

# Synopsis of the UK Gemini user feedback questionnaire

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The questionnaire was online from July 11 until October 18 2006. It was advertised via the PPARC astrocommunity email list, and the UK Gemini Support Group (UKGSG) mailing list. The questionnaire was linked from the UKGSG web pages.

The total number of respondents was 63. The non-anonymous respondents were from 24 different institutions. Not all respondents answered every question.

The questions are given below in bold font.

### **Section 1: Personal Details and Science Area**

To be filled in by all UK astronomers.

**In which wavelength range(s) do you carry out the majority of your research ? (Check all relevant boxes).**

Wavelength range	Number
radio	10
mm/sub-mm	17
far-infrared	8
near-infrared	15
optical	48
UV	48
X-ray	12
gamma-ray	13

**What are your main science areas ? (Check all relevant boxes).**

Science Area	Number
planetary systems	11
stellar evolution	14
interstellar medium	7
star formation	15
nearby galaxies	14
galaxy formation and evolution	23
galaxy clusters	11
high redshift universe	26
AGN	13
cosmology	20
large scale structure	16
gamma ray bursts	3
other	5

## **Section 2: Telescope Usage**

To be filled in by all UK astronomers

**Which telescopes have you applied to as PI in the last 2 years ? (Check all relevant boxes).**

<b>Telescope</b>	<b>Number</b>
HST	13
Chandra	3
Spitzer	9
Gemini	29
VLT	25
Keck	2
Magellan	0
Subaru	1
UKIRT	12
ESO-nonVLT	12
JCMT	10
WHT	15
INT	7
AAT	10
other	13

**In which of the following years have you been PI on Gemini and/or VLT proposals? (Check all relevant boxes).**

	<b>Gemini &amp; VLT</b>	<b>Gemini only</b>	<b>VLT only</b>	<b>neither</b>
2006	12	11	7	12
2005	15	10	6	11
pre-2005	11	10	10	8

**If you have never applied to Gemini or VLT, please give reasons why.**

There were a variety of reasons given - some users had been co-Is on proposals, others mainly worked at non-optical or near-infrared wavelengths, others used archival data or were theorists.

**If you have been PI on Gemini AND VLT proposals in the period 2005-2006 then did you have:**

More proposals for Gemini	8
More proposals for VLT	11
About the same	7

**If in the last couple of years you have applied to use Gemini more than the VLT, or vice-versa, then:**

- a) What were the main reasons for that ?**
- b) Was this different in the past ?**  
If yes then why ?
- c) Is this likely to change in the future ?**  
If yes then why ?

For both Gemini and VLT availability of certain instruments was given as a reason for more applications to that telescope.

Gemini is used to observe northern hemisphere targets and also by PIs with collaborators in other Gemini partner countries. One user commented that they may use Gemini more in the future when Flamingos-2 becomes available.

Several users commented on the poor efficiency of the GMOS CCDs compared to the FORS CCDs. Some users may stop using Gemini in the future if the mid-ir instrument availability decreases, or if the VLT mid-ir instruments are competitive with Gemini.

Users generally find the application process for VLT easier to manage than that for Gemini. There is a perception that the VLT delivers better data.

**If you have additional comments about Gemini in comparison to other facilities, then please add them here:**

There were a few comments related to the TAC, namely that the TAC members should reflect a wider range of interests, that following the feedback from one round doesn't necessarily bring success in the next round, applying for time to complete a project which was not completed in a previous semester is not always successful, and that the two-stage TAC process appears to make it more likely that proposals do not make it to the telescope.

Positive comments were that the time swaps with other MKO telescopes were a good idea and that Gemini has a faster delivery of observations to the PI than the VLT.

### **Section 3: Current and Future Instruments**

To be filled in by all UK astronomers

**Please state whether you are likely to use the following current and near-future Gemini instruments and facilities in your future research (GMOS, bHROS, NIRI, GNIRS, NIFS, Flamings-2, NICI, Phoenix, Michelle, T-ReCS, Adaptive Optics) (yes, maybe, no, unsure):**

The current and near-future instruments most popular with UK astronomers are GMOS and GNIRS. Many users replied that they might use NIRI, NIFS and adaptive optics in the future. The least likely instruments to be used by the UK community were bHROS, Phoenix, NICI and T-ReCS.

**Gemini is planning the following 2nd generation instruments (GPI, WFMOS, PRVS, GLAO). Please rank how important these would be for your research (very important, quite important, unimportant, unsure):**

Users ranked WFMOS as the most important 2<sup>nd</sup> generation instrument. GLAO was also of interest to many users. PRVS and GPI were of less interest.

**If you have additional comments about future instruments please add them here:**

There were a couple of comments that astronomy seemed to have lots of planned planet finding and galaxy survey projects, on the other hand there were also comments on the importance of survey astronomy in general and WFMOS in particular, though one user was worried that the WFMOS program to measure baryon wiggles might be superseded by other planned surveys.

One user would like a high resolution ( $R \sim 100000$ ) near-infrared spectrograph. Another commented that exploiting GLAO would require a spectroscopic instrument with a wider field than currently exists.

