Theory & Modelling activities in support of the ITER Disruption Mitigation System *(E. Nardon)*

- Wealth of T&M activities within the international ITER DMS Task Force, **addressing all important issues**
- During the **non-active phase**, **RE avoidance** might be obtained with a **2 step SPI scheme**: pure H_2 SPI first, then Ne SPI
  - Pre-TQ dilution may suppress hot tail mechanism
- Present situation **critical** concerning **RE avoidance** during the **active phase** of ITER operation (T decay & Compton seeds + large avalanche) → Calls for further modelling and exploration of alternative schemes
- **RE mitigation** also **uncertain** but strategy based on a **H_2 SPI into the beam** to obtain a benign termination might lead to a solution
- **Heat loads** mitigation generally **less critical** but difficult to quantify in experiments
  - **3D MHD simulations** ongoing to help **optimize SPI parameters**
- Also ongoing efforts on **EM loads** modelling, e.g. [S. Jardin et al., this conf.]
  - Will be taken into account to define an **integrated disruption mitigation strategy**