Definition 1 *Let $P \in \mathbb{N}^*$. We call the d-SBD coefficients on $(a,1)$ of order P α_1^*, α_2^*, ..., α_P^* the minimizers of the quantity*

$$Q(\alpha_1, ..., \alpha_P) = \int_a^1 r \left(\frac{-1}{r^2} - \sum_{p=1}^{P} \alpha_P \rho_p^2 J_0''(\rho_p r) \right)^2 .$$

where $\rho_1, ..., \rho_P$ are the roots of J_0.

Theorem 1 *There exists L_1 and L_2 such that for all $a \in (0,1)$, for all $P \in \mathbb{N}$.*

$$\left| \frac{1}{r} - 1 - \left(\sum_{p=1}^{P} \alpha_p^* \rho_p J_0'(\rho_p r) - \sum_{p=1}^{P} \alpha_p^* \rho_p J_0'(\rho_p) \right) \right| \leq L_1 e^{-L2aP}$$

Lemma 1 *Let $e \in H^2(B)$ a radial function. Then it holds*

$$|e'(r) - e'(1)| \leq \sqrt{|\log r|} \int_r^1 r e''(r)^2$$