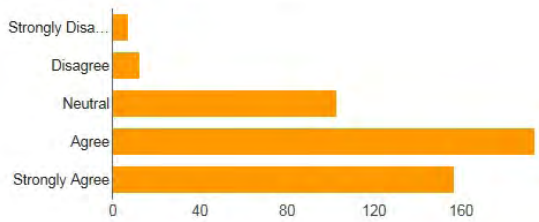
Strongly Disagree	**15**	3.2%
Disagree	**26**	5.5%
Neutral	**120**	25.4%
Agree	**188**	39.7%
Strongly Agree	**124**	26.2%

It is important to me to occasionally have our meeting close to policy makers [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



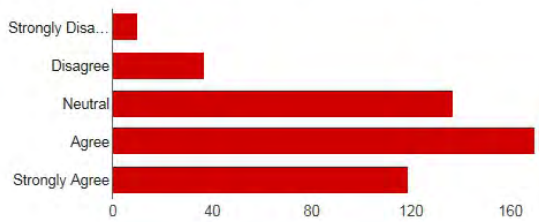
Strongly Disagree	**12**	2.5%
Disagree	**29**	6.1%
Neutral	**111**	23.5%
Agree	**216**	45.8%
Strongly Agree	**104**	22%

I think that the regular meeting in Washington D.C. is a benefit to the AAS [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



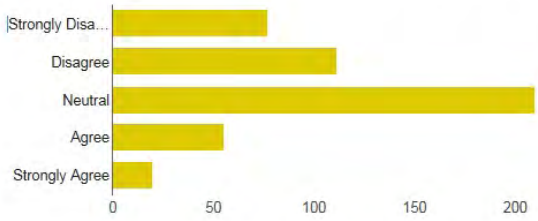
Strongly Disagree	**7**	1.5%
Disagree	**13**	2.7%
Neutral	**103**	21.7%
Agree	**194**	40.9%
Strongly Agree	**157**	33.1%

I think that the regular meeting in Washington D.C. is a benefit to astronomers in general [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



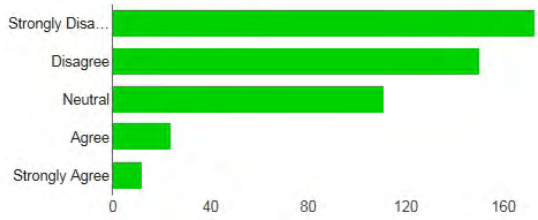
Strongly Disagree	**10**	2.1%
Disagree	**37**	7.8%
Neutral	**137**	29%
Agree	**170**	35.9%
Strongly Agree	**119**	25.2%

I think the meeting in Washington D.C. would be better held in summer, when AAS meetings are smaller [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



Strongly Disagree	**77**	16.3%
Disagree	**111**	23.5%
Neutral	**210**	44.4%
Agree	**55**	11.6%
Strongly Agree	**20**	4.2%

I have made use of the Washington D.C. meeting to visit policy makers [The AAS typically has a meeting in the Washington D.C. area every four years. This allows policy makers (federal agencies, congress, etc.) the opportunity to attend our meetings. It also gives members a chance to be close to policy makers.]



Strongly Disagree	**173**	36.8%
Disagree	**150**	31.9%
Neutral	**111**	23.6%
Agree	**24**	5.1%
Strongly Agree	**12**	2.6%

Meeting Content: Presentations

The oral presentations (5 min) are... [The following relates to length of presentations at the meeting.]

Too short	**323**	68.6%
Just right	**147**	31.2%
Too long	**1**	0.2%

The Dissertation talks (15 min) are... [The following relates to length of presentations at the meeting.]

Too short	**40**	8.5%
Just right	**399**	84.5%
Too long	**33**	7%

The invited talks (45 min) are... [The following relates to length of presentations at the meeting.]

Too short	**3**	0.6%
Just right	**353**	74.6%
Too long	**117**	24.7%

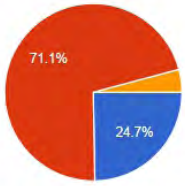
The question and answer sessions after each talk (5 min) are... [The following relates to length of presentations at the meeting.]

Too short	**63**	13.5%
Just right	**373**	80%
Too long	**30**	6.4%

The poster presentations (1 day) are... [The following relates to length of presentations at the meeting.]

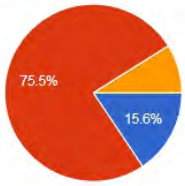
Too short	**114**	24.3%
Just right	**345**	73.6%
Too long	**10**	2.1%

How would you rate the quality of Plenary Sessions at the last meeting you attended?



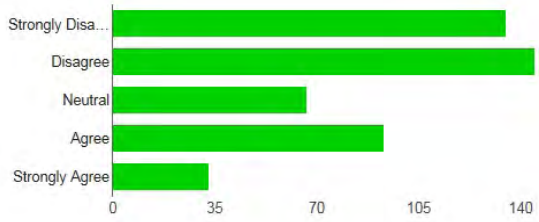
Exceeds expectations	**113**	24.7%
Adequate	**325**	71.1%
Below Expectations	**19**	4.2%

How would you rate the number of Plenary Sessions at the last meeting you attended?



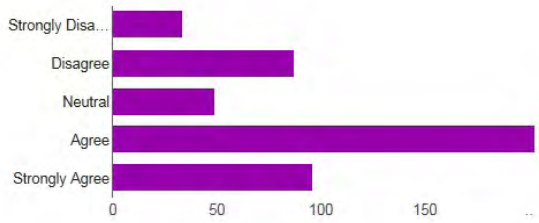
Too many	**70**	15.6%
The perfect number	**339**	75.5%
Too few	**40**	8.9%

I attend the meeting even if I am not presenting or part of an exhibit [The following statements relate to your attendance for presentations at the meeting]



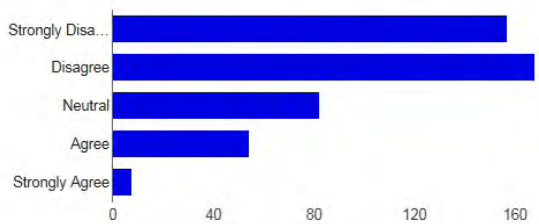
Strongly Disagree	**135**	28.5%
Disagree	**145**	30.7%
Neutral	**67**	14.2%
Agree	**93**	19.7%
Strongly Agree	**33**	7%

I attend the meeting only when I have something new to present or am part of an exhibit [The following statements relate to your attendance for presentations at the meeting]



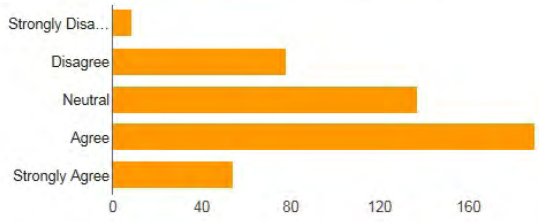
Strongly Disagree	**34**	7.2%
Disagree	**87**	18.6%
Neutral	**49**	10.4%
Agree	**203**	43.3%
Strongly Agree	**96**	20.5%

If I have nothing new to present, I usually submit a "recycled" abstract from another meeting [The following statements relate to your attendance for presentations at the meeting]



