



Air Force Research Laboratory



AE9/AP9 V1.30.001 Model Comparison Summary Report: Spatial Comparisons

5 January 2016

AE9/AP9/SPM Development Team

Integrity ★ Service ★ Excellence



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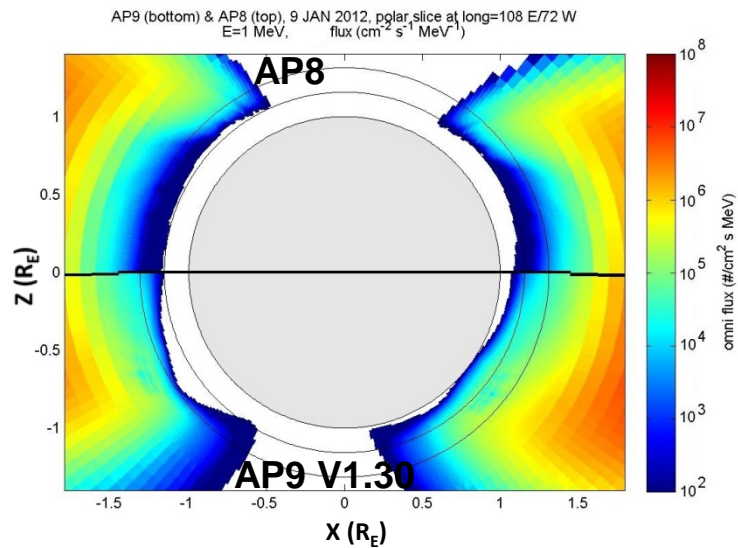
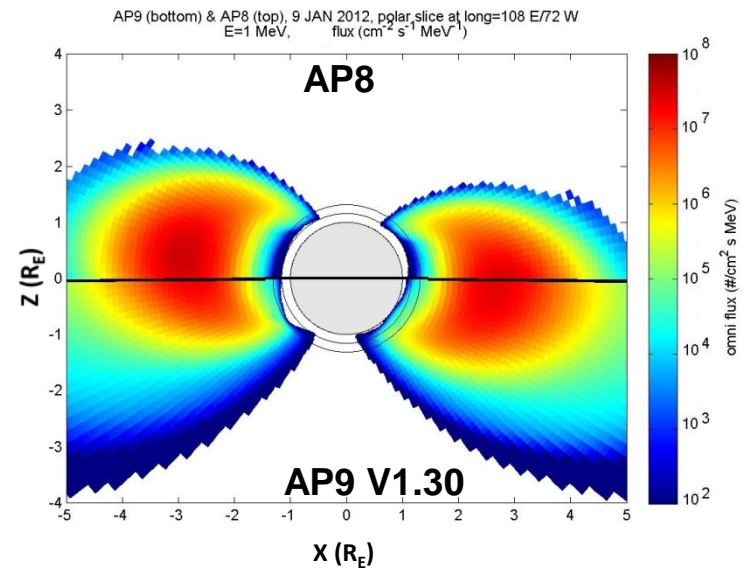
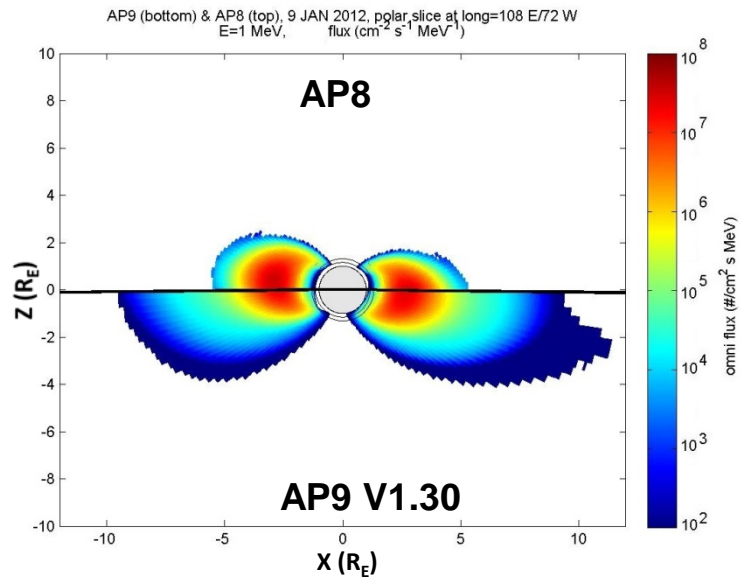
AE9/AP9 V1.30: Spatial comparisons to AE8/AP8 and AE9/AP9 V1.0

Content:

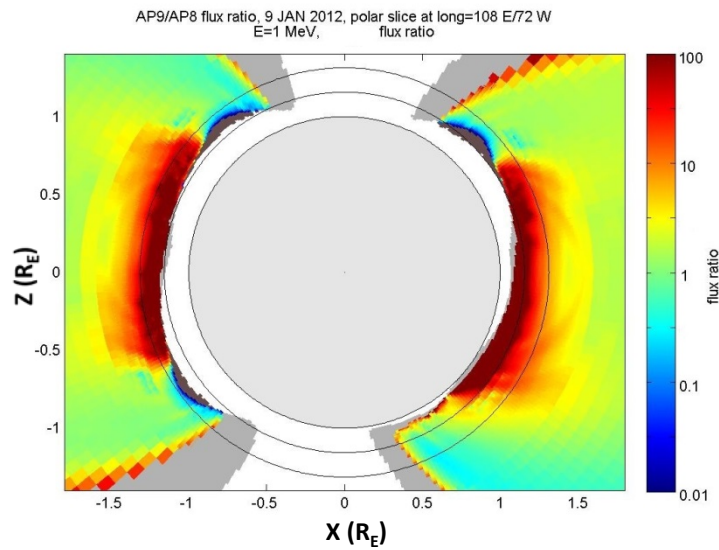
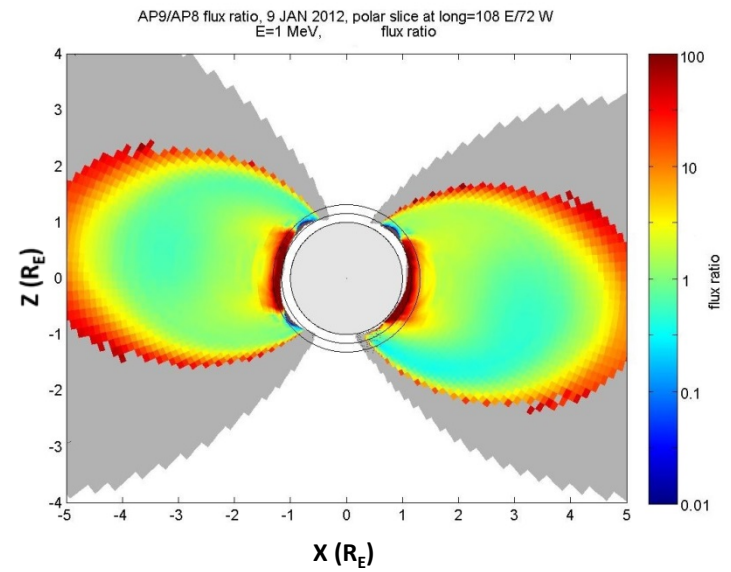
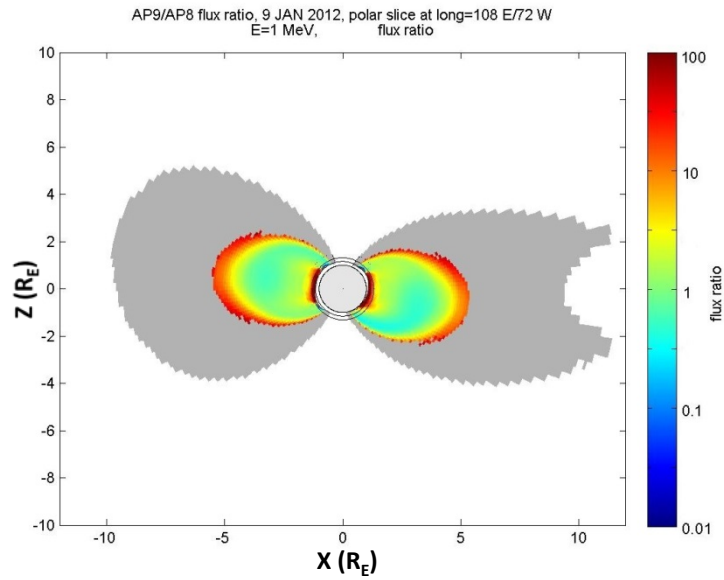
- All plots are meridional cuts through radiation belts, representing a plane through longitudes 108° E and 72° W (north-south axis is vertical).
- Split screen comparisons show AE9/AP9 V1.30 in lower half of each figure and former models (AE8/AP8 or AE9/AP9 V1.0) in top half.
- Ratio comparisons show ratio of AE9/AP9 V1.30 to former models.
 - grey = nonzero flux in V1.30 but zero flux in former model.
 - brown = nonzero flux in former model but zero flux in V1.30.

AP9 V1.30 vs. AP8

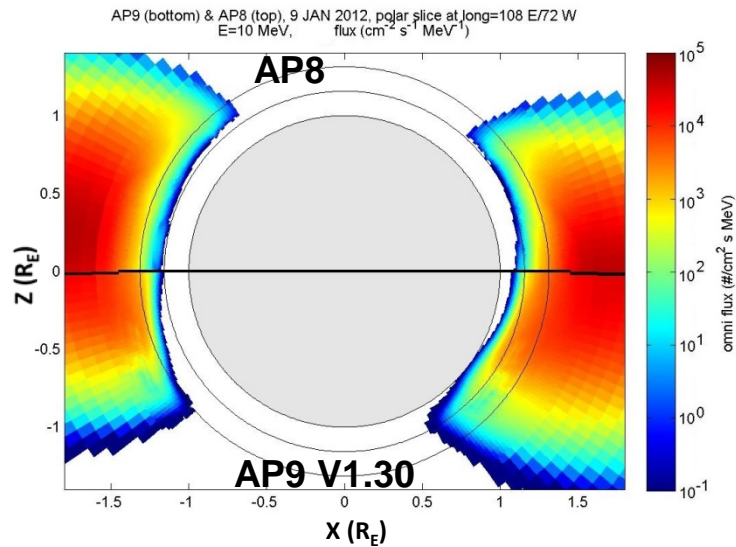
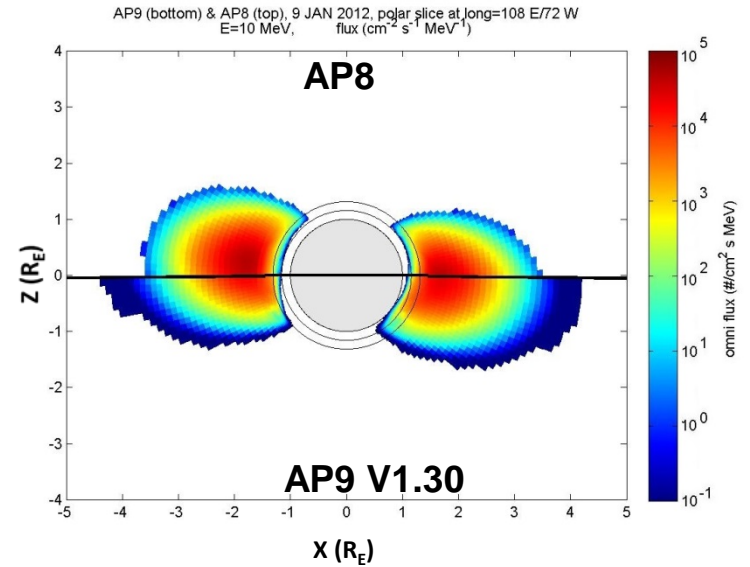
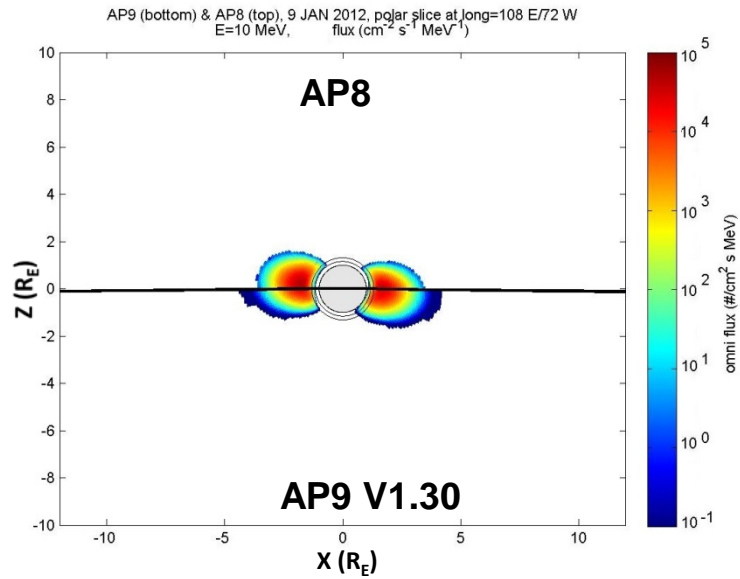
1 MeV protons



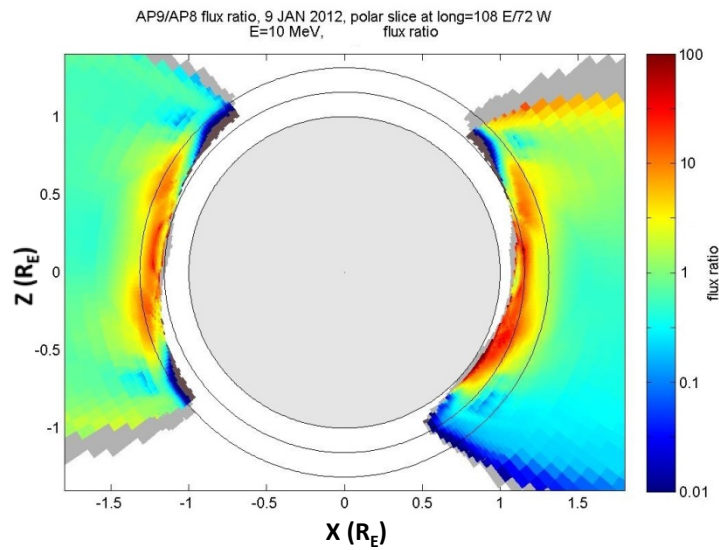
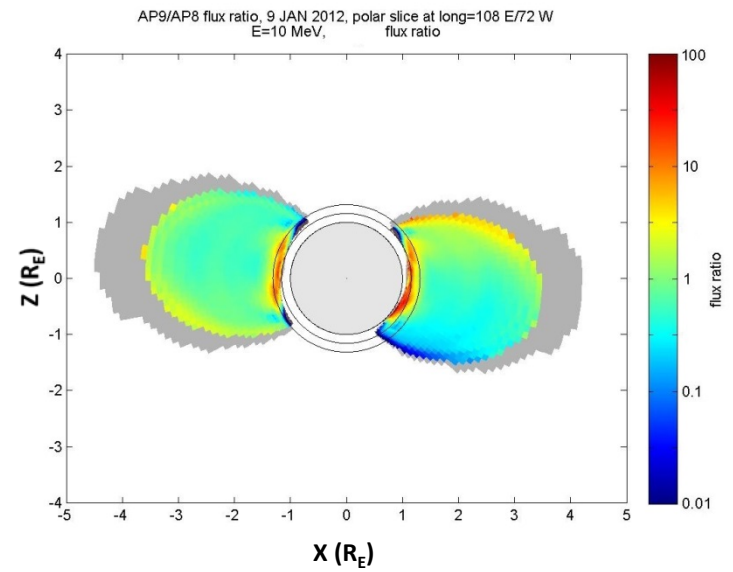
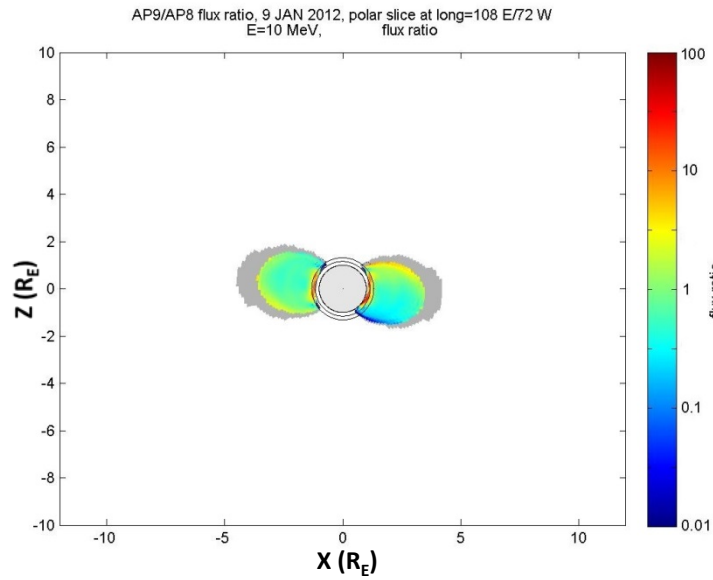
1 MeV protons, AP9-to-AP8 ratio



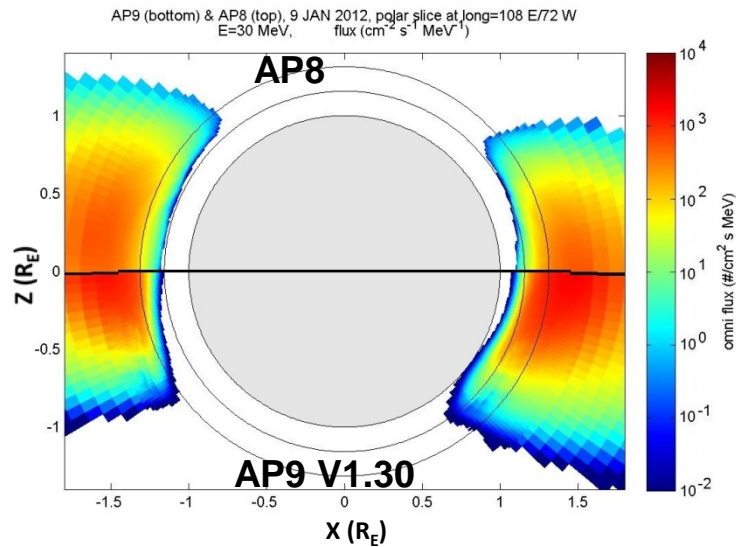
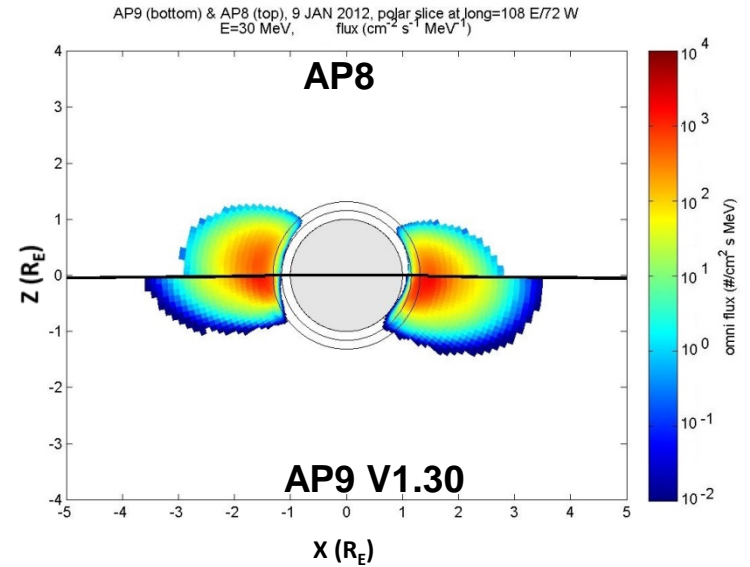
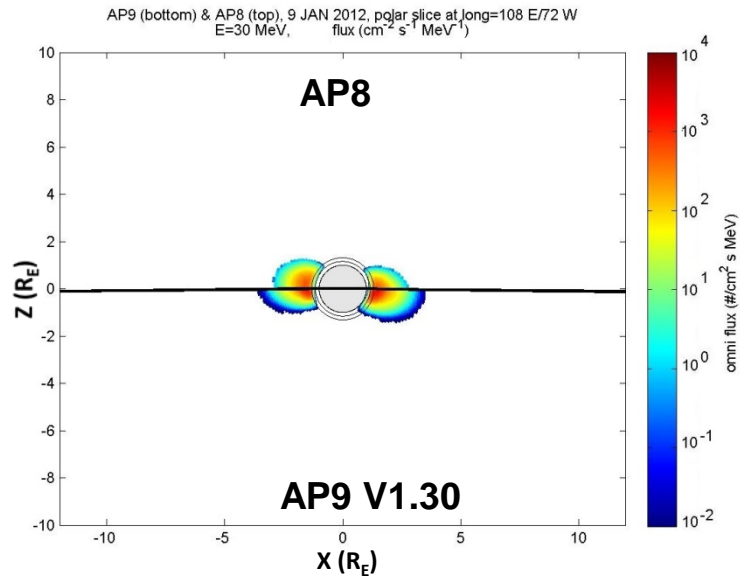
10 MeV protons



