

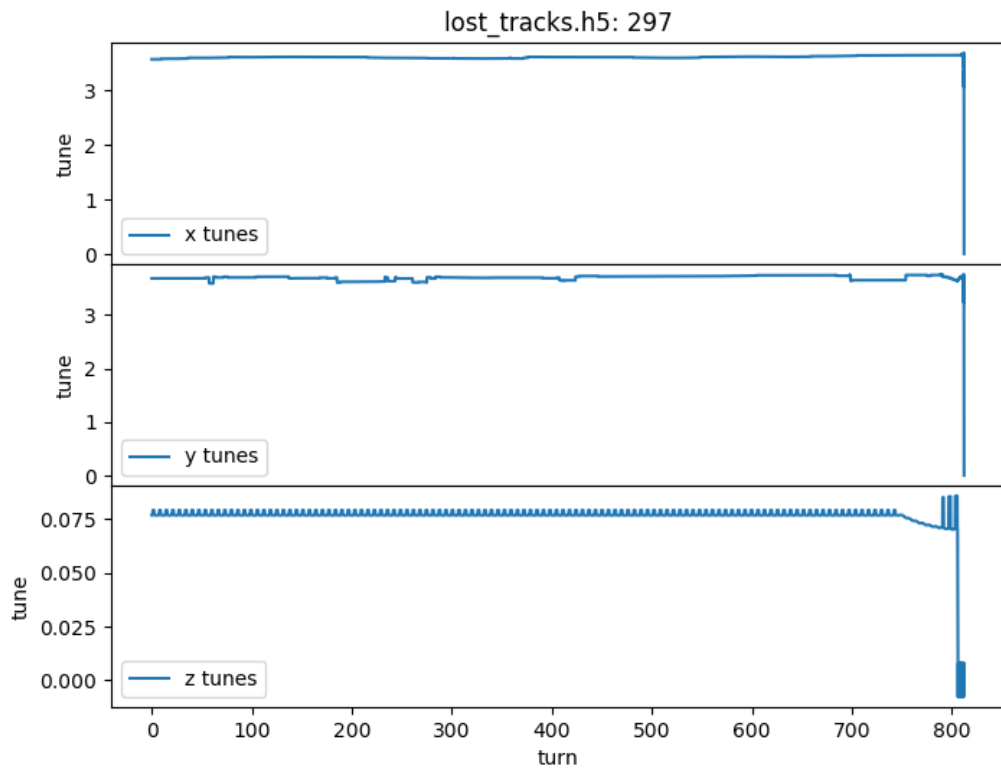
More Looking at cut and non-cut particles

- 16M particles
- Optimal compensation:
 - 6.0 A-m electron lens current
 - Longitudinal pulse shaping RMS=0.5m
- Transverse 4 sigma(4*4.15mm) aperture cut

