

# Minutes of the Meeting of the UK 8m Users Group, Thursday 24 September 2009

## Agenda:

- [ 1] 11:00 telecon with Colin Vincent (STFC)
- [ 2] apologies / actions from the last meeting
- [ 3] UK 8m Users Group: scope, membership, et cetera
- [ 4] updates from Gemini (Ilona Söchting)
- [ 5] updates from ESO (Jacco van Loon)
- [ 6] lunch (13:00-14:00)
- [ 7] 8m telescopes and the E-ELT (Chris Evans)
- [ 8] instrumentation (Gemini: Suzanne Ramsay)
- [ 9] STFC consultation and strategy
- [10] action items
- [11] any other business

## Present:

Stefano Bagnulo  
Chris Evans  
Roberto Mignani  
Simon Morris  
Jenny Patience  
Graham Smith  
Ilona Söchting (IS)  
Jacco van Loon (Chair; JvL)  
Chris Watson  
Mark Wilkinson

## Via telecon:

Richard McMahon (for agenda item 9)  
Suzanne Ramsay (for agenda items 7 & 8)  
Pat Roche (mostly)  
Aprajita Verma (partly)  
Colin Vincent (for agenda item 1; CV)

## Apologies:

Alfonso Aragon-Salamanca  
Simon Berry (STFC, but Colin Vincent was available)  
Andrew Bunker  
Matt Burleigh  
Dave Clements  
Christopher Conselice  
Paul Crowther  
Tim Gledhill  
Phil Lucas  
Mark Swinbank

## **[1] telecon with Colin Vincent (STFC)**

In preparation for the telecon and awaiting the arrival of some of the UG members, JvL summarised the jest of "A New Vision for New Times", Keith Mason's report featuring in Research Fortnight of 23 September 2009: we can expect tighter Research Council

budgets, rebalancing of disciplines, alignment with the government's focus on economic revival, and a "challenging" next few months though with (unspecified) "opportunities".

It seemed clear that astronomy has to ask itself how it fits within STFC's vision, not "what can STFC do for astronomy". Paul Crowther's very useful record of information emerging on the subject was consulted for Keith Mason's presentation of budget numbers, on 15 September 2009. Clearly, ESA and CERN are big items on STFC's budget, where spend on both of these is expected to increase in future.

A worry was expressed about grants being kept "on hold", also for approved programmes.

### **Telecon**

Colin Vincent summarised the consultation process: all advisory panels had reported, and all their reports were currently being published. The GroundBased Facilities Review (GBFR) would be represented by Robert Kennicutt at the PPAN meeting on 28/29 September 2009, and its report would be published thereafter. PPAN will then draft a recommendation to STFC's Science Board, who meet on 19/20 October 2009. They, in turn, respond back to PPAN and in December's Council meeting decisions will be made. In April 2010, at the start of the new financial year, the government will outline the budgetary constraints, with the expectation of cuts on public spending. Right now, there is a £40M gap in STFC's budget. There would be no further public consultation at this point, however responses to the reports from the advisory panels may still be made to the advisory panels themselves (note that the GBFR panel will cease to exist after Science Board has met).

CV explained that this Summer's consultation exercise was not invalidating PPAN's Programmatic Review of two years ago and that this was in fact PPAN's starting point in the current review process. However, some facilities had not been scored previously and these will now have to be folded into the ranking. All messages from the government are to benefit the UK economy and UK people, however Keith Mason also means to interpret this in a broader sense, e.g., in terms of cultural and training aspects.

On the point of UK's partnership in Gemini, the Gemini Board meeting in the 2<sup>nd</sup> week of November 2009 will be crucial, as this is when partners will have to express their intention to stay in the Gemini partnership beyond 2012 (or not). Although the exact form of the agreement would still be open for discussion, and likely take two years to go through the system. Preliminary impression of the case made by the community for continued UK partnership in Gemini was favourable, in the sense that a strong case had been made for UK access to an 8m-class telescope in the Northern hemisphere, and that the strength of Gemini's instrumentation programme was acknowledged. There has not been much progress on potential selling of UK time to other parties: Brazil might buy a week per year (i.e. a modest amount), Australia has decided against increasing their share; Canada's budget also poses strain on their partnership in Gemini, and the USA will have to await the outcome from the Decadal Review. As for WFMOS, though it was expected to be supported and its abandonment now brings savings to STFC, it was Gemini Board who pulled the plug (not STFC). On a positive note, Gemini's budget appears to be in good control (see also the discussion on future Gemini instrumentation below).

