**IDTT modeling**

*Inputs for modeling of plasma, antennas and machine*

**Inputs to setup synthetic reflectometers for IDTT**

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|  To perform simulations of IDTT reflectometry systems according to the work plan of the EnR project, some inputs are needed. These will be the foundation ground to setup the synthetic reflectometer systems to be used throughout the project.For **plasma modelling**, using a Single Null Scenario, the latest available data is required: * The magnetic equilibria for the first stage of the discharge (ramp up phase).
* The magnetic equilibria for the stationary stage of the discharge.
* The radial electronic density profiles associated to each of the time slices of the magnetic equilibria. Profiles should include the SOL region (outside the separatrix) or a model for that zone.
* The radial profile of electronic temperature associated to each of the time slices of the magnetic equilibria. Profiles should include the SOL region (outside the separatrix) or a model for that zone.

The above list is the absolute essential for building the input model for simulation codes and should constitute a coherent package. Additional information on the * Expected spectral characteristic of turbulence as a function of wave number and the expected radial profile of turbulence level.
* Expected characteristics of the MHD activity.

For **modelling the ROI of the machine**, the CAD description of the ports where the installation of the reflectometers is expected, should be available. The **antennas** for the LFS will be similar to the base model used for DEMO simulations at this stage. For the HFS the antenna model is being under study and differs from the LFS counterparts due to space restrictions.  |