



Statistical analysis of the oceanic magnetic anomaly data

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Ocean magnetic anomaly data are analysed in time and space to prove their Laplacian statistical distribution. We provide a physical explanation of this clear statistical feature of the data and investigate the detailed behaviour in time during the Cretaceous Normal Superchron. A further comparison of our results with those provided by two present global models of the lithospheric magnetic field gives first evidence of an intrinsic limit of these models, and confirm the strong need to use as more superficial data as possible to better constrain the models at the sea level.