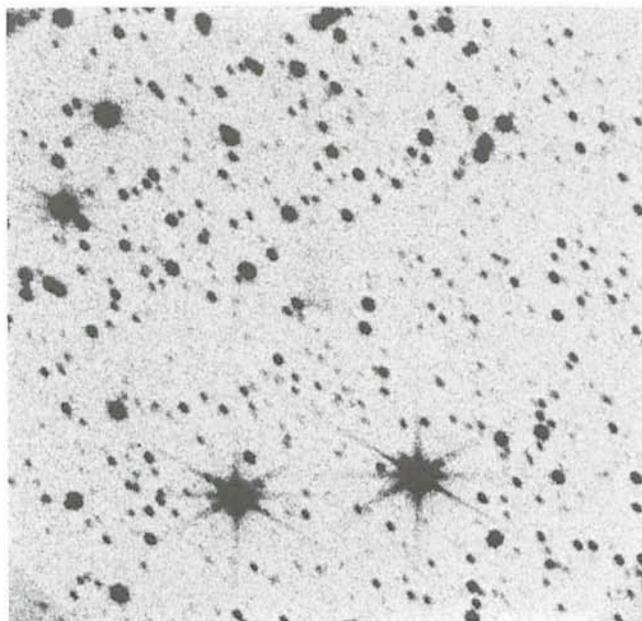


Our catalogue is not intended for use in statistical studies. Rather it is meant to provide a convenient finding list of southern groups and clusters that cover a wide range in distance, richness and morphological type, and that are distributed over the full range of right ascension. The catalogue will be published in the *Ap. J. Suppl.*, October 1977.

Duus is now undertaking a programme of investigation into the closest southern clusters, commencing with Fornax (STR 0321-374) and Abell 1060 (STR 1034-272). Using photoelectric and photographic photometry he will be examining in particular the early-type galaxies with a view to determining the luminosity (mass) dependence of their properties. The investigation will then be extended to some of the more distant clusters identified in this survey.

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## Comet Schuster

It is now more than one year and a half since Comet Schuster (1975 II) was discovered on an ESO Schmidt plate. It still holds the record of having the largest known perihelion distance, about 1,030 million kilometres, and after having passed through the perihelion on January 15, 1975, it now recedes slowly in a slightly hyperbolic (open) orbit, according to the latest orbital computations. Towards the end of 1977, it "crosses" the orbit of Saturn, and due to the comet's exceptional size, it should be possible to follow it for another several years.

The present photo was made low in the evening sky on May 13, 1977 with the ESO Schmidt telescope (observer: the discoverer). One still sees a faint tail, extending upwards from the comet trail. The stellar images were elongated because of differential refraction during the 1-hour exposure, an effect that is unavoidable when observing close to the horizon. The distance from the Earth was almost exactly 1,300 million kilometres and the apparent magnitude of the comet head was 18.5.

## Visiting Astronomers

(October 1, 1977—April 1, 1978)

Observing time has now been allocated for period 20 (October 1, 1977 to April 1, 1978). The demand for telescope time was again much greater than the time actually available.

This abbreviated 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 at request from ESO/Munich.

### 3.6 m Telescope

|             |   |
|-------------|---|
| Oct. 1977:  | van Agt, Lindblad, Swings, Wamsteker/Dennefeld.   |
| Nov. 1977:  | Dennefeld, Maurice/Prévoit/Audouze, Tarenghi.   |
| Dec. 1977:  | Fehrenbach/Andrillat, Schnur, Swings/Wamsteker/Surdej, Ulrich.                            |
| Jan. 1978:  | Brahic, Crane, West, Westerlund/Olander, Westerlund/Ekman/Lauberts/Bergvall, Appenzeller. |
| Feb. 1978:  | Appenzeller, Georgelin/Comte, Lelièvre/Wlérick.   |
| March 1978: | Gahm, Laustsen, van Paradijs/van den Heuvel, Véron, Schultz/Kreysa.                       |

With great pain we have received the notice that

### Bent Grønbech Jørgensen

died on June 7, 1977, only 29 years old, from a heart failure, with no prior illness.

Bent is well known on La Silla, where he spent most of his time between February 1972 and December 1974, carrying out many thousands of photoelectric observations with the Danish 50 cm telescope. In his function as "Danish Resident Astronomer" and part-time ESO staff member, he was also responsible for the maintenance of the telescope and its instrumentation and the introduction of visiting astronomers to the Danish telescope.

These fruitful years on La Silla resulted in important scientific work such as the "Grønbech-Olsen Catalogue" of complete *uvbyβ* photometry of southern bright stars, and a long series of papers on eclipsing binaries recently published in *Astronomy and Astrophysics*.

Apart from astronomy, his interests and activities covered many other fields. He participated in research programmes in geology at the Copenhagen University. He was also enthusiastic at archaeology and adventurous-like travels, visiting all five continents in the course of his numerous trips. During the last year of his life he went back to university and began to study computer science.

Bent left a scientific work of permanent value. More than this, however, his friends will remember his quiet but energetic personality, the enthusiasm with which he represented his ideas, often new and unconventional, his way of thinking without compromises and weaknesses which finally is the origin of his scientific success, but which, on the other hand, signified for his friends a person of absolute confidence, reliability and human quality.

All of us who got to know him closely will keep his memory as a great person and friend.

Nikolaus Vogt

La Silla, July 1977.

