

# ESO Workshop on Modern Techniques in Astronomical Photography

A workshop on the above subject took place in Geneva, Switzerland, on May 16–18, 1978. It was organized by the European Southern Observatory, in collaboration with the Working Group on Photographic Problems of the International Astronomical Union.

During three days, about 65 participants from 19 countries discussed the latest news in the field of astronomical photography. Review papers were presented about the dramatic history of photography of the skies (Wm. C. Miller, Hale Observatories, Pasadena), the newest hypersensitizing techniques (M. E. Sim, Royal Observatory, Edinburgh), the all-important photometric calibration of the plates (A. A. Hoag, Lowell Observatory, Flagstaff) and other subjects. These included colour photography (beauty versus scientific value!), copying of plates and special photographic techniques (or rather magics) to bring out what you do not see in the photos, but what is really there (very faint details or overexposed). The current photographic work at some of the world's leading telescopes was also described, well illustrated by photos—also from the soviet 6 metre telescope.

The workshop clearly demonstrated the enormous potential of photography in astronomy. Although some applications are now being taken over by other, mainly electronic detectors of higher quantum efficiency, the photographic plate is still the only detector available for large-scale information storage ( $10^{10}$  bits on a single 14 x 14 inch plate!) and, for many other purposes, by far the cheapest and easiest to use.

The main conclusions of the workshop were brilliantly summarized by Dr. Al Millikan (Kodak, Rochester) who is also the chairman of the Working Group on Photographic Materials of the American Astronomical Society. Specific recommendations for optimum use (including hypersensitization and calibration) of the various types of emulsions were given. This information will be of great value for photographic work at the observatories—and not the least for interested amateur astronomers.

The Proceedings have been edited by R. M. West (ESO) and J.-L. Heudier (Nice Observatory) and will be available by the end of June 1978.

## Proceedings of the ESO Workshop on Modern Techniques in Astronomical Photography

The Proceedings of this workshop have now been edited and will be available in print by the end of June 1978.

The price for the 300-page volume is Sw. Fr. 16.— (in Europe) and US \$ 10.— (elsewhere), including postage. Please send your order to:

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## Sign-posts of Star Formation in Interstellar Clouds South of Declination $-30$ Degrees

G. F. Gahm

*A major investigation of star formation in the southern hemisphere was recently undertaken by Dr. Gösta F. Gahm from the Stockholm Observatory at Saltsjöbaden, Sweden. He obtained direct plates and spectra with the 3.6 m telescope and here reports some very interesting preliminary results. Working with a newly-commissioned telescope may also create some exciting moments . . .*

The galactic dark cloud complexes south of declination  $-30^\circ$  have not been studied in as much detail as the corresponding complexes north of this limit. This circumstance is of course a result of the previous paucity of large optical, infrared and mm-telescopes in the southern hemisphere.

However, there is a number of interesting regions south of  $-30^\circ$ . For instance, there are two clouds in the Chamaeleon constellation, close to the southern celestial pole, at  $\delta = -77^\circ$ . These clouds contain a number of recognized pre-main-sequence objects, like T. Tauri stars and

the so-called Herbig type Ae- and Be-stars. Also, there are Herbig-Haro objects which are often found in regions of star formation. The Chamaeleon associations are the nearest regions of star formation that we know of, and we may therefore observe intrinsically fainter stars in pre-main-sequence phases of evolution in these clouds than in others. The most extensively studied region in the southern sky is the  $\eta$  Carinae nebula, which is a relatively distant giant H II region, very complex and with a number of interesting features as observed at optical, infrared and radio frequencies.

### The Coalsack

The well-known Southern Coalsack is another region which has been subject to several studies. This dark cloud is remarkable in the sense that there are no sign-posts of star formation known so far. The fact that the region contains a number of Barnard-Bok globules may or may not be taken as an indication that star-formation processes have started. We do not know, however, whether the Southern Coalsack is a virgin interstellar cloud in a very early stage