greater than 1 Mev, then only one parameter remains in the solutions. This parameter is $\langle|k(r)|\rangle/C$, where $k(r)$ is the radial function that determines the effective coupling and C is the surface deformation parameter.[5] The value of this parameter, determined from Eq. (1) and used in Eq. (2), is 0.21 ± 0.04 (R_0 is set equal to $1.41A^{\frac{1}{3}}\times10^{-13}$ cm).

Thus, in O^{17} the straightforward application of the weak-coupling collective model[5] gives consistent results.

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Magnetic Moment of Ne^{21}†

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NEON-21 is the lightest stable isotope whose magnetic moment has not yet been measured. Furthermore, this isotope is of considerable interest since it is one of the few isotopes whose spin is not correctly predicted by the extreme single-particle model of the nucleus. The nucleons outside of closed shells presumably consist of two $d_{\frac{5}{2}}$ protons and three $d_{\frac{5}{2}}$ neutrons, but the spin of Ne^{21} has been shown[1,2] to be $\frac{3}{2}$ instead of the $\frac{5}{2}$ which would result from the extreme single-particle model. Various conflicting theories[3–11] have developed as to the structure of Ne^{21} and the closely related Na^{23}.

The ratio of g-values of Ne^{21} and deuterium has been measured in a molecular-beam magnetic resonance apparatus[12] employing the separated oscillatory field method.[13] The result of several determinations without shielding corrections is:

$$g(Ne^{21})/g(D_2)=-0.514274\pm0.000004.$$

A thin-walled strainless steel trap inserted in the neck of a liquid helium Dewar was used to clean up the recirculating gas.

The sign of the moment was determined to be negative from the interference pattern obtained between one region of horizontally oscillating rf field and another region of vertically oscillating rf field. The previously measured[1] spin of $\frac{3}{2}$ is consistent with various deflection and optimum oscillatory field measurements in the present experiment. Further details of the measurements will be included in a later paper. Both the sign and the spin agree with the previous results[1,2] of Koch and Rasmussen[2] and Hubbs and Grosof.[1]

These data result in the following value, including shielding corrections,[13] for the magnetic moment of Ne^{21}:

$$\mu(Ne^{21})=-0.661758\pm0.000005 \text{ nuclear magneton.}$$

This result is in excellent agreement with the calculation of Umezawa[3] but in disagreement with the value quoted by Mayer and Jensen.[6]

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β-γ Circular Polarization Correlation in a J-J Transition*

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THE study of β-γ circular polarization correlation in β transitions without spin change provides valuable information about β-decay coupling constants.[1,2] In particular, the experimental result will depend on the presence or absence of S,T and V,A interference terms.[2] Recent experiments on aligned Co^{58} nuclei seemed to indicate the absence of such interference terms.[3–5] In order to study this problem with a different experimental approach and using a different β emitter, we have measured Sc^{46} by the method described in reference 1.

Sc^{46} samples obtained from the Oak Ridge National Laboratories were used to prepare sources of about 50 microcuries strength. The activity was deposited on 0.8-mg/cm^2 Mylar foils. The pulse height discriminators were adjusted to accept the electron spectrum above 170 kev and the γ spectrum above 260 kev. Single