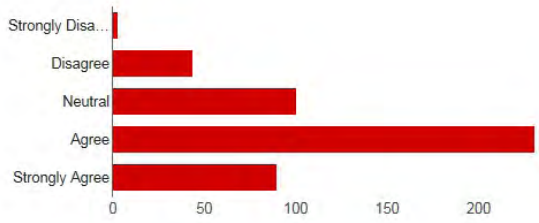
Strongly Disagree	**157**	33.5%
Disagree	**168**	35.8%
Neutral	**82**	17.5%
Agree	**54**	11.5%
Strongly Agree	**8**	1.7%

There are too many parallel sessions occurring at once [The following statements relate to presentations at the meeting]



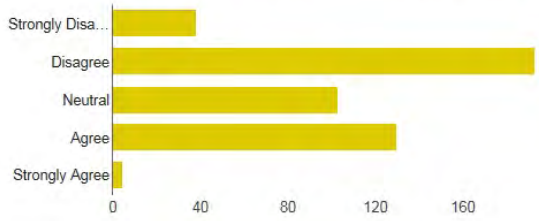
Strongly Disagree	**9**	1.9%
Disagree	**78**	16.7%
Neutral	**137**	29.3%
Agree	**190**	40.6%
Strongly Agree	**54**	11.5%

There are too many parallel sessions of similar subjects occurring at once [The following statements relate to presentations at the meeting]



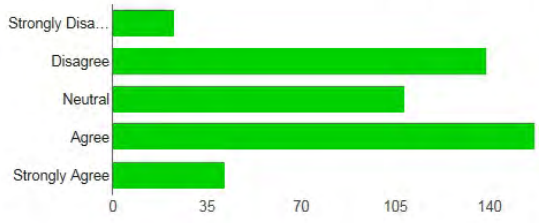
Strongly Disagree	**3**	0.6%
Disagree	**44**	9.4%
Neutral	**101**	21.5%
Agree	**231**	49.3%
Strongly Agree	**90**	19.2%

I have enough time to attend the sessions that are of interest to me [The following statements relate to presentations at the meeting]



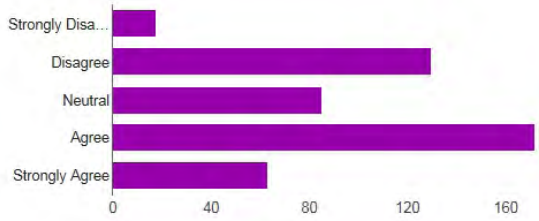
Strongly Disagree	**38**	8.1%
Disagree	**193**	41.2%
Neutral	**103**	22%
Agree	**130**	27.7%
Strongly Agree	**5**	1.1%

There is not enough time to view in detail all posters that are of interest to me [The following statements relate to presentations at the meeting]



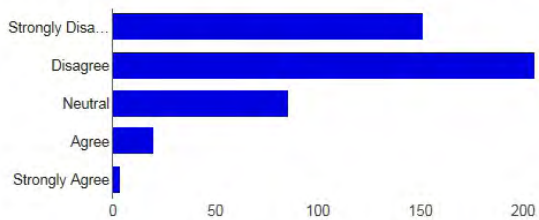
Strongly Disagree	**23**	4.9%
Disagree	**139**	29.6%
Neutral	**109**	23.2%
Agree	**157**	33.4%
Strongly Agree	**42**	8.9%

I would visit the poster hall if it were open later in the evenings [The following statements relate to presentations at the meeting]



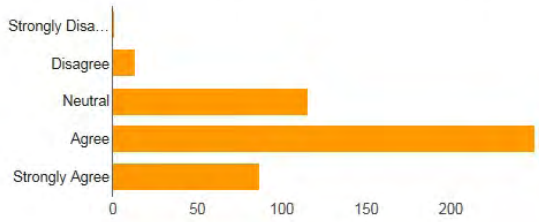
Strongly Disagree	**18**	3.8%
Disagree	**130**	27.8%
Neutral	**85**	18.2%
Agree	**172**	36.8%
Strongly Agree	**63**	13.5%

If the meetings were streamed online I would no longer physically attend [The following statements relate to presentations at the meeting]



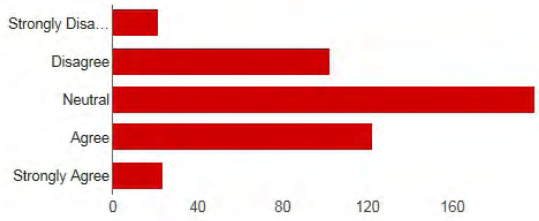
Strongly Disagree	**152**	32.5%
Disagree	**206**	44%
Neutral	**86**	18.4%
Agree	**20**	4.3%
Strongly Agree	**4**	0.9%

I find it more valuable to interact with the poster presenters [The following statements relate to presentations at the meeting]



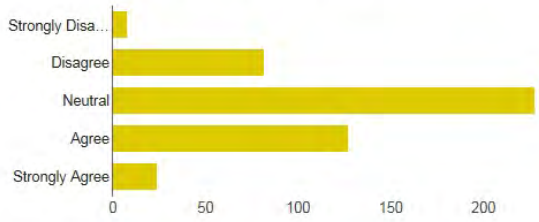
Strongly Disagree	1	0.2%
Disagree	13	2.8%
Neutral	116	24.8%
Agree	250	53.5%
Strongly Agree	87	18.6%

The oral presentations are the most valuable to me [The following statements relate to presentations at the meeting]



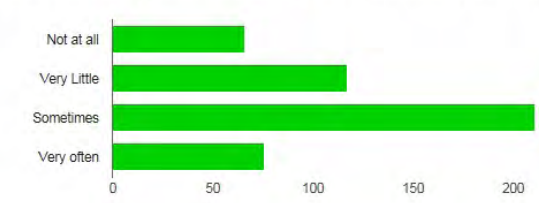
Strongly Disagree	22	4.7%
Disagree	102	21.7%
Neutral	199	42.4%
Agree	122	26%
Strongly Agree	24	5.1%

The poster presentations are the most valuable to me [The following statements relate to presentations at the meeting]



Strongly Disagree	8	1.7%
Disagree	82	17.5%
Neutral	228	48.6%
Agree	127	27.1%
Strongly Agree	24	5.1%

Live streaming of invited talks [This question regards technology in the presentations.]

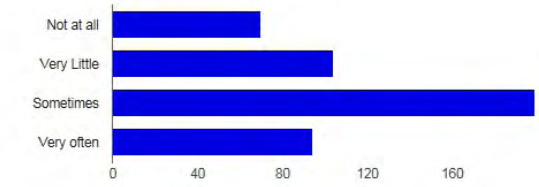


Not at all	66	14%
Very Little	117	24.9%
Sometimes	211	44.9%
Very often	76	16.2%

Live streaming of oral sessions [This question regards technology in the presentations.]

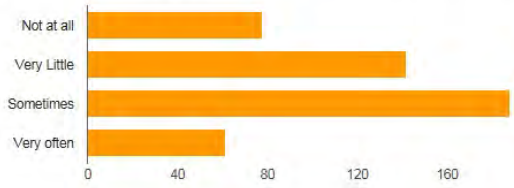
Not at all	100	21.3%
Very Little	158	33.7%
Sometimes	166	35.4%
Very often	45	9.6%

Recording of all oral presentations to be posted after the meeting [This question regards technology in the presentations.]



