

Physics Colloquium

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428 Pupin Hall

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**“Quantum Standards in the International
System of Units (SI)”**

A primary focus of present research activities with regard to the realisation and reproduction, respectively, of the SI-Units is the use of quantum mechanical principles and macroscopic quantum effects to trace back the units to fundamental constants. Established examples are the Cs-atomic clock, the Josephson-voltage standard and the quantum-Hall resistance standard. Future goals are the re-definition of the units Kelvin, Ampere and Kilogram via, respectively, the Boltzmann's constant, the electron charge and Planck's constant or the Avogadro constant.



Host: Professor Stormer