CV explained that STFC intends to focus on its key international subscriptions, which includes ESO. It will anyway not be possible to withdraw from ESO before 2014, and the UK has not yet paid off their joining fee. ESO membership is also expected to come out as one of the highest priority areas for UK astronomy. There are some issues that need to be addressed, such as penalties related to the delays in the delivery of VISTA, but more importantly a commitment to an increase in subscription to realise the E-ELT. The latter will be decided at the December 2010 meeting of ESO Council. Input from the design studies will need to be ready around Spring 2010. CV confirmed that R&D funding through PPAN and PPRP for E-ELT (as well as SKA) was currently on hold. A good indication of available funding should exist by mid-November 2009, with clearance by December. CV emphasised that the funding through the exploitation grants line was not on hold (for 2009 this would

be released through the normal procedures, for 2008 this will need to be asked for – Colin Cunningham for E-ELT and Paul Alexander for SKA).

The telecon ended with a brief question/answer session. IS asked whether the bulk of STFC's savings will fall on a single discipline, e.g., astronomy. CV replied that this was unlikely, that all programmes are hit, and that there are neither any reserved budgets. ESA expenditure is pretty clear, AURORA's budget is pretty unknown but fixed, CERN is somewhat uncertain, and Jon Womersley is visiting ESO's Director General to discuss a subscription freeze. Pat Roche mentioned the lengthy process of instrument selection for the E-ELT, which means a gap between the design studies and subsequent detailed studies. CV explained that a reasonable idea would form about the level of funding that will be requested for E-ELT, but that the exact profile of that funding is still open. He also mentioned current talks between ESO (as well as the SKA consortium) and the European Investment Bank for loans. CV was invited to ask questions, and he asked about the response to the call for proposals for the use of FMOS on Subaru in semester 2010A. The expectation is that roughly 30% of this time will be won by UK astronomers. Note that the peer review is done by the Japanese.

## **[2] apologies / actions from the last meeting**

Apologies had been noted.

The Terms of Reference had been drafted, revised, accepted, and posted on the UK 8m Users Group's website.

The membership of the UK 8m Users Group has been broadened and better balanced, but this remains a continuing effort.

Several UK 8m Users Group members have recently served on STFC's advisory panels (e.g., Chris Conscience on FUAP and Richard McMahon on GBFR).

## **[3] UK 8m Users Group: scope, membership, et cetera**

The membership of the UK 8m Users Group was reviewed: a few members have left the UK or been replaced within their department. New members are Stefano Bagnulo (Armagh), Graham Smith (Birmingham, and Chair of Gemini's NTAC), Mark Swinbank (Durham), Jenny Patience (Exeter), Roberto Mignani (MSSL), Rubina Kotak and Chris Watson (both QUB), and Chris Evans (ROE and ATC).

The scope of the UK 8m Users Group, to protect, facilitate and exploit UK's access to 8m-class telescopes, was upheld. There was little desire to discuss widening its scope to include other ranges of facilities at this point.

JvL proposed to detach Chairing the UK 8m Users Group from membership of the ESO Users Committee. A new Chair of the UK 8m Users Group would be needed by Summer 2010 anyway, but keen volunteers may start right away. JvL does not wish to continue as Chair beyond the nominal term of appointment (which ends in 2010).

## **[4] updates from Gemini**

Ilona Söchtig presented a brief update from the Gemini Observatory. The slides have been made available on the UK 8m Users Group's website.

The oversubscription factor computed on the basis of band 1 and 2 programmes (the ones that have a fair chance to be executed) is about 4. This compares favourably against, e.g., ESO. Per telescope, Gemini receives more proposals than ESO does. But larger programmes are more prominent at ESO than at Gemini. UK astronomers are relatively successful in obtaining data from Gemini. Gemini North is more popular than Gemini South. GMOS, though still popular, has lost somewhat in popularity now that the Laser Guidestar System works well. There has been little UK demand for high-resolution spectroscopy or for T-ReCS. No proposals were received for the Keck and Subaru exchange in semester 2009B (versus two proposals for each in semester 2009A). There is now a reasonable balance between Gemini partners in terms of their time executed on the telescopes

IS explained that band 3 programmes also have a good chance to be executed if the constraints are not tight, as some band 2 programmes require very good conditions that are not often met. Band 3 proposals may simply require a unique Gemini instrument.

