VII. *On the transit instrument of the Cambridge Observatory; being a Supplement to a former Paper.* *By* ROBERT WOODHOUSE, *Esq. Plumian Professor of Astronomy in the University of Cambridge.*

Read January 19, 1826.

IN the brief account of the transit instrument which I had the honour some time ago of presenting to the Royal Society, I stated the circumstance of the instrument's deviation from the meridian arising from the unequal expansion of its braces; but no instance was then given of the magnitude of such deviation. I now subjoin one.

On the morning of Oct. 15, (civil reckoning) after observing the passage of Regulus, the southern shutters were accidentally left open, so that when I returned to observe the inferior culmination of the pole star, the sun was shining on the upper western brace, the object-glass of the instrument being towards the zenith. The effect of this was a retardation of more than 25 seconds in the star's passage, as will thus appear:

Rate of Clock —.17	Oct. 14.	$0^h\ 59^m\ 20^s$	Polaris.
		12 59 44	Polaris S. P.
	Oct. 15.	0 59 20	Polaris.
		12 59 17	Polaris S. P.
Reversed the axis.	Oct. 16.	0 59 19.5	Polaris.
	Oct. 17.	0 59 20	Polaris.
	&c.		

I now view, with great suspicion, all the observations of the sun's transits, which I observed previously to the detection of that source of inequality which is the subject of the present, and of my former communication.