Titolo Tema/Progetto	Development of the Dark Count Rate measurement set up for the SiPM tile characterization inside the 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 Nuova Officina Assergi
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)	DarkSide-20k is the next future experimental project, that combines the special technique for the procurement and purification of underground Argon with the light detection technology based on large arrays of customized cryogenic photosensors. The Time Projection Chamber optical planes will be instrumented with more than 21 m2 of Silicon Photomultipliers (SiPMs) arranged in 528 Photo Detection Units (PDU) made each one of 16 tiles 5 cm x 5 cm, that will be massively produced and fully characterized both at room temperature and in liquid nitrogen inside the Nuova Officina Assergi (NOA) a large clean room of 420 m2 operational since 2023. A crucial measurement that contributes to the definition of the PDU validation passport is the Dark Count Rate on the single tile that will be performed on a 10% sample of the full production. The candidate will be involved into the development of a dedicated measurement set up and in the implementation of the data acquisition software in order automatize the operations.
Altre indicazion (lassimo 500 caratteri)	The activity will take place inside a clean room where the entrance is allowed only to the personnel dressed according the ISO-6 clean room protocol (protective uniform, overshoes, cap, gloves, mask, safety glasses).
Servizi offerti dal laboratorio ospitante	0
Note	0