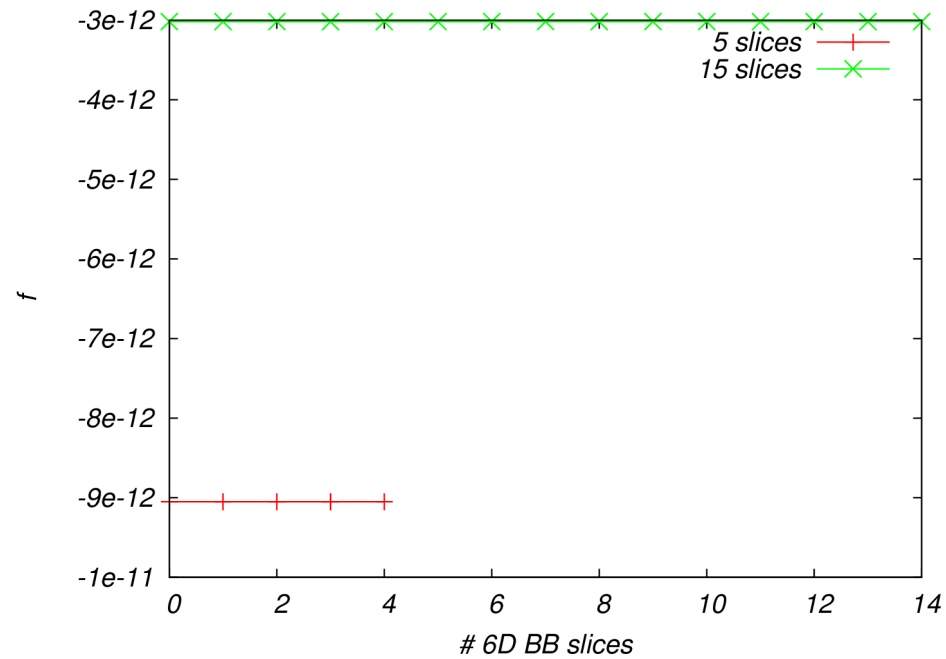# Update 6D BB lens in SixTrack
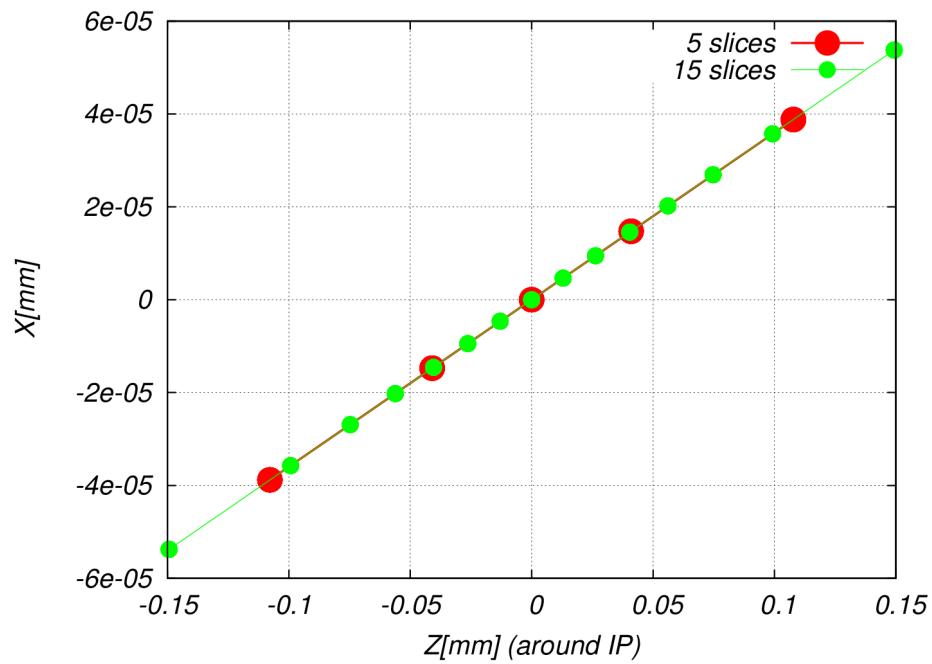