FOR APPROVAL

SCIENTIFIC TECHNICAL COMMITTEE

68th Meeting

ESO, Garching, April 16 & 17, 2008

DRAFT MINUTES
Draft Minutes of the 68th meeting of the Scientific Technical Committee, held at ESO, Garching, on April 16 & 17, 2008.

The STC convened in the following composition:

**Chair:** L. Tacconi (Germany)

**Members:**
- J. Blommaert (Belgium)
- D. Minniti (Chile)
- M. Prouza (Czech Republic)
- H. Kjeldsen (Denmark)
- L. Haikala (Finland)
- J.-G. Cuby (France)
- T. Herbst (Germany)
- R. Gratton (Italy)
- J. Afonso (Portugal)
- R. Bachiller (Spain)
- G. Olofsson (Sweden)
- W. Benz (Switzerland)
- H. van Langevelde (The Netherlands)

*Only on April 16th*

**Excused:** Y. Mellier (France)

**On behalf of the ESO Executive:**

T. de Zeeuw (Director General)

- R. Albrecht
- P. Ballester
- T. Bierwirth (Day 1)
- G. Chiozzi
- M. Cullum
- S. D’Odorico
- A. Glindehmann
- A. Kaufer
- B. Leibundgut
- G. Mathys
- A. Moorwood
- M. Peron (Day 2)
- G. Raffi (Day 2)
- M. Romaniello
- S. Stanghellini (Day 2)
- D. Suchar
- G.H. Tan
- M. West

**Minutes:** S. Mieske
16 APRIL 2008

1. **Opening of the meeting and adoption of the agenda (STC-439)**
   The meeting was opened by the chair L. Tacconi.

   The chair noted that H. van Langevelde will participate once more in the 68th STC meeting.

   Dates for the next meetings were set:
   
   October 21 and 22, 2008

   Tentative:
   
   April 22 and 23, 2009
   October 21 and 22, 2009

   The agenda was adopted.

2. **Approval of the minutes of the 67th STC Meeting (STC-438)**
   The minutes of the 67th STC meeting were approved.

3. **Discussion of the Fact Sheets**
   **STC-440A-INS-TSD:**

   **AMBER:**
   T. Herbst inquired about the alignment frequency required for AMBER. A. Kaufer replied that the alignment still happened on a daily basis and that more people were trained with AMBER now.

   **HAWK-I:**
   R. Gratton asked whether the switching off of the cryo-cooler during VLTI operations had an impact on the life-time of the detectors for HAWK-I and CRIRES. A. Moorwood replied that if at all the cryomechanics were a larger concern than detectors in this respect. However, the instrument could still be kept cold using its continuous flow liquid nitrogen system when the CCC’s were switched off. He outlined that the instruments were coupled to the telescope essentially through the cooling braids and that this coupling excited the telescope structure and caused the major part of the vibration. He added that efforts to damp the vibrations were going on. Following an inquiry by L. Tacconi he explained that fully working active compensation would be expected to damp the vibrations by one order of magnitude and detailed the other ongoing measures to reduce vibrations.

   T. Herbst inquired whether the vibrations caused by CRIRES and HAWK-I only affected their respective UTs, and asked about the time-scale for re-cooling CRIRES and HAWK-I. A. Kaufer and
A. Moorwood explained that no measurable cross-coupling of the vibrations existed between different UTs. HAWK-I had a rather short time-scale for down-cooling while CRIRES required ~3 days to be operational again and ~5 days to be fully functional. A. Moorwood added that the cryo-cooling switch-off affected the detector temperature, but not so much the instruments themselves.

X-SHOOTER:
A. Moorwood announced that the NIR arm of X-shooter had arrived in Garching on April 15th, 2008. The visual and UV arms had already been under test in Garching for some time.

VLTI:
The discussion was deferred to the special agenda item on VLTI.

AOF:
J.-G. Cuby expressed his concern about the delay of the AOF after the failed PDR pointing out that the AOF will become operational only after MUSE. He inquired how this delay affected MUSE science operations and whether there were options to accelerate the development of the AOF, in the light of its being an ELT pathfinder facility.