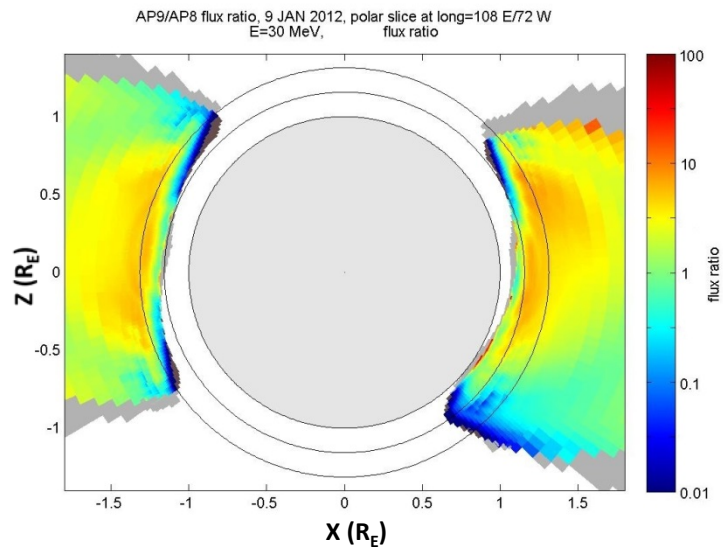
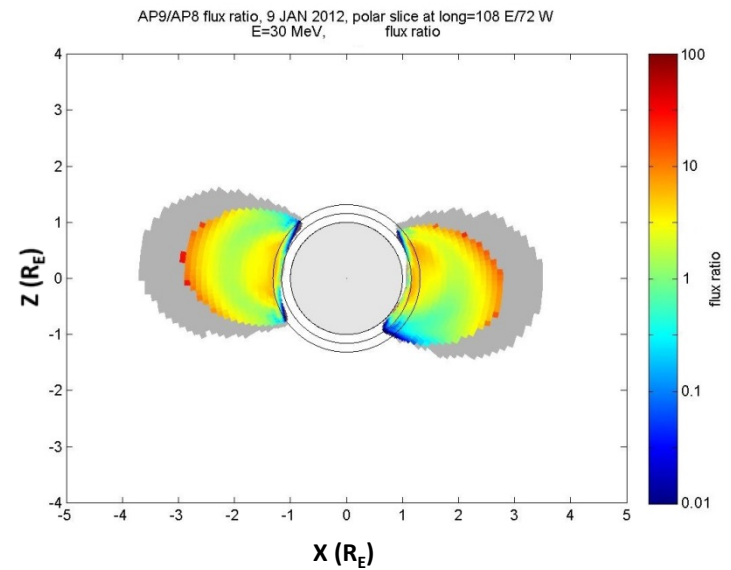
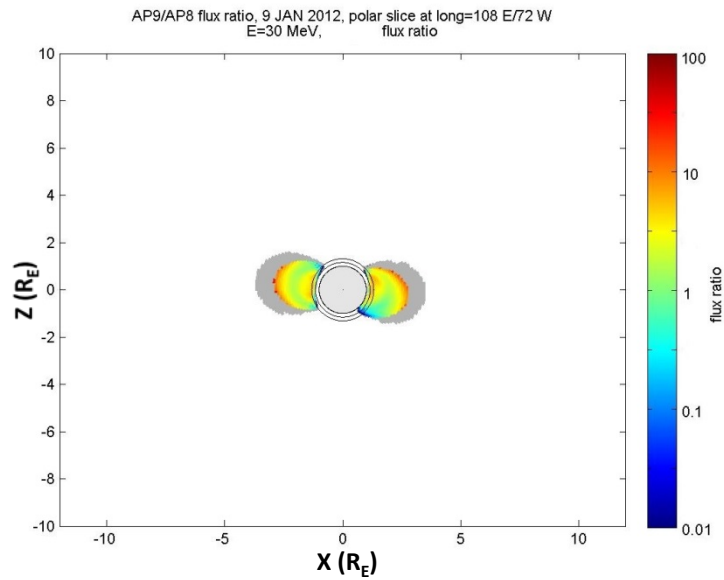
10 MeV protons, AP9-to-AP8 ratio



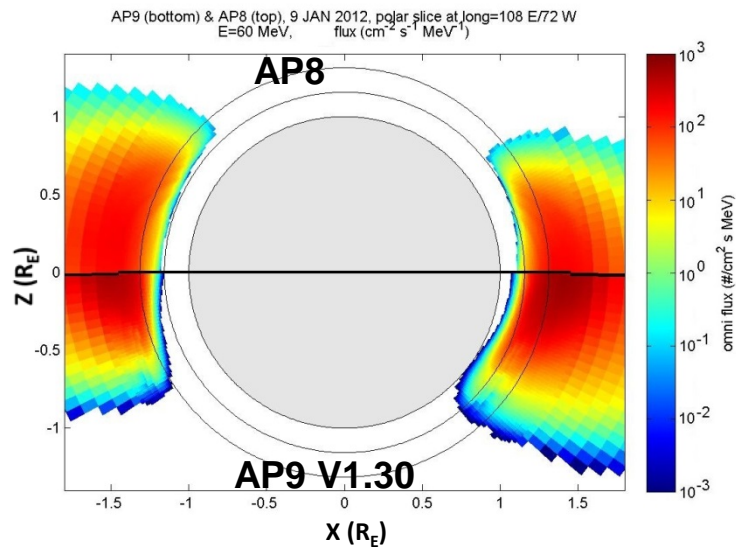
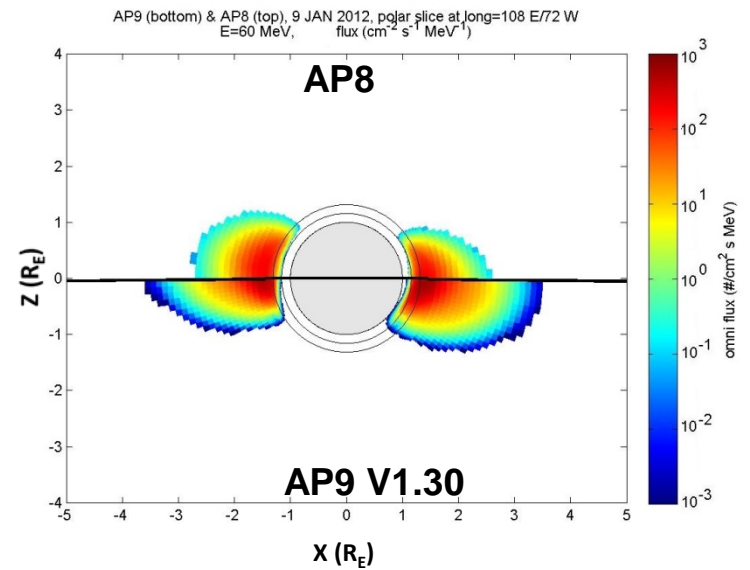
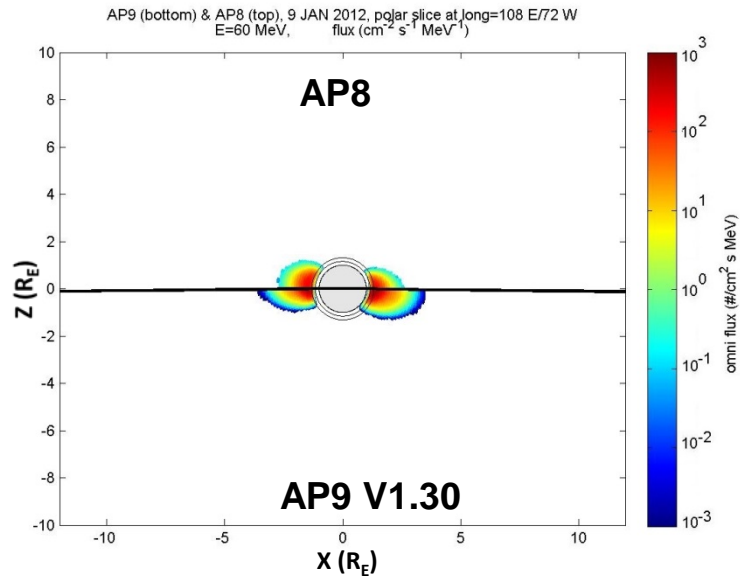
30 MeV protons



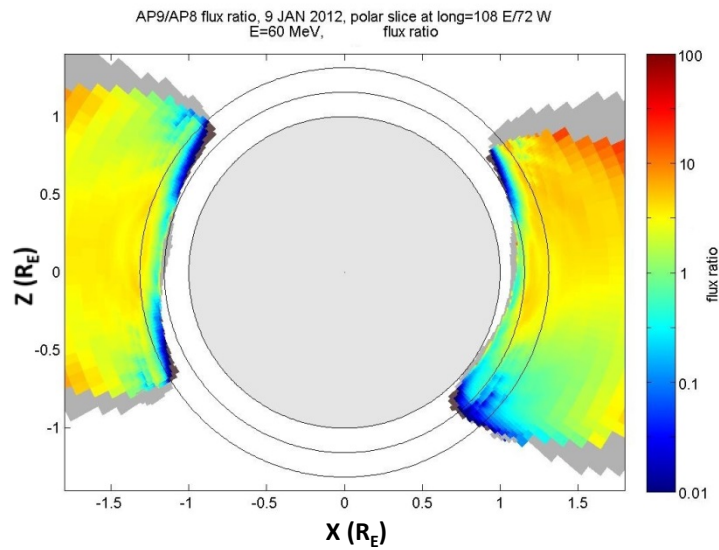
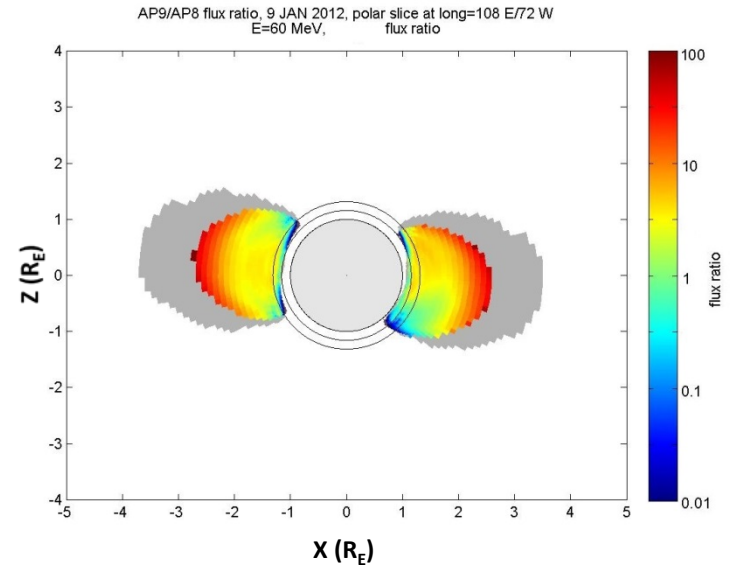
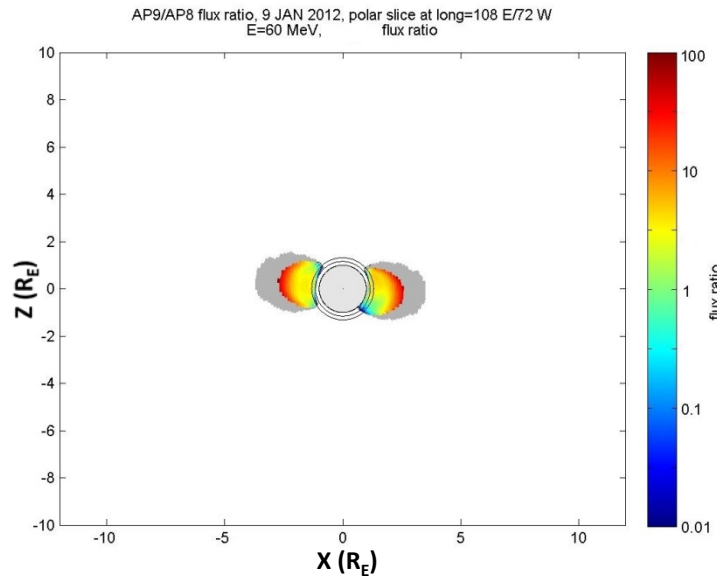
30 MeV protons, AP9-to-AP8 ratio



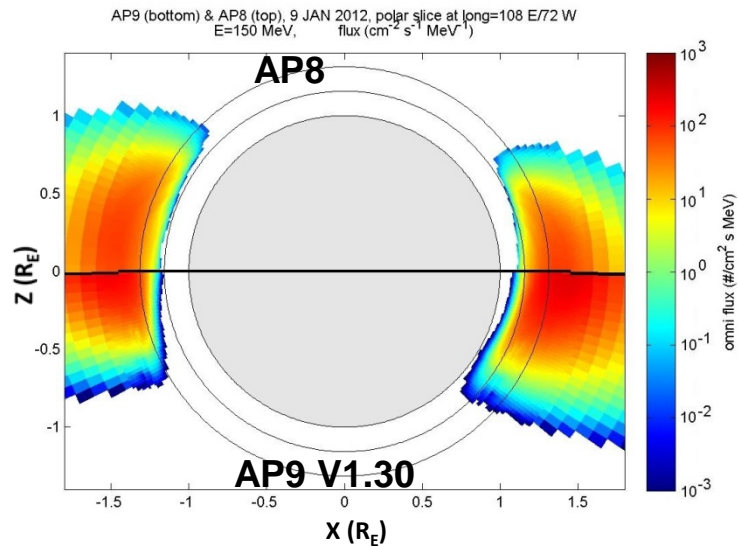
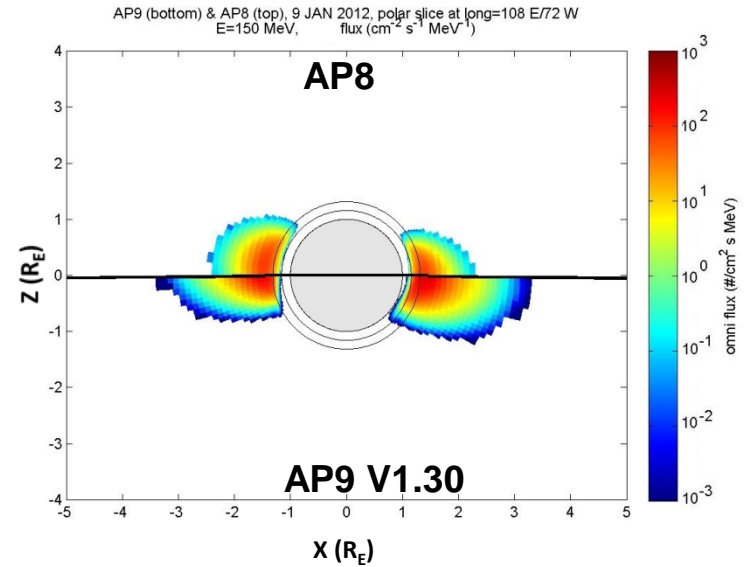
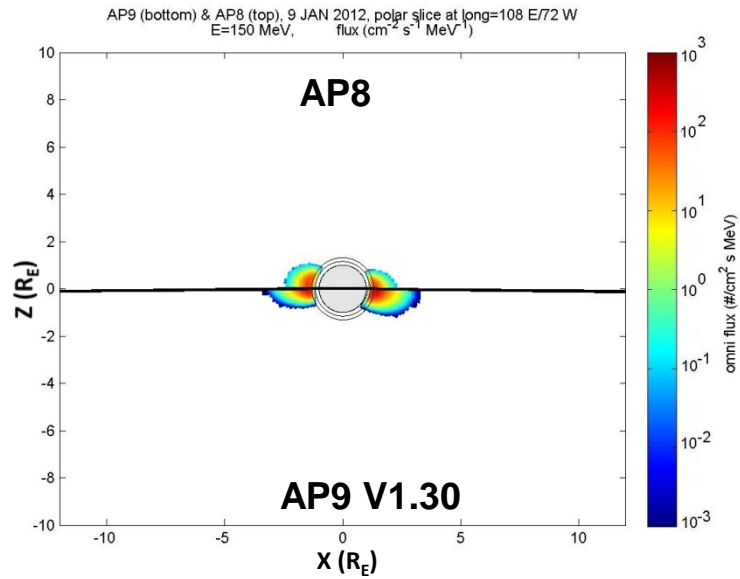
60 MeV protons



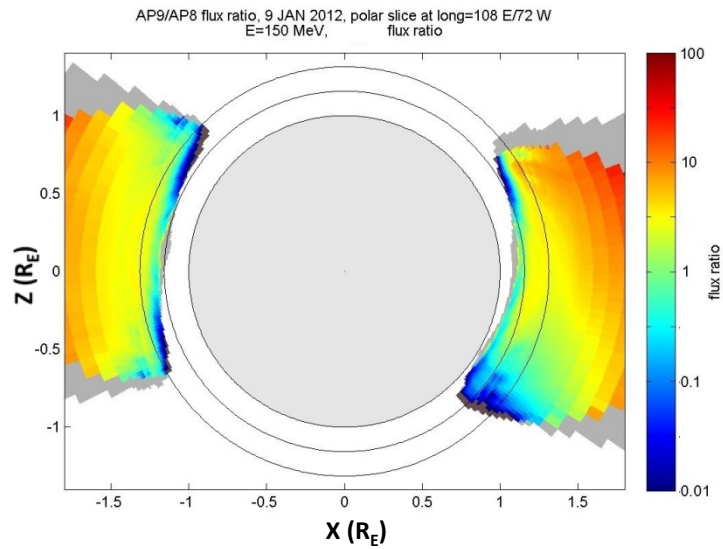
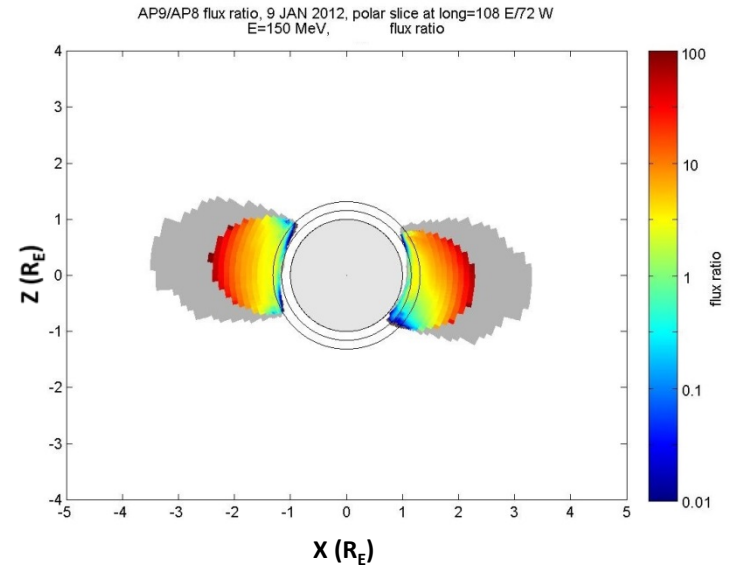
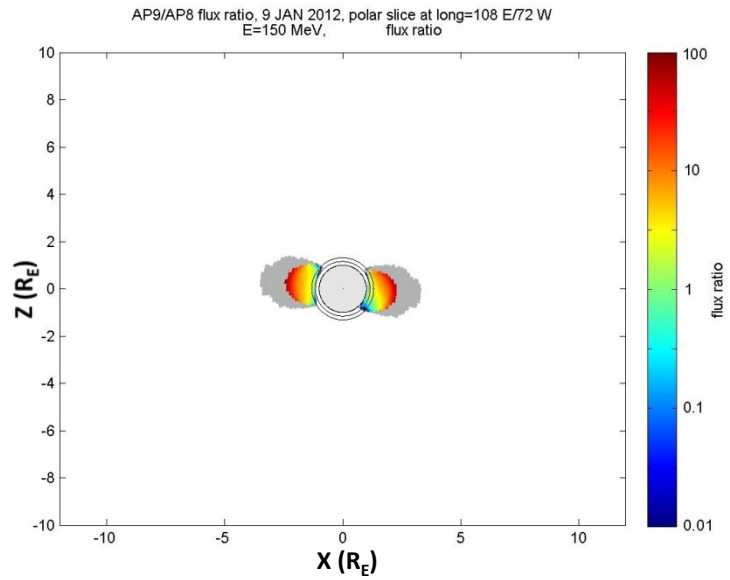
60 MeV protons, AP9-to-AP8 ratio



