



## **Paleomagnetic results from a mid-ocean ridge detachment at the Mid-Atlantic Ridge, 15°45'N**

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Normal faulting has been recognized as an important process at the axial region of mid-ocean ridges. At slow spreading ridges large-offset, low-angle detachment faults help accommodate plate separation where magma supply is low. One such structure, a corrugated massif north of the Fifteen-Twenty fracture zone, was studied in detail during cruise JR63 (MacLeod et al. 2002, Escartin et al., 2003) and 63 geographically-oriented drilling cores were taken using the 'BRIDGE' seabed rock drill. Material recovered included gabbros, dolerite, peridotite and basalts, in addition to fault schists. In this study we performed paleomagnetic measurements on 19 selected oriented cores with the purpose of investigating the magnetic mineralogy and stability of the different materials, and testing contrasting detachment fault models using paleomagnetic data. The experiments consist of AF and thermal demagnetization, susceptibility measurements as well as high-field analysis. Preliminary results suggest that when a stable direction is reached magnetite is the main carrier. Fifteen oriented cores give apparently reliable paleomagnetic directions, 8 cores are consistently reversely magnetized, 3 show normal polarity magnetization while 4 display evidence for significant tectonic rotation. Results will be discussed in term of constraints on the deformation history.