

Project: **964**

Project title: **Ocean signals in Earth's magnetic field (OceanMag II)**

Project lead: **Jan Saynisch**

Report period: **2020-01-01 to 2020-12-31**

2020 was a successful year in our project, we were able to publish substantial work on the phases of electromagnetic tidal signals (Saynisch et al., 2020). However COVID19 led to some delay, so most of the work done in 2020 will be published in the end of 2020, e.g., the separation of the M'' from the Swarm observation. Nonetheless we were able to contribute to the field of oceanic magnetic fields and ocean modelling/assimilation in general. Our group expanded the use of AI methods to generate realistic error budgets for atmospheric forcing and developed a nonlinear inversion scheme of satellite gravimetry observation (Irrgang et al., 2020a,b).