

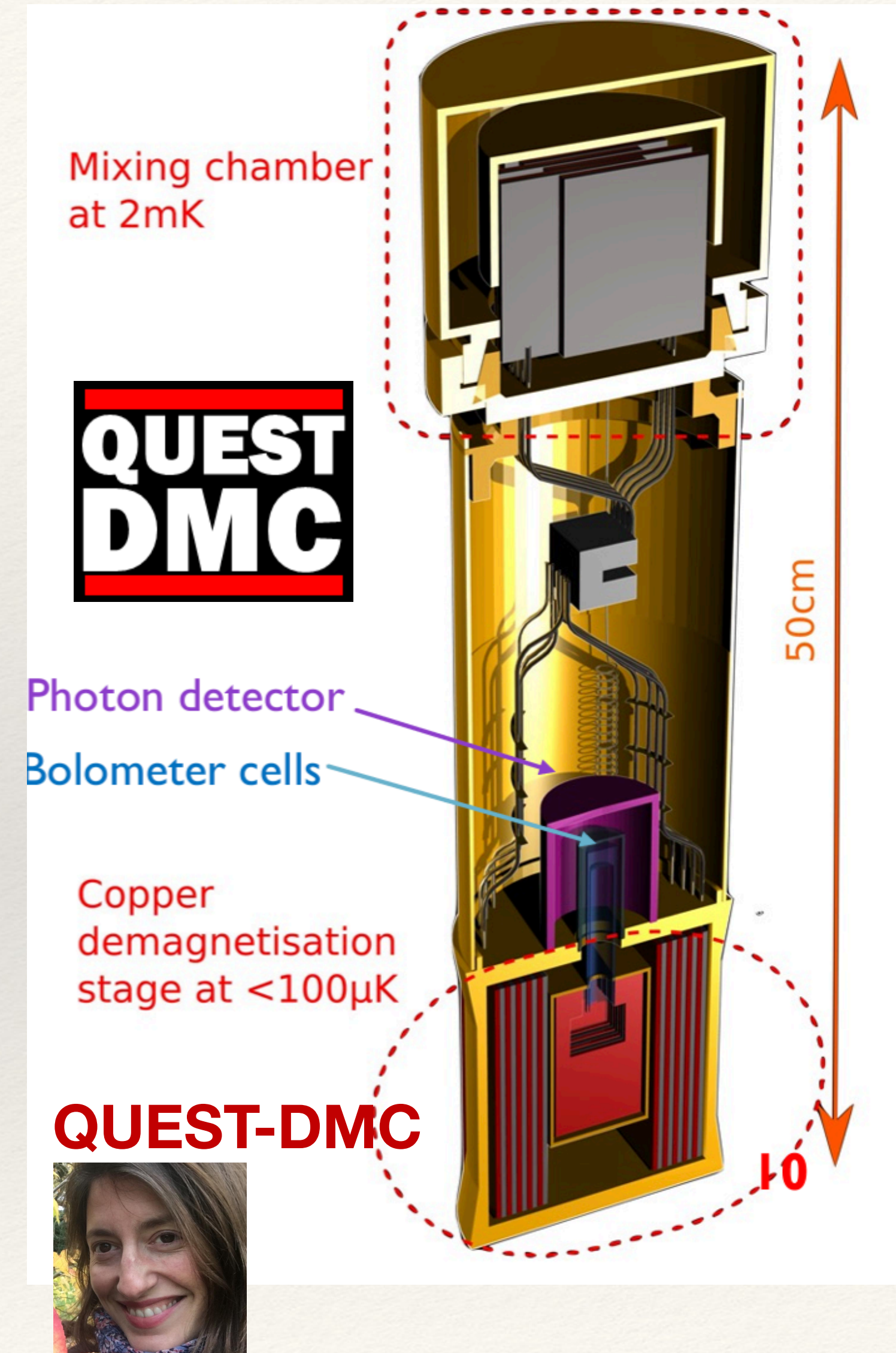
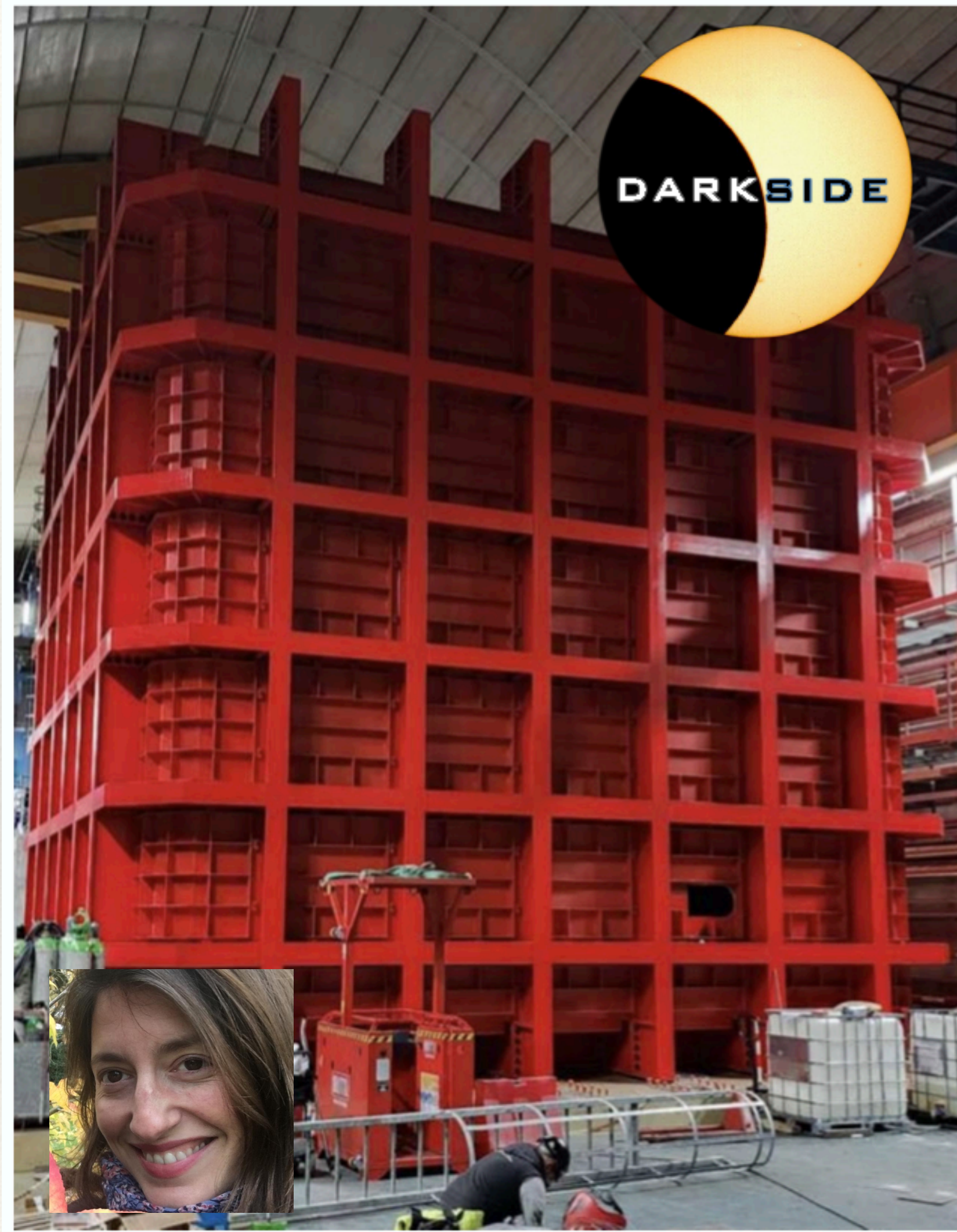
