

- The concept and experiments of a medium-flux, low-temperature 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 reflection coefficient and implantation profile of low energy ions

