Replica of Spherical Sundial Installed

A re-creation of a spherical sundial designed by Thomas Jefferson is now in place on the North Terrace of Monticello.

The device, which features a wooden sphere 10½ inches in diameter, reproduces a sundial made at Monticello sometime between 1809 and 1816. The dial was installed near where the original stood, based on a description by a visitor to Monticello in 1832. The whereabouts of the original Jefferson sundial is unknown.

The design for the re-creation was based on drawings by Jefferson and a detailed description in a letter to the architect Benjamin Henry Latrobe dated Aug. 27, 1816.

Jefferson’s sundial was something of a novelty in its time. There is no evidence that spherical dials were in use in North America before Jefferson produced his version, although various types based on the same principle existed in Europe.

The re-created sphere has horizontal lines drawn for the Tropic of Cancer, the Equator, and the Tropic of Capricorn. Vertical lines extending from tropic to tropic represent the hours of the day, indicated by Roman numerals below the Tropic of Capricorn. Progressively shorter vertical lines represent half-hour, quarter-hour, and five-minute intervals.

The sphere is mounted on a tapered neck with the Equator tilted on an
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angle based on the location’s latitude, 38º 1’ North. The noon line is aligned with the true north-south axis.

Solar time can be determined by moving the meridian, a bar of thin sheet iron that pivots on the north and south poles. Solar time is indicated when the bar casts the least shadow on the sphere. However, to discourage handling and to preserve the mechanism, the meridian has been set in place to indicate noon.

The device rests on a classical pedestal of Jefferson’s design and a cast-stone capital modeled on the “corn cob” capitals designed by Latrobe for the old vestibule of the Senate wing in the U.S. Capitol. The original capital, sent by Latrobe as a gift to Jefferson in 1809, has not been located.

In an 1817 letter to Latrobe, Jefferson remarked “my dial captivates every body foreign as well as home-bred, as a handsome object & accurate measurer of time.”