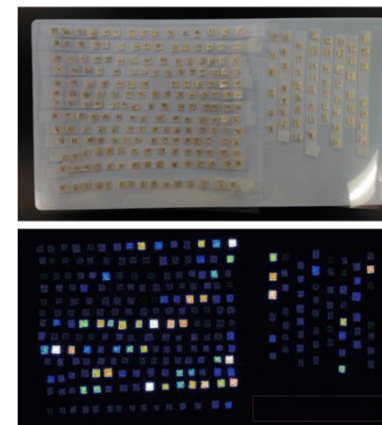
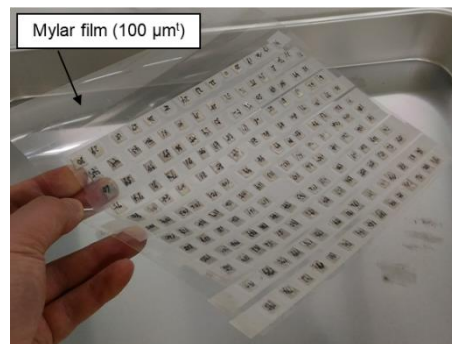




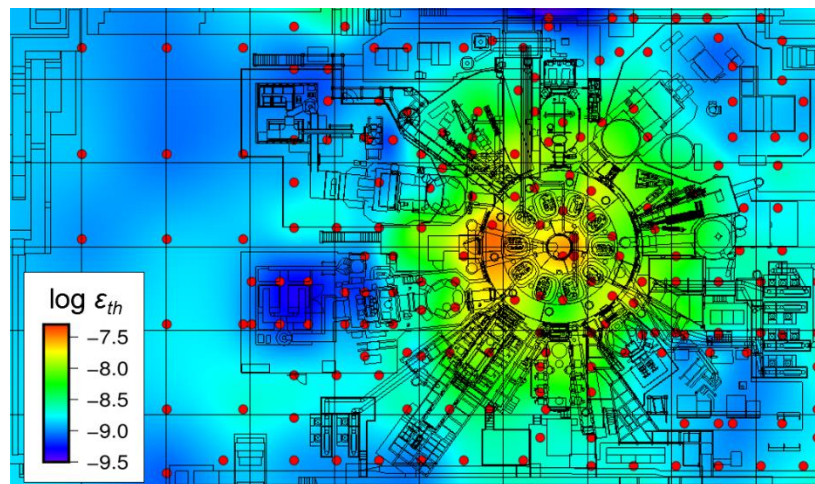
Neutron flux distributions in the LHD torus hall evaluated by an imaging plate technique in the first campaign of deuterium plasma experiment

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- The global flux distributions for neutrons in the torus hall of large fusion devices were experimentally evaluated for the first time in the Large Helical Device (LHD) using the activation foil method measured by the imaging plate (IP) and the high-purity Germanium detector (HPGe).
- The thermal neutron distribution underneath LHD were largely influenced by the boron in polyethylene blocks placed on the floor underneath LHD.
- The neutron flux distribution in the torus hall obtained in this work should be capable to develop the radiation safety in LHD and to predict the accumulation of radioactivity proceeding with the deuterium plasma experiment in LHD.



Foils stuck on the mylar film for IP measurement, and the typical experimental result of IP measurement.



Thermal neutron flux distribution, ε_{th} on the floor level of LHD torus hall measured by In foils. The red points in the figure indicate the position of In samples