

out irreparable long-term damage to ESO and the VLT. Containment of personnel costs, in particular, can only be sustained till the point where salaries are no longer competitive and result in loss of experienced staff and demotivation of the remainder.

Returning now to a happier subject, the ratification and approval by the Chilean Government and by ESO of the Interpretative, Supplementary and Modifying Agreement to the Convention of 1963 has important consequences for the scientific communities in ESO Member States and Chile.

It gives ESO a certainty of stability for our future activities in Chile and the operations of the VLT observatory for many decades. At the same time, Chilean astronomers will have direct access to this new and powerful tool for astronomical observations by means of guaranteed observing time.

Now that the Agreement is coming into force, it is important that Chilean and European Scientific Communities at large are informed of some details of the Agreement regarding observing time:

To this purpose, some items of Article 11 of the Agreement, which are directly relevant to the subject, are reproduced in full below.

Article Eleven

1. *The Chilean Scientist shall continue to have access to the instruments of observing of ESO on the basis of competitive projects, on equal conditions with the astronomers of the member countries of ESO. There are no limits to the percentage of time which can be acquired in this way.*

2. *In recognition of the role of Chile as the host country and to assist in the development of astronomy in Chile, ESO is prepared to make observing*

time available to scientifically meritorious Chilean proposals, independent of the competitive pressure, up to the fractions of observing time specified in this Article.

3. *Consequently, Chilean scientists who present meritorious projects, shall have the right to obtain additional time up to 10% of observing time in each and every telescope installed or to be installed by ESO, without prejudice to the statements in paragraphs four and five of the present Article.*

4. *Chilean scientists who present meritorious projects shall have the right to obtain up to 10% of the observing time of the VLT/VLTI telescopes (defined in Article Two), it being understood that at least one half of this 10% shall be dedicated to projects of Chilean astronomers in co-operation with astronomers of ESO member countries. This percentage shall be acquired over a period of five years starting from the beginning of the functioning of the first telescope as agreed upon between the parties through an exchange of Notes. In case of an increase in the request for observing time by Chilean scientists for projects of special scientific merit, the Director General of ESO may assign additional observing time for these projects, within the fraction of observing time devoted to co-operative projects.*

5. *The percentage of time indicated for the telescopes presently functioning, 10%, shall be established on the basis of total time available to ESO and in accordance with the distribution by the Observing Programmes Committee of ESO (OPC). In the case of telescopes presently in operation, for which a Member State of ESO contributed financially, in total or in part, in addition to its ordinary contribution, the Organisation shall make its best efforts to ensure that a similar percentage to that*

mentioned in the second paragraph shall be granted.

6. *Any proposal whose principal investigator is a Chilean scientist or is a foreign scientist affiliated to a Chilean institution included in a list to be approved by the Joint Committee mentioned in Article Nine*, shall be considered as a Chilean proposal.*

7. *The proposals for observation submitted by Chilean scientists, which respond to the regular calls for competition, shall be qualified in accordance with ANNEX A** for all of the telescopes installed or to be installed.*

8. *Those proposals from Chilean scientists which have obtained a classification higher than 3.0, within the percentage specified in this Article, shall be accepted. The Chilean scientists whose proposals are accepted shall be subject to the same rules and shall have the same facilities and obligations as the scientists of ESO member States.*

9. *It is understood that the limiting value specified as 3.0 is a part of the current scheme of evaluation. In case there are changes in the scale of evaluation, the corresponding limiting value on the new scale shall be equivalent to the one specified here, which shall be determined by the parties.*

10. *Meritorious projects shall be selected by the ESO Observing Programmes Committee (OPC) in which a Chilean scientist shall be incorporated as a full member. Similarly, a Chilean scientist shall be incorporated as a full member in the Scientific Technical Committee of ESO (STC) and a Chilean scientist as a full member in the Users' Committee (UC).*

* This Joint Committee will consist of three representatives of the Chilean Government and three representatives of ESO.

** ANNEX A provides the evaluation system for the applications.

TELESCOPES AND INSTRUMENTATION

VLT Status Report

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The VLT Programme is now in an advanced stage. Nearly all major contracts for the Unit Telescopes have been concluded and the remaining contracts will be signed in the next few months. Some of the first parts for UT #1 have already been delivered and others are in or nearing their test periods prior to delivery to ESO. Activities in Europe and on Paranal are reaching the final stages, in particular for the first Unit Telescope (UT #1).

