

## ULF waves as driver of relativistic electrons: Pros and Cons

ULF waves have been suggested as a possible intermediary transferring energy from high-speed streams of the solar wind to magnetospheric electrons. Evidently, ULF waves are not the only means of accelerating relativistic electrons, but nonetheless they are an essential element of the electron energization process, though their role has not been finally established yet. Among observational facts regarding to the interrelationships between ULF wave activity and electron dynamics, we discuss the following pro and con factors related to ULF energization mechanisms:

- The correlation of electron fluxes at the geostationary orbit and the ULF wave index, characterizing the level of magnetic fluctuations in the Pc5 band;
- The difference between the mechanisms of common Pc5 pulsations and global Pc5 waves during strong magnetic storms driven by high-speed solar wind streams;
- The correspondence between the azimuthal phase velocities of toroidal and poloidal Pc5 waves and relativistic electron magnetic drift;
- The correspondence between latitudinal structures of Pc5 waves and electron radiation belt.

Consideration of these contradicting facts does not allow one to unambiguously resolve the issues concerning the role of ULF waves in magnetospheric electron energization.

### Секция

Радиационные пояса и кольцевой ток

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