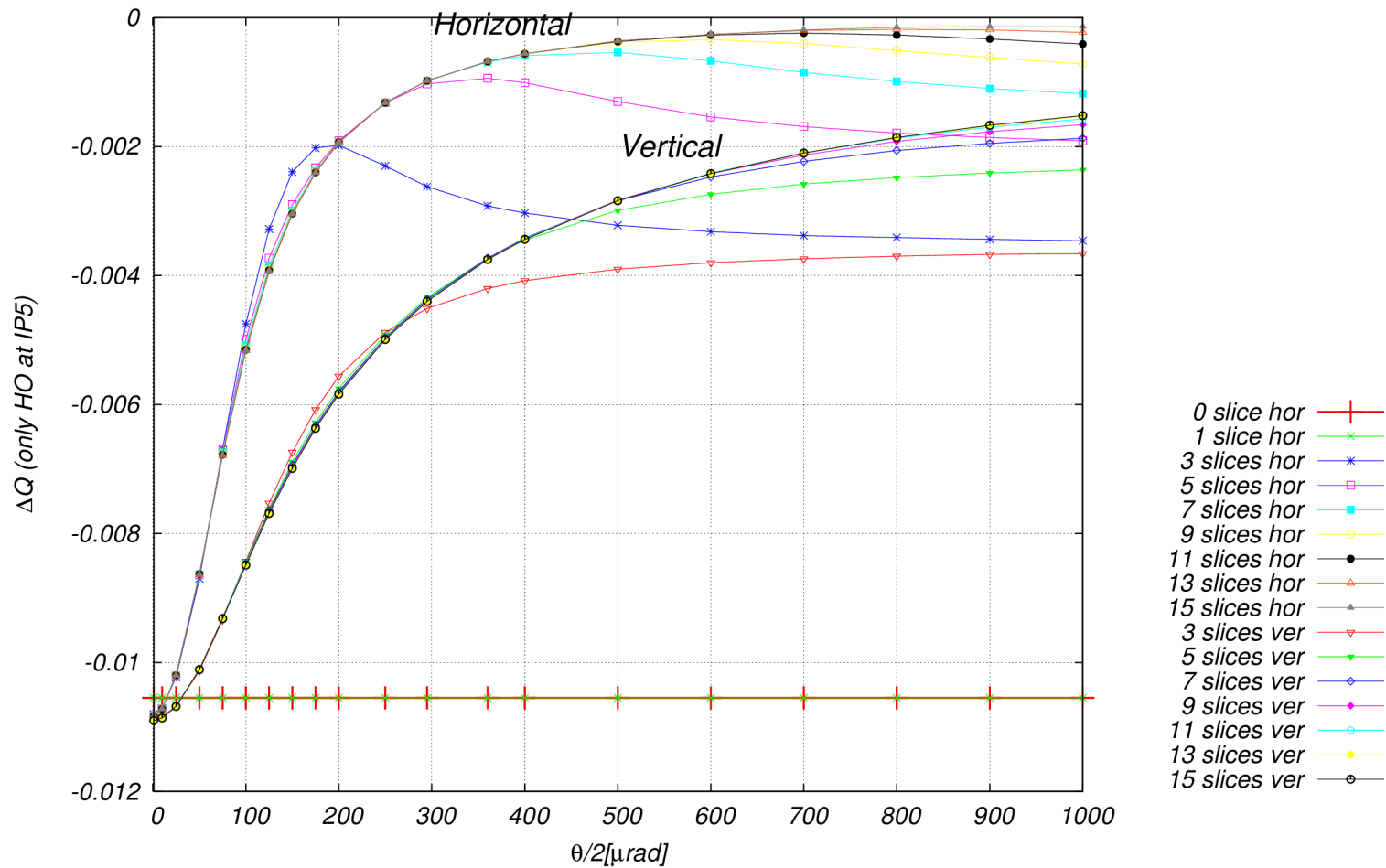
Javier Barranco, Tatiana Pieloni

Check slicing
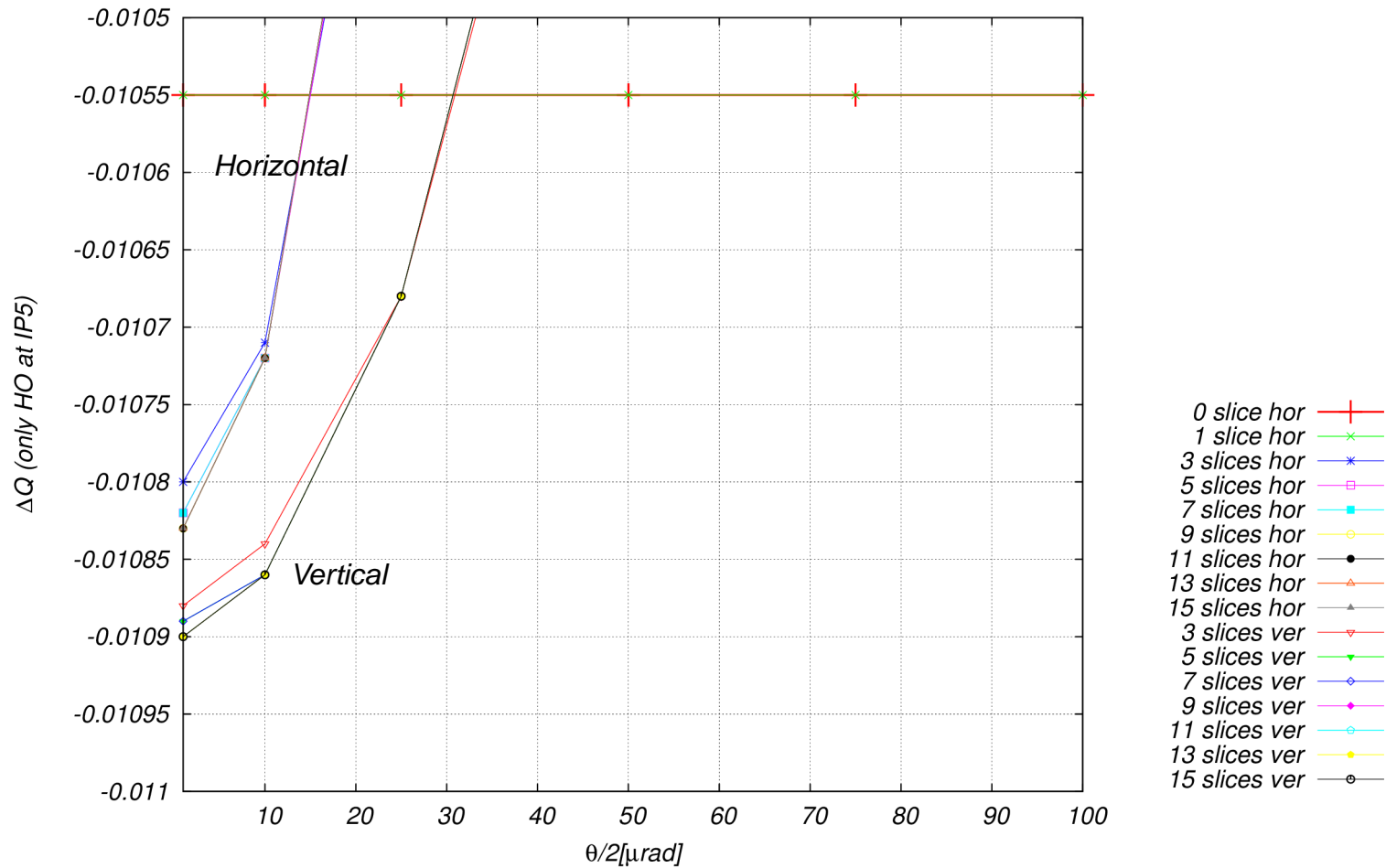
Check ΔQ vs #slices & θ/2

Positive θ/2. Convergence of the number of slices depends on the optics. Advisable to use minimum 11 slices.

