ESO Users Committee Mid-term Teleconference

Minutes by M. Rejkuba (v1 24 October 2016; v2 14 November 2016 including UC input)

Date/Time: 21 October 2016, 10:00-11:00

Present:

For ESO: Andreas Kaufer (Director of Operations), Michael Sterzik (Data Management and Operations Division Head), Marina Rejkuba (User Support Department Head)

For the UC: Maria-Rosa Cioni (UC chair, DE), Olivier Absil (UC co-chair, BE), Lise Bech Christensen (DK), Talvikki Hovatta (FI), Lukasz Wyrzykowski (PL), Sofia Ramstedt (SE)

The agenda:

1) News from ESO operations
2) Progress on the UC40 recommendations
3) Update on Survey of Non-Publishing PIs (SNPP)
4) Special topic for the 2016 UC meeting
5) Questions/issues from the UC

(1) News from ESO

- GRAVITY Science Verification was carried out in June and September 2016 yielding excellent quality data and providing tests for the offered operation modes. Following that, science operations started officially in October using ATs.
- Adaptive Optics Facility – assembly and integration of the adaptive secondary has started. UT4 is out of operations until December as planned and announced.
- For the first time, phase 2 material for ALMA Cycle 4 observing projects had to be submitted by PIs by a single deadline at 15 September 2016. This implied an increased workload on the Phase 2 Group in Garching and the European ARC nodes (as contact scientists) over the northern summer, but the ARC network succeeded in getting all projects submitted by the deadline.
- An ALMA internal review of the data reduction pipeline took place in Charlottesville on July 28, 2016.
- With the end of September 2016, ALMA Cycle 3 data taking is completed. JAO and the ARCs have not been able to process all Cycle 3 data and a backlog of a few months has resulted mostly due to level 1 checks that take longer than planned. Measures to improve efficiency are under discussion in order to avoid the build-up of a backlog for Cycle 4 data. A message regarding data delivery has been sent to the ALMA community on October 16.
- The User Survey 2016 was sent to all ALMA users. The survey focuses on Phase 2, Data quality, QA2, Face-to-Face support and Archive as well as queries on new tools such as the new project tracking tool SnooPI.

- The working group “Science Data Management” (c.f. presentation by M. Romaniello at the UC40 meeting) has produced the final report that is handed over to Rob Ivison and will be presented at the upcoming STC88 (25-26 October).
- The Time Allocation Working group (c.f. presentation by F. Patat at the UC40 meeting) has completed its discussions/work and is now preparing its final recommendations that will be presented at the STC meeting in April 2017.
- New web-based phase 2 preparation tool and a new version of the visitor mode observation tool (vOT) has been deployed on Paranal in the beginning of October. During Period 98 visitor mode users on UT2 will be encouraged to use those tools for their observation preparation and execution. The received feedback will be included for future releases of the tools that are planned for the coming year.
- A yearly poll focusing on the Phase 2 preparation and its documentation for Paranal Service Mode was carried out in September. We targeted P97 and P98 PIs and their Phase 2 delegates, and received feedback from a total of 187 users, representing a 35.8% response rate. This rate is our highest to date, and we sincerely thank everybody who participated in this! The results will be published online and a report provided to the UC prior to the next meeting.

Discussion:
The UC asked to have the list of questions used in the ESO polls, such that asking the same questions could be avoided in the UC poll. The UC poll will be prepared in the beginning of 2017. ESO to send the list of questions to the UC chair.
ESO would like to add few questions related to the Special Topic to the UC poll, as was usually done also in the past. In addition, it will be considered if a Phase 2 tutorial or demo could be made available to users for feedback to be via the UC.
ESO would also like to get feedback on the following: which fraction of Paranal visiting astronomers would prefer, instead of the overnight stay at the guesthouse, a direct trip from the Santiago airport to Paranal on the day of their intercontinental flight arrival. In case that there is high interest in such an option we could look into potential ways to offer this within our logistical constraints.

(2) Progress on UC40 Recommendations

UC40.R.01: to extend APEX operations in view of the successful results and efficient organization.

