The software had to be ported from the remote control computer in ESO (an HP-720) to the OAT HP-425. No problem at all was encountered during this procedure. A porting of Xpool package on SUN and Sylicon Graphics was also put into effect, for test purposes, in the months preceding the final test.

On the first night ten hours were devoted to preliminary tests and to identify and fix some software bugs. From 4.00 UT astronomical observations could begin and continued until 11.00 UT. The second night started with some minutes of delay due to some minor software problems and lasted till 11.00 UT. The last night was entirely devoted to astronomical observations. On the whole, more than thirty hours were entirely devoted to astronomical observations. Eight OAT astronomers used this time to carry out various scientific observations. It should be stressed that while an observation was going on, the astronomers were able in remote MIDAS sessions to have a quick look at the previously acquired images in order to evaluate the validity of their data. Accordingly, if necessary, the transfer of the images from La Silla to Trieste could then be carried out.

4. Conclusions

This project was successful in proving the feasibility and reliability of second level remote observing already at this stage.

During the three nights of the final test over 30 hours were devoted to astronomical observations and, as can be inferred by the users' comments, the system proved to be very easy and flexible to operate, considering also that most of the observers had no experience in the use of EMMI.

In view of the success of the experiment it has been decided not to stop here but to proceed along two lines:

- To study and implement a special hardware/software system for on-line data compression technique, in order to reduce the quick-look time (at present of the order of minutes) and obtain an almost completely interactive environment.
- To identify other interested institutes in Europe to repeat a second level remote observing run from there, in order to test portability and reliability of the present set-up. This can also be useful to test operationally the feasibility of remote access during flexible scheduling, where more than one observing team can be active during the same night from different institutes.

The modalities are currently under definition. The candidate institute should have a network of Unix workstations, and provide the possibility of dedicating part of the LAN to the remote observings tasks in addition to the astronomical interest in participating in such an experiment. The communication equipment could be provided by ESO for the purpose of a first test.

The joint procurement of the leased link to Garching is another condition to be fulfilled, and further preliminary daytime tests and remote test nights will be necessary.

As an independent parallel activity the first level remote observing system is now getting its final touch. The operation team is being trained and user guides are being produced. It is planned to start offering remote observing with EMMI/SUSI to the user community in April next year.

5. Acknowledgements

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A Fourth VLT Instrument Science Team

At its May, 1992 meeting the ESO Scientific and Technical Committee approved the two Ultraviolet-Visible Echelle Spectrographs (UVES1 and UVES2) for the Nasmyth foci of the second and third VLT telescopes. The ESO staff responsible for building these instruments is now proceeding with the design studies of this major facility which will do high-resolution spectroscopy (resolution-slit width product = 40,000) in the 300 to 1100 nm wavelength range. At the same time an Instrument Science Team has been formed for this facility. Its members are:

B. Gustafsson (Uppsala)
H. Hensberge (Brussels)
P. Molaro (Trieste)
P. Nissen (Aarhus)

The team will select its chairman at its first meeting on December 9. As is the case for the other VLT instruments (see *The Messenger* **68**, page 8), the IST members and myself welcome your input on scientific matters relating to these instruments.

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