

THEMIS-RBSP Campaigns

- 1. Convened team comprising: J. Bonnell (lead)
J. Bortnik, S. Elkington, S. Kanekal, K. Keika, I. Mann, J. Rae, A. Runov, M. Sitnov, K. Takahashi, and A. Ukhorskiy
to consider science objectives as a function of mission phase.
- 2. Resulting white paper is a living document.
- 3. Seeking comments and suggestions...

8 Science Campaigns

4-8-12 hrs sep along orbit

4-8-12

Dawn-Dusk Differences
(Fall 2012)

Magnetopause Losses
(Winter 2012-2013)

Dawnside Waves & Electron Drift
(Spring 2013)

Ion Injection & Energization
(Summer 2013)

8-8-8

Duskside EMIC Waves
(Fall 2013)

Effects of SW Pressure Variations
(Winter 2013-2014)

ULF Waves
(Spring 2014)

8-8-8

Electron Injections
(Summer 2014)

Figure, much help, and some prodding to finish all thanks to S. Ukhorskiy!

RBSP Survey Plots

- 1. Limited funding + need for maximum access → necessitates careful planning.
- 2. What's already happening?
- 3. What needs to happen?

What's Already Happening?

- 1. Teams developing their own products. Some on demand, some frozen images.
- 2. Limited funding at Project WWW site. Ephemeris and planning information. Discussion sites.
- 3. SPDF enables on-demand stacked line and spectra plots from various instruments.
- 4. VIRBO points to data sets- didn't immediately see a plotting tool there.

What Needs to Happen?

- 1. Teams must decide on their survey plots.
Dimensions, colors (e.g. Bz), ticks, 1-hr, 1 orbit/page?
 - Poll active members of teams what studies they plan and what they will need.
 - Invite outsiders (other teams?) to comment.
 - Likely that some/many standard plots will include data from other teams. Must reach agreement.
 - THEMIS lesson: the best plots are those that your own team plans to use/don't invent different plots for the public.
 - Must discuss early/agree soon/keep informed/prevent duplication of effort.

How and When Should it Happen?

- 2. Well before launch.
 - We need a multi-instrument team to work on this topic and present reasonable solution for approval by acclamation/iteration at the next SWG meeting. Series of telecons.
 - This should be a group effort, consequently each team should find at least one researcher who plans to be actively engaged in analysis to participate.
 - **This is not an easy or a trivial task.** People engaged in it must think what a broad spectrum of users will require. But they must keep the plots/tools simple and inexpensive.
 - Project Team can keep records on who is doing what-
Project WWW site can point to resources.

What Could Happen?

- 1. Project WWW pages point directly to coherent set of survey plots and tools.
- 2. Standardized plot dimensions, coordinate systems (GSM, GSE, SM, polar or cartesian), colors, ticks, pitch angle, gyrophase scales, labelling (e.g. ephemeris at bottom of page in GSM/E coordinates).
- 3. Cover all aspects, avoid duplication.
- 4. Clarified roles for SPDF/VIRBO provides interactive services, correlations with other missions.

