

between the orders. The CCD package allows binning of the pixels in the read-out process. This option finds useful application in an observation where the read-out of the CCD is the dominant noise source. Binning perpendicular to the dispersion can be advantageous in poor seeing conditions. In the present set-up however, it can be applied only at wavelengths above 5000 Å, to avoid an excessive crowding of the spectral orders. Binning in the direction of the dispersion, with the resulting loss of resolution, may also be an attractive solution in the observation of very faint sources or to follow with higher temporal frequency the spectral behaviour of brighter objects.

The Status of the Data Reduction Software

Astronomers who have used other ground-based echelle spectrographs or, e.g., the high dispersion mode of IUE, are familiar with the difficulties in the data reduction and calibration of spectra in echelle format. To these must be added, in the case of CASPEC, the problems specific to the CCD data reduction. ESO plans to have a full reduction package working by the end of 1983 on the VAX 11/780 computer within the framework of the data processing system MIDAS. The programme will run partly automatically, partly in interactive mode from a de Anza display station. It will flat-field the images, find and extract the spectral orders, set a wavelength calibration from the comparison lamp spectrum, merge and flux-calibrate the spectral orders. The user will then have the option to

analyse further the one-dimensional files within MIDAS, to switch to IHAP or to perform the final steps of the data reduction at his home institution. The same package will be installed on the VAX computer at La Silla, to be used by the La Silla staff and off the telescope by visiting astronomers.

A large part of this package is already operational. Fig. 4 illustrates what can be achieved today as regards extraction, wavelength calibration and merging of the spectral orders in one CCD frame. At present we are using the test observations to optimize the procedure to flat-field and flux-calibrate the spectra.

A Word of Thanks

It is largely thanks to the excellent assistance of the La Silla staff that CASPEC's installation at the telescope was such a smooth and successful operation. We would also like to thank the other people who have contributed with their work or their advice in the different phases of this project, among them P. Biereichel for the CCD package, R. Gustafsson for the control modules, F. Middelburg for the updating of IHAP, J. Melnick for the data reduction, and the European astronomers who have provided useful suggestions for the programme of test observations. A particular acknowledgement goes to Prof. I. Appenzeller, who was actually present during part of the test period and was of great help in evaluating the instrument performances.

Visiting Astronomers

(October 1, 1983–April 1, 1984)

Observing time has now been allocated for period 32 (October 1, 1983–April 1, 1984). As usual, the demand for telescope time was much greater than the time actually available.

The following list gives the names of the visiting astronomers, by telescope and in chronological order. The complete list, with dates, equipment and programme titles, is available from ESO-Garching.

3.6 m Telescope

Oct. 1983:	Dennefeld, Bergeron/Kunth, Bergeron/Boissé, Zuiderwijk/de Ruiter, Shaver/Robertson, Moorwood/Oliva, Oliva/Moorwood/Panagia, Moorwood/Glass, Lequeux/Prévot, L&ML/Maurice/Rocca, Perrier/Léna/Chelli/Sibille, Alcaïno/Liller, Materne/Hopp, Azzopardi.
Nov. 1983:	Azzopardi, Azzopardi/Breysacher/Lequeux/Maeder/Westerlund, Surdej/Henry/Swings/Arp, Materne/Hopp, Azzopardi/Breysacher/Lequeux/Maeder/Westerlund, Westerlund/Azzopardi/Breysacher, Westerlund/Lundgren, Westerlund/Gustafsson/Graae Jørgensen, Pakull/Beuermann/Motch/Ilovaisky/Henrichs/van Paradijs, Koornneef/Israel, Israel/Koornneef, Rouan/Leger, van Paradijs/Motch/Beuermann/Zuiderwijk, Lindblad/Jörsäter.
Dec. 1983:	Lindblad/Jörsäter, Bertola/Zeilinger, Capaccioli, Olofsson/Bergvall/Ekman, Sherwood/Moffat, Epchtein/Braz, Durret/Boisson/Lawrence, Caplan/Deharveng/Comte/Viallefond, Marano/Braccesi/Zitelli/Zamorani.
Jan. 1984:	Marano/Braccesi/Zitelli/Zamorani, de Vries, Barbieri/Cristiani/Nardon, Jørgensen/Hansen/Nørgaard-Nielsen, Danziger/de Ruiter/Kunth/Lub/Maccacaro/Gioia, Kunth.
Feb. 1984:	Kunth, Mouchet/Motch/Beuermann/van Paradijs, Motch/Ilovaisky/Pakull, Courvoisier, Schoembs/Bar-

wig/Vogt/Koester/Kudritzki, Reimers/Koester, Koester/Weidemann, Weigelt/Drechsler, Véron.

