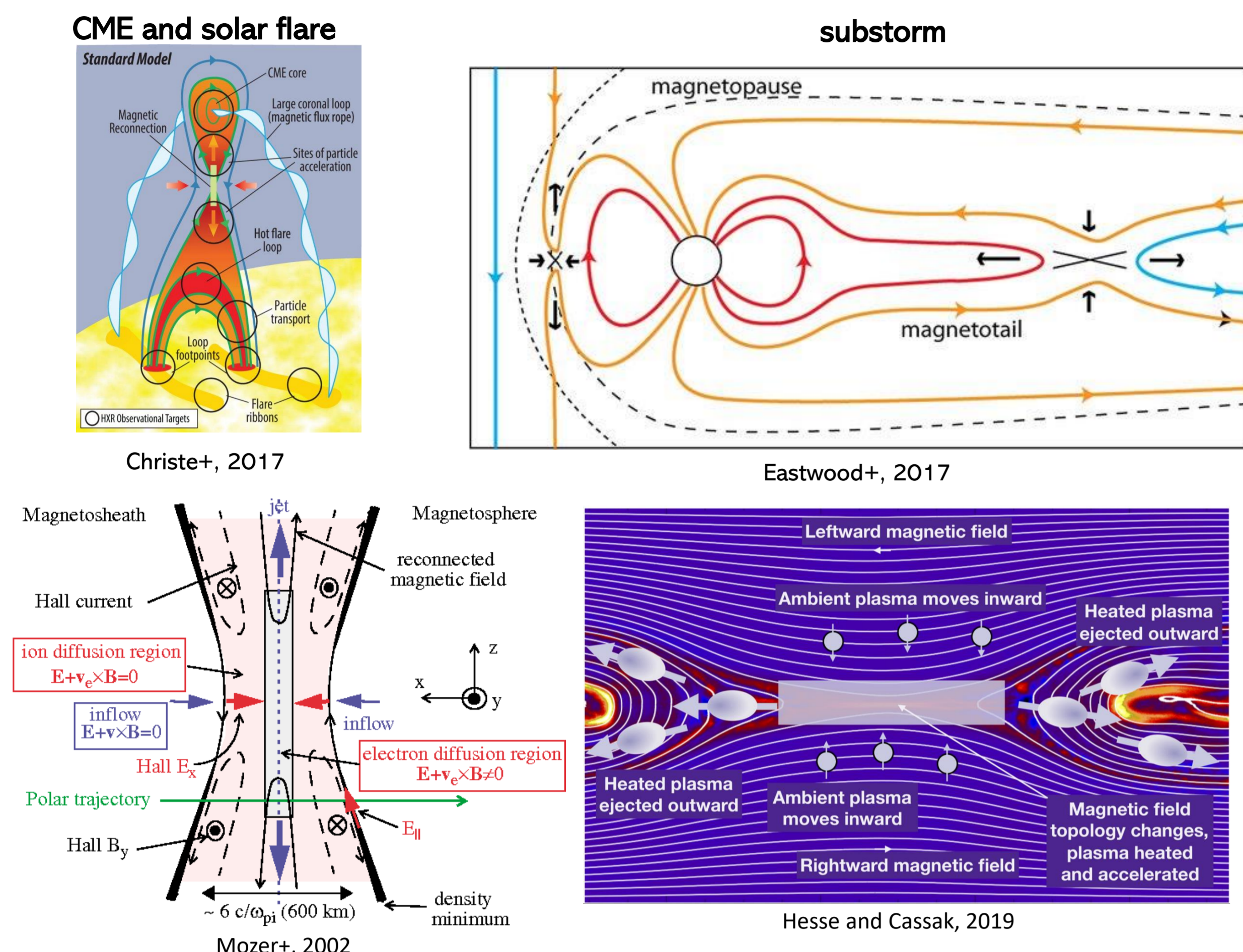


Reconnection and tearing instability

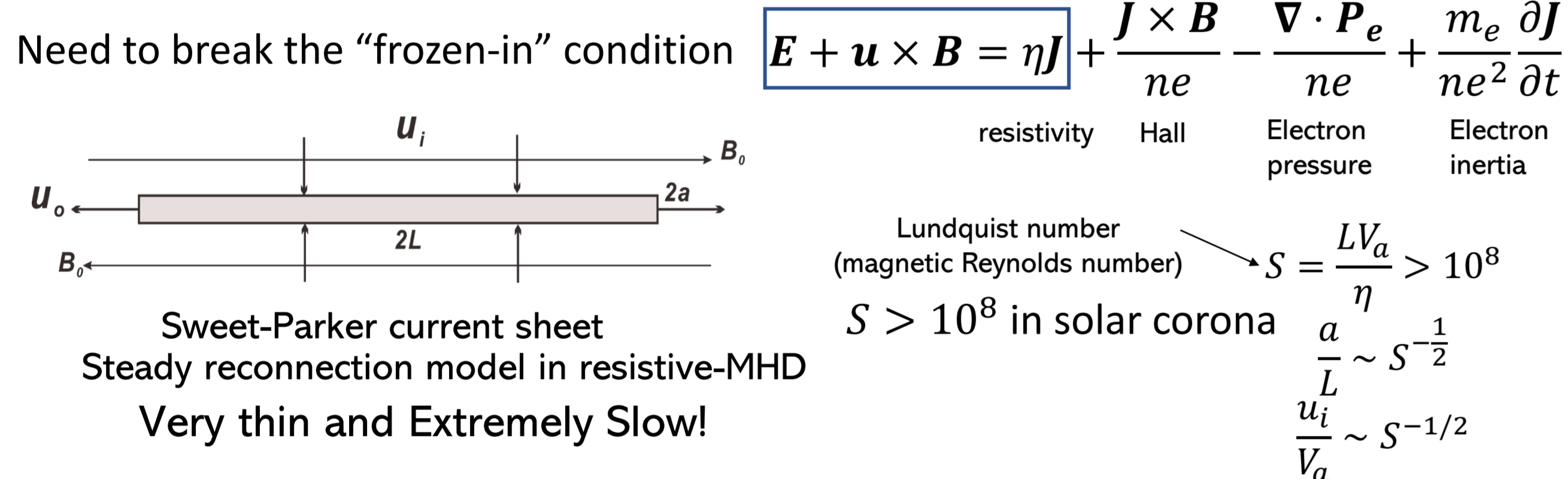
Magnetic reconnection—explosive energy release



