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Erratum : Conditions for Optimum Luminosity and Energy Resolution in an Axial Ray Spectrometer with Homogeneous Magnetic Field

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distribution of duration and relative complexity may be observed. In analyzing this phenomenon some selection of the time interval is presumed and the choice of the most probable time duration implies either foreknowledge of what is significant or an arbitrary choice.

A completely adequate analyzing system should give enough frequency components of events of selected duration to distinguish between them and to relate their frequency characteristics. However, the selectivity of the filter system is determined by the time interval over which the filters must respond. Two extremes of filter design are possible; one with a short-time constant and low "Q," the other one with a long-time constant and high "Q." Short events become lost in a long-time constant system, long events are not resolved in a short-time constant system. The long-time constant system permits a high degree of frequency discrimination, the short-time constant system has a necessarily broad response. The selection of the interval for analysis thus determines the degree of frequency discrimination that is possible.

The present instrument was designed for events of relatively short duration and hence is a short-time constant, low "Q" system. The use of longer intervals for analysis (Grass and Gibbs, Walter) has yielded little information. On the other hand, brief events such as a single spike or spike-and-wave group are of physiological importance. The present analyzer obtains a relatively broad frequency spectrum of such events. It is hoped that comparison of these spectra with others of activity less well understood may extend knowledge of the human electroencephalogram.

Erratum: Conditions for Optimum Luminosity and Energy Resolution in an Axial β-Ray Spectrometer with Homogeneous Magnetic Field

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IN this paper, the quantity (Eq. (10)), $d\phi=\frac{1}{2}\sin\theta d\theta$, is defined in *words* on page 163 as "the fraction of the total sphere into which β-rays can be projected", the implication being that it is the said fraction *corresponding to a specified range $d\theta$ of colatitude angles of emanation from the source.* The value of $d\phi$ however, *corresponding to a specified resulting range of energy inhomogeneity* (from aberration), is twice as great as the formulae throughout the paper indicate. The author's error arose from overlooking the fact that the range from θ_1 to $\theta_1=\Delta\theta$ contributes identically the same energy inhomogeneity as the range from θ_1 to $\theta_1+\Delta\theta$, see Fig. 8. Therefore, in formula 12 and in formulae 21 to 40 inclusive the symbol $d\phi$ should be interpreted as *only half the fraction of the total sphere* into which β-rays can be projected. The happy result of this correction is to make the luminosity of the instrument for a given energy resolution twice as great as represented in the paper, or to make the resolving power four times as great for a given luminosity as that stated in the paper. If the reader will therefore substitute $d\Phi=2d\phi$ throughout the paper and interpret $d\Phi$ as the utilized fraction of the total sphere about the source, all will be correct. The numerical values of the resolution given in the next to the last paragraph should also be revised for this reason. $\Delta\epsilon/\epsilon=0.0065$, 0.0049, 0.0032 should be changed to $\Delta\epsilon/\epsilon=0.0016$, 0.0012, 0.0008. The statement $\rho=0.004R$ should read $\rho=0.001/R$. In the final sentence of the paragraph, the values given as $\Delta\epsilon/\epsilon=0.004$, 0.003, 0.002 should read $\Delta\epsilon/\epsilon=0.001$, 0.0008, 0.0005.

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