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Influence of Ar Recycling and Divertor Configuration on Confinement in JET Radiating Mantle Discharges¹ D.L. HILLIS, J.T. HOGAN, ORNL, Oak Ridge, TN 37830, USA, AND EFDA-JET WORKPROGRAMME CONTRIBUTORS, Culham Science Centre, Abingdon, UK. — Discharges have been obtained on JET in the MkII-Gas Box divertor using impurity seeding with Ar for H-mode plasmas to produce a radiating mantle and improved confinement for a variety of divertor configurations. TEXTOR Radiation Improved (RI) -mode experiments suggest the important effect of recycling conditions on confinement. Similarly, control of impurity recycling in the MkII-GB configuration is found to be important in obtaining improved confinement in JET. Argon concentrations are measured in the JET sub-divertor with a Penning gauge coupled to a photo-multiplier system. Spectrometer and bolometer measurements in the plasma edge and strike point region are used as constraints on core and divertor modeling to advance our picture of the argon recycling pathway under strong and weak recycling conditions, and for strong and weak shaping configurations.

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- Prefer Oral Session
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Special instructions: Please include in the JET session.

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