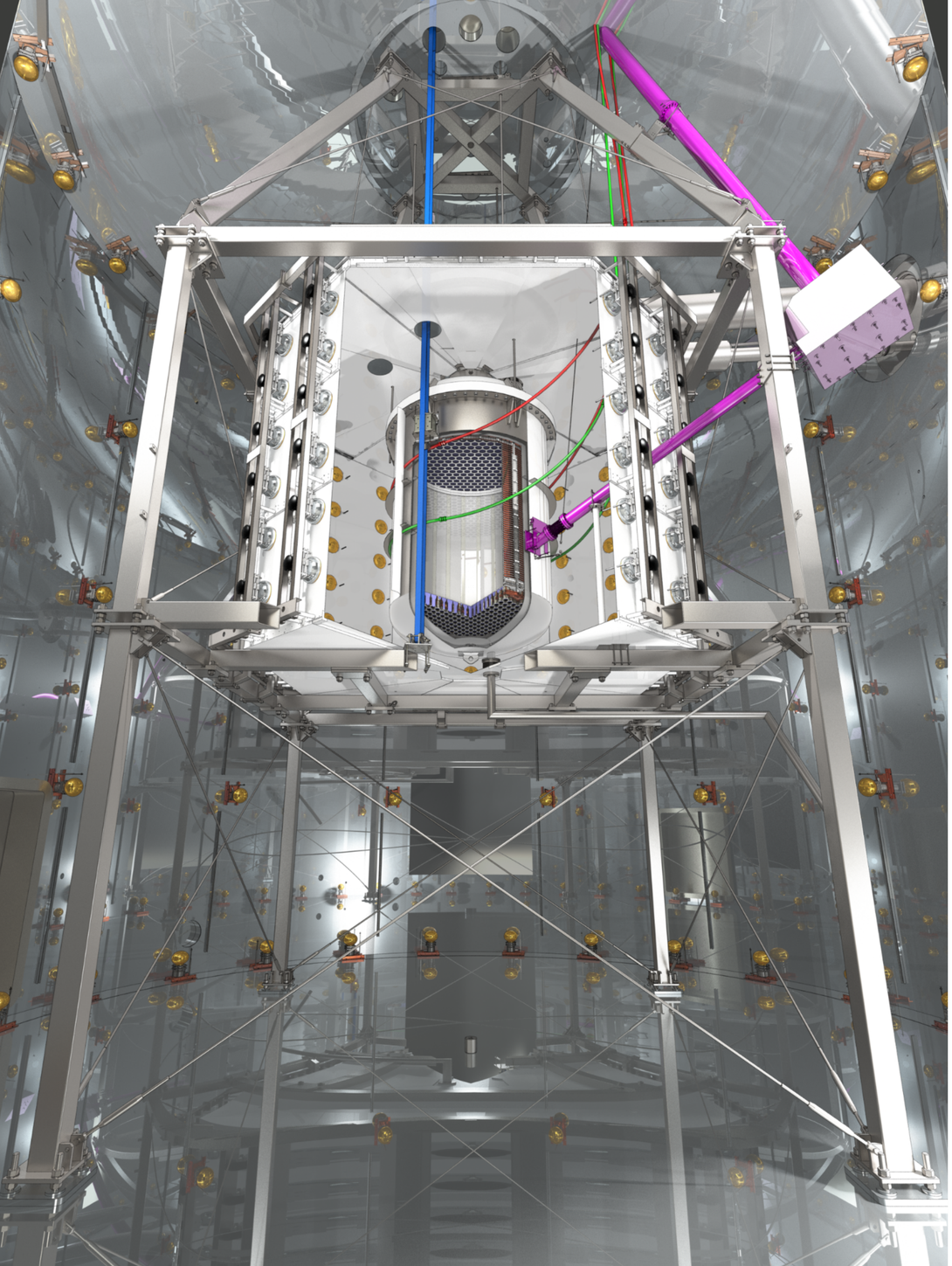
