

crease of precipitation by a factor of four or more.

In northern Chile, between latitude 24°30 S and 25 °S, influences of polar fronts and easterlies are at a minimum. Cloudiness and precipitation increase from the west to the east; thus, coastal cordillera summits have to be preferred. On that mountain range, the azoic zone over 1500 m extends from 24°20 S to 26°10 S. Absolute desert is limited to a strip of 80–110 km wide, and possibly due to a purely altitudinal effect, as narrow as 30 km at the latitude of Paranal. The aridity of the western cordillera area, north of 26 °S, appears to be stable, even in case of large amplitude

climate changes (warmer or colder). The occurrence of rainfall is barely related to the El Niño phenomenon.

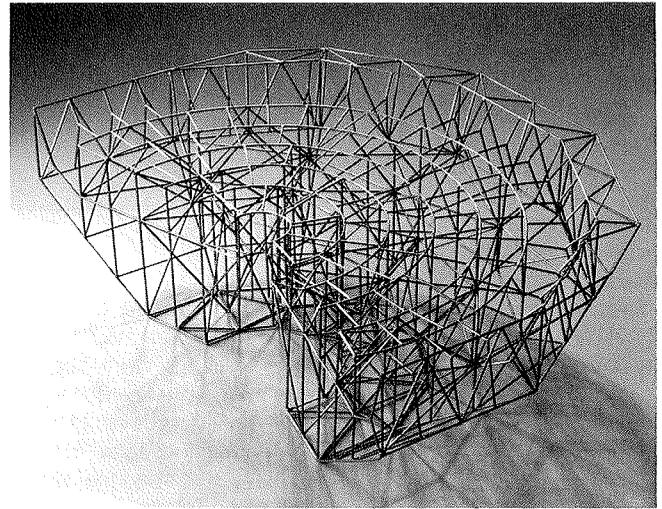
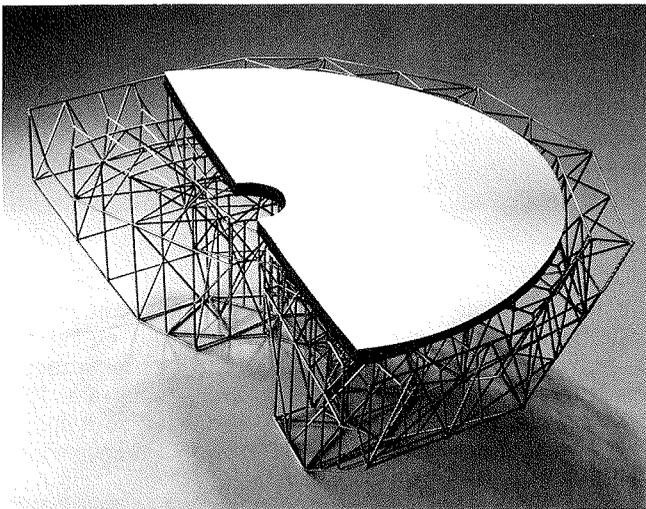
All the climatic indicators considered here, biogeographic and meteorological, lead to the conclusion that Paranal mountain is located in the best possible area of South America for the settlement of a modern astronomical observatory.

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## Progress on the VLT Mirror Cell Design



The NOTSA group at Risø (Denmark) is performing, under contract of ESO, the engineering of the VLT primary mirror cell.

A preliminary design has now been produced which however still needs to be optimized through computer modelling and finite element analysis. The NOTSA group thought that a preliminary "hardwire" modelling would be cost-

and time-effective and decided to build several models with copper wire which can easily be soldered and rapidly modified. This approach has effectively permitted to discriminate rapidly between several designs, which would have had required much more effort through computer modelling. It also permitted to correct for a few errors which for such a complex structure are almost unavoid-

able, time consuming and . . . sometimes may reach the manufacturing stage while still undetected.

The two photographs show one of these "hardwire" models, once with a half mirror cardboard model, once without. The actual VLT mirror cell will have a diameter of about 9 metres and it will be 3 metres high.

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## Halley Enters Hibernation

Famous Comet Halley, now receding from the Sun after its perihelion passage in early 1986, has recently entered into a state of hibernation which will last until shortly before the next passage in 2061.

This is the main result of a series of observations in late February 1990, during which the comet was imaged with a

CCD camera attached to the Danish 1.5-m telescope at La Silla. The seeing conditions were mediocre, ~1.3 arcsec. At this time Halley was 11.6 AU (1735 million km) and 12.5 AU (1870 million km) from the Earth and the Sun, respectively, that is well outside the orbit of the giant planet Saturn.

Exposures totalling 980 min (16 hrs 20 min) were obtained and the "negative" picture shown here is a composite of 23 frames, each individually cleaned. The image of Halley at the centre is pointlike; the straight lines are trails of stars and galaxies in the field, because the telescope was set to follow the com-