

2019 NRAO UC/ANASAC Report

June 4-6, 2019, Charlottesville, VA

The NRAO Users Committee (UC) and ALMA North American Science Advisory Committee (ANASAC) met at NRAO headquarters over a three-day period in June 2019. The first day was dedicated to ALMA-specific issues and ANASAC, while the latter two days covered all of NRAO. Fifteen committee members were in attendance, of whom three joined remotely (see additional material).

This year the UC resumed consideration of the VLBA, which is again under NRAO management. Other major issues included the process for allocating extremely large proposals (X-proposals) on the VLA, VLBA, and GBT, discussions of the Science-Ready Data Products (SRDP) initiative, and the great progress on the ngVLA project.

This report is divided into UC and ANASAC sections, as the charges to these groups are structured differently. The meeting agenda and attendance list are included as attachments. Key recommendations are bolded in the UC report, and are included as summarized findings in the ANASAC section.

The UC was chaired by Dan Marrone (Arizona), with Chris De Pree (Agnes Scott) as co-Chair. Susan Neff (GSFC) and Casey Law (Berkeley/Caltech) joined the UC this year. Jin Koda (Stony Brook) will become co-Chair next year when De Pree becomes Chair.

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Users Committee Report

I. VLA/VLBA Ops

The VLA is a mature facility; its operations continue to be smooth, with the notable exception of the difficult electrical infrastructure upgrade last summer. The Observatory management is taking sensible steps to maintain the aging instrument, while also conducting VLASS and making plans for entirely new capabilities from ngVLA. The Observatory is to be commended for securing funds to make necessary infrastructure improvements and repairs. The balance is well struck between maintenance and new initiatives.

The UC welcomes the VLBA back into NRAO. **While we understand that there is currently not sufficient funding for a full upgrade (receivers + digital backends) to significantly increase the bandwidth of the VLBA, we encourage NRAO to consider what could be done in the many years before the VLBA would be subsumed by the ngVLA.** On a shorter timescale, an effort should be made to bring the 3 mm receivers up to standards so as to restore the leading role of NRAO on the high frequency VLBI international scene.

The committee is concerned with the continued use of AIPS for solar and VLBA observations, and recommends working to transition to CASA as soon as is feasible.

We are pleased to see VLA/ALMA community days continuing, as a robust multi-wavelength and radio astronomy community is critical for support for large projects like ngVLA.

II. Time Allocation

The UC appreciates NRAO's efforts to evaluate biases in the proposal process, beginning with Carol Lonsdale's efforts several years ago. Though the statistics around any particular proposal process are slow to accrue, social science research gives reason to be wary of unconscious biases. Though NRAO has implemented important improvements in the proposal evaluation process, implementation experiments at other major facilities around anonymized proposing have shown no negative effects while reducing the opportunity for biases to enter the process. **We therefore strongly recommend that NRAO transition to anonymized proposing as soon as is practicable.** This could be implemented by following ALMA and randomizing the proposers, removing the proposers, or by following HST and insisting on the avoidance of self-identification (though this imposes additional work on the observatory to check for violations). **We recommend that the review process implement further safeguards against unconscious bias**, such as instructions to panelists to avoid personalization of discussion and/or the inclusion of "levelers" to the discussion to minimize such talk, **and to consider consulting social science experts to help define improvements to the process.**

The UC notes that the over-subscription rate¹ continues to be low, around 2. **NRAO should continue to monitor this in the X-proposal era**, when there may be fewer hours available for smaller programs on some facilities. As a context for understanding the proposal evaluation process, **the UC would like to see the proposal success rates as a function of requested observing time.**

III. X-proposals

The UC thanks NRAO for moving forward on the X-proposal process in response to the strong community interest in this opportunity. **The UC strongly supports informing the community about the imminent call for proposals in mid-June, including as many details as possible in the notices. We endorse the planned eNews announcement, but suggest addressing all submitters of Nols directly, and sending a stand-alone email.**

We feel very strongly that the restrictions proposed for the observing modes are overly burdensome. We would accept the alternate proposal, made by Ball, that the pre-announcement enumerates the capabilities that are considered technically challenging and urges proposers who need these capabilities to discuss their requirements with the telescopes. We also propose that the affected Nols be directly contacted.

