$B_{\mathrm{mag}} \equiv rac{1}{2} \left| rac{eta_2}{eta_1} + rac{eta_1}{eta_2} + eta_1 eta_2 \left( rac{lpha_2}{eta_2} - rac{lpha_1}{eta_1} 
ight)^2 
ight] \,.$ Note that  $B_{\text{mag}} \geq 1$ .  $B_{\text{mag}}$  is conserved through a beam line unless an additional machine error appears. It

The  $B_{\text{mag}}$  coefficient represents the mismatch between two optics:

is a ratio of the average Courant-Snyder incariant to the emittance.