

Titolo Tema/Progetto	Tracking and validation of the Motherboard and tile Printed Circuit Boards of the DarkSide-20k Photo Detection Units inside NOA clean room
Esperimento CSN2/Sigla del Proponente	DarkSide
Struttura INFN del proponente	LNGS
Laboratorio ospitante (Italia: LNGS, LNF, LNS,LNL, EGO, SOS-ENATTOS, TIFPA-FBK; Estero: CERN, La Palma, Malargue (AUGER), Salta (QUBIC))	LNGS
Persona di riferimento presso il laboratorio	Lucia Consiglio
Data di inizio (01/11/2024-01/04/2025, durata >= 3 mesi)	1-Nov-24
Data di fine (>= 3 mesi)	1-Feb-25
Descrizione attività (max 1000 caratteri)	<p>DarkSide-20k detector for dark matter direct search is based on a double-phase Time Projection Chamber (TPC) exploiting liquid Argon technology. Light detection will be performed by means of 26 m² Silicon PhotoMultipliers (SiPMs).</p> <p>The basic Photo Detection Unit (PDU) is made by 16 SiPM matrices called tiles (5 cm x 5 cm) integrated with the readout electronics into a printed circuit board (PCB) and subsequently mounted onto a 20 cm x 20 cm Motherboard.</p> <p>The PDU massive production will occur in the Nuova Officina Assergi (NOA) an ISO-6 clean room of 420 m² equipped with cutting-edge packaging machines, where more than 10.000 tiles will be assembled and tested according a well defined and complex process workflow. One of the activities to be performed in NOA is the test and qualification of the PCB (Motherboards and tiles) assembled with electronic components that are precedently mounted at an external company. The candidate will take part to the procedure of the PCB identification and tracking by means of a QR code to be laser engraved on each circuit before and will be involved in the procedure of validation of the PCBs operating on a custom dedicated set up</p>
Altre indicazioni (massimo 500 caratteri)	The activity will be performed inside a clean room, where the entrance is allowed only to personnel appropriately dressed (protective uniform, overshoes, caps, masks) and following well defined behaviour rules.
Servizi offerti dal laboratorio ospitante	0
Note	0