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Are BBP on REM-A more likely to fail?

Giorgio Dall'Olmo

REM-A sensor

- Combines ECO and ORC504
- Only one cable to the float
- REM-B sensor = REM-A + C-rover (included)

Problem

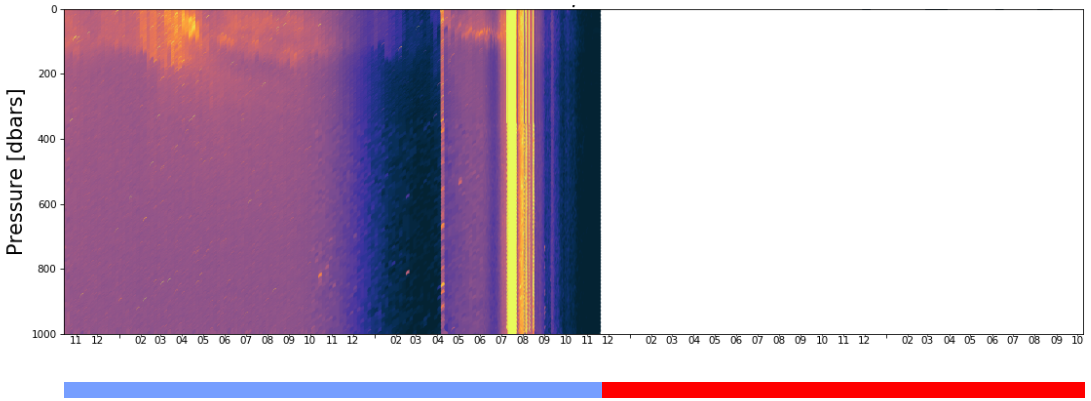
- Anecdotally: high failure rates

Objective

- Compare failure rates of ECO sensors mounted on REM-A sensors vs. other ECO sensors

