

Abstract Submitted  
for the DPP20 Meeting of  
The American Physical Society

**MHD Dynamics in Beam-Injected LTX- $\beta$  Plasmas**<sup>1</sup> P.E. HUGHES,  
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PPPL — The implementation of a toroidal Mirnov array in the Lithium Tokamak  
eXperiment-Beta (LTX- $\beta$ ) has provided the means to study MHD stability and  
mode dynamics in neutral beam injected LTX- $\beta$  plasmas [D.B. Elliott et al. IEEE  
TPS April 2020]. PSI-Tri reconstructions enhanced by the addition of Thomson  
scattering profiles inform stability analysis, as well as providing key transport and  
profile parameters to model beam-plasma coupling. An array of particle tracking  
codes is employed to model fast ion confinement for comparison against experimental  
measurements, including pressure and temperature evolution, fueling as character-  
ized by electron density, and the observed acceleration of MHD mode rotation in  
the counter-beam, counter-IP direction due to fast ion losses.

<sup>1</sup>Supported by US DOE contracts DE-AC02-09CH11466 (PPPL) and DE-AC05-  
00OR22725 (ORNL).

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Date submitted: 29 Jun 2020

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