Discussion on hydrogen retention in damaged tungsten: experiments and modelling. Review of main problems that were addressed in the course of the CRP.

- **Modelling of trapping/diffusion/TDS:**
  - Good progress during the period of the CRP
  - Development of new codes (MHIMS, DIFFTRAP, HIDT, TMAP), extension of codes by new models such as fill-level dependence of traps (TESSIM, MHIMS Reservoir), isotope exchange
  - Classical codes are often sufficient (except isotope exchange)
  - Close connection between modelling and experiment
  - All available input data are taken into account (depth profiles, TDS spectra, damage profiles, input from DFT)
  - Input data for modelling remain uncertain (Diffusion coefficient, pre-exponential factor) require clarification
  - Code-code comparison of 3 codes within Eurofusion, code-code comparison within CRP ongoing
  - Variation of heating rate can give precise detrapping energies

- **Damaging at elevated temperatures in the presence of H:**
  - Good progress during the period of the CRP
  - Data about damaging at elevated temperatures became available from a number of groups
  - Data at elevated temperatures with presence of H are still very scarce: More data are required
  - Re and transmutation element effects: Some data for Re are available, no data for Os, some data for Ta

- **Diffusion in the presence of a temperature gradient:**
  - No data available
  - No data on Soret constant

- **Diffusion code with time-dependent trap density and microstructure change:**
  - Can be included in some codes, but not widely used

- **Relation between microstructure and hydrogen trapping:**
  - Good progress within the CRP
  - Correlation of TEM and PAS/PALS investigations with D depth profiles and TDS
  - Work in progress

- **Different methods of sample loading:**
  - Good progress within the CRP
  - Data for different types of loading conditions (gas, atom, ion beam, plasma) are available
  More data for low energy particles are required

- **Effect of He:**
  - Good progress within the CRP
  - Data available for pure He and H/He plasmas
  - Only few data available for He in bulk W

- **Effect of impurities (C, N, O)**:
  - Some data available for C, N
  - generally only scarce data

- **Extrapolation of surrogate irradiation to neutrons:**
  - Some data for fission neutrons available
  - Surrogate irradiation for different (heavy) ion species give comparable results
  - Discrepancy for measured damage rate dependence
  - Work ongoing