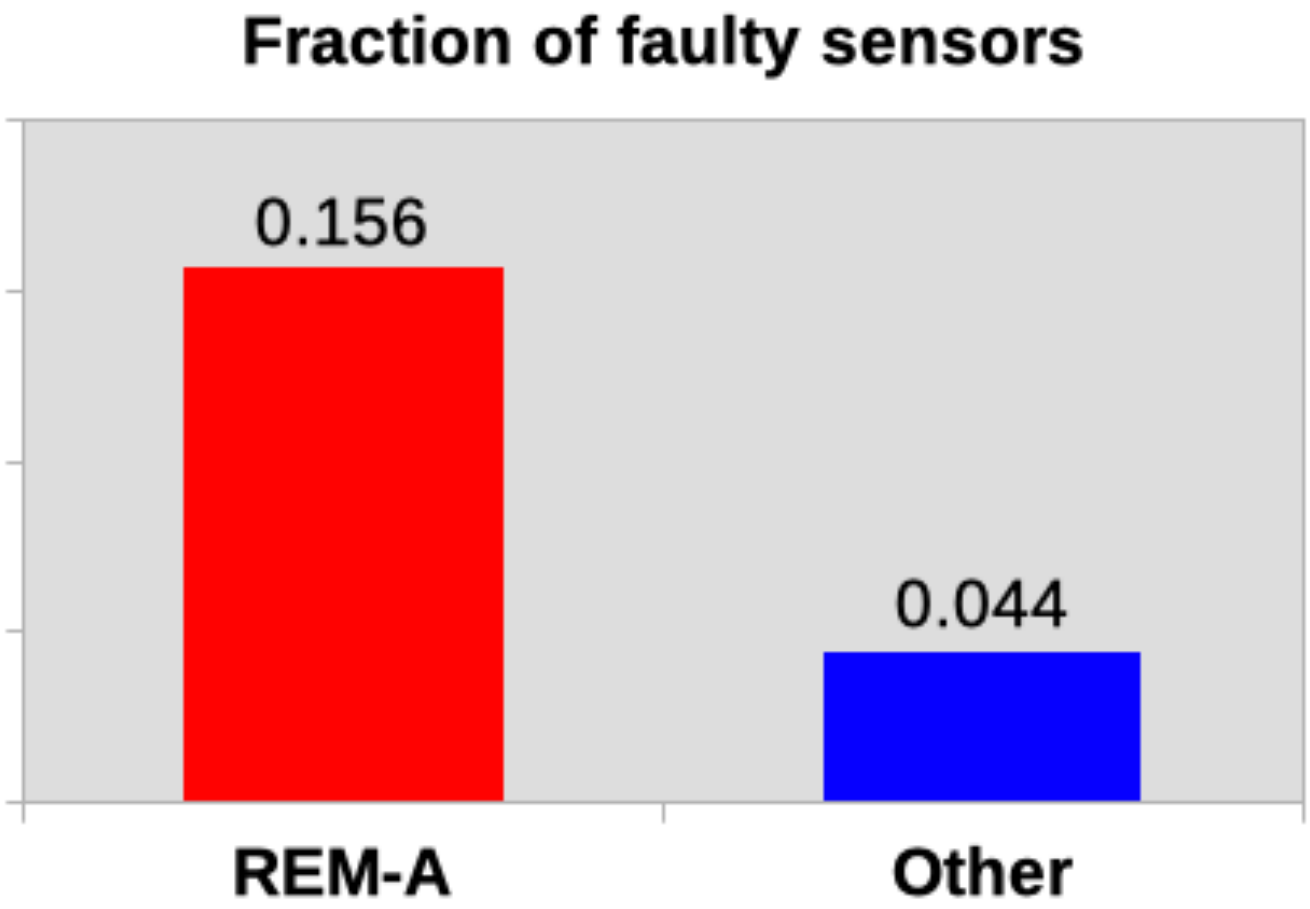
Method

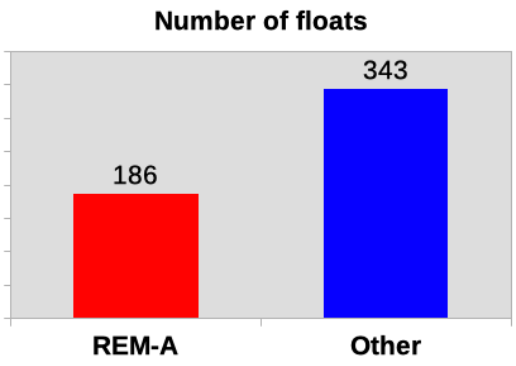
- Extract from `argo_bio-profile_index.txt` list of floats with BBP and CHLA
- Define “REM-A float” if PROVOR + BBP + CHLA + IRRADIANCE (Catherine + Antoine)
- Using Sprof files, count number of “NaN” BBP profiles for REM-A and other floats

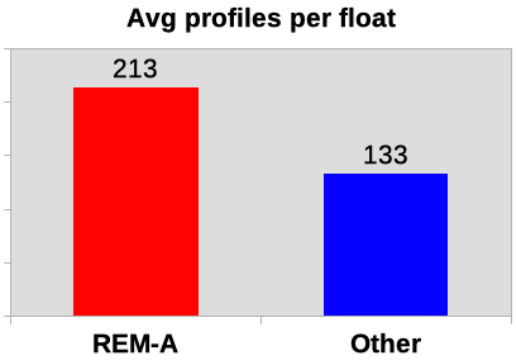


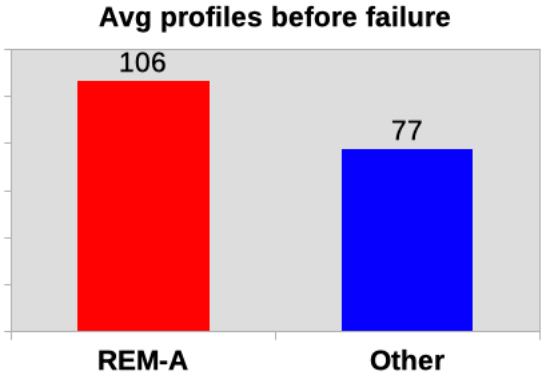
- Compute fraction of missing profiles `fract_missing`
- Define faulty sensor if `fract_missing > 0.2`
- Compute fraction of faulty REM-A floats vs. other floats

Results









ECO on REM-A is 3.5 times more likely to fail than without REM-A

No dependence on year of deployment
No clear dependence on max PRES before failure