Back-arc spreading at the East Scotia Ridge

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Sea floor spreading in back-arc basins is a characteristic phenomenon related to subduction. However, the process of initiation and evolution of back-arc spreading, and the similarities and differences between back-arc and mid-ocean spreading remain poorly known. The east Scotia Sea has been created at least the past 10 Ma, and one of the first back-arc basins in which well-developed magnetic anomalies were identified. Vector data of the geomagnetic anomaly field were successfully obtained over the back-arc spreading axis in the east Scotia Sea. No transform fault are observed in the back-arc spreading in the east Scotia Sea. Magnetic anomaly profiles and the strikes suggest that propagation rifts and overlapping spreading canters occur at each segment boundary.