ANALYSIS OF CONDITIONS OF GENERALISED ALMOST PERIODICITY.

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In the paper »Almost Periodicity and General Trigonometric Series» by A. S. Besicovitch and H. Bohr[1], devoted to the study of various types of almost periodicity, the type of B-almost periodicity was considered which included all the other types there studied.

We shall quote the definition of this type. But first we give some auxiliary definitions.

We call a set E of real numbers a relatively dense (r. d.) set if there exists a number $l > 0$ such that any interval of length l includes at least one number of the set. Such a number l is called an inclusion interval of the set.

We say that a set E is satisfactorily uniform if there exists a number $b > 0$ such that the maximum value $\nu(b)$ of the number of numbers of E included in an interval of length b is less than twice the minimum value $\mu(b)$ of the same number, i. e., if

$$\nu(b) < 2\mu(b). \tag{1}$$

Obviously we may always assume b an integer.

Definition of B a.p. functions. We say that a function $f(t)$ (real or complex) of a real variable t is B-almost periodic (B a.p.) if corresponding to any positive number ε, exists a satisfactorily uniform set of numbers

$$\ldots \tau_{-2} < \tau_{-1} < \tau_0 < \tau_1 < \tau_2 \ldots$$

[1] Acta mathematica Vol. 57.