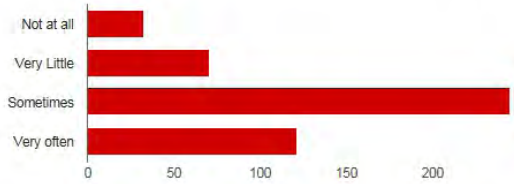
Not at all	70	15%
Very Little	104	22.3%
Sometimes	199	42.6%
Very often	94	20.1%

Uploading/Viewing of posters (to registered participants) shortly before the meeting [This question regards technology in the presentations.]



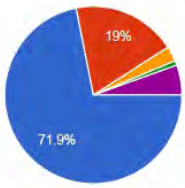
Not at all	**78**	16.6%
Very Little	**142**	30.3%
Sometimes	**188**	40.1%
Very often	**61**	13%

Uploading/Viewing of poster presentations after the meeting [This question regards technology in the presentations.]



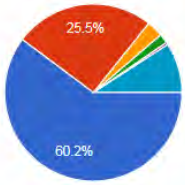
Not at all	**32**	6.8%
Very Little	**71**	15.1%
Sometimes	**245**	52.2%
Very often	**121**	25.8%

How much would you be willing to pay, in addition to current registration, to view recordings of the entire meeting after you have attended?



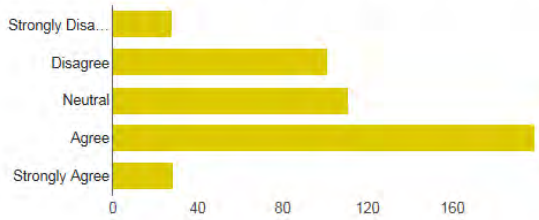
Nothing	**340**	71.9%
$50	**90**	19%
$100	**13**	2.7%
$200	**4**	0.8%
Other	**26**	5.5%

How much would you be willing to pay to stream and/or view recordings of the entire meeting instead of physically attending?



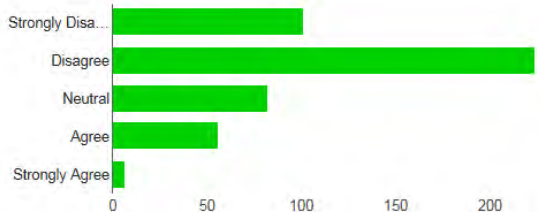
Nothing	**283**	60.2%
Half the cost of registration	**120**	25.5%
The cost of registration	**14**	3%
No more than $100 over the cost of registration	**8**	1.7%
No more than $200 over the cost of registration	**2**	0.4%
Other	**43**	9.1%

The AAS should restrict the number of talks given. [The following statements relate to changing the length of the meetings in different ways. Currently every member is entitled to present a paper.]



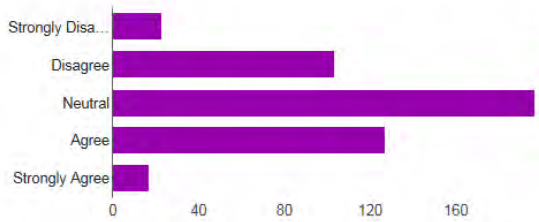
Strongly Disagree	**28**	6%
Disagree	**101**	21.6%
Neutral	**111**	23.7%
Agree	**199**	42.5%
Strongly Agree	**29**	6.2%

The AAS should restrict the number of poster presentations [The following statements relate to changing the length of the meetings in different ways. Currently every member is entitled to present a paper.]



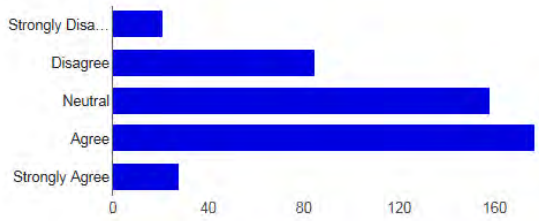
Strongly Disagree	**101**	21.5%
Disagree	**224**	47.8%
Neutral	**82**	17.5%
Agree	**56**	11.9%
Strongly Agree	**6**	1.3%

The AAS should incentivize posters over talks [The following statements relate to changing the length of the meetings in different ways. Currently every member is entitled to present a paper.]



Strongly Disagree	**23**	4.9%
Disagree	**104**	22.2%
Neutral	**197**	42.1%
Agree	**127**	27.1%
Strongly Agree	**17**	3.6%

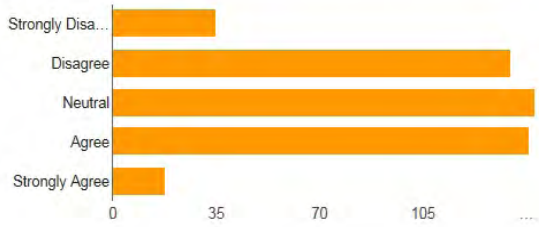
The AAS should convert some of the oral talks to poster presentations [The following statements relate to changing the length of the meetings in different ways. Currently every member is entitled to present a paper.]



Strongly Disagree	**21**	4.5%
Disagree	**85**	18.1%
Neutral	**158**	33.7%
Agree	**177**	37.7%
Strongly Agree	**28**	6%

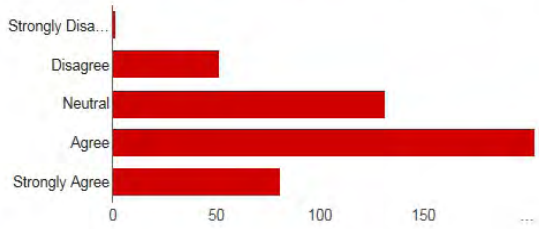
Meeting Content: Extras

I prefer to have events (scientific or social) planned throughout the evening [The following statements relate to the Networking and Socializing at the AAS Meetings.]



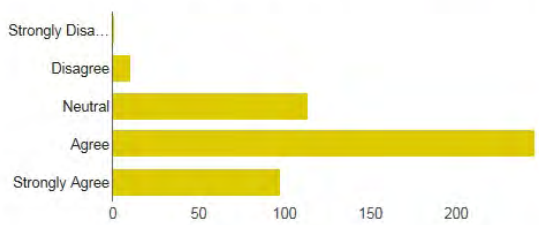
Strongly Disagree	**35**	7.4%
Disagree	**135**	28.6%
Neutral	**143**	30.3%
Agree	**141**	29.9%
Strongly Agree	**18**	3.8%

I prefer to have most of the evenings unstructured so I have free time to socialize, network, or attend to personal work or family matters on my own [The following statements relate to the Networking and Socializing at the AAS Meetings.]



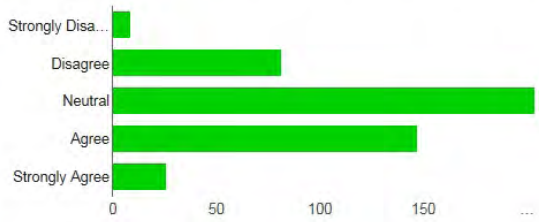
Strongly Disagree	**1**	0.2%
Disagree	**52**	11.1%
Neutral	**132**	28.1%
Agree	**204**	43.4%
Strongly Agree	**81**	17.2%

I would like to see more seating spaces for informal meeting with collaborators [The following statements relate to the Networking and Socializing at the AAS Meetings.]



