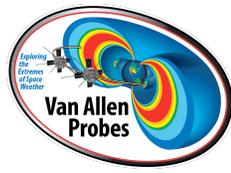




Van Allen Probes SWG Telecon

01 May 2015

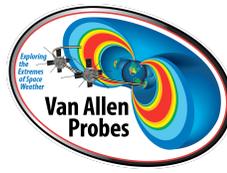


- Project news
- New two-spacecraft tools on RBSP Gateway: <http://rbspgway.jhuapl.edu/>
- Lapping event on June 12
- Upcoming meetings
- Publication update
- REPT analysis of March 17, 2015 storm (Dan Baker)
- “The evolution of ring current ion energy density and spectrum during geomagnetic storms based on Van Allen Probes measurements” Hong Zhao and Xinlin Li
- Walk on



Dial-in Information

(17 April 2015 3:00 EDT)



SWG Telecon (Van Allen Probes)

Host: Aleksandr Ukhorskiy

When it's time, start your meeting from here:

https://apl-webex.jhuapl.edu/orion/joinmeeting.do?ED=KEq-5N7rM5cII3U4FAkkyg==&PW=BgAAAGiaO_J-fyM0EdV6vyujkLxSBal_EHL6yUNv4i7yMtYHaucURxTDYy19xcQUgrtsEjtdwXwRQklaMJXlsxS-CkE

When: Friday, May 1, 2015, 3:00 pm (2 hrs), Eastern Daylight Time (New York, GMT-04:00).

Access Information

Meeting Number:

993 160 014

Password:

RBSP

Host Key:

519408 (Use this key during the meeting if you ever need to reclaim the host role.)

Audio Connection

8-1000 (Internal)

(240)228-1000 (Washington, DC)

(443)778-1000 (Baltimore, MD)

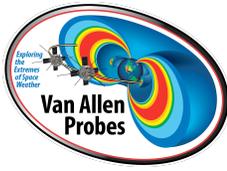
(844)275-9323 (Toll Free)

Access Code:

