Clearly, no electromagnetic processes, including production of an e^+e^- pair, can be observed in the $\pi^+\pi^-$ "atom," because the transformation of $\pi^+\pi^-$ into $2\pi^0$ will occur with overwhelming probability.

I would like to thank I. Ya. Pomeranchuk for opportunely calling my attention to reference 2.

*As noted by the authors, the expressions for the cross section, given in reference 2, must be multiplied by 4.

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ELECTRON PARAMAGNETIC RESONANCE OF Co^{2+} IN CORUNDUM

G. M. ZVEREV and A. M. PROKHOROV

Institute of Nuclear Physics, Moscow State University

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LINES of electron paramagnetic resonance of the cobalt ion were observed at frequencies of 9800 and 37500 Mcs at $T = 4.2°K$ in a monocrystal of corundum containing cobalt as an impurity. All the lines have a superfine structure of eight components in accordance with the value of the spin of the Co^{59} nucleus, $I = 7/2$.

When the magnetic field is parallel to the trigonal axis of the crystal, an intense line is observed; the components of this line are strongly non-equidistant at the frequency 9800 Mcs. When the magnetic field is perpendicular to the trigonal axis, the components of the superfine structure of this line are equidistant at both frequencies.

The observed spectrum can be ascribed to Co^{2+} with an effective spin of $S' = 1/2$. The superfine structure was not studied in detail; the g-factors, measured with respect to the center of the line, are $g_{\parallel} = 2.27$ and $g_{\perp} = 4.95$.

In addition to the intense line, several weak lines with a superfine structure characteristic of cobalt are observed.

As compared with the ions Cr^{3+}, Fe^{3+}, and V^{3+}, the ion Co^{2+} in corundum has a considerably longer relaxation time, so that at $T = 4.2°K$ the saturation effect occurs at powers $\sim 10^{-8}$ w.

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