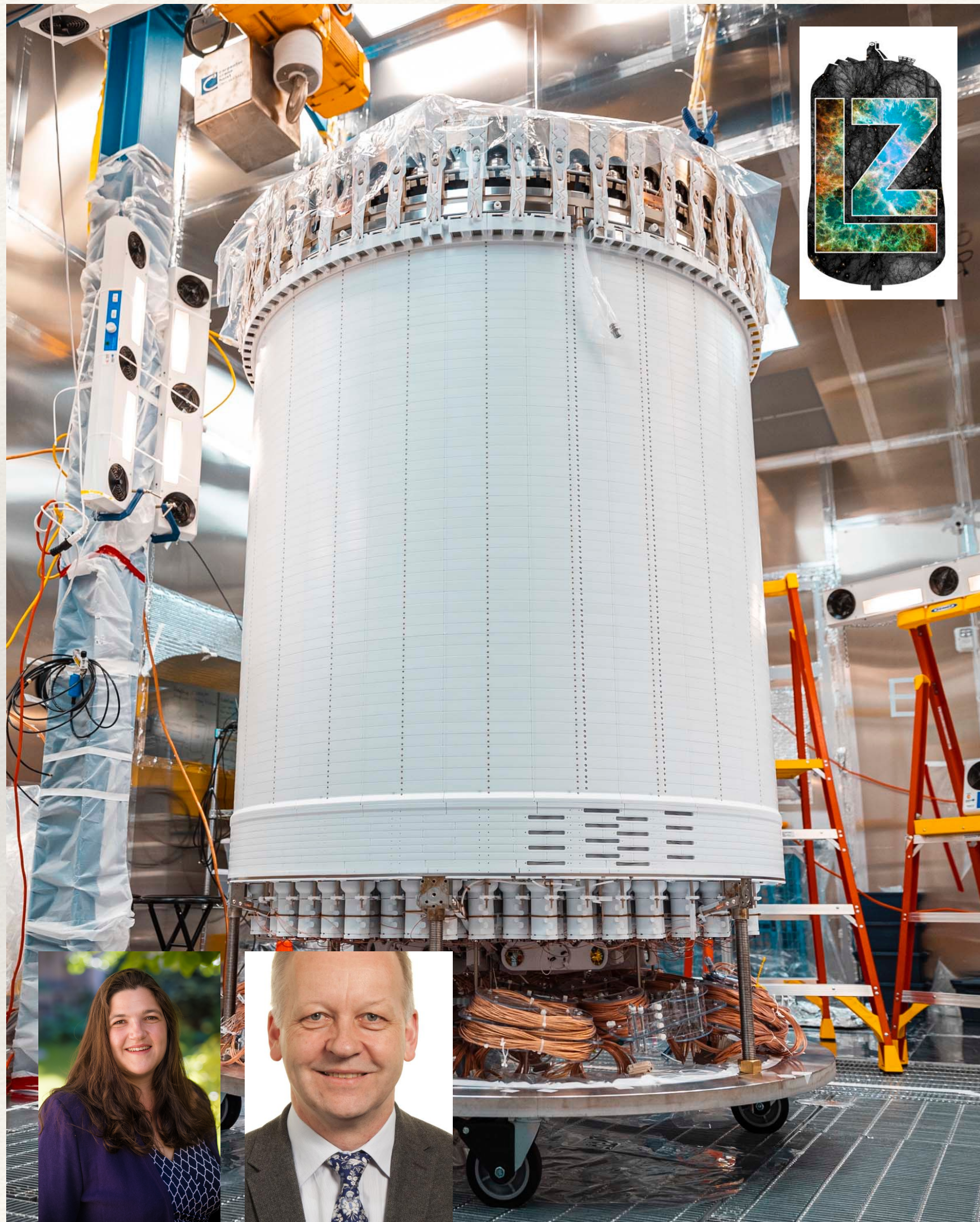


