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Suppression of Tearing Modes by Electron Cyclotron Heating in the TEXTOR tokamak. AVRILIOS LAZAROS, EGBERT WESTERHOF, ESHMAEIL FARSHI, FOM-Institute for Plasma Physics Rijnhuizen, Association EURATOM-FOM, Trilateral Euregio Cluster, The Netherlands, www.rijnh.nl, FRED HOEKZEMA, RUDI KOSLOWSKI, ANDREAS KRAEMER-FLECKEN, OLIVER ZIMMERMANN, Forschungszentrum Juelich GmbH, Institut fuer Plasma-physik, Association EURATOM-FZJ, TEC, 52425 Juelich, Germany, THE TEXTOR TEAM — The 2/1 tearing mode triggered by the Dynamic Ergodic Divertor in the TEXTOR tokamak has been suppressed by properly localised ECRH. Because the mode suppression is observed to be relatively insensitive to the driven current or toroidal injection angle, heating must be responsible for the main effect. In addition, a clear benefit of power modulation was observed. This indicates that direct heating of the magnetic island and the consequent decrease of the resistivity at the O-point, rather than changes in the local temperature and current density profiles, is the dominant mechanism responsible for the suppression of the 2/1 magnetic island in this case.

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