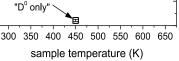
The influence of displacement damage on deuterium transport and retention in tungsten

- The concept end oexperiments of a medium-flux, lowtemperature plasma experiment is outlined.
- Shed light on deuterium transport and retention in tungsten with displacement damage on a quantitative level to compare with present diffusion trapping codes.
- 20 MeV self-damaged tungsten is used to create defects
- Low-energy deuterium plasma is mandatory to avoid defect creation during loading
- Spatial distribution of defects can be well separated from the ion implantation depth: transport of deuterium can be studied
- De-trapping energies were determined from TPD measurements with different ramp rates.
- With all these input an independent set of experiments. could be described quantitatively without any free parameter within a factor of two.
- The weak points are the refelction coefficient and implantation profile of low energy ions



temperature-dependenteflection coefficient



inventory (10²⁰ D/m²)

Ω 1

closed shutte