DIGITAL FLUXGATE MAGNETOMETERS OPERATED UNDER EXTREME ENVIRONMENTAL CONDITIONS

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Error sources of digital fluxgate magnetometers and its dependency on environmental influences will be analysed. Measurement results are based on two types of sensors, one designed for the ROSETTA Lander mission and the other for scientific measurements on the ship “Polarstern”. Temperature dependency, mechanical robustness, radiation hardness and susceptibility to electromagnetic stray fields will be discussed.