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**To:** Taskforces@jet.efda.org; Seminars@jet.efda.org

**Subject:** EFDA-JET Science Meeting - A scientific case for future DT campaigns at JET - 09:30 Monday 8 November in K1/0/38

Dear Colleagues,

The next EFDA-JET Science Meeting on **A scientific case for future DT campaigns at JET** will take place on **Monday 8 November in K1/0/38. Please note the unusual room!**

## **AGENDA**

09:15 Coffee in K1/0/38

09:30 Introduction: Scientific case for DT at JET - George Sips

10:00 Fusion performance predictions for JET - Clive Challis

10:30 Scientific issues - Henri Weisen

11:00 Maintaining the tritium capability at JET - Damian Brennan

## **ABSTRACT**

JET has unique capabilities enabling operation with tritium and beryllium. A DT campaign is planned for 2014-2015 that, compared to previous high power DT experiments in 1997, will be able to use substantial upgrades to the machine capability and diagnostics. With the ITER like wall (ILW), JET has the wall material mix envisaged for DT operation in ITER. The upgrades of the neutral beam system allow up to 16MW injection in hydrogen and up to 35MW in deuterium or tritium. In addition, the enhanced JET diagnostics are of particular relevance for scientific studies during DT.

Consequently, future DT and isotope scaling experiments JET would address key aspects of the ITER research needs, in the area of plasma confinement, tritium retention and removal techniques, together with the study of MHD-modes in the presence of alpha-particles. During the DT phase, JET would also aim at achieving the highest level of (absolute) performance, integrating the issues regarding the ILW and scenarios developed for ITER during the past 10 years.

The background for a future DT campaign and performance predictions for scenarios at high plasma beta will be given, together with an overview of key physics issues that can be addressed in dedicated H, D and 100% T campaigns in combination with a 50:50 DT phase. Moreover, the technical preparations for operation with tritium in 2014-2015 will be summarised.

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