

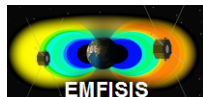
Van Allen Probes

# EMFISIS

## Instrument and Ops Status

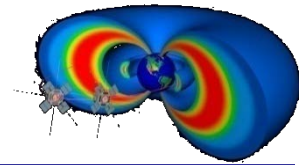
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*University of Iowa*

23 September 2014

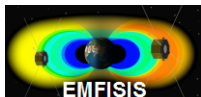




# On Orbit Status

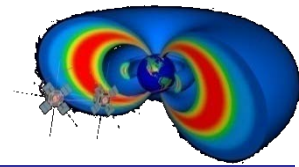


- All aspects of EMFISIS functioning nominally.
- No degradation of any part of the suite.
- Data throughput has been excellent. EMFISIS sends data to the IEM at the max rate that the link supports.
- Only data loss is when we have taken more data than can be sent to the IEM.
- Single and multi-bit errors seen on a regular data, but all are corrected by EDAC algorithms on board.
- Minor hit to MAG data at range change for about 6 months. Only affects two spins before change.

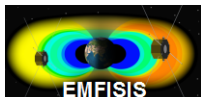




# Planning and Operations

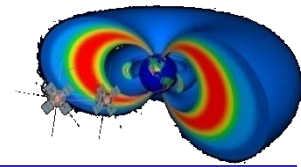


- The EMFISIS burst product is full, six-channel vector E and B waveforms.
- Current burst ops: 24 best 6 second burst captures every 25 minutes centered around 6 hours centered on apogee Ten best for each hour of the three hours around perigee
  - Triggered by chorus power around apogee
  - Triggered by lower frequency power near perigee
- We also run “Craig mode” every five orbits. This grabs a longer interval of burst (10 mins) and also runs on-board WNA analysis.





# Future Plans



- EMFISIS cannot send any more data volume – the link to the IEM is saturated.
- Burst mode triggers, however, can be varied widely.
- We want to do more intra-instrument coordination for other uses of our burst mode.
- As an example, we have done special captures for:
  - Lightning measurements.
  - Spread-F measurements (depends on orbit phase).
  - Cluster conjunctions.
- We are not averse to developing new on-board burst capture software (within reason) to support new science.

