THE MESSENGER

EL MENSAJERO

No. 77 – September 1994

The Encounter of Comet Shoemaker-Levy 9 with Jupiter

An extraordinary event took place in July 1994: the collision of a comet with Jupiter (Comet Shoemaker-Levy 9). There is every indication that this is an extremely rare event. For this reason the planetary astronomers in the world organized and carried out extensive observations of the encounter. The data obtained are truly unique.

This issue of the Messenger presents first results obtained at ESO La Silla (see pages 28–49).

Latest Developments Around Paranal

R. GIACCONI, Director General of ESO

There have been a number of important developments around the Paranal issue since my last report in the ESO Messenger (June 1994). In particular, Council decided to continue the construction of the VLT Observatory at Paranal, while at the same time requesting the ESO Management to pursue the ongoing studies of alternative solutions. During the past months, progress has also been achieved towards the conclusion of negotiations of a Supplementary Treaty between Chile and ESO.

The Council Decisions

The ESO Council met in extraordinary session at the ESO Headquarters on August 8 and 9, 1994. The main agenda items were concerned with the recent developments around ESO's relations with the Republic of Chile, as well as the status of the VLT project at Paranal.

This meeting followed continued consultations at different levels within the ESO member states and included careful consideration of all aspects of the current situation. Council took note of recent positive developments which have occurred since the May 1994 round of discussions with the Chilean authorities in Santiago. The confirmation of ESO's immunities as an International Organization in Chile, contained in a number of important statements and documents, is considered a significant step by the Chilean Government to insure to ESO the unhindered erection and later operation of the VLT on Paranal.

Under these circumstances and in order to maintain progress on the VLT project, the ESO Council authorized the ESO Management to continue the on-site work at Paranal.

Council also took note of the desire expressed by the Chilean Government to complete negotiation of a Supplementary and Amending Agreement, and it was decided that a Council Delegation shall conclude as soon as possible the negotiation of this Agreement. Council noted that the Chilean Delegation has accepted ESO's invitation to hold the final round of negotiations in Europe and proposed that it shall be held in the early autumn 1994, i.e. well before the next Council meeting on November 30–December 1, 1994.

Nonetheless, Council also expressed its preoccupation with regard to remain-

ing ambiguities contained in some official statements according to which the formal recognition of ESO's status on Paranal would depend on the conclusion of the above-mentioned Agreement. At the May 1994 meetings in Santiago, understanding had been reached that this Agreement will merely confirm the already existing legal situation. The main objective is to expand the cooperation between Chile and ESO by granting ensured access for Chilean astronomers to ESO's facilities and incorporate elements of Chilean labour legislation into the ESO internal staff regulations.

In view of these circumstances, and pending the successful conclusion of these negotiations, Council therefore instructed the ESO Management to continue exploring alternative sites for the VLT.

In a final statement, the ESO Council again expressed its hope that the scientific co-operation between Europe and Chile in the field of astronomy which began in 1963 will continue to develop and expand well into the next century to the mutual benefit of science in both communities.

The Continuation of the VLT Project at Paranal

In practical terms, the above decision by Council implies that ESO is now taking the steps necessary to move from Europe to Paranal the main mechanical parts of the rotating dome (total weight around 500 tons) for the first VLT 8.2-metre unit telescope. The transport will begin in late September and it is expected that the ship will unload its precious cargo in Antofagasta sometime in November. The assembly at Paranal will begin soon thereafter, once the concrete base, now under construction, is ready. This will enable the VLT project to stay within the planned timeline for completion just after the year 2000.

A Visit to Chile

In order to assess the current situation in Chile, I paid a visit to this country in the period August 23–26, 1994, together with the Head of the VLT project, Prof. M. Tarenghi. On August 24 we visited the Paranal site together with the Antofagasta authorities, including members of the Regional Government and also the Members of the Chilean Parliament from the Second Region, Senator A. Alessandri, Messrs. R. Gajardo and F. Valenzuela. The Mayor of Taltal also joined the visitors on the mountain top.

Both the site and the foundation layout were very impressive, and for the first time it was possible to get a feeling of the full magnitude of this enormous project. There were many positive comments by the visitors and this was an excellent opportunity for ESO to show its VLT project and future ambitions to the local authorities.

Later that day, the ESO Management made a thorough presentation of the VLT project in the presence of more than 150 persons at Hotel Antofagasta in that city. Among those present were the Members of the Parliament, various authorities from the Antofagasta and Taltal municipalities and also many local businessmen. This event confirmed the positive mood and the profound support which ESO enjoys in the Second Region. This was also obvious during a visit which Daniel Hofstadt and I paid to the Intendente (Governor) the next day.

Travelling on to Santiago the next day, our delegation met with the Ambassadors of the ESO member states and we gave a report on the latest developments at the ESO Council, as well as the status of the relations with the Chilean authorities. The same day we attended a meeting at the Ministry of Foreign Affairs in Santiago during which preparations were made for the final negotiations of the Supplementary Agreement.

Later that day we met with Mr. J.M. Insulza, Under-Secretary of Foreign Affairs, for a further exchange of views on all related matters. We were pleased to feel again the very positive attitude of the Under-Secretary personally and also the sincere desire of the Chilean Government to see the VLT installed in Chile. Mr. Insulza is going to visit Europe later this year, and we took the opportunity to extend a warm invitation to him to visit the ESO Headquarters in Garching during his stay in Germany.

Finally, as many of the administrative and scientific activities have now been transferred from La Silla to Santiago, we decided to inaugurate the Vitacura offices on this occasion. The brief ceremony was attended by many Chilean astronomers and related scientific authorities. I took this opportunity to express again the importance of clear support for ESO's case from the scientific community in Chile.

TELESCOPES AND INSTRUMENTATION

VLT Progress Report

M. TARENGHI, ESO-Garching

The following series of pictures best illustrates the enormous progress made in the VLT Project which is now in a new and dynamic phase of construction. The recent decision by the Council to continue with the erection is the natural consequence of the major progress made in the construction of the first unit telescope in Europe. The first 8.2-m mirror is currently undergoing the polishing process at REOSC, and the first interferogram was taken successfully. Blank no. 2 is now ready and Schott will deliver it to REOSC in October. Blank no. 3 has successfully completed the ceramization phase. In Milan, the foundations for the pre-erection in Europe are ready to receive the azimuth track, 16 m in diameter, which was machined at Ansaldo in Genova.

Figure 1 shows the azimuth track on the turning table supported by the special tool (the blue part) which was designed and manufactured for the VLT Project.

Elements of the fork structure have been welded and machined as shown in Figure 2. In addition, many of the subsystems of the tube are in the advanced