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Active Feedback on Locked Modes in DIII-D¹ E.D. FREDRICKSON, L.C. JOHNSON, M. OKABAYSHI, Princeton Plasma Physics Laboratory, R.J. LAHAYE, E.J. STRAIT, R.T. SNIDER, J.T. SCOVILLE, General Atomics, G.A. NAVRATIL, A.M. GAROFALO, Columbia University, E.A LAZARUS, Oak Ridge National Laboratory, M. GRYAZNEVICH, UKAEA Fusion — Experiments to control low density locked modes have been carried out on DIII-D, using switching power amplifiers (SPAs) to drive external coils in a closed loop configuration. There are six external “picture frame” coils mounted around the midplane and each coil spans 60 degrees in the toroidal direction and about 50 degrees in the poloidal direction. The SPAs are designed with less than 0.1 msec internal time delay, adequate for feedback experiments at frequencies comparable to the wall time constant. The maximum radial field which the coils can drive is about 40 G at the vacuum vessel wall. Feedback was tried with the “smart shell” algorithm and with direct feedback on the mode amplitude. In this first experiment, the locked modes were not stabilized.

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- Prefer Oral Session
 Prefer Poster Session

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Special instructions: DIII-D Poster Session 1, immediately following GA Navratil

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