The UC is concerned about the impact of filtering by the SRPs. **The SRPs should review the proposals in their areas, write a review for each one that describes the scientific context and the comparison to typical smaller proposals in the science area, and coarsely grade them (e.g., excellent/good/fair/poor). This should be provided alongside all technically feasible proposals as advice to the Science Assessment Committee. This committee may need to be larger than is proposed.**

The number of proposals passed on for an "in-depth technical and operations review" should be allowed to be larger than two per telescope if there are many excellent proposals. This is especially important if some top proposals may be weeded out for technical reasons.

The list of supplementary materials required by the submission deadline is overly long given the short lead time to the deadline. We propose the following division:

- Required submissions
 - Data management / Delivery plan
 - Major project milestones and schedule
 - Team resources
- Optional submissions
 - Special requirements (not all teams have these)
 - Engagement of US astronomical community
- Items for later discussions with proposers, not required at the deadline:

¹ defined as hours proposed divided by hours approved

- Demonstration of feasibility (some things, e.g., schedulability, are out of scope for the teams)
- Operational and NRAO/GBO support implications

We discussed the proprietary period for these proposals. Given the diverse array of possible projects, **we propose that each observation becomes public one year after being passed on to the proposing team, similar to the ALMA model.** The teams are free to propose to release them sooner, which should be considered in the evaluation.

III. Proposal/Observing Software

It is a very welcome development that NRAO has undertaken an analysis of the proposal software problem. **The UC continues to believe that improving this software is an important step in making NRAO facilities accessible to the community. Designing support for ngVLA into the software from an early stage will make this investment worthwhile.**

Staged deployment of the tool is desirable in order to take advantage of the capabilities of completed modules as soon as possible, but it seems that the steps in this path are not yet clear. The UC feels that it would be valuable for NRAO to think about a realistic deployment schedule for the components of the new tool. If there are synergies with ALMA's upgrade of their OT, they should be exploited to the extent possible.

IV. Data Management & CASA

Overall, the UC was very impressed with the wide variety of current activities and progress that NRAO has made in the past year on Data Management and Software. The effort to integrate various software for a wide range of developments for NRAO is the right strategy. The new archive is a valuable new resource with many new archive features implemented. The activity for better software documentation (including Jupyter Notebooks for CASA Guides) is a positive move for current users and for bringing in new adopters.

We are encouraged to see the recognition of the importance of software reliability and an appropriate resource allocation for testing. **The UC strongly recommends to set well-defined mechanisms to ensure reliability with rigorous testing of new software development (e.g., casacore, CARTA), to better establish confidence in the user community.**

NRAO needs a new mechanism for the rapid dissemination of known CASA issues (bugs) to the user community, even if a solution and a full analysis of the impact is not yet available. In the past year, there have been CASA bugs that impacted data processing/reprocessing/delivery and user time (e.g. primary beam bug, restoring beam bug in *tclean*). The UC recognizes that the timing of bug announcements is a difficult problem, but stresses that more openness is needed. An example of good practice is the ALMA OT, where bugs discovered during an active proposal call are almost immediately disseminated to the community. **A centralized public web page of all bugs with severity rating which are**

searchable with keywords and are linked to help desk tickets, or new software tools, may provide a long-term solution. Users want to know whether a problem they have encountered has already been discussed in the community or by NRAO, how serious it is, and if there is a solution or workaround. In addition, immediate action can be taken by opening access to user-submitted help desk tickets (e.g., setting default to be viewable by all), better curation of the FAQ list, and/or a CASA bug list.

V. VLASS

The UC is glad that VLASS project is proceeding as planned and appreciates the efforts of the team made to resolve technical problems. The team has responded to the requests in the 2018 UC reports on submitting an overview paper and creating a VLASS website and quick look image browsers. The new plan to release future VLASS data through the CADK server is encouraged to provide users better access to the data. The VLASS team expressed their concerns about the computing resources needed for delivering the data; the UC encourages NRAO to provide necessary resources for the benefit of the community.