993 160 014



Project News

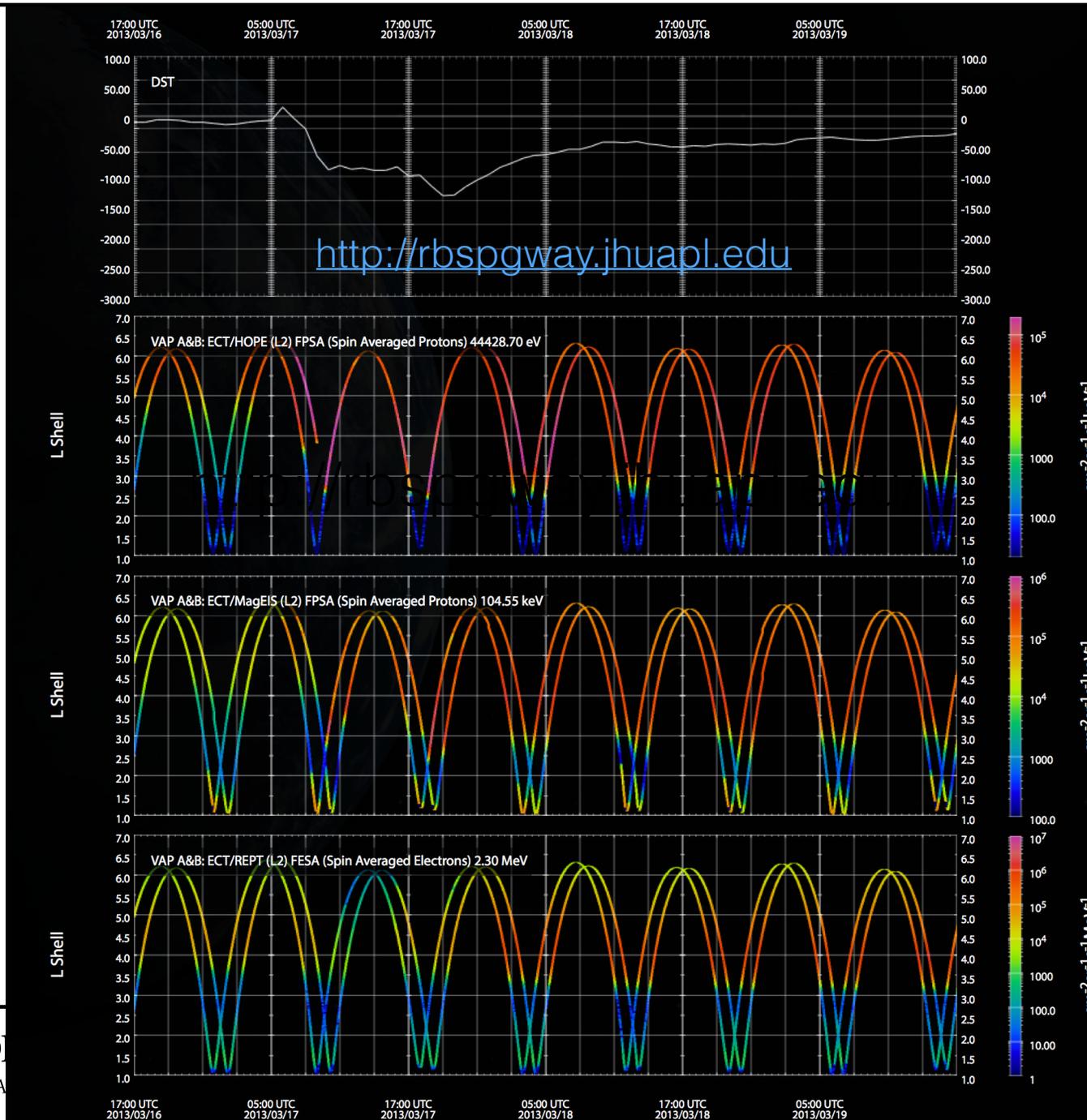


- Heliophysics Senior Review, April 22 (A. Ukhorskiy, D. Sibeck, B. Mauk, and E. Reynolds). Results - early June.
- Coming soon:
 - review and optimization of SOC weekly and team monthly reports according to RBSP SOW Science Investigation document (7417-9962)
 - broadening the scope of monthly telecons (aka, 'SOC telecons') to include the discussion of instrument operation, data collection, anomalies, and identified risks from monthly reports.

