



Photograph by H.-H. Heyer

be too much trouble to receive 20 children of age 4–6 from the Kindergarten in the German language section?

A challenge! And why not? If I said no, a future Copernicus might decide to let another science benefit from his/her abilities... So of course I said yes, while wondering how to entertain such a group and what the other ESO staff would say, when some of their youngsters suddenly turned up at their place of work.

The photo, taken on the balcony outside the ESO cafeteria after the tour, shows how nice the children were. Not

only did they know a lot about Mars and Jupiter, they also asked questions which were way beyond what you would expect from persons of that age. It was a real pleasure, especially to watch from a distance when Miguel Albrecht of ESO (whose daughter was in the group) showed a beautiful galaxy on the computer screen of MIDAS and to hear the gasps when he made it change colours.

After a sandwich lunch, the visit finished with a look through a small telescope at the cars in a distant car park. Patiently waiting for their turn to ap-

proach the instrument, and extensively discussing what they saw, I understood that the visit had paid off. Not only was it obviously fun; I am sure that the children came away with a good impression.

Two days later, the telephone rang and a teacher from the Munich European School called to ask if a Spanish-speaking class could perhaps visit ESO... But this time I answered truthfully that the visit calendar is booked out long in advance and we are rather few at ESO – maybe we could discuss such a visit in a couple of months' time?

R. WEST, ESO

A Most Impressive Astronomy Exhibition

Next time you come to Munich, don't miss the opportunity to visit an outstanding new astronomy exhibition!

In early May 1992, the world's largest technical museum, the Deutsches Museum which is located in the middle of Munich on an island in river Isar, inaugurated what is most probably the largest and most comprehensive astronomy exhibition in the world, and in any case the most up-to-date.

After more than five years of planning, involving a large team of museum specialists and scientists, the new, 1000 m² exhibition opened its doors to the public and was quickly and completely overrun by interested visitors. This event was accompanied by a "Sci-

ence Press Conference" on May 6, featuring 12 brief talks by well-known scientists and covering the grand lines of virtually all of modern astronomy. It was attended by about 200 media representatives from Germany and several other European countries and was widely reported in the media.

The exhibition was conceived and realized by a team headed by Dr. Jürgen Teichmann of Deutsches Museum and supported by scientists from many research institutes in Germany, including ESO. The former Director of the Max-Planck-Institute for Astrophysics in Garching, Professor Rudolf Kippenhahn, played a decisive, coordinating role.

The basic idea has been to show what modern astronomy really is and how it is done, while also demonstrating the long development that has transformed the oldest of sciences into one of the most modern and exciting ones. The Deutsches Museum is in a unique position to do so, thanks to its very extensive collections of historically important instruments. In this context, ESO was very pleased to make available its 1-metre active optics mirror and support system with which this revolutionary optical invention was first demonstrated. Only a few years old, this equipment is now on display in the same area as the earliest astronomical telescopes, representing yet another decisive step forward in as-

tronomical technology. The principle of adaptive optics is of course also explained here. There are lots of radio astronomy, a section of a of real 15-metre submillimetre antenna, the latest X-ray results from ROSAT, gravitational lenses, missing mass, Big Bang revisited, the end of the Universe, image processing stations, etc.

The exhibition is grouped in a somewhat unusual way. Believing that the visitors come to have their curiosity satisfied, the "answers" to many "questions" are given, by extensive use of advanced didactical means. The public will not only see beautiful pictures and the sky and its objects; there is also a substantial number of interactive displays which serve to involve and attract even those who have no particular previous relations to our science. There are several very realistic experiments, e.g. aberration, photoelectric lightcurves of an eclipsing binary, the origin of spectral lines, etc.

Visit the exhibition, when you come to Munich – you will not regret it!

R. WEST, ESO

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Astronomical Observations in 2001

D. ALLOIN and T. LE BERTRE, *Observatoire de Paris, Meudon, France*

A forum organized by INSU with the support of ESO was held in Paris on March 20, 1992. The motivation of this one-day meeting was to resume the discussions within the astronomical community about the future operating modes of telescopes in the VLT era. We enjoyed the visit of an important delegation from ESO Headquarters.

P. Shaver gave a review of the study made a few years ago by the "VLT Operation Working Group" and of the conclusions reached at that time. The operational modes were divided into three broad classes: classical observing, remote observing and service observing. The respective advantages and disadvantages were discussed and, at that time, the conclusion was reached that all three modes would be necessary. To allow this, it was important, in the conception of the VLT, that no essential options be designed out and that innovative ideas be incorporated. Now, it is more and more evident that flexible scheduling will be a central feature in the VLT operations, implying service observing. However, only the experience acquired with the NTT and then with the VLT will allow to select the most efficient ways of observing and, most probably, the VLT operations will start with classical modes.

M. Zolver reviewed the recent progresses made at ESO on the knowledge of seeing statistics and on the possibilities of seeing prediction. On the latter, three methods are presently investigated: statistical analysis, models of the atmospheric motions and warning from a station located ~ 30 km ahead of the observatory in the dominant-wind direction. Worries about the effect of levelling the Paranal summit on seeing quality were expressed in the audience; in fact, as seen through modelling of the atmospheric motions around the summit with its new profile, the effect should not be significant.

J. Breysacher described the present situation of time allocation at ESO. With 13 telescopes (including SEST) and 34 instrumental configurations, scheduling is a complex task. Many constraints of different nature (astronomical, logistic, human, etc.) have to be fulfilled. One simple change in the planning may lead to its complete revision. In these conditions, flexible scheduling cannot be introduced straightforwardly. Nevertheless, it is presently tested on a limited basis at the NTT so that experience might be acquired. It is already apparent that the changes of instrument must be done rapidly (in a few minutes) and reli-

ably, that the standard procedures for calibration have to be revised and that expert systems which incorporate all the constraints have to be developed. Flexibility should not create inefficiency.

The following contribution, by Mrs. Becker (from the Institut National des Télécommunications), was along the line of expert systems. She reviewed the present situation of queue managing, a completely new topic for most of us, but with which we might have to get familiar if we are to observe in the years 2001 on large instruments.

C. Boisson reported on her experience with service observing at the British telescopes. She explained that this service requires from the potential users a very detailed preparation of the observations and from the organization which offers it, a corresponding staffing.

D. Baade reviewed the experience acquired at ESO in remote observing. From his talk, it was evident that remote control is already a reality, successfully managed at ESO. Several questions were raised by the audience, mainly on the actual performances of this mode of observations. In the case of the CAT+CES, the users are presently requesting more remote observing than can be handled at ESO Headquarters due to