Oxford Dark Matter *Particle Physics Strategy*

Kimberly (for Jocelyn and Hans too!)

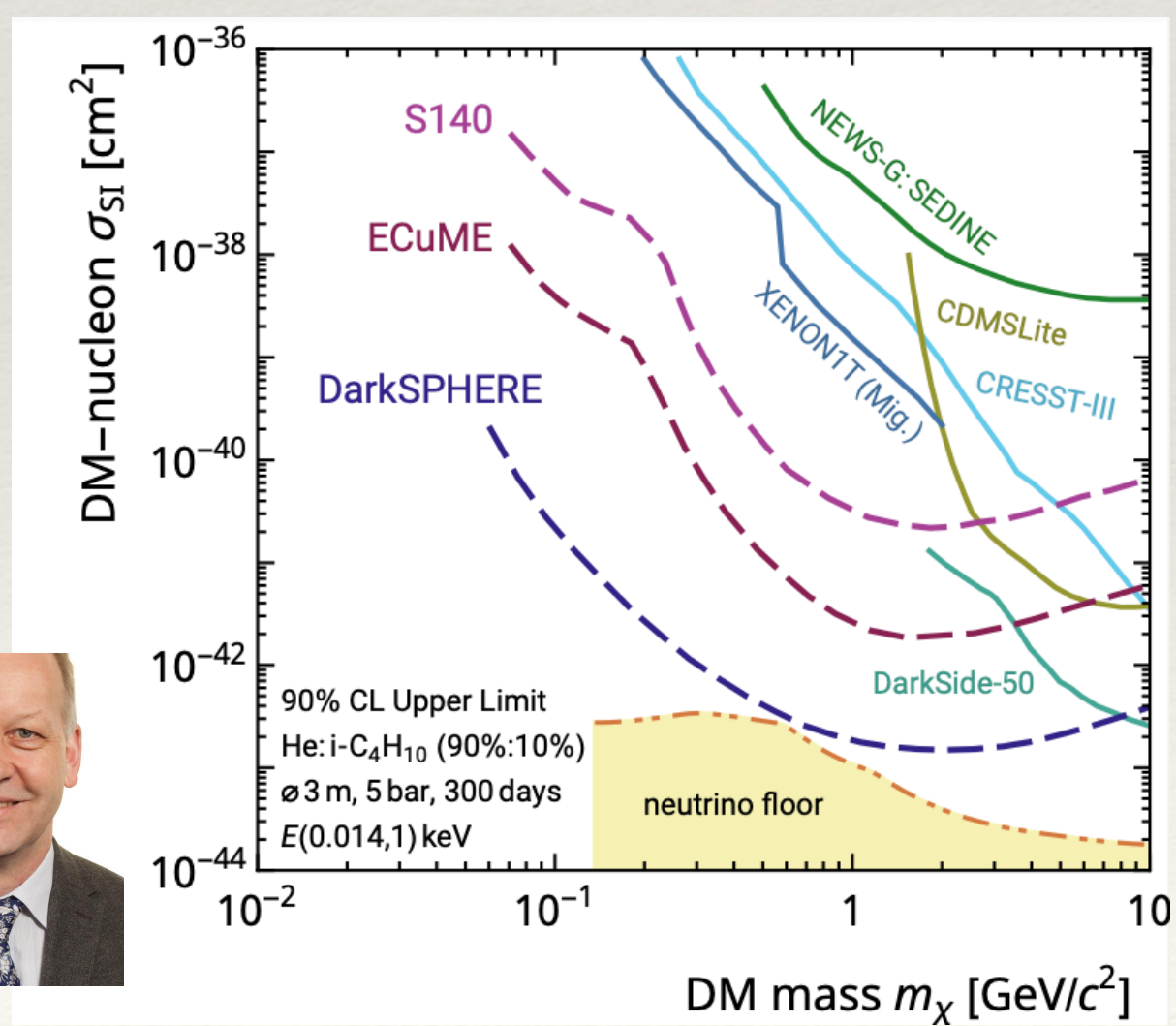
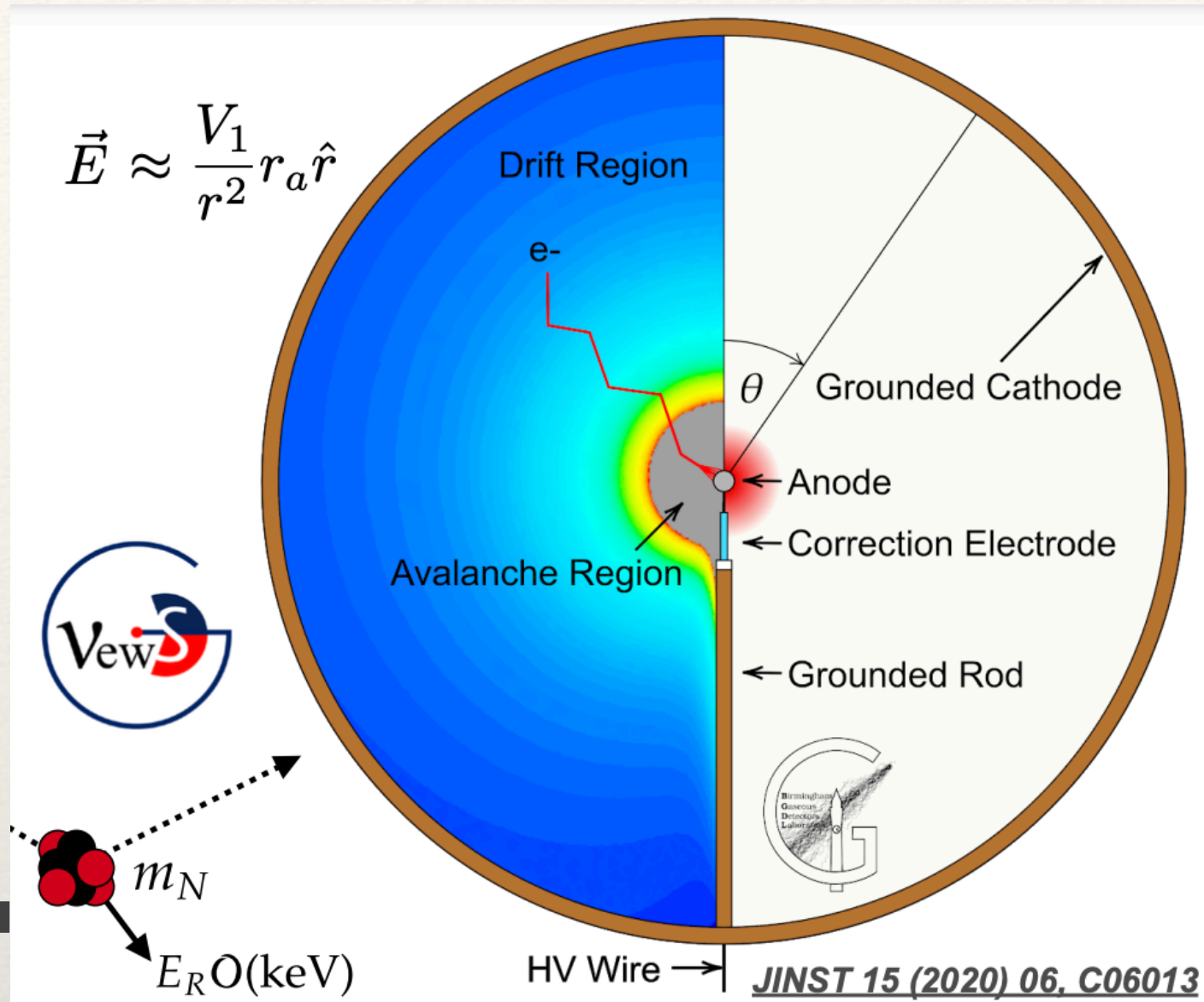


