

Venice workshop on the ESO Very Large Telescope.

During this conference, the technical and scientific aspects of the project were discussed. Nothing can better summarize the conference than Prof. Woltjer's conclusion:

"...I am particularly struck by the large consensus that has been achieved. Of course, there are aspects where different scientists have somewhat different perceptions. But much more important is the strong support which the concept of the array of four 8-m telescopes has found. ... Now is the time to realize the project."

The official ESO proposal, which also included plans for the financing and or-

ganization of the project, was finalized at the beginning of 1987 and distributed to the ESO governing bodies in March for a final decision to be taken in December.

Site testing activities had begun as early as 1983. Arne Ardeberg had explored a number of places in northern Chile and found that several of them would combine an outstanding percentage of clear nights with very low atmospheric water vapour content. One of them looked particularly attractive, because it offered, in addition, an easy access. This was Cerro Paranal. A workshop on site testing took place at La Silla in October 1983. Before that, a permanently manned station had been

set up at Paranal, sophisticated equipment acquired and progressively installed. A large quantity of data has been processed since. This effort is still expanding.

A lot more events than reported here took place during the project genesis. Also, many more people than could be quoted in this paper have made major contributions. The purpose of this article was not to give a detailed account of those last 10 years which preceded the decision to build the VLT, but rather to indicate the major milestones which led to it. What is important is that a decisive page of ESO history is about to be turned, and that this fascinating project is to become a reality.

Pre-Assembly of an Inflatable Dome Prototype for the VLT

Those who are familiar with the present technical proposal for the VLT, or have just seen pictures of the model published in the press, will have remarked the peculiar inflatable domes proposed. They can be opened entirely, leaving the telescopes in the open air during favourable weather conditions.

While the idea and the basic technology for such domes have been derived from existing inflated radomes for antennas found all over the world, a quite innovative design concept was demanded by the particular requirements of an astronomical observatory. In order to prove the validity of this design and to acquire the know-how necessary for a successful realization of all details, ESO has built with French and Dutch contractors a prototype with a diameter of 15 metres, about half the size required to house the unit telescopes of the VLT.

The dome consists of a double-wall fabric hemisphere, supported by rigid hoops that open and close in two symmetrical parts. Each side of the double-wall cover is made of seven lenticular ribs which are inflated once the dome is closed, thereby providing a rather stiff surface. Also the interior is pressurized, with an overpressure that will be increased by an automatic system in case of strong winds. The dome has been pre-assembled in the Netherlands and found satisfactory. It will be installed on a specially made base at La Silla, starting in February 1988. After being thoroughly tested, it will be used to house experimental set-ups in connection with the development of VLT optical systems.

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Figure 1: *The 15-m dome almost open.*



Figure 2: *The closed and inflated dome.*