MEAN MOTIONS AND VALUES OF THE RIEMANN ZETA FUNCTION.

BY

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in COPENHAGEN.

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Introduction.

1. In the theory of almost periodic functions the study of mean motions and of problems of distribution forms an interesting chapter.

Historically, the subject begins with Lagrange's treatment of the perturbations of the large planets, which leads to a study of the variation of the argument of a trigonometric polynomial $F(t) = a_0 e^{i\lambda_0 t} + \cdots + a_N e^{i\lambda_N t}$. Apart from some cases considered by Lagrange, this problem was first treated rigorously by Bohl [1] and Weyl [1], who by means of the theory of equidistribution proved the existence of a mean motion whenever the numbers $\lambda_1 - \lambda_0, \ldots, \lambda_N - \lambda_0$ are linearly independent.