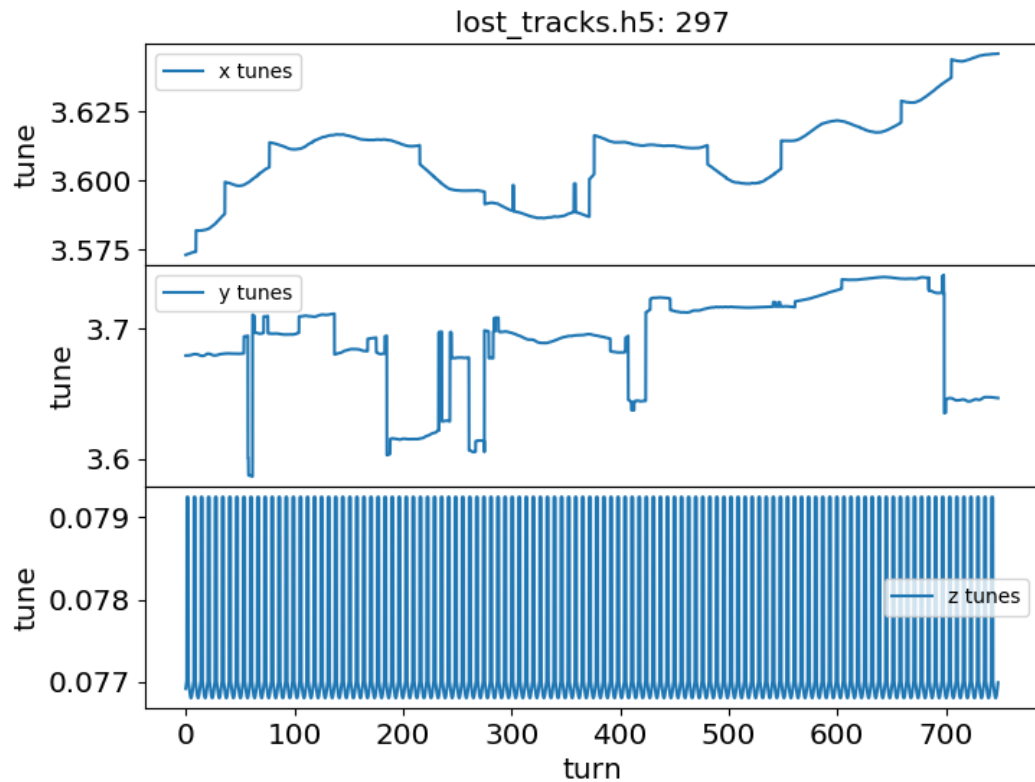
New this time

- Calculate lattice functions using moments
- Guard against calculating tunes just before particle is lost
- Tune diagram of lost and not lost particles

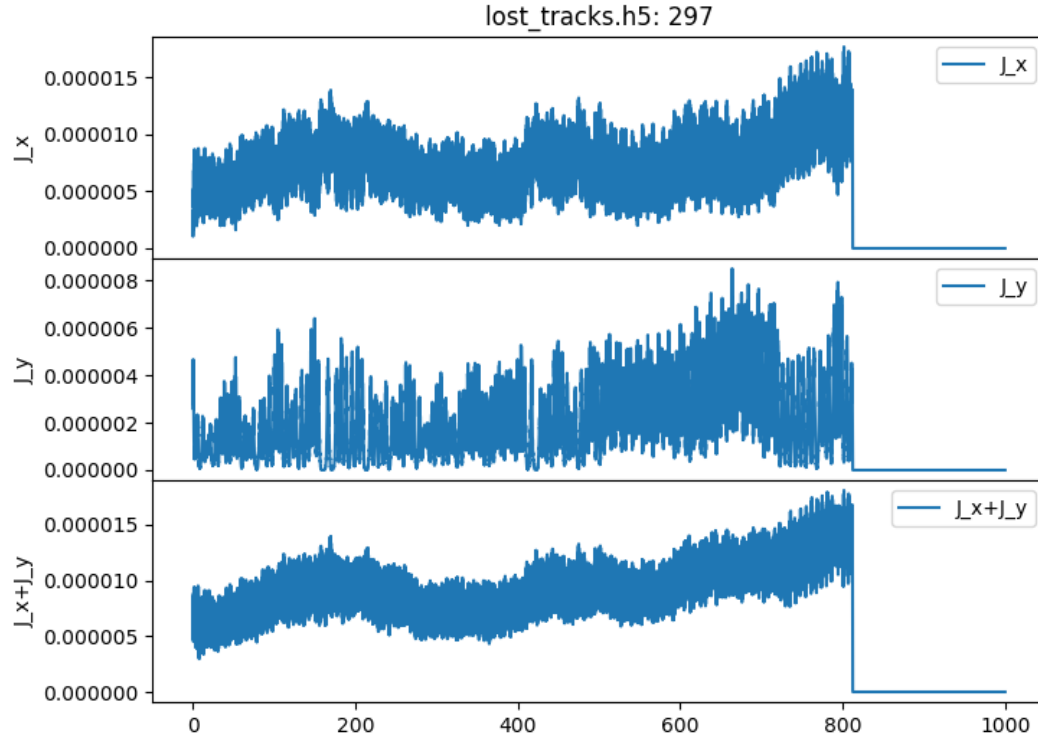
Lost particle 297 tunes (OLD)



Lost particle 297 tunes (NEW guarded tune calculation)

