Project: **964**
Project title: O**cean signals in Earth's magnetic field (OceanMag II)**
Project lead: **Jan Saynisch**
Report period: **2022-01-01 to 2022-12-31**

During 2022 we did normalize our workflow and hired new personel. The project could publiush important works on paleo data assimilation (Schachtschneider et al., 2022) and in sito EM signal detection (Petereit et al., 2022). Ongoing is our effort to advance the direct observation of electric signals from ocean tides and ocean circulation. We included the KALMAG Kalman-Filter framework into our workflow (Baerenzung et al., 2022) and could detect various oceanic tides in Swarm observations (Saynisch-Wagner et al., 2021) and preliminary circulation signals (Hornschild et al., 2022 – under review). All our data is now constantly updated and made available to the community: https://ionocovar.agnld.uni-potsdam.de/Kalmag/
Currently, we include Swarm and other potential field satellite missions to infere oceanic transpoorts from a combined inversion – this would be a major step for oceanic monitoring.
The OceanMagII project was is extended to 2023.