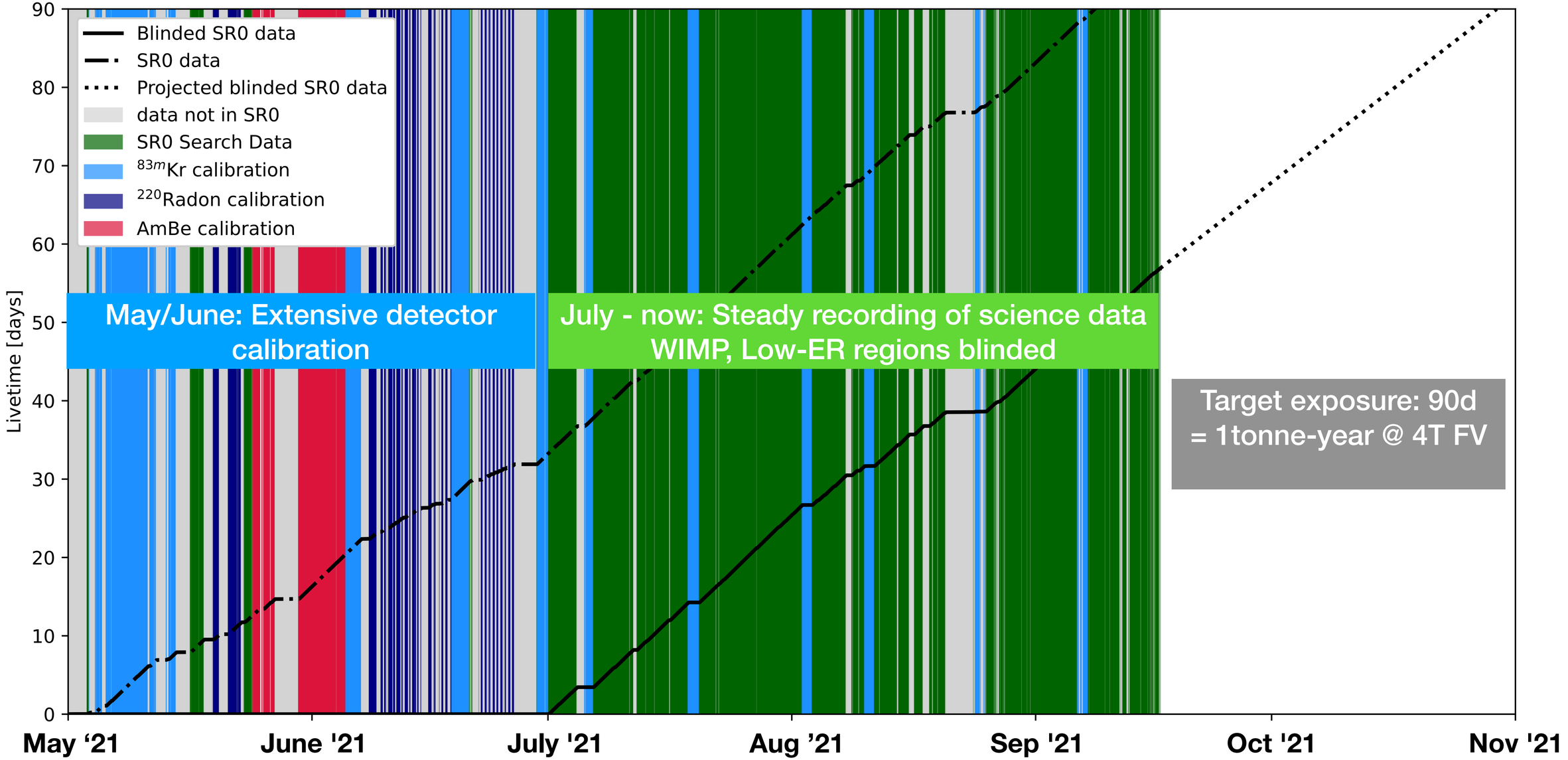


