Abstract Submitted
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An Experiment to Tame the Plasma Material Interface[1] R.J. GOLDSTON, J. MENARD, PPPL, J.P. ALLAIN, J.N. BROOKS, Purdue, J.M. CANIK, ORNL, R. DOERNER, UCSD, A. HASSANEIN, Purdue, M. KOTSCHENREUTHER, U. Texas, G.J. KRAMER, H.W. KUGEL, PPPL, R. MAINGI, ORNL, S.M. MAHAJAN, U. Texas, R. MAJESKI, C.L. NEUMEYER, PPPL, R.E. NYGREN, SNL, L.W. OWEN, ORNL, T.D. ROGNLIEN, LLNL, D.N. RUZIC, U. Ill., D.D. RYUTOV, LLNL, S.A. SABBAGH, Columbia, C.H. SKINNER, PPPL, V.A. SOUKHANOVSKII, LLNL, M.A. ULRICKSON, SNL, P.M. VALANJU, U. Texas, R.D. WOOLLEY, PPPL — Approaches to heat flux handling and tritium retention that may work for ITER do not generally extrapolate to Demo, and certain ITER parameters, such as first-wall temperature and loss power / major radius do not approach those of Demo. Thus research will be required in parallel with ITER to bridge the gap to Demo. A series of key questions sets the requirements for the research capabilities of a device fill this gap, such as heating power / major radius, flexibility in poloidal field configuration, plasma facing component flexibility in materials (solid and liquid) and in temperature, plasma pulse length, and access for surface and plasma diagnostics.

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