

- Gerda stopped physics data taking Nov'19
  - Special calibration runs (neutron flux data with Gd in Jan-Feb), transition to “post-Gerda run”
- Enrichment: 42 kg received from ECP (92% enrichment  $^{76}\text{Ge}$ ). Recycling Ge from Gerda: aiming at >70% yield. In future 85% possible.
- 6 new IC detector from 2 vendors (Mirion, Ortec) received in 2019. Characterisation completed (good performance), being shipped to LNGS.
- New detector average mass 2.2kg (better than expected 1.75kg). L200: Expect ~65 new IC detectors (132kg), the rest from Gerda/MJD for a total mass of 217kg.
- LAr veto production started
  - Idea to get rid of fibres, dope LAr with Xe and look into LAr(Xe) directly with SiPM.
- Electronics: production underway. HV cables: critical path
- Cryostat: parts ready
- Significant effort required for MC, analysis chain and characterisation of new detectors (at HADES and SURF)

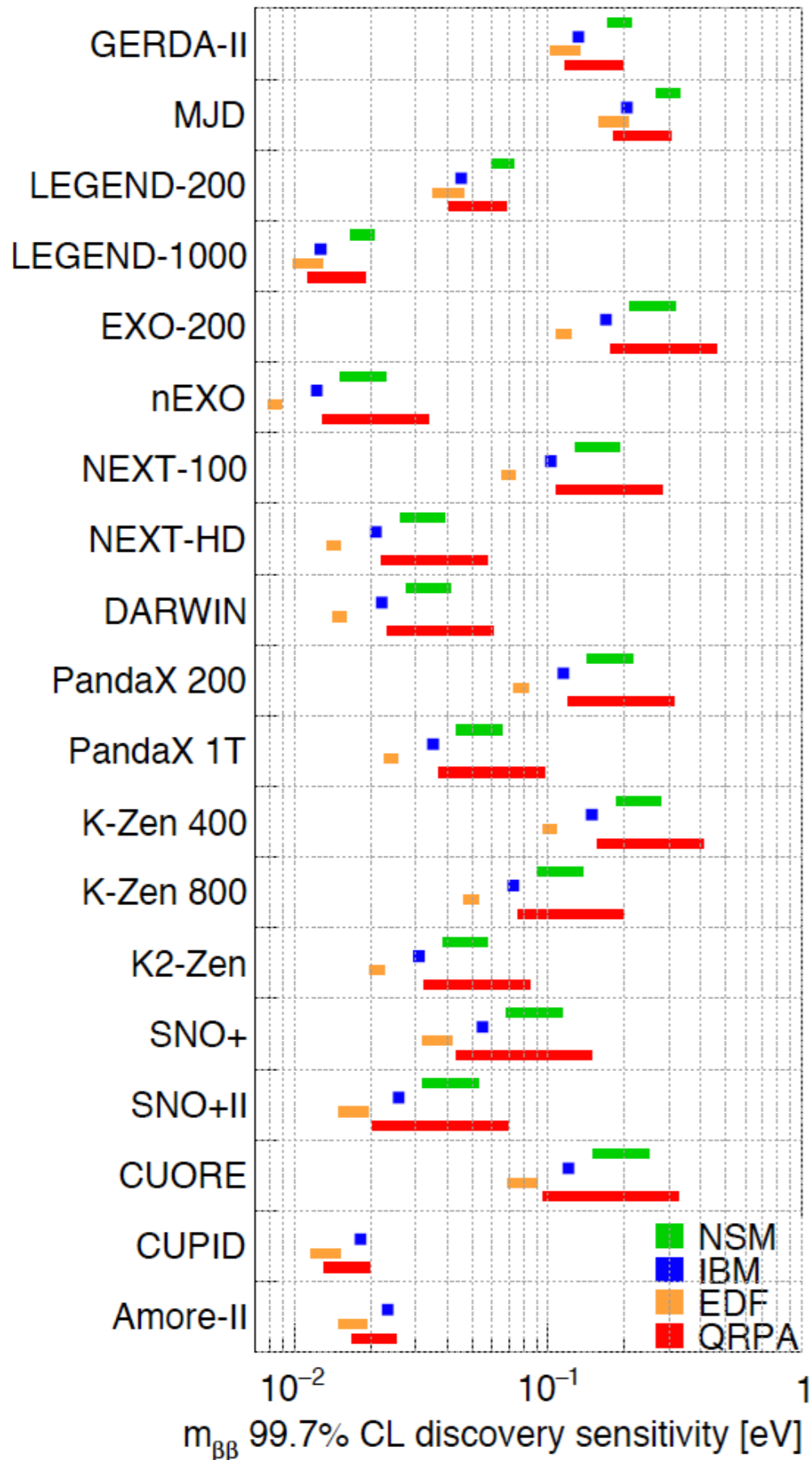
# Post-Gerda Run

- Test as many final components as possible
- Detectors. New: IC from Ortec, 4 IC from Mirion; Gerda: ~ BEGe, MJD: 5 PPC
- Final detector support
  - Checking PEN instead of Si for mounting plates
- Final electronics (but with Gerda coax cables)
- Possibly new LAr veto and calibration system (if ready)
- DAQ
- Full analysis chain
- Schedule
  - Jan-Feb: DAQ tests, neutron flux measurement
  - Data taking: Febr - Apr
  - LAr quality measurement mid-end Apr.

# Key Milestones of LEGEND-200

- Post-Gerda tests: Jan-Apr 2020
- July 2020: Start installation of HPGe electronics
- Nov 2020: Assemble first string
- Feb 2021: Installation completed
- Mar-Jul 2021: Commissioning runs
- Jul 2021: Start taking data

# LEGEND-1000



- Preparation for down select. Lots of work on pCDR: must be ready in ~Jan-Feb'20
- Two viable host ULab options out of three considered: SURF discarded due to DUNE and timescale: LNGS and SNOLAB remaining.
- Clear path to reach  $O(10 \text{ meV})$  sensitivity. Best **discovery potential** among competitors
- Interesting alternative design ideas: LN2 surrounding LAr; frozen Ar.