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Future Improvements to the ACME Electric Dipole Moment Experiment[1] JONATHAN HAEFNER, DANIEL ANG, JACOB BARON, Harvard University, DAVID DEMILLE, Yale University, JOHN DOYLE, GERALD GABRIELSE, NICHOLAS HUTZLER, Harvard University, ZACK LASNER, Yale University, COLE MEISENHELDER, CRISTIAN PANDA, Harvard University, ADAM WEST, Yale University, ELIZABETH WEST, Harvard University, ACME COLLABORATION — In 2014, the ACME collaboration set a new upper bound on the electric dipole moment of the electron using beams of cold ThO. We discuss studies into further improvements to the ACME experiment, with the eventual goal of sensitivity at the 10^{-30} e cm level, a factor of 100 smaller than the first generation experiment. Methods focus primarily on improving statistics, and include the use of an electrostatic or magnetic molecular beam focusing lens, optical cycling to improve detection, and the use of a new thermochemical beam source to increase molecule number.

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