Active Experiments



Proposed Experiments: Next 5 years in Boulby

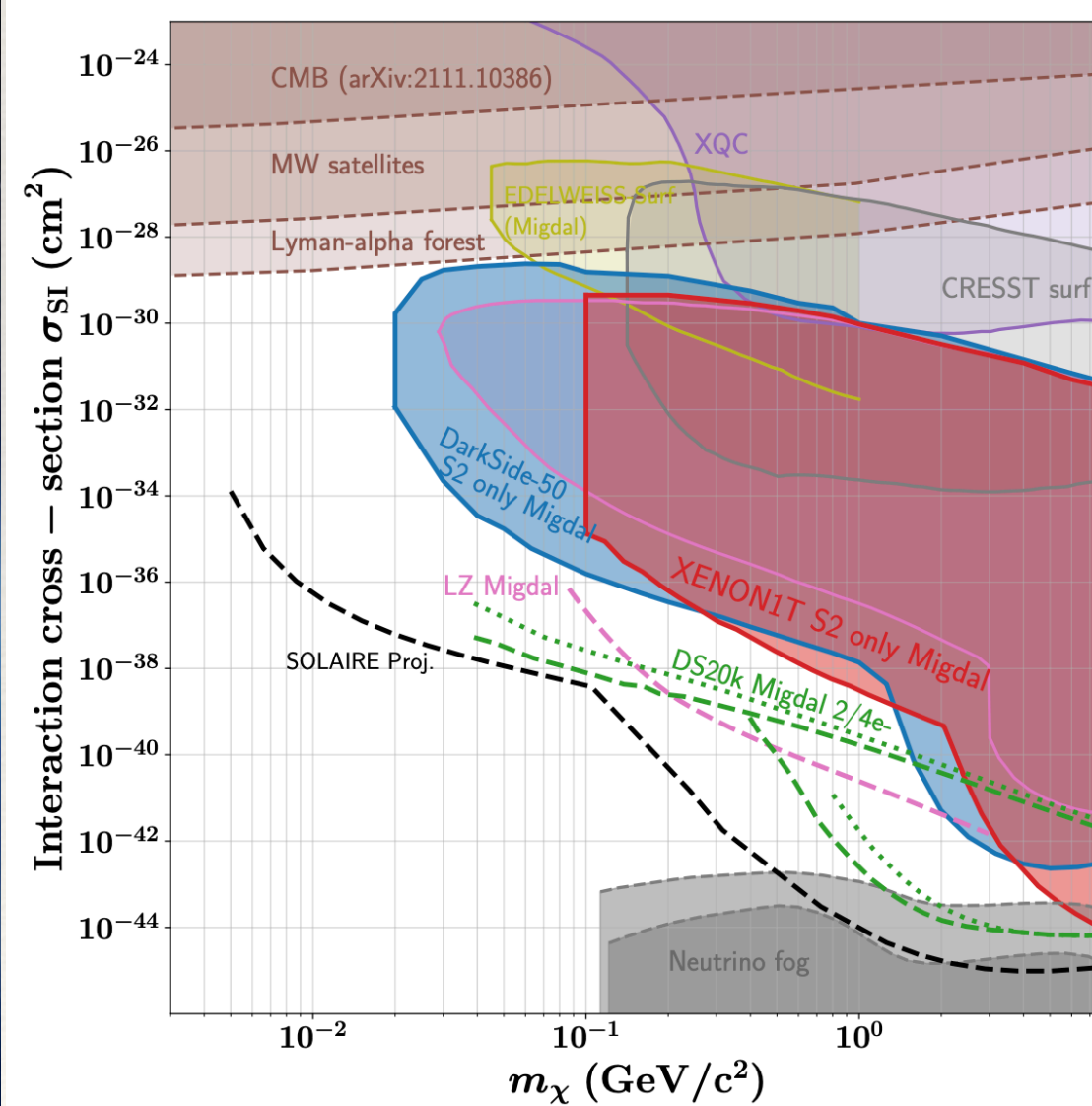
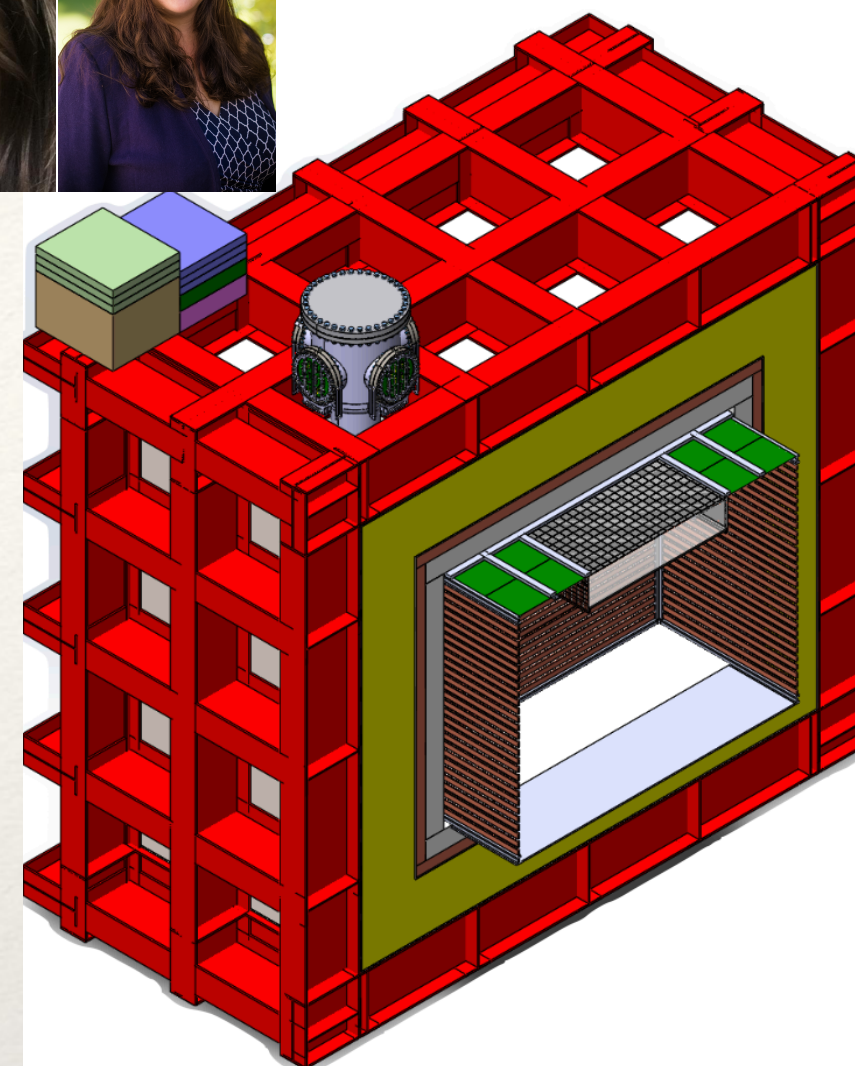
DarkSphere



