



R&D Requirements (discussion)

30 min



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IPMU

for the XLZD Collaboration

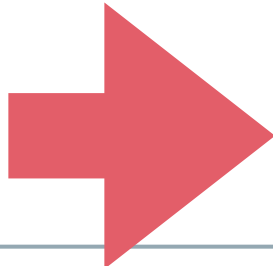
Time scale



45 t
2031

Full Inventory
2034

R&D + production + commissioning



5 years

8 years

Detector Design and R&D WG

Tom Shutt and Joern Mahlstedt

30 June 2025

XLZD meeting LNGS

Topics discussed in our meetings

- **Discussion about large shielded testing facilities**
 - TPC support,
 - Electrode
 - HV
- **Cryostat, Layout, and Serviceability**
 - TPC-Exo-skeleton
- **Photosensor R&D (Part I, Part II)**
 - Digital SiPM
 - Cold Electronics
- **Outer detector (Part I, Part II)**
 - LS, GdWater

- **Accidental Coincidence (high priority)**
 - electrode, photosensor, top screen
- **Condition**
 - small vs large set up
 - Surface vs Underground (+shield)
 - VUV light vs others
 - Test in LXe or not
 - common terminology (hot spot, electron train ...)
 - Impact on Science (DM vs DBD)

List up topics