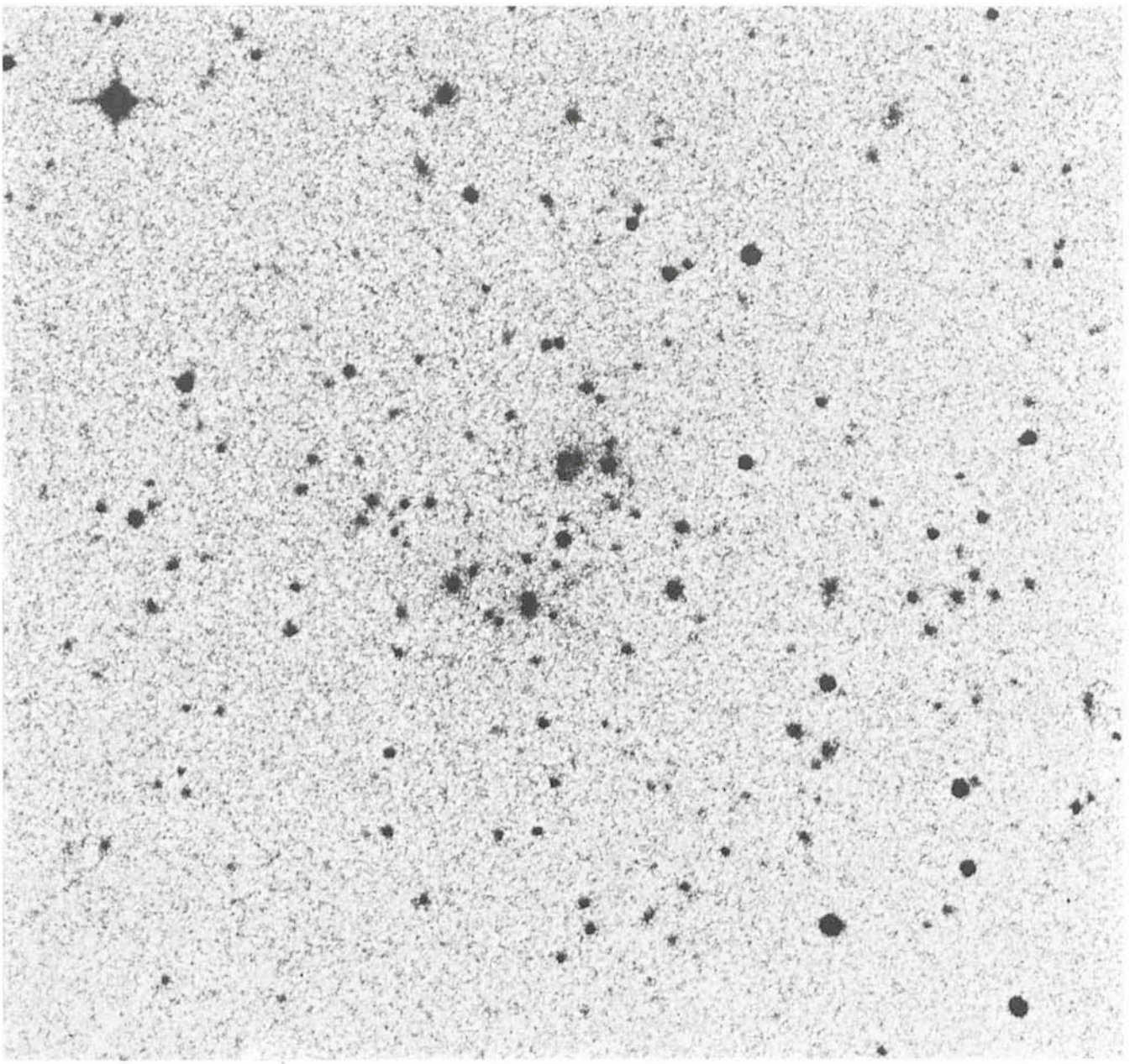
New Southern Groups and Clusters of Galaxies