# The Calibration Equipment of the ESO Schmidt Telescope

*Some time ago, two calibrating devices of completely new design were installed in the ESO Schmidt telescope. Invented by ESO astronomer Dr. André Muller, they permit simultaneous exposure of the sky and the calibration marks in the telescope. This greatly increases the accuracy of the calibration of the photographic plate, a problem that has always worried astronomers. Dr. Muller explains how it works:*

Some time ago the ESO Schmidt telescope was equipped with a calibrating device specially designed to produce calibration marks in exactly the same way as the stars and galaxies are acquired on the photographic plate. The philosophy behind the design is that the most reliable calibration is obtained if done simultaneously with the sky exposure, i.e. simultaneous and equal exposure time for sky and calibration marks.

Two projectors were constructed and mounted inside the telescope tube, as shown in Figure 1, in such a way that the projectors cause no light obstruction for the entering star and sky light. The calibration marks are projected on the sky background at the east and the west edge of the photographic plate.

The design of the projectors is shown in Figure 2. The light source (107) is chosen as to match as well as possible the required colour characteristic. The light passes through two different quartz windows (106). The size of the front window is matched by means of a diaphragm (25) with

the diameter of the projecting lens (102) in order to avoid light scatter inside the projector tube. The lens (105) images the diaphragm (25) on lens (102) which projects an image of a step-wedge (104), placed immediately in front of lens (105), on the photographic plate. The intensity of the light passing through diaphragm (25) is variable and depends on the exposure time of the photographic plate. In order to keep the colour characteristic of the light constant for different intensities, the light source (107) can be shifted along the axis (30) of the projector tube over a range of 1 to 12 cm from the quartz windows (106) covering an interval of nearly 5.5 magnitudes which has proved to be amply sufficient for the used range of exposure times.

The homogeneity of the light spot on the photographic plate was tested by removing the step wedge and measuring the density on the photographic plate of the image of the lens (105). Density variations of 0.01 were measured over the full size of the image which is 9.4 times larger than the actual surface used for the projection of the step-

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## 1.52 m Spectrographic Telescope

- Oct. 1977: Breysacher/Azzopardi, Ahlin, Foy, van Paradijs/van den Heuvel, Materne/Tarengi/Chincarini, Schmidt-Kaler/Kühn/Feitzinger/Reinhardt, Imbert.
- Nov. 1977: Imbert, Wamsteker, van Paradijs/van den Heuvel, Bergvall/Lauberts/Westerlund/Ekman, Dennefeld/D'Odorico, Kohoutek, Surdej/Breysacher, Sterken/Jerzykiewicz, Lacoarret.
- Dec. 1977: Lacoarret, Melnick, Dennefeld, Dennefeld/D'Odorico, Mauder, Klutz, Pakull.
- Jan. 1978: Pakull, Breysacher/Muller/Schuster/West, Schnur, Kunth, Westerlund/Olander, Seggewiss/Maitzen, Breysacher/Westerlund, Dravins.
- Feb. 1978: Dravins, Ardeberg/Lyngå, Georgelin/Comte, Breysacher/Muller/Schuster/West, Reimers, Gahm, Danks.
- March 1978: Danks, de Loore, Wamsteker, Breysacher/Westerlund, Andersen, Ahlin, Hunger/Kudritzki, Surdej.

## 1 m Photometric Telescope

- Oct. Thé/Staller, Alcaíno, Wamsteker/Schober, Epchtein/Turon.
- Nov. 1977: Vigneau, Vogt, Bergvall/Lauberts/Westerlund/Ekman, Wamsteker.
- Dec. 1977: Crane/Dennefeld, Lequeux/Mianes/Vigroux, Muller/Surdej/Schuster/West, Wamsteker, Salinari, Mauder.
- Jan. 1978: Mauder, Crane, Wlérick, Schnur, Westerlund/Olander, Pakull, Lub, Schröder.
- Feb. 1978: Schröder, Schnur, Lelièvre, Vogt, Knoechel, Gahm.
- March 1978: Gahm, Möllenhoff, Dennefeld/Materne, Adam, Wamsteker/Schober, Wamsteker, Sherwood/Arnold.

## 50 cm ESO Photometric Telescope

- Oct. 1977: Bouchet, Vogt, Bouchet, Wamsteker/Schober, Duerbeck.
- Nov. 1977: Duerbeck, Vogt, Duerbeck, Kohoutek.
- Dec. 1977: Kohoutek, Surdej, Vogt, Surdej.
- Jan. 1978: Surdej, Vogt, Pakull, Seggewiss/Maitzen, Haug.
- Feb. 1978: Haug, Knoechel, de Loore.
- March 1978: de Loore, Vogt, Bastiaansen.

## GPO — 40 cm Astrograph

- Oct. 1977: Azzopardi/Bijaoui, Blaauw/West, Azzopardi/Bijaoui.
- Nov. 1977: Blaauw/West, West/Muller/Schuster/Surdej, Martin.
- Dec. 1977: Martin, West/Muller/Schuster/Surdej, Martin.
- Jan. 1978: West/Muller/Schuster/Surdej, Blaauw/West, Giesecking.
- Feb. 1978: Zeuge, Blaauw/West, Giesecking, Azzopardi.
- March 1978: Azzopardi, Blaauw/West, Giesecking, Azzopardi.

## 50 cm Danish Telescope

- Nov. 1977: Renson, Sterken/Jerzykiewicz.
- Dec. 1977: Sterken/Jerzykiewicz, Heck, Klutz, Heck.
- Jan. 1978: Heck.

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## Do not forget ...

... that applications for observing time during period 21 (April 1, 1978 to October 1, 1978) must be sent to ESO-Munich **before October 15, 1977**. It has been decided that late applications will **not** be considered this time.

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