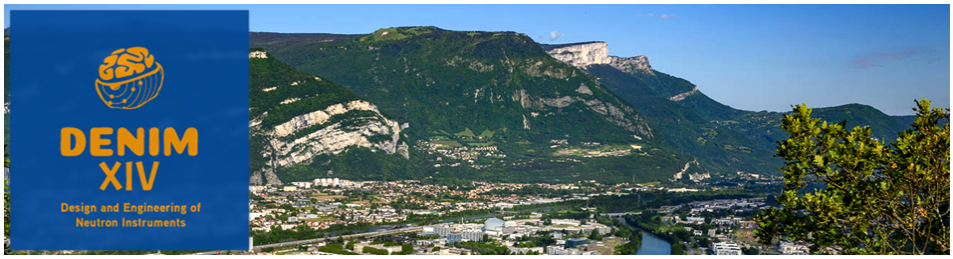

Contribution ID: **73** Type: **Poster**

Development of T0 choppers for ODIN and HEIMDAL instruments at the European Spallation Source

Wednesday, 22 October 2025 14:24 (1 minute)

The T0 chopper system is designed to block fast neutrons and gamma radiation from the prompt source pulse. To attenuate the fast neutrons to the required level, the T0 chopper places an attenuator mass of high cross-section materials in the neutron beam. The arrangement of materials is optimised to serve the purpose and consists of boron carbide, tungsten alloy, copper-chromium alloy and nickel-chromium alloy. The T0 rotor weighs 375 kg overall and runs at 14 or 28 Hz, supported by traditional bearings and driven by a 6.5 kW brushless motor. The poster shows the current status of the project and aims to illustrate the critical design features of the chopper.

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Session Classification: POSTER SESSION