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## MOTION, a liquid xenon time projection chamber platform for high voltage development in dark matter detectors

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MOTION is a time projection chamber with 80 kg of liquid xenon (LXe), serving as a testing platform for high-voltage (HV) delivery of around -200 kV and stability in LXe for next-generation dark matter detectors. The objective of this detector is to study the breakdown voltage of liquid xenon, which might depend on different factors such as surface area of the conductor and the purity of the liquid xenon, among others. The detector also serves as a platform to study spurious electron emission from electrodes, as well as the development of high voltage feedthroughs made out exclusively of radiopure materials.

### Summary

**Author:** BIONDI, Yanina (UZH)

**Session Classification:** Poster session leading into social dinner buffet