λ 6375 Absorption. *Astrophysical Journal.* April 1986.

442. E. Giraud: The Dependence of the Tully-Fisher Relation on Morphological Type. *Astrophysical Journal.* May 1986.

443. P. Magain: Contribution Functions and the Depths of Formation of Spectral Lines. *Astronomy and Astrophysics.* May 1986.

444. A.F.M. Moorwood: 3.28 μm Feature and Continuum Emission in Galaxy Nuclei. *Astronomy and Astrophysics.* May 1986.

MIDAS Memo

ESO Image Processing Group

1. Application Developments

In this summer release of MIDAS a great step towards hardware independence has been achieved: First, the AGL library from ASTRONET is now used by all graphics applications in MIDAS. The metafile oriented AGL package already supports a lot of different graphic devices and backend drivers for other devices may be added easily. Second, all image display applications of MIDAS are now based upon a proto-type of the IDI* interfaces. An actual implementation of the IDI interfaces has been done at ESO for the DeAnza IP 8500 and also at Trieste for an EIDOBRAIN 7001. The concept of these IDI routines was successfully tested in Trieste. We implemented MIDAS on the EIDOBRAIN machine by simply replacing the DeAnza IDI interfaces with the IDI interfaces of the Trieste group!

A set of commands for reduction and analysis of one-dimensional spectra is now available. For a long time this was a main missing area of applications that

---

* Image Display Interfaces which have been presented at the Data Analysis Workshop at ESO in February 1986.

was not considered until now due to the excellent performance of IHAP. The commands use AGL as standard graphics package. Functions included are wavelength and flux calibration tools and some interactive analysis facilities. More developments are expected in this area in the near future.

Another area of activity was the fitting package. New methods are now available to perform Least-Squares approximations to images and tabular data.

2. Distribution Policy

The distribution policy for MIDAS has been revised to ensure a better service for the growing number of users at other institutes. The basic scheme has been modelled after the concept used by AIPS. There will be two major releases of MIDAS taking place January 15 and July 15 each year, i.e. this July release is denoted 86 JUL 15. In addition, minor releases will be made April 15 and October 15 when required. New reduction packages and significant modifications will be distributed with major releases while minor ones will contain bug-fixes and small enhancements only.

The release tape contains installation procedures, help files and MIDAS code needed for generating the system except commercial libraries. All application programmes are available in FORTRAN source code, whereas monitor and libraries are distributed as object code for VAX/VMS, since parts of the latter code may be written in other languages. Source code as well as executable images and test files are available on special request. Two special libraries are needed for linking MIDAS, namely: NAG for mathematical routines and AGL for graphics. The latter can be obtained through ESO or directly from ASTRONET.

A request form for MIDAS releases was sent to all institutes on our present tape mailing list in early June. Other institutes which would like to use MIDAS

are kindly requested to contact the Image Processing Group in ESO directly. The MIDAS distribution kit is provided free of charge to all non-profit research organizations. New releases will be mailed automatically if we have received the returned distribution tape at least one month prior to the release date.

3. A Portable MIDAS Version

Most new computers are offered with the UNIX operating system which has been adopted also by major European vendors. In order to provide MIDAS for such systems (e.g. workstations), a portable version of MIDAS will be developed. This version will run under both VAX/VMS and UNIX, and be upgraded with real-time features for data acquisition and network capabilities. The design specifications will be presented to the community in the fall of this year while a release is expected in the spring of 1988.

4. Computer Upgrade

The main scientific computer facilities of ESO were upgraded at the end of June to meet the growing demand from users. The VAX 11/780 and VAX 11/785 computers are replaced by two VAX 8600 machines increasing the total performance by more than a factor of 3 to 8.4 MIPS. The I/O performance of the system is also increased by a second SBI bus on one VAX 8600 computer and the use of faster Winchester disk drives from System Industries. Further, a VAX station II/GPX was purchased for image processing applications. This workstation runs UNIX and will be used for the first implementation of the portable MIDAS version under UNIX. The computers are interconnected with a Local Area Network which uses Decnet protocol between DEC equipment and TCI/IP for communication to other systems such as HP computers and measuring machines.

Remote Control of 2.2-m Telescope from Garching

G. RAFFI and M. ZIEBELL, ESO

A Remote Control (RC) run of the 2.2-m telescope at La Silla was carried out from Garching during six observing nights in the period March 23–29, 1986. This was the next logical step after the test run of La Serena in June 1984. The instruments used, each for 3 nights, were the Adapter with CCD and the Boller & Chivens with CCD, so that the

astronomers involved had a chance to work both with images and spectroscopic data.

The RC concept implemented and tested in this run is what we call "Interactive Remote Control", to point out that the user works at the computer consoles with the same degree of interaction available as in the 2.2-m con-

trol room at La Silla, without the need to have a fixed and predetermined observing programme.

The Telephone Link

The RC set-up consisted of two HP 1000 computers, one being the control computer of the 2.2-m telescope at La