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The LSST2014 Project and Community Workshop Survey Results

Executive Summary

The LSST Project held the LSST2014 Project and Community Workshop August 11-15, 2014 at the Hyatt Regency in downtown Phoenix. 237 participants registered for the workshop. 121 attendees took the survey; not all survey participants completed every question. Some questions allowed respondents to choose more than one answer.

The meeting was attended by a good mix of the project team and the broader community. Nearly a third of respondents identified themselves as Science Collaboration members. Aggregated, about 70 percent of respondents are involved in technical work of the project. Camera and Data Management (DM) were the most well-represented subsystem teams.

In general, survey participants reported a good LSST2014 experience. They approved of the time of year, the basic agenda structure, the quality of internet access, and the venue and its amenities.

Downtown Phoenix was chosen as the meeting locale as an attempt to address previous surveys’ requests for a venue nearer to a major airport and with more dining and entertainment options outside of the conference hotel. While many respondents appreciated the ease of getting to the venue, a number of them lamented the lack of green space. For future workshops, the project should attempt to find a balance between accessibility and comfort.

For the first time since the project began conducting post-AHM surveys, Internet Access was the highest rated category among Meeting Practicalities, receiving “Good” or “Great” ratings from 98% of respondents. One respondent remarked, “Best internet I've had at a meeting this large.” This is a positive example of progress achieved through applying lessons learned from previous meetings regarding setting expectations with venue and proactive follow-up.

Although overall satisfaction was consistent with previous AHM survey results, the continued declines in positive ratings for some areas, specifically meeting Productivity and Enjoyment, and first-time declines in other areas, such as Information Prior to Arrival, warrants discussion for improvements to the next project and community workshop.

While all of the Information Prior to Arrival mentioned specifically in comments as “unavailable” was posted to the workshop’s website, because some attendees had difficulty finding it, the organizing committee should a) review the website design for improvements in clarity and b) commit to timely messages directing registrants to logistical information.

The most frequently cited barriers to productivity and enjoyment were a) stress from feeling the need to be in multiple places at once and b) the inability to connect with other attendees because they both were always occupied in a breakout session. Combined with other comments specifically requesting fewer scheduled sessions in the future, Fullness of Schedule appears to be the biggest contributor to
the negative ratings. While the “Just Right” consensus for the amount of **Plenary Sessions** and **Downtime for Discussion** remained virtually unchanged compared to 2012 AHM survey results, there was a 19% increase in the “Excessive” rating for **Breakouts** compared to 2012. Also, the ** Concurrent Science Workshop** was frequently cited as a major cause of the overly subscribed scheduled. Therefore, it appears the project should reduce the number of parallel sessions on the agenda and avoid holding a concurrent workshop during future project workshops.

A few comments scattered throughout the various questions stressed the opinion that working sessions within and among technical teams should be the purpose of the workshop. They proposed that elements such as plenary talks, presentations about the science, or introductory level material could be excluded or reduced considerably. When planning the LSST2014 agenda, workshop organizers also considered whether, after several project-wide meetings, those kinds of sessions might be viewed by attendees as redundant or old news. However, the agenda sessions most frequently identified as “most helpful” were those addressing general-audience, overview topics.

In particular, project newcomers, those who interact less frequently with the project, and many distributed team members appreciated the general-audience introductory sessions.

- “As a newcomer to the LSST project, the project overview session was most directly helpful.”
- “I’m a beginner user of DM tools and interaction with developers was helpful.”
- “All of the plenaries were interesting and useful in the sense that they helped paint the big picture - something that can easily get lost as one focuses on a small area.”
- “I have been involved in the science planning and site selection over many years, but have not kept up on the project for the last few years, so it was good to get an overview and refresh my knowledge of the project.”
- “They provided insight into what other subsystems are grappling with”

Naturally LSST technical work ought to be the Project’s focus; and project workshops should provide ample time and opportunity to address vital issues most effectively resolved through in-person interaction. However, the annual project and community workshop is more than a technical workshop. Registration is advertised broadly to a diverse audience. For much of that audience, the workshop offers one of few opportunities to share project overview and status; for some newcomers the workshop may be their first, best exposure to the big picture. Rather than radically altering the nature of the project and community workshop, the project should recommit to the strategy of hosting smaller, more frequent, focused technical workshops in order to address in another forum some of the technical topics that have, by default, ended up on AHM agendas in the past.
The LSST2014 Project and Community Workshop Survey Results

Background and Introduction

The Large Synoptic Survey Telescope (LSST) will be a large-aperture, wide-field, ground-based telescope designed to obtain sequential images of the entire visible sky every few nights. In addition to the traditional images of luminous stars and galaxies, the LSST will provide unprecedented three-dimensional maps of the Universe’s mass distribution. These maps can be used to better understand the nature of dark energy, which is driving the accelerating expansion of the Universe. The LSST will also provide a comprehensive census of our solar system, including potentially hazardous asteroids as small as 100 meters in size. In addition to providing the scientific community with unprecedented data, the project is dedicated to education and public outreach efforts to share LSST science with a broad audience, including the general public, educators, and the next generation of scientists.

