

The revolutionary changes to the International System of Units

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Since the beginning of the Metric System of measurement, during the French Revolution, the definitions of units has been changing in response to changing demands of science and technology. As of 20 May 2019, the International System of Units (SI) has undergone its greatest revolution since the French revolution, with the definitions of the kilogram, ampere, kelvin, and mole now based on fixed values of Planck's constant, the electron charge, Boltzmann's constant, and Avogadro's number. As a result, the International Prototype Kilogram, the last artifact standard, no longer defines the unit of mass. This talk will explain why these changes were needed and how they work.