1776.	
♂ June 11.	Received Mr. Kendal's laſt made Watch from the Royal Obſervatory. At noon it was 2′ 25″,97 too ſlow for mean time at Greenwich, and loſing at the rate of 2″,71 ſeconds per day on mean time. I then carried it on board the Diſcovery, and ſcrewed it firm to a bracket that was fixed to the bulkhead of the great cabin for that purpoſe.

Obſervations at Drake's Iſland in Plymouth Sound.

Being informed by the commanding officer that our ſtay would be uncertain, and that I muſt hold myſelf in readineſs for ſea; I did not ſet up the Clock and Obſervatory, but went on ſhore with the aſtronomical quadrant and the time-keeper.

The gunner of the fort let me have a room in his houſe adjoining to his garden, where I obſerved equal altitudes for the going of the watch, in order to ſee if it kept the ſame rate as at Greenwich.

1776.	Time per Watch of apparent noon uncorrect.	Half Interval of Obſervations.	Time per Watch at apparent Noon correct.	Watch too faſt for Mean Time.	Daily Rate of the Watch.	N° of Obſervations	Object obſerved.
	H. ′ ″	H. ′ ″	H. ′ ″	′ ″	″		
☉ July 7.	0 19 0, 87	4 54 33	0 19 7, 1	14 39, 31	Loſing	8	Sun.
♃ —— 11	0 19 28, 19	3 36 18	0 19 34, 9	14 31, 49	—1, 95	5	Sun.
♄ —— 13.	0 19 39, 00	4 48 48	0 19 47, 0	14 29, 05	1, 22	7	Sun.
♂ —— 30.	0 20 16, 14	4 32 2	0 20 32, 14	14 35, 63	+0, 38	11	Sun.

Between the 7th and 30th the watch was loſing at the rate of 0″,16 per day on mean time.

By comparing the reſult of the 7th with the compariſon at Greenwich, the watch (allowing its rate of gaining to be 2″,71 ſeconds per day) gave the longitude of Plymouth Sound 4° 33′ 56″ Weſt. But admitting that 4° 17′ is the true longitude Weſt, as deduced from former obſervations, it muſt have kept the rate of mean time during the interval.

Obſervations of a Total Eclipſe of the Moon, on Drake's Iſland in Plymouth Sound.

The Teleſcope uſed was an achromatic one of 3½ feet focus by Dollond, magnifying power 90 times. During the whole of this obſervation the ſky was very clear and free from clouds.

1776.	Time per Watch.	Mean Time.		
	H. ′ ″	H. ′ ″		
	10 8 30	9 53 54½	Firſt appearance of the penumbra	Very uncertain.
	10 11 6	9 56 30½	Beginning of the Eclipſe	
	11 11 40	10 57 4½	Beginning of the total darkneſs.	Theſe certain to a few ſeconds.
	12 45 30	12 30 54½	End of the total darkneſs.	
	13 45 0	13 30 24½	End of the Eclipſe.	Theſe uncertain.
	13 47 25	13 32 49½	Penumbra went off.	