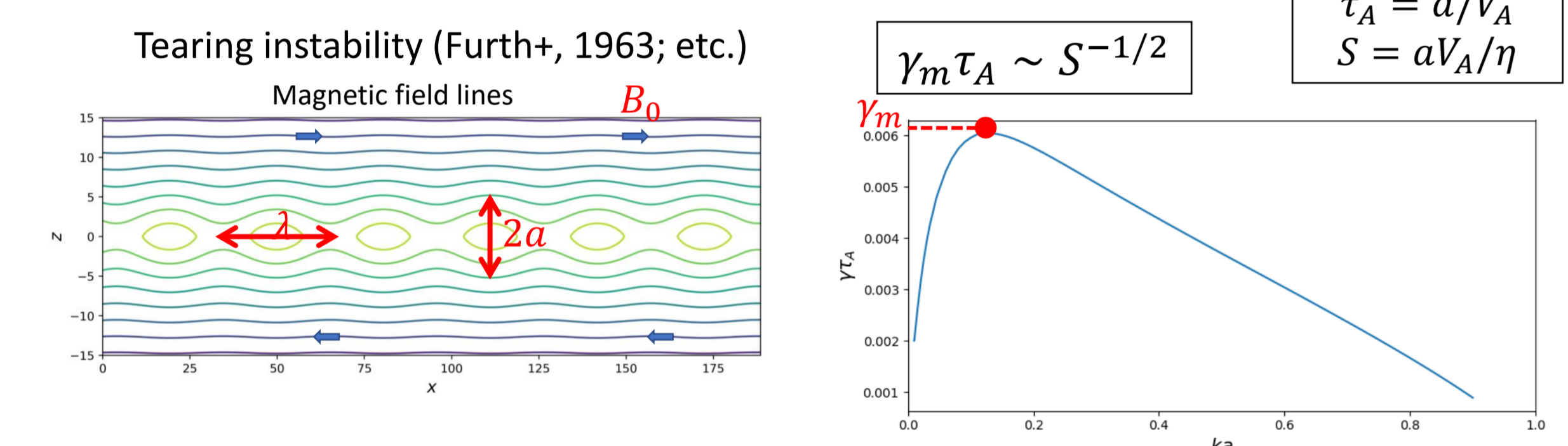
Now we know very much about the kinetic scale physics but

What triggers the fast magnetic reconnection at large scales?