The support of the UC is appreciated. A proposal to extend ESO’s participation in the APEX agreement at an increased level of 32% till the end of 2022 is currently being discussed at the STC level, in view of a Council decision in December 2016.

UC40.R.02: to make the abstracts of accepted proposal publicly available after the proposals are accepted (only 25% of the users replying to the UC poll were against it); this procedure is already in place for ALMA.

This recommendation was discussed with the Director General and the Director for Science. They are not in favour of proceeding along the line proposed by the UC, because it gives an unfair competitive advantage to non-ESO astronomers with access to fast-turnaround time on e.g. Gemini and Keck. No compelling arguments were provided as to why it is important to anticipate the release of the abstracts, given the above concern.

UC40.R.03: to schedule GTO & LP times flexibly to avoid blocking right ascension ranges and targets for contiguous periods of time.

The Observing Programmes Office will keep this recommendation into account when running the GTO scheduling, trying to optimize the needs of the wider community. At the same time, OPO also acknowledges that Large Programmes do usually come from that same community and rightly have a high priority, which ensures some balance.

UC40.R.05: to explore the statistics of how often a significant fraction of time is lost in visitor mode due to technical issues and if possible to compensate for it.

Those cases are very rare, precise statistics will be presented in the UC 2017 meeting. Compensation for major technical losses in visitor mode (~2/3 of the time or more) is assessed on a case by case basis, typically upon request of the visiting astronomer. In the 2017 meeting we will present more formalised guidelines for such cases.

UC40.R.06: to maintain up-to-date documentation about observing priorities used for service mode observations executions at Paranal.

Observing priorities for service mode observations executions are described in the Phase 2 Proposal Preparation Tool version 3 (P2PP3) User Manual, which is available from:

http://www.eso.org/sci/observing/phase2/P2PP3/P2PP3Documentation.html

UC40.R.07: to encourage observations in visitor mode, that are not limited to technically challenging programs, or to increase use of Designated Visitor mode.

With the ongoing update of our Phase 2 tools for visitor mode it is expected that visitor mode support can become more agile and may thus require less preparation time on Paranal itself. As a result, the total trip length may become shorter and make VM more attractive for users. Likewise, we are investing resources to make the dVM experience closer to that of actual VM due to the implementation of an eavesdropping functionality, in combination with the more agile Phase 2 tools.

It is not entirely clear what problem the UC is trying to solve here. ESO has removed from the proposal form the specific box for justifying observations in visitor mode (replacing it with a more generic mode justification), as this was already indicated as a possible obstacle for VM requests. The UC needs to give clearer indications, so that ESO can consider possible actions on a more informed basis.

Follow-up discussion:

The UC clarified that this stems from recent feedback in web-letters stating that “visitor mode is not sufficiently justified in the proposal”.

Such comments are not expected, because the OPC should not judge the proposal with respect to the observing mode. ESO could address this by further emphasising to the OPC and in particular panel chairs, who are in charge of the comments formulation.

UC40.R.08: to check for and/ or enable users to find possible conflicts of targets between approved and/ or carried-over programs and newly proposed programs.

This recommendation touches upon the policies that regulate the access of information for approved programmes. Possible policy changes will be reviewed. Any such review/ consideration would need to take into account that making available information on targets

that have been approved (but not yet observed) could again give unfair advantage to people who then could apply to observe them at other facilities.

UC40.R.09: to explore the possibility of increasing the number of participants or occasions for workshops/schools that are highly successful and oversubscribed.

This is under discussion and possibilities will be explored.

UC40.R.10: to improve transparency of the OPC selection process (sometimes grades do not correspond to comments) by feeding back to the users the individual comments of panel members, together with the consensus comment from the panel.

In the current implementation, the Panel Chairs are responsible for checking the integrity and the consistency of the comments sent to the PIs. In addition, there is an official channel for asking them to give more information if there is ambiguity or discrepancy between grades and comments. ESO is strongly against distributing individual comments, as this defeats the whole purpose of a panel discussion, which is behind the consensus report that is sent to the PI.

