Induced magnetic signatures at Jupiter’s moons

PhD project (start Oct 2017) in the Space and Atmospheric Physics group, Dept. of Physics, Imperial College London.

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We are the Principal Investigator for the magnetometer instrument on the JUICE spacecraft due for launch in 2022 to Jupiter and it’s moons. The most exciting (and difficult) measurement we plan to make is that of the induced currents flowing within the liquid water oceans of Ganymede, Callisto and Europa. The project will analyse previous data taken by the Galileo spacecraft during close flybys of these moons with the aim of revealing how each moon interacts with the background Jovian magnetised plasma environment, and simultaneously also improving our knowledge of the induced magnetic fields themselves. This work is critical in the leadup to launch of the JUICE spacecraft to ensure we have the understanding in place to be able to best tease out information about each subsurface ocean from the observations.

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