

Recent results using combined Van Allen Probes and BARREL datasets [Breneman et al., Nature, 2015] indicate that changes of up to an order of magnitude in the dynamics of electron loss arising from hiss occur on timescales as short as 1-20 min, in association with ULF modulations in plasma density and magnetic field. A surprising result was that these loss dynamics were coherent with hiss dynamics on a global scale comparable to the size of the plasmasphere. We expand this analysis to the entire BARREL dataset, consisting of three campaigns and more than 40 balloons, by calculating the coherence of electron precipitation signatures (bremsstrahlung X-rays) on all balloon combinations as a function of MLT and L. Preliminary results indicate that large-scale coherence maximizes near noon MLT, suggesting that magnetosphere compressions of solar wind origin are the primary cause of global-scale coherence of electron loss. Coherence also extends out a few hours from noon to both flanks, suggesting that Kelvin-Helmholz waves may also contribute. We will sort these results by solar wind parameters such as IMF clock angle better understand when these ULF waves are able to create a global coherence scale of electron loss in the magnetosphere.