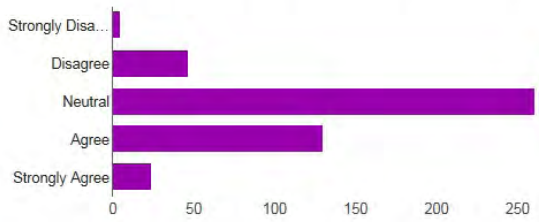
Strongly Disagree	**1**	0.2%
Disagree	**11**	2.3%
Neutral	**114**	24.3%
Agree	**246**	52.3%
Strongly Agree	**98**	20.9%

I would like to see more activities for socializing [The following statements relate to the Networking and Socializing at the AAS Meetings.]



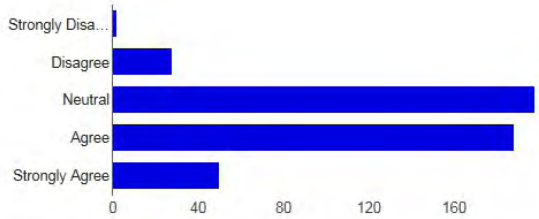
Strongly Disagree	**9**	1.9%
Disagree	**82**	17.5%
Neutral	**204**	43.6%
Agree	**147**	31.4%
Strongly Agree	**26**	5.6%

I would like more private meeting spaces available [The following statements relate to the Networking and Socializing at the AAS Meetings.]



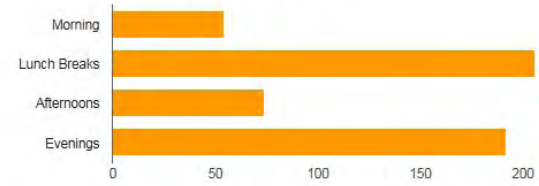
Strongly Disagree	**5**	1.1%
Disagree	**47**	10.1%
Neutral	**261**	55.9%
Agree	**130**	27.8%
Strongly Agree	**24**	5.1%

I would like AAS to improve the networking opportunities available [The following statements relate to the Networking and Socializing at the AAS Meetings.]



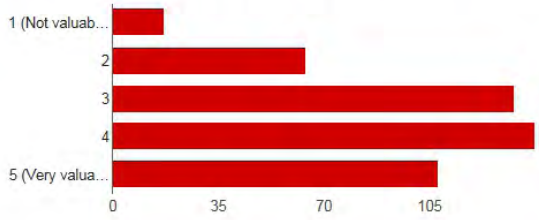
Strongly Disagree	**2**	0.4%
Disagree	**28**	6%
Neutral	**198**	42.5%
Agree	**188**	40.3%
Strongly Agree	**50**	10.7%

I would enjoy more free time during...



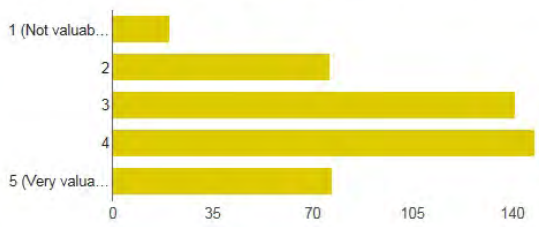
Morning	**54**	13.8%
Lunch Breaks	**206**	52.8%
Afternoons	**74**	19%
Evenings	**192**	49.2%

Technical (e.g. software development, statistics, data management) [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



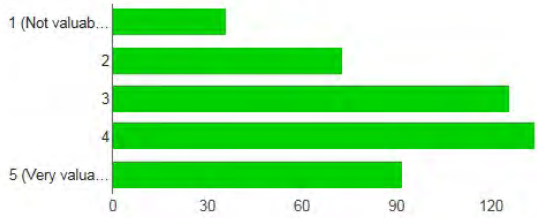
1 (Not valuable)	**17**	3.7%
2	**64**	13.9%
3	**133**	28.8%
4	**140**	30.3%
5 (Very valuable)	**108**	23.4%

Communication (e.g. professional talks, public speaking, publication writing, grant writing, writing for the public) [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



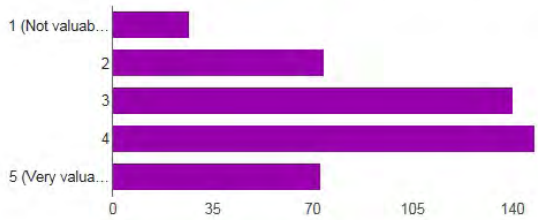
1 (Not valuable)	**20**	4.3%
2	**76**	16.5%
3	**141**	30.5%
4	**148**	32%
5 (Very valuable)	**77**	16.7%

Career services (e.g. resume building, job interviews) [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



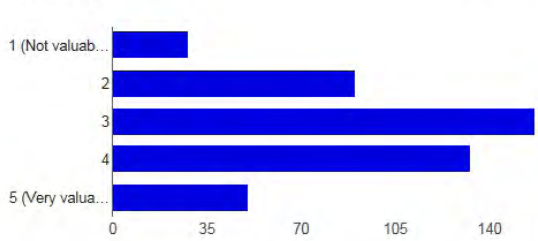
1 (Not valuable)	**36**	7.8%
2	**73**	15.8%
3	**126**	27.3%
4	**134**	29.1%
5 (Very valuable)	**92**	20%

Teaching/Education [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



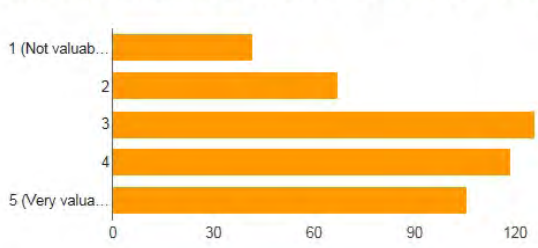
1 (Not valuable)	**27**	5.8%
2	**74**	16%
3	**140**	30.3%
4	**148**	32%
5 (Very valuable)	**73**	15.8%

Leadership and mentoring [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



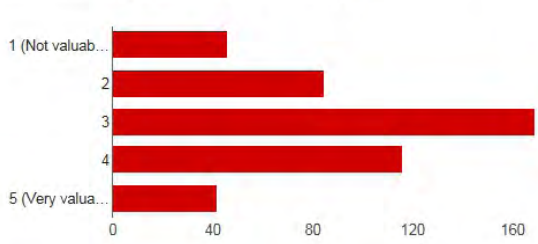
1 (Not valuable)	**28**	6.1%
2	**90**	19.7%
3	**157**	34.3%
4	**133**	29%
5 (Very valuable)	**50**	10.9%

Inclusion (e.g. barriers to inclusion such as unconscious bias, advocacy, equity) [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



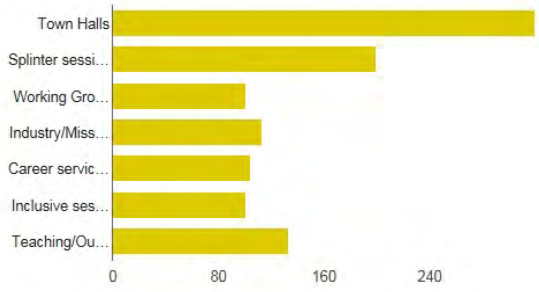
1 (Not valuable)	**42**	9.1%
2	**67**	14.6%
3	**126**	27.4%
4	**119**	25.9%
5 (Very valuable)	**106**	23%

Workforce development (e.g. recruitment and retention) [On a scale from 1 to 5 please rate how much you would value organized activities in the following areas at AAS meetings.]



