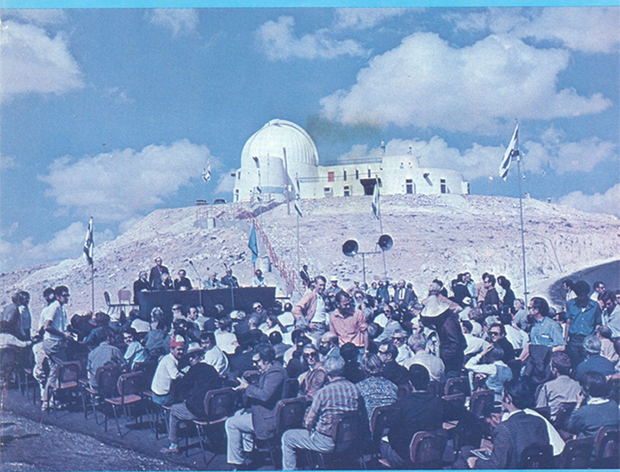
Sky and TELESCOPE



Dedication of Wise Observatory

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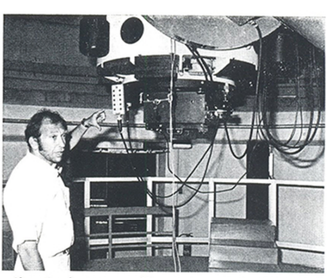


Above: American astronomer Myron Lecar explains the Cassegrain instrumentation of the 40-inch. He is standing on the rising floor.

Left: Prof. Uri Feldman (dark suit) is the director of Israel's Wise Observatory. With him is assistant director Ivy Gillam. This and the picture below are from Ektachromes by F. L. Whipple.

The Wise Observatory in Israel

THE FIRST major observatory in Israel was formally opened on October 26, 1971. While Israeli scientists have been active in theoretical astrophysics, and although Tel Aviv University has maintained a solar observing station, the new Florence and George Wise Observatory is the first facility in the country for stellar studies.

In southern Israel 196 kilometers south of Tel Aviv, the observatory is situated on Mount Zin in the Negev High Plateau, at latitude 30° 30′ north, longitude 34° 37′ east. It is five kilometers from the town of Mitzpe Ramon, population 1,500. The surrounding country is a barren rocky desert, where the sky is virtually cloudless about 230 nights per year.

The chief instrument of Wise Observatory is a 40-inch Boller and Chivens reflector, modified to accept Ritchey-Chrétien wide-field optics designed by Ira S. Bowen. It can be operated either at f/7 with an unvignetted two-degree field, or as an f/13.5 Cassegrain. Its optical parts are of fused silica.

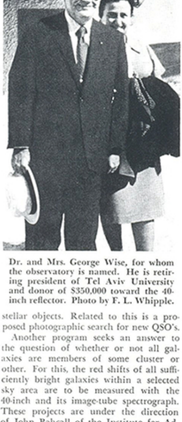
At the dedication (see also front cover), visiting dignitaries and astronomers await their turns to inspect the observatory. Israeli-built in eight months after plans were completed, the two-story concrete building has a 10-meter dome.

Accessories for the 40-inch presently include an image-tube Cassegrain spectrograph and a photoelectric photometer. Eventually a spectrum scanner and infrared detectors will be added.

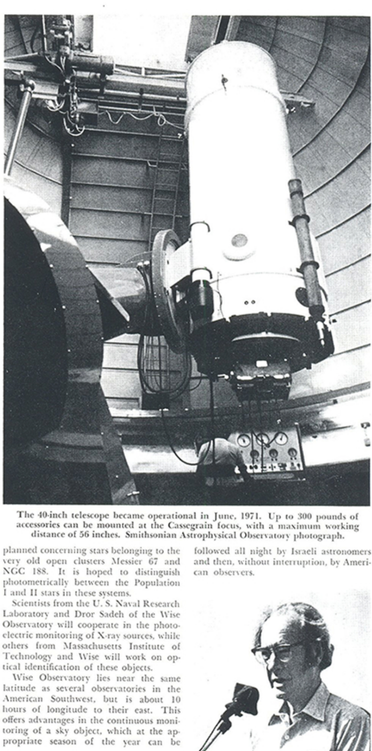
A master electronics system is provided to point the telescope, correct the tracking rate for atmospheric refraction, record meteorological data, and process the output of the telescope accessories. This system is built around a Hewlett-Packard 2114B computer.

The $1,500,000 observatory, whose director is Uri Feldman, is part of Tel Aviv University's department of physics and astronomy. The new facility was established with assistance from the Smithsonian Institution of Washington, and a group of American astronomers (coordinated by Myron Lecar, Smithsonian Astrophysical Observatory) is collaborating with Israeli astronomers in the observatory's research programs.

One such project is the photoelectric monitoring of the radiation from quasi-



Dr. and Mrs. George Wise, for whom the observatory is named. He is retiring president of Tel Aviv University and donor of $350,000 toward the 40-inch reflector. Photo by F. L. Whipple.



The 40-inch telescope became operational in June, 1971. Up to 300 pounds of accessories can be mounted at the Cassegrain focus, with a maximum working distance of 56 inches. Smithsonian Astrophysical Observatory photograph.

stellar objects. Related to this is a proposed photographic search for new QSO's.

Another program seeks an answer to the question of whether or not all galaxies are members of some cluster or other. For this, the red shifts of all sufficiently bright galaxies within a selected sky area are to be measured with the 40-inch and its image-tube spectrograph. These projects are under the direction of John Bahcall of the Institute for Advanced Studies, Princeton, New Jersey.

Also, a photometric program has been planned concerning stars belonging to the very old open clusters Messier 67 and NGC 188. It is hoped to distinguish photometrically between the Population I and II stars in these systems.

Scientists from the U. S. Naval Research Laboratory and Dror Sadeh of the Wise Observatory will cooperate in the photoelectric monitoring of X-ray sources, while others from Massachusetts Institute of Technology and Wise will work on optical identification of these objects.

Wise Observatory lies near the same latitude as several observatories in the American Southwest, but is about 10 hours of longitude to their east. This offers advantages in the continuous monitoring of a sky object, which at the appropriate season of the year can be followed all night by Israeli astronomers and then, without interruption, by American observers.

A leading speaker at the dedication was Fred L. Whipple, the director of Smithsonian Astrophysical Observatory, Cambridge, Massachusetts.