

Lux-Zeplin (LZ)

5 slide poster overview

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Overview

- Dark matter direct detection (WIMPs)
- Liquid Xenon TPC
- Combining technology from LUX and Zeplin collaborations
- Scale Up by a factor of 50 in Fiducial Mass from LUX
- Turn on in ~2020

LZ

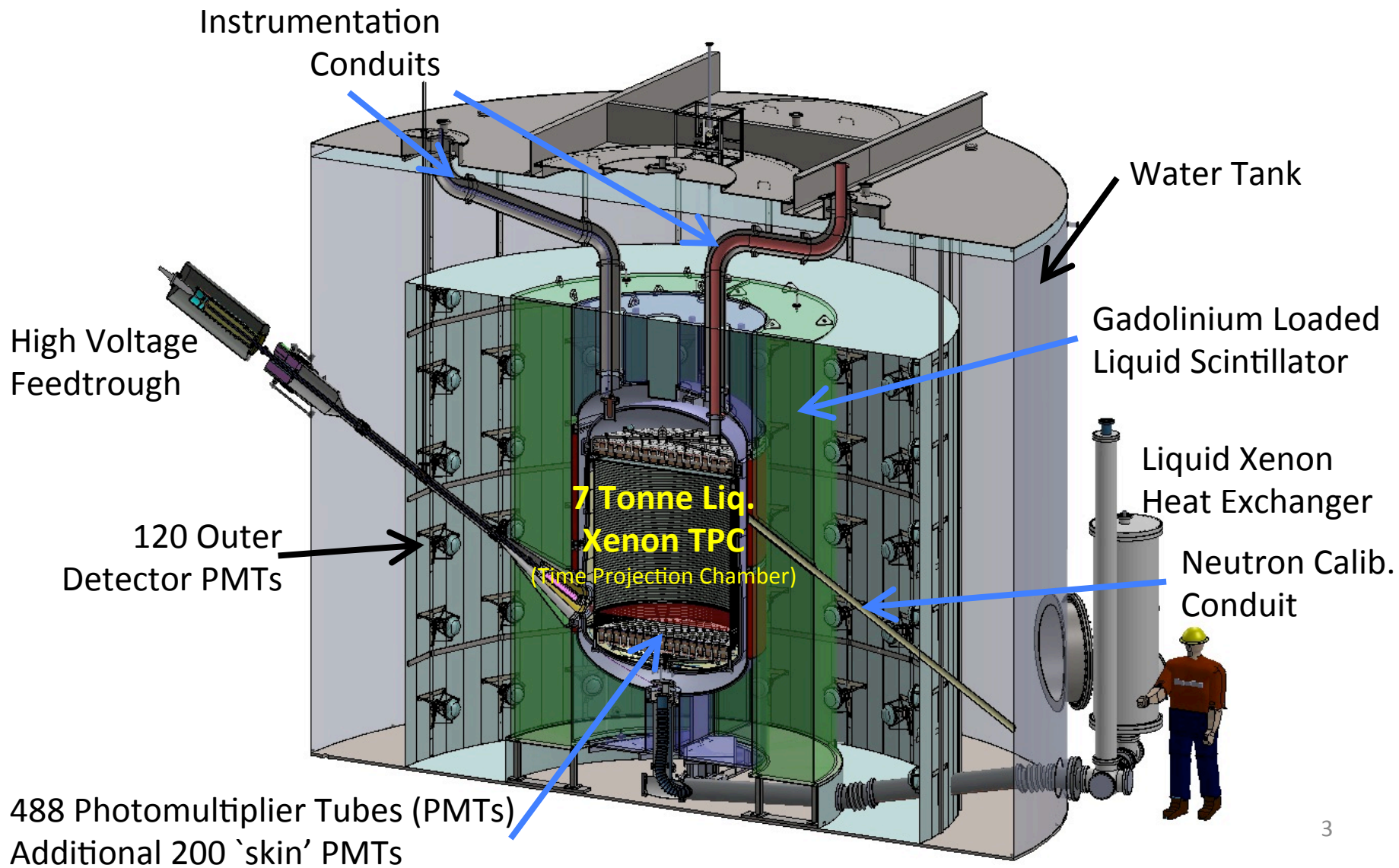
Total mass – 10 T

WIMP Active Mass – 7 T

WIMP Fiducial Mass – 5.6 T

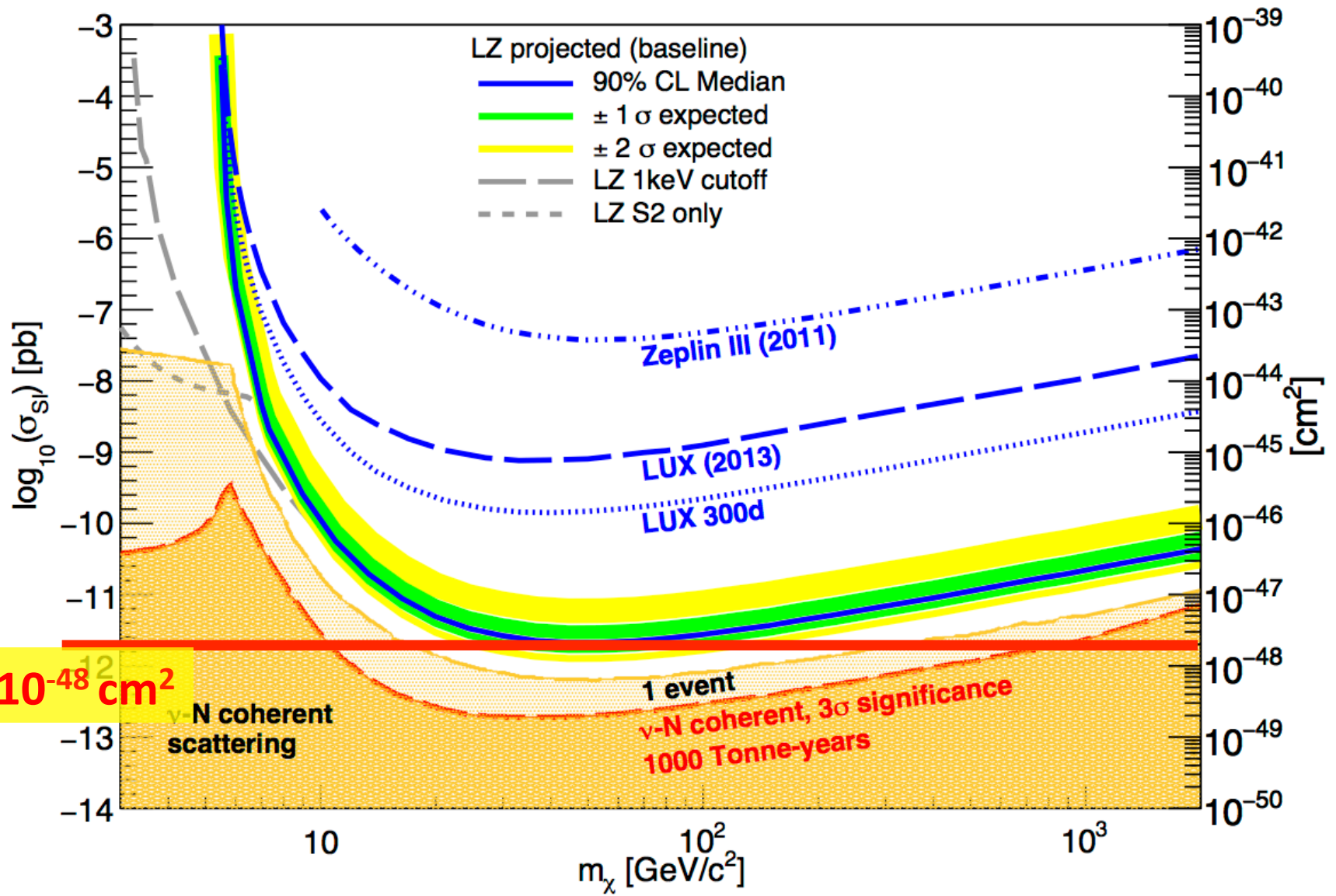


LZ Detector

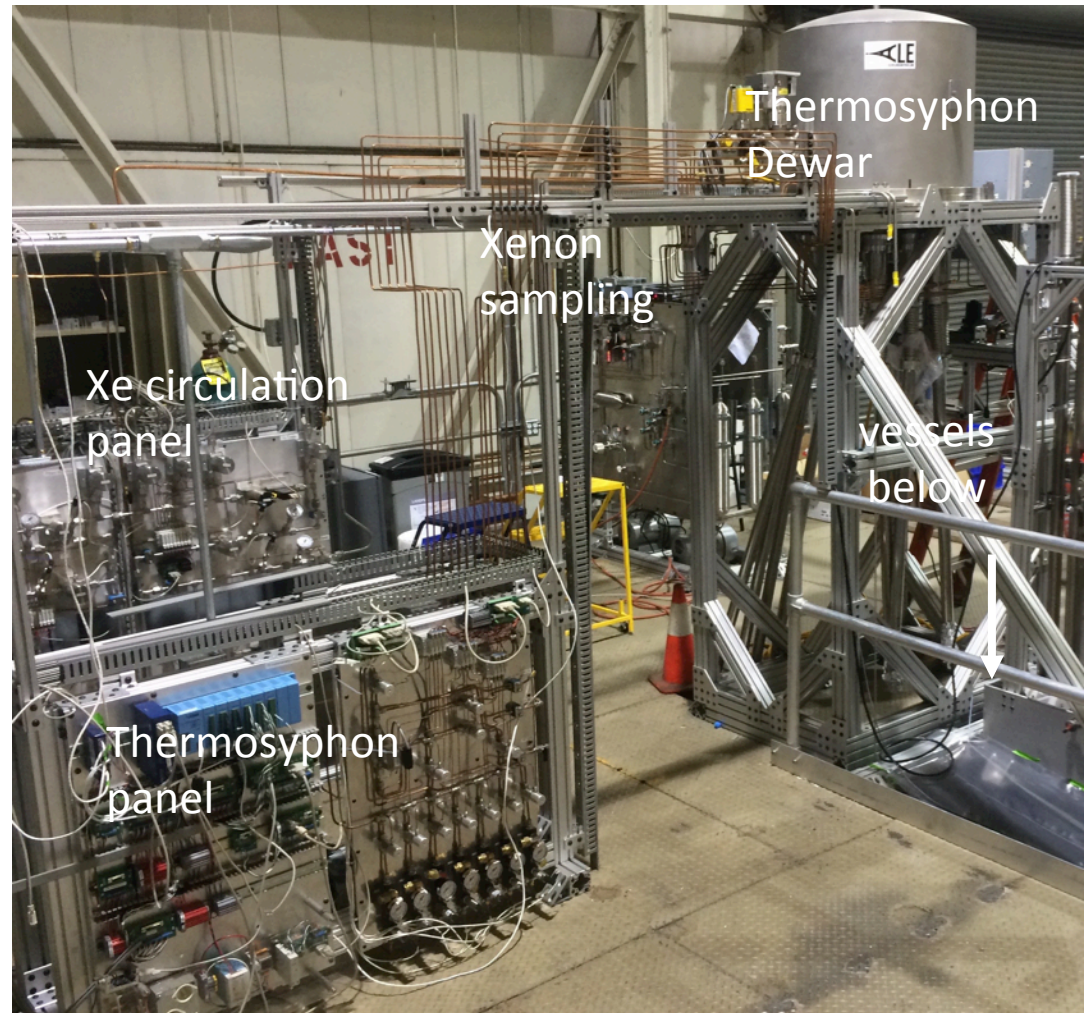


Projected Sensitivity – Spin Independent

(LZ 5.6 Tons, 1000 live days)



System Test Platform at SLAC



Conclusion

- LZ Project well underway, with procurement of Xe, PMTs and cryostat vessels started
- Extensive prototype program underway
- LZ benefits from the excellent LUX calibration techniques and understanding of background
- LZ sensitivity expected to be finally limited by neutrino-induced 'background'
- Turn-on in ~2020