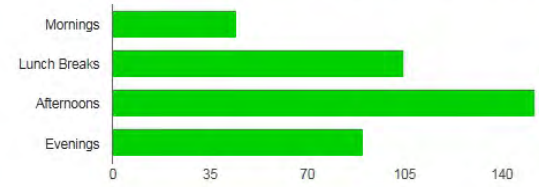
1 (Not valuable)	**46**	10%
2	**85**	18.6%
3	**169**	36.9%
4	**116**	25.3%
5 (Very valuable)	**42**	9.2%

Please check any of the following events that you participated in at the last meeting you attended:



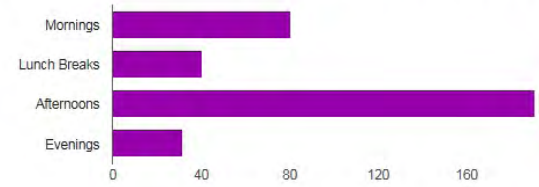
Town Halls	**320**	77.9%
Splinter sessions	**200**	48.7%
Working Groups	**101**	24.6%
Industry/Mission receptions	**113**	27.5%
Career services	**104**	25.3%
Inclusive sessions	**101**	24.6%
Teaching/Outreach sessions	**133**	32.4%

Town Halls [What time of day do you prefer to attend the following events?]



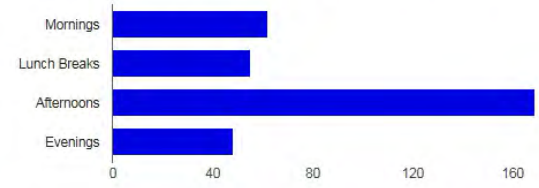
Mornings	**45**	11.5%
Lunch Breaks	**105**	26.8%
Afternoons	**152**	38.8%
Evenings	**90**	23%

Splinter Sessions [What time of day do you prefer to attend the following events?]



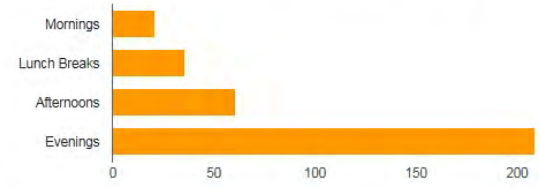
Mornings	**81**	23.5%
Lunch Breaks	**41**	11.9%
Afternoons	**191**	55.4%
Evenings	**32**	9.3%

Working Groups [What time of day do you prefer to attend the following events?]



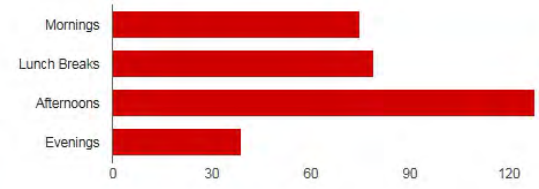
Mornings	**62**	18.6%
Lunch Breaks	**55**	16.5%
Afternoons	**169**	50.6%
Evenings	**48**	14.4%

Industry/Mission receptions [What time of day do you prefer to attend the following events?]



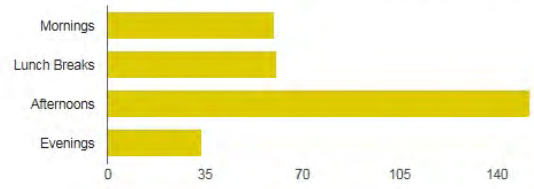
Mornings	**21**	6.4%
Lunch Breaks	**36**	11%
Afternoons	**61**	18.7%
Evenings	**209**	63.9%

Career services [What time of day do you prefer to attend the following events?]



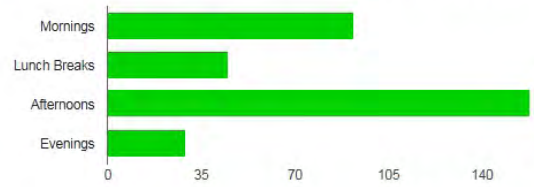
Mornings	**75**	23.4%
Lunch Breaks	**79**	24.6%
Afternoons	**128**	39.9%
Evenings	**39**	12.1%

Inclusive Sessions [What time of day do you prefer to attend the following events?]



Mornings	**60**	19.5%
Lunch Breaks	**61**	19.9%
Afternoons	**152**	49.5%
Evenings	**34**	11.1%

Teaching/Outreach Sessions [What time of day do you prefer to attend the following events?]



Mornings	**92**	28.4%
Lunch Breaks	**45**	13.9%
Afternoons	**158**	48.8%
Evenings	**29**	9%

Town Halls [When in the week do you prefer to attend the following events?]

Before the meeting starts	**23**	5.8%
During the meeting	**360**	90.7%
After Meeting	**14**	3.5%

Splinter Sessions [When in the week do you prefer to attend the following events?]

Before the meeting starts	**79**	21.5%
During the meeting	**246**	66.8%
After Meeting	**43**	11.7%

Working Groups [When in the week do you prefer to attend the following events?]

Before the meeting starts	**101**	27.9%
During the meeting	**204**	56.4%
After Meeting	**57**	15.7%

Industry/Mission receptions [When in the week do you prefer to attend the following events?]

Before the meeting starts	**42**	12.7%
During the meeting	**258**	77.7%
After Meeting	**32**	9.6%

Career services [When in the week do you prefer to attend the following events?]

Before the meeting starts	**52**	15%
During the meeting	**277**	79.8%
After Meeting	**18**	5.2%

Inclusive Sessions [When in the week do you prefer to attend the following events?]

Before the meeting starts	**46**	13.9%
During the meeting	**264**	79.5%
After Meeting	**22**	6.6%

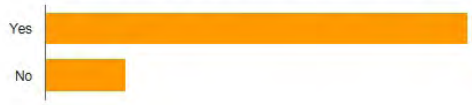
Teaching/Outreach Sessions [When in the week do you prefer to attend the following events?]

Before the meeting starts	**95**	27.4%
During the meeting	**221**	63.7%
After Meeting	**31**	8.9%

Cyber Cafe [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**353**	77.4%
No	**103**	22.6%

Career Center [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]



Yes	**378**	84%
No	**72**	16%

Hack Day [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**264**	58.3%
No	**189**	41.7%

Career Talks [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**275**	61.7%
No	**171**	38.3%

Childcare/Day Care [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**266**	59.2%
No	**183**	40.8%

Tables/chairs in Poster Hall [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**367**	81%
No	**86**	19%

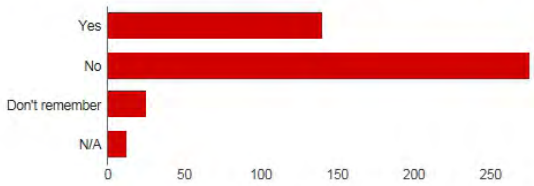
Food options inside the venue [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

Yes	**372**	83.2%
No	**75**	16.8%

Posted recordings of the Plenary Sessions after the meeting [During the last meeting you attended were you aware of the following meeting services, add-ons, and other activities?]

