

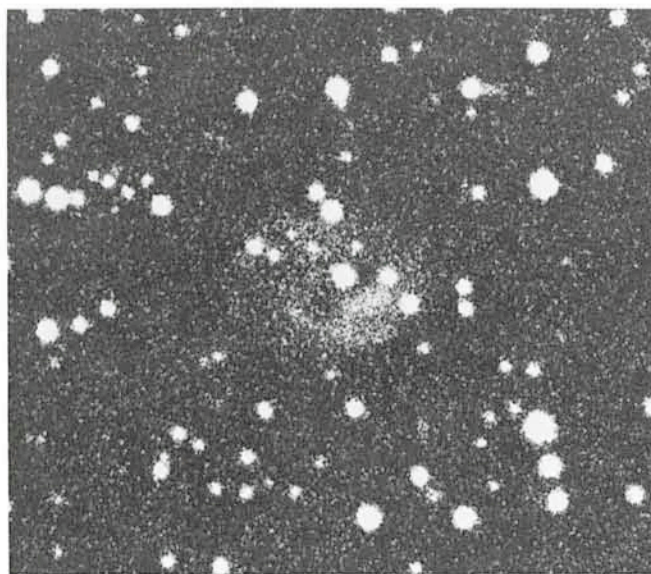
A New Planetary Nebula

On ESO Quick Blue Survey plate No. 869 (field 263), a small galaxy cluster may be seen in the NW corner. The three largest galaxies were included in ESO/Uppsala list No. IV which was published in February 1977 (Holmberg et al., *Astron. & Astrophys. Suppl. Ser.* 27, p. 295) as ESO 263-IG01, 263-G02 and 263-IG03.

Spectroscopic observations were carried out in March of the three objects and to some surprise it was found that the second object, 263-G02 is not a galaxy but a planetary nebula in the Milky Way! The low-dispersion spectrum also showed that the central star is of spectral type O.

What is the reason for this mistake? First of all, the coincidence with the galaxy cluster, but also because the structure in the gaseous envelope of the planetary may remind us of some sort of spiral arms. The "nucleus" was described as: Bright, or star?, but many galaxies have similar intensive nuclei. Clearly one can never be quite sure of the nature of such an object before a spectrum has been obtained.

The correct name of the object is now 263-PN02.



Enlargement from the original ESO Schmidt plate of the new planetary nebula ESO 263-PN02.

The Control System of the ESO 3.6-metre Telescope

The first visiting astronomers to the 3.6-m telescope are expected to show up sometime in October 1977. Continuing the Messenger series of descriptions of the various parts of the large telescope, Dr. Svend Lorenzen from ESO/Geneva here introduces the control system for which he has written the software. Unlike most of the mechanical parts of the telescope, the control programme will interact directly with the observers and it is of great importance that it is "astronomer-friendly". Those who have used the system so far are very happy with its performance and it is good to know that further improvements can easily be inserted into the very flexible system whenever this will be required.

The control system of the 3.6-m telescope as it will be available to the visitors later in 1977 features the possibilities already known from some of the ESO telescopes: a highly accurate programmable digital servo-system, and a good deal of other facilities aiding the observer to obtain reliable measurements. The control system—as it is designed with an integral minicomputer—is on purpose an open-ended system. The continuous development will stay compatible with the present description, and add a growing number of options—hopefully to the pleasant surprise of the future observers.

Operation Modes

The control system basically has five operation modes:

Guide: The telescope is tracking. With the handset a small correction rate can be applied. The dome follows the telescope as necessary with low speed (0.1 degree/sec).

Set: The telescope is tracking. With the handset a medium correction rate can be applied. The dome follows as necessary.

Offset: The telescope is tracking. With the handset steps can be applied. The dome follows as necessary.

Slew: The telescope does not track. With the handset the telescope can be moved with high speed (1 degree/sec). The dome does not follow the telescope.

Preset: The telescope goes with high speed to a given position. The dome goes with high speed (1.5 degree/sec) to the corresponding position.

All the tracking rates, correction rates, and offset amounts can be assigned within reasonable limits by

commands at the terminal. The correction rates and offset amounts are multiplied with $\sec \delta$ before they are applied in α .

Control Panel

The relevant part of the control board consists of three units. The first contains a normal CRT terminal. It is primarily used to input all commands which are not defined by push-buttons: coordinates of objects, rates of tracking, filters at the Cassegrain adaptor, etc. Furthermore a good deal of messages show up on the screen, some of interest for the observer, others more to the benefit of the maintenance team. All the transactions of this terminal are logged on a disc file for later analysis.

The next section contains a TV monitor with a selector switch. It can be connected to the cameras of the prime-focus guide probe, the Cassegrain-focus guide probe, or the Cassegrain centre field acquisition. Remote control of the high voltage of the cameras as well as of the shutters are also provided.

The third section consists of digital displays and illuminated push-buttons to command and show all basic telescope functions. This panel is logically divided into three rows. At the top row the sidereal time and the actual telescope coordinates are continuously displayed with a resolution of 0.1 second and 1 arcsecond, respectively. At the centre row a general-purpose display and eight buttons give the choice between Cassegrain focus, air-mass, zenith distance, hour angle, the coordinates of the Casse-