VI. SRDP

The UC is pleased with the clear progress over the last year on SRDP, and there is a good overall plan in terms of timeline and scope for SRDP with the gradual roll-out process. The new NRAO archive capabilities are impressive. The rapid implementation of on-demand calibrated measurement set (MS) availability and the Summer 2019 roll out of the pilot are appreciated. The ability to obtain calibrated MSes will benefit more users who may not have the resources to calibrate data locally.

The initial pilot program provides a good opportunity for many of the details and issues to flesh out prior to the full roll out this year. **However, the UC anticipates a very high level of interest in these features and expresses concerns on how to properly allocate enough resources to ensure the success of the pilot program.** The SRDP team should be cautious with the time estimates provided on the user-side for retrieval of MSes and images given uncertain queue time using the shared NRAO cluster. The SRDP team should also be cautious that other operations that use the NRAO computing cluster are not strongly impacted by inclusion of this mode.

The present plan to have QA control of the images produced by the SRDP may lead to an unnecessary slow down for users to obtain quick look data that may not be used for publication. The status quo of automatic ingestion of all images produced by SRDP may lead to storage of less scientifically useful data. **The UC suggests that SRDP images are added to the archive on the basis of an affirmative choice by the user, rather than defaulting to including everything.**

The UC looks forward to seeing broader implementation of the quick look images beyond VLASS. Possible inspiration from the JVO ALMA Archive may be helpful.

VII - Future Initiatives/ngVLA

The UC commends NRAO on the excellent and impressive work to date on the ngVLA project. The ngVLA team is to be particularly commended for development of the observatory reference design and reference Observation Program, as well as for the early pursuit of funding for technology development. The timing of the publication of the ngVLA Science Book in advance of the Astro2020 white papers was handled extremely well, and is reflected in the high appearance rate of “ngVLA” in the white papers compared to other proposed facilities.

The UC heard a presentation from Tony Beasley on some initial thoughts on plans for how to transition from JVLA operations through ngVLA construction to ngVLA operations. **The UC agrees that it is extremely important to involve the broader community in planning for the JVLA-ngVLA transition. The UC is interested to participate in this activity and feels that the draft process and timeline presented by Tony Beasley is a good start.** The UC is interested to be consulted about the timing for this process, as it seems likely that significant consultation and work on this transition plan will need to be done over the next 12-18 months.

The UC is particularly concerned about what sort of user community will be available when ngVLA comes online, and this will likely be affected by how the overlap of ngVLA/JVLA is handled. **The effect on the potential ngVLA user community should be considered as part of the consultation process for the transition plan,** which may also improve the community’s confidence in the ability of NRAO to carry out the ngVLA construction project.

IX. CDL

The CDL is an essential part of the present and future of NRAO and its facilities. We were pleased to see that there is a detailed plan for its future and that there are many hires on the horizon. **As discussed in the ANASAC report, the difficulties in the ASIC design process for the ALMA correlator upgrade is a major setback and we urge the preservation of the frequency doubling aspect of the design.**

X. Communications/EPO

The quality of the public facing NRAO EPO materials (on the web) are excellent, and have vastly improved in the past decade. The number and quality of NRAO press releases are impressive and serve the community well. The NRAO e-News has been a successful means to advertising news and deadlines to the community and their cadence is satisfactory.

The UC was impressed with NRAO’s effective presence at national meetings and in promoting ngVLA, including January 2019 AAS, and in recruiting at the undergraduate orientation event. The array of screens at AAS seemed to be an effective advertising tool, and the new content developed for the screen is useful in promoting NRAO science. The plan to advertise the press office offerings at AAS is satisfactory. The AAS PIO event has an impressive

return on investment through successful networking. UC encourages continued active participation in national meetings.

Decreasing participation in RAP leading to cancellation is concerning, and the UC encourages proactive reevaluation of the program to improve recruitment. The UC encourages expanding outreach work to Albuquerque. The UC commends the Sister Cities program, which appears to be an effective bridge between the NM community and Chile.

Additional efforts in outreach are appreciated, including in the hiring of the new educational expert in Socorro, the opening of the live web cam, and the development of the Google Maps VLA visualizer. The Interferometry App is also impressive and will be a useful teaching tool, but could be made easier to find.

