Geophysical Research Abstracts, Vol. 8, 05364, 2006
SRef-ID: 1607-7962/gra/EGU06-A-05364

Marine magnetic anomalies observed in the Cretaceous Quiet Zone in the North Pacific

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Old marine magnetic data collected from the Cretaceous Quiet Zone (CQZ) between the Pioneer and Molokai Fracture Zones in the North Pacific were reprocessed using the CM4 model for the main and external fields. In this area, the CQZ extends over $>$ 2000 km along the W to WSW spreading direction, which implies fast spreading with an average half-spreading rate of 5 – 7 cm/yr. Beside high amplitude anomalies associated with the Murray Fracture Zone and many seamounts in this area, anomalies trending NNW to N, which is approximately perpendicular to the spreading direction, are discernible in the processed data. They are of lower amplitude of about 100 nT or less with wavelengths of 20 to 100 km. This suggests that the Earth's magnetic field underwent its intensity variations with periods of 0.3 to 2 myr during the Cretaceous Normal Superchron.