NEW RESULTS ON ZEROES OF STATIONARY GAUSSIAN FUNCTIONS

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We consider (complex) Gaussian analytic functions on a horizontal strip, whose distribution is invariant with respect to horizontal shifts (i.e., "stationary"). Let $N(T)$ be the number of zeroes in $[0, T] \times [a, b]$. First, we present an extension of a result by Wiener, concerning the existence and characterization of the limit $N(T)/T$ as T approaches infinity. Secondly, we characterize the growth of the variance of $N(T)$. For the last part, we consider real stationary Gaussian functions on the real axis and discuss the "gap probability" (i.e., the probability that the function has no zeroes in $[0, T]$). This part is a joint work with Ohad Feldheim.