### **Section 4: Gemini archive**

To be filled in by UK astronomers who have used the Gemini archive.

**What did you use the archive for ? (Check all relevant boxes).**

To check what observations already exist (e.g. of a particular field or object)	11
To download PI package	15
To download calibration data	8
Archival research	2
Other use	0

**In the archive how easy was it to find the information you required ? (easy, manageable, difficult)**

**If you have downloaded data from the archive then how easy was this ? (easy, manageable, difficult)**

**Have you published papers containing archive data ? (yes/no)**

Most respondents found it manageable to find and download the information they required from the archive. Only one respondent had published a paper containing archive data.

**If you have any additional comments about archive use please add them here:**

Users commented that sometimes files were missing (e.g. mask definition files) and that it wasn't always obvious which calibration files were required. There was also a comment that the archive emails are rather long. A couple of users found it annoying to have to download the observation logs from the archive, one wanted to see them as text files and the other would like the observatory to send them directly.

#### **Section 5: Phase I - proposal submission to feedback**

To be filled in by all UK astronomers who have prepared a Gemini proposal.

**The following questions apply to your most recent experience of the Gemini Phase I process.**

**Could you find the information online (Gemini web pages) that you needed to prepare your Gemini proposal ? (yes, partly, no)**

**How easy was it to look for this information ? (easy, manageable, difficult)**

**How easy did you find it to use the Phase I tool (PIT) ? (easy, manageable, difficult)**

**How does the Gemini TAC feedback compare to that from other telescopes ? (Generally better, About the same, Generally worse, Don't know)**

Most users could find either all or partial information online, and they found it manageable to look for this information. The majority also found it manageable to use the Phase I Tool. The Gemini TAC feedback was rated similar to that from other telescopes.

**If you have any additional comments about Phase I (including any comparisons with other facilities) please add them here:**

Additional comments about Phase I were generally positive about the standard of the feedback from the Gemini TAC.

A user found it hard to find information on the web pages, and another commented that the information available is incomplete (though it had improved).

### **Section 6: Phase II observation definition**

To be filled in by all UK astronomers who have completed Gemini Phase II

**The following questions apply to your most recent experience of the Gemini Phase II process.**

**Could you find the information online (Gemini web pages and OT libraries), that you needed to prepare your Gemini Phase II ? (yes, partly, no)**

**How easy was it to look for this information ? (easy, manageable, difficult)**

**How easy did you find it to use the Observing tool (OT) ? (easy, manageable, difficult)**

**How does the Gemini Phase II process compare to that for other queue scheduled facilities (e.g. VLT, UKIRT) ? (Better, About the same, Worse)**

Most respondents could find partial information online, and they found it manageable to look for this information. The majority also found it manageable to use the Observing Tool. Respondents found the Gemini Phase II process about the same as or worse than that for other queue scheduled facilities.

**If you have additional comments about Phase II, including comparison with other facilities, please add them here:**

Additional comments included several that the information on the web pages was out of date, and that OT was difficult to use (including in comparison to p2pp). One user commented on the good help with Phase II received from the Gemini helpdesk. Several users felt that Phase II takes more time than it should.

### **Section 7: Data reduction**

To be filled in by UK astronomers who have reduced Gemini data.

**Could you find the information online (web pages and IRAF help), that you needed to reduce the Gemini data?**

**How easy was it to look for this information ?**

**Do you use the Gemini IRAF packages during the data reduction ?  
How do you rate Gemini IRAF ?**

**Which Gemini IRAF packages have you used ? (Check all relevant boxes).**

The majority of respondents found that it was manageable to look for the information and that the information was partly available. Most users sometimes use the Gemini IRAF package and rate it as partly useful. All the packages are used, with the gmos package used the most.

**If you have additional comments about individual Gemini IRAF packages (including comparisons with other data reduction software), please add them here:**

Users commented that the data reduction documentation was out of date and in need of updating and expanding. The scripts are relatively difficult to modify for individual needs.

### **Section 8: Science from Gemini data**

To be filled in by UK Gemini PIs and UK lead scientists (for joint proposals).

**Please estimate:**

**How many of your Gemini proposals have been in the Gemini queue (2006A or earlier, Bands 1-3, or classical only) ?**

**Of these, how many got publishable data ?**

**Of these, how many have been published ?**

Most users have had between 1 and 3 programs in the queue.  
Out of a total of 86 programs in the queue, 52 got publishable data.  
Of these, 44 have been published.

**What improvements would help you to speed up your publication of Gemini data ?**

Several respondents would like more time and/or more postdocs. Clearer documentation was again requested, as were pipelines to aid initial decisions about data reduction. Users again commented that it was hard to get programs completed.

### **Section 9: Support and Communication**

To be filled in by all UK astronomers who have experience of Gemini support.

**Please rate the following areas of support (good, ok, poor, don't know)**  
**Support from UK Gemini Support Group**  
**Support from Gemini observatory**  
**Support via the helpdesk**

The majority of respondents found the support from all three channels good or ok.

**Additional comments related to support and communication. In particular if you answered poor to any of the above then further details would be helpful.**

Someone commented that they liked the flexibility of Gemini to do observations in a slightly unusual way.

