$$N^{th}_{B_{x,y}} = \frac{32}{3\sqrt{2}\pi} \frac{R|\eta|\epsilon_l^{2\sigma}\omega_r}{\langle\beta\rangle_{x,y} Z^2\beta^2 c} \frac{1+\omega_{\xi_{x,y}}/\omega_r}{\Re\left[Z^{BB}_{\perp_{x,y}}\right]_{max}}$$