The LSST observatory will be constructed on Cerro Pachón in northern Chile. All environmental Impact requirements have been met, and construction permits have been obtained. At the end of construction, the LSST project will have delivered an 8.4-meter effective aperture telescope; all required support facilities; a 3.2-gigapixel camera; a supercomputing and data storage facility in La Serena, Chile; offices for Chile-based staff; and a data archive center at the National Center for Supercomputing Applications (NCSA) at the University of Illinois in Urbana-Champaign. The subsequent 10-year survey will deliver a data set suitable for answering a wide range of pressing questions in astrophysics, cosmology, and fundamental physics.

The LSST Project Office (LSSTPO), an independent operating center of the Association of Universities for Research in Astronomy (AURA), is the entity responsible for executing the construction of the LSST. On August 1, 2014, AURA and the National Science Foundation (NSF) signed a cooperative services agreement authorizing the LSSTPO to begin construction of LSST.

The LSST Project held the LSST2014 Project and Community Workshop August 11-15, 2014 at the Hyatt Regency in downtown Phoenix. While similar to the five all hands meetings (AHMs) previously hosted by the project, this workshop represents a rebranding of the Project’s regularly occurring broad-audience meetings as project and community workshops with a colloquial name of LSST followed by the year of the meeting. LSST2014 was a week-long workshop allowing both technical discussions between members of the teams involved in building LSST and interaction between project personnel and members of the broader community. Scheduled sessions were intended to focus on topics of cross-cutting significance and interest. Also, for the first time, the Project shared space and logistical support with a concurrent science workshop, the LSST/NOAO Cadence Workshop. Downtown Phoenix was chosen as the meeting locale as an attempt to remedy previous surveys’ requests for a venue nearer to a major airport and with more dining and entertainment options outside of the conference hotel. For more information about LSST2014, including the agenda and presentations, visit https://project.lsst.org/meetings/lsst2014/.
Survey Results

237 participants registered for the workshop. 121 attendees (51%) took the survey, compared to a 54% survey completion rate from 2012 AHM. Not all survey participants completed every question. Some questions allowed more than one answer.

Question 1: Name

Summary: Names have not been published in order to maintain anonymity of responses.

114 answered the question; 7 skipped the question

Question 2: What LSST groups are you part of?

Summary: Science Collaboration members represented the largest single group of attendees, accounting for nearly a third of responses. However, when added together, members of the project’s technical teams, such as Camera, Data Management, EPO, or Telescope and Site, accounted for approximately 70% of respondents. This distribution is consistent with previous AHMs. Nearly 12% self-identified as Not officially LSST yet, a 3% increase from 2012 and a 10% increase from 2010.

Respondents were allowed to select more than one answer, so for example, some project team members who also belong to science collaborations may have selected that group as well, and some project team members and most of the Science Collaboration members also attended the concurrent LSST/NOAO Cadence Workshop. Free-form answers and clarifications of the Not Specified or None responses have been incorporated into the chart above. Among notable such responses, three attendees self-identified as AURA management or Central Administrative Services (CAS) staff.
Question 3: Please rate the meeting practicalities, from Awful to Great

Summary: Respondents were asked to rate Internet Access, Food, Audio/Visual, Choice of Hotel, and Information Prior to Arrival on a scale of Awful (1) to Great (4). 120 respondents answered the question. Not all categories received a rating from all respondents. With an average rating across categories of Good (3), respondents’ overall satisfaction was consistent with the 2010 and 2012 AHMs. However, there were some notable differences from past surveys.

For the first time since the project began conducting post-meeting surveys, Internet Access was the highest rated category, receiving “Good” or “Great” ratings from 98% of respondents. One respondent remarked, “Best internet I’ve had at a meeting this large.”

The least favorably received elements were Choice of Hotel and Information Prior to Arrival. While both of these categories’ average scores were consistent with previous AHM surveys, the number of “Great” ratings for each decreased by nearly half, and the “Poor” ratings increased by 4% for Choice of Hotel and by 10% for Information Prior to Arrival.

Downtown Phoenix was chosen as the meeting locale as an attempt to remedy previous surveys’ requests for a venue nearer to a major airport and with more dining and entertainment options outside of the conference hotel. While some commenters appreciated the ease of getting to Phoenix and referred to the hotel itself as “nice,” a number of them remarked they preferred the outdoor amenities of past Tucson sites to the urban environment of downtown Phoenix.

