

Barometrical observations Sep. 15. 1776. Thermometer (see Post 2.) 76-81, day 78° = 20 1/2° Reaumur

Monticello	height of Mercury	29.449	} as time intervened in passing from one place to another, the observations were taken when I returned, as well as when I set out; and the mean of the two observations probably gives the state of the air at the time of the intermediate observation.
river shore at the Tobacco landing		30.06	
Monticello		29.405	
a spring on N. E. side of the high mount.		29.52	
the top of the high mountain		29.1433	
the same spring on the high mountain		29.48	
Monticello		29.445	

the mean of the 1<sup>st</sup> & 2<sup>d</sup> observations at Monticello - - - - - 29.4625

River shore at the Tobacco landing - - - - - 30.06

leaves difference of weight between the two columns of air - - - - - .5975

this by Nettleton's table makes the height of Monticello 512.17 f.

the mean of the 2<sup>d</sup> & 3<sup>d</sup> observations at Monticello - - - - - 29.465

Top of Montalto - - - - - 29.14333

difference of weight of the two columns of air - - - - - .32166

this by the same table makes Montalto higher than Monticello 280. f.

and the whole height of the High-mountain 792.17 f.

difference between 2<sup>d</sup> observation at Monticello & 1<sup>st</sup> at the spring .035

difference between 3<sup>d</sup> observation at Monticello & the 2<sup>d</sup> at the spring .035

this makes the spring lower than Monticello 30.2575 f.

for measuring height by the barometer see 9. Biblioth. Phys. Econ. 377. Enc. Meth. Physique 152. & post pa. 58.

Aug. 23. 1777. The variation of the needle taken at Monticello this day is 4° 45' East from the North pole.

Willis's mountain (the gap between the two points) is one degree West of the true meridian. these observations were not made with the utmost accuracy instead of a meridian line then, if a thread be suspended with a plumb, whenever by that you discover the sun to be vertical to Willis's mountain, it will have passed the meridian 4 minutes of time.

Feb. 5. 1778. Magnetic course of the gap of Willis's mountain S. 2 1/2° E.

\* but by a more accurate trial of 1778. Mar. 6. the mountain is 2° 30' E. of the magnetic meridian, & the true meridian 61° 30' E. of the mountain; the magnetic meridian will be 3° 27' of the true at the S. pole & so much E. of it at the North pole. so that the true meridian is 3° 27' to the left of the magnetic meridian whichever way you look.