XI. Students/Postdocs

We congratulate NRAO on the renewed NSF funding for the highly successful undergraduate summer program and request that NRAO track the number of applications and acceptance rate for this program.

The UC discussed various aspects of the Jansky Fellowship program, including the difficulty in successfully recruiting women, competitiveness compared to other prize fellowships, and the possible perception of the service aspect among the applicants. **We feel it is important to track systematically where candidates who decline a Jansky Fellowship end up.** The Jansky should be a highly sought-after fellowship, especially now that the number of available fellowships through NASA has decreased substantially. Although external Jansky fellowships are still available, there may be a perception that such applicants are held to a higher standard. The 10-25% support may sound like a requirement to the applicants and downgrade the perceived independence of the fellowship.

ANASAC Report

The ANASAC met on June 4, 2019 in Charlottesville, VA. ANASAC thanks all presenters for the substantial efforts required to prepare their content for the meeting, and for the clear and concise talks. Also, ANASAC commends NAASC on the new meeting format for 2019, with shorter presentations and more discussion time for specific ANASAC charges.

ANASAC Standing Charge #1: *To assist ASAC in presenting a North American view with respect to ASAC Charges (should they exist).*

Currently, there are no ASAC Ad Hoc charges, and ANASAC did not identify any issues relevant to the ASAC Standing Charges that are not already covered under existing ANASAC Charges.

ANASAC Standing Charge #2: *To lead community outreach through leadership of workshops.*

- The ANASAC recognizes that given the maturity of the ALMA user community and to reduce the workload of NAASC staff, **the organization of workshops could be shifted toward more community-led ones.**
- We recommend that NAASC **announces the opportunities for workshop support** to the NA community. To make the process more inclusive, we suggest having proposal calls **twice per year.**
- **The workshops should not only highlight ALMA results, but also aim to expand the user base.** The ANASAC strongly recommends the inclusion of words such as “**multi-wavelength**” in calls for workshop proposals.

It is important to continue support for various scales of workshops/meetings. ANASAC agrees that the ALMA project is mature enough that the topical meeting/workshop can be led/driven by the community with partially (or minimal) logistical support from NAASC. Two past topical meetings sponsored by NAASC (TORUS 2018 and Dusting the Universe) are great examples.

ANASAC endorses seeking proposals for workshops/meetings from the astronomical community, via a regular competition. It is very important to have a transparent process that informs the entire NA community about this opportunity. In order to have workshops/meetings on emerging topics in a timely manner, it is desirable to have two calls per year. The prime focuses of the meeting/workshop should be engaging non-traditional users (e.g., optical/IR community). The meeting/workshop should be science driven.

ANASAC agrees that the ideal use of NAASC financial support for such meetings is to make it easier for students and post-docs to attend and benefit from science discussions at the meetings.

The ultimate goal is to both showcase the ALMA results *AND* engage interest from non-traditional radio facility users.

ANASAC Standing Charge #3: *To provide a mechanism for widening ALMA's base within the community and feedback to the NAASC on community perception of ALMA.*

- ANASAC continues to be concerned that the delay in announcing the mosaicking bug led to wasted time on the part of ALMA researchers.
- We commend the NAASC for the highly successful Ambassadors program.
- We commend the NAASC for continuing to run the ALMA f2f program, an important asset for developing better expertise in ALMA data analysis.
- We are happy to see the overall decline in the number of emergency tickets submitted in the past two years.

Impact of CASA bugs on ALMA research: ANASAC continues to be concerned that the delay in announcing the mosaicking bug resulted in a waste of time by ALMA researchers, and remains unpersuaded by the argument that warning people of the bug in a timely fashion would have resulted in more harm than good. ANASAC recognizes that this is a difficult problem, but stresses that more openness is needed. **We note that ASAC recommended that ALMA develop a clear policy to handle situations such as this and ANASAC endorses this recommendation.**

ALMA Ambassadors program: ANASAC commends the NAASC for the efforts put into making the Ambassadors program such a success. The interest demonstrated both by the number of people willing to serve as Ambassadors, and by the number of institutions willing to host such visits, represents a major step in outreach to the broader astronomy community. The program serves to encourage non-radio experts to write ALMA proposals, and to spread interest in ALMA amongst the next generation of potential ALMA users. The fact that JWST is using the ALMA Ambassadors as a model for the JWST Master Class program is a powerful marker of the success of the program.