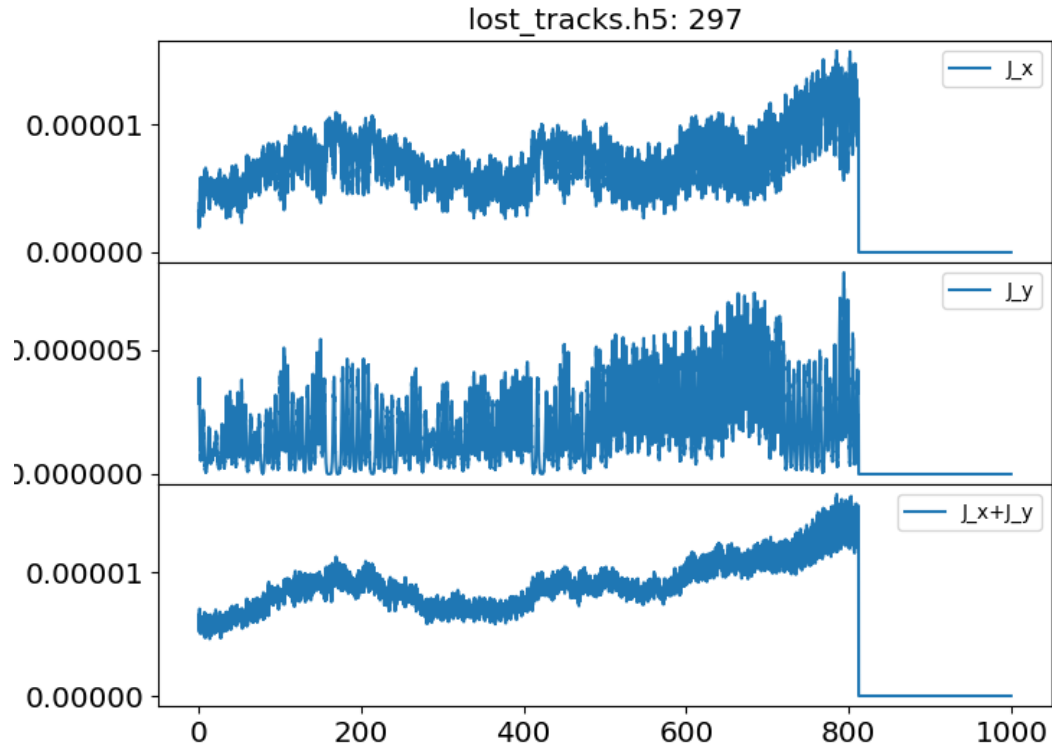


Lost particles 297 actions OLD



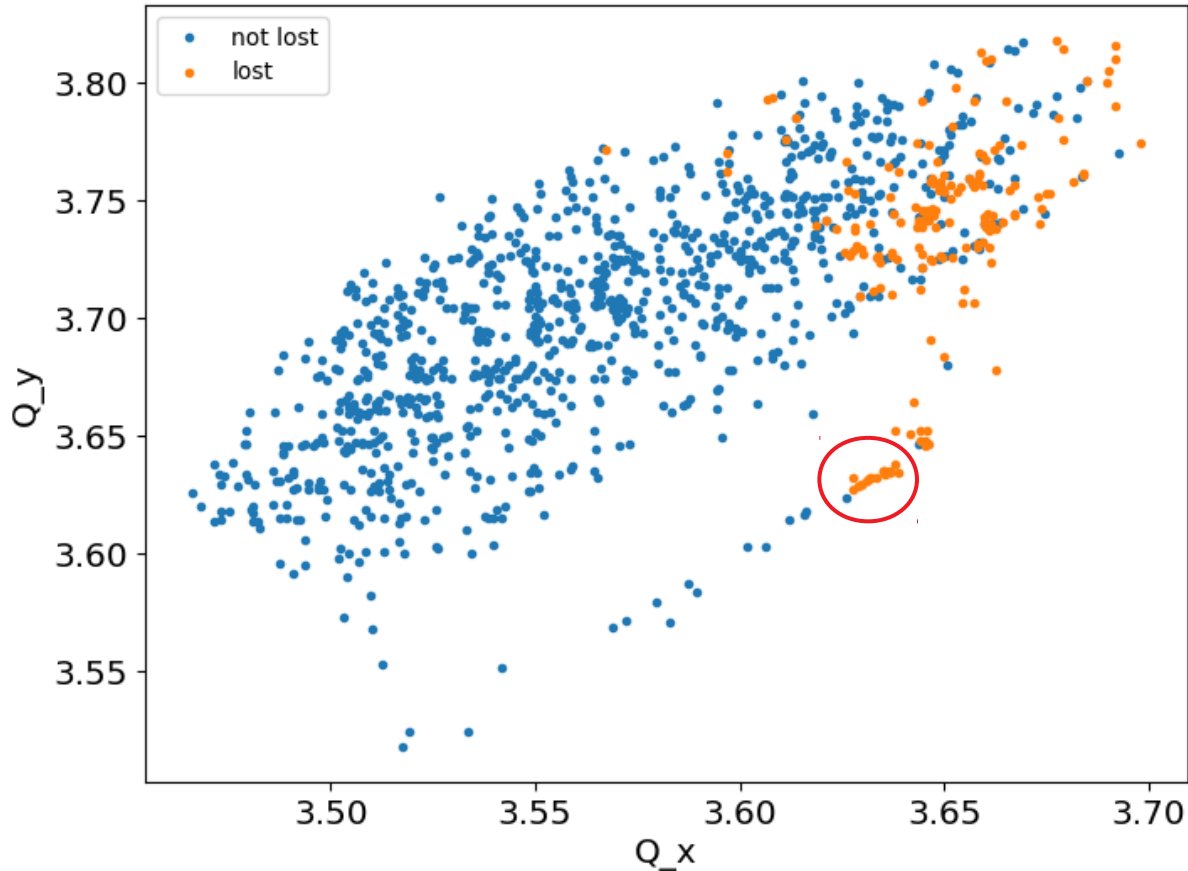
Action just grows, but no obvious structure. The aperture cut is about $1.5e-5$