# XENONnT Status

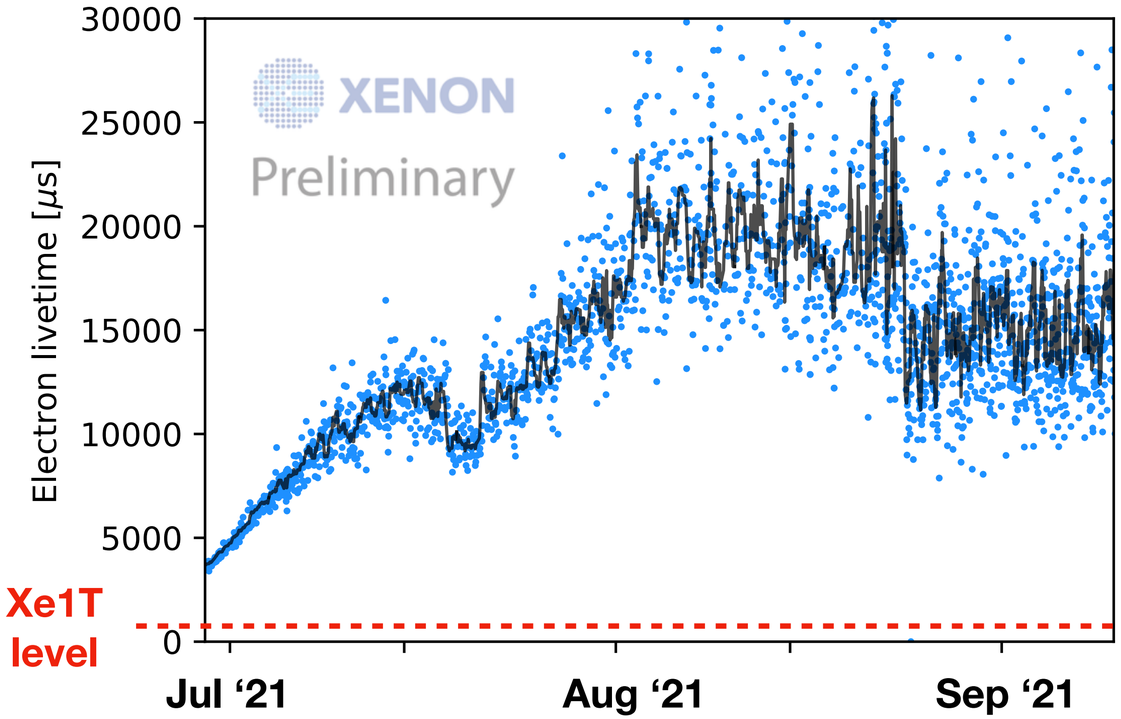
- **Oct - Nov ’20:**
  - TPC filled with 8.6t of Xe
  - Finalizing Neutron and Muon veto
- **Dec ’20:** Start Water Tank filling with $H_2O$
- **Jan - Apr ’21:**
  - Commissioning of TPC, nVeto and Muon Veto
  - Rn distillation column integration w/ cryo plant
  - *Short in TPC between cathode and bottom PMT screening mesh* → Low E-field
- **May ’21 - Now:** Calibration and Science Data!

