

Akn 120 is certainly an excellent object for optical photometric and spectroscopic monitoring. It also recommends itself for long-term observations in the radio, infrared and X-ray spatial regions.

Acknowledgements

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Announcement

SECOND ESO INFRARED WORKSHOP

19–22 April 1982

Organizing Committee: R. van Duinen (Groningen), M. Grewing (Tübingen), A. Moorwood (ESO, Chairman), P. Salinari (Florence), F. Sibille (Lyon).

This Workshop is being organized with the aims of reviewing the status and performance of the many infrared groundbased facilities and instruments which have come into operation since the last ESO Infrared Workshop in Sweden in 1978 and to promote discussion on three topics of interest for the future:

- the infrared astronomical requirements of future Very Large Telescopes on the ground,
- the areas in which groundbased and airborne observations can best complement future space missions,
- the use of array detectors and the possible spin-offs to be expected from infrared space technology in groundbased and airborne instrumentation.

An exchange of views in these particular areas is considered to be timely bearing in mind ESO's on-going VLT studies, the imminence of the IRAS launch, the advanced technical state of the

GIRL Spacelab project and the widespread interest being displayed in a European Astroplane and ESA's study of an Infrared Space Observatory.

The meeting will be organized around invited reviews of the major projects plus contributions, submitted in response to this announcement, on the capabilities of current instruments and techniques, detector and instrumental developments. In keeping with the desired Workshop atmosphere, however, we intend to devote considerable time to discussion and will particularly welcome contributors interested in expressing their ideas and prejudices on the above themes.

It is hoped that the results will be suitable for publication by ESO. Attendance will have to be limited to around 70.

Further information and application forms can be obtained by contacting

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Observations of the Giant Bubbles in the Large Magellanic Cloud

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Introduction

Deep monochromatic photographs through narrow-band interference filters on nearby spiral galaxies reveal large numbers (50–100) of circular shaped H II regions, with usually weak or absent central emission. They are called by various names; arcs, loops, rings, shells, etc. . . ., and are clearly the two-dimensional projections of more or less spherical bubbles of ionized gas.

This is by no means a new phenomenon: Hubble (1925, *Astrophysical Journal* **62**, 409) had already described three "ring nebulae" in the spiral of the Local Group NGC 6822. But it is the advent of large narrow-band interference filters that had made possible the detection of tens of bubbles in the galaxies in our vicinity. A number of surveys have recently been published, including one by Sivan (1974, *Astronomy and Astrophysics Suppl.* **16**, 163) of our Galaxy with a 1-m telescope and one of M 33 with the Soviet 6-m telescope (Courtès *et al.*, 1981, *The Messenger* No. 23).

In our Galaxy, 21-cm surveys show numerous H I bubbles, and in fact some of the H II rings do have H I counterparts. This phenomenon is thus not restricted to ionized gas, and appears as one of the fundamental ways by which interstellar gas is being shaped in galaxies. Further kinematical and physical studies appear essential to understand the basic processes at work. Our Galaxy, however, is not quite suitable for this kind of studies: Although it has the unique advantage that one can use a home-made telescope, the observer is unfortunately embedded in the galactic disk, which reduces detection, except for close and unobscured regions. In the nearest outer galaxies (M 31, M 33, etc. . . .), the angular resolution of even the largest telescopes is not sufficient for a fair view, and detailed studies would need anyway too many of their severely distributed nights. The Magellanic Clouds—and especially the large one—appear (as usual!) as the best compromise between maximum closeness and unobstructed global view.