A reduced Landau fluid model for collisionless magnetic reconnection

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- Magnetic reconnection: modification of the connections, through magnetic field lines, of infinitesimal plasma volumes (solar flares, sawtooth oscillations in tokamaks).

- In collisionless plasmas best described by Vlasov-Maxwell but fluid reductions helpful, in particular for 3D.

- Derived reduced fluid model for reconnection retaining linear electron Landau damping.

- With no damping noncanonical Hamiltonian structure.

- Numerically shown that Landau damping reduces reconnection growth rate and inhibits secondary instability