A. Moorwood replied that MUSE was approved as a viable concept for many science programmes without AO. He also pointed out that it was clearly ESO’s aim to have the AOF available as soon as possible. He also detailed the action items regarding GALACSI arising from the PDR and added that the GRAAL development had been contracted out to reduce the load on ESO manpower. The biggest concern for future delays is the laser procurement for which a modified call for tender was being issued. An ESO internal development programme regarding lasers was still going on.

R. Gilmozzi added that the requirements on the laser power originated from the fact that the sodium layer density varied by up to a factor 4 during the year. He noted that a possible solution of the problem would be to have the narrow-field mode only when the layer was dense enough to have enough flux, such that requirements on laser power could be relaxed.

A. Moorwood added that the ESO-MUSE science team recommended giving priority to the wide-field mode of MUSE. Following an inquiry by L. Tacconi about relative priorities between narrow-field and wide-field mode he explained that the narrow-field mode required very stable observing conditions and that therefore MUSE would probably be run in narrow-field mode only in a small fraction of the available observing time.

L. Tacconi pointed out that lasers at other astronomical sites experienced problems of similar magnitude to those at the VLT. The DIRECTOR GENERAL noted that it would be useful to have exact numbers regarding scheduled nights, overheads, and losses for LGS facilities at other telescopes. A. Moorwood noted that the VLT LGSF was experiencing serious problems, but that in 2007 it had worked well for extended periods thus giving room for cautious optimism that its performance could be recovered and, hopefully, stabilized. He also noted that the AO part of the AOF had been assigned to the INS division while the laser part had been transferred to TEC.
T. Herbst inquired about the adaptive secondary mirror for the AOF facility and how the facility worked for seeing worse than 1.2". R. Gilmozzi and M. Kissler-Patig detailed how the system worked in poor conditions.

MAD:  
A. Moorwood noted that MAD with its NGS mode worked superbly.

Following inquiries by L. Tacconi and D. Minniti, J. Melnick detailed the time-scale for the additional science verification run in August 2008.

Detectors:  
A. Moorwood announced the positive news that progress on wave-front sensing detectors working in avalanche mode had been made by a UK contractor.

**STC-440B-LSP:**
The discussion of the Fact Sheets was deferred to the discussion after A. Kaufer's presentation.

**STC-440C-SCO:**
T. Herbst asked for a comparison of citation index between open and guaranteed time. B. Leibundgut confirmed that this would be provided.

W. Benz asked for details on the faculty discussion on national funding schemes which were provided by M. Kissler-Patig.

**STC-440D-VISAS:**
J.-G. Cuby inquired whether the low pressure factor on UT3 might be balanced by moving instruments.

A. Moorwood replied that MAD would be installed at UT3 and that X-shooter would be commissioned on UT3. FORS1 would therefore be kept several months longer on UT2 than planned.

L. Tacconi inquired on the situation for P82. G. Mathys explained that for P82, FORS2 remained by far the most demanded instrument and that VISIR and HAWK-I were least demanded for normal programmes although the latter was of particular interest for large programmes.

**STC-440E-DMO:**
L. Tacconi asked how many requests for early data release had been received since enabling this option. F. Comerón replied that over 60 requests had been received in the first two weeks. He also noted that no significant increase in the requests for modifications of service mode observations were
being received as a consequence which had been one of ESO’s main concerns prior to the deployment of this capability.

**STC-440F-SDD and STC-440G-ECF:**
No questions regarding these Fact Sheets were raised.

**STC-440H-ALMA:**
The discussion of the Fact Sheets was deferred to the specific item later.

L. Tacconi as chair of STC thanked ESO for providing the Fact Sheets.

After the DIRECTOR GENERAL’s presentation M. Prouza inquired whether a prolongation of the period for GTC-GTO had been discussed. J. Melnick replied that such a prolongation had not been discussed pointing out that EMIR should be available for the last 12-18 months of the agreed GTO period.

The DIRECTOR GENERAL added that Spain was extremely careful to honour all the commitments of their in-kind contributions.