150 MeV protons

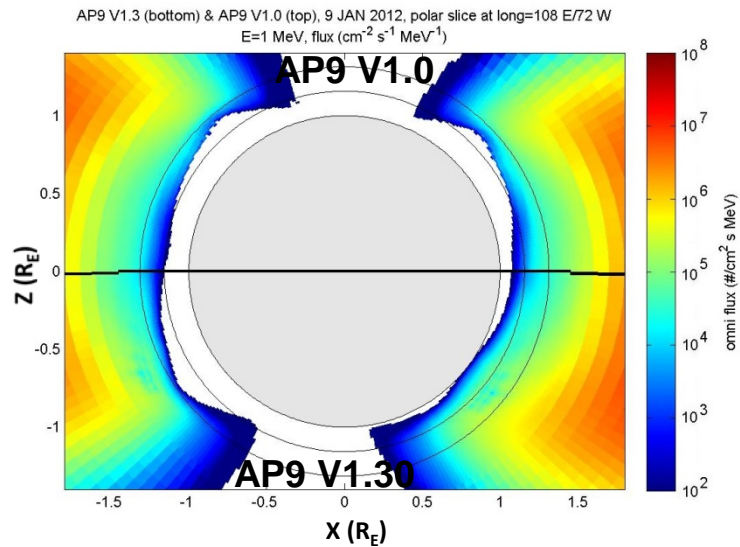
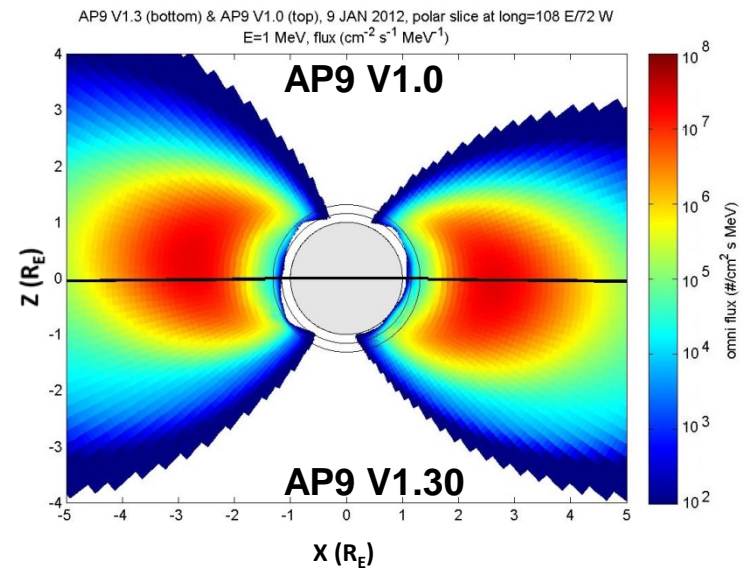
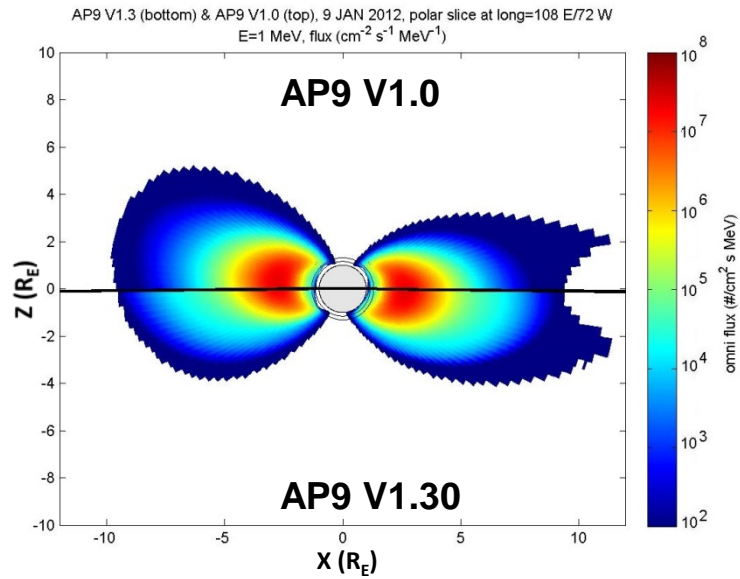


150 MeV protons, AP9-to-AP8 ratio

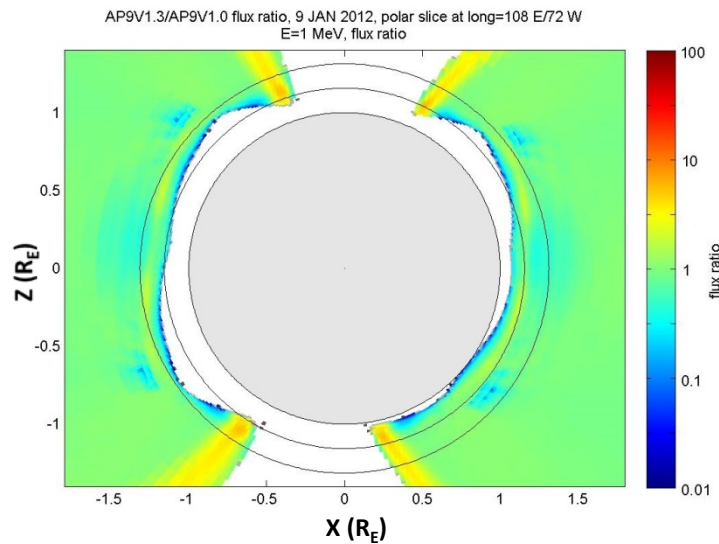
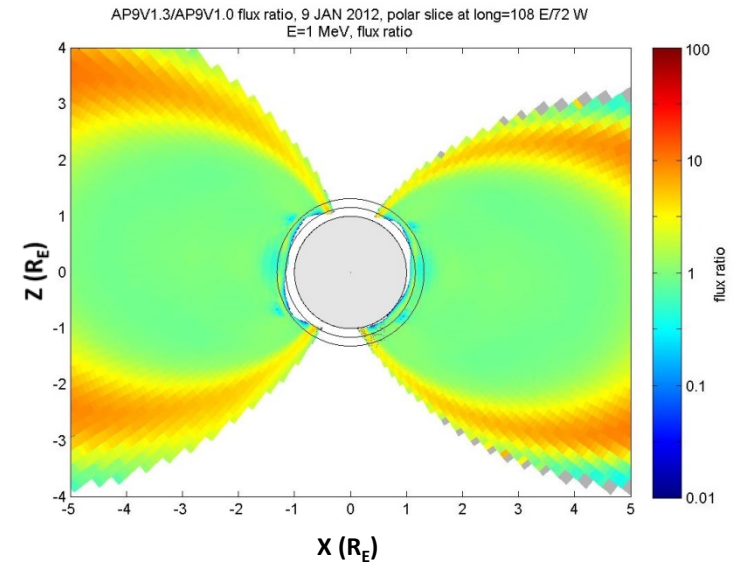
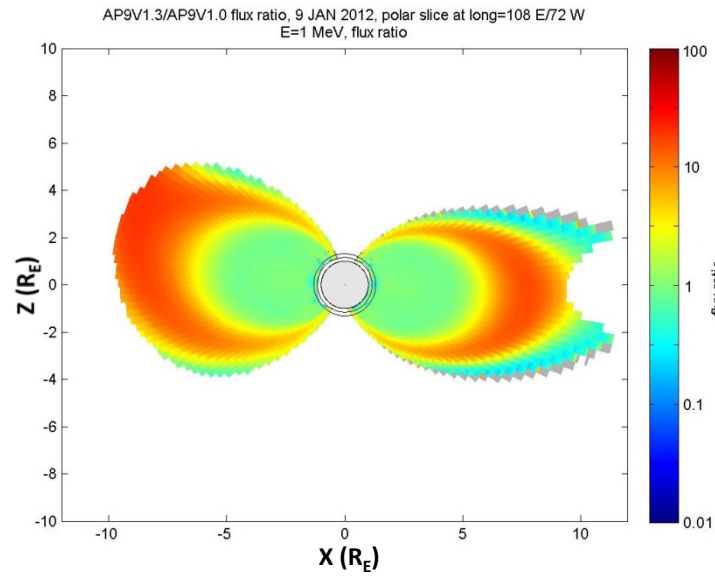


AP9 V1.30 vs. AP9 V1.0

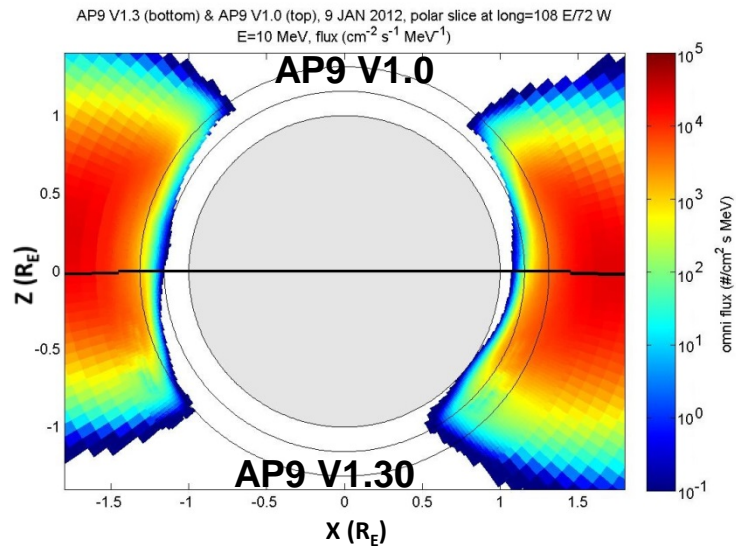
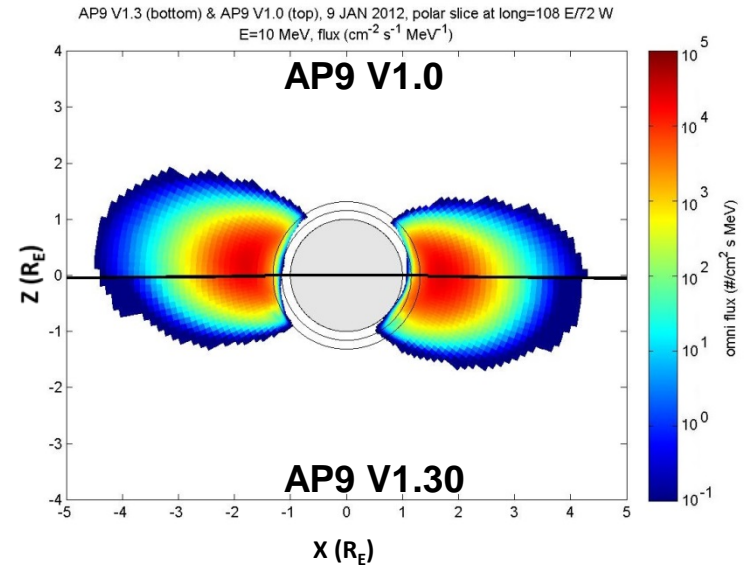
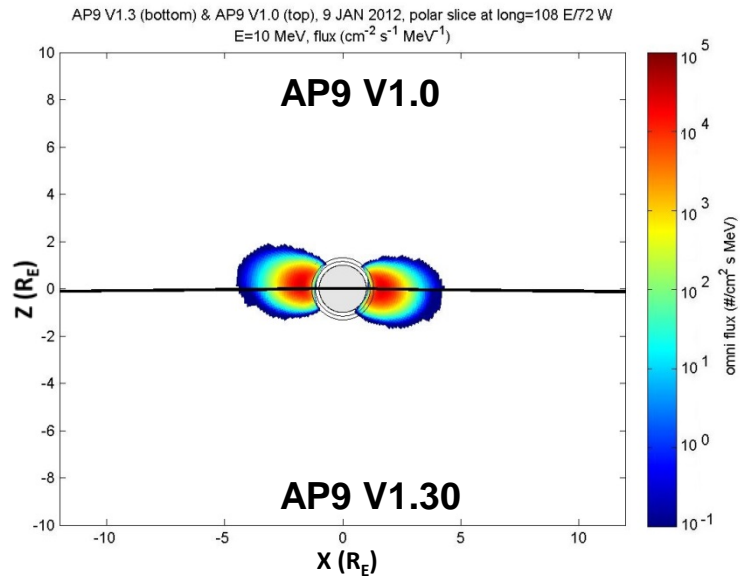
1 MeV protons



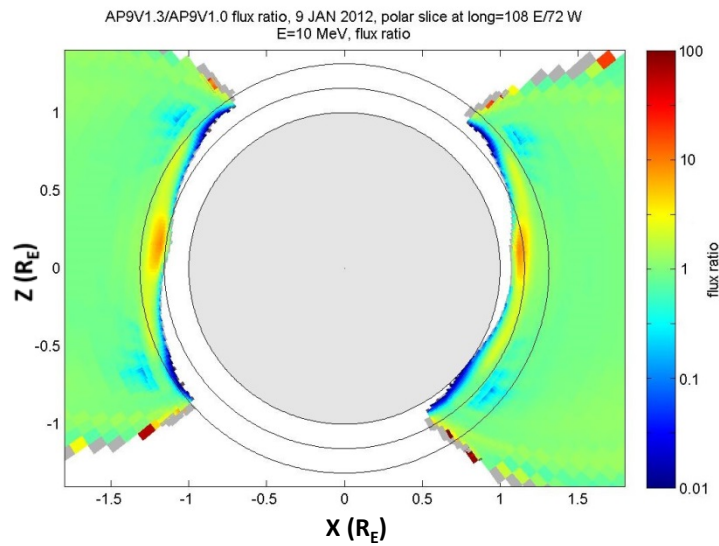
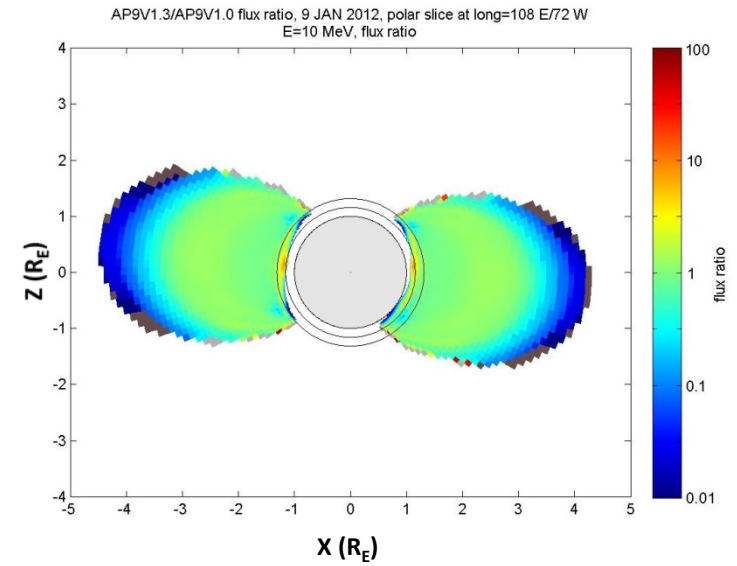
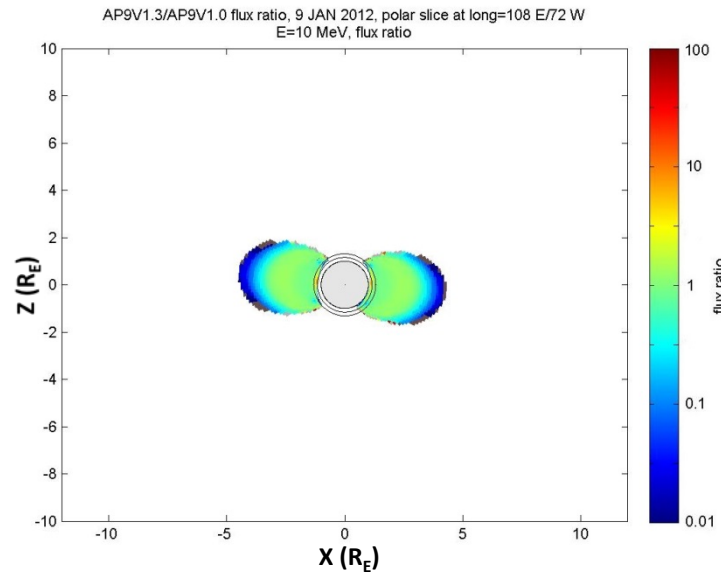
1 MeV protons, AP9V1.30-to-AP9V1.0 ratio



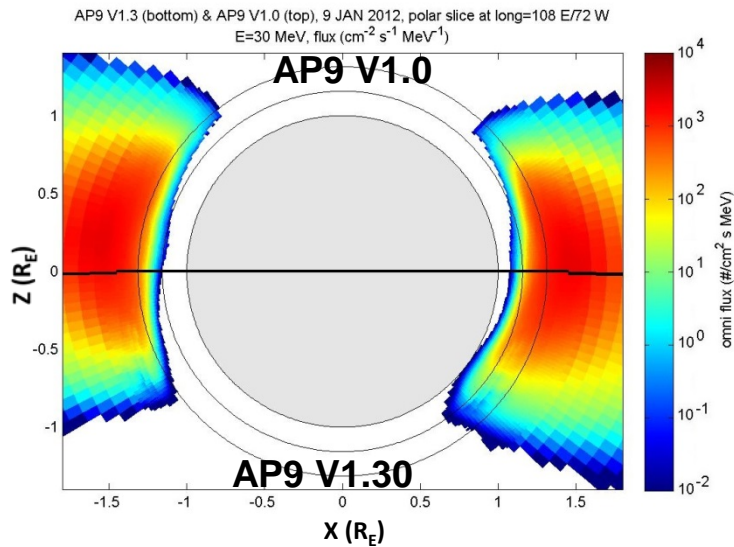
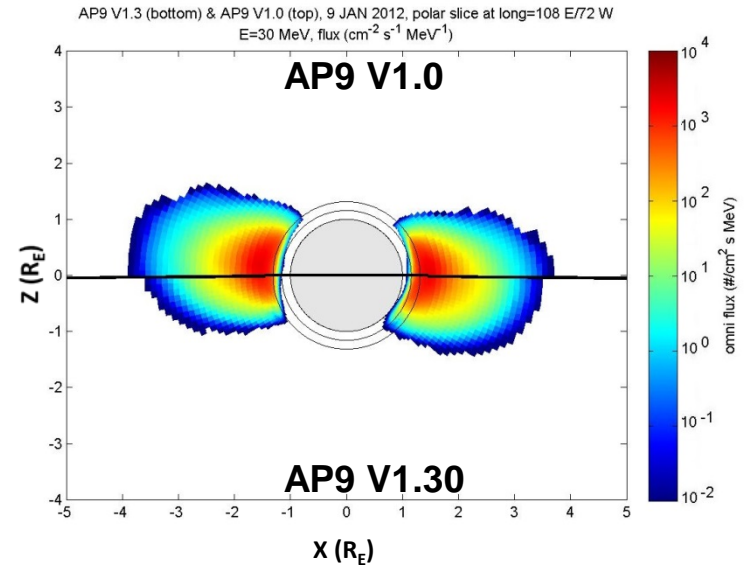
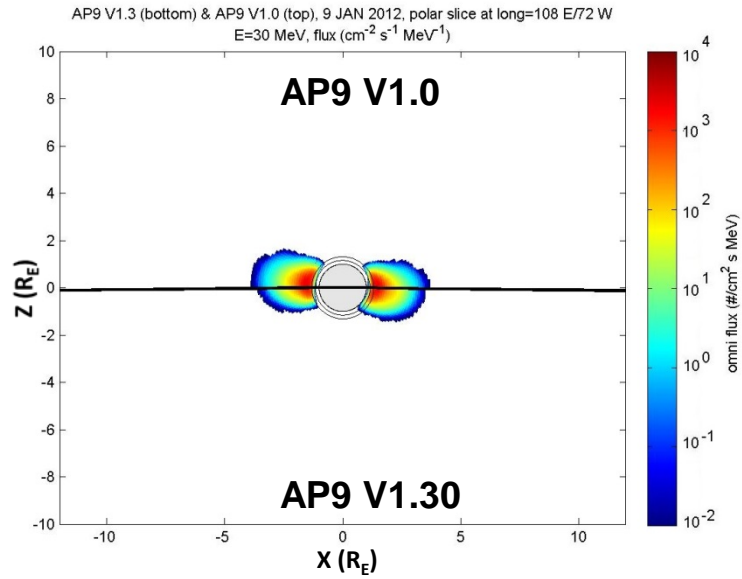
10 MeV protons



