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Type: **Invited Talk**

Atomic clocks, precision measurements and tests of the Standard Model

Wednesday, 19 October 2022 09:00 (30 minutes)

Time and frequency are the most accurately measurable quantities in physics. Some optical atomic clocks reach a relative frequency uncertainty close to 10^{-18} and allow to search for deviations in the predictions of Einstein's general relativity, test modern unifying theories and to develop new sensors for gravity and navigation.

In my talk, I will introduce the concepts of optical clocks and precision spectroscopy, present the current international status and discuss recent measurements which give new boundaries on possible deviations from predictions of general relativity and the standard model.

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