5. **STC and subcommittee structure**
5a. **SSWG recommendations (T. de Zeeuw)**
5b. **Discussion of subcommittee membership**
H. van Langevelde inquired whether there was/had been a VLT subcommittee. The DIRECTOR GENERAL replied that the creation of such a committee overseeing the entire Paranal infrastructure had been recommended in 2005 by the SSWG, but that this had not been implemented by ESO.

After the DIRECTOR GENERAL’s presentation R. Bachiller inquired on how the subcommittee members were appointed. The DIRECTOR GENERAL detailed the respective procedures.

L. Tacconi inquired whether the STC should also propose external members to subcommittees. The DIRECTOR GENERAL answered that any suggestion was welcome. He suggested that people who reached the end of their term should be replaced but that current subcommittee memberships should be left until end of 2008. L. Tacconi noted that most of the current STC members were close to the end of their 3-year term. The DIRECTOR GENERAL emphasized that it was important to keep some memory in the system and that a re-election for a second term was possible.

R. Gratton asked about the connection between the ESE and the SWG. R. Gilmozzi explained that the SWG was established as a subcommittee of ESE. The DIRECTOR GENERAL pointed out that these
two committees might be merged and that the resulting committee should not be larger than each of the two previous ones.

T. Herbst argued that the SWG might be considered similar to an ad-hoc committee, since it was in charge of the DRM which was a time-limited event. It might be dissolved afterwards. L. Tacconi added that the respective instrument teams were also creating specific science teams which might create confusion. The DIRECTOR GENERAL added that at the transition from design to construction, the structure and tasks of subcommittees should be re-assessed.

W. Benz noted that it might be considered a contradiction that the STC’s task was both “overseeing” and “advising”. The DIRECTOR GENERAL and B. Leibundgut noted that this was a problem of wording in the presentation, not in the corresponding document which gives clear indications of the tasks of the STC.

J. Afonso asked whether people from the STC serving in ESAC should also be nominated for ASAC. The DIRECTOR GENERAL replied that this would not need to be constrained in this way. Experts external to STC might also be nominated.

T. Herbst asked whether the discussion in Committee of Council included the ability of the STC to form ad-hoc subcommittees. This was confirmed by the DIRECTOR GENERAL.

6. La Silla/ Paranal
6a. Report from La Silla/ Paranal (A. Kaufer)

After A. Kaufer’s presentation L. Tacconi noted from her own experience on Paranal that the LGS team was doing a very good job and that incredible effort was going into the instrument. She added that for the LGS to work properly, many things had to function at their limit at the same time and that it would be important for ESO users to get an idea of how difficult the LGSF was to run.

A. Kaufer noted that one needed to distinguish between efforts to operate and to maintain, stressing that the maintenance cycle for the laser was much shorter than for other instruments. He added that there was close collaboration with Garching on this issue and that the time scale of the recovery plan was mid-May 2008. He emphasized that the integration of the laser with SINFONI worked well while for NACO additional commissioning runs were required and scheduled.

A. Moorwood summarized that joint efforts between ESO Garching/ MPE/ Paranal were ongoing to improve the laser situation. He noted that the new VERDI lasers appeared to be functioning stably and stated that R. Tamai was coordinating the efforts to recover the laser functionality. M. Cullum added that the MPE was concerned about the problem and willing to support ESO and that there was close collaboration with Paranal.

A. Kaufer outlined that the first aim was to achieve the level of performance achieved in June 2007 and then to aim further.

T. Herbst asked for an explanation of the meaning of "survival" mode. A. Kaufer replied that this mode meant that dedicated people worked on the laser from morning to evening twilight or even
during the night, instead of the desired maintenance amount of ~1 hour per day. A. Moorwood added that a “push-button” mode could not work for every kind of instrument noting that facilities like VLTI or LGS required more maintenance.

L. Tacconi stressed that instruments were becoming more complex and that it might prove worthwhile to indicate to the user community what realistically could be expected. The DIRECTOR GENERAL noted that this comment would be helpful for the Users committee.

