

Accuracy is Never Excessive

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key words

precise distance measurement, pulsed laser, two-beam interferometer, comb technology, spectro-interferometric measurements

I have presented the modern method of accurate distance measurement based on comb technologies. Comb technology is a method that uses laser radiation of short and ultrashort pulses. Each laser pulse contains a certain set of modes (frequencies) of generation-comb. The Michelson laser interferometer device forms a precision measuring tool for accurate distance measurement. A combination of three principles: precise measurement of the time of successive passage of the interferometer arms by a laser monoimpulse, an interferometer for determining the number of envelope wavelengths, and a spectrometer for determining the resolution region of the spectrum. This combination of measurement processes determines the measurement uncertainty at the level of 10^{-8} , which is compatible with the accuracy of modern reference tools.

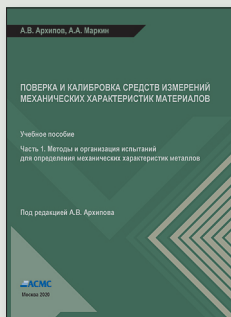
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НОВАЯ КНИГА

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