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Collection of silicon detectors mechanical properties from static and dynamic characterization test campaigns

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Physics research is constantly pursuing more efficient detectors, often trying to develop complex and optimized geometries resulting in non-trivial engineering challenges. Although critical for this optimization, silicon tiles' mechanical data are hardly present in the literature. For this reason, this work focuses on silicon detectors' mechanical characterization, aiming to provide engineers with input data for the design. In detail, this paper concerns a set of tests on single sides silicon detectors, dynamic tests on glued tiles, and severe stress of bonded ladders.

Eligibility for "Best presentation for young researcher" prize

Yes

Authors: MANCINI, Edoardo; MANCINI, Edoardo (Universita e INFN, Perugia (IT)); MORETTINI, Giulia; MUS-SOLIN, Lorenzo; MUSSOLIN, Lorenzo (Universita e INFN, Perugia (IT))

Co-authors: AMBROSI, Giovanni (Universita e INFN, Perugia (IT)); CAPRAI, Mirco (INFN Perugia); CIANETTI, Filippo; IONICA, Maria; SCOLIERI, Gianluca (INFN Perugia)

Presenters: MANCINI, Edoardo; MANCINI, Edoardo (Universita e INFN, Perugia (IT))

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