The slides present a detailed update on Gemini instrumentation. Flamingos-2 and GNIRS are experiencing some problems; GNIRS is expected to be commissioned in April 2010. The upgraded GMOS-N is expected to be commissioned in August 2010.

## **[5] update from ESO**

JvL presented brief updates from the 33<sup>rd</sup> ESO Users Committee meeting in April 2009, the telecon between the Chairs of the Users Committee and the OPC and ESO Operations and Programmes Office (OPO), which immediately followed the Users Committee meeting, and some issues to be discussed at the upcoming Users Committee telecon (late October).

An ESO Messenger article in Summer 2009 describes the Users Committee. Currently, ESO has grown to 15 member states (the latest addition being Austria). ESO now comprises more telescopes than ever, and La Silla (which hosts non-ESO telescopes too) still remains open. The new Director General has initiated an organisational restructuring, leading to a more logical structure of operations and responsibilities. The Users Committee notices improvement, for instance the minutes of the meeting are now approved and published within about two months, and there is more progress in the area of data access. ESO has some serious challenges ahead, one of which is the ever growing number of proposals received each semester, now well over 1000.

Progress on the User Portal and ESO archive has meant that now data is accessible within half an hour. There has also been a shift in focus, from only quality-control pipelines to also scientifically validated pipelines and reduction recipes. ESO has launched an electronic forum on data reduction. All these developments had been requested by users for some time. On the topic of data reduction tools some more progress will be needed, but this is constrained by limited resources at ESO. This is also why ESO will not support Mac OS.

In terms of VLT operations, ESO has decommissioned one of its FORS workhorses, but moved the polarimetry unit to the remaining FORS instrument. The pressure on FORS, already popular before, has increased. X-Shooter, the first 2<sup>nd</sup>-generation VLT instrument, is already popular while it is being commissioned. The MAD multi-conjugate adaptive optics experiment was very successful and offered more often than initially anticipated, though it will not be followed up by a similar instrument. The E-ELT design currently is based upon 5 optical elements, and 9 foci in which to place instruments. ALMA will operate with 16 dishes first, for which a Call will be issued in 2010. The ALMA Regional Centres are being set up (infrastructure, recruitment).

The Users Committee is trying to find a solution with ESO to (re-)balance the pressure on the different VLT unit telescopes. ESO maintains this is a complicated issue, but it does try. The Users Committee had polled the community on their short- and long-term instrument needs; a condensed version will be presented to ESO's Science and Technology Committee.

One idea which may help relieve some pressure from the VLT is to pool programmes for La Silla so that short programmes could still be executed at La Silla under the new minimal operation scheme if one observer is sent to execute several such programmes. This could also provide opportunities for training.

The special topic of the Users Committee meeting (as proposed by ESO) was Target of Opportunity and Rapid Response Mode. In the latter case, one can now be on target within 5 minutes from triggering such ToO request. This has proven very successful for the PIs of ToO and RRM programmes, but less satisfying for the majority of PIs of programmes that were overridden in this way – they felt they had not been compensated adequately. This is currently being investigated in somewhat more detail by the Users Committee. ESO is also reconsidering some form of “remote observing”, but no concrete plans exist.

The UC (JvL) / OPC (Elias Brinks) / OPO (Gautier Mathys) telecon was meant to update the Users Committee on OPC procedures and to share ideas. From period P84 on, triage has been introduced. This means that all panel members grade all proposals in advance of the panel meeting. Any triaged proposal may be resurrected by any panel member for discussion. No external refereeing will be introduced, even in rare cases where no panel expertise exists (or expert panel members are conflicted on the proposal). Allocatable time is set aside per panel, per telescope, in proportion to the requested amount of time for that panel/telescope combination. The idea of bundled programmes for La Silla was discussed; the Users Committee will poll the community on this at the next opportunity (March 2010). The current 1-hr limit on Observing Blocks is under revision, prompted also by the impracticability of short OBs for execution of surveys with VISTA. It was recognised that GTO programmes often block the best targets, in particular in the case of VLTI where often only a few targets are feasible. Not much can be done about this.