NRAO Ambassadors program: ANASAC considered the idea of creating NRAO ambassadors who are trained to host miniature versions of the synthesis imaging workshop at their home institutions. This seems hard to implement, even with prepared materials. It takes significant expertise to teach people interferometry, and a lot of time as well. ALMA community days have a brief interferometry overview, which seems like a realistic level of information short of sending out discipline experts.

One-to-one f2f visitor program: The ALMA f2f program is an important asset for developing better expertise in ALMA data analysis within the community, and for helping first-time users efficiently to prepare their data for publication. ANASAC is happy to learn that NAASC has been able to accept nearly all requests for such visits. Recognizing that providing NAASC personnel to support these visits is still a limited resource, the committee agrees that a minimum level of technical competency may be required in order to make such visits effective.

Helpdesk performance: ANASAC appreciates NAASC's provision of running statistics on usage of the Helpdesk, allowing ANASAC to monitor trends. ANASAC agrees that the Helpdesk system seems to be healthy, and is happy to see the overall decline in the number of emergency tickets submitted in the past two years. The number of non-proposal-related data-analysis tickets seems to have reached a stable level that can be handled promptly by the responders, allowing the NAASC to be responsive and provide support that enables productive use of ALMA data.

ANASAC Standing Charge #4: *Evaluation of the ALMA Proposal Process: Current Cycle and ALMA Supplemental Call.*

- The aggressive schedule of two DPR tests in the Cycle 7 and 8 supplemental calls followed immediately by implementation of DPR in the main Cycle 9 call risks a critical failure. **A careful review of the Cycle 7 test results must be carried out in a very timely fashion to determine whether DPR can be deployed for the main call in Cycle 9 or may need to be delayed to Cycle 10.**
- **The ANASAC requests to be involved in (1) reviewing the results from the DPR surveys, and (2) identifying improvements to the DPR process to be implemented in the Cycle 8 supplemental call.**
- **It would also be extremely helpful for the ANASAC to see the report from the ESO DPR test.**
- We note serious concerns about unconscious bias among reviewers and **we urge NAASC/ALMA simultaneously with DPR to move to true double-blind peer review by removing all PI and co-I names from regular ALMA proposals**, as is done, for example, by the HST.

The ANASAC heard presentations on the plans for new ALMA capabilities in Cycle 8 and for the plans for Distributed Peer Review (DPR) in Cycles 7, 8, and 9. The improvement in sustainability from DPR due to reduced travel is a positive aspect. The ANASAC had an extensive discussion of the DPR process (see bullets above). We feel that there will need to be substantial discussions between the NAASC and the ANASAC to understand the feedback from the DPR surveys and how to evaluate and improve the DPR process. For example, it may be useful to review whether grading proposals on an absolute scale is better than using rankings. It might also be useful to ask reviewers about their level of expertise for each proposal and to rescale their grades appropriately.

ANASAC Ad Hoc Charge #1: *Scientific outcomes and impact from all Cycles. Is North America doing well--what are the challenges and are there specific actions that might increase scientific impact?*

- The ANASAC is **pleased to see excellent scientific outcomes** from the NA. **We do not see any immediate problem** and are glad to see that we are on an improving trend.

- We agree that **we should look at the totality of outcomes with different metrics**, not just the metric of publication counts.
- We think it is important to continue monitoring the statistics, as this will reveal signs of any future problem before it becomes serious. **Assuming continued monitoring, the ANASAC favors dropping this Ad Hoc Charge.**
- **Financial support for students, such as the SOS program, continues to be important for the NA community**, as there is typically a gap in time between successful ALMA proposal and, e.g., NSF funding to support students. The European community provides much more direct financial support for ALMA users and the SOS program is a very cost-effective way to support the best young ALMA (and VLA) users. **We suggest expanding student support programs.**

The NA ALMA community continues to be doing well in scientific outcomes. While NA authors published about 40% fewer papers than EU counterparts, the number of publications in highest-impact journals and the citation counts are comparable. The publication counts are still increasing in NA, while they appear to be saturating in EU. ANASAC also recognizes that the number of EU astronomers available to work on ALMA data is significantly larger than for NA.

