

Abstract Submitted  
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**Progress of the TCV Divertor Upgrade** HOLGER REIMERDES, EPFL, SPC, Lausanne, Switzerland, TCV TEAM, EUROFUSION MST1 TEAM — The TCV tokamak is in the midst of an upgrade to increase its capability to investigate conventional and alternative divertor configurations. The main components of the divertor upgrade are the addition of a gas baffle, enhanced divertor diagnostics and an increased pumping capability. A simultaneous heating systems upgrade increases the power for the divertor to mitigate. The baffle design was guided by simulations with the edge codes SOLPS-ITER and SOLEDGE2D and remains compatible with a wide range of configurations including Snowflake and Super-X. The first baffle version, installed in 2019, is predicted to increase the compression of divertor neutrals by up to a factor of 10 and lead to detachment at lower core electron density. To validate the model predictions the diagnostic array is being augmented with additional baratrons, low-temperature Thomson scattering measurements in the divertor and extending Langmuir probe and IR thermography coverage to the entire poloidal divertor circumference. A prototype non-evaporable high capacity getter pump is installed to evaluate its potential in a tokamak. Planned experiments will test the model predictions and provide guidance for possible revisions of the baffle upgrade.

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