



Applying Satellite Geomagnetism to Probe Ocean Flow

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While many sources which contribute to the geomagnetic field have been extensively studied, one source to receive little attention is the magnetic field generated via motional induction in the oceans. As part of the GEOSPACE consortium, we are attempting to gain a better understanding of the fields generated by this source and the flows that generate them. While recent work has highlighted the potential to extract a global tidal signal from satellite magnetic data, here we attempt to isolate a far more localised signal. Focusing on the Argentine Basin we aim to identify a circulation within the basin, to date only identified in TOPEX altimetry data. Using simple data analysis, it has been possible to isolate this signal in both CHAMP & SAC-C satellite datasets as well as in ground-based observatory data from Port Stanley.