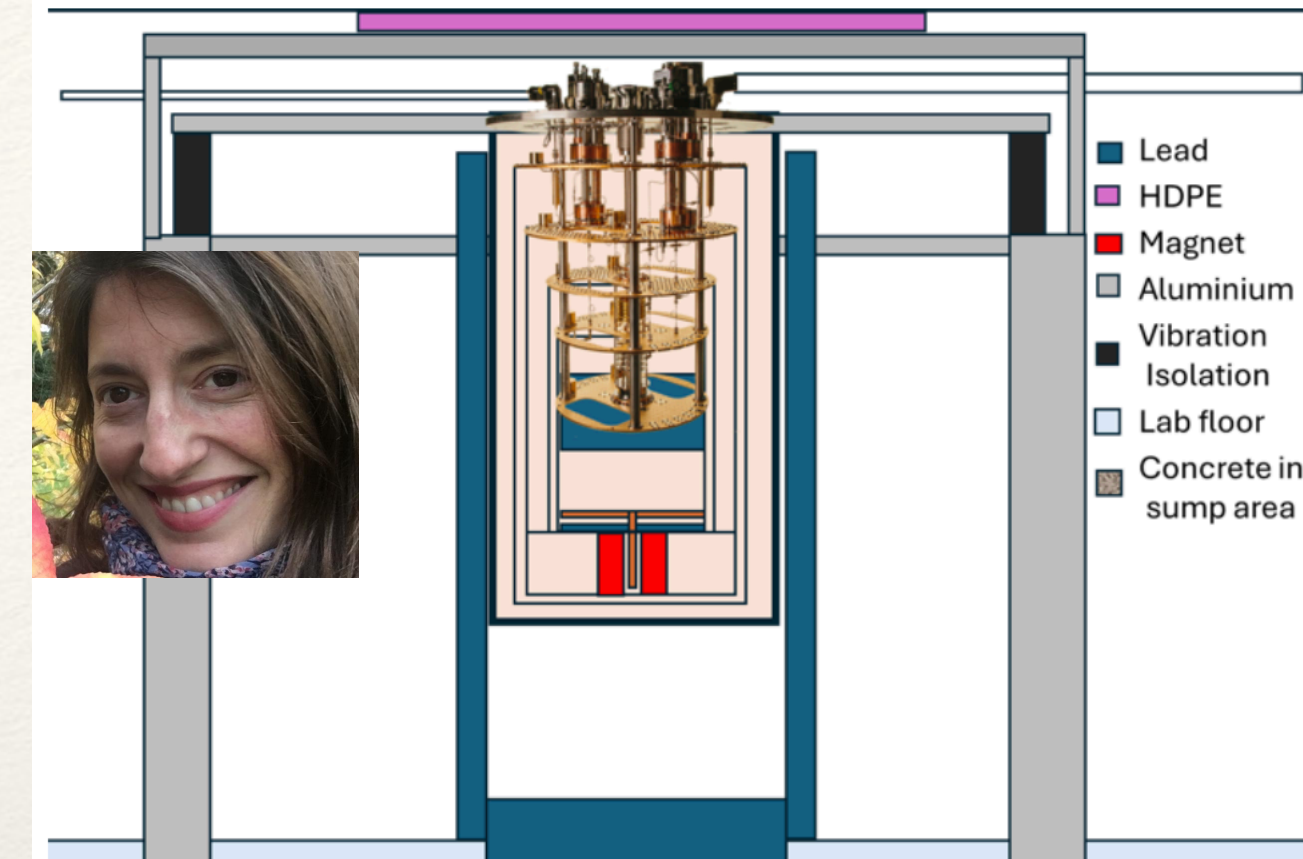
SOLAIRE



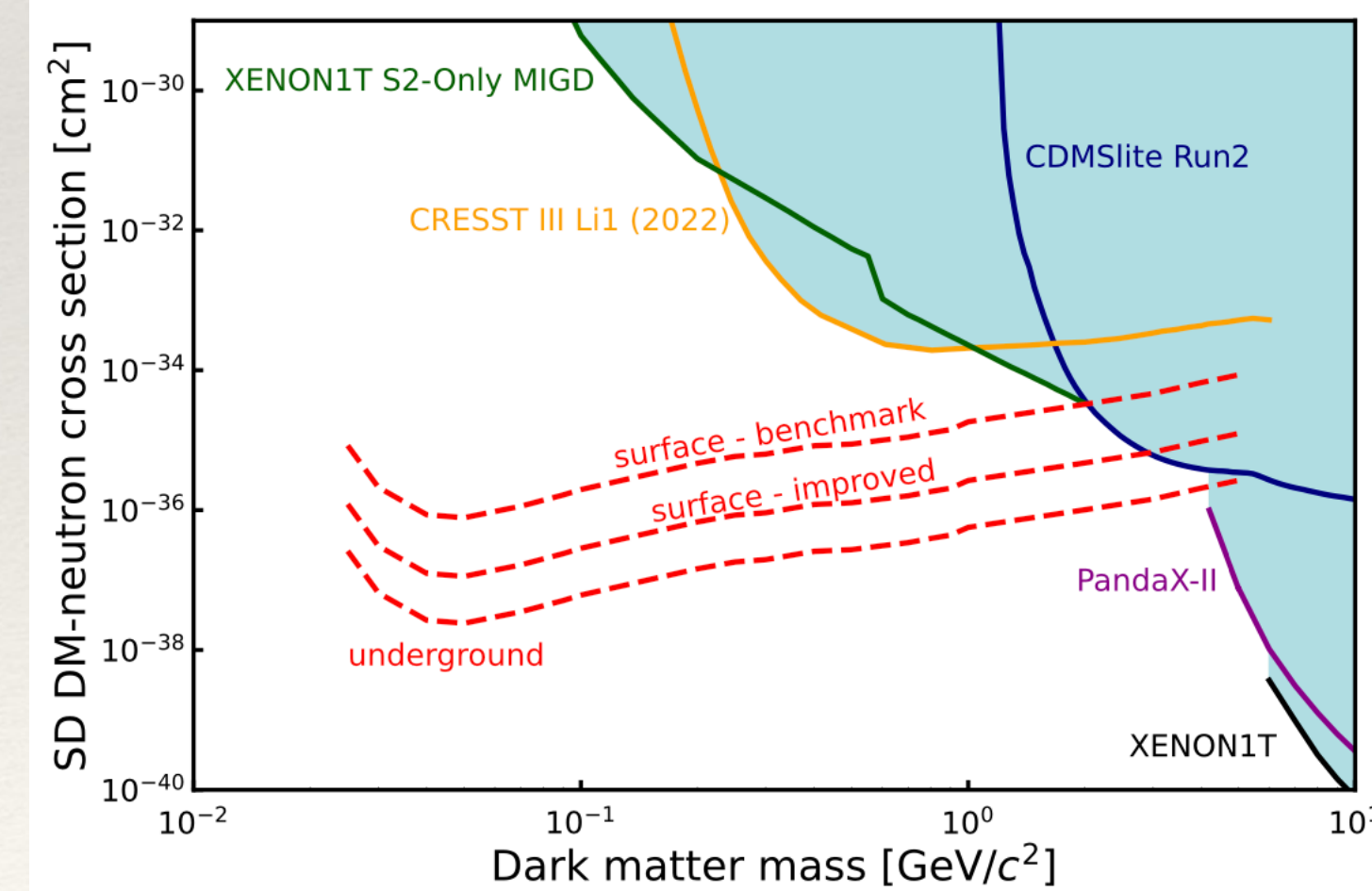
SOLAIRE



UltraDark



World's first cryogen-free, dedicated low background nuclear demagnetisation cryostat
