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Corrigendum

Elliptic equations in R^2 with nonlinearities in the critical growth range

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In hypothesis $(H6)$ of Theorem 1.4 the λ_k has to be replaced by $\lambda_k + \sigma$, with $\sigma > 0$. In the statements of Thms. 1.3 and 1.4 the lower bounds for β have to be replaced by $\frac{2}{\alpha_0 d^2}$ and $\frac{4}{\alpha_0 d^2} e^{K/\sigma}$, respectively, where $K = K(\alpha_0, \lambda_k)$.

In the inequalities (4.5) and (5.4) the last integrals in fact go to πd^2. So the last inequality of the proof of Thm. 1.3 is $4\pi/\alpha_0 \geq (\beta - \epsilon)d^2\pi M_0$. One proves that $M_0 = 2$.

The first integral in (5.4) is split into integrals over $B_{d/n}$ and $B_d \setminus B_{d/n}$. The latter integral is estimated from below by $\pi d^2 \hat{M}$ as in the paper; one calculates that $\hat{M} = 1$. To estimate the integral over $B_{d/n}$ one uses the following estimates on t_n and v_n: $t_n^2 \leq 4\pi/\alpha_0 + c\|v_n\|/\sqrt{\log n}$, $\|v_n\| \leq c/(\sigma\sqrt{\log n})$, and $t_n^2 \geq 4\pi/\alpha_0 - c/(\sigma \log n)$ which are obtained from (5.1) and (5.2). Then the last inequality in the proof of Theorem 1.4 becomes $4\pi/\alpha_0 \geq (\beta - \epsilon)d^2\pi e^{-K/\sigma}$, which yields a contradiction if β satisfies the above condition.