

## REVISION OF GLOBAL MARINE MAGNETIC DATA SET

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A global marine magnetic data set was created by Quesnel et al. (2009). The GEODAS DVD Version 5.0.10, which is available from the U. S. National Geophysical Data Center, was used as the data source of this data set. Magnetic anomalies were recalculated using a comprehensive main and external field model CM4 (Sabaka et al., 2004), then were cleaned by careful check and removal of spurious data, and finally a line leveling method was applied to reduce data misfits among various cruises. The data set consists of about 20 million records collected by about 2400 cruises from 1953 to 2003. Some more marine magnetic data were added to the GEODAS in 2008. They were collected by about 180 survey cruises mainly of Australia, New Zealand and Japan. Additionally, we also obtained marine magnetic data near the Spanish coast. There are about 3 million records in these new data. We recalculated magnetic anomalies for the new records and cleaned them in the same way as the old data set. As for the line leveling, we modified the method slightly. When we created the old data set, we treated all the cruises equally in the line leveling method. Although the method was satisfactory, in order to further reduce the RMS crossover difference (COD) of the whole data set, it is particularly important to reduce the CODs of cruises with large RMS CODs. Approximately 60 cruises have RMS CODs > 200 nT, while about 140 cruises have RMS CODs > 150 nT. We first tried to minimize the CODs of these cruises, either by adjusting data to reduce the data offsets with the other cruise data or by removing data near the points with large CODs. Then, we applied the line leveling method to all the cruises. We will show more details on the revised data set and the results of line leveling.

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