Lost particles 297 actions NEW lattice function calculation with moments



Actions variation is much smaller, especially J_x+J_y

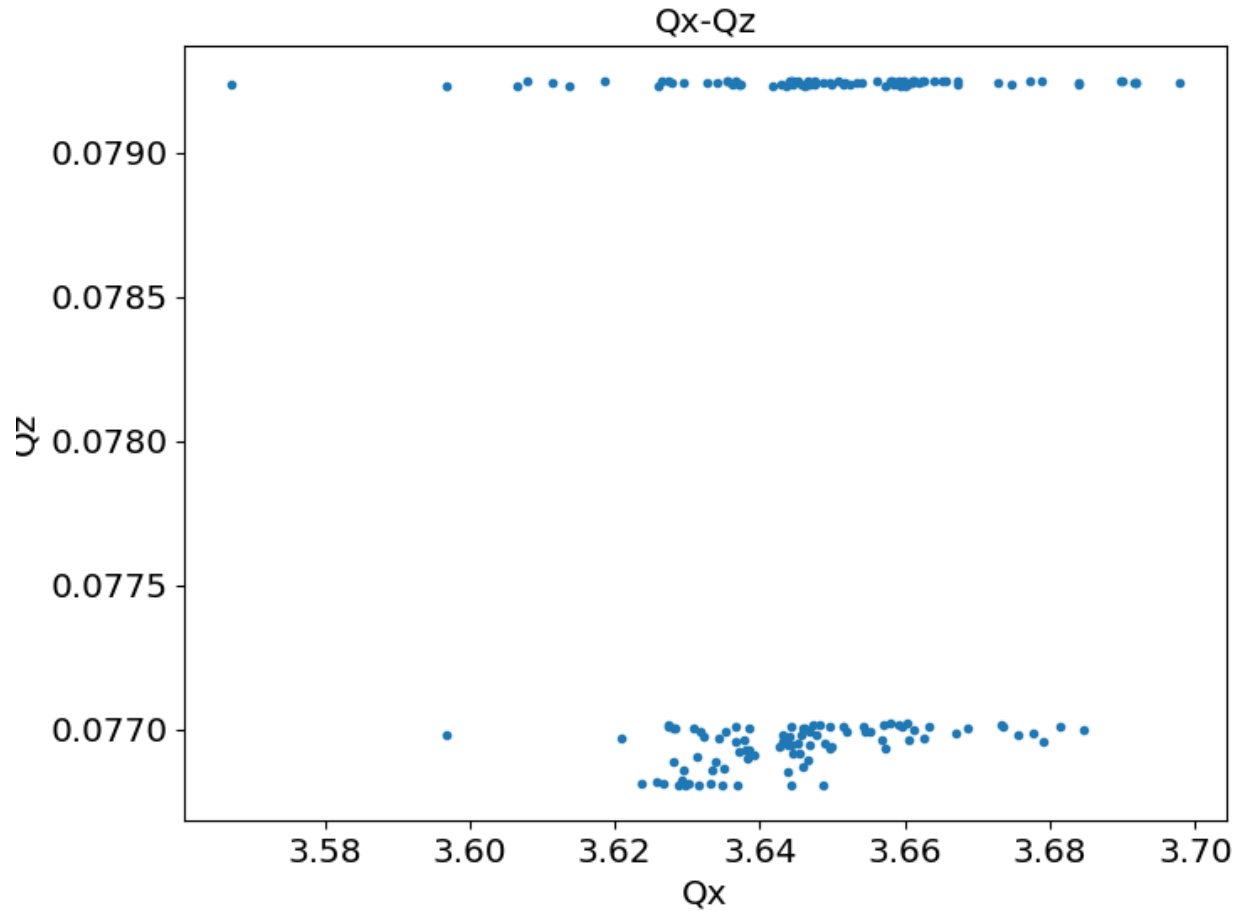
Tunes of the lost and (1000 of) kept particles



