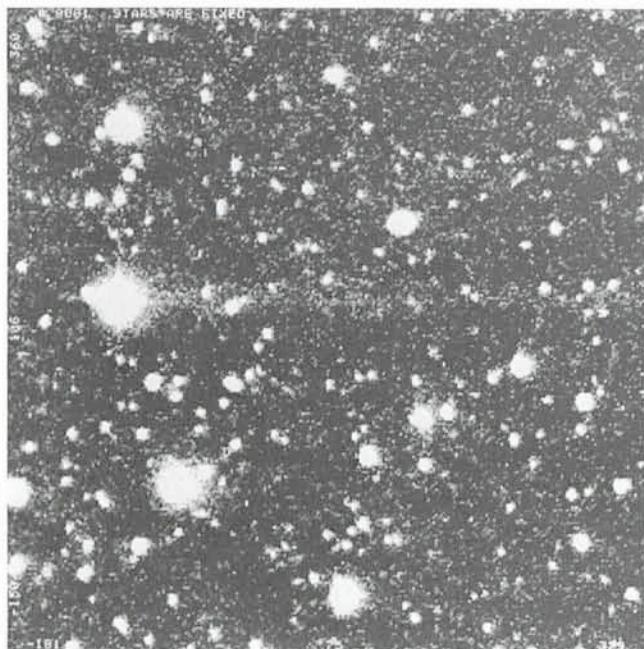


# Where is Phobos 1?



The Soviet spacecraft Phobos 1, launched in July this year and now en route to Mars and its major moon, was lost due to an incorrect ground control command. Many attempts were made to reestablish radio-contact, but unfortunately in vain.

On September 21, ESO received a request for observation of Phobos 1 from the Space Research Centre in Moscow. If it were possible to obtain a sequence of images of the spacecraft – of course only as a faint point of light – then its accurate position and perhaps even its rotational status could be determined. This would help the efforts to reacquire contact.

At La Silla, the first possible night, September 22, was lost due to snow (see the "NTT Picture Gallery" in this issue) and no observations of such a faint object could be made during the ensuing full moon period. However, ob-

servations were carried out with the Danish 1.5-m telescope on October 1/2, 2/3, and 3/4, resulting in a total of fifteen 10-minute exposures with the CCD camera. Moreover, nine 3-minute exposures were made with the EFOSC instrument at the 3.6-m telescope during the night October 3/4. The observers were visiting astronomers D. Hatzidimitriou and C.A. Collins (Edinburgh); the image processing was made at La Silla by H.-U. Nørgaard-Nielsen (Copenhagen) and H. Pedersen (ESO), who was also responsible for the coordination.

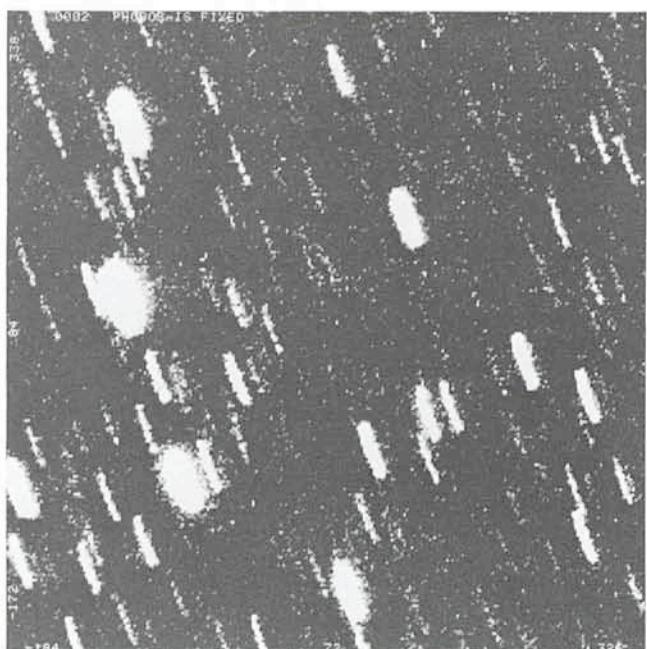
We show here the central areas of two images from EFOSC. The one to the left is a direct exposure of the Phobos 1 field; the right one is a combined frame in which the 3.6-m telescope was set to follow the motion of the spacecraft; the stars are therefore seen as trails. The limiting magnitude in both cases is magnitude 25 or fainter. Since Phobos 1 is

not seen, it must either have been outside the field (did a rocket fire after the contact was lost?) or it was positioned so unluckily in space that the sunlight reflected from its surface in our direction was too faint to be detected, even with the present, extremely sensitive equipment.

A final attempt was made with EFOSC on October 9/10, by visiting astronomers G. Suchail and Y. Mellier (Toulouse). Four frames, totalling 36 minutes were obtained, but again there was no sign of Phobos 1.

It is a pity that this last-ditch effort was unsuccessful and that it was not possible to help our space colleagues this time. But it is a good example of the collaborative spirit that reigns in our field of science, and which transgresses all borders.

*The editor*



## Open-House at ESO

On October 22, 1988, the science institutes in Garching again jointly organized an open-house day. With the help of many of the staff members, a well-defined path was established through the ESO Headquarters with demonstrations and exhibitions along the route.

This year, around 1,800 persons visited ESO. They were received at the entrance by the most "photogenic" staff members and guided towards the auditorium, where a new ESO slide show was running at 20-minute intervals.