One user had had a frustrating time getting information from the UKGSG. Again there were comments that the level of documentation was the real problem.

**If there are any additional comments you would like to make about any aspect of Gemini, then please add them here:**

There were several additional comments about instrumentation – there is a perception that the instruments are not reliable, and a desire for better instrument support. The GMOS long slit spectroscopic set up time for faint targets was found to be too long, and blind offsetting was requested, as well as the ability to make GMOS masks without pre-imaging. Again there was a request for up to date information on the web pages.

## **Questionnaire – Main themes and Actions**

The main themes from the questionnaire have been, and will continue to be, used to provide input to the various Gemini committees (Operations Working Group, Gemini Science Committee and Gemini Board) on which the UK has representatives.

The main themes are listed below, along with brief comments and taken or planned actions.

### **Phase I and II**

#### **Chances of gaining time from the TAC are low**

**Comment:** This could be partly a misconception since in reality the over-subscription rates for Gemini (hours proposed / hours allocated by TAC) are lower than for some of the smaller telescopes to which the UK has access.

However these over-subscription rates are based on the planned UK hours available for a semester, which do not take into account weather losses. The true over-subscription (hours proposed/ hours observed) is therefore higher. Also, not every program gets observed in the queue observing philosophy, and historically completion rates for Gemini programs have not been as good as expected. All these facts could be influencing the users perception of the likelihood of getting Gemini time.

**Action:** DONE The UK oversubscription for the previous semester will be stated in the email that announces the Gemini Call for Proposals, and in the UK Call for Proposals web page

PLANNED Plots of UK over-subscription and other relevant proposal statistics will be made available on a web page

DONE Gemini will provide a web page showing completion rates in each Band

**TAC should be more transparent and reflect a wider range of interests, in particular in the extragalactic members. TAC should rotate more often. TAC sometimes does not allocate time to projects that were partly observed in previous semesters.**

**Action:** PLANNED Link from the UKGSG page to the PPARC page containing information about the TAC members

IN PROGRESS The range of interests of the extragalactic members can be widened as existing members rotate off.

IN PROGRESS Provide an independent contact person for any comments about the TAC process.

**Application process is painful (Phase I and II) and takes too much time. The documentation is out of date and incomplete.**

**Comment:** The OT will likely always take longer to master than p2pp, simply because the philosophy is that the PI uses the same piece of software as is used at the telescope to take the observations, and therefore this contains parameters that the PI does not need to change. However improvements are clearly required.

**Action:** IN PROGRESS A campaign is underway to improve the content and layout of the Gemini web pages. This involves both observatory and NGO staff. The content has already been updated. Trial pages using a new content management system are now being developed.

DONE The timeline for internal releases of software, web pages and Phase-II libraries has been shifted so that there is now more time for NGO and observatory testing before these are released to the public. This should result in better documentation.

IN PROGRESS Observatory and NGO staff are working on the implementation of automatic checking of Phase-II within the OT, and also on ways to improve the Phase-II skeletons that get sent to the user.

### **Operations**

**Gemini is not as efficient as it should be, the instrumentation is not as good as it could be, and the data products could be better.**

**Comment:** This is hard to address, as there are few objective comparisons that can be made to e.g. the VLT. Some of this perception of Gemini could be due to the part of the process that the users see (e.g. proposal preparation and Phase-II) being quite difficult with some missing information and this then colouring the users perception of the part of the process that they don't see.

**Action:** IN PROGRESS Make sure that information about e.g. efficiency is available and correct. Improve the part of the process that the users see, as detailed elsewhere.

### **Gemini overheads are high**

**Comment:** Histograms of acquisition times (which are the ones users are often worried about) are available on a Gemini web page. In general these are similar to the published acquisition times for the VLT. Note that in the past acquisition times and other overheads that PIs were asked to assume when writing the proposal were too high. Also note that programs are charged for the actual acquisition time used.

**Action:** DONE Gemini to provide data on acquisition overheads.

IN PROGRESS Gemini are improving the acquisition procedure by implementing one method for all instruments, and making this as straightforward as possible.

### **Instrumentation**

**Gemini has a restricted choice of instruments and they should be more efficient**

**Comment:** Users working in optical wavelengths commented that the VLT instrument suite was more diverse (i.e. FLAMES) and that the FORS CCDs were more sensitive. However there were comments from near and mid-infrared users that Gemini was a better telescope for their observations.

**Action:** IN PROGRESS Gemini Science Committee should continue to place a high priority on getting better GMOS CCDs.

IN PROGRESS The UKGSG should highlight on the web pages and in departmental talks those areas where Gemini performs well or has unique capabilities.

**The data reduction software and documentation could be improved.**

**Comment:** A dataflow project scientist was hired by the observatory. Work is underway to create new data reduction pipelines. These pipelines will use the same tasks as are available to the user in Gemini IRAF, so the first job is to improve these tasks. Action on improving the documentation has not yet been taken. This will hopefully be discussed at the upcoming Gemini-NGO meeting in June.

**Action:** PLANNED UK committee reps should push the observatory to place a higher priority on improving the data reduction software and documentation.