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, $q_{||\text{peak}} \sim 3\text{GWm}^{-2}$
- A few droplets $\sim 0.1\text{mm}$ ejected
  - Small plasma impact & no disruptions
- Erosion $\sim 150-300\mu\text{m}$ per 1.5s exposure
- MEMOS code fits melt motion: TH/P3-40
  - Driven by $J \times B$ force (thermo mission)

Experiment planned for 2015

- ELM melt with $\sim 15^\circ$ angle of incidence
  - More ITER-like geometry
- Direct measure of surface temperature

G.F. Matthews EX/4-1, Fusion Energy Conference, St. Petersburg, 2014