The first deep photographic atlas of the southern sky, the ESO (B) Atlas, is now virtually complete. It has already been extensively used by many southern observers, and lists of various objects are being compiled. Drs. Alan Duus and Barry Newell of the Mount Stromlo and Siding Spring Observatory in Australia have identified a large number of new clusters of galaxies which will no doubt soon be studied in closer detail. Excluding the quasars, faint galaxy clusters are the most distant known objects in the universe and are therefore of great importance for the study of its large-scale structure. Drs. Duus and Newell report:

We have undertaken a survey of a limited region of the southern sky to obtain a finding list of clusters of galaxies. We chose 97 high galactic latitude ($|b^{II}| > 20°$) fields from the ESO (B) Survey, and from these located 770 groups and clusters, of which no less than 710 proved to be new identifications.

Clusters were examined visually, using our film copies of the ESO (B) Atlas and a x 7 eyepiece, and classified on a system similar to that described by Zwicky, Herzog and Wild (1961). The accompanying photograph shows STR 2232–380, a newly-identified cluster. It is classified as compact, with ~200 members and is extremely distant.

Cluster coordinates (α, δ) were determined with respect to a grid of standard stars selected from the SAO catalogue. Our catalogue includes clusters and groups, with $\delta < -27°$, previously identified by de Vaucouleurs (1956, 1975), Klemola (1969), Snow (1970), Sersic (1974), Rose (1976) and Sandage (1976).



The new, extremely distant cluster of galaxies, STR 2232–380, reproduced from the ESO (B) survey plate (60 min, IIa-0 + GG 385). Note in particular the central condensation of elliptical galaxies which leads to classifying the cluster as "compact".

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.

References:

de Vaucouleurs, G. 1956, Memoirs of the Commonwealth Observatory (Mt. Stromlo), No. 13.

de Vaucouleurs, G. 1975, in *Galaxies and the Universe*, vol. 9 of *Stars and Stellar Systems*, ed. A. Sandage, M. Sandage, and J. Kristian (Chicago University of Chicago Press), Ch. 14.

Klemola, A. R. 1969, *A. J.*, 74, 804.

Rose, J. A. 1976, *Astr. Ap. Suppl.* 23, 109.

Sandage, A. 1975 *Ap. J.*, 202, 563.

Sersic, J. L. 1974 *Ap. Space Sci.*, 28, 365.

Snow, T. P. 1970. *A. J.*, 75, 237.

Zwicky, F., Herzog, E., and Wild, P. 1961, *Catalogue of Galaxies and Clusters of Galaxies*, California Institute of Technology.

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.*

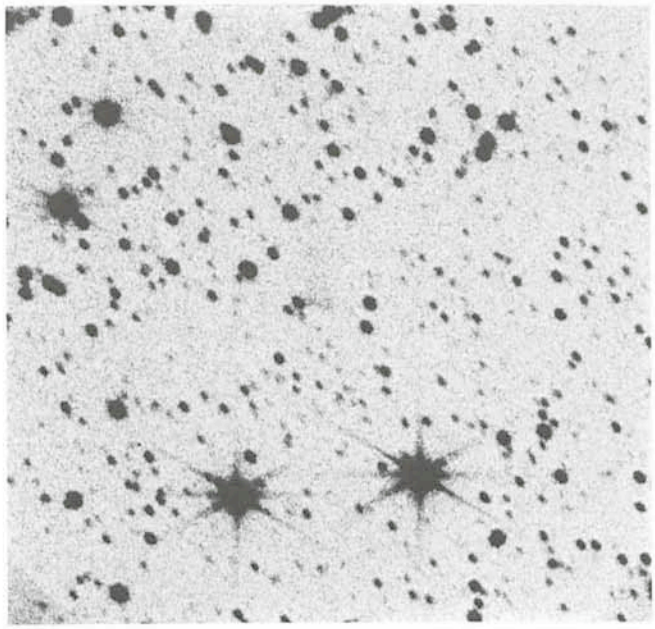
Apart from astronomy, his interests and activities covered many other fields. He participated in research programmes in geology at the Copenhagen University. He was also enthusiastic at archaeology and adventurous-like travels, visiting all five continents in the course of his numerous trips. During 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.



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 perihel distance, about 1,030 million kilometres, and after having passed through the perihel 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 ot 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/Prévot/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.