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Search for the permanent electric dipole moment of ^{129}Xe NATASHA SACHDEVA, TIMOTHY CHUPP, University of Michigan, USA, EARL BABCOCK, ZAHIR SALHI, Julich Centre for Neutron Science, Germany, MARTIN BURGHOFF, ISAAC FAN, WOLFGANG KILLIAN, SILVIA KNAPPE-GRUNEBERG, ALLARD SCHABEL, FRANK SEIFERT, LUTZ TRAHMS, JENS VOIGT, Physikalisch-Technische Bundenstalt, Germany, SKYLER DEGENKOLB, Institut Laue-Langevin, France, PETER FIERLINGER, EVA KRAEGELOH, TOBIAS LINS, JONAS MEINEL, FLORIAN ROHRER, STEFAN STUIBER, WILLIAM TERRANO, Technische Universitat Munchen, Germany, FLORIAN KUCHLER, TRIUMF, Canada, JAIDEEP SINGH, Michigan State University, USA — CP-violation in Beyond-the-Standard-Model physics, necessary to explain the baryon asymmetry, gives rise to permanent electric dipole moments (EDMs). EDM measurements of the neutron, electron, paramagnetic and diamagnetic atoms constrain CP-violating parameters. The current limit for the ^{129}Xe EDM is 6×10^{-27} $e \cdot$cm (95% CL). The HeXeEDM experiment uses a stable magnetic field in a magnetically shielded room, spin-precession detection with SQUID magnetometer arrays and a ^{3}He co-magnetometer to measure the ^{129}Xe EDM with the potential to improve the sensitivity by two orders of magnitude. Results from a June 2017 test run and plans for production data will be presented.

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