VIII.—NOTES OF TRANSIT OF VENUS, AS SEEN AT THE CRAWFORD OBSERVATORY, QUEEN'S COLLEGE, CORK, 6TH DEC., 1882. BY PROFESSOR ENGLAND. Communicated by Howard Grubb, F.R.S.A.

[Read, December 18, 1882.]

THE time was taken by chronometer set to Greenwich time, and checked by the signal gun at 1 o'clock of the day of the transit, the proper allowance being made for the time occupied in the transmission of the report. The observations were made with the 8-inch refractor, furnished with polarizing eye-piece. The field of view was by this contracted to about 5′ diameter.

The telescope was directed to the sun at about $1^h\ 30^m$, and adjusted so that the E. limb of the sun bisected the field of view, and the planet should appear near the middle. A few minutes before the calculated time of contact my attention was altogether directed to the dark part of the field, hoping to see Venus before contact. In this respect I think the limited field was an advantage; but no appearance whatever was observed until after $2^h\ 2^m$, when a slight *notch* was observed on the sun's limb very near the centre of the field. It took a few seconds before I could be absolutely certain of this, on account of the apparent undulatory motion on the sun's edge. The observation may therefore be considered of no value as regards time of contact. The planet gradually advanced on the sun—the disc beautifully defined—until it had somewhat more than half entered on the sun's disc, when the part without the sun became visible, the eastern edge being distinctly luminous, very similar to what is seen in the moon a few days after new moon, except, of course, the planet was much darker than the moon, no difference being apparent between the part on the sun's disc and that without it, except near the eastern edge. The cusps now gradually approached, and at $2^h\ 21^m\ 51^s$ I signalled to my assistant to register the time. It was not, however, until twenty seconds after, viz. $2^h\ 22^m\ 11^s$, that I felt satisfied of contact, and the limb of the sun was only clearly visible outside the planet at

$2^h\ 22^m\ 16^s$. As I have stated, much uncertainty necessarily results from the flickering motion of the cusps.

During the whole time the planet was visible it appeared perfectly circular; no deformity whatever, as 'black drop,' 'pear shape,' &c. When once fairly on the disc of the sun I did not pay much attention to any subsequent phenomena. Our Observatory being situated within the College grounds, and being chiefly intended for educational purposes, I was anxious to have our students, as far as possible, see the transit. For this purpose the image of the sun was thrown on a sheet of white paper by the siderostatic telescope, the image being about 6 inches in diameter: the image of the planet was very distinct, and over one hundred individuals were thus enabled satisfactorily to see the transit.

I should have stated that observations here made by the siderostatic telescope, one before the junction of the cusps at $2^h\ 21^m\ 27^s$, the other after the light of the sun was well seen at the eastern side, $2^h\ 22^m\ 20^s$.