Asymptotic generalized value distribution of solutions of the Schrödinger equation

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We develop the theory of generalized value distribution for the class of functions defined as boundary values of Herglotz functions. One of the main results is an estimate of asymptotic generalized value distribution for Herglotz functions translated by an increment $i\delta$ off the real axis. We also present precise relations between the employed measures, and the link with compositions of Herglotz functions. A case of particular interest which we study is that of the Weyl-Titchmarsh m-function associated with Sturm-Liouville differential operators. In this context, this generalized theory allows for the possibility to describe the asymptotic value distribution of solutions of the Schrödinger equation in terms of other measures than Lebesgue measure.