Some evidence of a resonance contribution

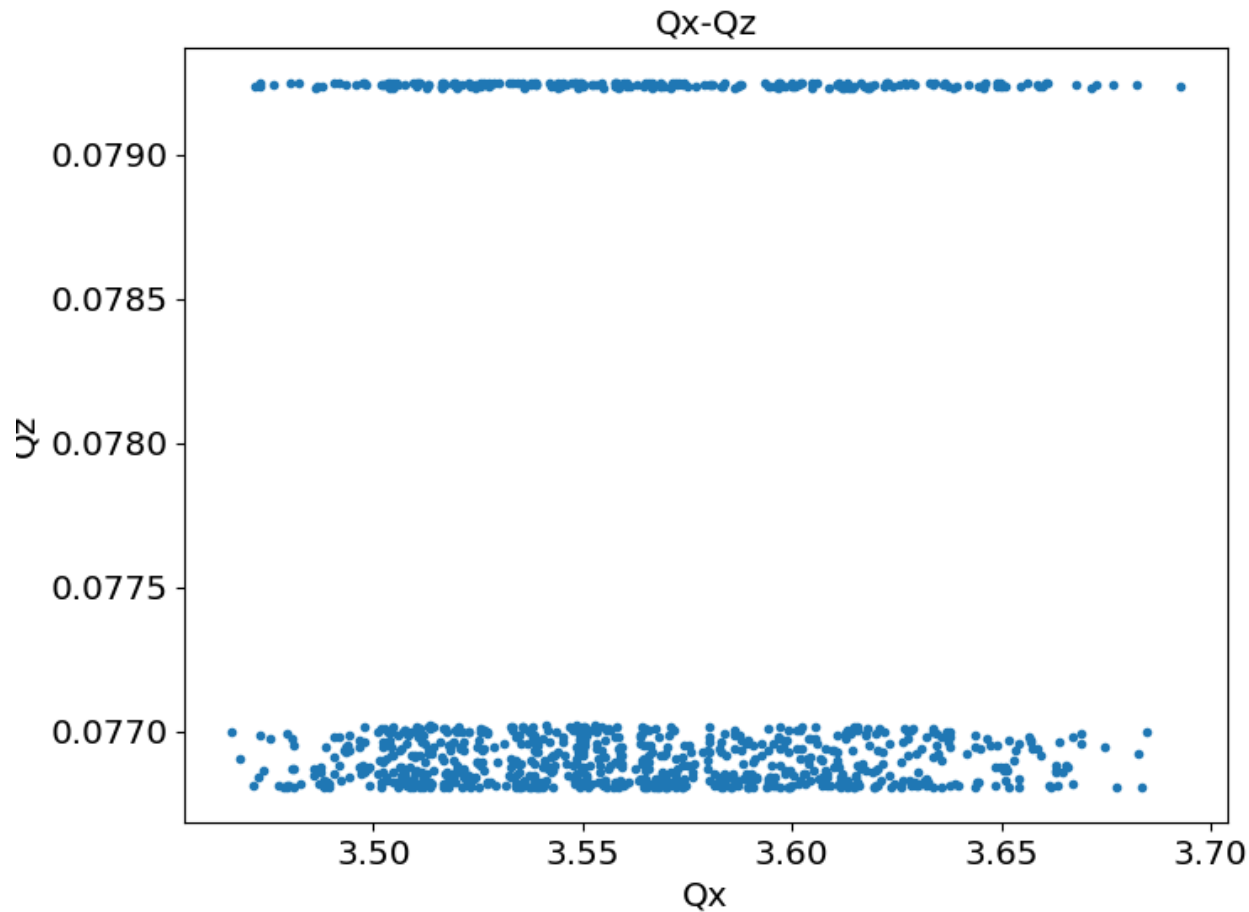
As Alexey thought, lost particles are at higher amplitudes and experience a smaller tune shift

