

A definition of the SI second based on several optical transitions

Wednesday 18 October 2023 09:00 (30 minutes)

In this paper, we discuss the possibility to redefine the SI second using the geometric mean of several optical clock transitions. This definition would allow to take advantage of the many high performance optical frequency standards currently available.

Here, we describe the fundamental properties of this definition and its practical implementation. Finally, we discuss its strengths and weakness, as compared to a definition involving a single transition.

Author: LODEWYCK, Jérôme (LNE-SYRTE Observatoire de Paris)

Presenter: LODEWYCK, Jérôme (LNE-SYRTE Observatoire de Paris)

Session Classification: SI Definition, Clocks and Time Scales II

Track Classification: SI definition, Clocks and Time Scales