Contribution ID: **4** Type: **not specified**

Plasma current measurement at JET using fibre optics current sensor (FOCS)

The Fibre Optic Current Sensor (FOCS) is a supplementary diagnostic system to be installed in ITER to provide data on the plasma current. The FOCS is not standard for plasma current measurements the and sensor performance in a tokamak environment has to be assessed. Considering this goal, polarisation detection based FOCS systems were installed at JET. The measurements were performed in various machine operating scenarios at currents up to 4.2 MA. Data from Continuous External Rogowski (CER) coils were used as a reference. To have an agreement between two systems, cross-talk between the CER and TF coils had to be taken into account, while FOCS is mostly not affected by this effect. Based on the experimental data we conclude that the FOCS has performance characteristics compatible with the ITER requirements.

Primary author: GOUSSAROV, Andrei (SCK CEN)

Co-authors: Mr LEYSEN, Willem (SCK CEN); Mr BEAUMONT, Perry (CCFE); Prof. WUILPART, Marc (UMons); Prof. BATISTONI, Paola (CCFE); Mr BERKIS, Nicolas (CCFE)

Presenter: GOUSSAROV, Andrei (SCK CEN)