"Quantitative Assessment of Radiation Belt Modeling" Focus Group Agenda

GEM 2016 Summer Workshop

Session 1 (Tue, 01:30-03:30 PM, SFCC O'Keefe/Milagro/Kearny): "Radiation Belt (RB) particles and modeling".
Chair: Weichao Tu and Steve Morley

1. **Nikita Aseev**: Understanding the dynamics of electrons at GEO
2. **Hong Zhao**: On the relation between radiation belt electron fluxes and solar wind parameters/geomagnetic indices
3. **Ashley Jones**: Secular drift of the SAA from SAMPEX particle counts
4. **Drew Turner**: The source of inner zone electrons by sudden injections
5. **Shri Kanekal**: Near-Instantaneous energization of radiation belt electrons by IP shocks, including the March 17 2015 event
6. **Dan Baker**: The March and June 2015 storms and their implications for radiation belt models
7. **Anthony Chan**: Evaluation of Drift-Shell-Splitting Effects using 3D Diffusion Modeling
8. **Vania Jordanova**: Modeling the seed population of the radiation belts with SHIELDS
9. **Adam Kellerman**: Recent development and performance of the data-assimilative VERB code
10. **Lutz Rastaetter**: CCMC results for challenge events
11. **Alexander Drozdov**: Response of radiation belt simulations to different radial diffusion coefficients
12. **Louis Ozeke**: Quantifying the ULF wave radial diffusion coefficients using global ground based magnetometer measurements for each of the GEM challenge events
13. **Sasha Ukhorskiy** (walk-in)

Session 2 (Wed, 01:30-03:30 PM, SFCC O'Keefe/Milagro/Kearny): "Waves and local interactions".
Chair: Wen Li and Jay Albert

1. **Jean-Francois Ripoll**: Reproducing the observed energy-dependent structure of Earth's electron radiation belts during storm recovery with an event-specific diffusion model
2. **Irina Zhelavskaya**: Automated determination of electron density from electric field measurements on the Van Allen Probes spacecraft using neural networks
3. **Xiangning Chu**: Observation and neural network modeling of the refilling plasmasphere
4. **Dave Hartley**: Quantifying the variable sheath impedance of the Van Allen Probes EFW instrument using whistler-mode waves
5. **Wen Li**: New chorus wave properties near the equator from Van Allen Probes wave observations

6. **Homayon Aryan**: Average chorus scale size
7. **Jinxing Li**: Coherent Whistler Waves Simultaneously Observed in Unexpectedly Large Spatial Scale
8. **Jacob Bortnik**: The observed and simulated saturation characteristics of chorus waves
9. **Lunjin Chen**: Evaluation of electron pitch angle scattering rates based on observed EMIC waves
10. **Xiaojia Zhang**: The statistical distribution of EMIC wave spectra using Van Allen Probes observations
11. **Xiangrong Fu**: Modeling EMIC wave properties: linear theory and hybrid simulation
12. **Oleksiy Agapitov**:

Session 3 (Fri, 01:30-03:30 PM, SFCC Sweeney B): "ULF waves and nonlocal transport" — joint session with "ULF Wave Modeling, Effects, and Applications" FG.
Chair: Jay Albert and Michael Hartinger

1. **Greg Cunningham**: Radial diffusion in non-dipolar background fields
2. **Theodore Sarris**: Quantifying outer belt electron radial diffusion based on Van Allen Probes data and test particle simulation
3. **Wen Li** (walk-in): The potential importance of pitch angle dependence in D_{LL}
4. **Qianli Ma**: Radial intrusion of energetic electrons in the slot region
5. **Solene Lejosne**: Drift in the inner belt
6. **Yan Song**: The role of ULF waves in the particle acceleration
7. **Mike Hartinger**: Globally coherent ULF waves: azimuthal wave numbers and other properties

Session 4 (Fri, 04:00-06:00 PM, SFCC Sweeney B): "RB "dropout" and "buildup" challenges and future plans".
Chair: Steve Morley and Wen Li

1. **Yi-Jiun Su**: Formation of the inner electron radiation belt by enhanced large-scale electric fields during the March 2013 storm
2. **Suk-bin Kang**: CIMI Simulation of the Stormtime Dropout Event
3. **Mary Hudson**: Simulations of the March 2013 and March 2015 Storms
4. **Qianli Ma**: Magnetosonic waves during the challenge events
5. **Weichao Tu**: Low-altitude electron distributions during the challenge events
6. **Jay Albert**: LCDS calculations for the challenge events
7. **Ashar Ali** (by Scot Elkington): D_{LL} quantification using Van Allen Probes Data
8. **Steve Morley on behalf of FG**: Summary of challenge event resources