A. Kaufer noted that regarding the LGSF, ESO was in a learning phase. He emphasized that AO systems now were “push-button” systems expressing his optimism that also the LGSF would achieve a better stability at lower maintenance cost in the future.

J. Blommaert inquired what the future amount of ESO time will be for the 2.2m telescope at La Silla. A. Kaufer answered that according to the still ongoing negotiations with the MPIA there would be 3 months of ESO time provided that the contract with Brazil was not extended. The DIRECTOR GENERAL added that it still needed to be negotiated, given the interest of Brazil. G. Mathys added that for P82 the pressure factor on the 2.2m telescope was about 4.

6b. Status of instrument upgrades (A. Moorwood)

After his presentation A. Moorwood asked the STC for advice on prioritizing within the HARPS upgrade plan and between VIMOS and HARPS upgrades.

J. Afonso inquired what ESO’s responsibility was for the HARPS upgrade. A. Moorwood explained that ESO was building the cryostat for HARPS-North and outlined the participation of ESO on HARPS-South.

J. Afonso asked whether the HARPS upgrade would be cheaper than the VIMOS upgrade.

A. Moorwood answered that this would not necessarily be the case, but stated that exact costing figures were not yet available. Following an inquiry from T. Herbst he added that it might be expected that also HARPS-North would like the same upgrades.

R. Gratton asked whether the problem regarding an IR upgrade for GIRAFFE was manpower.

A. Moorwood answered that such an upgrade would be a major project for which the scientific priority would have to be clarified.

R. Gratton asked whether a call for external contribution to a GIRAFFE IR upgrade was planned.

A. Moorwood answered that he would not consider this an upgrade, but rather characterize it as a new instrument concept for which strong scientific arguments and resources would be needed. He also suggested re-discussing the issue of a WFMOS type instrument on the VLT if this could not go to prime but only to a smaller field Nasmyth focus.
H. Kjeldsen noted that some of the planned upgrades for HARPS-South would already be included in HARPS-North. A. Kaufer noted that part of the reason for the HARPS-South upgrade was to not let HARPS-South fall behind HARPS-North.

J. Afonso asked why ESO built a cryostat for HARPS-North although this was not an ESO instrument. A. Moorwood replied that ESO was part of the HARPS-South consortium and that building this cryostat was deemed necessary for the success of the project.

D. Minniti noted that for the VISTA surveys it would be beneficial to have J- and H-band capabilities for GIRAFFE.

6c. **HARPS polarimeter proposal (A. Kaufer) (STC-441[*])**

A. Kaufer explained that the polarimeter proposal still was a concept which would require significant support. He added that the STC was asked for an evaluation of the science case. If the science case was approved, the technical side would be reviewed. This upgrade would be a La Silla Observatory project and constraints on resources needed to be taken into account. He expanded on technical details of the context.

T. Herbst expressed his confusion that although the proposal was considered only a concept, it foresaw installation of the polarimeter capability in a short time-scale. He asked what would happen to the proposal, if the STC rejected its scientific validity. A. Kaufer replied that he did not consider the schedule in the proposal to be very realistic.

A. Moorwood added that ESO had asked for a letter of support from the HARPS team because there might be a concern that adding a new component to HARPS would decrease its stability. A letter in support of the upgrade had been received. He also stressed that if the STC disapproved the scientific validity of the proposal, it would not be accepted. A. Moorwood noted that re-insertion of the Iodine cell would be impossible if a polarimeter capability was added.

G. Olofsson stressed the scientific value of a polarimeter upgrade in the context of monitoring magnetic properties, provided that such an upgrade was possible without losing stability.

R. Gratton asked whether the polarimeter mode would be available to the ESO community.

A. Moorwood replied that the proposers were happy to make the instrument available to the community. He noted that this would also require significant effort from ESO’s side and added that GTO issues had not been discussed yet.

J. Afonso inquired whether the current proposal for polarimeter conflicted with other envisaged future upgrades. A. Kaufer replied that the envisaged improved guiding system might require the same space as the polarimeter.

