"Quantitative Assessment of Radiation Belt Modeling" Focus Group Agenda

GEM 2017 Summer Workshop

Session 1 (Wed, 10:30-12:15 PM, Holley Ballroom): "Observations of radiation belt processes".
Chairs: Weichao Tu and Jay Albert

1. **Xinlin Li**: Long term perspective on out belt electrons: Van Allen Probes era with previous two solar cycles
2. **Simon Wing**: Untangling solar wind drivers of radiation belt: an information theoretical approach
3. **Alex Boyd**: Peaks in Phase Space Density: When, Where and for How Long?
4. **Zheng Xiang**: Understanding the Mechanisms of Radiation Belt Dropouts Observed by Van Allen Probes
5. **Nikita Aseev**: New signatures of ultrarelativistic electron loss in the heart of the Earth's radiation belts
6. **Yuri Shprits:** Observations of Electron Precipitation by ELFIN-L Instrument Suite on Lomonosov Spacecraft
7. **David Malaspina**: Statistics of Low Frequency Hiss
8. **Dave Hartley:** Estimating Plasmasphere Electron Densities from Observations of Plasmaspheric Hiss
9. **Drew Turner**: The phase coherency scales of individual chorus elements and the greater chorus active region observed by Van Allen Probes and MMS
10. **Mark Engebretson**: EMIC waves observed by the Van Allen Probes

Session 2 (Wed, 01:30-03:00 PM, Holley Ballroom): "Modeling of local processes and transport".
Chairs: Jay Albert and Wen Li

1. **Yuri Shprits**: Identifying the dominant loss mechanisms for multi-MeV electrons
2. **Theodore Sarris:** Investigating the association between the rates of radial transport and electron flux oscillations
3. **Lunjin Chen**: Excitation of magnetosonic waves in a dipole field
4. **Jacob Bortnik:** The relation between Langmuir and Whistler waves in the laboratory, simulations, and space
5. **Dedong Wang:** Effect of Highly Oblique Chorus Waves in the Evolution of Electrons in the Earth's Radiation Belts
6. **Jay Albert:** Diffusion by highly oblique whistlers
7. **Xiangrong Fu**: Generation of Highly Oblique Lower-band Chorus via Nonlinear Three-wave Resonance

8. **Liheng Zheng**: Fokker-Planck simulation of nonlinear EMIC wave-particle interactions
9. **Ivan Vasko**: Diffusive scattering of electrons by Time Domain Structures in the inner magnetosphere

Session 3 (Wed, 03:30-05:00 PM, Holley Ballroom): "Global modeling, metrics and validation", joint with "Modeling Methods and Validation" FG.
Chairs: Weichao Tu and Katherine Garcia-Sage

1. **Steve Morley**: Measures of model prediction quality based on the log accuracy ratio
2. **Grant Stephens:** Latest developments and findings of the TS07D model
3. **Thiago Brito:** Improving magnetic field models by fitting to in-situ data
4. **Homayon Aryan**: Application of whistler wave distribution models in radiation belt simulation models: CIMI simulations
5. **Kevin Pham**: Quantifying the Precipitation Loss of Radiation Belt Electrons during a Rapid Dropout Event
6. **Zhao Li**: Simulated prompt acceleration of multi-MeV electrons by the 17 March 2015 interplanetary shock
7. **Jean-Francois Ripoll**: Global validation of reduced Fokker Planck computations of the radiation belts dynamics
8. **Qianli Ma**: Diffusive transport of several hundred keV electrons in the Earth's slot region
9. **Alexander Drozdov**: The long-term VERB code simulation with parametrized EMIC waves

Session 4 (Thu, 10:30-12:15 PM, Port VI-VIII): "New challenge results and plans".
Chairs: Wen Li and Jay Albert

1. **Sapna Shekhar**: Statistical study of spatial extent of Relativistic Electron Precipitation with NOAA POES
2. **Jinxing Li**: Langmuir waves modulated by rising-tone chorus waves: Van Allen Probe Observations
3. **Chao Yue**: The characteristic response of whistler mode waves to interplanetary shocks
4. **Sam Bingham**: Van Allen Probe Observations of Whistler Growth, Source, Seed, and Relativistic Electrons During ICME and CIR storms
5. **Anthony Saikin**: A statistical examination of favorable plasma conditions concerning inner magnetosphere EMIC wave excitation
6. **Irina Zhelavskaya**: Empirical modeling of the plasmasphere dynamics using neural networks

7. **Xiangning Chu**: A neural network model of three-dimensional dynamic electron density in the inner magnetosphere
8. **Suk-Bin Kang**: Relativistic electron flux dropout due to field line curvature on 1 June 2013
9. **Wen Li:** Quantitative Simulation of the GEM Challenge Events During Radiation Belt Enhancements