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

ICO-16 Satellite Conference*

on

Active and Adaptive Optics

Garching, Germany

August 2 to 5, 1993

Topics:

- Atmospheric characterization for adaptive optical system design
- System considerations for laser beam control and astronomical imaging
- Theoretical performance limitations
- Wavefront correctors
- Wavefront sensors
- Application of phase conjugation
- Control for active and adaptive optical systems
- Laser guide star techniques

For more information, please contact:

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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 significative.

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 reliably, 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