

Aperture consensus

$$A_{\frac{1}{2}ap.} = k_{\beta}(n\sigma + \delta_{max} D) + d_{sep} + CO_{peak} + d_{tol}$$

$k_{\beta} = 1.1$, $n = 9$, $\delta_{max} = 0.86e - 3$,

D includes hor. and ver. spurious dispersion,

$d_{sep} = 9.5\sigma/2$, $CO_{peak} + d_{tol} = 4.6mm$.

Potential reduction of requisites:

- δ_{max} corresponds to almost 8 sigma! Momentum aperture could be lowered.
- Realignment of the quads for a better use of the aperture. This needs study.
- Spurious dispersion can be evaluated at 30% or at 20% of the invariant.

Ongoing work

- External aperture module in Python using Twiss and Survey output (RM and RT).
- Need of full lattice description of different options. So far only the IR insertion is provided...
- Local chromaticity correction (RM), impact of spurious dispersion?
- Field quality considerations -> JPK notebook, to be adopted.