[\[Phys. Rev. Applied 18, L041002 \(2022\)\]](https://arxiv.org/abs/2202.04102)



Boulby expansion: Phase 1



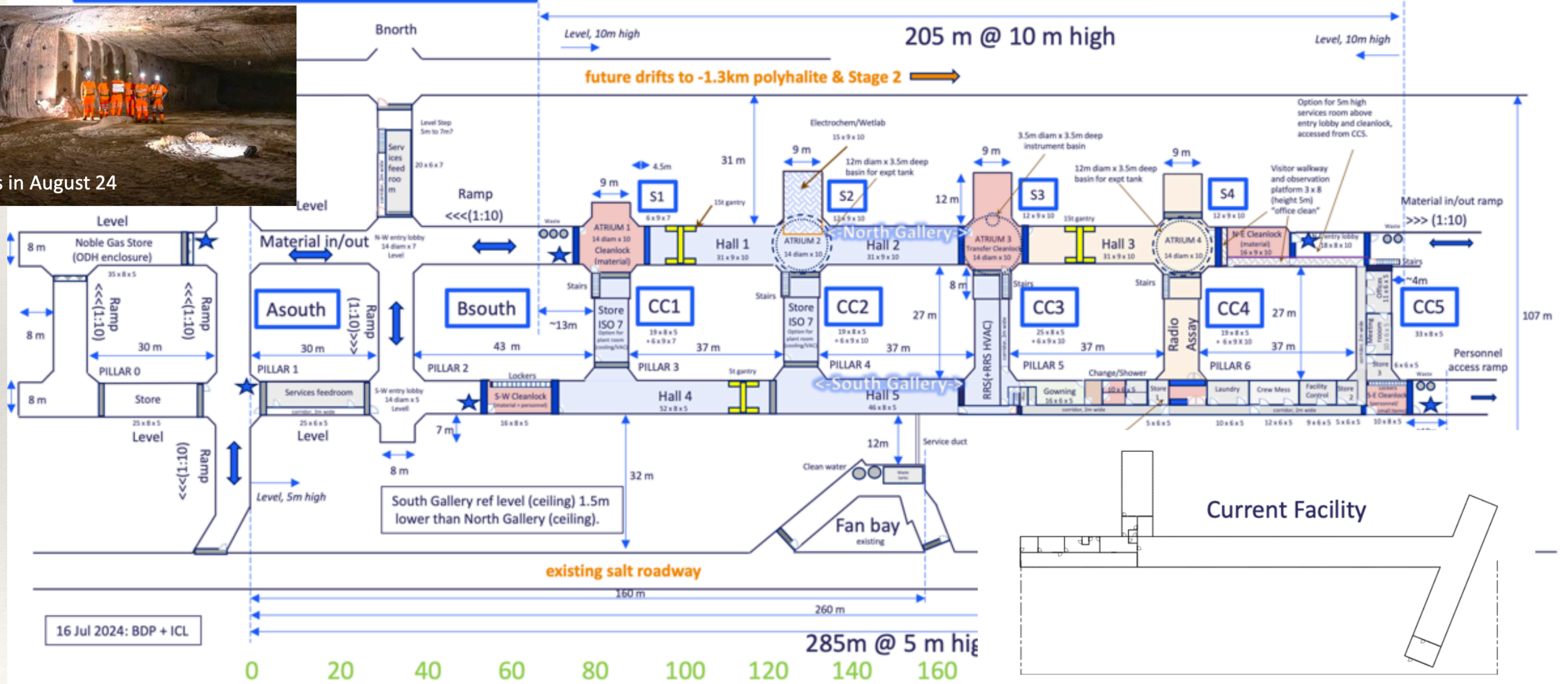
Stage 1 Functional Layout, revision 8.2.1

