

Abstract Submitted  
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**The State of the Unit: A documentary film about the kilogram** AMY YOUNG<sup>1</sup>, University of Illinois at Urbana-Champaign — The definition of the SI unit of mass is based on the international prototype of the kilogram, created in 1879 [1]. In the next years, metrologists will redefine the kilogram in relation to fundamental physical constants [2]. Intended for a general audience, the forthcoming documentary, *The State of the Unit: The Kilogram*, presents the history of the kilogram, interviews with researchers at national metrology institutes in the U.S., France, and Germany, and everyday mass measurement activities at varying scales. Excerpts of the film will be shown, and followed by a discussion with the filmmaker about the project to date. This film is supported in part by the Materials Computation Center at the University of Illinois at Urbana-Champaign, the California Institute of the Arts, Valencia, California, and La Fémis, Paris, France.

[1] The Kilogram and Measurements of Mass and Force, Z. J. Jabbour and S. L. Yaniv. *J. Res. Natl. Inst. Stand. Technol.* 106, 25–46 (2001).

[2] Redefining the SI Base Units, Peter Mohr. National Institute of Standards and Technology website. November 1, 2011. <http://www.nist.gov/pml/newsletter/siredef.cfm>. Accessed November 3, 2011.

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