

The Work of Charles Mason and Jeremiah Dixon

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ABSTRACT

The geodetic activities of Charles Mason and Jeremiah Dixon in America between 1763-68 were, for the period, without precedent. Their famous boundary dividing Maryland from Pennsylvania, the Mason-Dixon Line, today remains a fitting monument to these two brave, resourceful and extremely talented scientists.

Tutored by Astronomer Royal Dr James Bradley, Charles Mason was aware of the contemporary theories and experiments to establish the true shape of the Earth. He was also cognisant of what was being termed “the attraction of mountains” (deviation of the vertical). However, at the time it was no more than a theory, a possibility, and it was by no means certain whether the Earth was solid or hollow.

The Mason-Dixon Line, a line of constant latitude fifteen miles south of Philadelphia, although the most arduous of their tasks, was only part of their work for the proprietors of Maryland and Pennsylvania. For the Royal Society of London, they also measured the first degree of latitude in America.

In recent years, the Mason-Dixon Line Preservation Partnership has located many of the original markers and surveyed them using GPS. The paper reviews the work of Mason and Dixon covering the period 1756-1786. In particular, their methods and results for the American boundary lines are discussed together with comments on the accuracy they achieved compared with GPS observations.

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