Stage 1: ~45000 m³, 6000m² footprint
 Current lab: ~6000m³, 1200m²

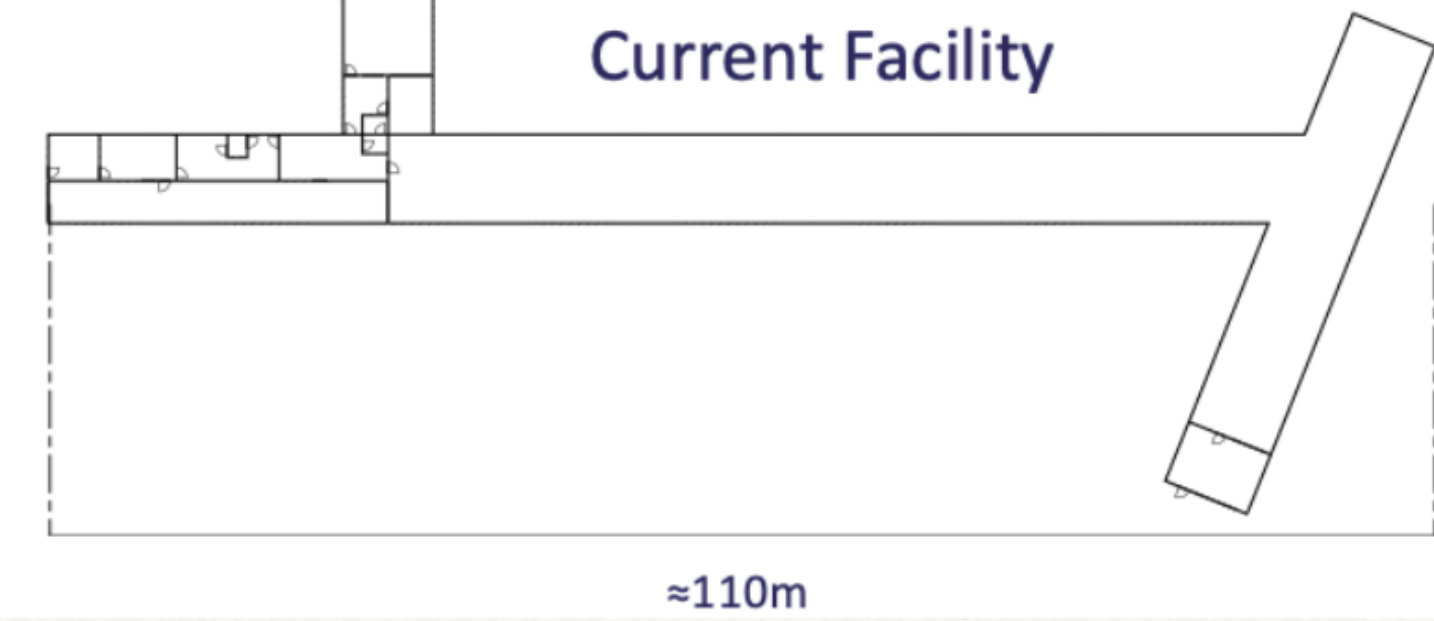
(excluding external zones)



