

**Notes on ESO:**

Council met on Dec 4/5 in Garching.

**Ratification of Brazil** : there does not seem to have been much progress in 2012. Minister Raup has confirmed Brazil's intention to join and it is hoped that the bill will go to Parliament soon....

A number of other potential member states have been in touch with ESO, but none on the scale of Brazil.

**ELT Approval:** Following Provisional approval of the E-ELT as a project in June 2012, the project was approved officially with 2/3 of the member states voting in favour. Of the countries that voted in favour 'ad-referendum' in June, Belgium, Finland and Italy confirmed their positive votes, and France changed its abstention to a positive vote. The UK was given an extension to March 2013 to confirm its ad-referendum vote. Construction will not begin until 90% of the funding is secured, but this change in status is important as it allows countries to start paying contributions to the E-ELT project. I hope the UK will confirm its vote at the March Council meeting.

With project approval, the tender process will get away – with initial calls in April 2013.

**ALMA:** remains on track for completion of construction (except the Residencia) by the end of 2013, and is expected to come in very close to budget. The official inauguration will take place on March 13. The new Director, Pierre Cox, takes over on April 1. The penultimate Front End has been shipped from RAL, so this work is expected to finish in February. Production of the Band 5 receivers has been approved (led by NOVA) and a pre-production prototype for Band 1 will be produced by East Asia. A proposal for VLBI capability, aimed at the SgrA\*, was welcomed but more details are needed before approval.

Cycle 0 has now finished, with an anticipated completion rate >75% for approved programmes, and significant progress in most of the remainder. Cycle 1 is about to get underway with the 32 antennas offered expected to be available (more than 50 antennas are now at the high site). ESO applications were again the most oversubscribed.

**LaSilla- Paranal :**

KMOS is being commissioned, which is going spectacularly.  
Sphere has continuing issues with high-order DM. Initial commissioning with current DM. PAE this quarter  
MUSE delayed due to optics problems. PAE in September 2013  
AOF in integration and test.  
Fiber Laser has been shipped to Chile (PARSEC replacement)  
ESPRESSO approaching FDR : Laser Comb AofO to be released.  
ERIS has been approved – AO imager/spectrometer for UT4 in 2017

VISIR upgrade went well, except the performance of Aquarius Detector.  $1/f$  noise performance of the detector is too high, the conversion gain is a function of flux and is different for the two VISIR detectors which came from different batches. Also fringing etc. Standard measurements did not reveal this in the lab, where the background was very different. Read-rest operation did not work with MIRI detectors and so ATC adopted up-the-ramp sampling. A 3rd detector may be OK for the spectrograph channel, and a faster (1-2Hz) chop may help tackle the  $1/f$  noise.

New baseline for instrument upgrades will be to return the instrument to Garching unless a good reason not to

VLT work has been reorganised into 5 sub projects. Real issues with PRIMAThroughput – possible due to polarization. Metrology retro-reflector has been installed at M2 to close the loop over the whole optics train, but return signal is very weak, with intensity dependent on the derotator and azimuth positions because of polarisation issues. Now have a model that reproduces the observed performance. The solution will be more difficult than originally planned, and may need a wave plate to be installed synchronised to the derotator. Will continue in experimental mode to understand the PRIMA metrology and do not yet know the resources and timescales of a solution. Will then need a formal review to consider technical, financial and programmatic implications and particularly for MATISSE and GRAVITY. Use of PINOIER may be extended.

GRAVITY is in MAIT, with a 6-month slip  
MATISSE has passed FDR

Need to ensure any lessons are learnt for E-ELT

### **OPC Report**

The current period showed a decrease of 10% in the total number of proposals submitted compared to previous years. 5 out of 20 Large Programmes were approved. (22UK nights withdrawn as VISTA agreement)

3.6-m and NTT remain in very high demand

### **Finance:**

ESO's budget for 2013 was not increased to compensate for inflation. This will impact the programme, but Council asked ESO management to minimize the impact on the science programme. Austerity measures in place and some reduction in staffing

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