

$$2 \times \{ \ell_p(\hat{\beta}_k) - \ell_p(\beta_k) \} \leq 3,84$$

$$\Rightarrow \ell_p(\hat{\beta}_k) - \ell_p(\beta_k) \leq \frac{3,84}{2}$$

$$\Rightarrow \ell_p(\beta_k) \geq \ell_p(\hat{\beta}_k) - \frac{3,84}{2}$$