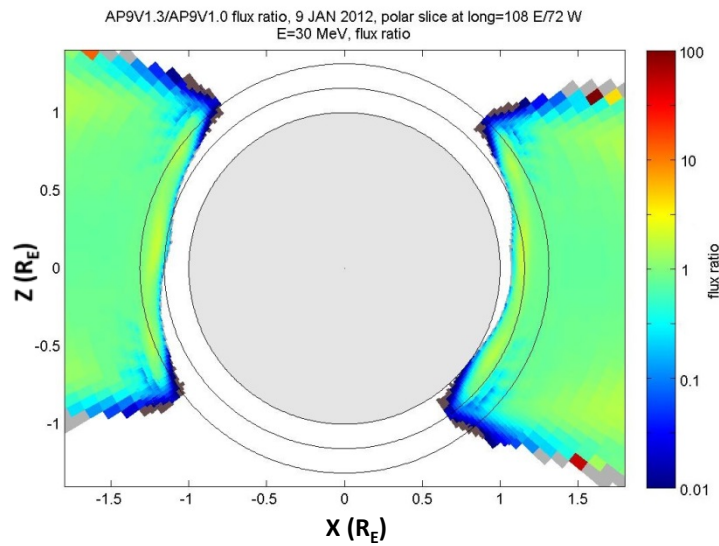
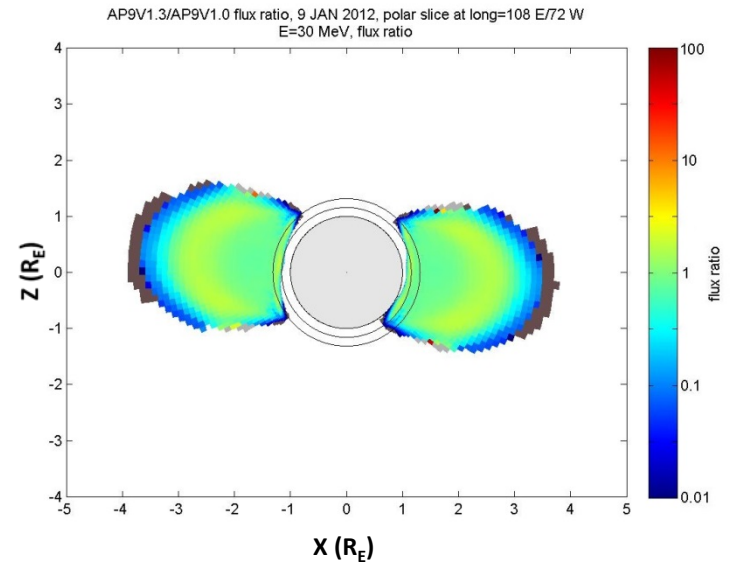
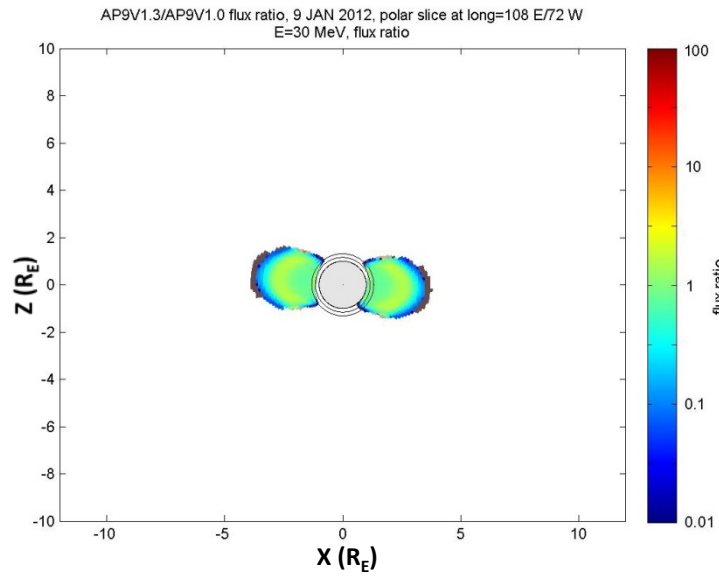
10 MeV protons, AP9V1.30-to-AP9V1.0 ratio



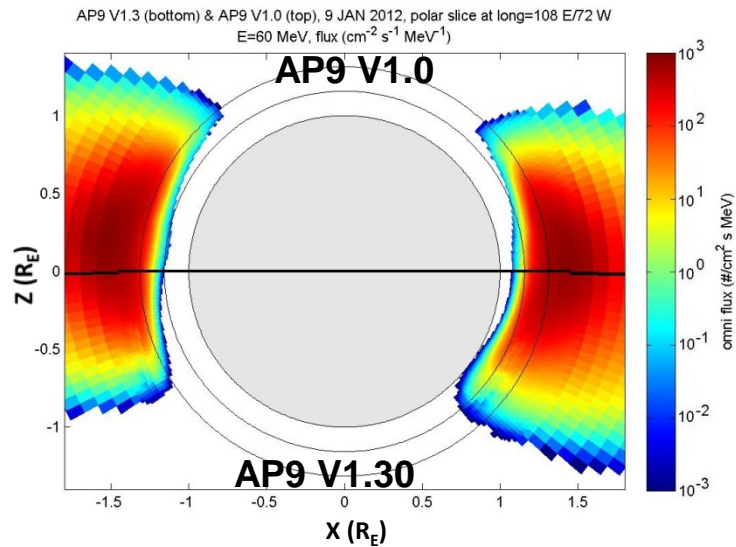
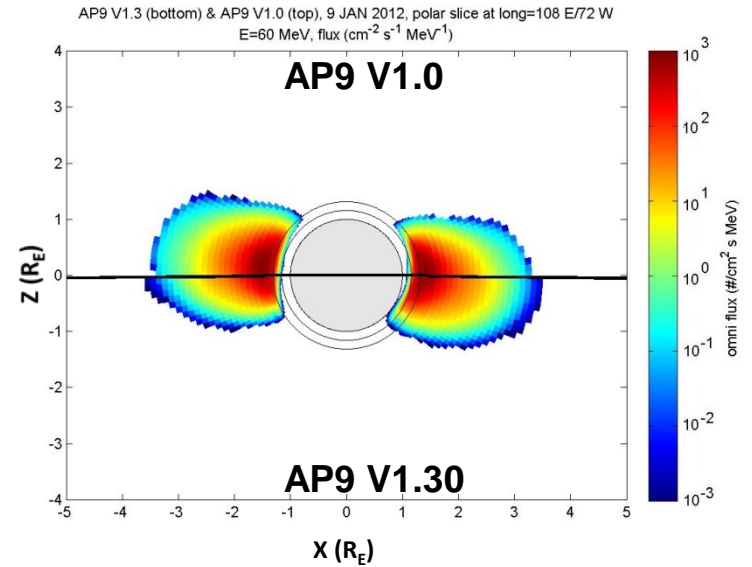
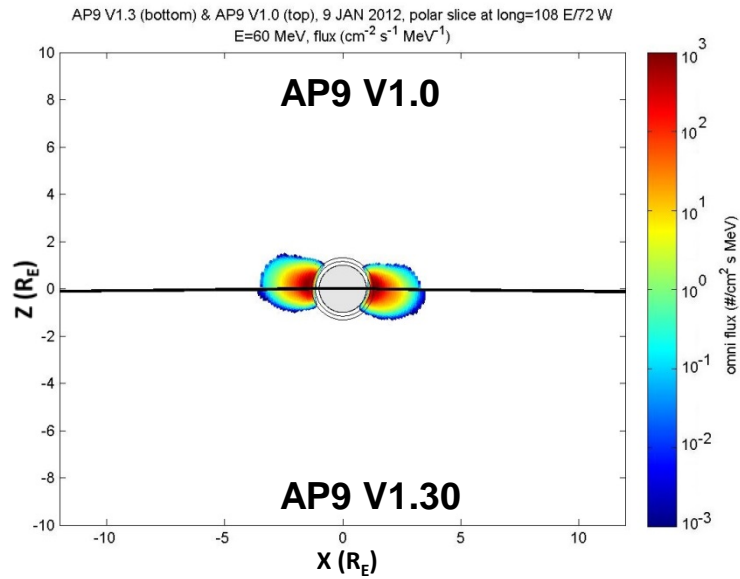
30 MeV protons



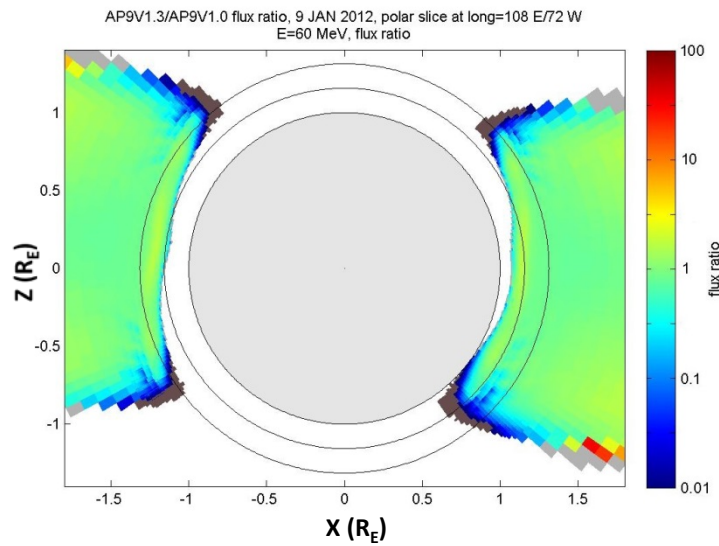
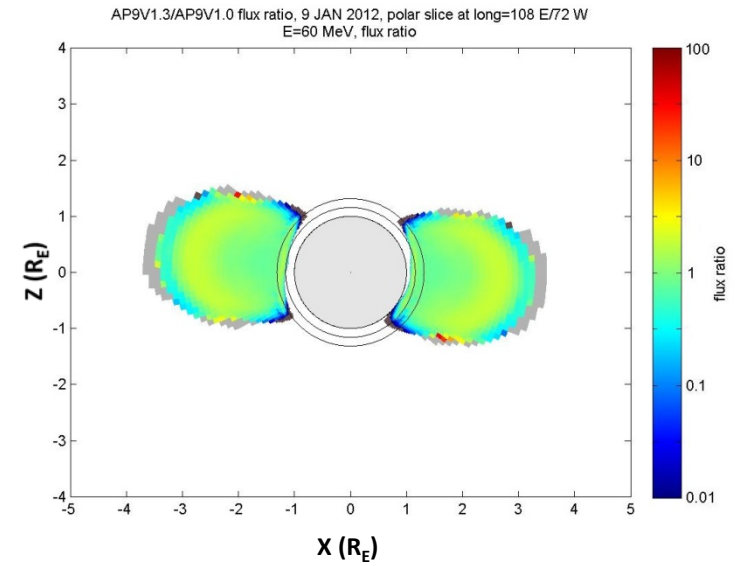
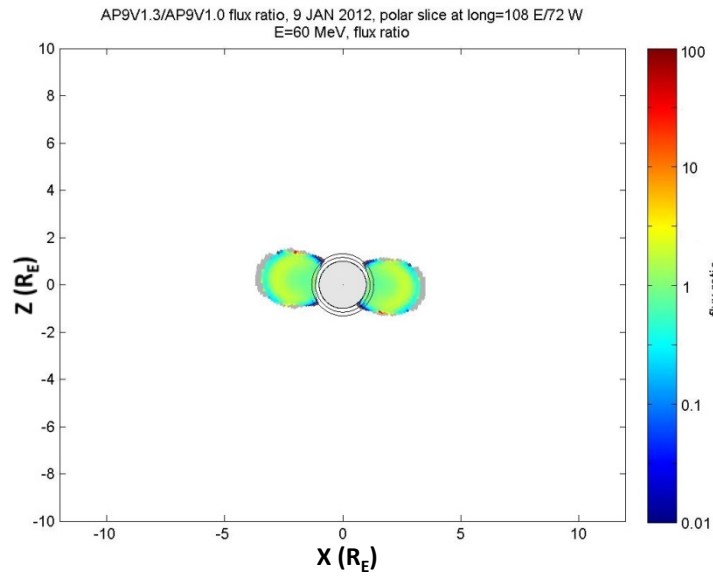
30 MeV protons, AP9V1.30-to-AP9V1.0 ratio



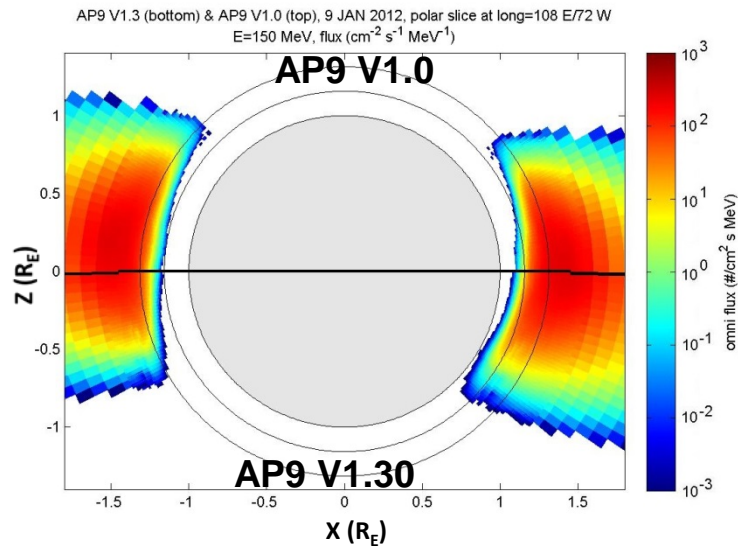
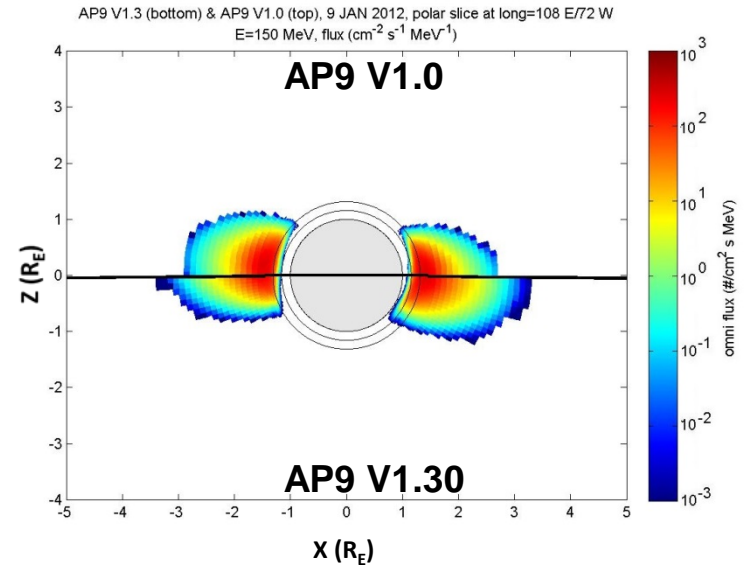
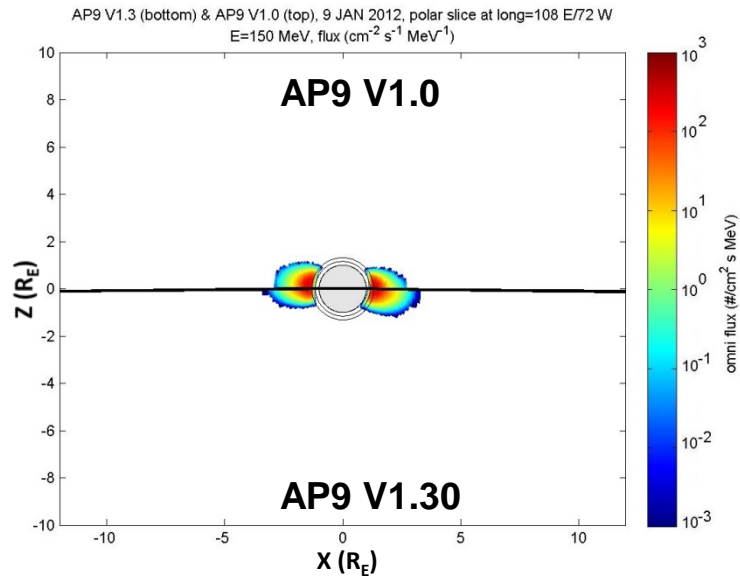
60 MeV protons



