

Plenary Talk PV X Wed 8:15 U Audimax
The future of time: prospects for a redefinition of the SI second — ●WILLIAM D. PHILLIPS — National Institute of Standards and Technology, Gaithersburg MD, USA

The reform of the International System of Units (the SI) in which the kilogram, ampere, kelvin, and mole are all defined by fixing the val-

ues of four fundamental constants of nature, gives us a measurement system in which all of the base units are defined in terms of natural constants. While one might have hoped that this reformed SI would serve us into the indefinite future, the SI unit of time, the second, remains in serious need of redefinition. This talk will describe the history and current status of the SI second, and speculate about a possible redefinition.