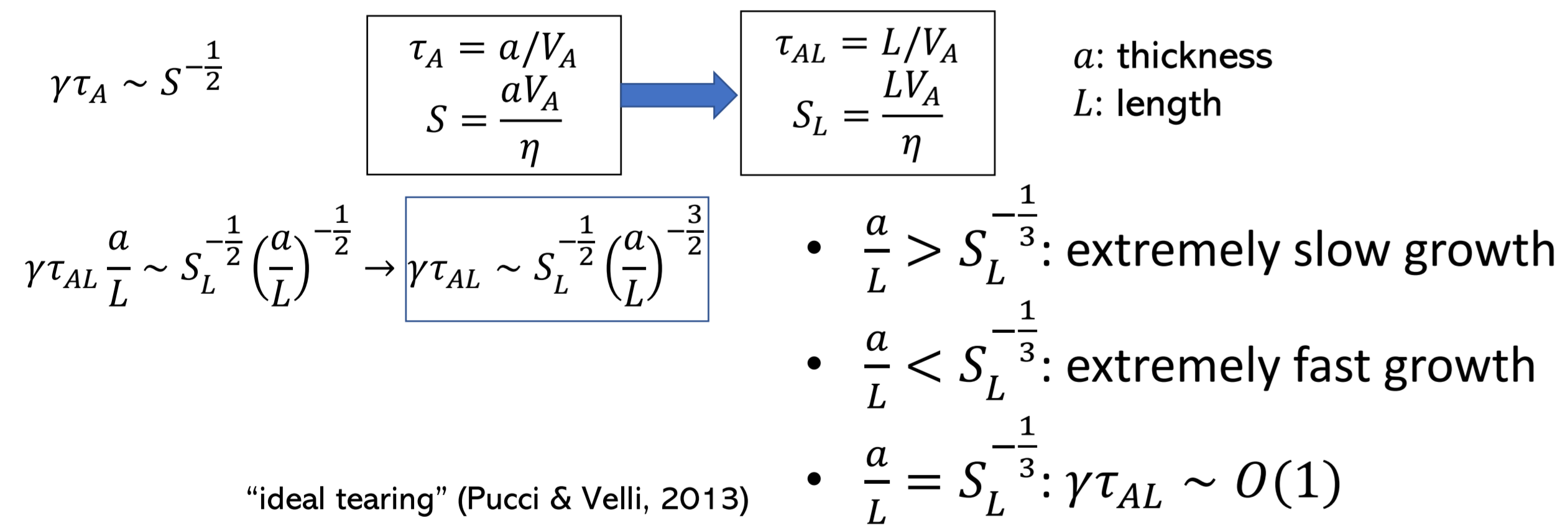
Onset of reconnection



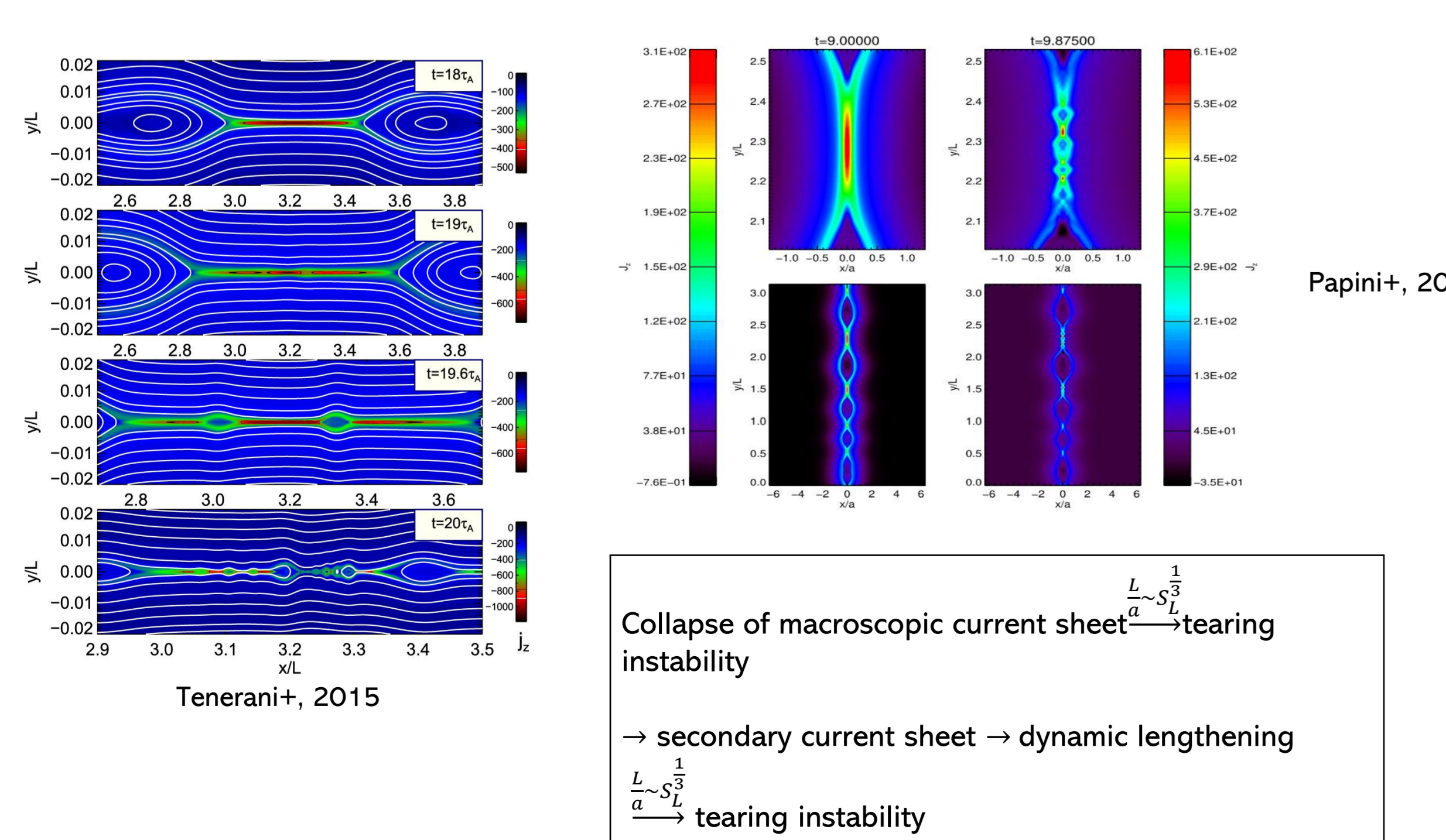
Are resistive current sheets stable?



