## HUMAN RELIABILITY ANALYSIS ON DIGITALIZED CONTROL ROOMS OF NPP

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In the era of digitalization, the need for electricity is growing every year. Digital instrumentation and control systems (I&C) have been in use for over three decades in various application. In advanced nuclear power plant (NPP) the main control room (MCR) has changed from analog to digital control systems (DCS). Digital technology in nuclear operations and maintenance is the key to successfully addressing challenges by nuclear operators in the power generation market. Although adopting digital technology in nuclear can be challenging due to the many technical, safety, regulatory, commercial and environmental constraints which characterize the industry. New digitalized human system interfaces (HSIs) pose challenges to traditional human reliability analysis (HRA) methods. The purpose of the work is to show the effects of digital HIS on human behavior and reliability, and the need for digitalization in nuclear power industry which studies show training and experience, quality and availability of procedures are important factors.

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## EFFECT OF ALPHA PARTICLES ON SPECIFIC IONIZATION AND DETECTION EFFICIENCY IN VACUUM WITH VARYING MESH-HOLE DIAMETERS OF A CIRCULAR MESH COLLIMATOR IN GEANT4 SIMULATION

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