

Abstract Submitted
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Beta-Collapse Events in AT Regime on DIII-D¹ M. GRYAZNEVICH, UKAEA Fusion, E.J. STRAIT, K.H. BURRELL, R.J. LA HAYE, J.T. SCOVILLE, A.D. TURNBULL, General Atomics, E.D. FREDRICKSON, M. OKABAYASHI, Princeton Plasma Physics Laboratory, A.M. GAROFALO, G.A. NAVRATIL, Columbia University, E.A. LAZARUS, Oak Ridge National Laboratory — Beta-collapse and rollover events have been observed in negative central shear AT regimes on DIII-D. These events are associated with a growth of a slow rotating resistive wall mode (RWM), which can stop the plasma rotation and cause fast β -collapse after the mode amplitude reaches critical value. The duration of the mode growth and the critical amplitude increase with the β_N value at the RWM onset. This increase is correlated with the increase in the toroidal rotation in the high velocity shear region between q_{\min} and $q = 2$. Increase in the heating power and application of an active feedback compensation of the $n = 1$ field at the wall help to sustain rotation and can prevent β -collapse, which suggests a strong influence of the velocity shear on the RWM evolution.

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Prefer Oral Session
 Prefer Poster Session

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Special instructions: DIII-D Poster Session 1, immediately following LC Johnson

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