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TITLE: Beat-type oscillations in the electromagnetic field of the earth (according to observations in Irkutsk)

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TEXT: Regular observations of PP-oscillations were begun at Irkutsk in August 1957. The present paper reports results obtained as a result of four years of observations. The PP-oscillations have the form of beats. The most frequently encountered repetition frequency of these beats was found to be 0.3 to 0.1 cps. The most frequently encountered frequency of the "carrier" was found to correspond to a period of 0.6 to 1.0 sec. Finally, the maximum amplitude of the resultant oscillation was found to lie between 0.05 and 2.5 mV/km, but the most frequently encountered values were in the range 0.15 to 0.60 mV/km. A study was also made of the diurnal variations in the frequency of appearance of the PP-oscillations, the diurnal variation in their intensity and the seasonal distribution. A further study was concerned with changes in the ionosphere during PP-oscillations and their geographical distribution. A survey of the results obtained at

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twelve different stations shows that for geomagnetic latitudes greater than 40° the mean monthly repetition frequency of PP-oscillations is given by the empirical formula $n = -3.8 + 0.15\varphi$ where φ is the geomagnetic latitude. It is noted that the results now reported are only preliminary. There are 6 figures and 15 tables.

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