A. Moorwood re-iterated that the STC was asked to advise on priorities of the HARPS upgrades and of HARPS vs. VIMOS upgrades, given that both upgrades cannot be followed through at the same time. J.-G. Cuby added that the push for large scale surveys pointed to an upgrade of VIMOS.
J.-G. Cuby also noted that instruments similar to HARPS polarimeter had been extremely successful and that such an upgrade would be highly appreciated by the community.

A. Moorwood added that a call for an ultra-stable spectrograph for the VLT had been issued and that he considered the case for a WFMOS instrument the most difficult issue of next generation instruments.

7. **VLT/I**

7a. **Status of PRIMA (F. Delplancke)**

After F. Delplancke’s presentation L. Tacconi asked whether the schedule for PRIMA integration was too ambitious. F. Delplancke replied that the time-scale indeed was ambitious but that fall-back options existed. She emphasized that it was important to meet the schedule in order to do the full testing on Paranal in August 2008. Following an inquiry from T. Herbst she added that the testing would occur exclusively in the lab and that the ATs were not disturbed by CRIRES.

7b. **Second generation VLT/I instrumentation (A. Moorwood/ A. Richichi)**

After A. Richichi’s presentation L. Tacconi noted that the current report was more optimistic than the previous report.

J. Melnick noted that fringe-tracking of 3 beams with the FSU was not yet possible, it required FINITO. A. Richichi added that PRIMA will be able to combine only 2 beams. He mentioned that an internal evaluation had been carried out and had estimated about 1-1.5 years and a few 100k€ would be needed to allow combining more beams for AMBER.

J.-G. Cuby inquired whether lobbying for more ATs had been considered. A. Moorwood noted that the VSI consortium was positive towards this possibility, if funding was available. The DIRECTOR GENERAL noted that ESO would only be able to make a small financial contribution in cash for buying new ATs, stressing that support from the community would be essential to obtain additional ATs.

7c. **VLTI subpanel report (H. Kjeldsen)**

After H. Kjeldsen’s report W. Benz stressed that it was important to have interferometer people on STC subcommittees on optical/ IR infrastructure. The DIRECTOR GENERAL noted that this was also important vice versa by having non-interferometer people on the VLTI subcommittee. He also noted that the LGS was an important current commitment requiring sufficient expertise. H. Kjeldsen concurred that it was a positive thing to have aspects on other instruments included in specific subcommittees.

W. Benz noted that 7-9 people in subcommittees might be too little to cover the expertise needed, given the complexities of facilities like VLTI or LGS.
L. Tacconi stated that the STC as such might fill gaps of expertise in the subcommittees. T. Herbst noted that it was also important to have sufficient expertise in the subpanels in order to pre-digest the specific information.

The DIRECTOR GENERAL remarked that the scheduling of subcommittee meetings might have to be re-thought, in the light of recent non-availability of experts for some of those meetings. J. Afonso detailed the problems regarding low level of attendance in a recent ESAC meeting, partially due to the fact that it was an extraordinary meeting.

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A new agenda item was added after item 10:

11. Waiver for 6 month limitation of ToO Large Programmes (R. Gratton)

8. E-ELT
8a. Report from the Programme Office (R. Gilmozzi)

After R. Gilmozzi’s presentation W. Benz inquired whether 1 year of site-monitoring data was sufficient for a thorough characterization. R. Gilmozzi agreed that one year was not sufficient and that also pre-existing measurements would be correlated with new measurements. At the end of the process, 2-3 years of data would be available.

W. Benz inquired whether models existed that predicted long-term evolution of climatic conditions such as humidity. R. Gilmozzi replied that this was not the case. He added that the long-term seeing trend on Paranal showed that this was dominated by the ground-layer and that the image quality had not changed between 1998 and 2008. Following an inquiry from G. Olofsson he added that it was possible to separate ground-layer seeing from high-layer seeing.

The DIRECTOR GENERAL asked whether corresponding data for the TMT sites were available.

R. Gilmozzi replied that in time this would be made available and that for Cerro Armazones there was an arrangement in place to exchange data with Paranal.

