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## **Updating the Geomagnetic Polarity Time Scale by steadying the global variation of spreading rates**

The development of a geological time scale based on the rock record archive has been a focus of research for centuries. The Earth's magnetic field reversed its polarity through geologic time, and seafloor spreading recorded this reversal history in magnetized blocks of oceanic crust on mid-ocean ridge flanks. The resulting magnetic anomalies have been used to establish a Geomagnetic Polarity Time Scale (GPTS). GPTS construction is based on interpolating few absolute dates of magnetic reversals assuming smooth variations in spreading rates. We present here an updated GPTS for the Late Cretaceous-Eocene (~83-33 Ma) that minimizes the variability of spreading rates over a global set of ridge flank regions (Southern Ocean, Northern Pacific, South Atlantic, and Indian Ocean). The resulting GPTS highlights a major plate reorganization episode at ~50 Ma, when spreading rates decreased in the Indian Ocean as India started colliding with Asia while spreading rates increased in the South Atlantic and Northern Pacific and the Hawaii-Emperor seamount chain changed its orientation.