

Centenary of the Discovery of Earth's Magnetic Field Reversals

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In the early years of the 20th century, physicist Bernard Brunhes, then director of the Geophysical Observatory of Puy de Dôme (now Observatoire de Physique du Globe de Clermont), measured for the first time reverse magnetization in samples from a basaltic lava flow and from the underlying backed argillaceous sediments from the village of Pontfarcin (now Pont Farin) in the Cantal volcanic district (Auvergne, France).

He correctly interpreted this observation as a consequence of the inversion of Earth's magnetic field in the past [Brunhes, 1905a, 1905b and 1906]. Subsequent observations by Mercanton [1926 a and b] and Matuyama [1929] have reinforced this assumption. This paradigm of periodic magnetic reversals resulted in the construction of a paleomagnetic scale that has been of great consequence for the understanding of Earth's dynamics.

Because of the importance of the discovery, Cox *et al.* [1963] gave the name *Brunhes* to the present-day normal magnetic epoch.

To commemorate the centenary of Brunhes's discovery, a monument was erected near the

entrance of the present-day observatory. The panel was unveiled on 4 June 2014 by Vincent Courtillot, a former student of Allan Cox, and Etienne Leflaive, the grandson of Bernard Brunhes.

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Vincent Courtillot and Bernard Brunhes's grandson unveiling the Brunhes stela, made of enameled lava. The inscription reads "Bernard Brunhes (1867–1910). Director of the Puy de Dôme Observatory from 1900 to 1910. Bernard Brunhes discovered in 1906 the inversions of the Earth's magnetic field. This finding, of paramount importance for the Earth's history, has earned him a worldwide reputation: the present magnetic period bears his name." Stela designed by Jacques Kornprobst and manufactured by Patrice Brunel. Financial support provided by several French institutions.