# XENONnT Science Run

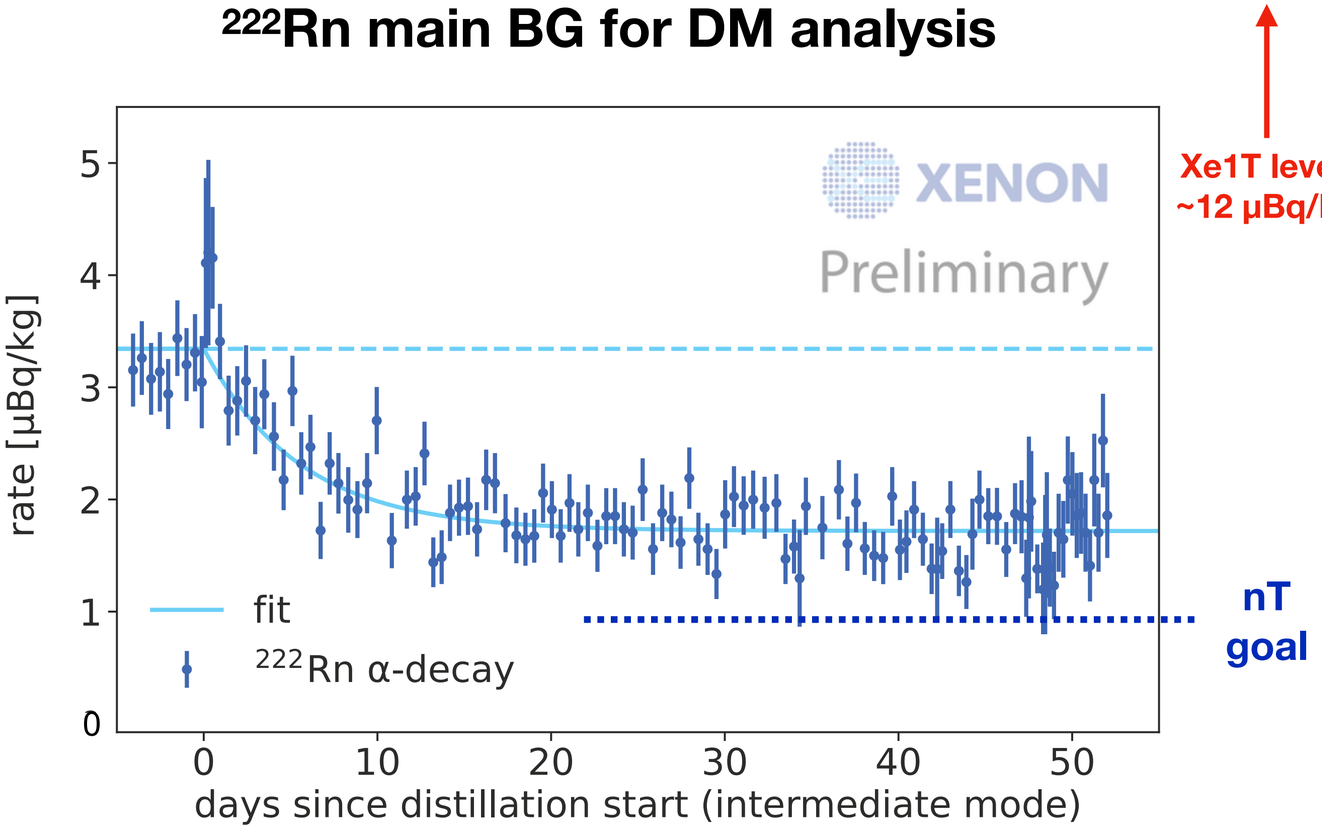


# Extremely high purity, low Rn background

**Electron Lifetime: purity of LXe**




**$^{222}$Rn main BG for DM analysis**




Good prospects for 1st science goals: WIMP search, Low-E ER excess

Nikhef

Menu

Search

# Rivals join hands for ten times more sensitive dark-matter detector

20 July 2021

**The two major competing experiments that have so far hunted for dark-matter particles are joining forces for the next step. This week, US-based LUX-ZEPLIN and European XENON are publishing a joint memorandum of understanding.**

The agreement gives new impetus to plans already in place for DARWIN, a larger detector for dark-matter particles, known as WIMPs. That project would use 40-50 tons of liquid xenon to find dark-matter collisions. LUX-ZEPLIN (LZ) and XENON both use several tons of xenon. ...

https://www.nikhef.nl/en/news/rivals-join-hands-for-ten-times-more-sensitive-dark-matter-detector/