The success should be measured by the totality of many metrics, rather than mere publication counts. The metrics presented, including counts of highly-cited papers, mean citations, and total citations, were useful in clarifying the meaning of the total number of papers published. Indeed, the ALMA publications from NA are impressive. ANASAC has no immediate concern. For this reason, the ANASAC agrees with the removal of this Ad Hoc ANASAC Charge, provided that NAASC agrees to continue monitoring the statistics presented, so that any future problem is caught early.

ANASAC again recognizes the ongoing challenge for the NA community that most radio astronomers in NA need two successful proposals, one to ALMA for data and one to NSF to carry out their science. In this context the SOS program, which targets support to exciting research programs being carried out by graduate students is crucial for the health of the community while at the same time being cost effective. ANASAC recommends expanding the SOS program. In addition to student support, continuing support for page charges and broad advertisement of this support are important as well.

ANASAC Ad Hoc Charge #2: *Assess the status of observations and progress made toward future cycles. Are the data meeting user expectations? Are the data being released to the PIs in a timely fashion?*

- **ANASAC encourages NAASC to expand the raw data release option, from the pilot stage to the full user group.**

- ANASAC suggests NAASC should continue its efforts on estimating the probability of completing proposals before the end of the cycle, and further suggests that this information should be made public.

ANASAC is pleased that NAASC continues to deliver data in a timely fashion. ANASAC regards the fact that 25% of users in the pilot program for raw data release choose to take advantage of it as a demonstration of its success, and ANASAC encourages NAASC to expand the raw data release option to the full user group.

Ad Hoc Charge #3: *The fifth call for ALMA Development Studies/NA just ended, as did the call for ALMA Development Projects/NA. Please comment on the process, which was accompanied by specific suggestions ('ALMA2030') developed by ASAC and by reports from previous Studies.*

- **The ANASAC was disappointed to hear of the ASIC-related delays in the Correlator Upgrade Project. We strongly encourage the CDL to maintain the capability to run at double speed for the CUP phase 2 upgrade, as promised in the original plan.**
- **The ANASAC endorses a concerted program to develop factor of 2+ improvements (e.g., CUP ph2, Band 6v2) accompanied by a robust planning/development program with a view to major changes as ALMA approaches 2030.**

The ANASAC was disappointed to hear about the delays in the Correlator Upgrade Project. The ASIC is the heart of the matter, and given the cost of a chip run, it clearly needs to be validated fully. We support caution in this matter. We strongly encourage the CDL to maintain the capability to run at double speed for the CUP phase 2 upgrade, as promised in the original plan. Losing this capability would be a significant setback, that would greatly diminish the value of the project.

ALMA is 7.5 years from the start of early science, and the completion of its baseline capabilities is foreseen within a few years. Given the non-ALMA pressures on the partners, investments in global factor of 5-10 capability improvements in the next decade are likely unrealistic. The ANASAC endorses a concerted program to develop factor of 2+ improvements (e.g., CUP ph2, Band 6v2) that also advance some science by larger factors, as long as it is accompanied by a robust planning/development program with a view to revolutionary changes to ALMA starting in the 2030s.

Other topics:

The ANASAC thanks NAASC for coordinating with us on activities related to the upcoming IVC visit.

The ANASAC would welcome the opportunity to increase communication with the NAASC through more frequent telecons and informational emails that go beyond what is occasionally released on almascience.