Concerns related to Information Prior to Arrival focused on late agenda changes and inability to find certain pieces of information, such as the hotel address. While all of the information mentioned was available on the workshop website, clearly the organizing committee could have done a better job of directing registrants to it. One respondent suggested, “A message a few days before then another the
day before the conference would have been helpful in reminding people of the Agenda and where to find the agenda+talks…” The project should consider adopting this practice for future workshops.

Representative Sampling of Comments:

No Outdoor Space

- Downtown eliminated any real outdoor relief from the work...no pool or outside recreation (soccer match, etc).
- Phoenix downtown in August is very hot and not a particularly hospitable place to walk around...Dove Mountain is too far out of Tucson, but at least it has pleasant grounds to walk/run around.

Late Agenda Changes

- There were far too many changes to the agenda just days before the meeting began.
- The agenda, as is traditional, came together too late and with too many conflicts but that may be unavoidable, otherwise the pre-information was fine.
- I would have liked clearer information in advance about the detailed schedule of the meeting, and who was leading what session.

Information Prior to Arrival

- The hotel address was not conveyed in the meeting communications. This caused me to wait at the airport in the taxi while I called the Hyatt booking line (on hold for 10 minutes!) to check the address as there is more than 1 Hyatt Regency in Phoenix apparently.
- On the Cadence workshop in particular, the pre-meeting communication was sporadic and limited. The messages about downloading MAF and homework assignments were good, but the overall logistics and specific goals of the workshop were not clearly outlined ahead of time. In particular there was a significant lull between the initial announcement and any details or schedule. Such a lack of clarity doesn't help the goal of engaging the community. And, in particular, clear communication is a key part of inclusiveness of people who otherwise may not feel like the mainstream.

Positive Comments

- Internet access amazingly good for a conference hotel.
- Best internet I've had a meeting this large (but need to log in via webpage still keeps it from being "great").
- It was routinely hellacious outside, but the quality of the accommodations was impressive.

Suggestions:

- A message a few days and the day before the conference would have been helpful in reminding people of the Agenda and where to find the agenda+talks.
- Two suggestions: 1. Insist that ‘all’ speakers use a microphone (and repeat questions from the
This was particularly a problem during the last morning when speakers farmed out brief reports to their colleagues in the audience. 2. Upload and link speaker's presentation to the online agenda ‘before’ it is presented.

**Question 4:** Please indicate your interest in having various aspects of LSST2014 AHM repeated at future meetings.

**Summary:** Four of the six meeting features received favorable scores. The most popular were the Reception and the talks on Breakthrough LSST Science and LSST Technology Challenges; more than 80 of the 115 question’s respondents expressed interest in having each of those elements included in future workshops. Breakout Introductions received support from 60% of respondents, although some commenters wished they had been more concise.

The two elements with unfavorable ratings were the Concurrent Science Meeting and the Diversity and Inclusion Talk, which received only 44.35% and 35.65% support, respectively. Overwhelmingly, the most often cited objection to holding another Concurrent Science Meeting was the scheduling conflict created for members of the community with an interest in both the science meeting and the LSST technical sessions. None of the comments objected to the Diversity and Inclusion Talk, per se, although two respondents suggested alternating that topic with others, such as safety. And while only about a third of respondents would like to see a future Diversity and Inclusion Talk, many respondents to Question 5 (see below) singled out the workplace culture plenary as one of the most helpful sessions.

**Representative Sampling of Comments:**

**Concurrent Science Workshop Too Conflicting**

- I think the problems with having the concurrent workshop exceeded the benefits.
- Although I understood the practical reasoning in having the scientific workshop at the same time, I found it frustrating to have to choose between attending technical or scientific discussion. I would have been more comfortable with two successive meetings with less time...
• DO NOT EVER schedule another community workshop on top of the project meeting. It is completely unfair to the scientists who work directly on the project, forcing them to choose between fulfilling their project responsibilities and working with their colleagues from the scientific community. As a scientist, I found it totally offensive that I could not attend any of the Cadence Workshop after Monday's MAF tutorial.

• A concurrent science meeting means attendees will miss nearly all the LSST meeting sessions. I was unhappy that I missed all the breakout sessions – including the ones I was supposed to present at!

• I'd like the concurrent science meeting... but I dislike how there were conflicts with that and with other technical sessions. Maybe the scope of the science meetings can be shortened – the meeting itself lengthened by a half to a full day, etc. to minimize these conflicts.

Positive Comments

• The diverse coverage was great!

• I would prefer to have too much to choose from, and these were all covered well in 2014.

• Breakthrough talks were especially good.

Suggestions

• I would only suggest the addition of a DOE representative to give a plenary talk on their involvement and interests in the LSST.