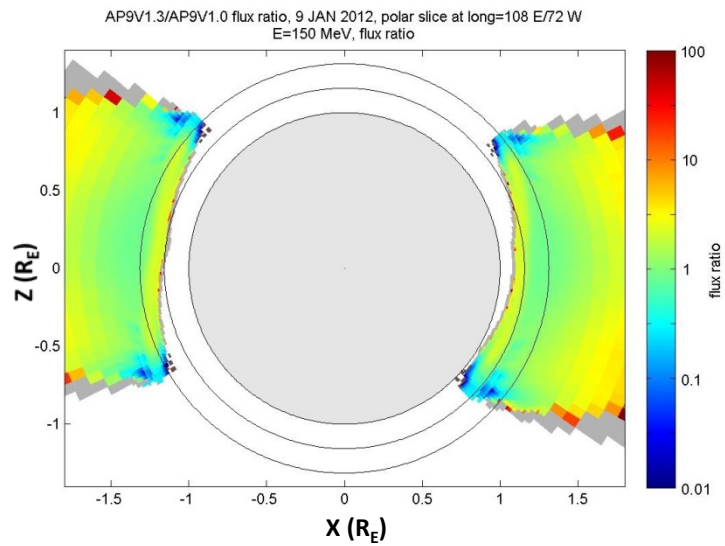
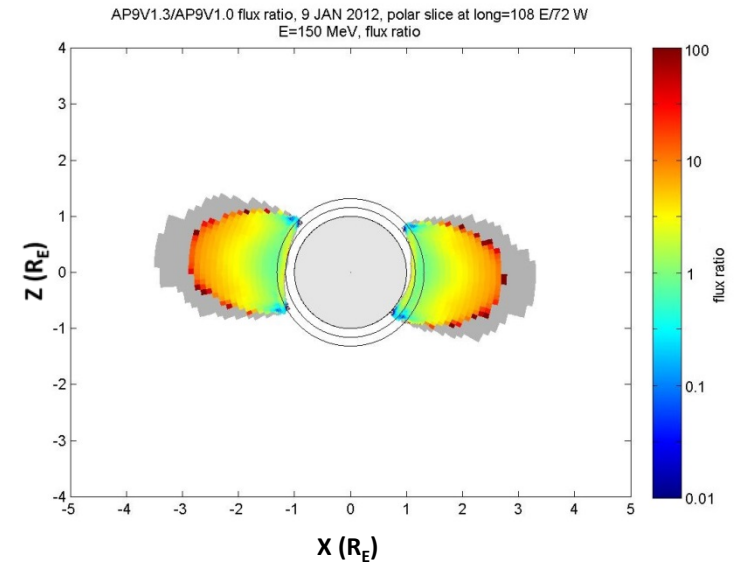
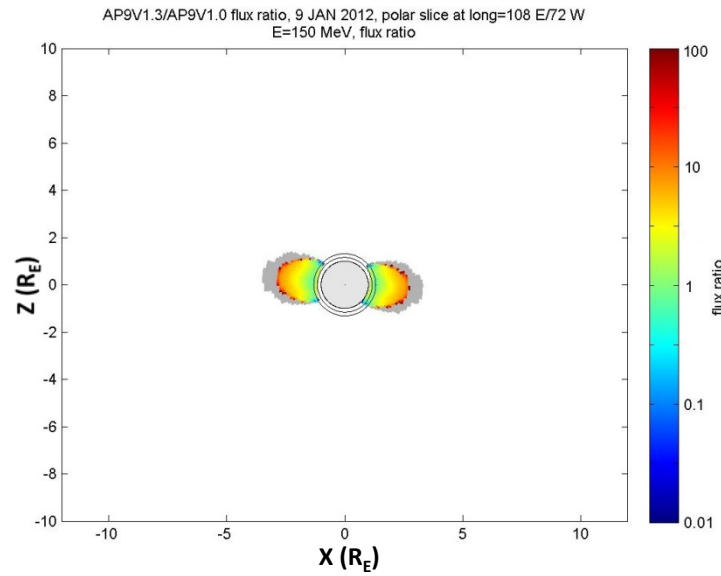
60 MeV protons, AP9V1.30-to-AP9V1.0 ratio



150 MeV protons

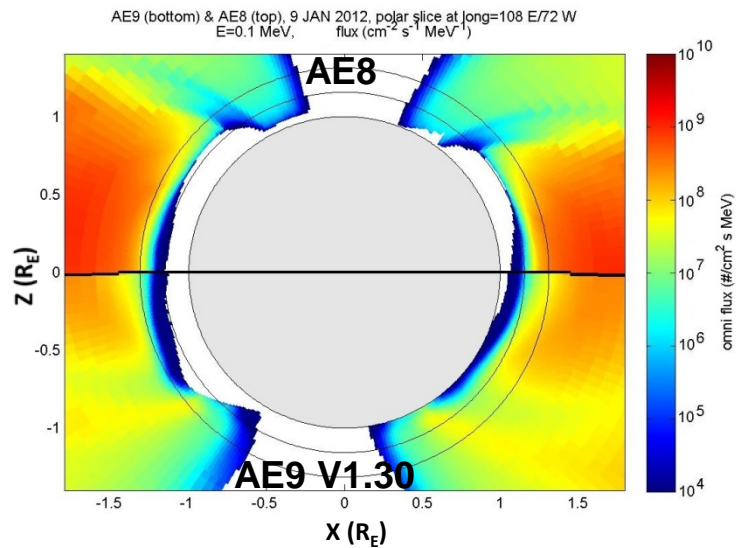
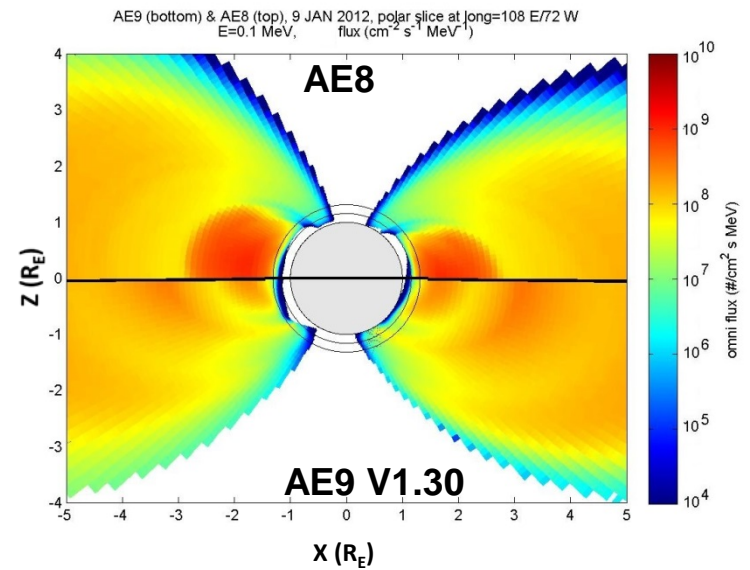
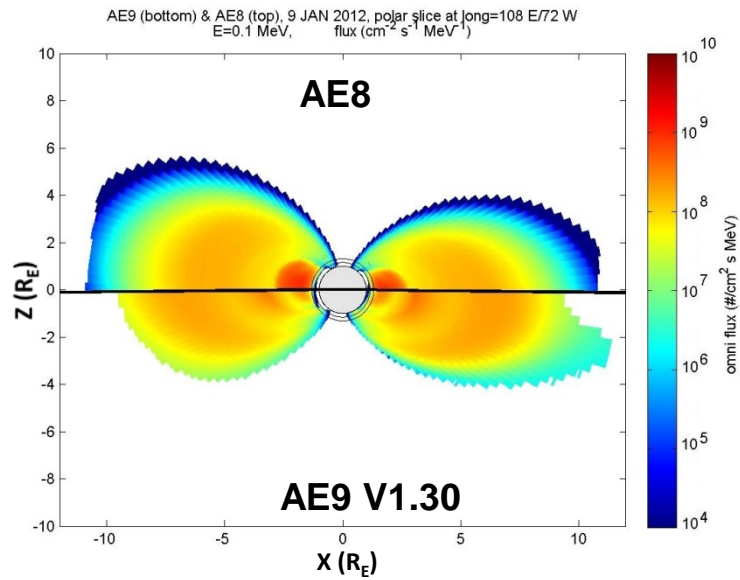


150 MeV protons, AP9V1.30-to-AP9V1.0 ratio

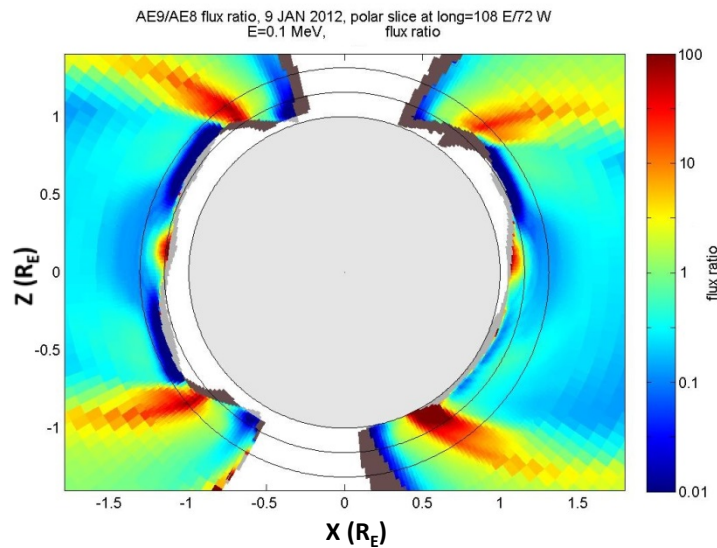
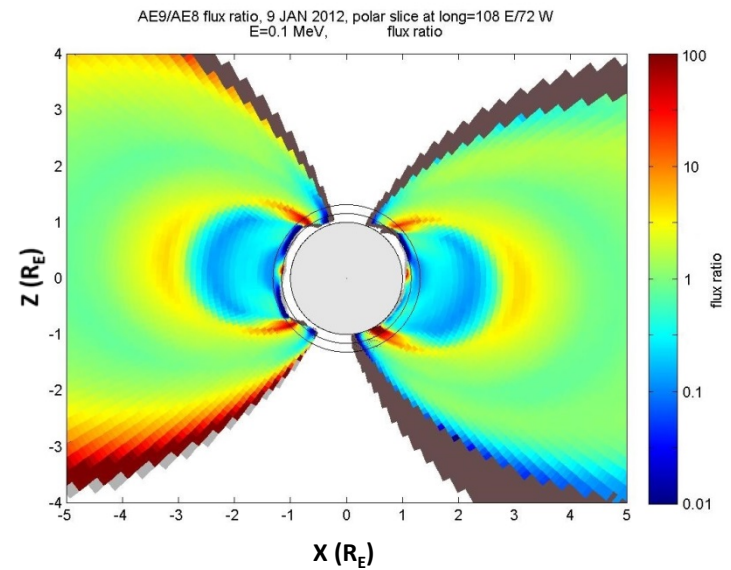
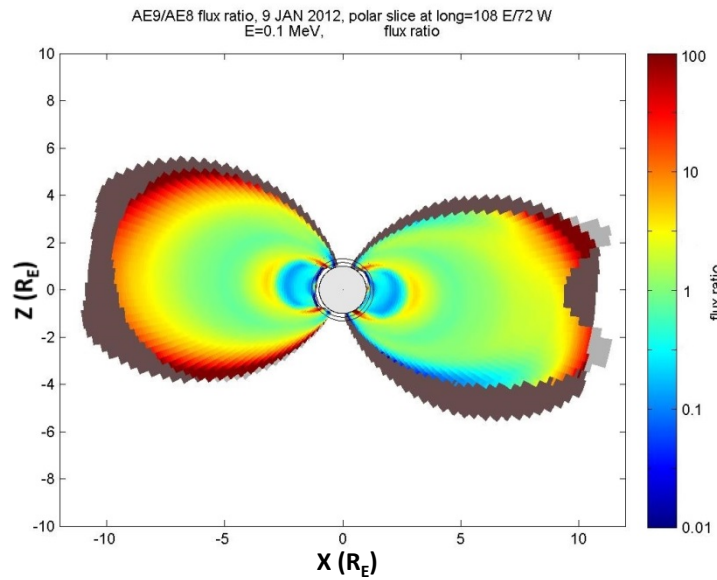


AE9 V1.30 vs. AE8

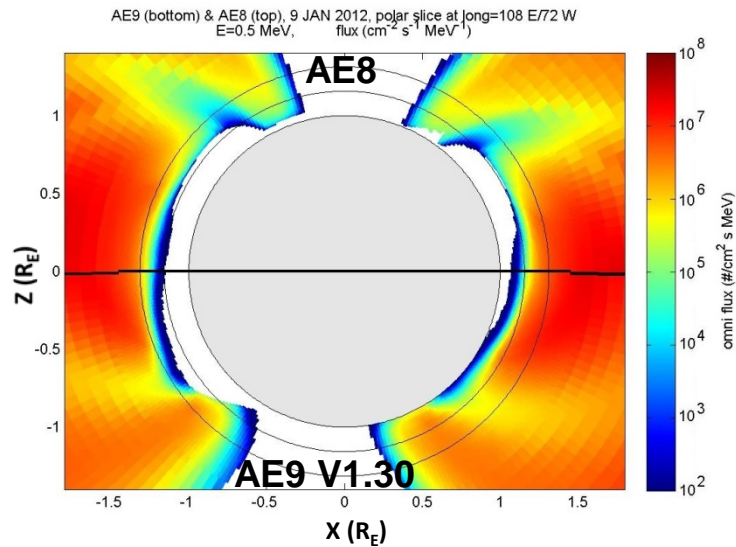
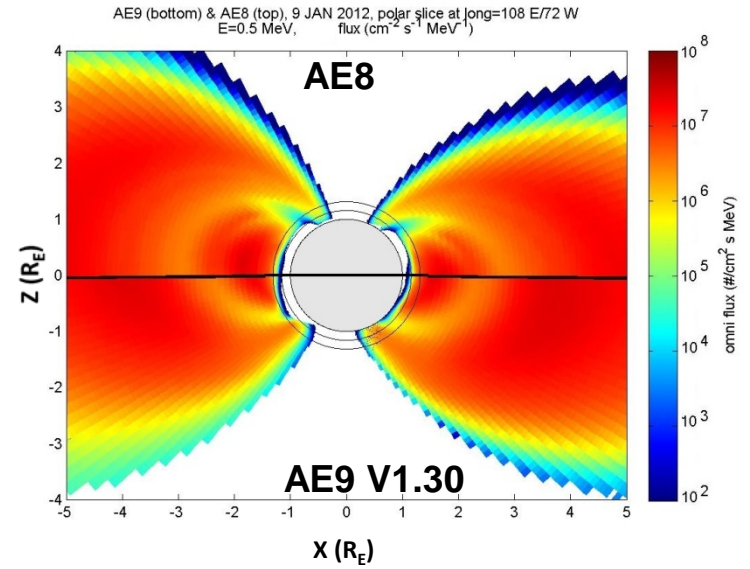
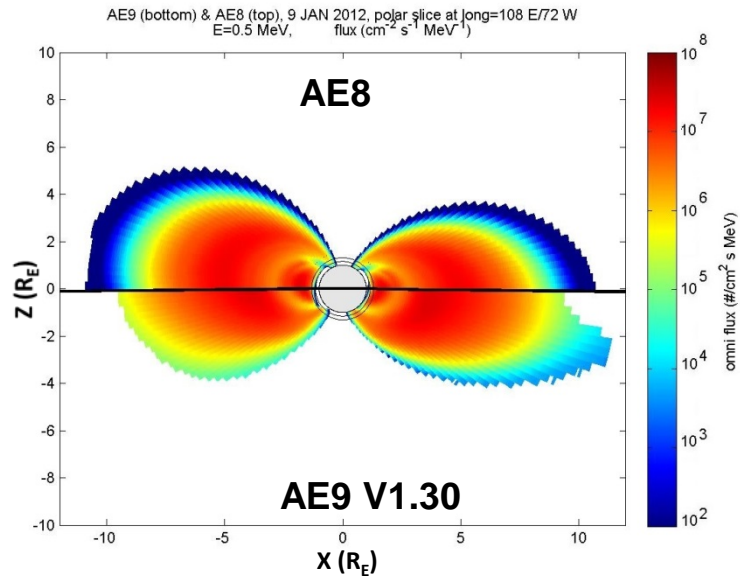
0.1 MeV electrons



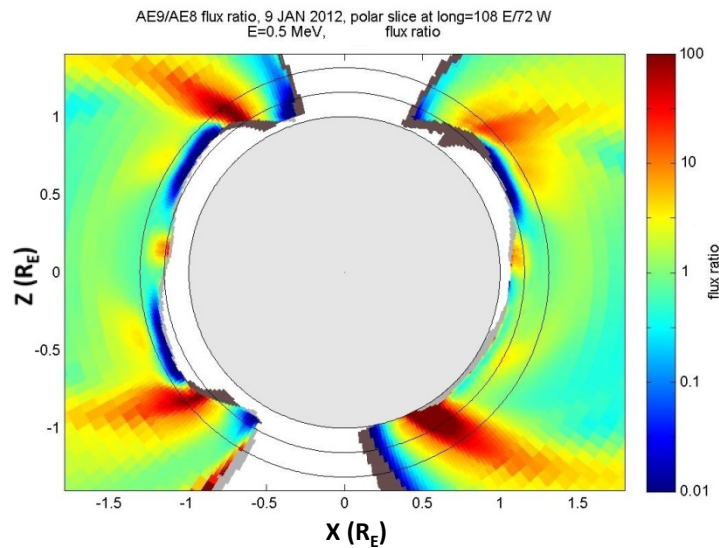
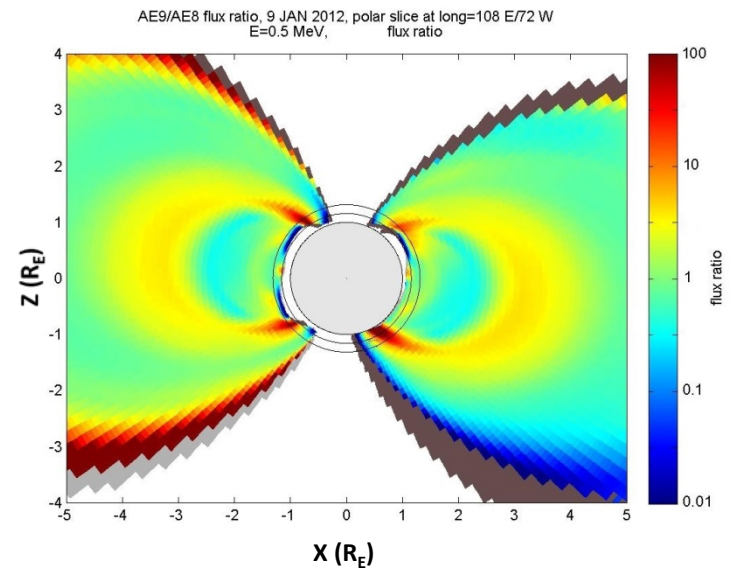
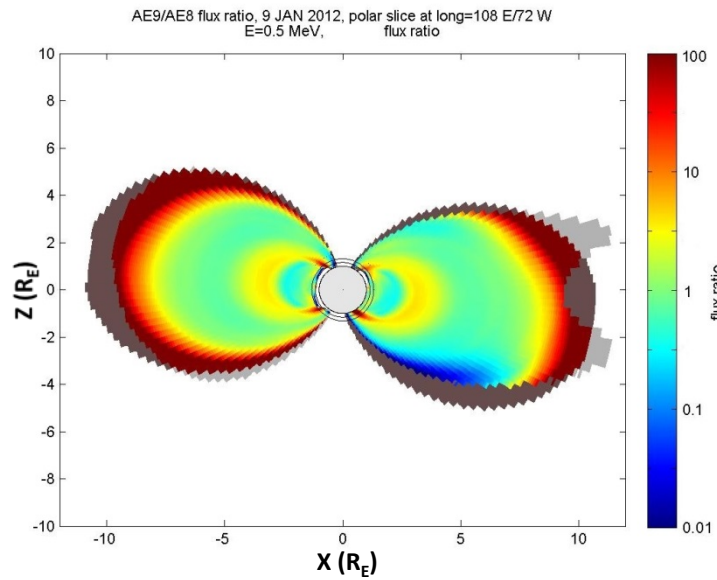
0.1 MeV electrons, AE9-to-AE8 ratio



