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Transforming the CNGS installation into AWAKE: Status and challenges.

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The Advanced Proton Driven Plasma Wakefield Acceleration Experiment (AWAKE) is a proof-of-principle R&D experiment at CERN, installed in the former CNGS facility. It is the world's first proton driven plasma wakefield acceleration experiment, using a high-energy proton bunch to drive a plasma wakefield for electron beam acceleration. Modifying the CNGS underground high radiation area for AWAKE beam, expected at the end of 2016 (protons) and 2017 (electrons), requires challenging modifications in a complex intervention area. Dismantling of activated elements, separation of the highest activated areas and installation of shielding were followed by underground civil engineering works to create new tunnels and cores for AWAKE electron and laser beams. AWAKE services and infrastructure must be integrated within the existing radiation facility and at the same time be designed and installed to keep the radiation dose to personnel as low as possible. This poster shows the main challenges encountered in matters of integration, safety and coordination. It gives an overview of the dismantling and installation works completed, on-going and planned to ensure the timely start of a safe and technically reliable AWAKE facility.

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