UC40.R.11: to allow the identification of moving targets (solar system) in the archive by taking into account their ephemerides.

The recommendation was included in the requirements for the upgrade of the Science Archive Facility user services. It will likely not be part of the first release, though, because of higher priority services of more general interest and impact, including several suggestions from UC39.

UC40.R.12: to advise the users via the Call for Proposals to provide, in case of resubmissions, sufficient clarity to the comments received on previous evaluation(s).

This is already addressed in the Call for Proposals (CfP), Section 1.2 Important reminders and Section 2.2.1 ESOFORM Important notes (pages 8 & 14 in the P99 CfP). In general, the points made by the OPC should be addressed in the Scientific rationale, with explicit mention and reference to the OPC feedback. In addition, this can be signalled in the Special Remarks box (in the current implementation). If the UC thinks this would be useful, ESO could make this more explicit in the newsletter that announces the release of the CfP.

UC40.R.13: to add to the Call for Proposals the statistics of the over/ under subscribed right ascension range(s) for all the instruments including APEX.

It is assumed the request refers to telescopes (and not to instruments). In this case, the oversubscription averaged over the last 5 semesters (on an even/odd basis) for non-APEX telescopes, is already available:

https://www.eso.org/sci/observing/phase1/p99/pressure.html.

Given that, as part of the extension agreement (if approved by Council in December), the instrument suite of APEX will be upgraded (and ESO's share increased to 32%), we propose to include a general overview of the LST pressure on APEX at that moment (starting P101 in 2018). Because of scheduled major telescope maintenance activities, P100 at APEX will end 3 months earlier than usual, making an LST pressure plot based on previous even periods unreliable.

The UC recognizes the effort made by ESO on the following aspects and would like to recommend their continuation:

UC40.R.14:

- **To provide cookbooks and/ or video tutorials for data reduction for all instruments;**
- **To reach the community % of females in ESO advisory bodies (where ESO has control over selection);**
- **To guarantee a quick reply to DDT proposals;**
- **To support all critical software (data pipelines, Phase 2 preparation software) on both Linux and MacOS, and to provide detailed installation guidelines for both;**
- **To engage the UC in the development and testing of the new Phase 1, and Phase 2 tools.**

A first draft Reflex video tutorials were produced and are available at: https://www.youtube.com/channel/UCCq4rxr30ydNyV94OWmLrMA (or just search "ESO reflex" on YouTube). Work is ongoing on cookbooks that include best practices on data reduction for different instruments.

Data pipelines and Reflex are publicly available for both Linux and MacOS. Installation is provided via RPM/MacPort packages and via command line scripts. Detailed instructions are available at www.eso.org/pipelines.

Phase 1/Phase 2 tools development and testing: We plan to present the status of the tools at the next UC meeting. There is still a plan to engage the UC to provide feedback. What needs to be clear is that we will not be receiving feedback from single users, but a unified users view channelled through the UC. The recommendations will have to be based on general needs, and not on single-person tastes/preferences.

Gender in OPC and Panels: the female/male fraction (30/70) is fully consistent with that of the PI community (see Patat 2016). The Observing Programmes Office is very proactively promoting female participation and has the 50/50 balance in its goals. For P99 the gender balance is 33/67.

DDT proposals response time discussion:

UC would like to know what is the typical response time for ESO and other observatories. A statement was made by the UC that other observatories are able to give the final reply on the DDTs within 48h.

For ESO such a short time-scale is not feasible on a regular basis, because each proposal receives a technical and scientific assessment. The latter is done by two people who are knowledgeable on the topic. There are of the order of ~2 DDTs submitted every week (50-60 per semester). The response time is typically of the order of 1 week (TBC). In exceptional

cases when the urgency of the DDT is clearly flagged (this is checked as soon as the proposal arrives), there is a faster response and so far, as far as ESO is aware, no urgent DDT was missed due to too slow reaction. Sometimes after a DDT is approved. ESO waits also non-negligible time for users to finalize their OBs.

