

Melting of Tungsten by ELM Heat Loads in the JET Divertor – in support of ITER

Aim: Help ITER reach decision on material for first divertor

Special W lamella edge melted by ELMs:

- ELMs: 0.3MJ, 30Hz, q_{||peak}~3GWm⁻²
- A few droplets ~0.1mm ejected
 ⇒ Small plasma impact & no disruptions
- Erosion ~ 150-300μm per 1.5s exposure
- MEMOS code fits melt motion:TH/P3-40
 ⇒ Driven by J×B force (thermo mission)

Experiment planned for 2015

- ELM melt with ~15° angle of incidence
 ⇒ more ITER-like geometry
- Direct measure of surface temperature

All H-modes at 3MA, ~24MW



