SRAG GOES-VW Series Satellites

**SRAG Needs**
- Proton and heavy-ion measurements 10 MeV/n – 1 GeV/n
  - Need to nail down the high energy tail of the spectrum of SEPs
  - **Something like 7 channels to cover 100 MeV – 1 GeV**
  - Various data fits to current data can yield factors of 2-4 difference in total event dose
- Exploration Missions – Requirements at least out to Mars orbit – Off Sun-Earth line
  - Proton and heavy-ion spectrum measurements 10 MeV/n – 1 GeV/n
  - SEP forecasting with low false alarm rate. Forecast 24-72 hour all-clear periods
  - CME shock arrival prediction capability out to Mars. Accuracy of a few hours.
  - May require STEREO type orbit, L4, L5, or L3

**Fly small particle detectors as a test payload**
- Reduce cost, mass, and volume without giving up particle/energy measurements
- Single Medipix technology detectors flying on ISS for last two years
- LUCID (Langton Ultimate Cosmic Ray Intensity Detector) cube design
- Medipix technology detector stack
Depth Dose Comparison
REM Dose and Dose Eq. Rates (JPM)