tensor $P^{jk}_{\alpha\beta}$ is indicated in reference 6.

According to (1), the absorption curve $A(\omega)$ consists of a series of $(a = \xi, \ldots.)$ Gaussian lines, shifted by a distance $\Sigma_\gamma \Delta^2_{\alpha\gamma}/\omega_\gamma$ from the resonance frequencies ω_a. The width of these lines (at half the intensity) is calculated from the expression $\Delta\nu_{1/2} = 2.35\,\Delta_{a0}$. The coefficient $\Delta^2_{\epsilon 0}$ differs from the corresponding result $\langle(\Delta\nu)^2\rangle$ of Van Vleck[5] in that $\Delta^2_{\epsilon 0d}$ for the $\mathcal{H}_d$ interaction is twice $\langle(\Delta\nu)^2\rangle_d$, and $\Delta^2_{\epsilon 0}$ depends on the value of the isotropic exchange interactions. Therefore, the acoustic magnetic resonance is a much-promising method of investigation of exchange interactions in crystals.

Furthermore, it follows from our calculations that if $\Delta\nu_{1/2}$ in a crystal is determined by dislocation-type defects, then for $I = 3/2$ and $I = 5/2$ the ratio δ of the ultrasonic resonance width and the magnetic resonance width are respectively $\delta(3/2) = \sqrt{5/3}$, and $\delta(5/2) = \sqrt{12/5}$. The experimental values are $\delta(3/2) = 1.7$ (reference 1) and $\delta(5/2) > \delta(3/2)$ (reference 2).

We note that in the event of the excitation of free nuclear precession about the direction of H by an ultrasonic moment, the form of the decrease in the nuclear induction signal G with time will be described by the function $G_K(t)$ obtained from $A(\omega)$ by a Fourier transform [cf. reference 3, (3.17)]. Since $G_K(t) \neq G_M(t)$, it follows that ultrasonic moment methods can yield new results compared with the usual spin-echo method.

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BETA AND GAMMA SPECTRA OF THE Sb^{113} *AND* Sb^{115} *ISOTOPES*

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RECENTLY Selinov and his co-workers[1] discovered the new antimony isotopes Sb^{113} and Sb^{115}. The isotopes were obtained by the method of absorption of the approximate values of their end-point beta spectra.

The beta and gamma spectra of these isotopes were investigated with a double-lens beta spectrometer. The positron spectrum of Sb^{113} was found to consist of two components with end-point energies of 1.85 ± 0.02 and 2.42 ± 0.02 Mev. The values of log ft are 4.4 and 4.7. The end-point energy of the positron spectrum of Sb^{115} is 1.51 ± 0.02 Mev, and log ft = 4.25. The shape of the spectra is resolved. In the conversion-electron spectrum of Sb^{115} a gamma line with an energy of 0.499 ± 0.002 Mev was found. The conversion coefficient α_K is 0.00625. The ratio of the conversion coefficients of the K and L shells is about 6.

According to preliminary data, eight gamma lines were observed in the Sb^{113} gamma spectrum, which was investigated with a scintillation spectrometer. The data on the Sb^{113} gamma spectrum are being published in the transactions of the 10th Conference on Nuclear Spectroscopy.

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A ROTATORY MAGNETO-MECHANICAL EFFECT IN A LOW PRESSURE PLASMA

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IT has been pointed out in the literature[1] that in a low pressure positive column the gas should rotate around the axis of the column if a longitudinal