



A new method of recalibrating NOAA MEPED proton measurements

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Since 1978 the NOAA/POES satellites have continuously monitored energetic particles with the MEPED instrument. After some years of operation, the particle detectors become degraded due to radiation damage. Fortunately, both new and older satellites are operational at the same time. By comparing the monthly averaged proton energy spectra from a newly launched satellite with all the older satellites in the same altitude range, we derive the correction factor due to radiation damage. For the years in between new satellites, we calculate the correction factor using two different methods based on cumulative flux and the A_p index. The cumulated flux for each satellite gives an estimate of the amount of radiation damage and therefor the degradation. The A_p index describes the level of geomagnetic activity the detector environment.