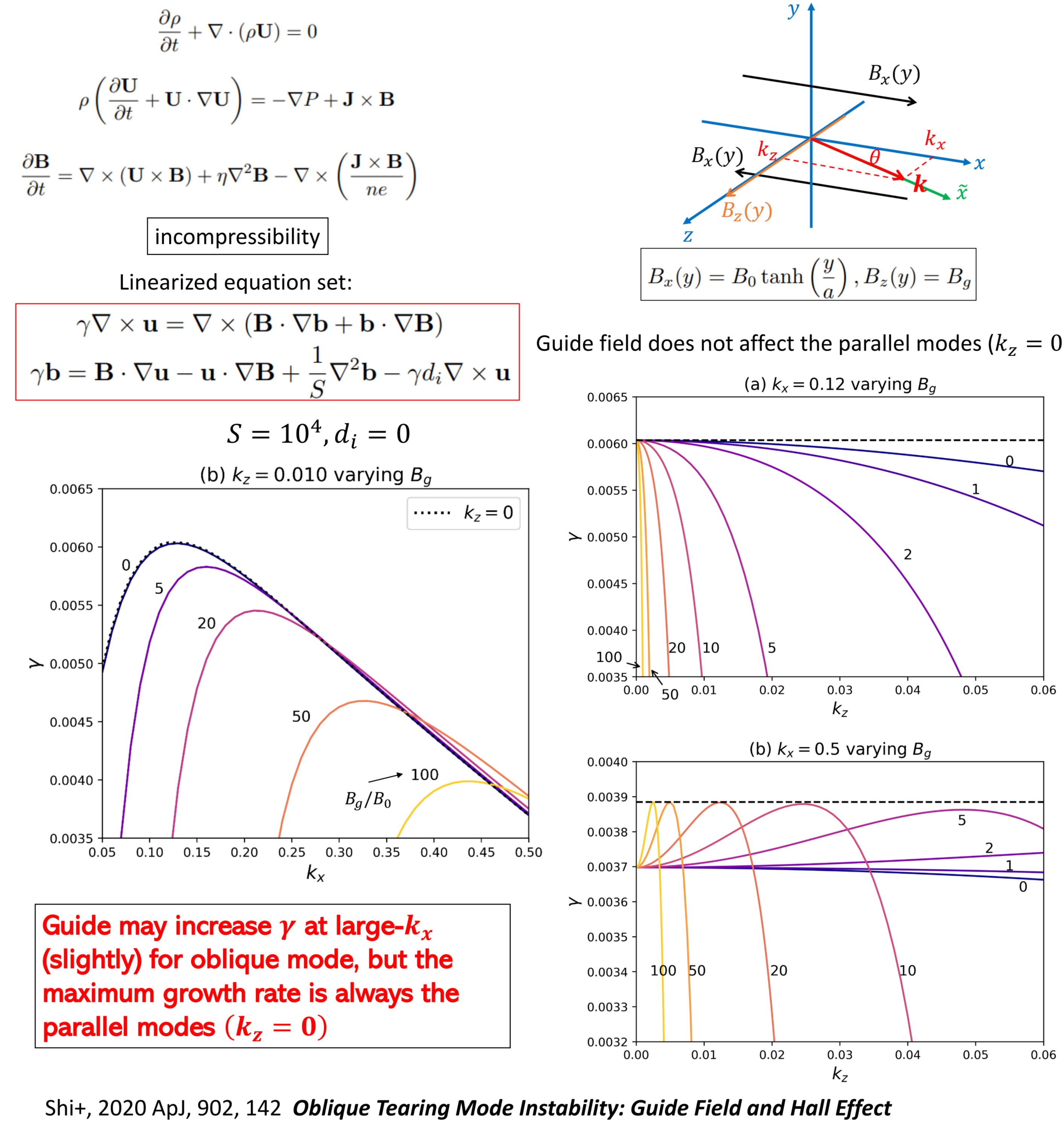
Aspect ratio (thickness) of the current sheet determines whether fast tearing can happen



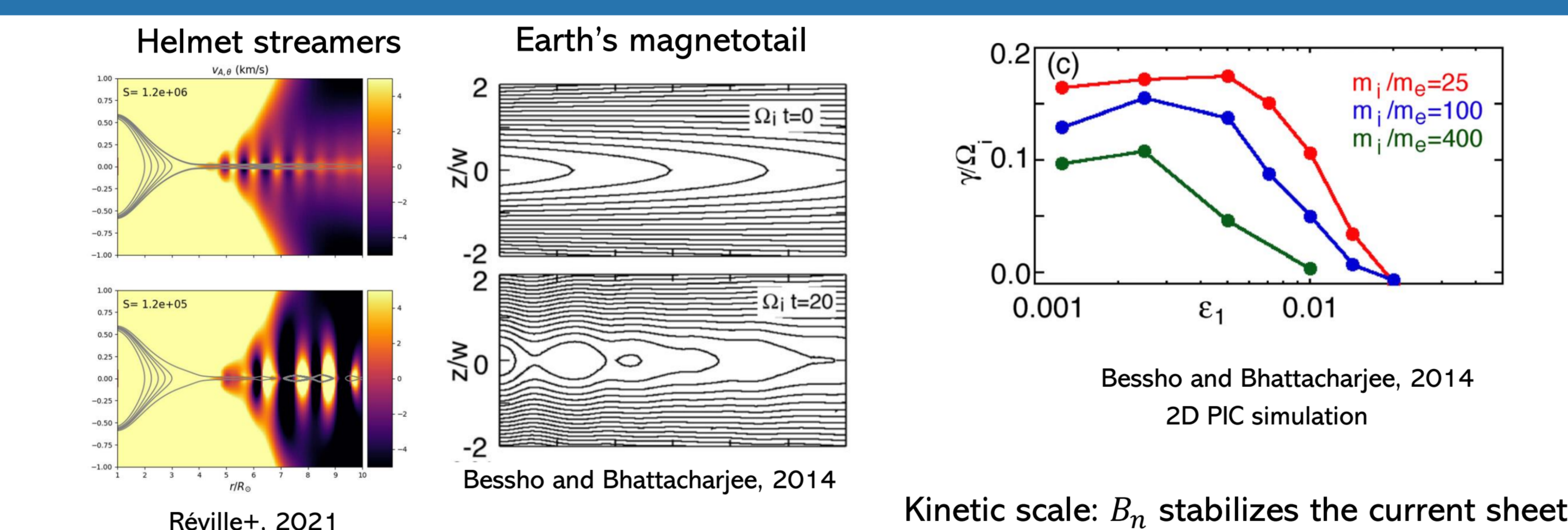
Fast recursive tearing in a collapsing CS