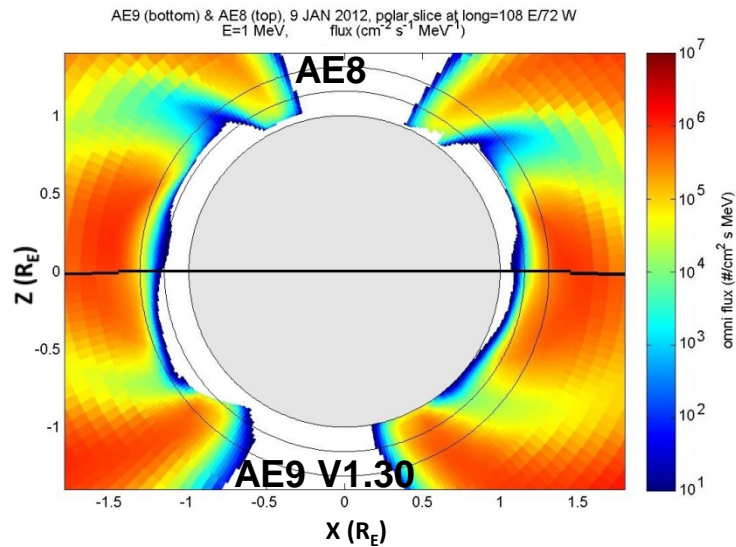
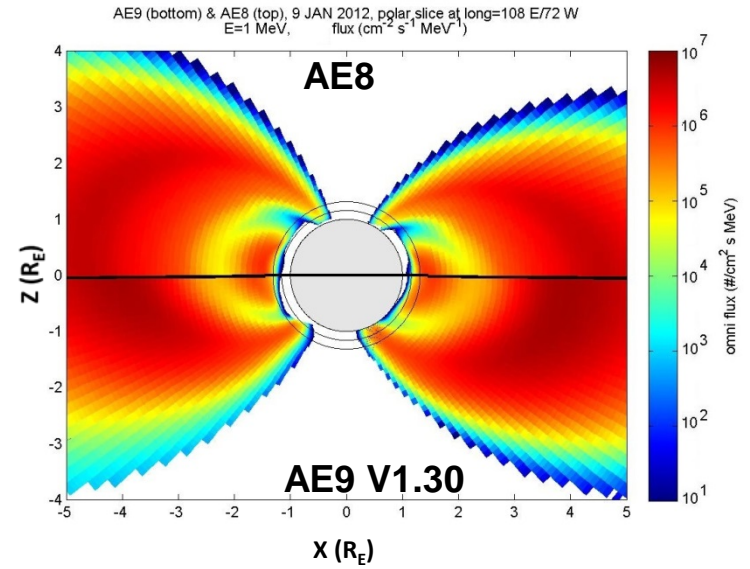
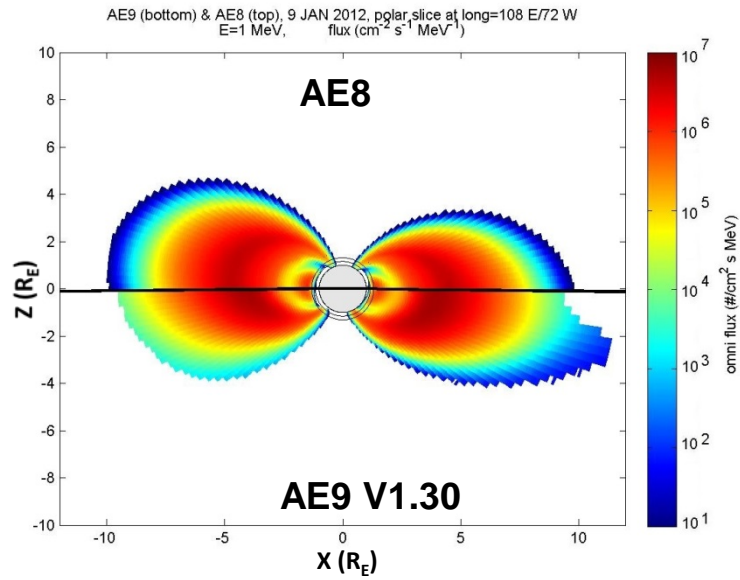
0.5 MeV electrons



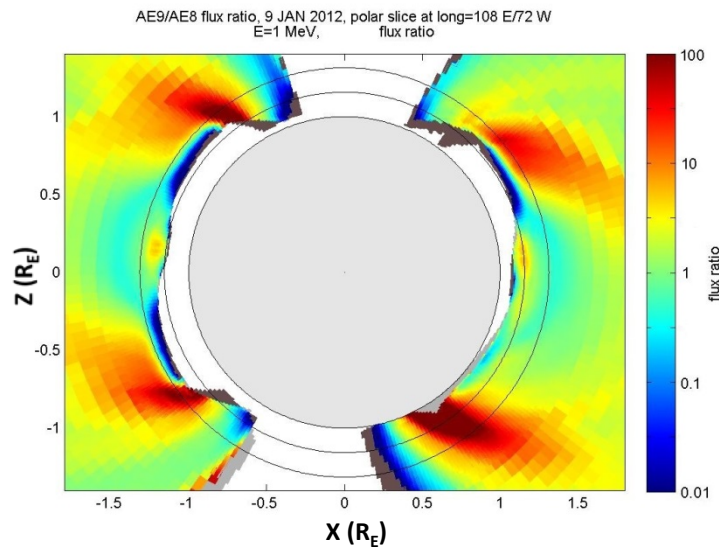
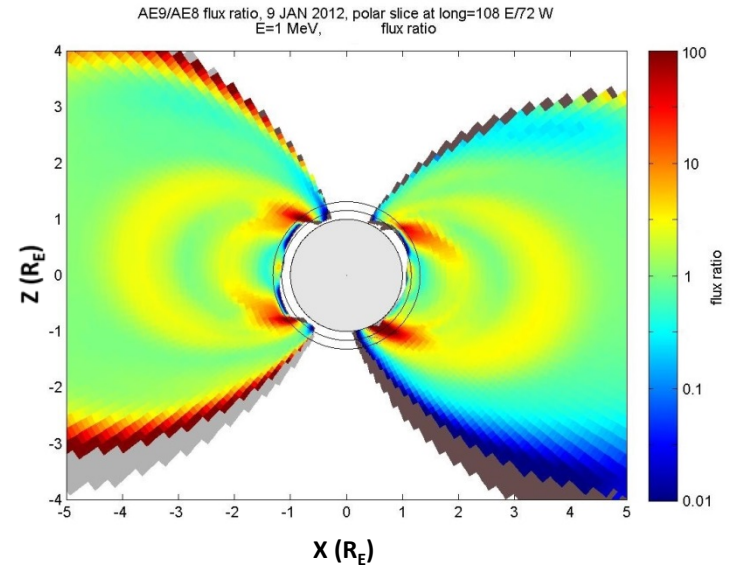
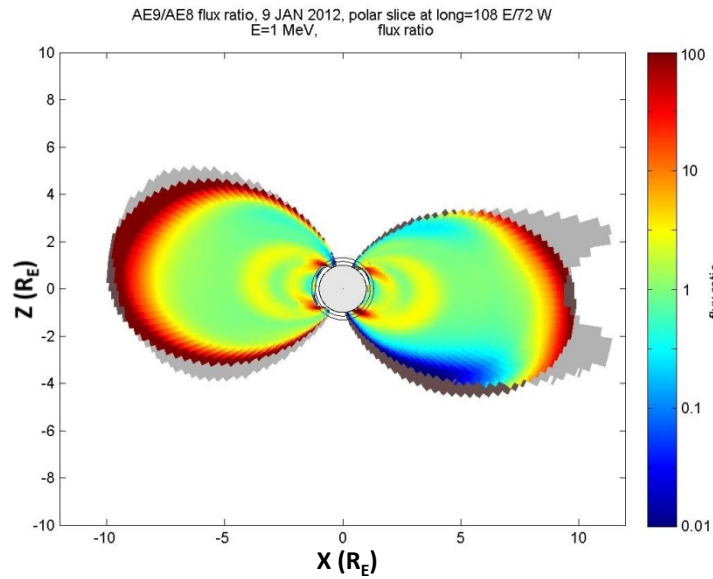
0.5 MeV electrons, AE9-to-AE8 ratio



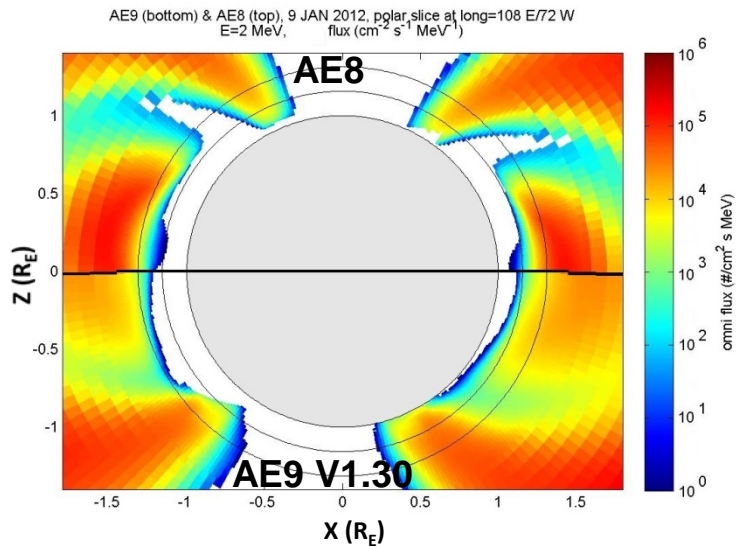
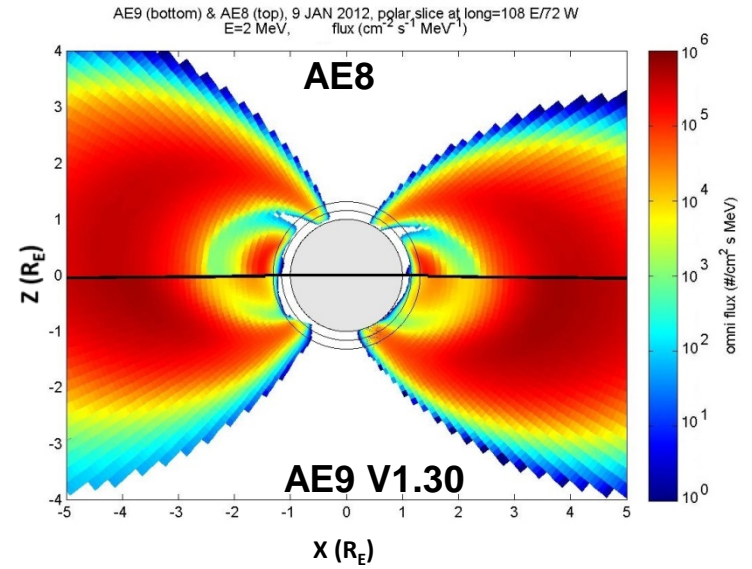
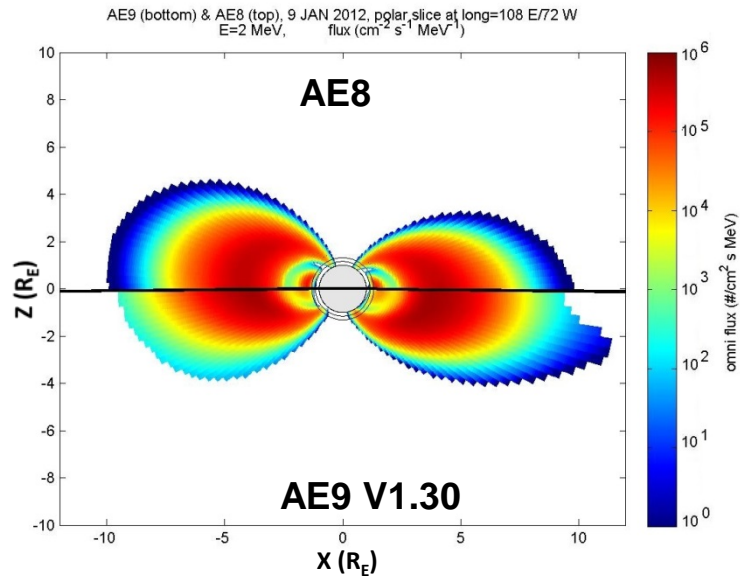
1 MeV electrons



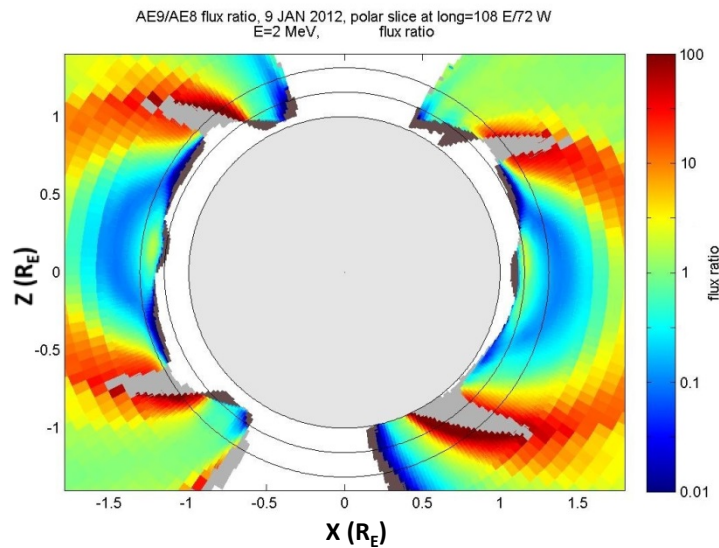
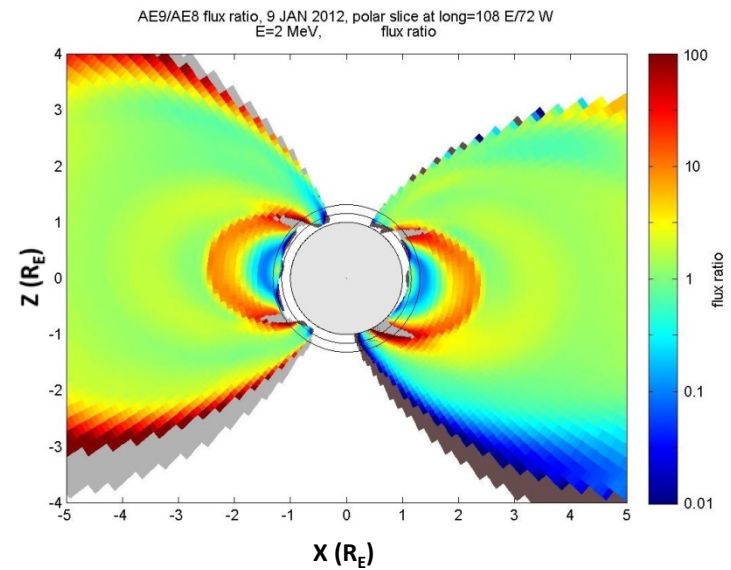
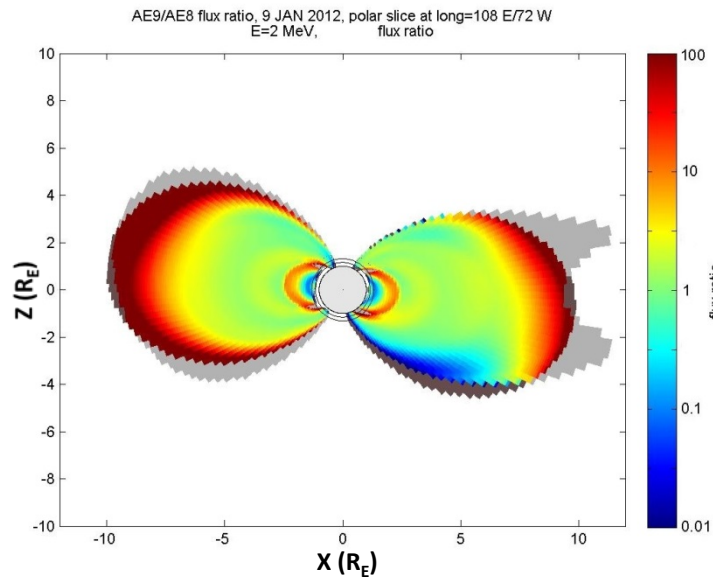
1 MeV electrons, AE9-to-AE8 ratio



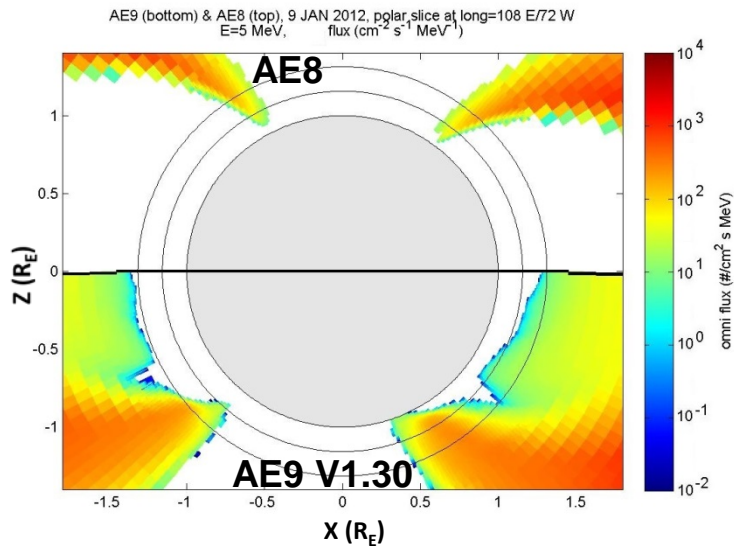
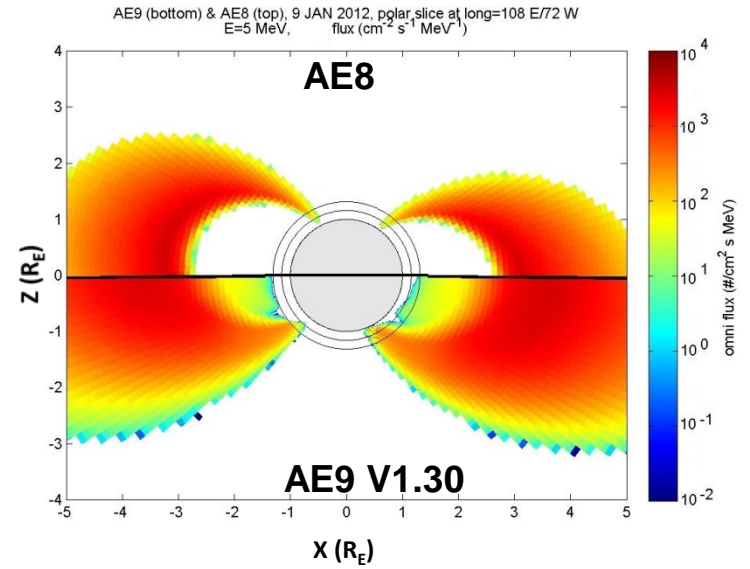
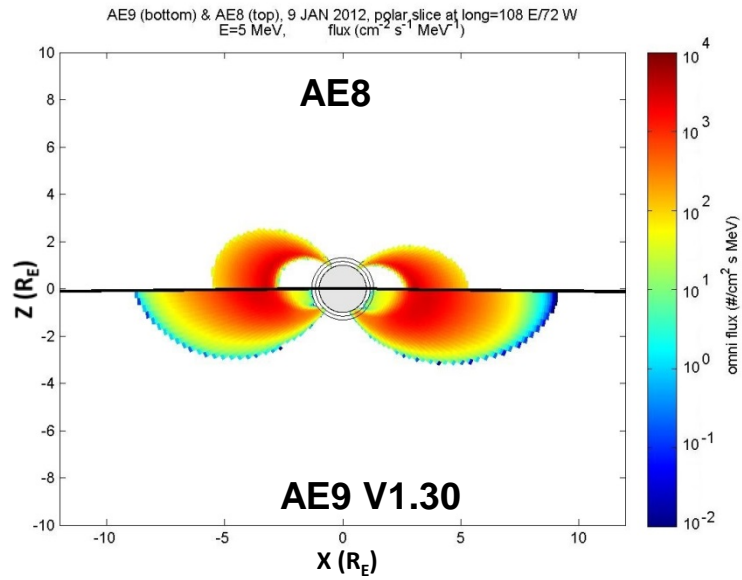
2 MeV electrons



