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Implication of a shock front in the X-point region of ASDEX Upgrade on the evolution of divertor detachment MARCO WISCHMEIER, STEFFEN POTZEL, DANIEL CARRALERO, Max Planck Institute for Plasma Physics, EURATOM Association, Garching, Germany, STEFAN H. MULLER, Center for Energy Research, University of California of San Diego, La Jolla, USA, ASDEX UPGRADE TEAM — Existing numerical fluid transport code packages containing an as complete as possible model of our current understanding of the volumetric processes in the divertor are not able to qualitatively reproduce the experimental observations in the high field side, HFS, divertor of ASDEX Upgrade during detachment. In contrast to numerical models it is observed experimentally that as the ion flux density to the inner divertor drops a region of high density $is formed in the X-point region of the far Scrape-Off Layer, SOL, of the HFS divertor extending away from the separatrix. In the X-point region supersonic flows are theoretically predicted and measured experimentally. In a Gedanken experi$
$point. We compare the implications to the experimental dependencies under which the high density in the far SO$
$point region appears.$

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