Contribution ID: **37** Type: **Poster**

effects of trapped energetic particles on double tearing modes

Thursday, 5 September 2019 15:15 (15 minutes)

The effects of trapped energetic ions(TEI) on double tearing modes (DTMs) are studied by hybrid simulation. It is shown that TEI have a stabilizing effect on DTMs for small energetic ion beta. A new energetic particle driven mode is found when energetic ion beta larger than a threshold. This mode is an ideal mode, which is a fishbone-like mode. The threshold increases with resisitivity, and the resistivity tends to reduce the growth rate. The dependence of TEI effects on energetic ion beta, gyro-radius and speed is studied systematically. It suggests that a fishbone-like mode will be triggered with a reversed shear q profile.

Country or International Organization

China

Primary authors: CAI, Huishan (University of Science and Technology of China); Mr GAO, baofeng (University of Science and Technology of China)

Presenter: CAI, Huishan (University of Science and Technology of China)

Session Classification: Poster

Track Classification: Effects of Energetic Particles in Magnetic Confinement Fusion Devices