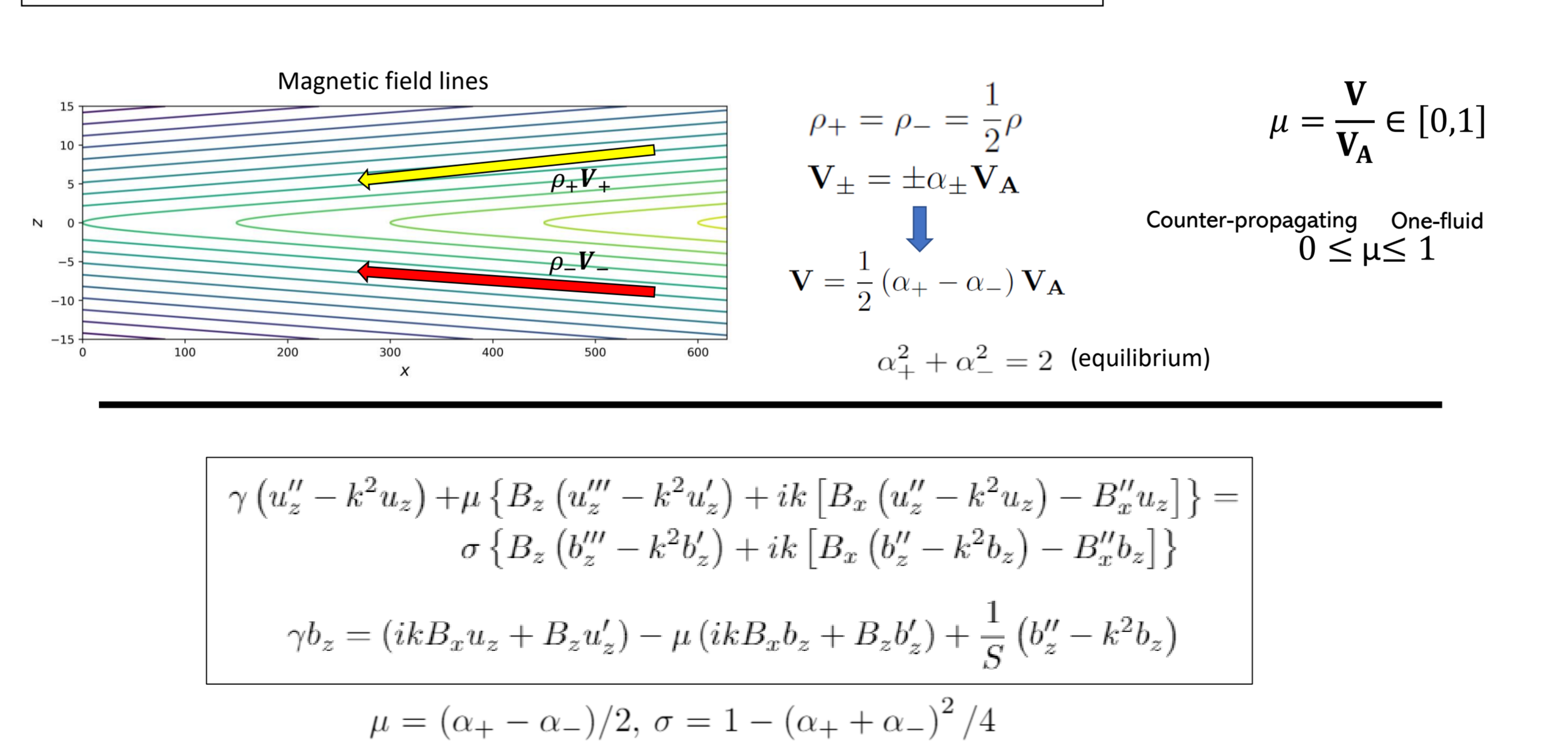
Guide field and oblique tearing mode



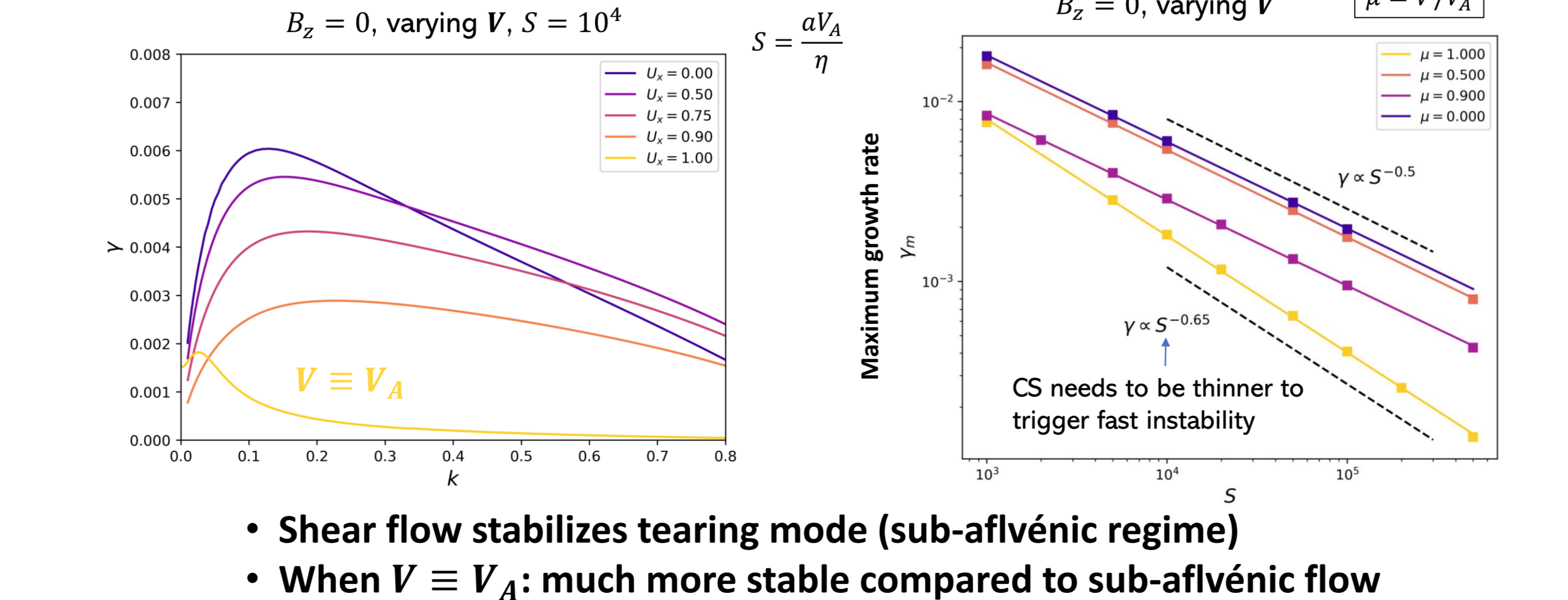
Normal component of magnetic field



