

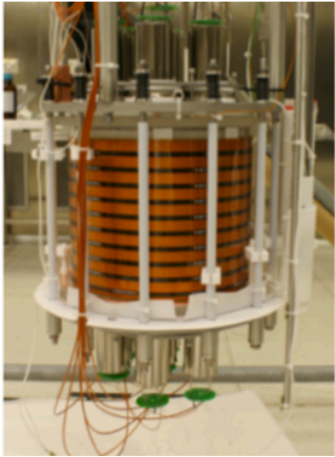
darkside

S.Albergo

DarkSide @ INFN-CT

The DarkSide Program

2012



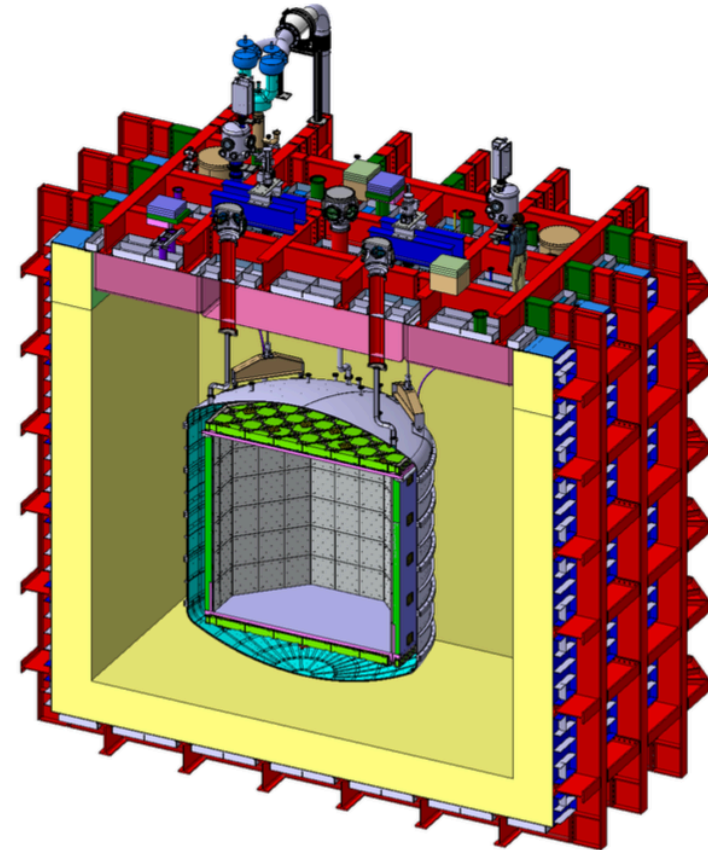
DarkSide-10

2013 - 2018



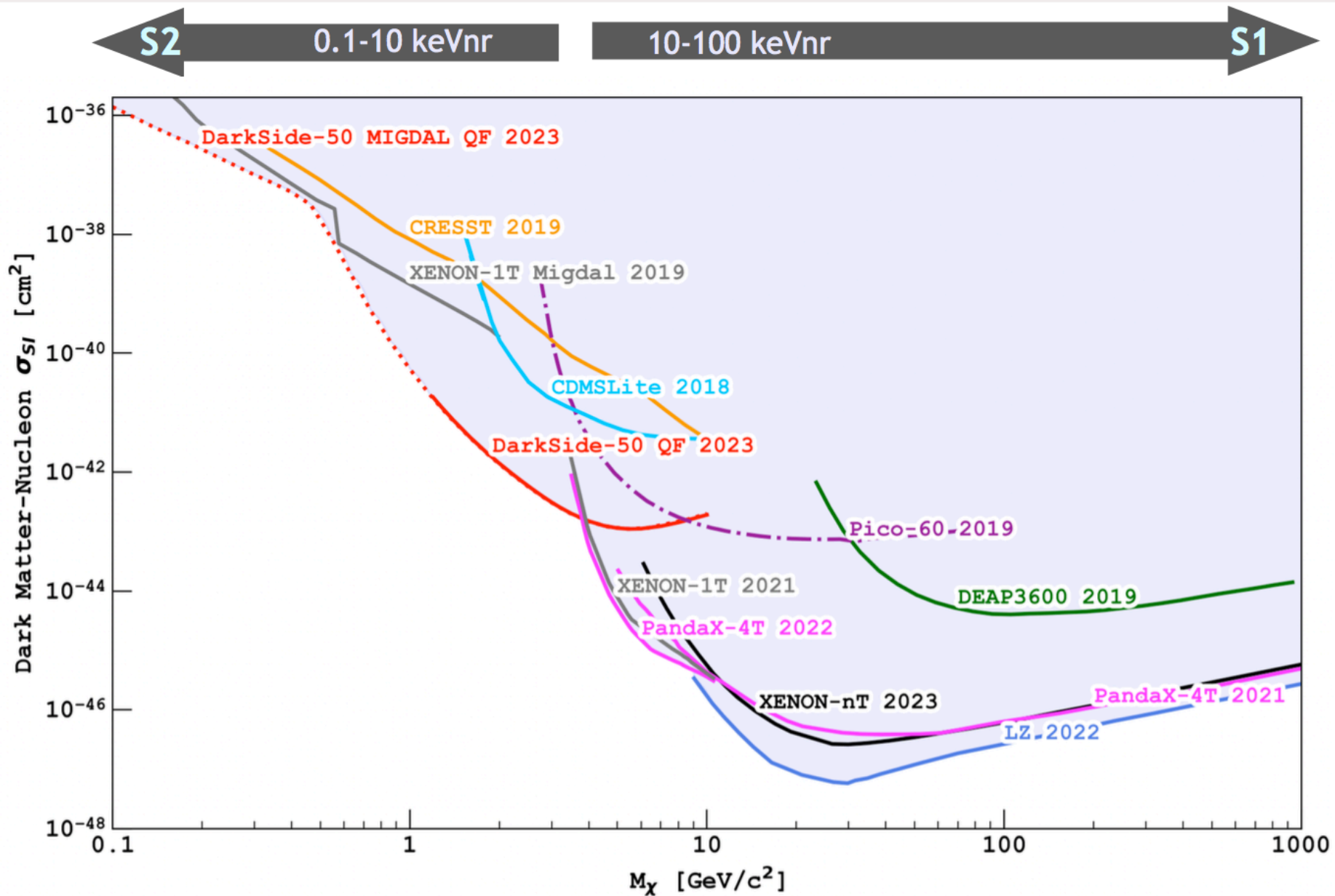
DarkSide-50

2026 - 2036



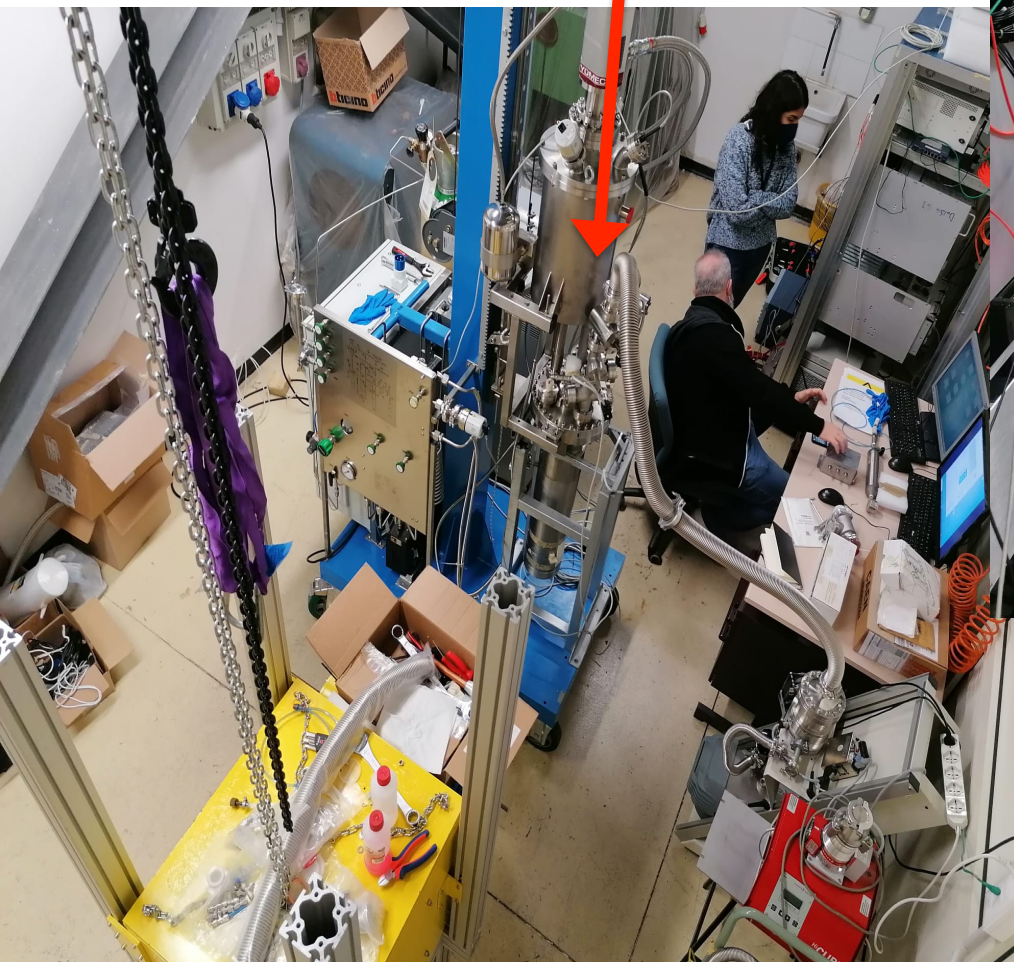
DarkSide-20k

DARK MATTER 90% CL EXCLUSION LIMIT



ReD laboratory @ DFA

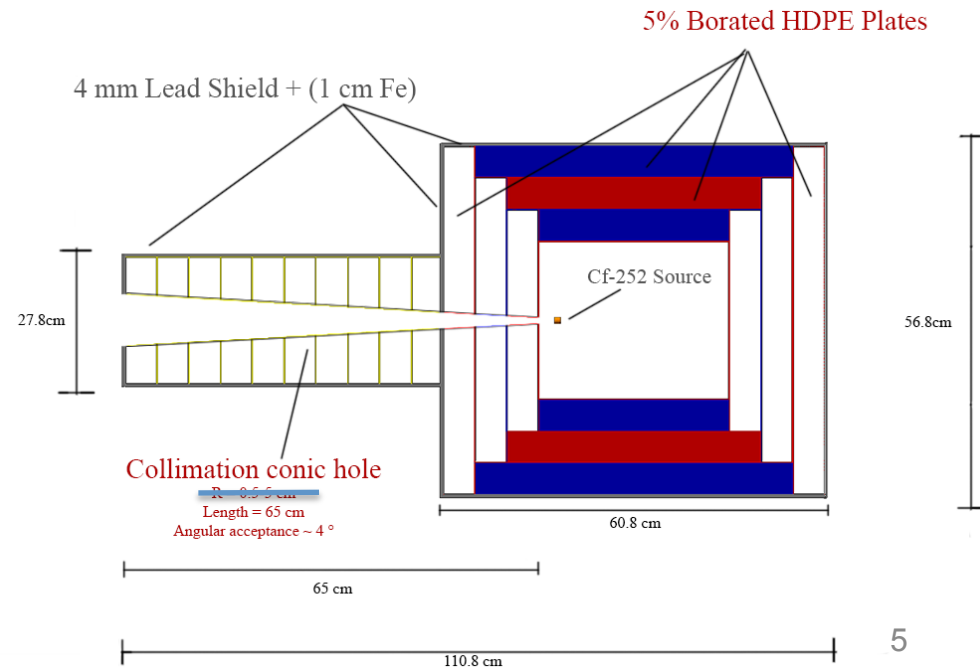
Lar-TPC



ToF Wall

^{252}Cf collimator

- Hardware:
 - 400 kg of **B-loaded HDPE** purchased by SezCt cutted to final sizes and ready to be assembled
