Figure 5: (a) A 2-minute R exposure on the irregular galaxy NGC 3109 at the red arm of EMMI. A windowed format of 1700×1000 pixels (10×5.8 arcmin) in the 2048^2 Ford CCD was used. The FWHM of the stellar images is 1.1 arcsec. (b) A 3-minute exposure of a section of the same galaxy taken with SUSI through a Gunn i filter. The FWHM of the stellar images is 0.55 arcsec. The two white crosses near the faint spiral galaxy at the centre of the image are separated by 2 arcsec. The brightest star is identified by the two white arrows in the corresponding EMMI image.

Figure 6: The centre of the Terzan 7 cluster from a 900-second B exposure with SUSI (courtesy of Roberto Buonanno, Osservatorio Astronomico di Roma). The FWHM of the stellar images is on average 0.46 arcsec.

for which the SUSI project team (see Table 2) is to be congratulated. That the effort paid off can be seen from the two examples of astronomical observations (Figs. 5b and 6).

MIDAS Memo

ESO Image Processing Group

1. Application Developments

Besides on-going developments of new packages and improvements of existing ones, many small changes were made in the MIDAS system to remove bugs or to increase functionality and/or user friendliness. The most important ones are given below.

In the Echelle package two new methods for order definition and ripple correction have been added. Of course, the old methods are still available.

Two new commands have been implemented to correct bad rows and columns in CCD images. The method is based on a poster paper presented by G. Pojmanski at the 3rd ESO/ST-ECF Data Analysis Workshop.

The FILTER commands have been modified to take care of the frame boundaries in the filtering. In addition, the FILTER/MEDIAN command has been revised to increase its speed.

Several commands have been added to improve the usage of catalogues in

MIDAS. For example, one can now sort and search in catalogues. Also, the usage of ASCII file catalogues is now possible.

Finally, the DELETE/GRAPHICS and DELETE/DISPLAY commands can now delete individual graphic and display windows.

2. Configuration Control

Soon after the 91MAY was frozen for release, MIDAS software at ESO Headquarters was put under the Source Code Control System (SCCS). The MIDAS Group has decided to take this step mainly for three reasons:
- to improve the coordination of software development, in particular for the core and application parts of the system;
- to maintain records of changes in the system during the release cycle;
- to be able to regenerate old versions of MIDAS from the running system using the tools the SCCS system provides.

At ESO, the SCCS control has been implemented for two of the three running MIDAS versions: i.e. the development system (test), and the internal release (new). Starting with the 91NOV release, also this version (that is sent to the user community) will be controlled by SCCS. The SCCS system allows control write access to the source files, and monitor changes made to those files. Under SCCS, only one user can update a file at the time, and records of all changes are stored in a history file. All source code as well as e.g. documentation and help files are affected by the SCCS control.

With the implementation of the control system, day-to-day development of the ESO-MIDAS software can be controlled better and will guarantee a further increase in the stability of the MIDAS software.

3. MIDAS at the IAU General Assembly

At the XXIst General Assembly of the International Astronomical Union (IAU), held in Buenos Aires from July 23 to August 1, ESO was represented with a stand at the exhibition room in the Conference Centre. The main part of the exhibition was dedicated to the Very Large Telescope (VLT), now under construction in Europe and Chile. In collaboration with the ESO Information Service, the MIDAS Group used the GA event to present the MIDAS project to the astronomical community. Demonstrations of MIDAS, using a SONY News lap-top computer were scheduled at regular intervals, and a documentation

set was displayed. Many visitors of the exhibition showed their interest in MIDAS and signed up to receive further information.

4. ESO-MIDAS User Agreement

During the distribution of the 91MAY release of MIDAS, some problems identifying the various requests were encountered. To avoid delays in the distribution of future releases, we kindly ask you to quote your ESO-MIDAS User Agreement number on all correspondence regarding MIDAS distribution and documentation. If you are not sure about your user agreement number, please contact Resy de Ruijsscher at ESO-IPG.

---

5. Central Computer Facilities at ESO

As announced in the previous Messenger (No. 64, June 1991), the central computers at ESO Headquarters, two VAX 8600 systems running the VAX/VMS operating system, will be replaced. After extensive benchmarking and negotiations with several candidate vendors, ESO has purchased two Solbourne 5E/802i machines, 40 MHz SPARC technology, running the UNIX operating system. The machines were purchased from Kontron, Eching near Munich.

In the course of September the machines will be made operational, whereas at the same time the mainte-

nance of both VAXes will be minimized. It is anticipated that the VAXes will be disconnected in the month of November. Visitors who intend to use ESO's central computing facilities for data reduction and analysis are advised to contact the Visiting Astronomers Section or the Image Processing Group of ESO.

6. MIDAS Hot-Line Service

The following MIDAS support services can be used to obtain help quickly when problems arise:

- EARN: MIDAS@DGAESO51.bitnet
- SPAN: ESO::MIDAS
- Eunet: midas@eso.uucp
- Internet: midas@eso.org
- FAX.: +49-89-3202362, attn.: MIDAS HOT-LINE
- Tlx.: 528 282 22 eso d, attn.: MIDAS HOT-LINE
- Tel.: +49-89-32006-456

Users are also invited to send us any suggestions or comments. Although we do provide a telephone service we ask users to use it in urgent cases only. To make it easier for us to process the requests properly we ask you, when possible, to submit requests in written form either through electronic networks, telefax or telex.

More information about MIDAS can be found in the ESO-MIDAS Courier which is the biannual newsletter on MIDAS related matters issued by the Image Processing Group and edited by Rein Warmels.

News About Automatic Photometry

With reference to the earlier article in this journal (Sterken and Manfroid, *The Messenger* **63**, p. 80, March 1991) about automatic photometry at La Silla, it now appears that, after a technical intervention in 1990, the r.m.s. deviations measured at the Danish 50-cm telescope (SAT) have returned to the level measured before the automation. The figure shows the standard deviations in u, v, b and y (0.001 mag) of the mean magnitude differences between standard stars (pairs for which more than 6 observations in each observing run were available). Observing runs 1 to 8 (August 1986) are in the manual mode and the later observations are in the automatic mode. Note the low level of the latest runs.

C. STERKEN, Astrophysical Institute, University of Brussels (VUB), Belgium