ANALYSIS OF THE ACTIVATION OF THE DETECTOR MODULE OF THE DNFM DIAGNOSTICS

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Numerical modelling of Divertor Neutron Flux Monitor (DNFM) [1] activation for standard irradiation scenario on ITER SA2 [2] has been carried out. The calculations were performed using MCNP C-model-181031 [3] of neutron transport and FISPACT [4] activation model.

DPA (displacement per atom) value dynamics during irradiation, activity and inventory dynamics during cooling are obtained. Also contact dose rate as a function of cooling time is calculated. All these modelling results will be presented in the Radwaste Checklist.

As a calculations verification a series of experiments are carried out, where niobium, aluminum and ftoroplast samples were irradiated. Activity measurements were compared to ones obtained in calculations.

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References

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