The UC has also identified the following minor issues:

UC40.R.15:

- **The computers in the Paranal visiting astronomer rooms run under "old" versions of the operating systems;**
- **The choice of afternoon breakfast for night workers is limited;**
- **The bed sheets in La Silla are not changed weekly;**
- **There are no postcards of the observatory;**
- **It is difficult to find the transfer bus at the Antofagasta airport;**
- **The Skype video call from the guest house is slow;**
- **Some telephones in the La Silla dormitories do not work.**

Paranal related: Computer replacements in the visiting astronomer offices are budgeted for 2017. Afternoon breakfast indeed has more limited choices available, by design, given the lower demand for afternoon breakfast vs. the preparation for the evening dinner. However, the selection is still very reasonable including cereals and a recently added selection of fresh fruit and juices. The location of the bus at Antofagasta airport is indicated to everyone by the person with the 'ESO' sign waiting at the airport exit for the passengers.

On the La Silla related points: it is hard to comment without knowing the exact dates related to reported problems. However, the one telephone problem that we are aware of, was fixed soon after the End of Mission report was received. The bed sheets are changed for each new visitor, or weekly for long runs. The best way of notifying about these problems is in End of Mission reports, which are all read and any reported issue is followed-up and corrected as fast as possible.

(3) Update on SNPP

1278 programmes that (i) had science data files in the archive and that (ii) were scheduled between P78 and P90 in either A-rank class in Service Mode or in Visitor mode and that (iii) had no refereed publication according to telbib have been identified and their PIs asked to answer a single question why no refereed paper was published – the question had multiple choice answers. After several reminders the survey closed with 968 responses.

About 11% of the users actually published a refereed paper, or had a paper submitted/ accepted in a refereed journal. The largest fraction 23.6% are still working on the data, while the lowest fraction of responses indicated that data/science case lost interest (2.3%) and that ESO data reduction tools were inadequate (2.6%). The survey results are being analysed and will be described in an ESO Messenger article.

(4) Special topic for the 2017 UC meeting

The proposals from the UC included:

- The new Phase 1/Phase 2 online tools
- VLTI status and plans
- Multi-object spectroscopy
- Data Reduction Tools other than Reflex
- La Silla Operations

ESO would like to get more feedback from ALMA users, and also on Visitor vs Service Mode.

Discussion:
It has been agreed both by the UC and ESO representatives that the Phase 1/Phase 2 tools as well as information on La Silla Operations could better be presented as part of the update from ESO at the next UC meeting.
The VLTI as special topic was featured at the 37th UC meeting in 2013. While this could be an interesting topic for a future UC meeting, it was deemed too early to include it in 2017, because GRAVITY is just starting operations and MATISSE will start commissioning in the near future.
The question which data reduction tools are used is an interesting one. ESO is working on improving Reflex workflows and expanding its capabilities. Reflex acceptance by users takes time and thus it might be too early to address this. It would be interesting to get more feedback in particular on Reflex as well as alternate tools in the future.
ESO liked the proposal to review experience from the current MOS instruments and their operations – hence welcomes feedback from FORS2, FLAMES and VIMOS experienced users. This is timely as there are new MOS instruments in construction/planned.
Also more feedback from ALMA users is welcome as we are soon to start Cycle 4 and the user's base is growing.

The final choice of the next year's Special Topic will be agreed in the coming weeks via e-mail. The next UC meeting will take place at ESO Headquarters in Garching on May 9+10, 2017.

(5) Questions/issues from the UC

- Concern about GTO vs normal programs with respect to GTO reserved targets. In case of PRIMA-DDL GTO list for P99 on NACO the total observing time associated to the protected targets was about 3x as large as their expected GTO time for one single period. Is this the case for any other GTO, or if it's just related to NACO?