At the upcoming Users Committee telecon, the Users Committee will ask for updates on the pressure on the different unit telescopes, development plans for a wide-field MOS, E-ELT Design Review Science Plan, the status of the software environment for data reduction tools (a.k.a. ESO-Reflex), revision of proposal evaluation procedures (e.g., Michael Merrifield’s community-style refereeing), feedback from PIs of programmes affected by ToO/RRM overrides, and whether VISTA has been accepted (hand-over is on 14 October).

Various UK 8m Users Group members would like to see ESO support Mac OS. Roberto Mignani asked whether ESO would support SciSoft for Mac OS, but Stefano Bagnulo remarked that SciSoft is not supported by ESO. Chris Watson and Jenny Patience pointed out that some departments, e.g., at QUB and Exeter, have moved completely to Mac OS. This issue will be placed at the Users Committee telecon.

## **[7] 8m telescopes and the E-ELT**

Chris Evans gave a brief overview of the E-ELT. Slides are available from Joe Liske’s presentation at a previous week’s UK workshop, from the UK E-ELT website, and from ESO. The E-ELT is the largest of all considered ELTs, with a collecting power twice that of its nearest competitor (the TMT) and more powerful on essentially all fronts. There is a very strong UK involvement in instrument development.

The TMT has now been decided to be constructed on Hawai’i, i.e. US territory. They still keep the rights to Armazonas (a mountain opposite Paranal), but ESO seems to be discussing this site with the Chilean government. A recommendation about the site will be made for the December 2009 Council meeting. Chris Watson mentioned that currently, sites in the Northern Atacama, Argentina and La Palma are being considered.

Jenny Patience and Ilona Söchtig posed the question as to how it was decided that the E-ELT would have a diameter of 42m. What would be gained by going from, say, 30m to 42m, and how much would be gained by making it 100m. Suzanne Ramsay and Chris

Evans explained that the size of 42m had been decided based upon rationale arguments and that a lot of simulations are still being performed at ESO right now. With regard to the future of Paranal, Suzanne Ramsay reassured that there will certainly be continued development at Paranal on, say, a 5-yr timescale.

## **[8] instrumentation**

Suzanne Ramsay had circulated a brief document on future Gemini instrumentation, in advance of a consultation of the UK community the week following the UK 8m Users Group meeting. The observatory and Gemini Science Committee had drawn up a list of proposed instruments, with an attempt to get a fixed budget line for instrument development (about \$30M over 4 yr). Note that this is a fundamentally different process than the "Aspen process". There is a pressing need to replace existing, aging instruments. Although the GSC have their own priorities and timelines, this is merely a starting point and suggestions for alternative instruments are welcome too. There will be a scientific motivation for prioritization first, before deciding who will build it.

The idea was put forward for a special session at the NAM 2010, to provide a forum to discuss future Gemini instrumentation.

## **[9] STFC consultation and strategy**

This discussion concentrated on the GBFR report, which concerns the long term, >2012. Highest priority is given to E-ELT and SKA (equally), next to ESO (including ALMA). This is also endorsed by the FUAP. On the point of Gemini, the community is divided. But clearly, a 25% stake in both Northern and Southern Gemini telescopes is not ranked highly. A recommendation is made for about 40 nights per year on a Northern 8m telescope, leaving unspecified which telescope this could be. To place this in context: currently, UK's share in Gemini gives them 62 nights per year on a Northern 8m telescope. The GBFR report includes a statement on the importance of grants to support exploitation of facilities.

There will be a few weeks for comments on the document, for which the panel e-mail address should be used, but there is no desire for large lobbying campaigns. One useful input could be specifying how many nights on a certain telescope / instrument are needed, to better justify the level at which certain facilities are needed.

A wide-field MOS was identified as high priority – one such instrument already exists on a Northern 8m telescope, viz. FMOS at Subaru. It was suggested that there is a danger in being removed from the Gemini partnership without being offered the possibility to buy into any other Northern 8m-class telescope.

## **[10] action items**

- #1:** IS to propose a forum at NAM 2010 to discuss Gemini instrumentation;
- #2:** JvL to ask the GBFR panel for PPAN's reaction to their report;
- #3:** JvL to contact the NUAP and FUAP panels to remain informed about their meetings.

## **[11] any other business**

There was no other business suggested to be discussed.

The Chair thanked all who attended, and adjourned the meeting at 16:30.