 - ^{252}Cf (~1.5 MBq) source purchased by **LNS**
 - Fission taggers: BaF detectors (available)



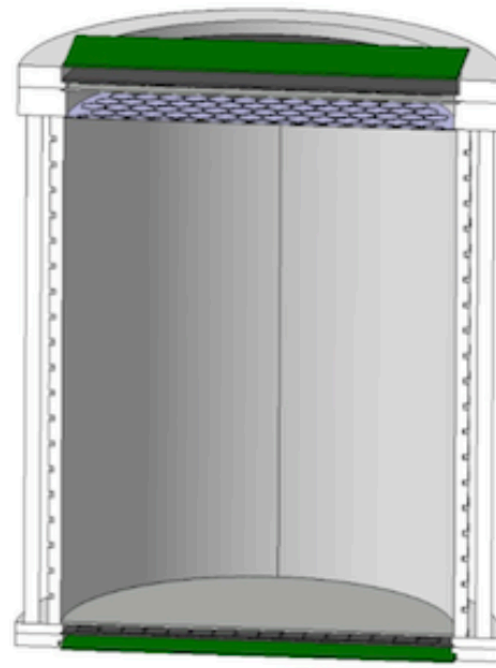
Completamento ReD e avvio ReD+

Al di fuori dei finanziamenti INFN è stato approvato un PRIN 2022:

ReD+, a low-energy characterization for low-mass Dark Matter searches with Argon



TPC exterior



TPC interior

Composizione e percentuali 2023

Sebastiano Albergo	60%	PO Responsabile locale
Alessia Tricomi	10%	PO
Noemi Pino	100%	dottoranda

Contributo tecnico da
N.Guardone,
A.Rapicavoli,
M.Salemi

Composizione e percentuali 2024

Sebastiano Albergo	60%	PO Responsabile locale
Giaoacchino Anastasi	?	RTDA HPC
Noemi Pino	100%	Dottoranda
Sebastiana Puglia	80%	RTDA
Alessia Tricomi	10%	PO

Contributo tecnico da

N.Guardone,

N.Giudice

A.Rapicavoli,

M.Salemi

Impegni di attività nel 2024

- Implementazione analisi Machine Learning ReD&DS-50
- Attività su PROTO e test beam
- Collegata (extra INFN) attività su ReD+

RICHIESTE 2024

Consumo	Metabolismo	2.5 k€
Missioni	- Meeting di collaborazione - Partecipazione a test beam	2.5 k€ 3.0