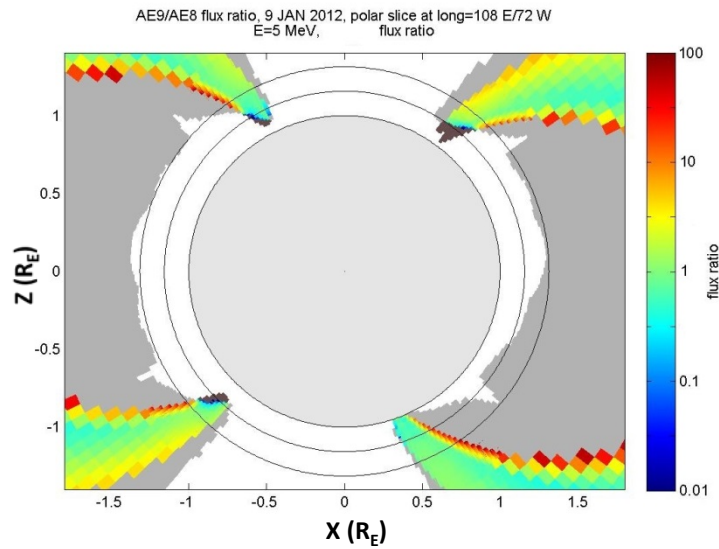
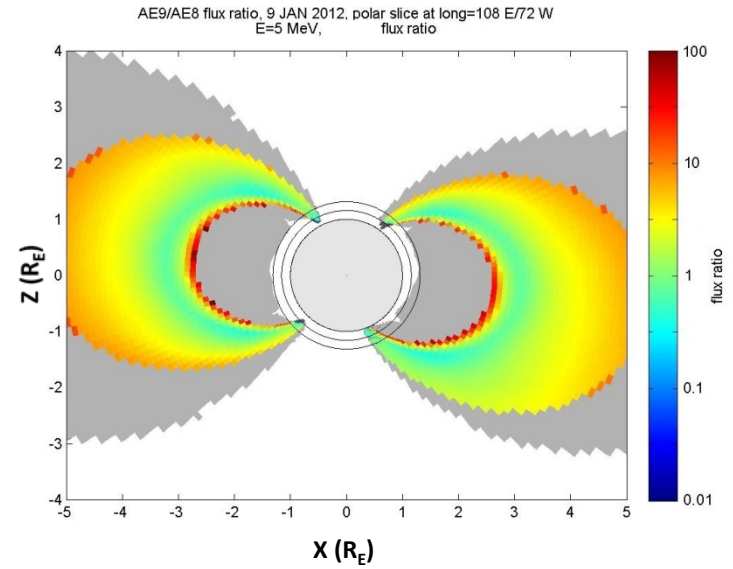
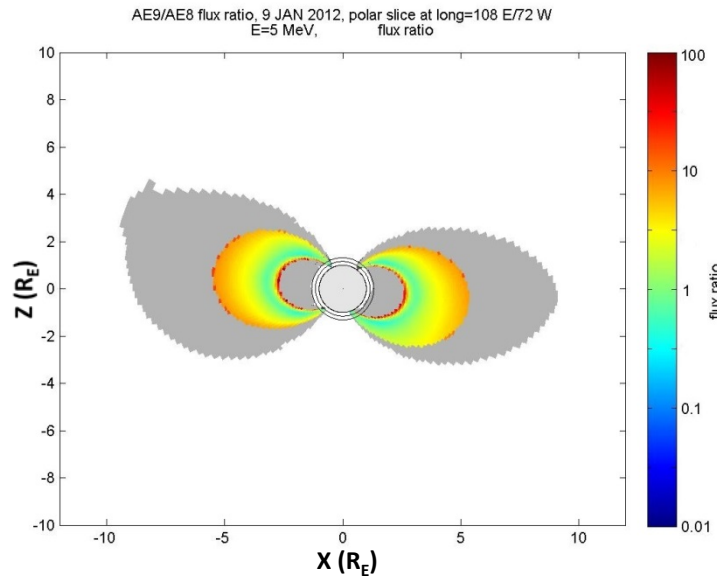
2 MeV electrons, AE9-to-AE8 ratio



5 MeV electrons

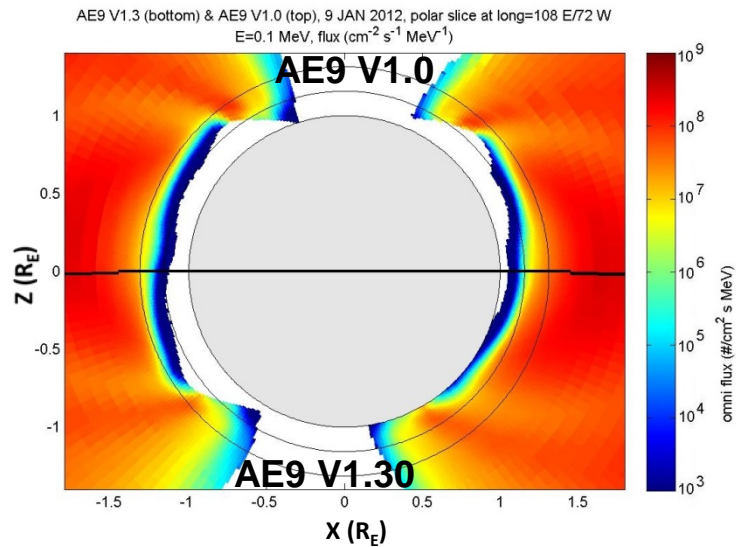
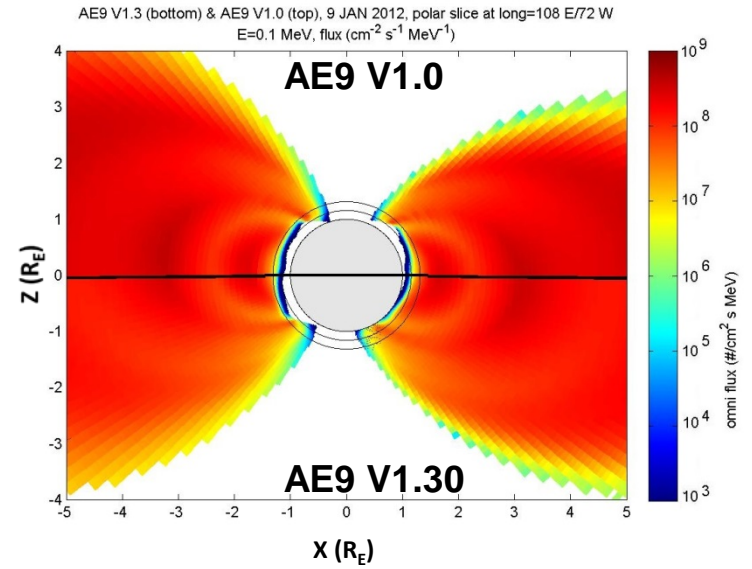
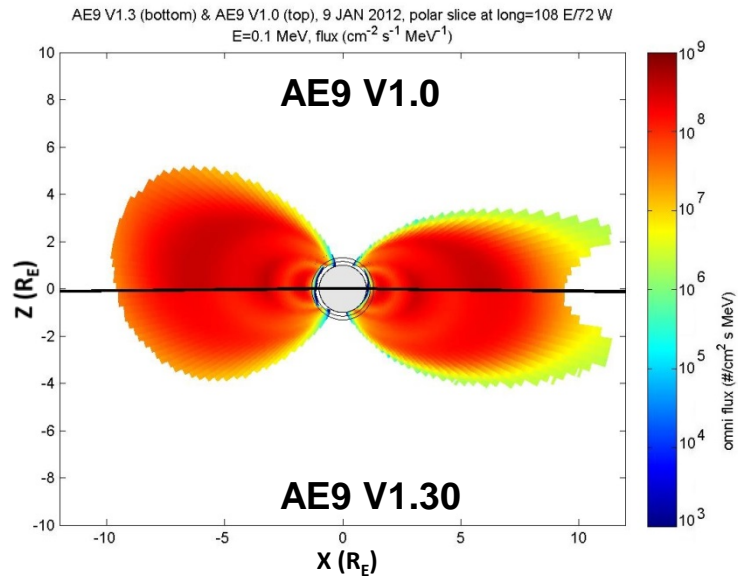


5 MeV electrons, AE9-to-AE8 ratio

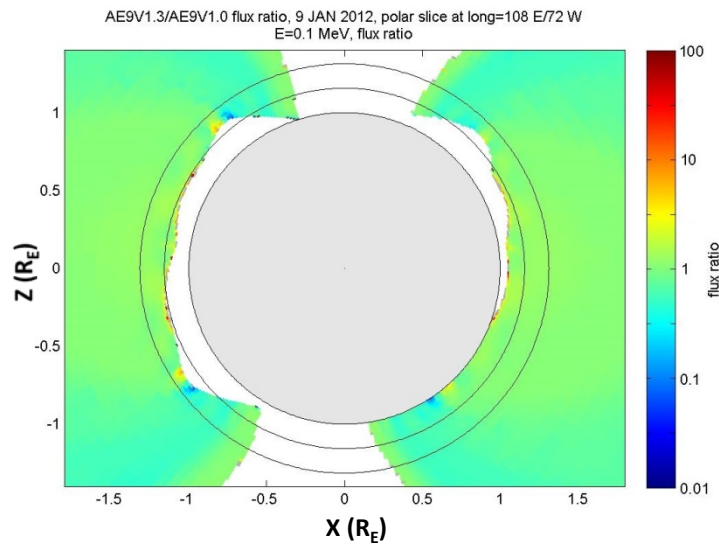
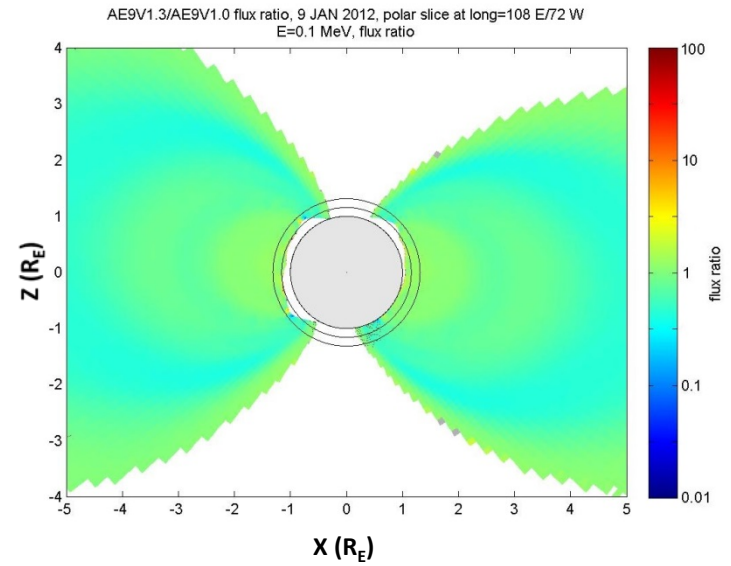
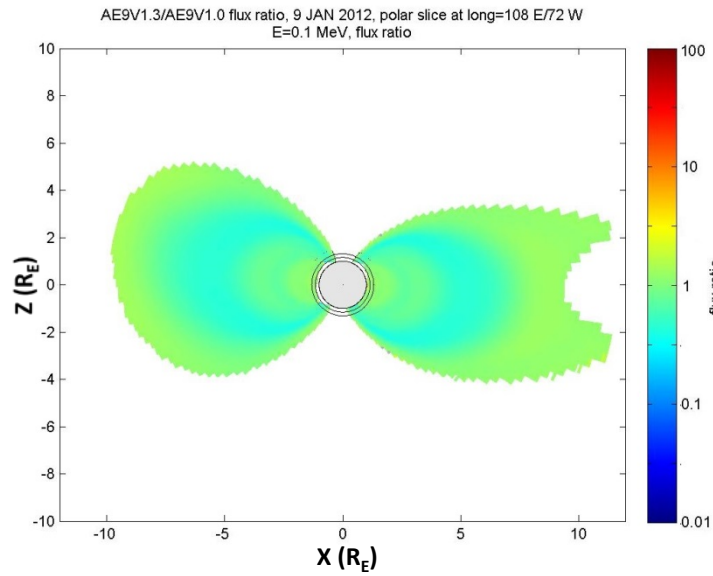


AE9 V1.30 vs. AE9 V1.0

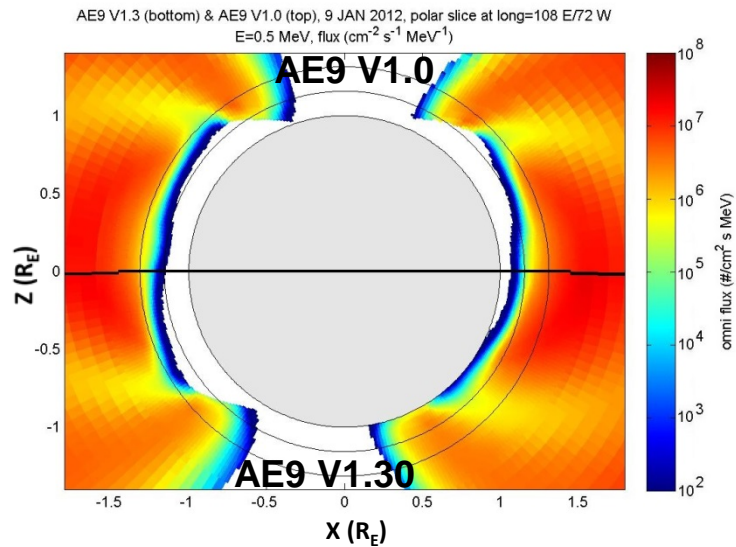
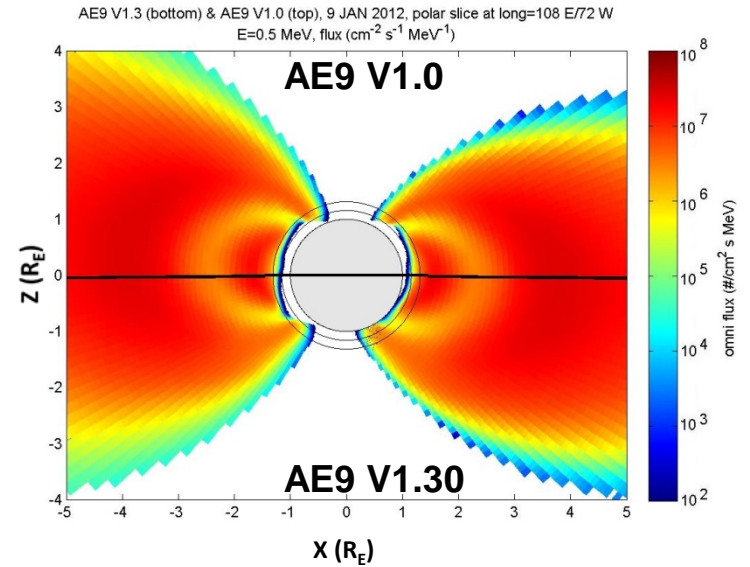
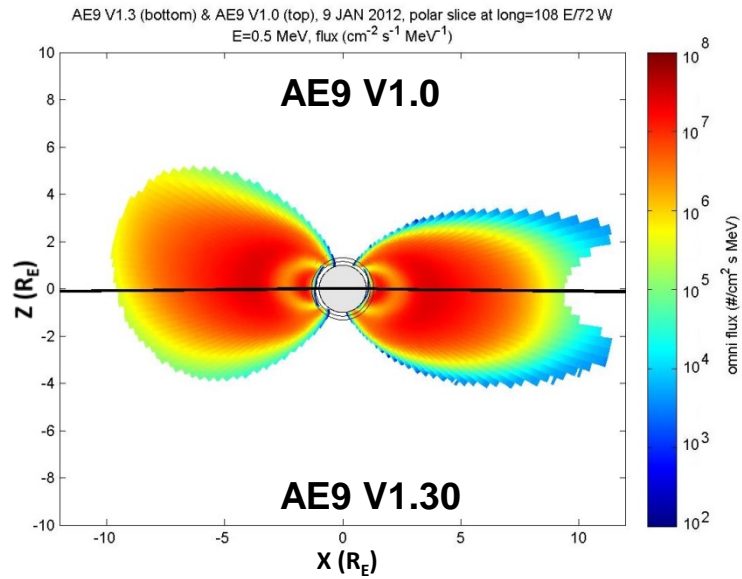
0.1 MeV electrons



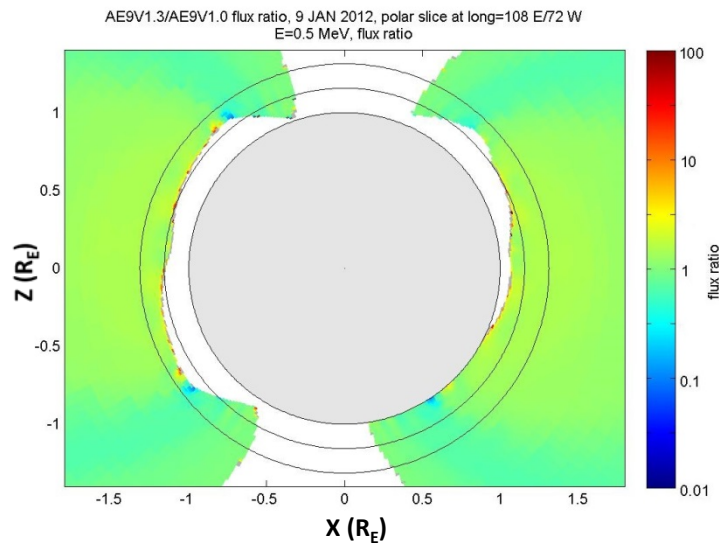
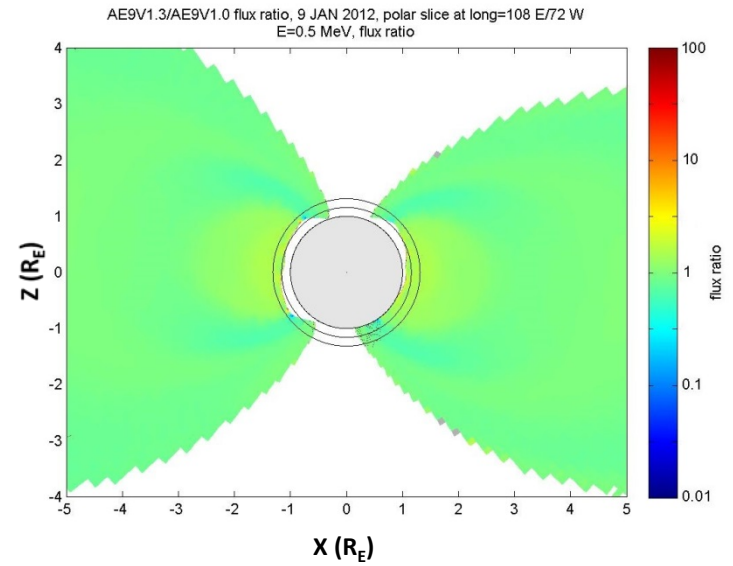
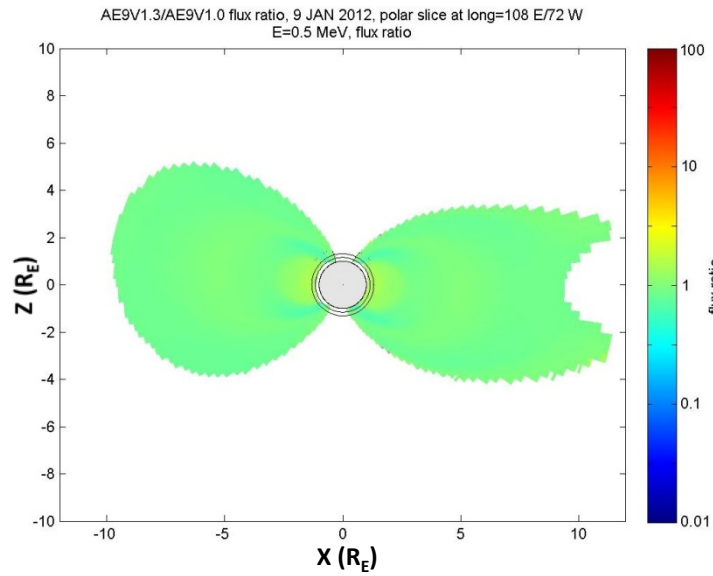
0.1 MeV electrons, AE9V1.30-to-AE9V1.0 ratio



