ter-of-mass motion accounts for a large part of the range of the Ba and Tb recoils in the forward direction, but does not exclude the possibility that lighter products, such as Sr and Br, result largely from a fission reaction in which only a small portion of the kinetic energy of the incident proton is used for nuclear disintegration.

Finally, a detailed analysis of the results on the barium, strontium, and bromine nuclides at 2.2 Bev shows that the high-yield primary products are more neutron-deficient than those observed in the previously cited work[3,4] at lower energies. The $Tl^{200,201}$ activities in the present experiments, as at lower energy,[6] result primarily from the decay of lead and bismuth predecessors rather than from independent production. This probably accounts for the relatively low yield of Tl^{202}, a shielded nuclide.

We are grateful to many members of the staff of the Brookhaven National Laboratory for cooperation on these experiments, in particular, Dr. G. B. Collins and the operating staff of the Cosmotron.

* Research carried out under the auspices of the U. S. Atomic Energy Commission.

† Permanent address: Institute for Nuclear Studies, University of Chicago, Chicago, Illinois.

‡ Permanent address: Physics Department, University of Illinois, Urbana, Illinois.

§ Permanent address: Chemistry Department, Columbia University, New York, New York.

[1] A. Turkevich, Phys. Rev. **94**, 775 (1954).

[2] There are indications, especially from the x-ray spectra of the gross electron-capture activities, that the maximum yields occur several atomic numbers below Bi.

[3] R. H. Goeckermann and I. Perlman, Phys. Rev. **76**, 628 (1949).

[4] W. F. Biller (unpublished); P. Kruger, Ph.D. thesis, University of Chicago, March, 1954 (unpublished).

[5] J. M. Miller and G. Friedlander, Phys. Rev. **91**, 485 (1953).

[6] W. E. Bennett, Phys. Rev. **94**, 997 (1954).

Errata

New Absorption Lines of Crystals in Submicrowave Region, S. KOJIMA, K. TSUKADA, S. OGAWA, AND A. SHIMAUCHI [Phys. Rev. **92**, 1571 (1953)]. "Rock salt," which appeared three times in the printed text, should read "rock crystal (quartz)."

Reaction Concept in Electromagnetic Theory, V. H. RUMSEY [Phys. Rev. **94**, 1483 (1954)]. Equation (50) of this paper needs some further explanation. The reaction in anisotropic media was given in the form

$$\langle a,b\rangle=\int\int\int[\mathcal{E}(b)\cdot d\mathbf{J}(a)-\mathcal{H}(b)\cdot d\mathbf{K}(a)]. \quad \text{(E-1)}$$

Now the reciprocal relation for this class of fields is

$$\int\int\int[\mathcal{E}(b)\cdot d\mathbf{J}(a)-\mathcal{H}(b)\cdot d\mathbf{K}(a)]$$
$$=\int\int\int[\mathbf{E}(a)\cdot d\mathbf{J}(b)-\mathbf{H}(a)\cdot d\mathbf{K}(b)], \quad \text{(E-2)}$$

and $\langle a,b\rangle$ is not equal to $\langle b,a\rangle$ in general. However, the methods described in the paper for isotropic media can be carried over to anisotropic media without difficulty. To retain the same notation as for the isotropic case, it seems better to define $\langle a,b\rangle$ by the formula

$$\langle a,b\rangle=\int\int\int[\mathbf{E}(b)\cdot d\mathbf{J}(a)-\mathbf{H}(b)\cdot d\mathbf{K}(a)] \quad \text{(E-3)}$$

instead of (E-1), and use the notation

$$\langle a,b\rangle'=\int\int\int[\mathcal{E}(b)\cdot d\mathbf{J}(a)-\mathcal{H}(b)\cdot d\mathbf{K}(a)] \quad \text{(E-4)}$$

to denote the expression in (E-1). Thus

$$\langle a,b\rangle'=\langle b,a\rangle. \quad \text{(E-5)}$$

The quantity $\langle a,b\rangle$ can still be interpreted as the result of making an observation of the field generated by source b by using a as a test source, and thus the apparatus of the reaction theory still applies. The quantity $\langle a,b\rangle'$ represents the same thing, except that the environment in which the field generated by b exists is obtained from that to which $\langle a,b\rangle$ refers by transposing the tensors $\mu\epsilon$ and σ.

