



Historic geomagnetic data from Central Europe: extending geomagnetic time series back to the 18th century

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Historic geomagnetic data is important to extend the time series of modern geomagnetic observations to time scales relevant to the geodynamo and to close the gap between archeomagnetic and modern data. Magnetic observatory data from before 1840 is scarce, the most notable exceptions are observations in Paris and London in Western Europe. We are currently looking for historic geomagnetic time series for Central Europe and have been successful in finding 18th century data in monasteries in Southern Germany. From 1782, regular declination measurements were initiated by the Societas Palatinae in several places in southern Germany and beyond. This allows to construct a declination time series for Bavaria starting in 1782 that is still continued at the Geomagnetic Observatory Fuerstenfeldbruck. This time series includes the maximum in westerly declination around 1800. Barraclough and Malin (1999) have interpreted the timing of the maximum in westerly declination of historic data from other locations in terms of a high westwards drift rate of the geomagnetic field. The new time series fits well to the drift rate suggested by Barraclough and Malin (1999). The oldest known measurement of declination from Bavaria is from 1523 and the available data between 1523 and 1782 (from Jonkers et al, 2003) suggests that a maximum in easterly declination occurred around 1600.