• In the future, we need a plenary session on LSST progress and achieved/coming milestones. On the NSF side, the CAMs should present EVMS status.

• While the Cadence workshop involved ALL science groups in the same program – in the future the science meetings may be more broken down by topic, so they can run in parallel with each other.

Question 5: List the plenary sessions you found most helpful and why.

Summary: 71 of 121 respondents answered the question; respondents were allowed to provide more
than one answer. All plenary sessions, except the Friday afternoon wrap-up, received specific mentions as most helpful. Monday’s project **Overview and Status** talks were most popular, receiving 22 mentions. **Breakthrough Technical Challenges** and **Breakthrough LSST Science** were next with 16 and 14 mentions, respectively. Although the Diversity and Inclusion Talk fared poorly in Question 4, Tuesday’s **Workplace Climate** talk received 13 mentions as most useful.

A few comments scattered throughout the various questions stressed the opinion that working sessions within and among technical teams should be the point of the workshop – that elements such as plenary talks aimed at a broader audience, presentations about the science, or introductory level material could be excluded or reduced considerably. When planning the LSST2014 agenda, workshop organizers also considered whether, after several project-wide meetings, project overview and status, science and technical challenges talks might be viewed by attendees as redundant or old news. However, LSST2014 results continued a trend from the 2010 and 2012 AHM surveys, where talks with the same kinds of objectives scored highest in appreciation. In particular, commenters called out the **Overview and Status** talks for their value to project newcomers, distributed team members, and to those who in general have less frequent interaction with the project. As one commenter said, “It’s important for everyone to see the full picture – at least once a year.”

**Notable responses:**

- Talks on project status, including science planning, were interesting. I have been involved in the science planning and site selection over many years, but have not kept up on the project for the last few years, so it was good to get an overview and refresh my knowledge of the project.
- All of them – they span the full breadth of the project – from technical and admin issues of the day, to the variety of science efforts engaged. It’s important for everyone to see the full picture – at least once a year.
- The session of introducing LSST basics is the most helpful to me, because I am a newcomer.
- I was very happy that there was a Diversity and Inclusiveness talk and that the Director gave it.
- Tuesday’s Plenary was also helpful because it gave me an understanding about the value of the working culture at LSST and how seriously it is taken. It’s appreciated that a project this big is dedicated to the working culture of its employees.
• LSST climate was a welcome talk. I wish other collaborations I have worked with had such expressed goals.

• Having a science and a technical plenary reflects well the diversity of the current LSST team: keep that.

• Exciting Technical Challenges. They provided insight into what other subsystems are grappling with.

• Exciting Technical Challenges – I like to have the general LSST community aware of the technical challenges facing LSST.

• All of the plenaries were interesting and useful in the sense that they helped paint the big picture – something that can easily get lost as one focuses on a small area.

• Afron Smith’s talk on open source and open collaboration was extremely good! All three technical talks were very good. I actually learned things I didn’t know before – particularly regarding the Camera refrigeration system and galaxy deblending algorithms.

• I actually found the GitHub session both entertaining and thought-provoking, but then it is very relevant for us.

Suggestions

• Steve and Victor’s grand overview of the whole project status was very valuable, and should be distributed to lsst-projectandscience. (This was suggested by others since the workshop ended, and the publicly accessible location of the talks was broadcast to the suggested email distribution list the last week of August.)

Question 6: Which breakouts did you find most helpful and why?

Summary: Many of the responses acknowledged a category of breakout, rather than a specific session; however, a significant number of breakouts were mentioned by name. Sessions called out specifically were NOT rolled into the numbers for broad categories represented in the graphic; e.g., the nine (9) mentions for Data Management sessions does not include the three (3) How to Use, Re-use DM Tasks mentions.

Answers were provided through comments only, and some respondents referred to a specific session colloquially rather than by the session title on the agenda. Because of this, in some cases it was difficult to interpret which specific session they intended to name. For future surveys, the project should consider asking the participants to choose from a list of the breakouts that occurred rather than asking for open text answers only. Comments, then, could be used as the opportunity to answer the “why” portion of the question.

Representative Comment Cluster Responses:
Attended Cadence Only

- I was not able to attend any breakouts, because I had to attend the cadence workshop. This was very unsatisfactory.
- I only attended breakouts of the Cadence workshop. The schedule did not allow me to attend other parallel sessions.

Cross-Disciplinary

- The sessions that were "cross-disciplinary."
- More the one to ones between telescope and camera.
- ICD Telescope/Camera/DM discussions – resolved lots of detail issues quickly.
- ...breakouts touching interfaces or cross sub-system issues/items where best.