Elastic Scattering of 190-Mev Deuterons by Protons, OWEN CHAMBERLAIN AND MARTIN O. STERN [Phys. Rev. **94**, 666 (1954)]. In this paper, we presented experimental results on the elastic scattering of 190-Mev deuterons by protons, and attempted to compare these results with predictions based on the impulse approximation. Various potentials were used to represent the nucleon-nucleon interaction.

It has been called to our attention that an earlier publication of Daitch and French[1] also considered the relationship between nucleon-nucleon and nucleon-deuteron scattering. In particular, their relations (7) are equivalent to our Eq. (13) and Table V. These relations concern the energies and angles of nucleon-nucleon scattering to be used in calculating the deuteron-proton scattering.

We regret that, due to an oversight, reference to the work of these authors was not made.

[1] P. B. Daitch and J. B. French, Phys. Rev. **85**, 695 (1952).

Influence of the Earth's Magnetic Field on the Extensive Air Showers, GIUSEPPE COCCONI [Phys. Rev. **93**, 646 (1954)]. In the discussion of the importance of the displacement D_m of the electrons in an extensive air shower caused by the earth's magnetic field, two mistakes were made which have been pointed out to the author by Professor K. Greisen. (a) The fact that an electron of a certain sign can have had parents of different sign before reaching the detecting apparatus decreases D_m by a factor of about 2. Using the same notation as in the original paper, it follows that $D_m/\mathfrak{D}_s=0.22\times(\cos\lambda)/P$ instead of $0.45(\cos\lambda)/P$. The old expression remains valid for other particles, e.g., mu mesons. (b) In evaluating the rms lateral displacement in the E−W direction, D_m must be added quadratically to $\mathfrak{D}_s$, and not linearly as was implicitly done in the discussion.

This reduces the ratio of the E−W to the N−S lateral displacement, for the electrons, to

$$\left[1+\left(\frac{0.22\cos\lambda}{P}\right)^2\right]^{\frac{1}{2}}\simeq 1+\frac{0.02\cos^2\lambda}{P^2}.$$

At sea level, the effect is practically negligible (~2 percent). It remains important, however, at high altitudes.

Quantum Theory of a Damped Electrical Oscillator and Noise. II. The Radiation Resistance, J. WEBER [Phys. Rev. **94**, 211 (1954)]. The following typographical errors appear on pages 212 and 213. In Eq. (6), the exponent 2 following the last bracket should be just inside the last bracket, making the last matrix element squared. In Eq. (9), the last matrix element, $\langle E_F|q_F/\sqrt{L}|E_F+\hbar\omega\rangle$, should be squared. In Eq. (13) on the right, the π^2 in the denominator should be π. In reference 2, page 213, the word "of" should be inserted after the word "propagation." On page 212, above Eq. (8), the statement "$\rho(E_{FR}+\hbar\omega)=\rho(E_{FR}-\hbar\omega)=\omega^2/2\pi^2\hbar c^3$ should be labeled Eq. (7).

Phase Shifts for High-Energy Nucleon-Nucleon Scattering, BURTON D. FRIED [Phys. Rev. **95**, 851 (1954)]. The line above Eq. (3) should read: "(b) the triplet D phase shifts are all equal." The letter D was inadvertently omitted.

Hyperfine Structure and Nuclear Moments of the Stable Bromine Isotopes, JOHN GORDON KING AND VINCENT JACCARINO [Phys. Rev. **94**, 1610 (1954)]. In Table I, the frequency $(1,0\leftrightarrow 0,0)^{81}$ appears incorrectly as 1275.271 instead of 1275.291. The quadrupole interaction constants, b, are listed with improper sign and superscript on page 1615. They are given correctly in the abstract.