

SolAir Guard

Solar Comrades

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Challenge: Develop the Oracle of DSCOVR

Problem

- DSCOVR satellite
 - uses Faraday Cup sensor to measure data that is used to predict geomagnetic storms on earth
 - sensor already exceeded its lifetime
 - it is measuring faulty data from time to time

Solution

- Instead of using the faulty Faraday Cup sensor on DSCOVR the magnetometer (magnetic field vector) can be used for predicting geomagnetic storms
- magnetometer is a standardized sensor
- ALL satellites orbiting earth have this sensor
 - ALL satellites could be harnessed for predicting geomagnetic storms

Method

- AI (LSTM) identifies correlation between the magnetometer (magnetic field vector) and geomagnetic storms (Kp-index)
- Future development: individual satellite position calibration for the model