Side Meetings

- Camera cooling issues – keeping me abreast of Camera team’s difficulties. I am responsible for interfacing utilities to the camera and between the Dome and platform lift. We came to mutual agreement on a path forward to solve the problems with this difficult interface.
- Camera related to CD-2 (since that is my current effort).
- Discussion of how the camera was to be cooled. After a week of simulations and engineering challenges, it was fun to hear somebody talking about fundamental physics problems and how they solved them.

Other Notable Responses:
• The last DM tutorial (talking about Tasks, etc.) was most helpful. It’s my understanding that previous related sessions were found to be less so (I didn’t attend). I would recommend continuing with the DM tutorial sessions; by the time of the next AHM the stack will be at a point where a "bring your data, we will help you analyze it" session or mini-workshop would be very productive and fun.

• DM breakouts explaining algorithms and code were great – very important we understand these, as they are our route to the data.

• ComCam – cleared up issues regarding responsibilities of ownership and deliverables. Guider (Re-Optimization) cleared the way to finalize the changes to the ICD.

• Guiding Re-optimization review: the group was able to move forward by making specific substantive agreements. We accomplished the goals for the session.

• Broadening participation – broadened my set of contacts within LSST; good exchange of ideas.

• Improvements to DocuShare – it was good to do real-time comparisons; key people attended.

• The Technical Operations breakouts, since by knowing the operations model we can understand what is needed to support and implement it.

Question 7: What do you think about the various elements of the agenda structure? Please rate each element from Inadequate to Excessive.

Summary: LSST2014 had a single plenary session each day and as many as seven (7) breakout sessions running parallel Tuesday through Thursday, not including sessions of the concurrent Cadence Workshop. Workshop organizers also arranged with the venue to have one dedicated room per subsystem available all week to be used at will for impromptu meetings and discussions.

The consensus among respondents was that the agenda balance was “Just Right.” However, while
ratings for Plenary Sessions and Downtime for Discussion were virtually unchanged from the 2012 AHM survey, satisfaction with the amount of Breakouts declined dramatically from 2012. The “Just Right” score decreased about 17%, and the “Excessive” ratings more than doubled from 19.85% in 2012 to 39.09% in 2014.

**LSST2014 Agenda Elements Rated from Inadequate to Excessive**

Perhaps this is to be expected, as the LSST2014 agenda had more parallel breakout sessions than the 2012 AHM, which had a maximum of five (5) parallel sessions at one time and did not share time with a Concurrent Science Workshop. Even at five (5) concurrent sessions, nearly 20% of respondents rated Breakouts as excessive, so clearly the project needs to do a better job of establishing and communicating future workshops’ objectives and setting limits to the number of scheduled parallel sessions.

One notable improvement was the evaluation of the Plenary Sessions. In past AHM surveys, many respondents felt the agenda contained too much plenary time. In both 2010 and 2012, the Plenary Sessions ran two (2) hours Monday through Friday with as many as five (5) talks per day. In response, the LSST2014 organizing committee adopted the strategy of crafting shorter Plenary Sessions with focused messages. Plenary Session blocks were reduced to 90 minutes with three (3) talks addressing a theme specific to that day. This strategy appears to have been well received. The percentage of LSST2014 survey respondents who rated Plenary Sessions as “Excessive” was half that of the 2012 AHM survey results, declining to 7.02% in 2014 from 16.18% in 2012.

**Notable Comments**

- This is a dilemma that is always difficult to resolve - because the project is so distributed and because these meetings only occur annually, at best, each technical team tries to use the time together to resolve internal issues. This is fine, but it results in an overloaded schedule of breakout sessions with numerous working groups on top of broader interest sessions. And, unfortunately, the same two dozen or so people seem to be vital for the success of all of them. Perhaps, the project leadership should decide early on a theme or goal for the meeting and structure a limited agenda around that goal, leaving lots of open time for impromptu working groups.

- One of the concerns from the 2012 AHM was the conflict between concurrent sessions and the ability of group members to learn of activities in other systems that interface to their own. This year it was even worse, with DM often running breakouts in conflict with itself. Also, there was little or no discussion of the specific breakout topics or their scheduling except among the
leadership team. I like the reduced number of plenaries.

- Like I said, the cadence workshop was all-consuming. Also the schedule information was confusing and poorly presented on the website, so I'm not even really sure what other sessions were happening with the exception of EPO, because they emailed me directly.

- The closing plenary was, in some ways, the least useful. I know everyone is tired by then but it may be worth re-thinking how to best use the closing session.

- The morning plenaries were excellent in timing in the schedule, length of session, and variety of interest topics. Really well done!

- From my perspective, most people's time is best spent on specific breakouts geared around their own areas of responsibilities. I would suggest only 1 plenary talk per day. Plenaries I found most useful address overall project status.