The first enclosure on Paranal is almost completed and the acceptance testing is planned for January 1997. The remaining enclosures are in an advanced erection phase, see Figure 1 (cover page) and Figure 2. In parallel, SKANSKA completed the final adjustment and casting of the embedded beams and rings within the specified tolerances, and in a very smooth operation the first rotating platform was installed in the coudé station of UT #1.

The erection of the main structure of UT #1 on Paranal has started (see Fig. 3). The azimuth tracks have already been aligned; the cable wrap, the oil pumping station and the oil recovery system have been installed. Even though some manufacturing problems by subcontractors have caused delays in the delivery of the base frame, AES is confident that they will be able to keep to the contractual delivery date.



Figure 1 was obtained mid-October 1996 and shows the four enclosures at different stages of integration. No. 1 is complete, no. 2 is in the final stages of the implementation of the aluminium cladding, no. 3 is ready for enclosure cladding and no. 4 is in the final stages of steel erection which was completed the following day with the positioning of the roof using the 350-ton crane situated next to the dome.

Back in Europe, all four primary mirror blanks have been delivered by SCHOTT and are of excellent quality. Two completed mirrors are being stored by REOSC

and the third one is in the process of being polished according to schedule.

Installation and testing are the key activities in Europe. The integration of the

main structure and the acceptance testing in Milan, planned for November 1996, are nearing completion (Figs. 4 and 5). ESO computers and control electronics have already been installed and are ready for the ESO tests in Milan.

The first M1 Cell – M3 Tower unit is now being integrated for the European acceptance testing, which is planned for early January 1997. The M2 Unit contract also achieved a major milestone. The first Beryllium blank was completed and nickel-plated. It has been accepted by the subcontractor and has been transported to Europe. The Electromechanical Unit is also in an advanced stage and is now being integrated for the acceptance and dynamic tests with a dummy mirror starting January 1997.

The first Nasmyth adapter/rotator was completed and delivered to ESO for extensive tests on hardware and software (see Fig. 6). The first M3 mirror cell is nearing completion and is planned to be delivered to ESO in November 1996.

Work is also progressing in all other areas, well in line with the VLT integration schedule, and ESO will enter the integration period of the UT #1 in the middle of next year.

An important highlight of the last months was the development in the VLTI Programme. The VLTI “New Plan” was submitted to STC and Council in



Figure 2 shows details of enclosure no. 2 and in the background enclosure no. 1. Clearly visible are the openings foreseen to optimise the ventilation during the night to avoid any contribution from dome seeing.



Figure 3 was taken inside enclosure no. 1 and shows the 2 azimuth tracks of the first telescope structure already in place and going for the final adjustment. The inner part shows the cable wrap in place and the beginning of the installation of the necessary connections. At the bottom of the hole the coudé rotating platform has already been installed.



Figure 5 shows a different view of the telescope structure of the first telescope, and clearly visible is the dummy simulating the mass and other characteristics of the mirror cell and associated mirror. This piece in steel and concrete was extensively used to test the procedure of mounting and dismounting the mirror cell.



Figure 4 was taken in Milan in October 1996 during the final integration of the telescope structure. The telescope is fully equipped with all subsystems and associated electronics.



Figure 6 shows the first of the 12 adapter/rotators in the Garching assembly hall during integration and testing. The Beryllium arm that will explore the focal plane has not yet been integrated. On the left-hand side, one can see the electronic test rack used to collect all parameters for final analysis and performance of the machine.

May and June 1996 and its implementation was decided in the form of an ESO-MPI-INSU agreement. The updated agreement has already been sent to INSU and MPG, and their signatures are expected in the next few weeks. The first stage of this plan will provide the coherent combination of two Unit

Telescopes in the thermal infrared by the year 2000, and of two Auxiliary Telescopes in the near-infrared by the year 2002.

To conclude, excellent technical progress continues to be made, and cost and technical performance are satisfactory. Significant management effort is

being continuously applied to maintain the schedule, in particular with regard to the subsystems which have remained on the critical path.

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