Feedback from ESO: This was an exception related to the very special NACO case related to PRIMA DDL compensation. The GTO was allowed to specify more targets than they would observe because:
1) observations are done in visitor mode and scheduled in blocks (not in single nights here and there)
2) observations are time critical
3) exact nights could not be fixed at the time target protection list was due for submission
4) the final targets selection to be done when the exact nights are fixed (after the schedule release)

It was reckoned that this exception could be made, since NACO is an old instrument, it did not have any GTO for many years, PRIMA DDL had a complicated history, and the science case requires it.

For the rest of the GTO contracts, ESO confirms that the lists are binding. So far it was only possible to reserve targets for one semester. With the deployment of GTO LPs, the GTO teams can effectively block the targets for longer than one semester. But this was requested by Council, and so there is not much we can discuss about it. If users are concerned with this, they have to talk to their Council representatives.

- ESO's view on oversubscription of time on various instruments. What is the goal to reach? Do we need to be concerned with too high factors? Is there a strategy to mitigate the problem of oversubscribed instruments? For example, can large-programs run over 3 instead of 2 years?

Balancing different telescopes and oversubscription is a concern for ESO. At the last call for proposals the number of proposals went down, but the oversubscription remains high due to many upcoming commissioning activities (AOF, GRAVITY, ESPRESSO).
Regarding the possibility to extend LPs over more than 2 years: effectively this is what happens when the pressure is particularly high. In the past some LPs were running for even a longer time, but this cannot be requested a priori, because of unknown pressure for the future when the LP is submitted. The high scientific merit and potential of the LPs typically makes them high priority for observations.

- Long waiting time (several months) to respond to ALMA help desk tickets.

Such very long response times are very exceptional and could be due to a mistake.
Full statistics on ALMA helpdesk response times over the past 6 months has been prepared by the ARC department following this request for feedback.

Phase 2:
Not counting the standard project tickets, a total of 67 tickets were opened in EU during that period. All but one general queries and change requests handled locally were answered in less than 4 days.

Change requests and proposal-related issues sent to Chile took 5 to 16 days. The delay was caused by a bug in the helpdesk tool. Once the bug was fixed things became pretty quick (with some CRs dealt within in the same day).

Past 6 months:
26 "General queries" tickets filed: 20 were resolved in less than 4 days (another 2 in a week, 2 in two weeks and 2 were left open by mistake).

52 "Data reduction" tickets filed: 60% are closed within 20 days. Many are still Pending because the PI never reacted to the last posting of a staff member. For some it is not clear whether the ticket has been resolved.

38 "Archive and Data Retrieval" tickets filed: 26 (28) were answered within 2 (3) weeks. A few are Pending.

13 "OT" tickets: 11 were dealt with in less than a week.

Fun fact: ALMA Helpdesk ticket number 10000 was opened this week!

- What was the impact of GTO on the execution of A-ranked class programs for P96?

It is unclear why there should be some impact. GTO has reserved nights and is executed in VM. Hence any approved A-ranked SM programme does not compete for the same time/ nights.
Furthermore, the SM programmes are only approved as A-rank if there is available time in the schedule reserved to execute them.
The only effect that prevents their execution could be bad weather or accumulated carryovers from the previous period that could not be taken into the account, because the scheduling for the next period is done before a previous one is ended. In such cases anyway the incomplete A-ranked SM programme is carried over.

- Would it be appropriate to encourage the observation of programmes for which data are needed for PhD projects and/or where the analysis should be done by the PI who is on fixed-term contract? Carrying over these programs may result in the PI having left the current position/ institute.

This is very much a policy issue. Furthermore, it is not always obvious whether a PI has a permanent position or not – ESO does not have this information. It would be dangerous for ESO to take such assumptions as the contract could change between the time of submission of a proposal and the OPC/scheduling. The proposals very rarely have only one person and if PI leaves the current position/institute it is assumed that the team behind is still behind the proposal. The OPC asked few years ago to remove the flag that indicated if a given proposal was part of a PhD project and at which stage of the PhD.
The primary criterion for the evaluation is the science case and its potential outcome. Changing the priority for execution of observations based on PI's career status or use for a PhD project would go against the OPC recommendation and the science policy.