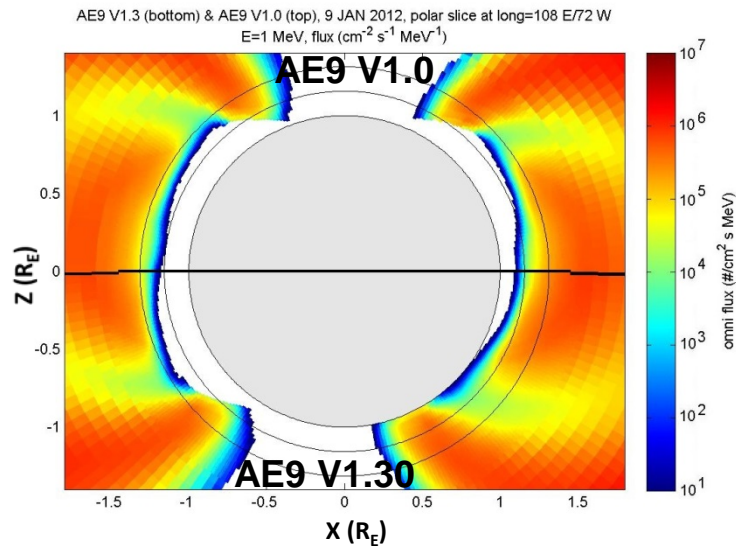
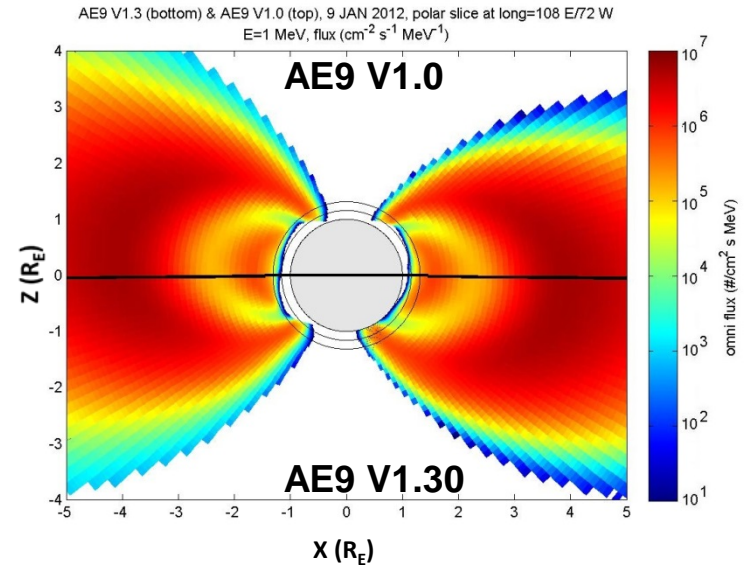
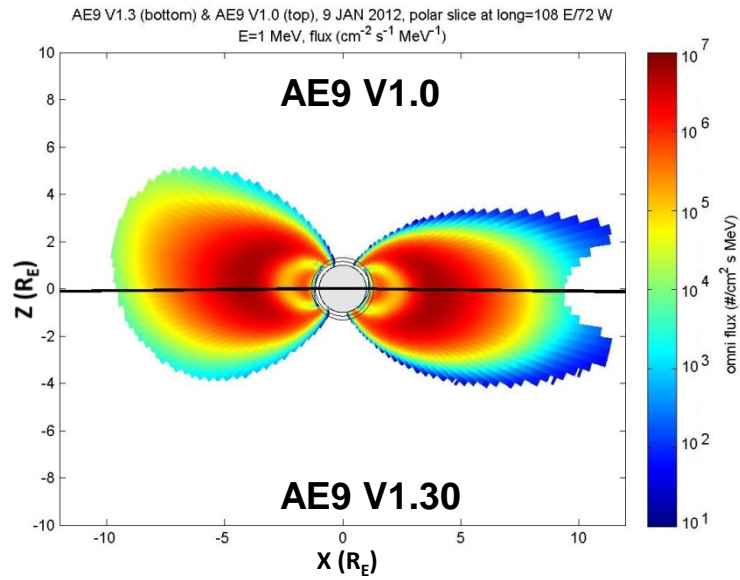
0.5 MeV electrons



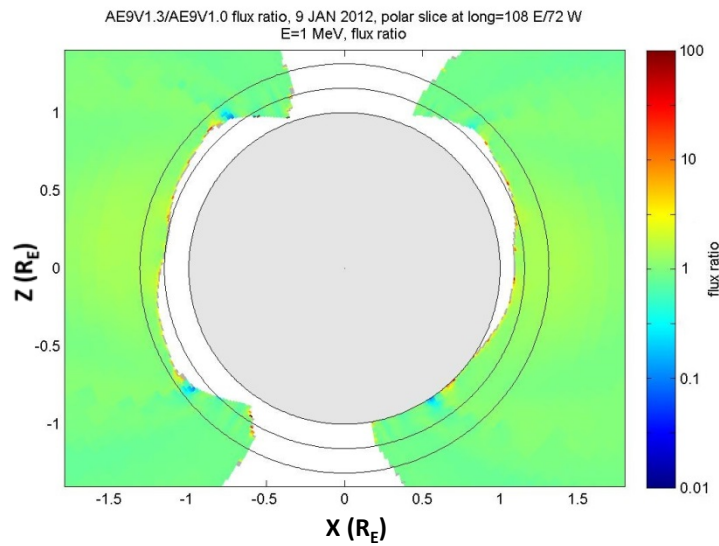
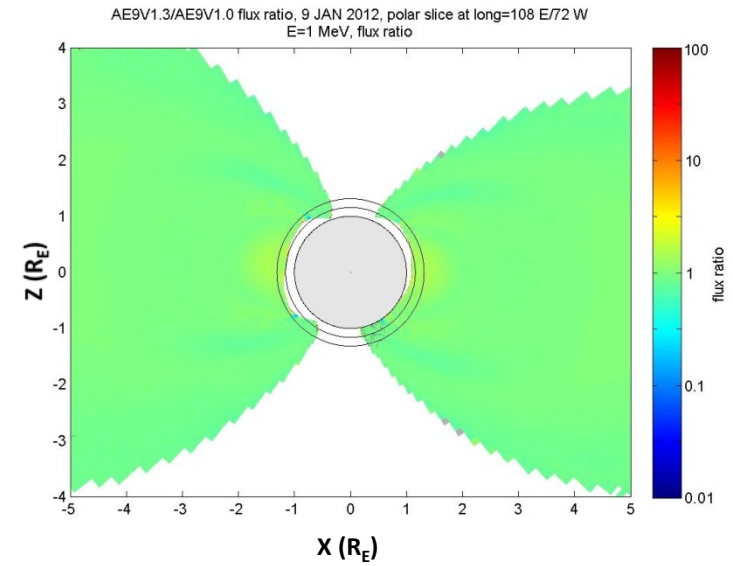
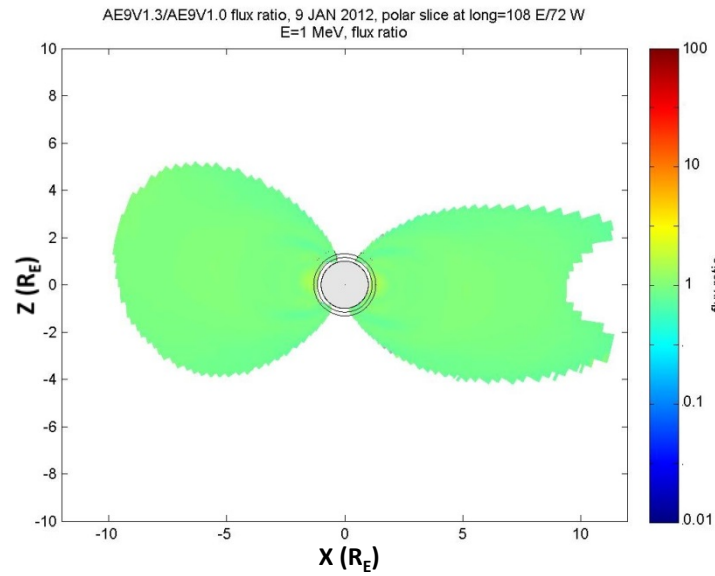
0.5 MeV electrons, AE9V1.30-to-AE9V1.0 ratio



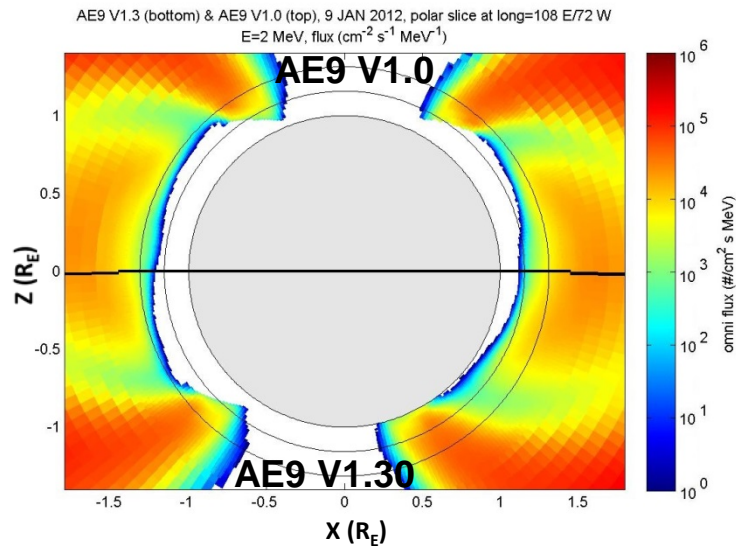
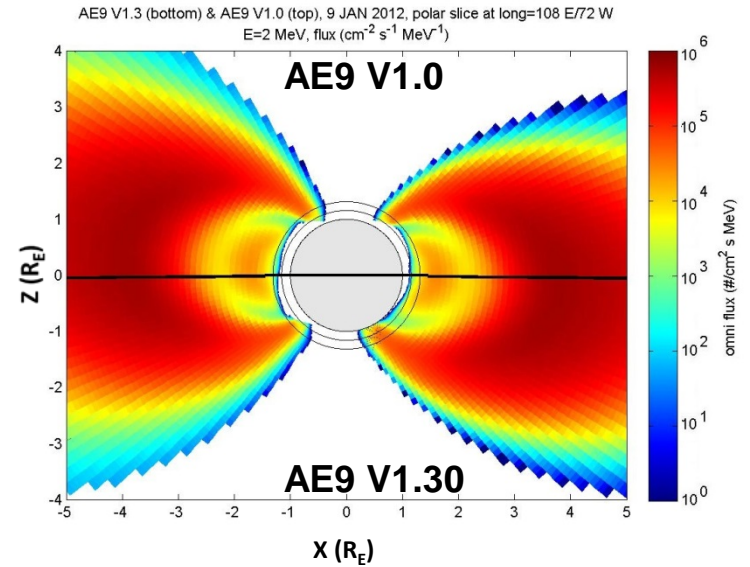
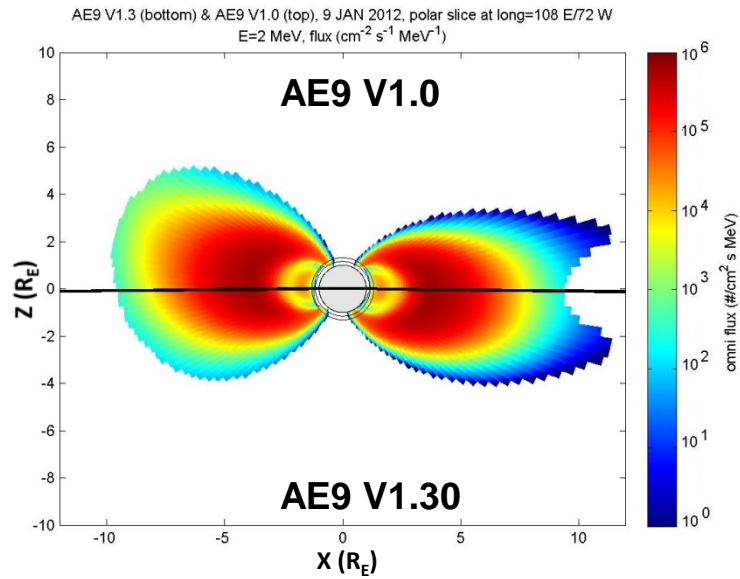
1 MeV electrons



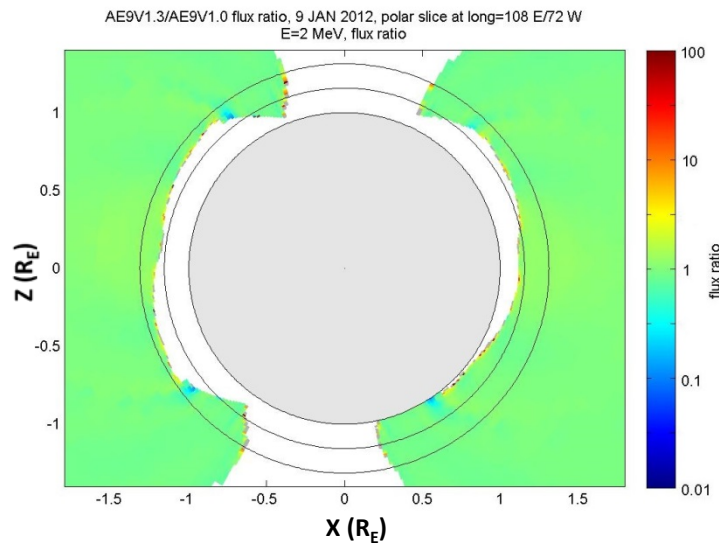
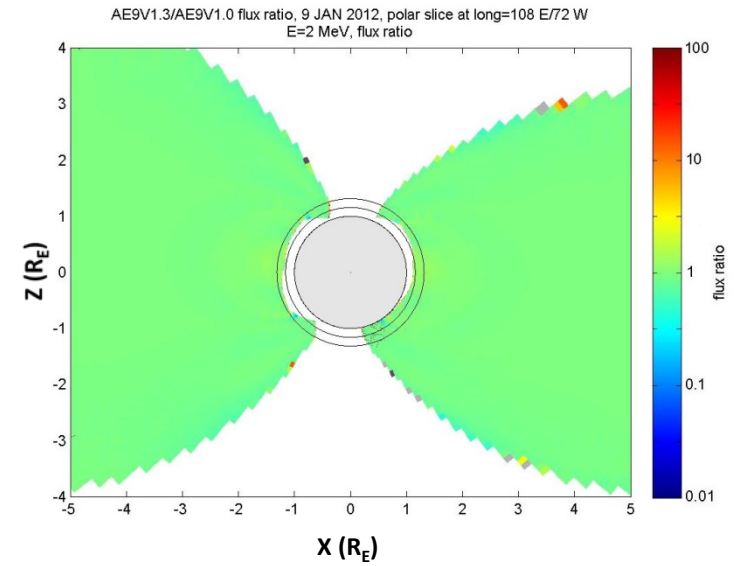
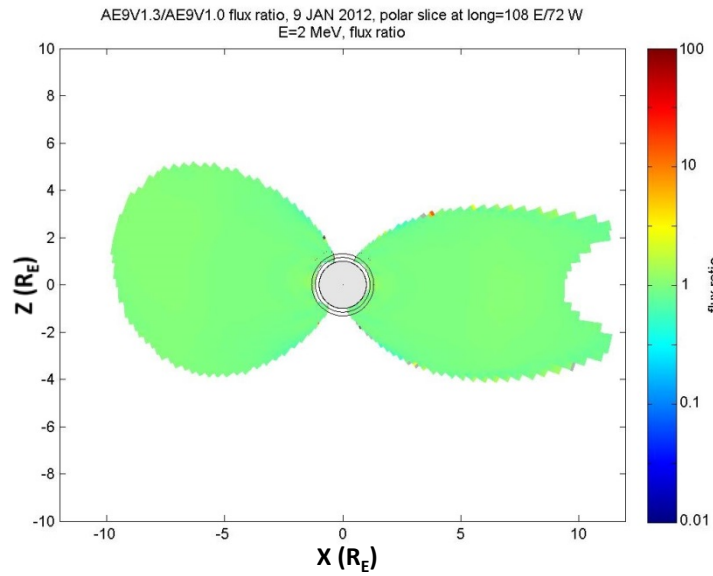
1 MeV electrons, AE9V1.30-to-AE9V1.0 ratio



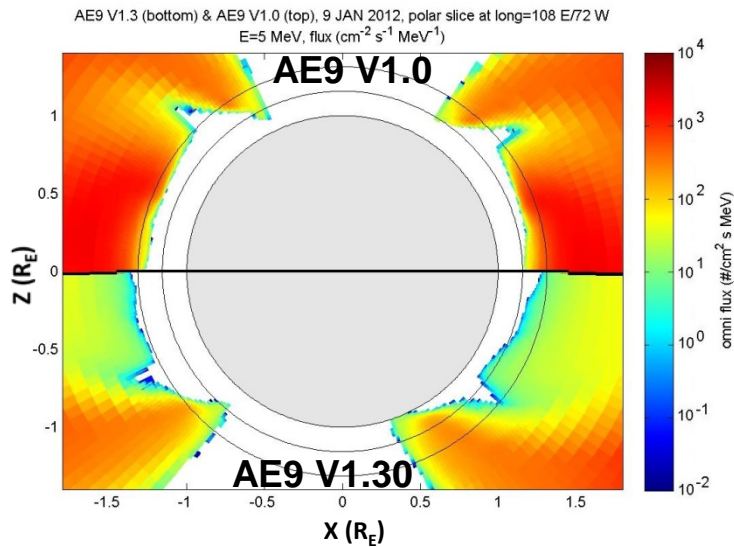
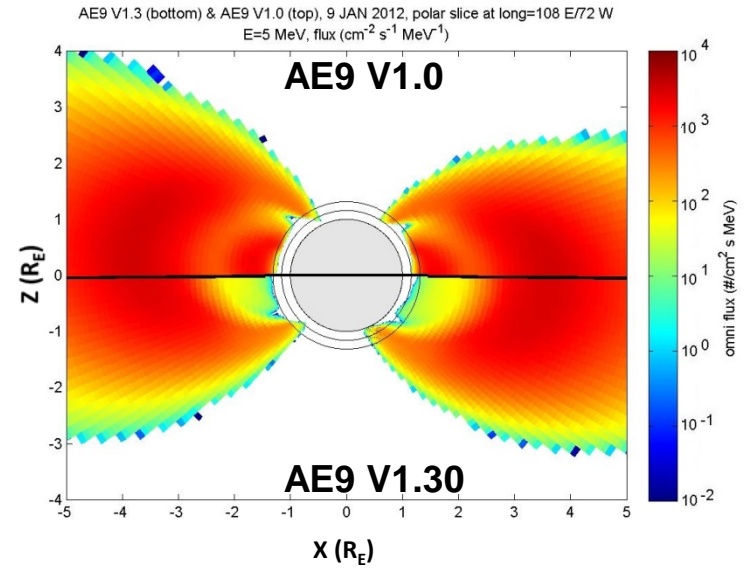
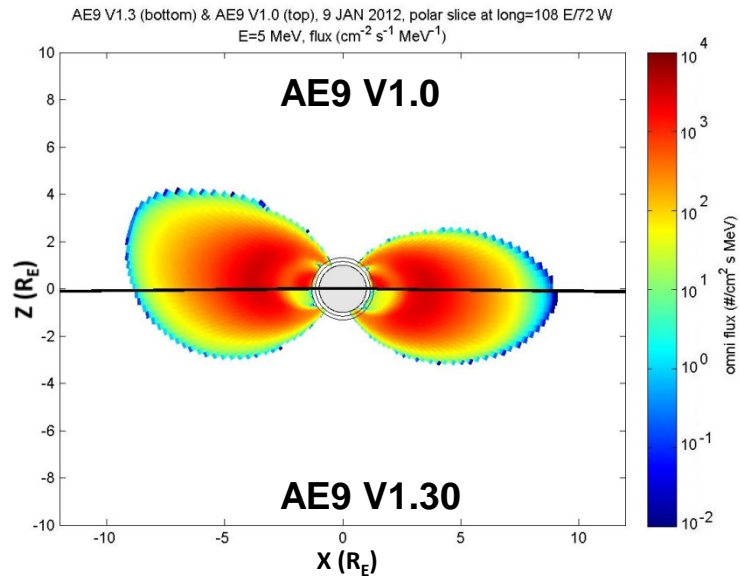
2 MeV electrons



2 MeV electrons, AE9V1.30-to-AE9V1.0 ratio



5 MeV electrons



5 MeV electrons, AE9V1.30-to-AE9V1.0 ratio