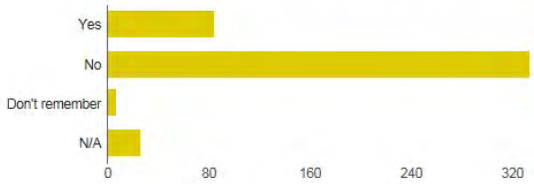
Yes	**96**	21.5%
No	**351**	78.5%

Cyber Cafe [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



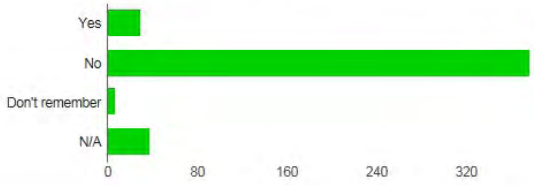
Yes	**140**	30.8%
No	**276**	60.8%
Don't remember	**25**	5.5%
N/A	**13**	2.9%

Career Center [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



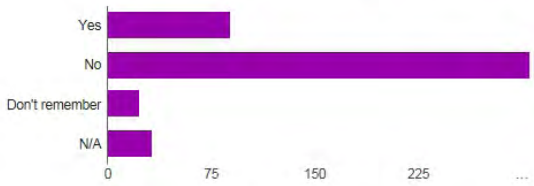
Yes	**85**	18.8%
No	**334**	73.9%
Don't remember	**7**	1.5%
N/A	**26**	5.8%

Hack Day [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



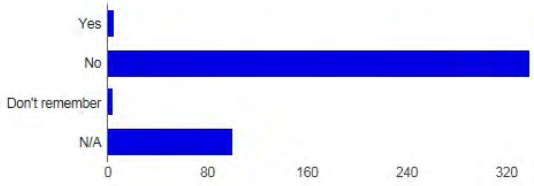
Yes	**29**	6.4%
No	**377**	83.6%
Don't remember	**7**	1.6%
N/A	**38**	8.4%

Career Talks [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



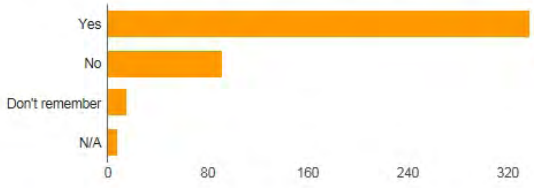
Yes	**89**	19.7%
No	**306**	67.8%
Don't remember	**23**	5.1%
N/A	**33**	7.3%

Childcare/Day Care [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



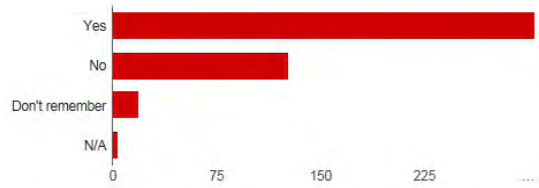
Yes	**5**	1.1%
No	**339**	75.5%
Don't remember	**4**	0.9%
N/A	**101**	22.5%

Tables/Chairs in Poster Hall [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



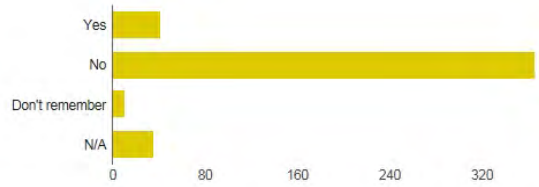
Yes	**338**	74.4%
No	**92**	20.3%
Don't remember	**16**	3.5%
N/A	**8**	1.8%

Food options inside the venue [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]



Yes	**305**	67%
No	**127**	27.9%
Don't remember	**19**	4.2%
N/A	**4**	0.9%

Posted Recordings of the Plenary Sessions after the meeting [During the last meeting you attended did you utilize the following meeting services, add-ons, and other activities?]

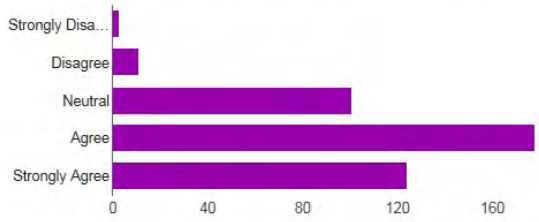


Yes	**41**	9.1%
No	**366**	81%
Don't remember	**10**	2.2%
N/A	**35**	7.7%

Within the last 5 years, have you used the Career Center?

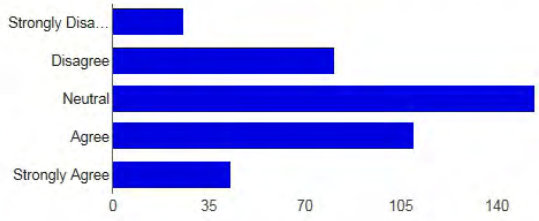
I have used it to recruit or post an employment position	**55**	12.1%
I have used it to search for a job	**102**	22.4%
I have not used the Career Center within the last 5 years	**309**	67.8%

From my point of view, the Career Center should take place at the Winter Meeting [The following statements relate to the Career Center]



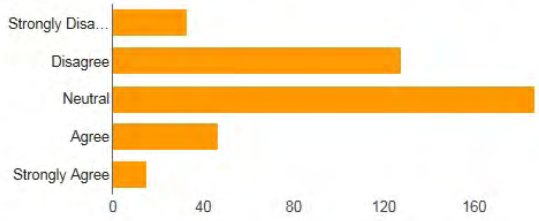
Strongly Disagree	**3**	0.7%
Disagree	**11**	2.6%
Neutral	**101**	24.2%
Agree	**178**	42.7%
Strongly Agree	**124**	29.7%

From my point of view, the Career Center should take place at the Summer Meeting [The following statements relate to the Career Center]



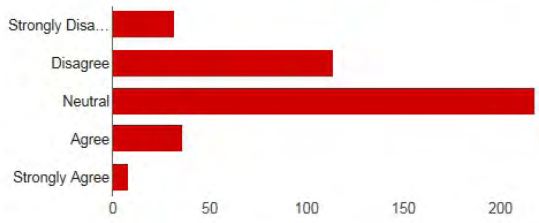
Strongly Disagree	**26**	6.3%
Disagree	**81**	19.6%
Neutral	**154**	37.2%
Agree	**110**	26.6%
Strongly Agree	**43**	10.4%

For postdoc positions, the Winter meeting is too late for interviews [The following statements relate to the Career Center]



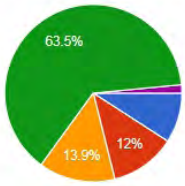
Strongly Disagree	**33**	8%
Disagree	**128**	31.2%
Neutral	**187**	45.6%
Agree	**47**	11.5%
Strongly Agree	**15**	3.7%

For non-postdoc academic positions (e.g. faculty), the Winter meeting is too late for interviews [The following statements relate to the Career Center]



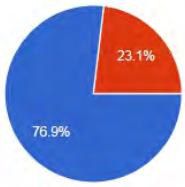
Strongly Disagree	**32**	7.8%
Disagree	**114**	27.9%
Neutral	**218**	53.4%
Agree	**36**	8.8%
Strongly Agree	**8**	2%

Regarding child care services at AAS meetings, would you be most interested in:



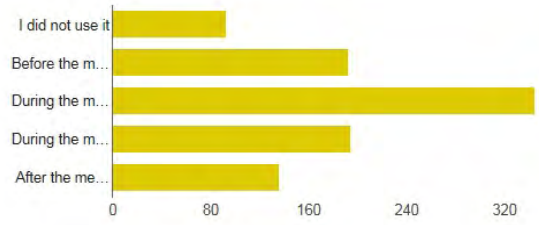
Grants to support bringing children (to be used for airfare, childcare, food costs, etc.)	**42**	9.1%
Affordable on-site care	**55**	12%
I am unlikely to bring my children to a meeting	**64**	13.9%
Not applicable to me	**292**	63.5%
Other	**7**	1.5%

Did you use the small printed program book containing maps, talk and poster titles, times and locations, sponsor ads, etc. during the most recent AAS meeting you attended?



