

The Elizabeth Telescope of the Cape Observatory was officially opened by the British Ambassador, Sir Hugh Stephenson, on May 1. This is a 39-inch reflector constructed by Sir Howard Grubb Parsons & Co. of Newcastle, England. In most respects it is a perfectly conventional instrument and its cross-axis mount is a smaller edition of the series of 74-inch telescopes made by this firm in recent years. The principal mirror has a focal ratio of $f/4.63$ and observations can be made at the prime focus (focal length 180.5 inches), at the Cassegrain focus (equivalent focal length 65 feet, i.e. $f/20$) or near the prime focus through a corrector system which gives a flat field in good definition of over $2^\circ \times 2^\circ$ with an equivalent focal length of 137.75 inches and a focal ratio of $f/3.94$. This corrector system is similar to that described by J. G. Baker in "Amateur Telescope Making. Book Three". It consists of an annular correcting plate of 35 inches clear aperture with a central hole 15.5 inches in diameter some distance behind which is a doublet lens 13.0 inches in aperture. The tube of the telescope is very sturdily built and designed according to the principle of balanced flexures introduced by Serrurier for the 200-inch Hale Telescope.

The packing cases containing the new telescope arrived at the Observatory on September 13, 1963. The instrument was erected by members of the staff of the Observatory and of the Ministry of Public Building and Works under the supervision of Mr. T. Hall of Grubb-Parsons. The assembly of the telescope went smoothly and the first star was viewed on November 13. Thereafter the telescope was used at the Cassegrain focus for photoelectric photometry and for direct photography until the preparations for working at the prime focus were complete. The Yapp Dome, which houses the telescope, is not furnished with a movable prime focus platform. To avoid the complications that the provision of such a platform would introduce, a method of working the telescope from the main floor of the dome has been developed. The first plates at the prime focus were taken in February and with the reflector-corrector system in March by Mr. Palmer, who had been specially seconded from Herstmonceux to assist in the adjustment of the instrument.

The optical and mechanical performance of the new telescope and the convenience of handling leave nothing to be desired. The performance of the reflector-corrector system which converts the telescope into a powerful camera of $f/3.9$ covering a flat field of over $2^\circ \times 2^\circ$ in good definition is especially pleasing.

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