**Fractional resonance of sub-MeV electrons with oblique EMIC waves**

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Relativistic electron losses in the outer radiation belt are largely attributed to electron resonant scattering by electromagnetic ion cyclotron (EMIC) waves. While quasi-linear theory predicts scattering of electrons of >1 MeV, sub-MeV electron precipitation is also present. Leaving aside an important and rapidly developing theories of nonlinear, nonresonant, and bounce-resonant EMIC wave interactions, we will discuss the effect of fractional resonances with oblique EMIC waves, which have minimum resonant energy twice lower than anomalous cyclotron resonance.