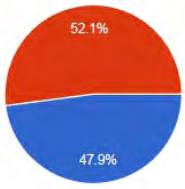
Yes	**356**	76.9%
No	**107**	23.1%

When during the meeting did you use the printed program book?



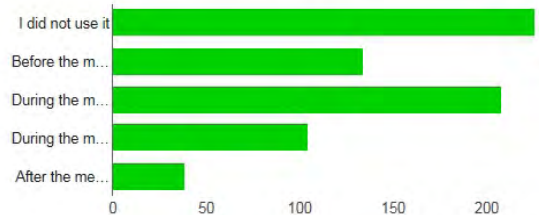
I did not use it	**93**	20.2%
Before the meeting for planning	**193**	41.9%
During the meeting for planning	**345**	74.8%
During the meeting for information about a talk I just watched	**195**	42.3%
After the meeting to recall talks I saw	**136**	29.5%

Did you use the smartphone app which contains maps, talk and poster titles and abstracts, times and locations, sponsor ads, etc. during the most recent AAS meeting you attended?



Yes	**220**	47.9%
No	**239**	52.1%

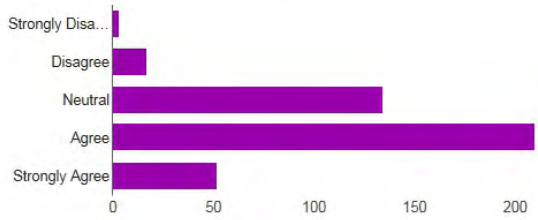
When during the meeting did you use the smartphone app?



I did not use it	**226**	50.9%
Before the meeting for planning	**134**	30.2%
During the meeting for planning	**208**	46.8%
During the meeting for information about a talk I just watched	**105**	23.6%
After the meeting to recall talks I saw	**39**	8.8%

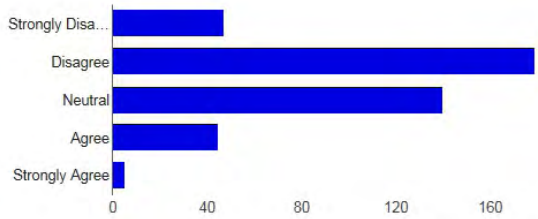
Summer Meetings and Other Meeting Services

The Summer meeting is qualitatively different from the Winter meeting [The following statements relate to the planning of a Summer meeting]



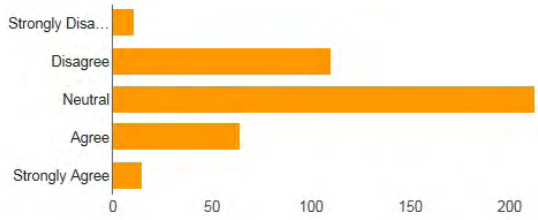
Strongly Disagree	**3**	0.7%
Disagree	**17**	4.1%
Neutral	**134**	32.2%
Agree	**210**	50.5%
Strongly Agree	**52**	12.5%

The Winter and Summer meetings are two chances for the same experience [The following statements relate to the planning of a Summer meeting]



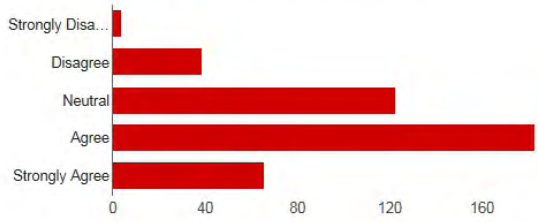
Strongly Disagree	**47**	11.3%
Disagree	**179**	43%
Neutral	**140**	33.7%
Agree	**45**	10.8%
Strongly Agree	**5**	1.2%

The summer and winter meetings should be more similar [The following statements relate to the planning of a Summer meeting]



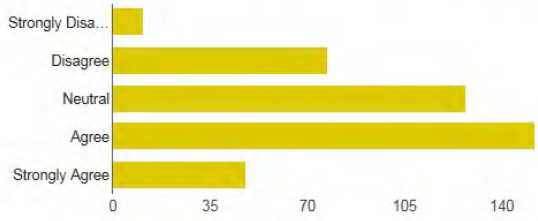
Strongly Disagree	**11**	2.7%
Disagree	**110**	26.6%
Neutral	**213**	51.6%
Agree	**64**	15.5%
Strongly Agree	**15**	3.6%

Smaller meetings are better for sharing ideas [The following statements relate to the planning of a Summer meeting]



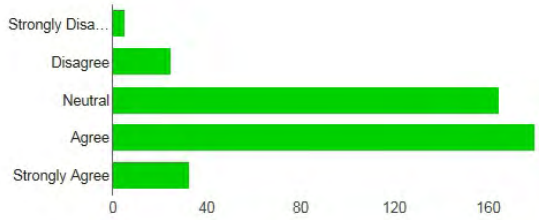
Strongly Disagree	**4**	1%
Disagree	**39**	9.4%
Neutral	**123**	29.6%
Agree	**183**	44.1%
Strongly Agree	**66**	15.9%

Smaller meetings are better for networking [The following statements relate to the planning of a Summer meeting]



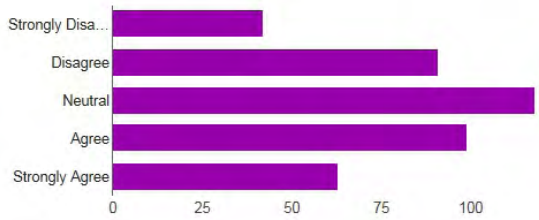
Strongly Disagree	**11**	2.7%
Disagree	**77**	18.6%
Neutral	**127**	30.6%
Agree	**152**	36.6%
Strongly Agree	**48**	11.6%

The total cost of a summer meeting is essentially the same as a winter meeting to me [The following statements relate to the planning of a Summer meeting]



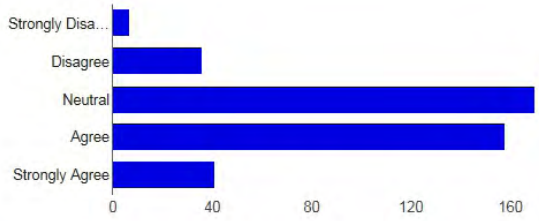
Strongly Disagree	**5**	1.2%
Disagree	**25**	6.1%
Neutral	**165**	40.4%
Agree	**180**	44.1%
Strongly Agree	**33**	8.1%

The location is the most important factor in deciding whether to attend a summer meeting [The following statements relate to the planning of a Summer meeting]



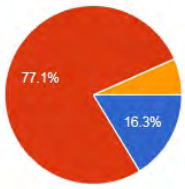
Strongly Disagree	**42**	10.2%
Disagree	**91**	22%
Neutral	**118**	28.6%
Agree	**99**	24%
Strongly Agree	**63**	15.3%

Larger meetings are better for employment opportunities [The following statements relate to the planning of a Summer meeting]



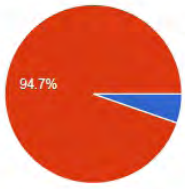
Strongly Disagree	**7**	1.7%
Disagree	**36**	8.7%
Neutral	**170**	41.3%
Agree	**158**	38.3%
Strongly Agree	**41**	10%

How many AAS meetings per year do you attend?



