

Abstract Submitted
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Recent Alfvén Eigenmode measurements on JET¹ V. ASLANYAN, M. PORKOLAB, P. WOSKOV, MIT-PSFC, P. PUGLIA, W. PIRES DE SA, R. GALVAO, L. RUCHKO, USP Brazil, S. SHARAPOV, S. DORLING, S. DOWSON, M. GRAHAM, T. BLACKMAN, G. JONES, A. GOODYEAR, CCFE UK, P. BLANCHARD, A. FASOLI, D. TESTA, EPFL Switzerland, J. FIGUEIREDO, C. PEREZ VON THUN, EUROfusion PMU, JET COLLABORATION² — Alfvén Eigenmodes (AE) have been observed in the latest JET campaigns, excited by ICRH-driven fast particles in D and DH plasmas. The detection of AEs allows determination of isotope abundance in recent experiments with mixed ion composition plasmas. A major upgrade to the Toroidal Alfvén Eigenmode Active Antenna diagnostic at JET has opened the possibility to probe AEs with a wide range of toroidal mode numbers n and quantify their damping rate. A new 4 kW amplifier has been installed for each of six antennas to increase the output power and allow real time control of the relative phasing between the antennas. The diagnostic will be used to study the damping of alpha-driven AEs during the DT campaign planned on JET in support of ITER. Simulations with the MISHKA code are used to interpret the frequencies and radial localization of AEs.

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²See the Appendix of F. Romanelli et al., Proceedings of the 25th IAEA Fusion Energy Conference 2014, Saint Petersburg, Russia.

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