

Status of laboratory tests on variations of fundamental constants

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The comparison of different types of clocks and frequency standards over periods of a few years has allowed to place stringent limits on variations of fundamental constants in terrestrial laboratories in the present epoch. Presently, all experiments are consistent with the constancy of constants, for example the relative change of the fine structure constant is constrained in the range of the low $1\text{E-}17/\text{yr}$. Further advances in this field can be expected from the rapidly improving precision of optical clocks with laser-cooled atoms and ions and from the availability of a wider range of systems, including molecules and nuclei, with high sensitivity to the values of specific constants.

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