



Geomagnetic polarity time scales for the Cenozoic and Mesozoic (Petrus Peregrinus Medal Lecture)

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The sequence of geomagnetic polarity reversals is an integral part of Cenozoic and Mesozoic geologic time scales and provides a framework for global correlation of marine and continental rocks. A review of the current status of the geomagnetic polarity time scale for 0–250 Ma suggests that the sequence is basically complete to a resolution of better than ~50,000 years from 0–175 Ma and for much of 200–250 Ma. There is a notable gap from 175–200 Ma, in the transition from Pangean rift basins and the development of modern ocean floor, during which the polarity sequence is still poorly described. Cyclical successions with good magnetostratigraphies provide the best opportunity for the refinement and extension of the geomagnetic polarity time scale.