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# The influence of small values of a holomorphic function on its maximum modulus

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## 1. Introduction

In a recent paper [5] we investigated the possible growth of the maximum modulus of a holomorphic function $f$ defined in the unit disk $D$ if the function tended to zero on certain sequences of Jordan arcs $\{\gamma_n\}$ in $D$. These sequences were distinguished by having

$$(1.0)\qquad \begin{aligned} &\text{i)}\quad \frac{1}{2}\leq r_n=\min_{z\in\gamma_n}|z|\rightarrow 1,\ n\rightarrow\infty;\\ &\text{ii)}\quad 0<\varliminf_{n\to\infty} HD(\gamma_n)\leq\varlimsup_{n\to\infty} HD(\gamma_n)<\infty;\end{aligned}$$

where $HD(\gamma_n)=\sup\rho(a,b)$, $a, b\in\gamma_n$, $\rho(a,b)$ denoting the hyperbolic distance between $a$ and $b$. Such a sequence satisfying (1.0) is labeled a $PHD$ sequence. If

$$R_n=\max|z|,\ z\in\gamma_n,\ n=1,2,\cdots,$$

then the closed circular sector of $|z|\leq R_n$ of minimum angle $\alpha_n$ containing $\gamma_n$ is denoted by $E_n$. So $E_n$ is of the form

$$0\leq|z|\leq R_n,\ \theta_n\leq\arg z\leq\theta_n+\alpha_n.$$

For convenience we suppose $0\leq\alpha_n\leq\pi$, all $n$. For a $PHD$ sequence

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