

South Africa to Have Largest Telescope South of Equator

Astronomy

WHAT will be the largest telescope south of the equator is now under final test at Pittsburgh, preparatory to dismantling it for shipment to its final home in South Africa. The new instrument, a reflecting telescope with a mirror five feet in diameter, has been built for the southern station of the Harvard College Observatory, at Bloemfontein, by J. W. Fecker. Harvard astronomers are now using it to make photographs of the stars. So far, it seems to be entirely satisfactory and free from measurable error.

The mounting of the telescope was designed by Mr. Fecker and built in his shops. The huge mirror, exceeded in size by only three others now in use, previously belonged to the Harvard Observatory, but was not satisfactory. It has been refigured in the Fecker works and provided with a special mounting to prevent it from bending, as it was formerly thought too thin to be of use.

When erected in South Africa, the Harvard station at Bloemfontein will have several large instruments adapted to photography of the southern skies. In addition to the big reflector, a refracting telescope, with a photographic lens 24 inches in diameter, is already in use, as well as a number of smaller telescopes.

The mirror for the world's third largest telescope is also undergoing completion at the same place. This is the 69-inch disc made last year at the Bureau of Standards in Washington, and intended for the Perkins Observatory at Ohio Wesleyan University, Delaware, Ohio. The instrument was completed with the intention of using a 60-inch mirror. As the Bureau of Standards' scientists succeeded in making a bigger disc than anticipated, Mr. Fecker has also built a new tube for the telescope, to use the mirror to its full advantage.

Mr. Fecker is the successor of John A. Brashear, one of the most

famous makers of large telescopes and lenses.

With three groups of European astronomers planning separate observatories in South Africa, in addition to the six large ones already there, this is rapidly becoming one of the world's great astronomical centers. Already it is the chief center of Southern Hemisphere observatories.

The University of Leyden, Holland, will be the next northern observatory to establish a branch south of the Equator to observe parts of the sky invisible from Europe or North America. Prof. W. de Sitter, director of the Leyden Observatory, has recently inspected South African sites, and decided to locate the branch on the grounds of the Union Observatory at Johannesburg.

Another southern observatory is to be established at the Cape as a joint enterprise of all the German observatories. Prof. P. Guthnick, director of the Berlin University Observatory at Neubabelsberg, a suburb of Berlin, also made a recent inspection of possible sites. So far he has not decided between Bloemfontein, Pretoria and Windhoek, but it is believed that he favors the former.

In addition to these, it is planned to move the Radcliffe Observatory, now at Oxford, England, to South Africa. This institution, equipped with an 18-inch refracting telescope in addition to smaller instruments, has no connection with the University of Oxford, which has its own observatory. Sir Frank Dyson, Astronomer Royal, and Dr. H. Knox-Shaw, in charge of the Radcliffe Observatory, recently visited possible locations. So far they have not decided between Bloemfontein and Pretoria.

The Royal Observatory, at Cape Town, is the oldest of the present South African observatories. Its largest telescope is a refractor with a lens 24 inches in diameter. The University of South Africa, also in Cape Town, boasts an 18-inch refractor.

At Johannesburg is located the Union Observatory, with a 26-inch refractor. Both the University of Michigan and Yale University have established branches on the Union Observatory grounds with 27-inch and 26-inch refracting telescopes, respectively.

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