

# Impact of Kinetic Effects of Energetic Particles on RWM Stability in Rotating High- $\beta$ Plasmas

## Shiraishi *et al.* (TH/P1-20)

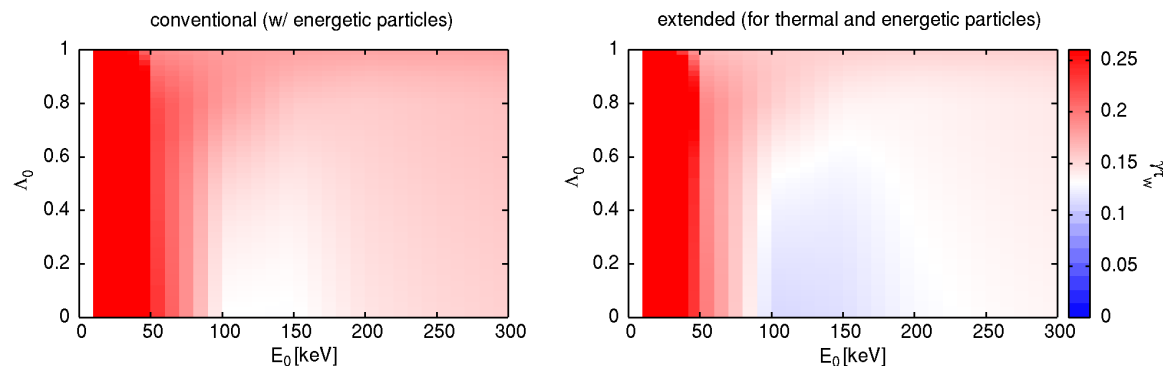
Hybrid kinetic-MHD theory extended to include self-consistent rotation effects

$$\delta W_k = \delta W_{k0} + \delta W_{k1} + \delta W_{k2} + \delta W_{k3} \quad \text{[shaded box]} = \textit{new terms}$$

(from left) Conventional, Coriolis, centrifugal, rotation shear

Extended theory has been applied to energetic particles.

RWM growth rates as function of “actuator” parameters; birth energy and injected pitch angle variable



By “extended” kinetic-MHD theory, we found an optimal region where the growth rate is reduced near  $E_0 = 100\sim 150\text{keV}$  and  $\Lambda_0 = 0\sim 0.1$ .