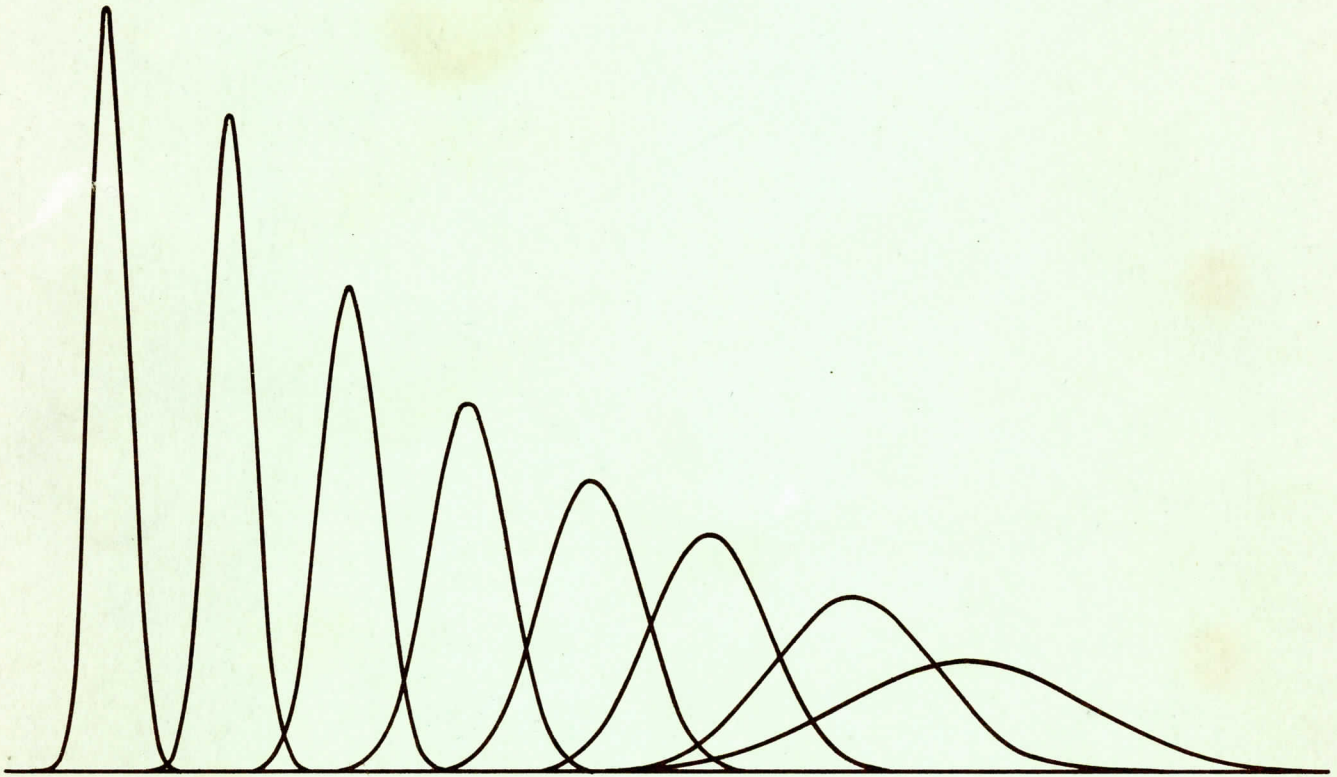


INTRODUCTION TO QUANTUM PHYSICS

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A PART OF

PHYSICS

A NEW INTRODUCTORY COURSE

This work is the product of THE EDUCATION RESEARCH CENTER (formerly called the Science Teaching Center) which was formed in September, 1960, using space provided by M. I. T. and financed by an initial grant from M. I. T. In March, 1961, the Center received a grant from the National Science Foundation which made possible a significant expansion of its activities. This grant was renewed in November, 1962, 1964, 1965 and again in 1967. The Center has also received generous support from the Kettering Foundation, the Shell Companies Foundation, and the Victoria Foundation.

The drawing on the cover shows, in multiple exposure, the sequential motion of a probability distribution used to describe the propagation of a free particle. The peak of the distribution moves to the right with constant velocity. The probability pulse spreads as it propagates, corresponding to the increased probability that the particle will be found farther and farther from the average position. The total probability (proportional to the area under each peak) does not change as the distribution propagates. Chapter 10 presents the quantum description of the motion of free particles.

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