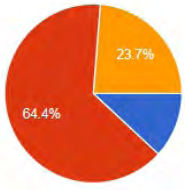
None	**74**	16.3%
One	**351**	77.1%
Two	**30**	6.6%

If there were more than two meetings per year, would you attend more?



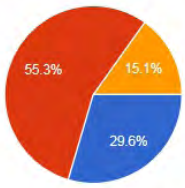
Yes	**24**	5.3%
No	**431**	94.7%

What do you think is the ideal number of attendees for a Summer Meeting? Recent average attendance at the Summer Meeting has been approximately 600-1000 people



fewer than 600	**47**	11.9%
600-1000 is about right	**255**	64.4%
more than 1000	**94**	23.7%

What do you think is the ideal number of attendees for a Winter Meeting? Recent average attendance at the Winter Meeting has been approximately 2200-2400 people

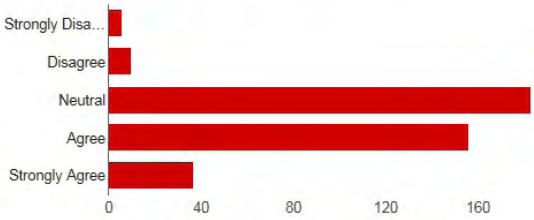


fewer than 2200	**123**	29.6%
2200-2400 is about right	**230**	55.3%
more than 2400	**63**	15.1%

The AAS Topical Conferences are a recent initiative to organize separate, specialized Topical Conferences that are run by the AAS, but selected based on proposals from the astronomical community (http://aas.org/meetings/aas-topical-conference-series). In addition, the summer AAS meetings can host focused topical meetings as a "Meeting-in-a-Meeting", which can be multi-day and are organized in response to member proposals.

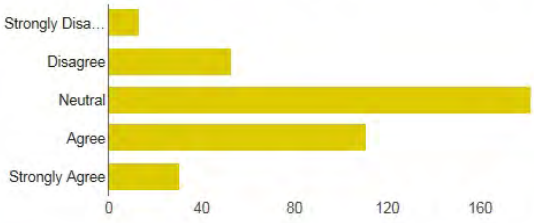
Topical Conference	**63**	14.7%
Meeting in a Meeting	**92**	21.5%
Neither	**302**	70.6%

The "Meeting in a Meeting" is valuable [null]



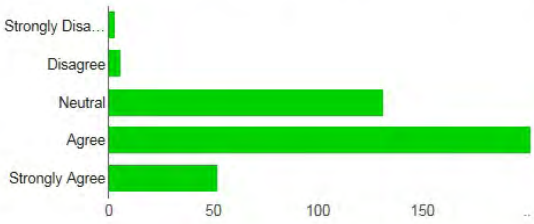
Strongly Disagree	**6**	1.5%
Disagree	**10**	2.6%
Neutral	**183**	46.7%
Agree	**156**	39.8%
Strongly Agree	**37**	9.4%

The range of "Meeting in a Meeting" sessions available influences my decision to attend [null]



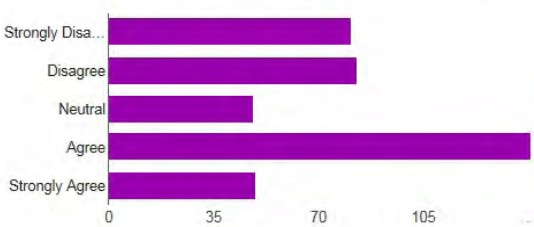
Strongly Disagree	**13**	3.3%
Disagree	**53**	13.6%
Neutral	**182**	46.7%
Agree	**111**	28.5%
Strongly Agree	**31**	7.9%

The AAS Topical Conferences are or could be a service of significant interest to AAS members. [null]



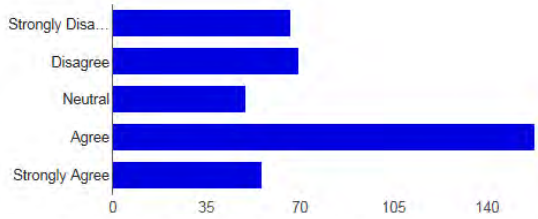
Strongly Disagree	**3**	0.8%
Disagree	**6**	1.5%
Neutral	**132**	33.4%
Agree	**202**	51.1%
Strongly Agree	**52**	13.2%

Before taking this survey, I was aware of the AAS Topical Conferences [null]



Strongly Disagree	**81**	20.1%
Disagree	**83**	20.6%
Neutral	**48**	11.9%
Agree	**141**	35.1%
Strongly Agree	**49**	12.2%

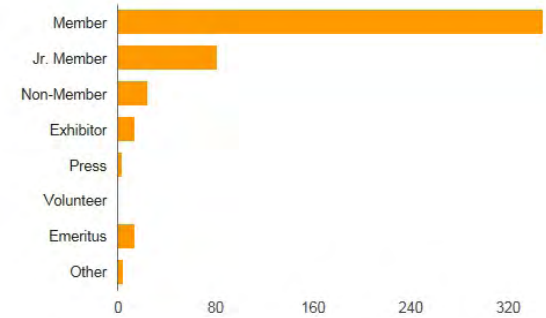
Before taking this survey I was aware of the "Meeting in a Meeting" format [null]



Strongly Disagree	67	16.7%
Disagree	70	17.5%
Neutral	50	12.5%
Agree	158	39.4%
Strongly Agree	56	14%

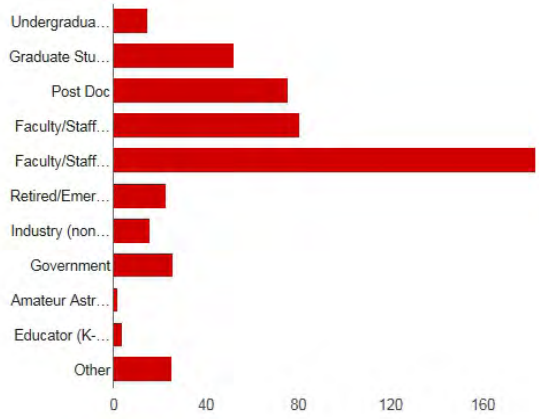
Demographics

What was your registration status at the last AAS meeting you attended?



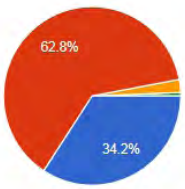
Member	349	74.1%
Jr. Member	82	17.4%
Non-Member	24	5.1%
Exhibitor	14	3%
Press	3	0.6%
Volunteer	0	0%
Emeritus	14	3%
Other	4	0.8%

What is your job status in relation to the field of Astronomy and Physics?



Undergraduate Student	15	3.2%
Graduate Student	52	11%
Post Doc	76	16.1%
Faculty/Staff (Early Career)	81	17.2%
Faculty/Staff (Mid Career)	183	38.8%
Retired/Emeritus	23	4.9%
Industry (non-academic)	16	3.4%
Government	26	5.5%
Amateur Astronomer	2	0.4%
Educator (K-12)	4	0.8%
Other	25	5.3%

What is the gender you identify as?



Female	161	34.2%
Male	296	62.8%
Prefer not to respond	11	2.3%
Other	3	0.6%

Responses vs. Time

Survey sent out on July 29th, 2015

Reminder message on August 19th,2015