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## **Radiation reaction force induced nonlinear mixing of Raman sidebands of an ultra-intense laser pulse in a plasma**

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Stimulated Raman scattering of an ultra-intense laser pulse in plasmas is studied by perturbatively including the leading order term of the Landau-Lifshitz radiation reaction force in the equation of motion for plasma electrons. In this approximation, radiation reaction force causes phase lag in nonlinear current densities that drive the two Raman sidebands (anti-Stokes and Stokes waves), manifesting itself into the nonlinear mixing of two sidebands. This mixing results in a strong enhancement in the growth of the forward Raman scattering instability.

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