March 1984: Véron, Bettoni/Galletta, Galletta/Bettoni, Chincarini/Manousoyannaki, de Jong/Miley, de Loore/Burger/v. Dessel/v. Paradijs, de Jong/Miley, Thé/Lamers, Krautter, Engels/Perrier, Motch/Mouchet, Rodono/Catalano/Blanco/Marilli/Pazzani/Russo/Vittone/Butler/Scaltriti/Linsky/Foing.

1.4 m CAT

Oct. 1983:	Kollatschny/Yorke/Fricke, Cayrel de Strobel, Gondoin/Mangeney/Praderie, Burkhart/Lunel/Van't Veer/Coupry.
Nov. 1983:	Burkhart/Lunel/Van't Veer/Coupry, Barbuy, Grewin/Kappelman/Bianchi, Seitter/Duerbeck, Kohoutek/Wehmeyer, Gustafsson/Andersen/Nissen.
Dec. 1983:	Gustafsson/Andersen/Nissen, Eriksen, Ardeberg/Lindgren/Maurice, Danks/Lambert, Kudritzki/Gehren/Simon, Noci/Ortolani.
Jan. 1984:	Noci/Ortolani, Westerlund/Krelowski, Drechsel/Rahe/Wargau, Reimers/Hempe, Gillet/Faurobert.
Feb. 1984:	Gillet/Faurobert, Viotti/Altamore/Rossi, Gry/Ferlet/Vidal-Madjar, Ferlet/Roueff, Kudritzki/Nissen/Gehren/Simon, Baade.
March 1984:	Baade, Felenbok/Roueff/Praderie/Catala/Czarny, Grewin/Krämer/Gutekunst/Bianchi, Foing/Bonnet/Linsky/Walter, Foing/Bonnet/Linsky/Bornmann/Haisch/Rodono.

1.5 m Spectrographic Telescope

Oct. 1983:	Rafanelli/Bonoli, Pelat/Nottale, Schiffer, Prévot, L./Lequeux/Prévot, M. L./Maurice/Rocca, Richter/Sadler, Chincarini.
Nov. 1983:	Chincarini, Crane/Chincarini/Tarengi, Ardeberg/Lindgren, Bues/Rupprecht, Danziger/Maraschi/Tan-

zi/Treves, Viotti/Gilmozzi/Wolf/Zickgraf, van Paradijs/
Motch/Beuermann/Zuiderwijk, Olofsson/Bergvall/
Ekman.

- Dec. 1983: Olofsson/Bergvall/Ekman, Kohoutek/Wehmeyer,
Lub/de Ruiter, Capaccioli, Reipurth, Rosa.
- Jan. 1984: Rosa, Bica/Alloin, Chmielewski/Jousson, Wolf/Appenzeller/Klare/Leitherer/Stahl/Zickgraf/Bastian,
Lindblad/Lodén, Molaro/Franco/Morossi/Ramella,
Joubert, Georgelin/Boulesteix/Marcelin/Rosado.
- Feb. 1984: Georgelin/Boulesteix/Marcelin/Rosado, Schulte-Lad-
bek, de Loore/van Paradijs/Zuiderwijk, Zuiderwijk/van
Paradijs/de Loore, Foing/Bonnet/Linsky/Bornmann/
Haisch/Rodono, Maurice/Louise, Chincarini/Manous-
soyannaki.
- March 1984: Chincarini/Manoussoyannaki, Festou/Dennefeld,
Bettoni/Galletta, Melnick/Quintana/Terlevich, An-
dersen, Thé/Lamers, Jensen, Festou/Dennefeld,
Brand/Wouterloot, Festou/Dennefeld, Krautter,
Maurice/Louise, Festou/Dennefeld.

1 m Photometric Telescope

- Oct. 1983: Lauberts, Krügel/Chini, Perrier/Léna/Chelli/Sibille,
Oliva/Moorwood, Arp/Gosset/Surdej/Swings.
- Nov. 1983: Arp/Gosset/Surdej/Swings, Prévot, M. L./Prévot, L./
Lequeux/Maurice/Rocca, Arp/Gosset/Surdej/Swings,
Bues/Rupprecht, Pakull/Beuermann/Motch/Ilovaisky/
Henrichs/van Paradijs, van Paradijs/Motch/Beuer-
mann/Zuiderwijk, Cristiani.
- Dec. 1983: Cristiani, Olofsson/Bergvall/Ekman, Fricke/Bier-
mann/Colina, Reipurth, Lindroos, Bica/Alloin/Dottori/
Pastoriza.
- Jan. 1984: Bica/Alloin/Dottori/Pastoriza, Barbieri/Nardon/Cris-
tiani, Souza/Chincarini, Wolf/Appenzeller/Klare/Leith-
erer/Stahl/Zickgraf/Bastian, Wargau/Drechsel/Rahe,
Encrenaz, Schoembs/Barwig/Vogt/Koester/Kudritzki.
- Feb. 1984: Schoembs/Barwig/Vogt/Koester/Kudritzki, Bouvier/
Bertout, Maitzen/Catalano, Cetty-Véron, Lagerkvist/
Rickmann.
- March 1984: Lagerkvist/Rickman, Westerlund/Thé, Thé/Lamers,
Engels, Encrenaz, Krautter, Rodono/Catalano/Marilli/
Blanco/Pazzani/Russo/Vittone/Scaltriti/Butler/Linsky/
Foing, Brand/Wouterloot.

