ASTRONOMY

To Test Florida as Site For Huge, New Type Telescope

Ritchey, Who Built 60-Inch Mt. Wilson Instrument, To Bring Improved Telescope From Paris For Trial

PROF. GEORGE W. RITCHEY, American astronomer who built the great 60-inch telescope at the Mt. Wilson Observatory and the optical parts of the 100-inch, largest in the world, is now preparing to return to the United States after staying in Paris since 1921. During the coming winter he will go to Florida to make tests with a new type of telescope that he has developed in collaboration with Prof. Henri Chrétien, of the Observatory of Nice. The purpose of these tests will be to determine whether the region of Miami is suitable for a very large telescope of the same type, which is projected by a group of Detroit men who are interested in astronomy. If the atmospheric conditions prove satisfactory, it is planned to build a telescope there with an aperture of 20 to 25 feet, far larger than any in existence today.

The Ritchey-Chrétien telescope is a reflector, in which a concave mirror brings the light rays to a focus. This type of telescope was invented by Sir Isaac Newton, and is widely used today, the world's largest telescopes all being reflectors.

PROF. GEORGE W. RITCHEY

Who plans to test during the coming winter the suitability of conditions in Florida for astronomical observation

A disadvantage of such telescopes is their small field. That is, they focus sharply a star at which they are directly pointed, but the image of another close by is badly distorted. As most of these instruments are used for photography, the stars in the center of the plate are sharp, but those at the edges may be badly blurred. With lens telescopes, where a convex glass does the focussing, sharp images can be obtained over a much larger field, but the lens telescopes, known as refractors cannot be made as large as the reflectors.

Sharp Images Over Large Field

The Ritchey-Chrétien telescope, Prof. Ritchey claims, gives sharp images over a large field even though it is a reflector. The curves used are not parabolic, but are special curves developed for the purpose. One advantage of the Ritchey-Chrétien telescope is that it is very short compared to the aperture. This instrument, though it has a twenty-inch mirror, is only about fifty inches long. A telescope of the Newtonian type of similar aperture would be more than twice as long.

In order to test the actual performance of the telescope, Prof. Ritchey has erected it in a regular observatory mounting at the estate of the Duc de Gramont, a French nobleman particularly interested in optics. He declares that it has proven highly successful.

This telescope is now being dismantled, and Professor Ritchey is preparing to take it to the United States. Within a few months he expects to have it erected in Miami, and during the winter will use it to make astronomical photographs. In order to get the full advantage of the new curves, the photographs will be made on curved plates, ground as perfectly as a lens. This takes care of the slight curvature of the field even with these curves, and it is claimed that more perfect astronomical photographs than ever before will be possible.

Science News Letter, October 25, 1930