Normal component of magnetic field is often non-negligible

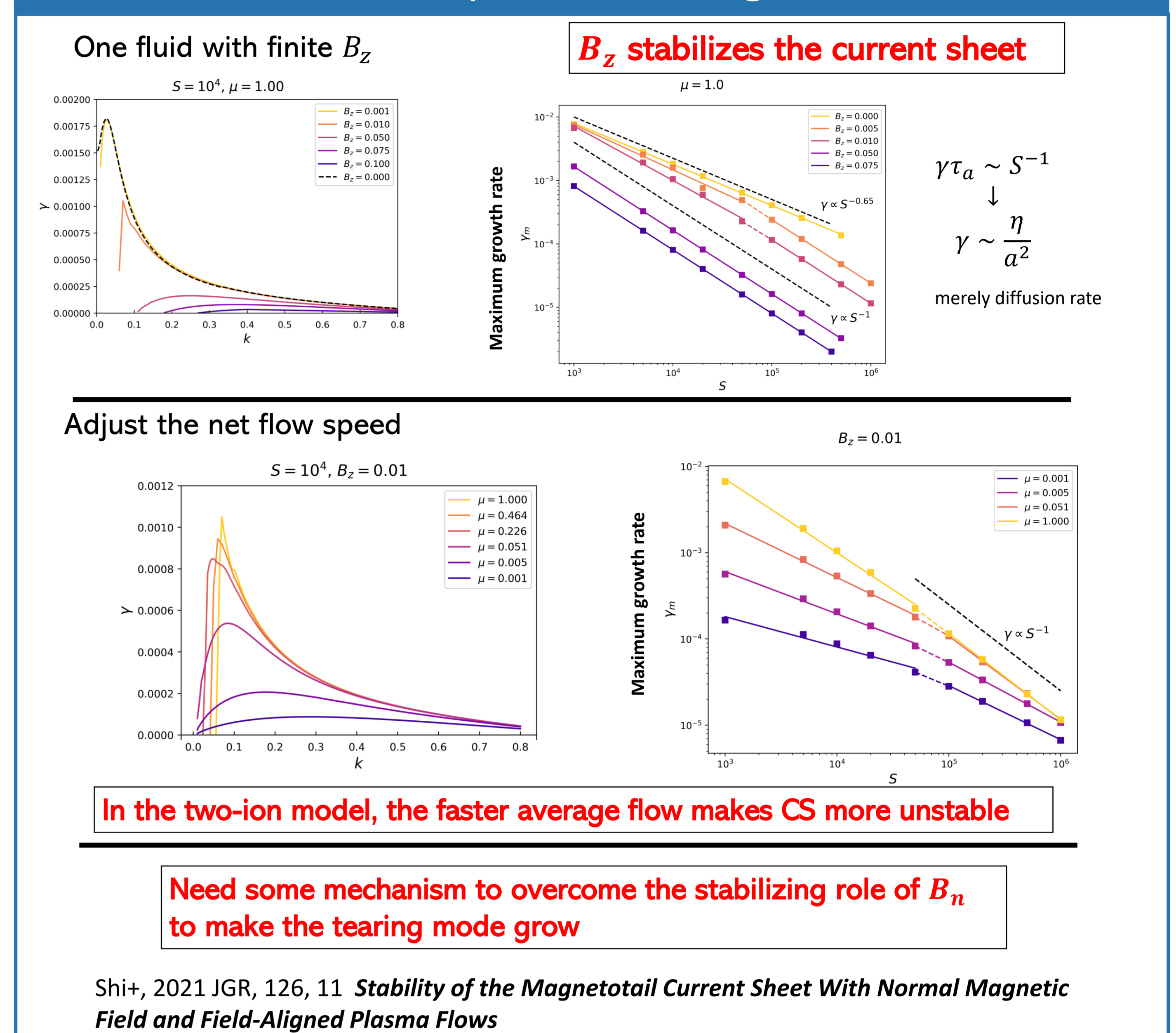


one-fluid shear flow

