Contribution ID: 266 Contribution code: MOPB047 Type: Poster Presentation

Integrated approach for ESS personnel safety systems

Monday 26 August 2024 16:00 (2 hours)

The European Spallation Source (ESS) is a state-of-the-art research facility currently under construction in Lund, Sweden. Upon project delivery, ESS will host the most powerful linear proton accelerator and a spallation target capable of producing the brightest neutron source in the world. In order to enable safe commissioning and operation of these potent systems, each system has a dedicated personnel safety system (PSS). Together they make up the ESS PSS, an integrated system of several PSS across the facility. These systems communicate with each other through a centralised interlink system, and together determine if the facility is ready for proton beam generation in the Accelerator and consequently neutron production at the Target Station. This paper provides a summary of the inner workings, along with a discussion on the approach and proposed strategies for overcoming the identified challenges.

Footnotes

Funding Agency

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Session Classification: Monday Poster Session

Track Classification: MC3: Proton and Ion Accelerators and Applications: MC3.4 Proton linac

projects