- Way too many concurrent breakouts, resulting in too many key personnel conflicts. This resulted in sub-optimum meetings with fewer than desired achievements. The number of concurrent breakouts needs to be paired back at future meetings, in my opinion.

- Too many parallel sessions. I think a more tiered system would be useful so that there were not parallel breakouts for the same group. As an example, have one DM, one Camera, one Telescope, etc. meeting per time block.

- The cadence workshop, which is most of what I attended, seemed to have more breakouts than needed.

- Some of the best stuff happens while you're drinking coffee or having a beer together. The free food and drink was a huge contributor to the number of scientists I met last week, and that consistently winds up being one of the most crucial outcomes of a workshop.

- What down time for discussion? There was absolutely NONE! Between the excessive breakout schedule and the community workshop this was by far and away the worst team meeting for interactions with colleagues working on the project.

**Question 8: What time of year is most convenient for you to attend the meeting?**

**Summary:** In keeping with 2010 and 2012 AHM survey results, in which more than 50% of respondents selected **August** as the preferred month to hold future meetings, LSST2014 was scheduled for **August** in order to take place after summer vacations but before the beginning of the academic year. In the LSST2014 survey, again more than half of respondents selected August as most convenient. **June** and **July** continued to have strong support (26.79% and 32.14% respectively), but all other months received fewer votes than they did in 2012. Respondents were allowed to select more than one option.

**Notable Responses:**
To be cost efficient, it's good to hold the meeting in the off-season for whatever location is hosting.

Mild preference for June -- but strong preference NOT to have it always at the same time of year. For instance there are other things I'd like to attend that happen in the middle of August every year -- so having to attend the LSST conference each year at that time means I NEVER get to attend those other things.

This year the meeting was held on the first week of middle school. So I might suggest the first week of August especially for the next meeting. I think a lot of people will want to bring their families.

When school is not in session.

Question 9: The next meeting will be at least one year from now in Seattle, Washington. What other locations might be desired for future workshops?

Summary: In addition to already having been identified as the site for the next workshop, University of Washington in Seattle, received the most support for future meetings beyond 2015 with 36% of the vote. Somewhere in Tucson and SLAC received the second most support; each received 19.59% of the votes.

Suggest another location answers

- CalTech/IPAC
- Dove Mountain
- East Coast
- Honolulu
- La Serena
Some of the University of Washington votes may have been influenced by an error in the question’s wording. Initially it read “Where should a future AHM be held?” even though University of Washington already had been announced as the next meeting’s location. After having this pointed out by one of the respondents, the question was changed to acknowledge Seattle as the next location and to solicit ideas for sites beyond that. It is unclear how many, if any, of the respondents who selected University of Washington did so before the question was reworded and because they thought it was already decided.

Notable Comments:

- Rotate through the above list.
- Holding the next AHM at SLAC would help to highlight the partner-agency (DoE) involvement in LSST.
- The Tucson resorts have the advantage of confining people in a location, and provide much, much more opportunities for informal discussions and interactions.
- Don’t care – just make it easier to get to than Tucson.
- I understand the reasons for the Phoenix location, but not being near the home facilities of any of the partner institutions was a lost opportunity for more in-depth interactions and understanding of the project.
- With so many of the technical staff located in Tucson, AZ and Menlo Park, CA, I think from a fiscal standpoint, it makes sense to have meetings in one of these locations. If that's not an issue, then I think having the meeting in a city where there isn't an established LSST presence makes a lot of sense. Whenever you have people at their "home office" location, there will be a certain amount of distraction for those people associated with general office issues, etc. To get everyone away to a neutral location would put everyone on equal playing ground and help free everyone from typical office issues for the week. I would suggest cities that have interesting extracurricular activities to offer to spark interest (Portland, OR; Austin, TX; Denver, CO; San Diego, CA; Nashville, TN; somewhere in FL).
Question 10: Please rate the following from Not Very to Extremely.

Summary: More than 81% of respondents found the meeting “Quite a bit” or “Extremely” Productive; more than 77% found it “Quite a bit” or “Extremely” Enjoyable; 89% are “Quite a bit” or “Extremely” Likely to attend the next meeting.

While these numbers represent a favorable consensus, their continued decline compared to previous meetings’ surveys is cause for concern. 2014 “Quite a bit” and “Extremely” ratings aggregates were 4%, 8%, and 4% lower respectively than in 2012. In turn, 2012 ratings were 4%, 4%, and 12% lower than in 2010.

As in 2012, survey respondent’s comments reflected dissatisfaction with the fullness of schedule and inadequate amount of time for informal collaboration.

