Vertical Neutron Camera for JT-60SA 2026 Status and planned activities

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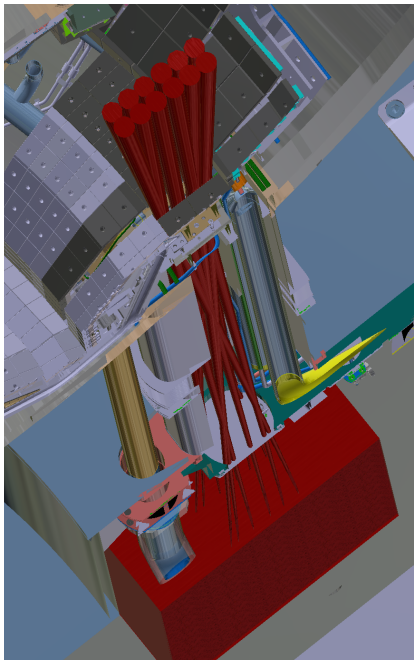
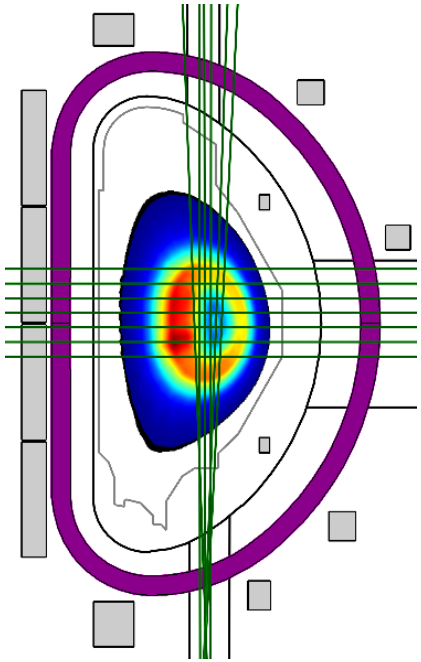
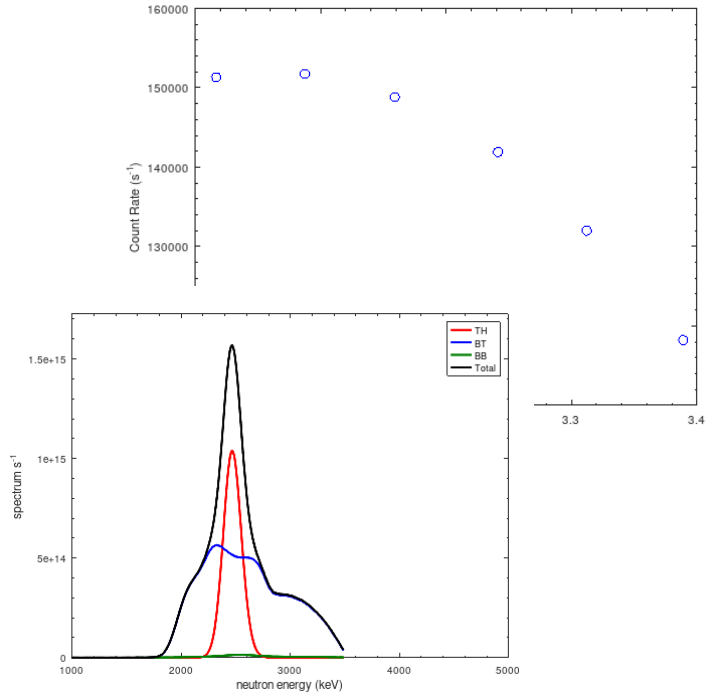
Status and task description

Task description:

- coordination of the finalisation of the enginnering design of collimation and shielding for the vertical neutron camera, of the detectors and their shielding and of the data acquisition system
- Extend the TRANSP/NUBEAM modeling to all the JT-60SA scenarios to estimate neutron fluxes and spectra at the VNC and CNS.
- Manpower: 6 PM







Goals and Plan

By the end of 2026 (but realistically spilling into mid 2027):

- VNC design built to print: design is fully completed, frozen, and released, and manufacturing can proceed strictly according to the drawings and specifications, without further design work.
- Prepare procurement of shielding & collimation material and of detector and data acquisition system.
- Planning for manufacturing and testing of components for 2027.

Plan:

- Complete TRANSP/NUBEAM/DRESS modeling of missing scenarios (UU). Support modeling effort for CNS.
- Accelerate MCNP modelling efforts for shielding and engineering design: close collaboration between NCBJ and F4E.
- Finalize detector design and shielding: close collaboration between NCBJ and UU.
- Strong interaction with QST: so far the missing link. Visits to JT-60SA necessary.