Abstract Submitted
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Plasma operation in a divertor tokamak with all tungsten plasma facing components R. NEU, W. BOBKOV, R. DUX, T. EICH, H. GREUNER, O. GRUBER, A. HERRMANN, L. HORTON, A. KALLENBACH, M. KAUFMANN, P. LANG, C. F. MAGGI, H.-W. MUELLER, R. PUGNO, T. PUETTERICH, V. ROHDE, W. SCHUSTEREDER, A.C.C. SIPS, J. STOBER, W. SUTTROP, M. WISCHMEIER, H. ZOHM, MPl fuer Plasmaphysik, Euratom Association, Garching, Germany, ASDEX UPGRADE TEAM — To investigate plasma wall interaction with tungsten plasma facing components and its implications in a divertor tokamak, ASDEX Upgrade has been completely equipped with W coated tiles. A range of tools has been developed to allow for discharges with good confinement combined with acceptable W concentrations. After the implementation of W ICRH- and guard-limiters, they were identified as the main W sources during operation of ICRH. This is attributed to the acceleration of intrinsic impurities in the rectified parasitic electrical field leading to an increased W sputtering yield. During the last vent deposited layers were removed from the W surfaces and the start-up of the 2007 campaign was performed without prior boronization. Although all primary carbon sources are removed, almost no reduction of the C concentrations is observed up to now. H-Modes with $H \approx 1$ and a moderate W content could be obtained soon after the first pulse with auxiliary heating and detailed investigations on the W influxes and their impact were performed.

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