F HEYDEN

JESUIT SCIENTISTS

Jesuit scientists are as old as the Society of Jesus. While the Popes relied heavily on the Jesuits at the time of the Council of Trent for theology, they also relied on the Jesuit scientists who at the time of the founding of the Jesuits in 16th century were already busy with the study of the sun and the stars. At the time of the great modern astronomers like Tycho Brahe, Kepler and Galileo, there were Jesuits of equal ability if not, better working on the same problems.

One of the most prominent was Christopher Scheiner, a Dutch Jesuit who had a very interesting life. First of all, he is credited as one of the first observers of sunspots. Later Galileo, who was actually behind him in time of discovery claimed he was a plagiarist who copied from him. Kepler had other ideas that the sunspots were planets like Mercury passing across the face of the sun and perhaps four other astronomers including some Chinese of several centuries earlier who had seen sunspots.

But Scheiner outstood all of them because of his scientific analysis. He began at first by making his own telescope which most of the astronomers had to do at that time and saw to it that it had a specially designed eyepiece to not only give an exact picture of the sun on a screen but one which showed better detail than mere shadows of sunspots. From his pictures he saw that the sun was a sphere because of the limb darkening across the face of the disk which made a sunspot appear only for less than 180 degrees. At first he thought he had seen small planets crossing the face of the sun but he went on to note the rotation of the sun and did so in such a manner that he not only found the period of the sun's rotation from sunspots but also the variation of that period with latitude and the angle of rotation with the obliquity of the earth's orbit. He even gave a logical explanation of the refraction of the sun caused by the earth's atmosphere at rising and setting. He also noted more details in his solar images that others had not seen. He saw what we now call flocculi or brighter areas on the face of the sun.

In 1626 he wrote a book on the sun which he named the Rosy Bear after the Orsini family who financed the publication. Analysing that book for its