After the 2012 AHM, the project committed to trying to hold more frequent, smaller and more focused technical meetings to alleviate some of the pressure from the AHM agenda. The 2013 Joint Technical Meeting was intended as the first of such meetings, with a second JTM planned for spring 2014 followed by the summer 2014 all hands meeting. Unfortunately, due to the transition to construction and intense review by the NSF of the construction project’s cost and schedule between FDR and the August 1 CSA signing, that second planned JTM was cancelled. If possible, the project should renew its commitment to a schedule of smaller, more frequent, focused technical workshops as a compliment to the broader project and community workshops. By bringing together the larger technical staff more frequently, some of the kinds of technical topics that have, out of necessity, ended up on AHM agendas in the past, will have another outlet for resolution, freeing up the project and community workshop schedule.

Representative Sampling of Suggestions from Each Cluster:
• Simple, don't schedule every waking moment of the meeting. A few suggestions for opening up the schedule:
  1) Leave one day in the middle, Wednesday or Thursday, where there is NOTHING scheduled
  2) Cutoff the breakout schedule on two days at 3:30pm or even earlier
  3) Don't schedule plenaries everyday, and for something completely radical...
  4) Schedule the meeting to include the weekend - i.e. Wednesday through Tuesday - and then don't schedule anything for Saturday and Sunday.

• I recommend that we use the "unconference" format (http://en.wikipedia.org/wiki/Unconference) for either a couple of dedicated breakout slots or, better yet, for one or two sessions in each breakout slot. I have experience with this from Sci Foo Camp (http://en.wikipedia.org/wiki/Science_Foo_Camp). The best unconference sessions are those in which there are not formal presentations, but rather engaged discussion. I think the format would work well for some topics. All you need to organize this is a very large poster of each daily schedule with some empty time slots with room assignments (a range of room sizes is best, with seating capacity indicated) and pad of large post-it notes that fit in the space allocated for each unconference session on the scheduling poster. See the 'format' section of the above wikipedia site. A couple of 'rules' would be that everyone is welcome -- i.e., these are not closed meetings -- and the sessions should always start with introductions and brief statements of what each person hopes to get out of the session; general education is a fine goal -- one doesn't have to be an expert to attend a session. We wouldn't have to call these sessions 'unconference' -- perhaps "Unstructured pop-up meetings" would be good.

• Hold more than one reception if we can afford it -- say, on the last evening -- to allow more interaction in the evenings

• Perhaps a poster session? Not sure if that is the right mechanism, but unstructured discussion time was unfortunately limited at this meeting. At other meetings much of this takes place during poster sessions.

• More meetings. There's just too much jammed into one 4-day meeting (Friday morning wasn't useful)
• Subsystems need to have meetings other than the full-project meeting (perhaps the week before); virtually every internal DM breakout was much less productive than it could have been because key members had to participate in conflicting cross-subsystem breakouts or tutorial sessions. If the intra-subsystem meetings are separate, the time for intra-subsystem discussion will be much less crunched.

• I found it very hard to get to meet the people I needed to meet. Many of the attendees are a bit socially awkward and could use as much help as possible connecting in relationships. Could have been more strategic to do some of the following: color code name tags based on LSST group affiliation; color code name tags of people not part of an LSST group (cadance attendees); somehow encourage LSST groups to sit together at meals (group names on some of tables); have breakouts for new people on each group to get acquainted; organize optional evening meals for each group.

Conclusion

In general, survey participants reported a good LSST2014 experience. They approved of the time of year, the basic agenda structure, the quality of internet access, and the venue and its amenities. Although overall satisfaction was consistent with previous AHM survey results, the continued declines in positive ratings for some areas, specifically meeting Productivity and Enjoyment, and first-time declines in other areas, such as Information Prior to Arrival, warrants discussion for improvements to the next project and community workshop.

The Good News...Internet Access

For the first time since the project began conducting post-AHM surveys, Internet Access was the highest rated category among Meeting Practicalities, receiving “Good” or “Great” ratings from 98% of respondents. One respondent remarked, “Best internet I’ve had at a meeting this large.”

This is a positive example of progress achieved through applying lessons learned from previous meetings regarding setting expectations with venue and proactive follow-up.

Venue

Downtown Phoenix was chosen as the meeting locale as an attempt to address previous surveys’ requests for a venue nearer to a major airport and with more dining and entertainment options outside of the conference hotel. While many respondents appreciated the ease of getting to the venue and nearby amenities, a number of them lamented the lack of green space. For future workshops, the project should attempt to find a balance between accessibility and comfort.

Agenda Balance and Workshop Goals

A few comments scattered throughout the various questions stressed the opinion that working sessions within and among technical teams should be the purpose of the workshop. They proposed that elements such as plenary talks, presentations about the science, or introductory level material could be excluded or reduced considerably. When planning the LSST2014 agenda, workshop organizers also
considered whether, after several project-wide meetings, those kinds of sessions might be viewed by attendees as redundant or old news. However, the agenda sessions most frequently identified in questions 5 and 6 as “most helpful” were those addressing general-audience, overview topics.