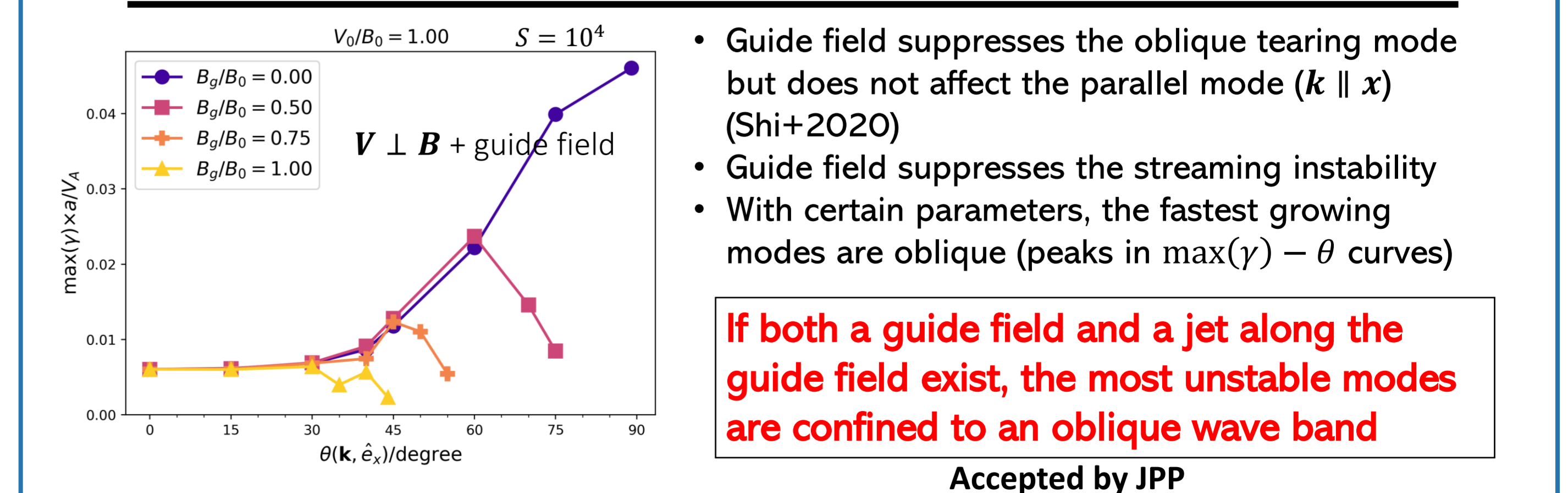
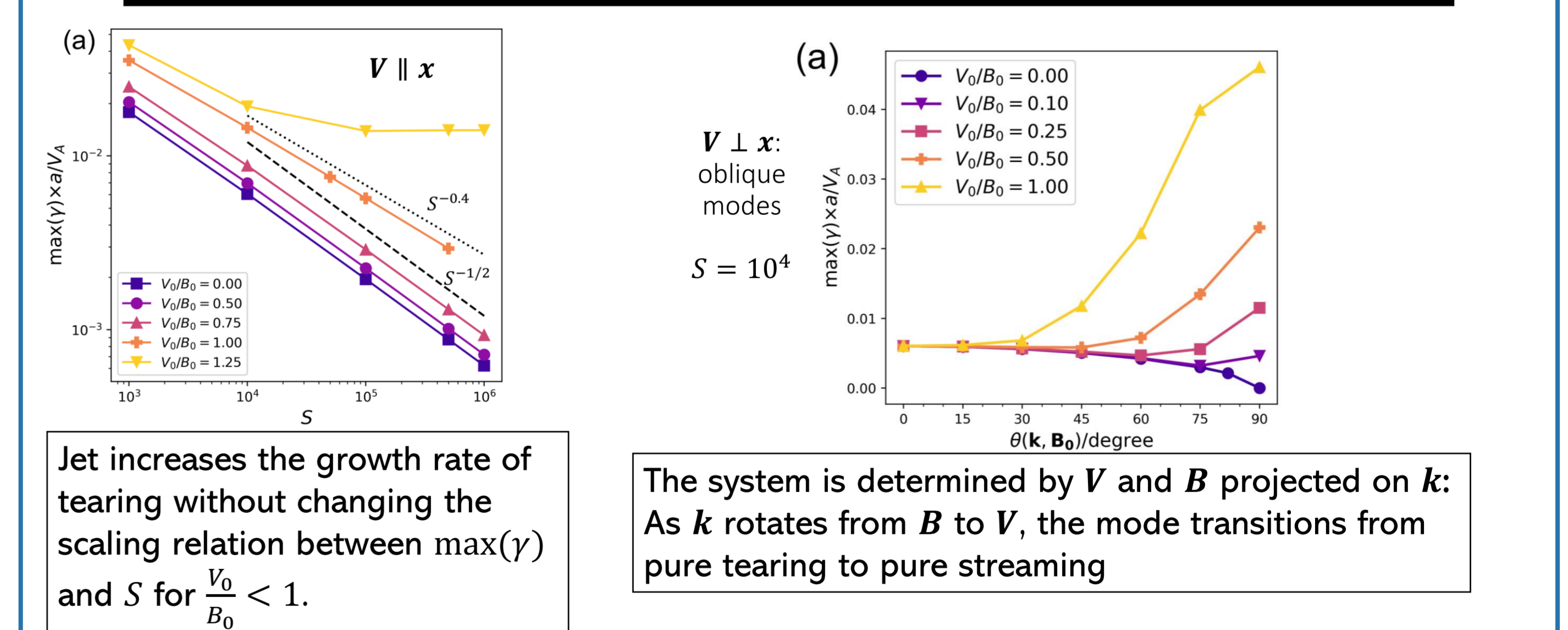
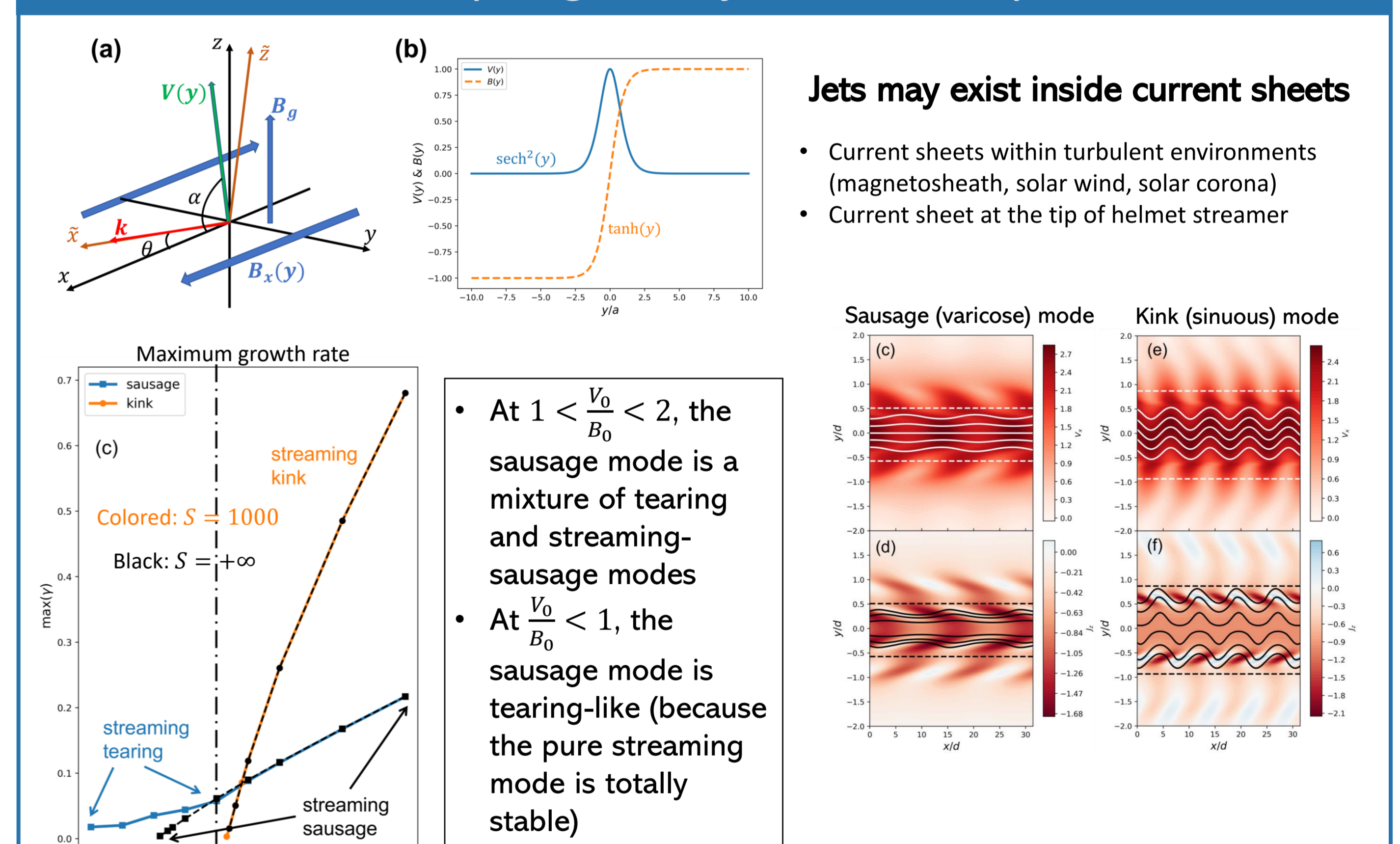


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Normal component of magnetic field



Coupling with jet instability



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