

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	}	Oct. 14.	}	0 ^h 59 ^m 20 ^s	Polaris.
				12 59 44	Polaris S. P.
— .17	}	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.