W. Benz asked whether the 1st half of 2010 was a realistic date for start of construction, given that the site was not yet known. R. Gilmozzi answered that negotiations with possible host countries including Chile were starting now and that political consultations happened in parallel with site characterization activities. He noted that ESO would not approach potential host countries like the TMT consortium which asked the countries to compete for potential sites.

T. Herbst inquired how serious the possibility to use the Las Campanas site for the E-ELT was.
R. Gilmozzi and the DIRECTOR GENERAL replied that the situation was not clear, given also the competition among the two American projects.

J.-G. Cuby inquired how exactly the cross-correlation of site characteristics back in time was done.

R. Gilmozzi replied that MASS/ DIMM seeing measurements were correlated with FORS image quality data. The cross-correlation would not be necessarily done with satellite data. J.-G. Cuby inquired whether Cerro Armazones would become available, if the TMT went to Hawaii. The DIRECTOR GENERAL confirmed that this would probably be the case.

8b. Report from the Instrumentation Office (S. D’Odorico)

After S. D’Odorico’s presentation L. Tacconi asked whether there was collaboration between the SWG and the instrument consortia. S. D’Odorico confirmed that the SWG had been regularly updated on the progress of the instrument studies. It had been agreed that the SWG could send one or more members to the review meeting of the instrument, at the end of the first phase. In the case of the upcoming proposals for new concept studies, the SWG would be consulted if there was a problem to establish scientific priorities among competing proposals.

M. Kissler-Patig added that in May 2008 a workshop on the DRM will take place to which the consortia will be invited. This would give the opportunity to have a view of what is done by the different groups and to avoid duplication.

8c. Report from the ESE subpanel (T. Herbst)

Following T. Herbst’s report R. Gilmozzi noted that the 2M€ contingency for Phase B was untouched yet and that the current estimates for total cost of the E-ELT were within the contingency range specified before Phase B.

T. Herbst and R. Gratton noted that part of the concerns raised in the report also referred to time contingency.

J. Melnick summarized the various methods/ instruments to measure the ground-layer atmospheric turbulence.

T. Herbst noted that it had been discussed in the subcommittee meeting to put a DIMM on top of the VST in order to clarify the seeing situation on Paranal. He stressed that this would imply only a modest investment.

9. ALMA

9a. Project Status Report (H. Rykaczewski)

After H. Rykaczewski’s report R. Bachiller stated that he was positively impressed by the progress made for the front-ends. He stated that worries remained regarding Antenna supply asking for some more details on whether the European Antenna supply was a bottle-neck.
H. Rykaczewski confirmed that the European Antennas were a concern. He explained that the delay was due to a combination of various effects. The consortium had asked for three months more testing in Europe where experts were more readily available than in Chile. The consortium were optimistic to catch up with the schedule for the next antennas. H. Rykaczewski noted that Antenna No. 6 was the most critical one for the vendor because the delivery date of this antenna would determine whether or not penalties apply.

T. Herbst inquired whether degradation of sub-components was a concern. S. Stanghellini stated that for Apex degradation of the sub-reflector occurred, but this happened because it was not coated. ALMA sub-reflectors were coated such that degradation issues should not be too serious.

R. Bachiller asked for more details on the power supply. H. Rykaczewski stated that the maximum expected load would be 8 MW. The plan was to obtain this through connection to a Chilean power supplier. If the hook up failed, the power would have to be supplied by Diesel generators which would cost of the order of 2M€ per year.

J.-G. Cuby inquired whether APEX was shut down entirely for 2 months during the Bolivian winter. A. Kaufer confirmed that this happened for APEX each year. H. Rykaczewski noted that ALMA which could operate in interferometric mode and at lower frequencies than APEX would not be affected as much by the Bolivian winter and it was not planned to stop operations during that period of the year.

R. Bachiller inquired whether the contract for integration centres had been signed. This was confirmed by H. Rykaczewski.

9b. **ALMA Operations (P. Andreani)**

After P. Andreani’s presentation R. Bachiller stated that Spain’s involvement in the ARCs would be through IRAM. He noted that a formalized commitment of the ARC nodes regarding dedicated personnel was necessary.

P. Andreani explained that in this context the signature of the MoU was the first important step. The MoU would define deliverables and responsibilities.