Meeting Participation

Ilse Cleeves, University of Virginia (UC)
Christopher De Pree, Agnes Scott College (UC **Co-Chair**)
Trish Henning, University of New Mexico (UC)
Jin Koda, Stony Brook University (UC, ANASAC)
Shih-Ping Lai, National Tsing-Hua University (UC, ANASAC)
Casey Law, University of California at Berkeley (UC)
Laurent Loinard, UNAM (UC)
Dan Marrone, University of Arizona (UC **Chair**, ANASAC)
Susan Neff, NASA/GSFC (UC)
Giles Novak, Northwestern University (UC, ANASAC **Chair**)
Kate Su, University of Arizona, (UC, ANASAC)
Stephen White, Kirtland AFB (UC, ANASAC)
Christine Wilson, McMaster University (UC, ANASAC)

Remote Participation

Edo Berger, Harvard University (UC)
Rachel Osten, Space Telescope Science Institute (UC, ANASAC)

Unable to Attend:

Fabian Walter, Max Planck Inst für Astronomie (UC)

ANASAC Meeting Agenda

Tuesday, June 4

- 08:30 – 09:00 *Executive session (closed)*
- 09:00 – 09:15 Welcome (Beasley)
- 09:15 – 09:45 NAASC Status (Remijan)
- 09:45 – 10:30 *Discussion - IVC Process and Planning*
- 10:30 - 10:45 BREAK**
- 10:45 – 11:15 Science Overview/Publications (Remijan)
- 11:15 – 11:45 *Discussion – NA Publication Rates*
- *ANASAC Standing Charge #2 & 3*
 - *ANASAC Ad Hoc Charge #1*
- 11:45 – 12:15 ALMA Capabilities including Distributed Peer Review - Plans for Cycle 8+ (Vlahakis)
- 12:15 – 13:00: *Discussion – Distributed Peer Review*
- *ANASAC Charge #4 & DPR evaluation criteria/planning for Cycle 7+*
- 13:00 – 14:00 LUNCH**
- 14:00 – 14:30 Data Processing Timescales: raw data delivery, ADMIT and ToO and triggered prgms (Ubach)
- *Anticipated Changes to the Cycle 7 Pipeline*
 - *NAASC involvement in SRDP*
- 14:30 – 15:00 *Discussion - Raw Data Policy and Pipeline Development*
- *ANASAC Ad Hoc Charge #2*
- 15:00 – 15:30 ALMA Development program/ALMA2030 Roadmap strategic planning (Jewell)
- 15:30 – 16:00 *Discussion - ALMA Archive Access and Development*
- *ANASAC Ad Hoc Charge #3*
- 16:00 - 16:15 BREAK**
- 16:15 – 16:45 ALMA Ambassadors/NAASC Summer School/NRAO Ambassadors (Remijan)
- 16:45 – 17:45 *Final Discussion and ASAC Charges - ALMA User Experience*
- 17:45 – 18:00 *Executive session (closed)*

Users Committee Meeting Agenda

Wednesday, June 5

- 08:30 – 09:00 *Executive Session (closed)*
09:00 – 09:30 NRAO Overview – Tony Beasley
09:30 – 10:30 VLA/VLBA Operations & Development – Mark McKinnon + Walter Brisken
- 10:30 – 10:45 *BREAK***
- 10:30 – 11:30 Telescope Time Allocation, X proposal implementation – Lewis Ball
11:30 – 11:50 Proposal/Observing Software – Jeff Kern
11:50 – 12:15 Data Management & CASA – Brian Glendenning + Lewis Ball
- 12:15 – 13:30 *LUNCH***
- 13:45 – 14:30 VLASS – Claire Chandler + Mark Lacy
14:30 – 15:30 SRDP – Jeff Kern + John Tobin
- 15:30 – 16:00 *BREAK***
- 16:00 – 16:45 ngVLA and astro2020 – Eric Murphy
- 16:45 – 17:30 *Executive Session (closed)*

Thursday, June 6

- 08:30 – 09:00 *Executive Session (closed)*
09:00 – 10:00 NRAO Futures – Tony Beasley
10:00 – 10:30 CDL – Bert Hawkins
- 10:30 – 11:00 *BREAK***
- 11:00 – 11:30 Science Communications/ EPO – Suzy Gurton + Mark Adams
11:30 – 12:00 Postdoctoral/SOS Programs – Lewis Ball
- 12:00 – 14:00 *Executive Session/write-up, including LUNCH (closed)***
- 14:00 – 14:30 Exit Interview
14:30 *Meeting ends*