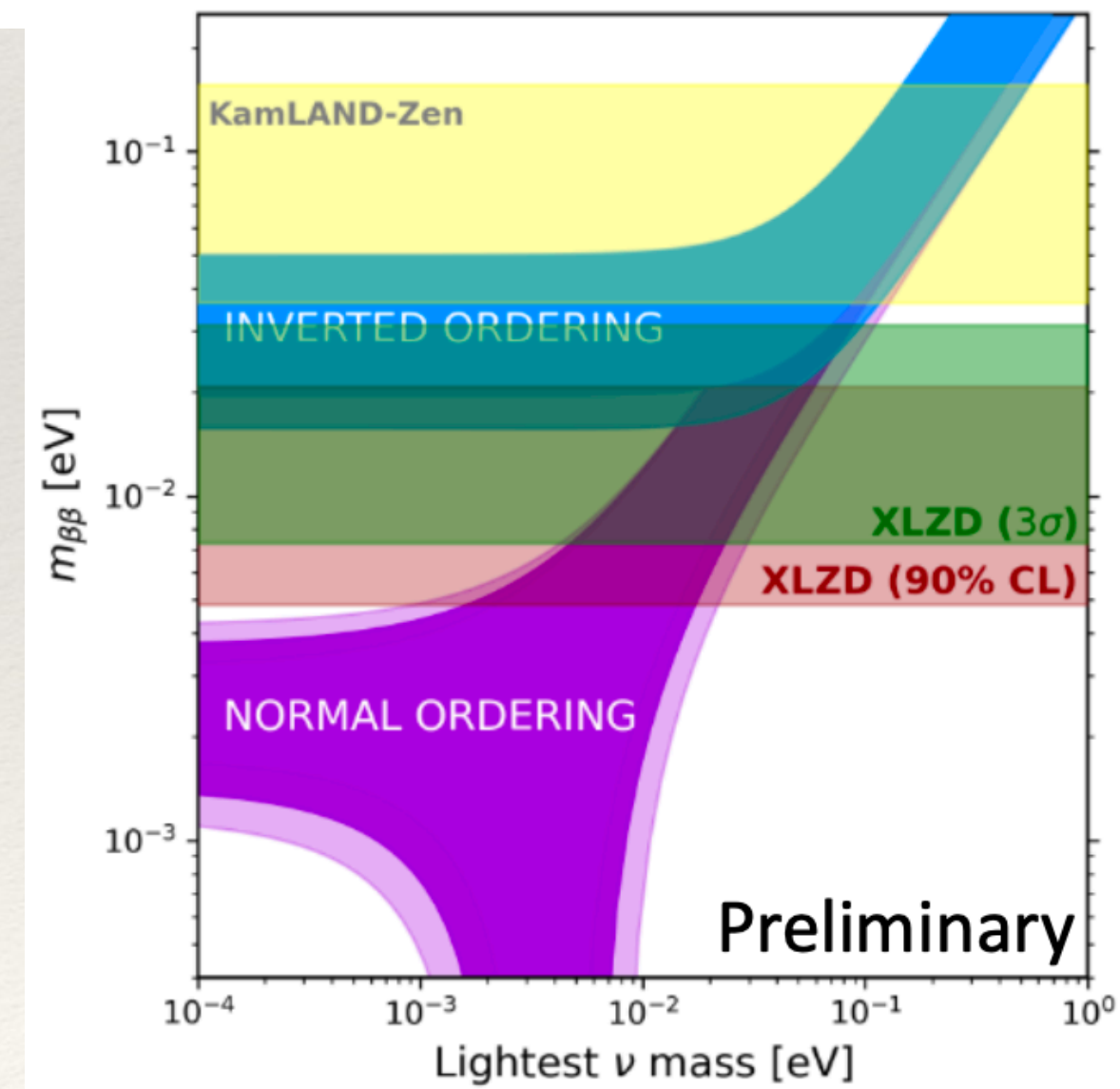
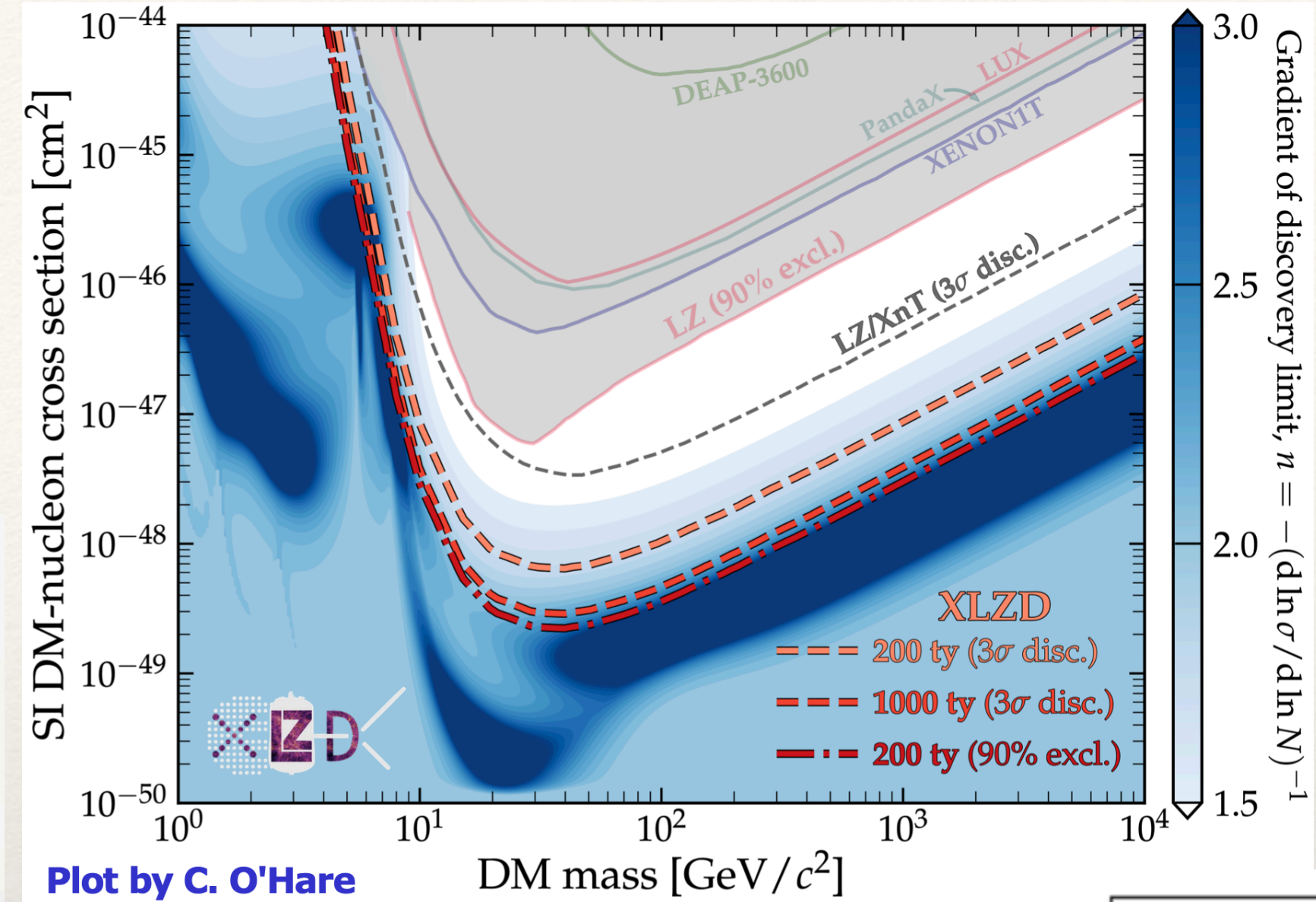
Progress in August 24



16 Jul 2024: BDP + ICL



Future-looking: XLZD@Boulby (Phase 2)



Kim's musings about strategy

- Area was already recognized as an area of growth and with future retirement
- Growing QTFP programme also offers opportunities
 - Can we grow young leaders here?
- Boulby hosting XLZD is a big opportunity for Oxford/UK leadership
 - But also space for new experiments in the Phase 1 facility!
- Links with Collider DM searches, Dark Energy, the rest of QTFP, outside sub-department links not yet taken into account
 - Can we work more strategically for supporting fellowships/ERC Starters?
- Oxford inter-linked lab space? Don Perkins Laboratory?