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Erratum: Conical Two-Crystal Monochromator for Scattering, Diffraction, and Absorption Cross Section Work with Slow Neutrons

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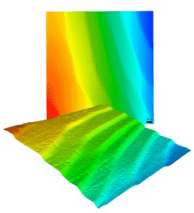
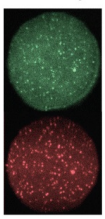

slopes, the ratio of which corresponds approximately to the ratio of nozzle directivities, (c) For maser oscillation on the 3-2 $N^{14}H_3$ line, the influence of the number of molecules should be 12 times bigger, due to the larger threshold number of molecules required for oscillation; experiment gives effectively this order of magnitude.[4]

The frequencies of both masers were compared, using a quartz clock as a reference. The frequencies, extrapolated to zero number of molecules, are equal within experimental error ($\pm 5\times 10^{-11}$). On the other hand, the insensitivity of frequency towards voltage variations proves that the traveling wave effect lies beyond the precision of measurement. This suggests an accuracy better than 10^{-10} for a double-beam maser. The frequency is 22 789 421 731$\pm$1 Hz in the TA1 scale[2] (Cs: 9 192 631 770 Hz). The reproducibility of the number of molecules can allow a long-term stability of a few 10^{-12}.

These figures show the interest of more precise measurements. The precision is actually limited by the fluctuations of our comparison quartz oscillators, which amount to 2×10^{-11} for 0.2-sec measuring time. These fluctuations are eliminated when the quartz oscillator is replaced by a maser, the short-time stability of which was found to be 2×10^{-12} for a measuring time of 0.2 sec. First experiments, using a maser as a comparison oscillator, indicate a measurement precision of 4×10^{-12}. We shall therefore be able to measure with greater precision all the effects mentioned above.

We want to thank Professor H. Mügeli, Director of the Laboratory, for his interest in this work.

[1] K. Shimoda, T. C. Wang, and C. H. Townes, Phys. Rev. **102**, 1308 (1956).
[2] J. De Prins and P. Kartaschoff, L.S.R.H. Report No. CE1 (August 1960); Suppl. Nuovo cimento (to be published).
[3] J. De Prins, thesis (to be published).
[4] Y. Saburi, M. Kobayashi, and S. Iijima, Procès-Verbaux des Séances du Comité International des Poides et Mesures Document S. 2 of the "Comité Consultatif pour la définition de la seconde," 1961 (to be published).

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[Rev. Sci. Instr. 32, 602 (1961)]

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PAGE 602, column 2, line 24, change "37 ft" to read "37′".
Page 603, column 1, line 30, change "$\csc(\frac{1}{2}\pi_2-4\theta)$" to read "$\csc(\pi/2-4\theta)$."

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Erratum: High Speed Oscilloscope with Electron Optical Magnification Using Four-Pole Lenses

[Rev. Sci. Instr. 32, 421 (1961)]

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IT has been pointed out by Dr. D. F. McDonald and others that Eq. (17) is incorrect. It should read

$$M\frac{d^2\mathbf{r}}{dt^2}=-e\nabla\psi=e\mathbf{E} \qquad (17)$$

and the μ_0 should be deleted from the rest of the equations in that section.