

TG1: Next steps

Stefan Schoenert on behalf of TG1
GERDA general meeting, LNGS, June
26-28

Status/Recent progress

- Testing of HdM and IGEX completed
- Non-enriched prototype with low-mass holder and contacts successfully tested in LN at Canberra (8 cycles) and LNGS (8 cycles)
- ANG1 dismounted in April; dimensions taken (Canberra type!)
- Low-background holder for ANG1 in production (completion: July)
- RG3 dismounted June 1; dimensions taken
- Mock-up string with 3 detectors under construction for Munich lock mock-up (completion: July)
- Preparation of new data taking with non-enriched prototype under preparation

Plans at LNGS for July through September

- All upcoming tests at LNGS in LAr
- July: Operation of non-enriched prototype in Rn-free bench
 - Start-up with warm FET
 - Calibration with gamma sources
 - Switch to cold Milano FE
 - Data taking with FADC (pulse shapes)
 - Continuous data taking: monitoring of crystal performance
 - Upgrade of test stand (filter; LN heat exchanger → minimize LAr refill)
- August: Start-up of ANG1
 - Calibration data with gamma sources
 - Pulse shapes with FADC
 - Continuous data taking: monitoring of crystal performance
- September: continue

Transformation of enriched detectors

(proposal for discussion and decision in TG1 working group meeting

Wednesday afternoon)

- Preference: transform all HdM and IGEX crystals in Canberra style diodes (Li layer up to groove, silicon-oxide passivation, chinese hat contact)
- Offer received by Canberra for transformation
 - Detailing work steps to be carried out
 - Minimal material loss
 - Recovery of enriched material during mechanical
 - Overnight underground storage in Hades (to be worked out with M. Hult)
 - 3-5 detectors per week
 - Overall exposure ~ 90 h (5x10 h + 2x20 h) possible
 - Start of operation earliest August 21

Transformation of enriched detectors

(for discussion in TG1 working group meeting Wednesday afternoon)

- September: Transformation of two enriched crystals: (RG3 & ANGx)
 - October: construction of low-mass holders for RG3 & ANGx)
 - November/December: performance test of RG3 & ANGx
 - January: transform 5 diodes (RG1/2 & ANGx/x/x)
 - February/March: construction of low-mass holders
 - February/March: characterization of spectroscopic performance in Rn-free test bench
- ⇒ Spring: Phase I detectors ready (performance tests passed)
- April: start-up of LArGe
 - Mai (until end of 2007): background tests of enriched diodes in LArGe