50 cm ESO Photometric Telescope

- Oct. 1983: Pedersen/Danziger/Brinkmann/Kanbach/Reppin/
Rieger/Trümper/Hurley/Lund/Ilovaisky/Motch/Pizzi-
chini.
- Nov. 1983: Pedersen/Danziger/Brinkmann/Kanbach/Reppin/
Rieger/Trümper/Hurley/Lund/Ilovaisky/Motch/Pizzi-
chini.
- Dec. 1983: Pedersen/Danziger/Brinkmann/Kanbach/Reppin/
Rieger/Trümper/Hurley/Lund/Ilovaisky/Motch/Pizzi-
chini.
- Jan. 1984: Pedersen/Danziger/Brinkmann/Kanbach/Reppin/
Rieger/Trümper/Hurley/Lund/Ilovaisky/Motch/Pizzi-
chini.
- Feb. 1984: Pedersen/Danziger/Brinkmann/Kanbach/Reppin/
Rieger/Trümper/Hurley/Lund/Ilovaisky/Motch/Pizzi-
chini, Foing/Bonnet/Linsky/Bornmann/Haisch/Rodo-
no.
- March 1984: Foing/Bonnet/Linsky/Bornmann/Haisch/Rodono,
Westerlund/Thé, Lagerkvist/Richman, Baade, Foing/
Bonnet/Linsky/Bornmann/Haisch/Rodono.

GPO 40 cm Astrograph

- Nov. 1983: Valbousquet/Florsch.
- Dec. 1983: Valbousquet/Florsch.
- Jan. 1984: Amieux.
- Feb. 1984: Amieux, Debehogne/Lagerkvist/Machado/Caldeira/
Netto/Vieira/Mourao/Tavares/Nunes/Bezerra/Zappa-
la/de Sanctis/Protitch-Benishek.
- March 1984: Debehogne/Lagerkvist/Machado/Caldeira/Netto/
Vieira/Mourao/Tavares/Nunes/Bezerra/Zappala/de
Sanctis/Protitch-Benishek.

1.5 m Danish Telescope

- Oct. 1983: Maurice, Andersen/Nordström/Olsen, Prévot, L./Im-
bert/Andersen/Nordström/Mayor/Ardeberg/Lindgren/
Maurice, Imbert/Prévot, L./Andersen/Nordström/Ar-
deberg/Maurice/Mayor, Lindgren, Ardeberg.
- Nov. 1983: Maurice, Andersen/Nordström/Olsen, Prévot, L./Im-
bert/Andersen/Nordström/Mayor/Ardeberg/Lindgren/
Maurice, Imbert/Prévot, L./Andersen/Nordström/Ar-
deberg/Maurice/Mayor, Lindgren, Ardeberg, Ulrich/
van Breugel/Miley/Heckman, Loose/Colina/Thuan,
Grosbøl.
- Dec. 1983: Durret/Bergeron, Pedersen, Quintana.
- Jan. 1984: Quintana, Stahl/Wolf/Zickgraf, Liller/Alcaíno, Arde-
berg/Lindgren.
- Feb. 1984: Mayor/Burki.
- March 1984: Mayor/Burki, Mayor/Mermillod, de Loore/Burger/v.
Dessel/v. Paradijs, Motch/Mouchet, Grewing/Krämer/
Gutekunst/Bianchi, Sadler.

90 cm Dutch Telescope

- Nov. 1983: Pakull/Beuermann/Motch/Ilovaisky/Henrichs/van Pa-
radijs.
- Dec. 1983: Schneider/Weiss/Rakos, Greve/van Genderen.
- Jan. 1984: Greve/van Genderen, de Zeeuw/Lub/Lemstra/
Blaauw.
- Feb. 1984: Cuypers, Nelles.
- March 1984: Nelles.

61 cm Bochum Telescope

- Nov. 1983: Bianchi/Grewing/Pakull, Kohoutek/Wehmeyer.
- Dec. 1983: Kohoutek/Wehmeyer, Sterken Group.
- Jan. 1984: Sterken Group, Wolf/Appenzeller/Klare/Leitherer/
Stahl/Zickgraf/Bastian.

Applications for Observing Time at La Silla

Period 33 (April 1–October 1, 1984)

Please do not forget that your proposals should reach the
Section Visiting Astronomers **before October 15, 1983.**