

Abstract Submitted  
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**On the determination of the poloidal velocity and the shear layer in the scrape-off layer of ASDEX Upgrade**<sup>1</sup> ROMAN SCHRITTWIESER, STEFAN COSTEA, FRANZ MEHLMANN, Institute for Ion Physics and Applied Physics, EURATOM-ÖAW Association, University of Innsbruck, Austria, ANDERS HENRY NIELSEN, VOLKER NAULIN, JENS JUUL RASMUSSEN, Association EURATOM/DTU, Dept. of Physics, DTU Risø Campus, Roskilde, Denmark, HANS WERNER MUELLER, Max-Planck-Institute for Plasma Physics, EURATOM Association, Garching, Germany, NICOLA VIANELLO, Consorzio RFX, Associazione EURATOM-ENEA sulla Fusione, Padova, Italy, DANIEL CARRALERO, VOLKER ROHDE, Max-Planck-Institute for Plasma Physics, EURATOM Association, Garching, Germany, CHRISTIAN LUX, CODRINA IONITA, Institute for Ion Physics and Applied Physics, EURATOM-ÖAW Association, University of Innsbruck, Austria, ASDEX UPGRADE TEAM — We have determined the poloidal velocity in the scrape-off layer (SOL) of ASDEX Upgrade (AUG) and further inside with three different methods, which are critically compared. The methods take use of a reciprocating probe with six pins by which the radial electric field and the cross-correlation (CC) of signals was determined in the SOL up to the shear layer (SL) and a few mm inside it. The poloidal velocity was determined (i) from the ExB drift, (ii) from the CC of the ion saturation currents of two poloidally separated negatively biased probes and (iii) from the CC of two poloidally separated floating probes. By use of synthetic data, obtained from simulations with AUG parameters applying the ESEL code, a detailed benchmarking was carried out. Based on the probe data we have also determined the position of the shear layer.

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