

# International Conference on Precision Physics and Fundamental Physical Constants (FFK-2019)



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## New quantum SI units and fundamental constants

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The International system of units, SI, has just been changed once again. The new definitions, which concern the kilogram, ampere, kelvin, and mole, are to come in force on May, 20. Similarly to the definition of the metre in terms of the speed of light, those four units are now defined in the terms of adopted exact values of fundamental constants, such as the elementary charge, Planck, Boltzmann, and Avogadro constants.

I consider the new definitions and discuss how the four defining constants were measured for the last time. I discuss the advantages in the realization of the units and the methods to be applied for the new standards. I also consider what will change for the applications in particle, nuclear, and atomic physics.

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