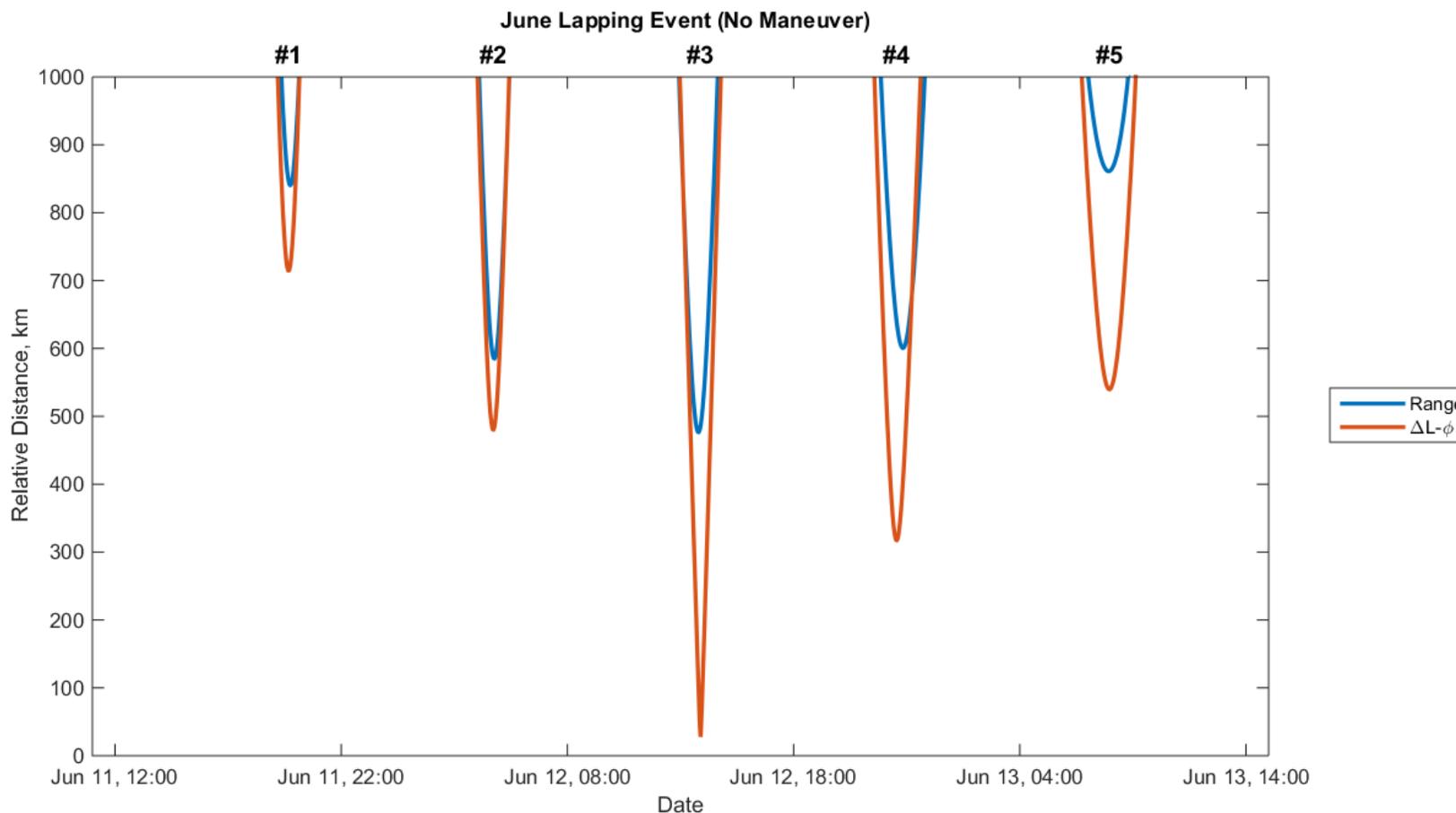


Two-Spacecraft Plotting @ RBSP Gateway

March 17, 2013 Magnetic Storm



$$\Delta\rho_{SM}=27.9 \text{ km}; \Delta z_{SM}=460 \text{ km}; z_{SM}\sim 4000 \text{ km}$$



Further adjustment would shorten the lifetime by ~ 1 day. Project Science Team recommendation, supported by ECT, EMFISIS, and RBSPICE is to cancel **this** maneuver. Subsequent maneuvers to be analyzed separately.



Upcoming Meetings



- AGU Joint Assembly (May 3-7, Montreal, Canada). 3 inner magnetosphere related sessions.
- Special Van Allen Probes poster session/data workshop at GEM (June 14-19, Snowmass, CO) - the list of poster titles **due by the next SWG telecon** (May 15).
- CEAR workshop (June 21-25, Seattle, WA). The schedule is *almost* complete. It can be found at: http://cedarweb.vsp.ucar.edu/wiki/index.php/2015_Workshop:Workshop_Schedule.
- AGU Fall Meeting (December 14-18, San Francisco, CA). ~10 inner magnetosphere related sessions.

- Detailed publication update - Next SWG Telecon, May 15

Citation Report: 178

(from All Databases)

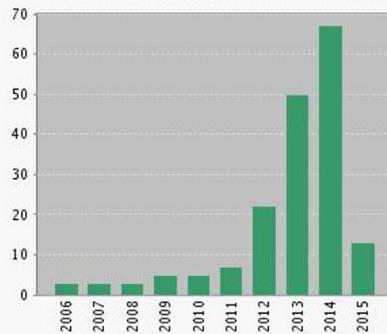
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Timespan: 2006-2015.

[...Less](#)

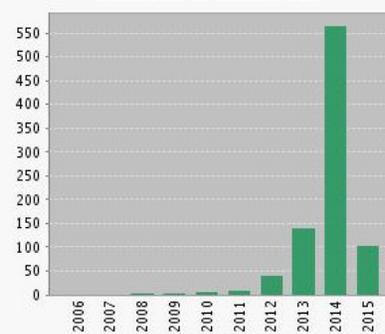
This report reflects citations to source items indexed within All Databases.

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



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Sum of Times Cited without self-citations [?]: 388

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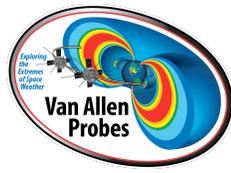
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REPT Analysis of March 17, 2015 Storm (D. Baker)



1. Evolution of spectra and pitch angle distributions of ultra-relativistic electrons during March 2015: Van Allen Probes observations.

S. G. Kanekal, et al.

This is being prepared for GRL and addresses remarkable field aligned (cigar or butterfly) distributions and spectral features. Several VAP team members have already agreed to be coauthors.

2. Fast radial diffusion of ultra-relativistic electrons: March 2015 storm event.

A. N. Jaynes, et al.

This is also in preparation for GRL and will look at the period of fast diffusion of multi-MeV electrons in the outer belt following the 17 March 2015 storm, and the role of ULF waves in the increased radial diffusion rates. Again, several VAP team members have expressed willingness to join this study.

3. Scot Elkington will make use of global simulation results to examine the effects of magnetic field geometry and field variations on pitch angle evolution. In particular, he will investigate the competing effects of outward radial diffusion, drift shell splitting, drift orbit bifurcation, and magnetopause shadowing on observed butterfly distributions during the storm.

In this work we implicitly assume that magnetopause loss is the ultimate cause of the butterfly distribution, with transport and field geometry effects (DSS, bifurcation, and outward diffusion) identified as varying proximate causes. Any remaining differences between simulated and observed results would be ascribed to pitch-angle scattering due to EMIC, magnetosonic, etc. This will probably be a JGR paper.

4. Examining the impenetrable barrier for ultra-relativistic electrons during strong solar wind forcing: March 2015 Van Allen Probes observations.

D. N. Baker et al.

This study continues the work reported in our November 2014 Nature paper about the inner edge of the outer zone (as seen in the REPT data). Even under extreme storm conditions and powerful solar wind driving, the highest energy electrons were not substantially transported into the slot and inner zone. This paper will also be targeted toward GRL.