In addition, a significant number of LSST2014 survey respondents self-identified as a project newcomer or as belonging to a group other than a member of the project team, e.g., members of the science community, not officially LSST yet, or a potential international affiliate. In fact the percentage of attendees who identified as not yet officially part of the project has increased 3% since 2012 and 10% since 2010. Newcomers will continue to grow, especially over the next year as the project fills a significant number of positions on the team. In particular, newcomers, those who interact less frequently with the project, and many distributed team members appreciated the general-audience introductory sessions.

- “As a newcomer to the LSST project, the project overview session was most directly helpful.”
- “I'm a beginner user of DM tools and interaction with developers was helpful.”
- “All of the plenaries were interesting and useful in the sense that they helped paint the big picture - something that can easily get lost as one focuses on a small area.”
- “I have been involved in the science planning and site selection over many years, but have not kept up on the project for the last few years, so it was good to get an overview and refresh my knowledge of the project.”
- “They provided insight into what other subsystems are grappling with”

Naturally LSST technical work ought to be the Project’s focus; and project workshops should provide ample time and opportunity to address vital issues most effectively resolved by in-person interaction. However, the annual project and community workshop is more than a technical workshop. Registration is advertised broadly to a diverse audience. For much of that audience, the workshop offers one of few opportunities to share project overview and status; for some newcomers the workshop may be their first exposure to the big picture.

**Productive and Enjoyable Decline and Fullness of Schedule**

While survey respondents’ ratings of workshop Productivity and Enjoyment represent a favorable consensus, the continued decline of positive response percentages from year to year is cause for concern. In 2014, “Quite a bit” and “Extremely” ratings aggregates were 4%, 8%, and 4% lower respectively than in 2012. In turn, 2012 ratings were 4%, 4%, and 12% lower than in 2010.

The most frequently cited barriers to productivity and enjoyment were a) stress from feeling the need to be in multiple places at once and b) the inability to connect with other attendees because they both were always occupied in a breakout session. Combined with other comments specifically requesting fewer scheduled sessions in the future, Fullness of Schedule appears to be the biggest contributor to the negative ratings. In response to the question on the appropriate balance of agenda elements, the “Just Right” consensus for Plenary Sessions and Downtime for Discussion remained virtually unchanged compared to 2012 AHM survey results, but there was a 19% increase in the “Excessive“ rating for
Breakouts compared to 2012. Therefore, it appears the number of Breakouts is the largest contributor to Fullness of Schedule.

Following the 2012 AHM, the project drafted a plan to alleviate Fullness of Schedule by a) consciously limiting the number of parallel breakout sessions scheduled in each time slot and b) hosting smaller, more frequent, focused technical workshops in order to address in another forum some of the technical topics that have, by default, ended up on AHM agendas in the past. Unfortunately, project planning negotiations with the NSF that dominated manager’s attention during the first half of 2014 prevented proper execution of the strategy. The project should recommit to it.

Concurrent Science Workshop

The Concurrent Science Workshop was frequently cited as a major cause of the overly subscribed scheduled. The 19% increase in the “Excessive” rating for Breakouts combined with the less-than-favorable support for the Concurrent Science Workshop in Question 4 suggests the project should avoid holding a concurrent workshop during future project workshops.

Information Prior to Arrival

“Great” ratings for Information Prior to Arrival decreased by nearly half, and “Poor” ratings increased by 10% compared to 2012 AHM survey results. Negative comments in this area tended to focus on tardiness in publishing a detailed agenda, late and frequent agenda changes, and the inability to find certain pieces of information, such as the hotel address.

The detailed agenda with named breakout sessions was published and distributed later than it was in either 2012 or 2010. Also, session rescheduling to avoid conflicts happened closer to meeting start time than the organizing committee would have liked. Both of these circumstances were unfortunate consequences of the less-than-usual project management level involvement in planning described above.

While all of the information mentioned in comments as “unavailable” was posted to the workshop’s website, because some attendees had difficulty finding it, the organizing committee should a) review the website design for improvements in clarity and b) commit to timely messages directing registrants to logistical information.

Recommendations

- Conduct a pre-meeting survey of likely attendees to help set the agenda.
- Limit the number of parallel sessions to no more the five at one time.
- Avoid concurrent science workshops.
- Schedule open-time blocks for informal collaboration in the agenda.
- Experiment with non-traditional breakout sessions to facilitate informal interactions.
- Send registrants “reminder” messages regarding logistics 2 weeks prior, 1 week prior, and one day before the workshop begins.
- Hold more frequent, targeted project workshops in addition to the AHM.
Appendix A: Previous AHM Survey Results

2012 AHM (Document-13731)