Tools for Swapping Drivers

• Kameleon-converter:
  convert outputs of any ionosphere electrodynamics models (including ionospheric electrodynamics outputs from global MHD models, AMIE, Weimer, etc.) into the same format (cdf)

• Kameleon-interpolator:
  can be called as a subroutine from any code to provide values on the grid (tested with CTIPe and TIE-GCM, and will be implemented for GITM)
MI Coupling: Driver-Swapping Community Tool

High-Latitude Electric Potential Models
- empirical
- data assimilation
- global MHD
  - Heelis
  - Weimer
  - Foster
  - Heppner & Maynard
  - Ridley
  - AMIE
  - super DARN
- SWMF
- Open-GGCM
- LFM

Particle Precipitation Models
- empirical/analytical
- global MHD
  - Fuller-Rowell & Evans
  - Hardy et al.
  - Ovation Prime
  - Roble & Ridley

Penetration Electric Field Models
- inner magnetosphere model
  - CRCM (driven by SWMF)
  - RCM (driven by SWMF or Tsyganenko)

IT Models (CTIPe/TIE-GCM/GITM)
Repository of Drivers

• Current Status:
  ftp://hanna.cccmc.gsfc.nasa.gov/pub/GEM-CEDAR/out/high-latitude-drivers/

  – Models:
    • SWMF
    • AMIE: Aaron Ridley (UM), Geoff Crowley (ASTRA)
    • superDARN Assimilative Mapping (SAM): Ellen Cousins (UCAR), Simon Shepherd (Dartmouth)

  – Events:
    • E.2001.243 : 08/31-09/01/2001 (only for SWMF)

  – Data frequency:
    • 5 min: SWMF, AMIE
    • 10 min: superDARN

• New additions
  – CMIT, Weimer05
  – More events or continuous runs?