

Call for contribution of expertise

CERN invites collaborating institutes and universities to contribute with the expertise of their qualified employees to the activity described below.

Start date: asap

Duration: One year, possible extension to a maximum of up to 3 years.

Project/Activity: Mechanical Engineer for thermomechanical studies

Detailed description of Activity:

The expert will join the EN-STI group. The main tasks will be the following:

- Follow-up of the manufacturing and installation of the new antiproton production targets, in order to serve the AD Physics program. Coordination within the existing interfaces in the area including the mechanical positioning trolleys, beam instrumentation, cooling, and upstream and downstream magnetic systems. Optimization studies of target core materials based on the results of the PROTAD HiRadMat experiment.
- Follow-up of the activities of installation of the new Target (Pb target cooled by gaseous nitrogen) and respective recommissioning. Coordination with the n_TOF operation.
- Perform detailed studies on the ISOLDE targets thermomechanical response, aimed at their potential optimization and increase of their lifetime
- Study of the current ISOLDE dump system in order to assess its compliance with future operational scenarios and, if necessary, the development of upgraded designs compatible with the new requirements.

Profile: Master degree in mechanical engineering. Experience with thermomechanical studies by means of implicit and explicit Finite Element Model (FEM) as well as potential fluid calculations by means of Computational Fluid Dynamics (CFD) will be highly appreciated. Experience in manufacturing and on coordination and installation activities is highly appreciated.

Specific details: Candidates will be expected to possess a good working knowledge of either English or French. Documentation shall be produced in English.

Status at CERN: Associated Member of the Personnel (Project Associate).

Conditions in accordance with CERN's Staff Rules and Regulations and Administrative Circular No. 11. Subsistence allowance is payable by CERN to cover the additional cost arising from the individual's (and, as applicable, their family's) stay in the local area while performing activities at CERN.

Option: Collaborating institutes and universities can propose to support the activity of the qualified employees participating in this "Call for contribution of expertise" with students or other employees. Their status and Subsistence allowance when applicable will be adapted to their relation with their institutions

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