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Screening Effect of Plasma Flow on RMP Penetration in EXTRAP T2R LORENZO FRASSINETTI, Fusion Plasma Physics, Association EURATOM-VR, School of Electrical Engineering, Royal Institute of Technology KTH, ERIK OLOFSSON, PER BRUNSELL, SHEENA MENMUIR, JAMES DRAKE — The penetration of resonant magnetic perturbations (RMP) can be screened by plasma flow and the understanding of this phenomenon is important for ELM mitigation techniques. This work studies the screening effect in EXTRAP T2R. EXTRAP T2R is equipped with a feedback system able to suppress all error fields and to produce one or more external perturbations in a controlled fashion. The EXTRAP T2R feedback system is used to generate a RMP that interacts with the dynamics of its corresponding tearing mode (TM). The level of RMP penetration is quantified by analyzing the RMP effect on the TM amplitude and velocity. To study the screening effect, the flow is changed by applying a second perturbation that is non resonant (non-RMP). This produces the flow reduction without perturbing significantly the other parameters. By modifying the amplitude of the non-RMP, an experimental study of the flow effect on the RMP penetration is performed. Experimental results are compared with the model described in [Fitzpatrick R *et al.*, Phys. Plasmas 8, 4489 (2001)].

Lorenzo Frassinetti
Fusion Plasma Physics, Association EURATOM-VR,
School of Electrical Engineering, Royal Institute of Technology KTH

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