

Recent results from Van Allen Probes and future prospects from the CeREs Cubesat

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The Van Allen Probes mission, since its launch in August 2012 has advanced our understanding of fundamental questions regarding the acceleration and loss of outer Van Allen belt electron populations. Electron dynamics in the outer radiation belt are driven by a number of physical processes, which affect low energy cold plasma to relativistic and ultra-relativistic particle populations. I will present recent results from Van Allen Probes mission focusing on the energetic electron dynamics. I will also discuss the significant role of CubeSats that may lead to a paradigm shift in the way space-based observations are carried out, e.g., by enabling multipoint observations. I am currently leading a CubeSat mission, CeREs, the Compact Radiation belt Explorer, CeREs that was launched December 2018 and is currently in the commissioning phase. CeREs will provide high quality measurements of radiation belt electrons, especially microbursts.

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