The diameter of the ſun, in a horizontal direction, was meaſured juſt after the tranſit, and found to be $= 31' 30.8''$.

The clock at Savile-Houſe was ſeveral times compared with my clock in Surry-Street, from Friday evening, the 5th June, to Monday evening, the 8th June; ſo that I am as ſure of the time at Savile-Houſe, as if the obſervation had been made at my houſe in Surry-Street.

Ja. Short.

XXXIV. *Obſervations on the Tranſit of* Venus, June *the* 6*th*, 1761, *made in* Spital-Square; *the Longitude of which is* $4' 11''$ *Weſt of the Royal Obſervatory at* Greenwich, *and the Latitude* $51° 31' 15''$ *North*; *by* John Canton, *M. A. and F. R. S.*

Read Nov. 5, 1761.

HAving meaſured the diameter of Venus, on the ſun, three times, with the object-glaſs micrometer, the mean was found to be 58 ſeconds; and but $\frac{6}{10}$ of a ſecond, the difference of the extremes *.

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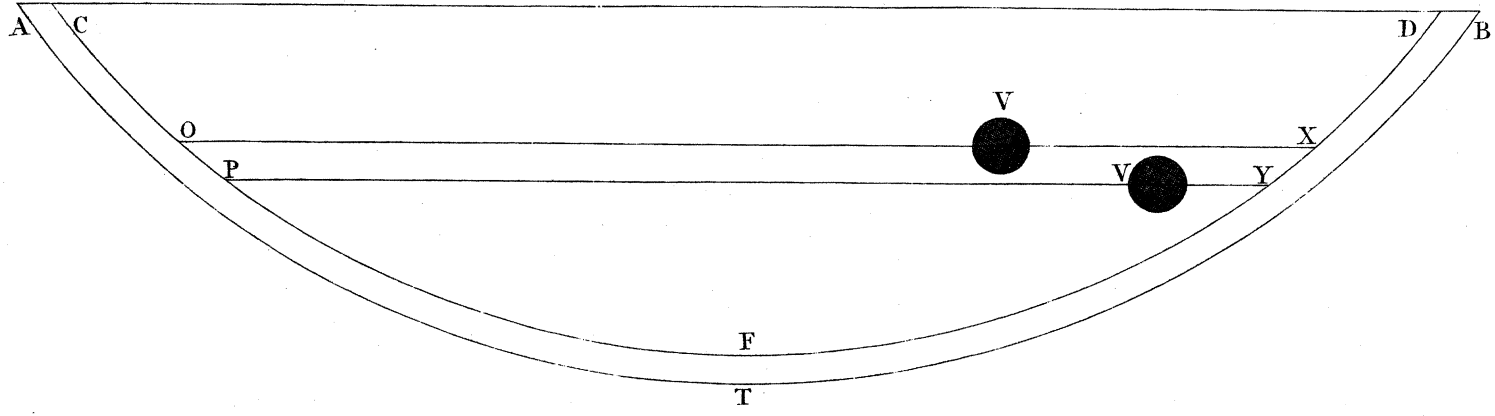
* With the ſame micrometer, the diameter of Venus was meaſured, off the ſun, twelve times, March the 29th, 1758, about noon; and the mean was $1' 1'' 42'''$; whence the diameter, at the time of the tranſit, ought, by computation, to have been $1' 0'' 19'''$.

The



J. Mynde Sc.

The diameter of the ſun, from four obſervations very nearly agreeing with each other, was $31' 33'' 24'''$.

	h.	m.	ſ.
The time, by the clock, of the internal contact, was - - - - - - -	8	17	4
Of the external contact -	8	35	27
Of noon - - - - -	11	58	$24\frac{1}{2}$
Therefore the apparent time of the firſt contact, was - - - - - - -	8	18	41
Of the laſt contact -	8	37	4

The two poſitions of Venus on the ſun's diſc, [*Vide Tab.* VI.] in chords parallel to the equator, were determined by frequently meaſuring the parts of ſuch chords on each ſide the centre of the planet, with the object-glaſs micrometer; which was done with difficulty, both on account of the clouds, and the teleſcope's not having an equatorial motion.

Let the arc A T B repreſent a part of the ſun's limb; let C F D be parallel to it, at the diſtance of a ſemidiameter of Venus; and let O V X and P V Y be parallel to the equator. At $7^h\ 14^m\ 39^ſ$ A. M. apparent time, O V was $14' 43''$, and V X $5' 32''$. At $7^h\ 57^m\ 21^ſ$, P V was $16' 36''$, and V Y $1' 56''$.

Theſe obſervations were all made with a reflecting teleſcope of 18 inches focal length, which magnified about 55 times.