L. Tacconi remarked that IRAM was the only institution which was already providing support. It had the infrastructure in place and the expertise needed. In that context the fact that formally dedicated personnel had not been defined can be considered a detail.

R. Bachiller stated that the personnel issue needed to be discussed in the IRAM Council.

W. Benz inquired on the quality of applicants for the ALMA ARC vacancies. P. Andreani replied that 17 applications had been received for 2 ARC positions and that the overall quality of applicants was very good, also regarding applicants for positions in Chile.
9c. Report from ESAC (J. Afonso)

After J. Afonso’s report the DIRECTOR GENERAL pointed out that the suggestion to build up CASA expertise in Europe had been taken up by ESO. G. Raffi added that ESO was currently hiring two staff who would be dedicated to contribute to the CASA development in Europe.

A. Moorwood asked for some more details on ARTEMIS, given that it was supposed to compete with SCUBA-2 which was a physically very large instrument. J. Afonso replied that the different technology of ARTEMIS was possibly capable of competing with SCUBA-2 and that it was much cheaper than SCUBA-2.

Following inquiries from A. Moorwood, J. Blommaert and R. Bachiller, J. Afonso detailed some more aspects of the ARTEMIS proposal and the ESAC conclusions on it.

L. Tacconi asked about the role of the STC regarding ARTEMIS. J. Afonso answered that the ESAC and as such STC was asked to consider the scientific value of ARTEMIS. If it was judged worthwhile, there would be the possibility to include it in the APEX cabin.

A. Kaufer detailed the available options to bring visitor instruments to ESO telescopes. He noted that the consortium would build ARTEMIS in any case and stated that the STC was asked to judge on the scientific value of ARTEMIS.

L. Haikala explained that the difference in performance between ARTEMIS and SABOCA could be compared with the difference between SEST single beam and SIMBA noting that it will be able to compete with SCUBA-2. G. Olofsson added that the possibility to observe at 200 micron made it a very interesting instrument.

10. ESO Fellowship Programme (B. Leibundgut)

After B. Leibundgut’s presentation W. Benz asked how many of all former fellows now worked at ESO. B. Leibundgut replied that 16% of all former fellows now worked at ESO.

L. Tacconi noted that it was a good thing to have fellows integrated in the observatory work. They became better and more complete scientists in this way.

B. Leibundgut stated that fellows understood that operational work could serve them in their future career. M. Kissler-Patig noted that nonetheless the duties were still the major reason for people rejecting fellowship offers. B. Leibundgut added that the main questions in inquiries about the fellowship programme referred to the nature of the duties.

W. Benz inquired whether fellows in Chile carried out more duties than fellows in Garching.

B. Leibundgut replied that the setup in Chile was different, given that fellows there were directly involved in operations. It was tried to compensate this by a fourth year without duties.
The DIRECTOR GENERAL noted that a list of former fellows should be made public. M. Kissler-Patig and B. Leibundgut replied that this was already partially available and would be worked on.

11. **Waiver for 6 month limitation of ToO Large Programmes (R. Gratton)**

R. Gratton presented a request to remove the restriction that ToO programmes only apply for 1 single semester. He asked for the possibility to apply for ToO Large Programmes lasting for 4 semesters, provided that the targets were extremely rare events.

This request was discussed by the STC, G. Mathys, B. Leibundgut and the DIRECTOR GENERAL. A general comment was that such a request should be channelled to the OPC, given that the STC did not have the necessary insight and responsibility for this. The DIRECTOR GENERAL stated that it should be made sure that the OPC treated such proposals in the right way.

W. Benz stated that generally it was difficult to draw the line between what was the interest of the community and the interest of special groups. T. Herbst noted that it was unclear why 1 semester proposals would penalise the corresponding group. G. Mathys remarked that the criteria for recommendation by the OPC of implementation of a Large Programme were considerably stricter than for Normal Programmes. He added that allowing ToO Large Programmes might in turn disadvantage other type of proposals.

B. Leibundgut gave the example of HST SN proposals which are re-submitted every cycle. He noted that if the science case was good, time would be granted.