Backward Error n = 1000, k = 20, cond(A) = 100000.0,  $\lambda$  = 0.4  $\cdot \sigma_{max}$ 10<sup>5</sup>  $-\bullet - \|\widetilde{B} - B\|_2$ -  $2\kappa(A)\|A\|_2\tilde{\varepsilon}_1 + 10.4\tilde{\varepsilon}_2$ backward error bound direct inversion error  $10^{3}$  $\varepsilon_2^{\text{abs}} \leq \frac{1}{2(\beta + \lambda \varepsilon_1^{\text{abs}})}$ •  $2(\beta + \lambda \varepsilon_1^{abs})^2 \varepsilon_2^{abs} \leq \frac{1}{2}$  $10^{1}$  $10^{-1}$  $10^{-3}$  $10^{-10}$  $10^{-5}$  $10^{-9}$  $10^{-8}$  $10^{-7}$  $10^{-6}$  $10^{-4}$ 

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