

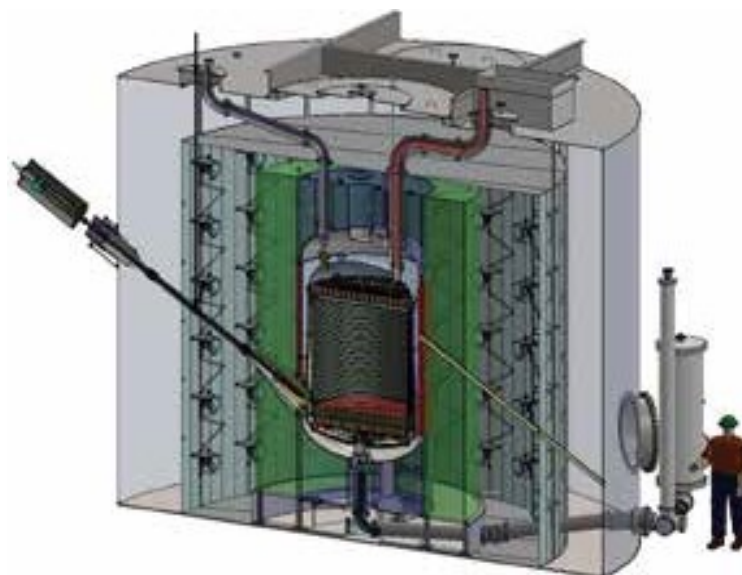


# Direct Dark Matter Search with LUX-ZEPLIN.

**Hans Kraus (Oxford)**

**Tuesday, 10 November 2015, 16:45 h, DESY Auditorium**

Dark matter composes the largest fraction of the matter density of our universe. WIMPs (Weakly Interacting Massive Particles), amongst other possibilities, are suggested as viable candidates for such particle dark matter. Dark matter is searched for with detectors implementing a variety of techniques and technologies, amongst which is the LUX-ZEPLIN (LZ) detector, a two-phase xenon time projection chamber. LZ will have a liquid xenon mass of about 7 tonnes, shielded by an active organic scintillator veto and a water tank, and will be installed within the Sanford Underground Research Facility (SURF) in South Dakota. A range of shielding techniques, fiducialization, signal discrimination, and radiopurity control will be employed in order to reduce backgrounds to a level that will allow the sensitivity to WIMP-nucleon spin-independent cross section to be improved significantly compared to existing results.



- **Coffee, tea and cookies will be served at 16:30h**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**