

# Deferred Editorials

## The Transit of Venus.

On Tuesday an event occurred in the astronomical world which had its prototype two hundred and fifty-seven years ago, and of which the discoverer was "a hard working curate," who had a "small pittance" at Hoole, a village near the little town of Preston, Lancashire, England. We refer to the transit of Venus across the sun's disc. This little planet, which is now a bright evening star, and will be especially brilliant the 12th of January next, had undoubtedly performed her transit periodically for thousands of years before the time of Joseph Horrox. But it had never been observed. Nobody had taken any note of the event. The astronomer Kepler left among his papers a prediction of the transit of Venus in 1631, and supposed no other could possibly be visible till 1761. The enthusiastic curate Horrox, then scarcely out of his teens in age, into whose hands these tables fell, on going carefully over them, found errors which led him to believe that a transit would occur in 1639, and that it would pass over the sun's disc long enough before sunset of November 21 of that year to permit of its examination. He communicated his conviction to his friend Crabtree, and, though widely separated by distance, they both observed and took notes of the great event. The only means Horrox had of observing it was by admitting the sun's image into a darkened room, upon a screen which he had prepared, and on which he had described a circle six inches in diameter, divided into one hundred and twenty equal parts, the circumference of which was also marked off into three hundred and sixty degrees, so placed that the sun's rays should at the time fill the whole circle. By this simple method he was able to mark the whole progress of the transit without injury to his sight. Not being able to determine, as now is done, the exact hour when the event would take place, he remained in his darkened room from sunrise till the hour of his service in the house of God for the day was Sunday, and he would not neglect his clerical duties. He attended the morning service, and during the interval ascertained that the planet was not on the sun's disc. After attending the afternoon service, he returned to his chamber, and at a quarter past three an opening in the clouds rendered the sun visible, and he says, "I perceived a new spot, of unusual magnitude and of a perfectly round form, that had just wholly entered upon the left limb of the sun; so that the margins of the sun and the spot coincided with each other, forming the angle of contact." The many earnest wishes of the devout young priest, who found time to mingle his study of duty and the doctrines of theology with that of the celestial worlds around him, were gratified, and for the half hour before the sun passed below the horizon he watched alone the wonderful phenomenon which now has attracted the attention of the whole scientific world, and has been witnessed by many hundreds of scientific men. During this half hour Horrox measured the distance of the planet from the sun three times. At the same time his friend Crabtree, having made similar arrangements, was so captivated and overjoyed with the sight, that he only recovered himself sufficiently to draw a diagram of the planet, which corresponded exactly with the observations of Horrox. Before these two friends could find time to meet each other face to face, or communicate their observations, both passed away.

The event which so excited the enthusiasm of the young astronomers took place again on Tuesday of this week, commencing a little before nine o'clock of the evening, our time, and continuing for about four hours. Preparations have been making for it in scientific circles all over the world for many months past. Companies of astronomers and men of science, with their nicely adjusted instruments for observations, have been sent to points where the sun was visible at that hour of the day, by various governments of the world. Those from the United States occupy stations at Windwardstock, Pohn, Nigraiki, Hobarttown, Bluff Harbor, Critham Island, Kerguelen Possession. We shall very soon hear the results of their observations. The great problem to be solved is the distance of the sun from the earth. The distance now given is ninety-five millions of miles. Later observations than this make the distance nearly three million miles less. Neither is supposed to be correct, though the error, it is said, will not exceed the breadth of a hair seen at the distance of one mile, an error which will amount to many thousands of miles when carried out in the enormous numbers which represent the distance of the sun. The precise practical benefit to result from this large outlay of money and time, and for this upheaving of the astronomical world, in the effort to measure with scientific exactness the distance of the sun from the earth, may be problematical. May be it will allay the apprehensions of the timid in regard to a collision of the heavenly bodies, by which this mundane sphere may possibly ere long be sent whizzing off into illimitable space, with its precious freight of humanity. But whether it be decided that the sun is a few million miles more or less distant from the earth, one thing is too well settled to be disputed. It is the centre around which this earth, the far off planets, the fiery comets and the innumerable stars whose light has been years of time in reaching our eyes, revolves as a common centre, whilst itself, with all this throng of stars and planets, is no doubt revolving in a circle of almost infinite expansion around another common centre whose measurement is beyond the power of finite comprehension.