Lost particles Qx-Qz



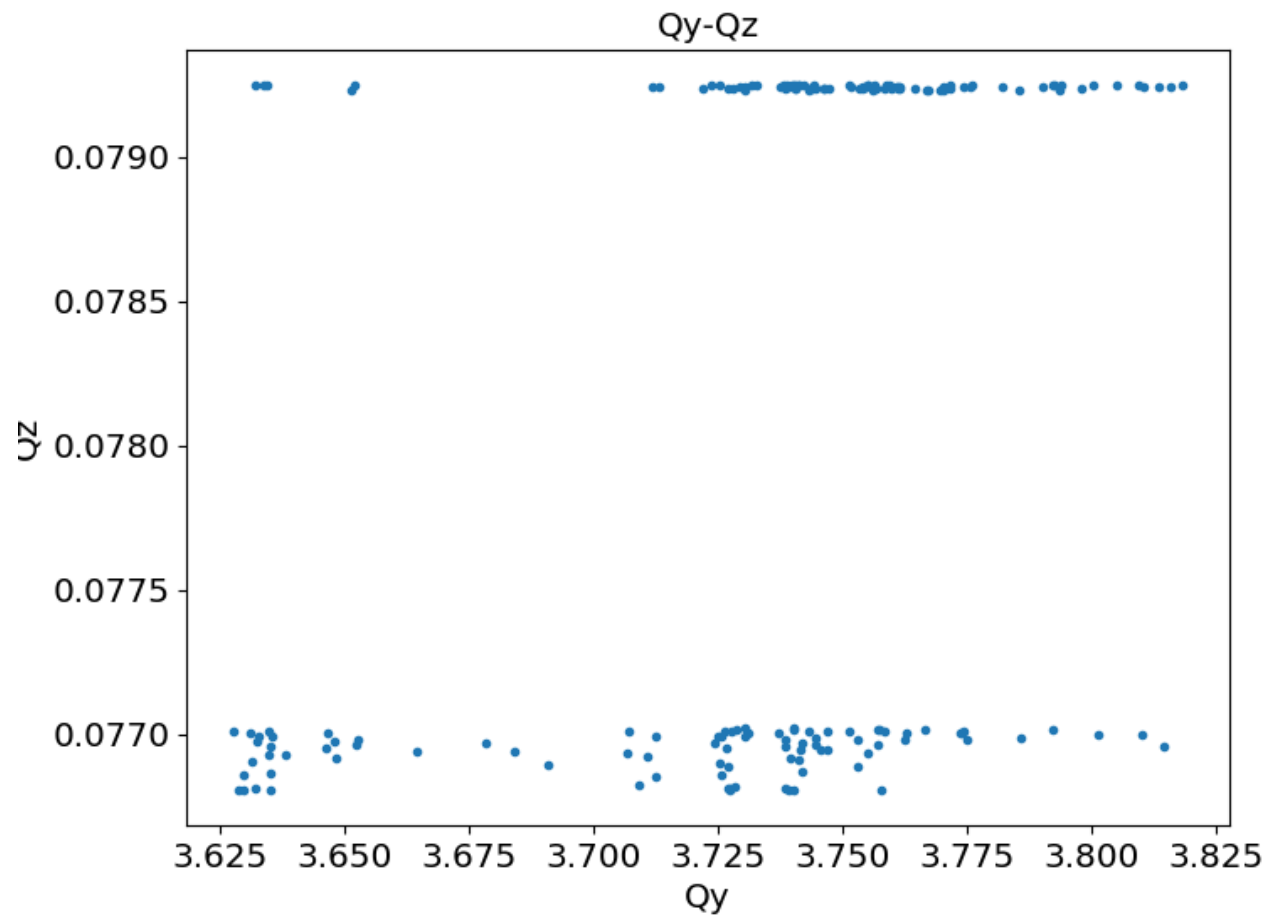
Is that a suppression
just above $Q_x=3.64$?
Are they stable so
they're not in the lost
particles?

Kept particles Qx-Qz



Also shows
something around
 $Qx=3.64$, and maybe
 $Qx=3.57$ at low Qs.

Lost particles Qy-Qz



Kept particles Qy-Qz

