

A correlation study of substorm injections and ULF power with relativistic electron events

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We demonstrate that the flux levels of post-storm relativistic electrons are well correlated with the amount of electrons of the energy about 100 keV injected during substorms, while the power of ULF is more or less related to the spectral hardening of these seed electrons. Hence, the existence of ULF alone during the storm time does not necessarily cause flux increase of relativistic electrons as storms do not always generate sufficient amount of seed electrons of this energy range. The relativistic electron events occurring during non-storm times are closely associated with the substorm injection electrons of around 100 keV.