

(Feb.5 , 10am AP discussion)

Observations:

- 1) Yellow more loss than blue during rebucketing
Both rings have not enough momentum aperture
- 2) Yellow and Blue have similar lifetime after rebucketing (sy)
- 3) Yellow have less momentum aperture (0.2mm) than blue (0.5 mm)
- 4) Yellow seems having more negative momentum aperture (vhs)
- 5) Both blue and yellow have vertical dispersion about 0.75m (dejan ...)

Direction of solution

- 1) Difference between blue and yellow
- 2) Difference between this run and previous runs

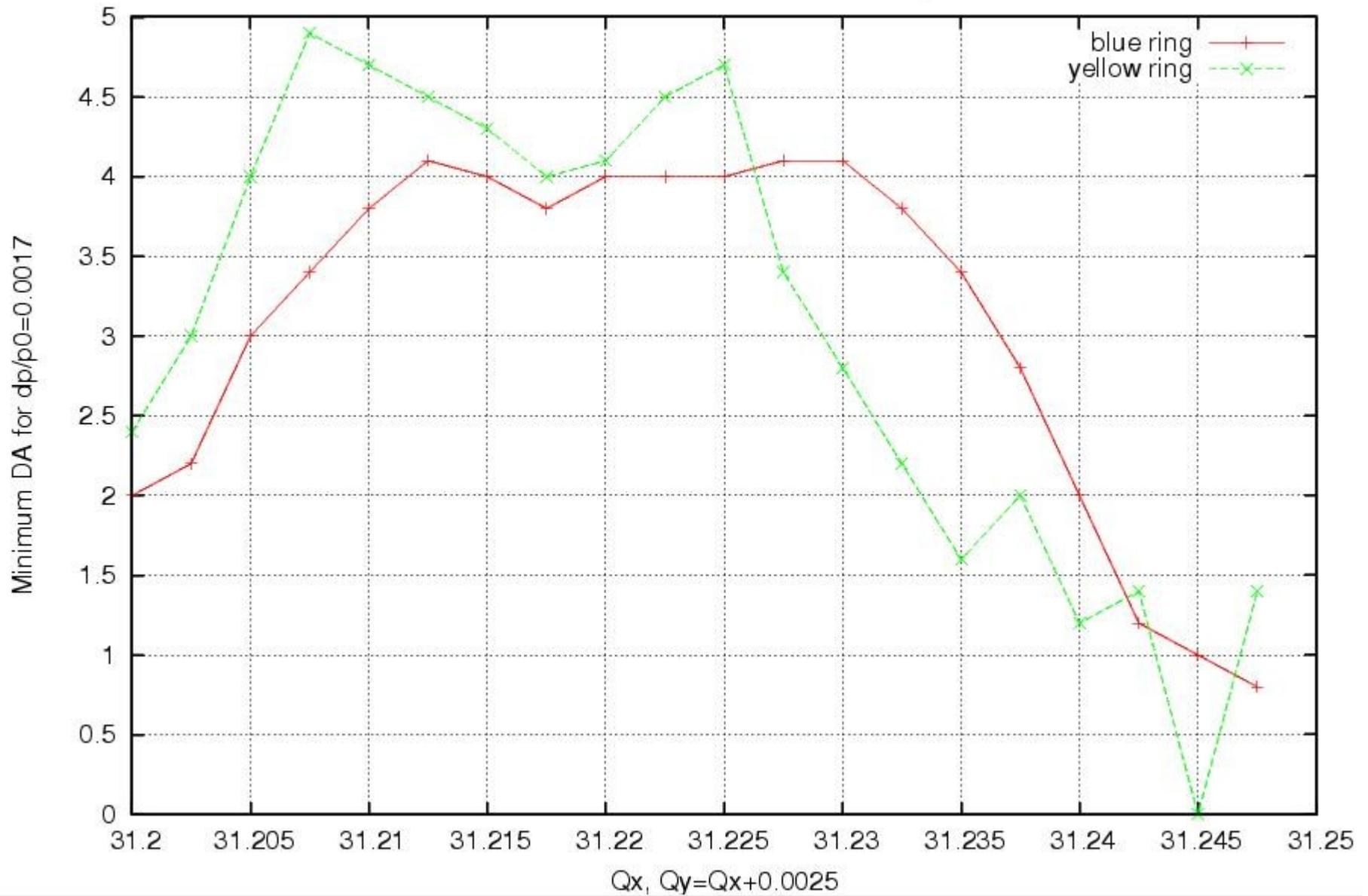
Regarding to difference between this run and previous runs

- 1) beta * squeezed from 1.0 m to 0. 6m
- 2) large H dispersion in Irs
- 3) DX magnet training at non-colliding Ips
- 4) IR corrections, coupling, nonlinearities, ...
- 5) phase advance between IP6 and IP8, beta-beating
- 6) Physical aperture in Blue and /or yellow, not likely
- 7) working point choosing, too close to 1/4.

Simulation studies

1. Check off-momentum tunes and β^*
2. Dynamic apertures for 2010 IBS lattices with $\beta^*=0.6\text{m}$
3. Dynamic apertures in the tune scan from 0.15 to 0.33
4. Simulating second order chromaticity correction with for $\beta^*=0.6\text{m}$ lattices
5. Dynamic apertures for released β^* lattices (0.7m, 0.8m, 0.9m, 1.0m)
6. Dynamic apertures in the tune scan from 0.20 to 0.25 with Q'' correction

10⁶ turn DA for 2010 0.7m lattices, with rebucketing, h=2520, Vrf=4M



Machine Studies

1. Check the correction strength of Q'' from model (APEX: grd, vhs, dejan, yun)

only Blue checked, seems agree at least in direction of correction

2. Q'' correction at store (APEX : dejan, yun)

both ring Q'' corrected, around ~ 500 ,
opened blue momentum aperture but not yellow

3. Tune scan along diagonal (APEX: vhs, dejan, yun, Thomas)

good spot for beam decay (0.214, 0.21) and $Q'y=3.2$
rebucketing with (0.2165, 0.212) and $Qy' = 0.2$, 250%/hr decay

Tune space review