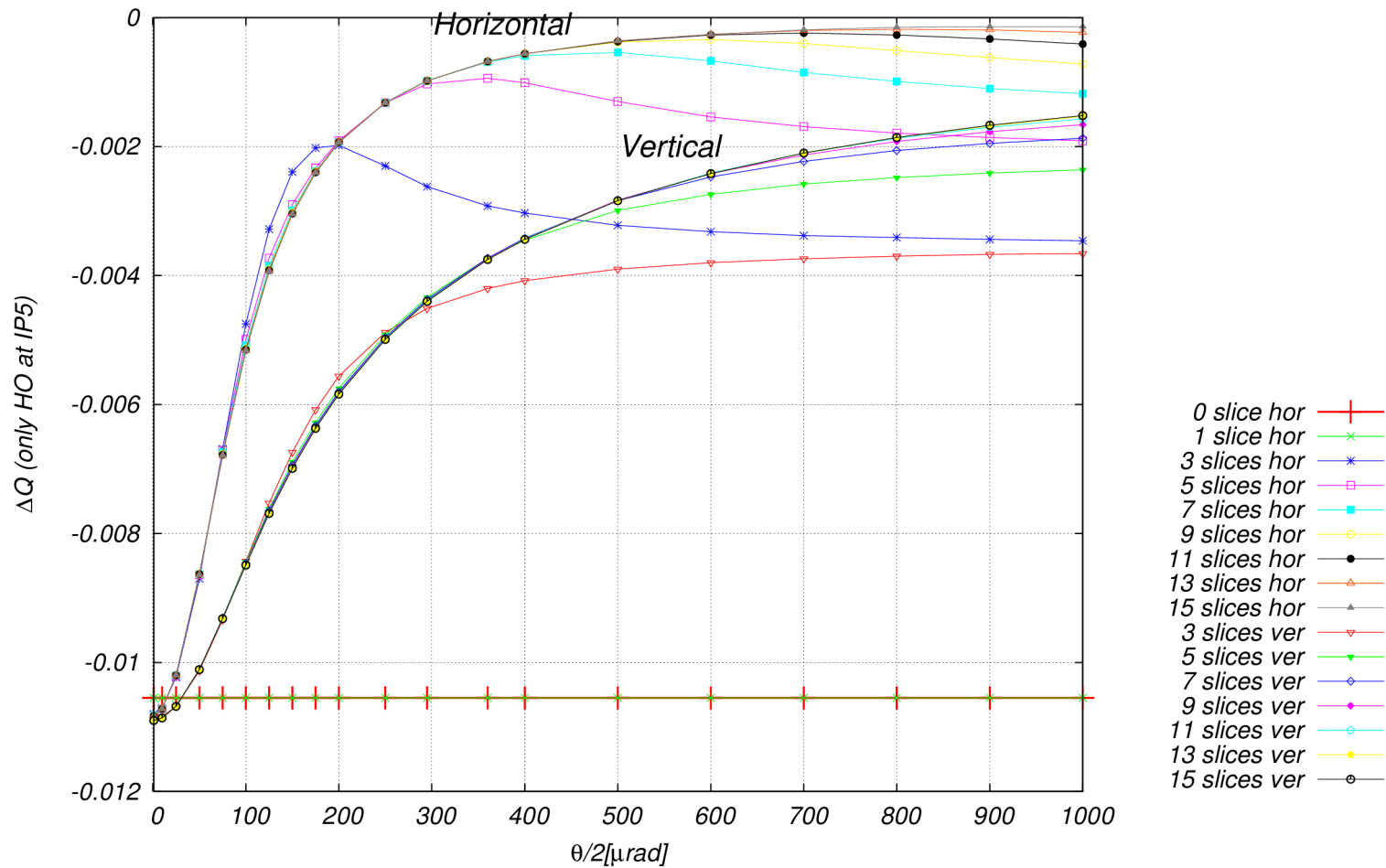# Check ΔQ vs #slices & θ/2
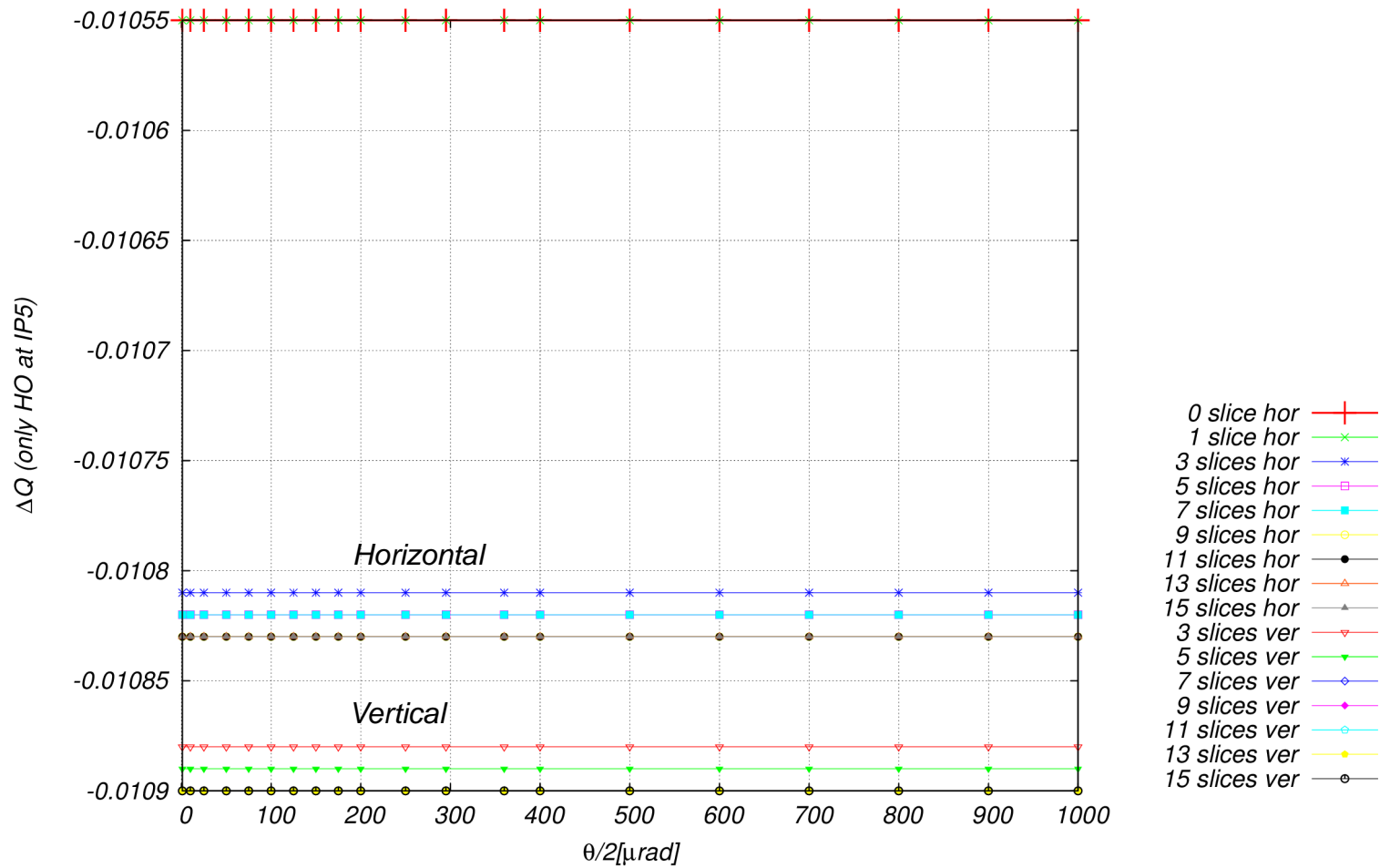
Positive θ/2. Zoom at small crossing angles.

Check ΔQ vs #slices & θ/2

Negative θ/2

Check ΔQ vs #slices & θ/2
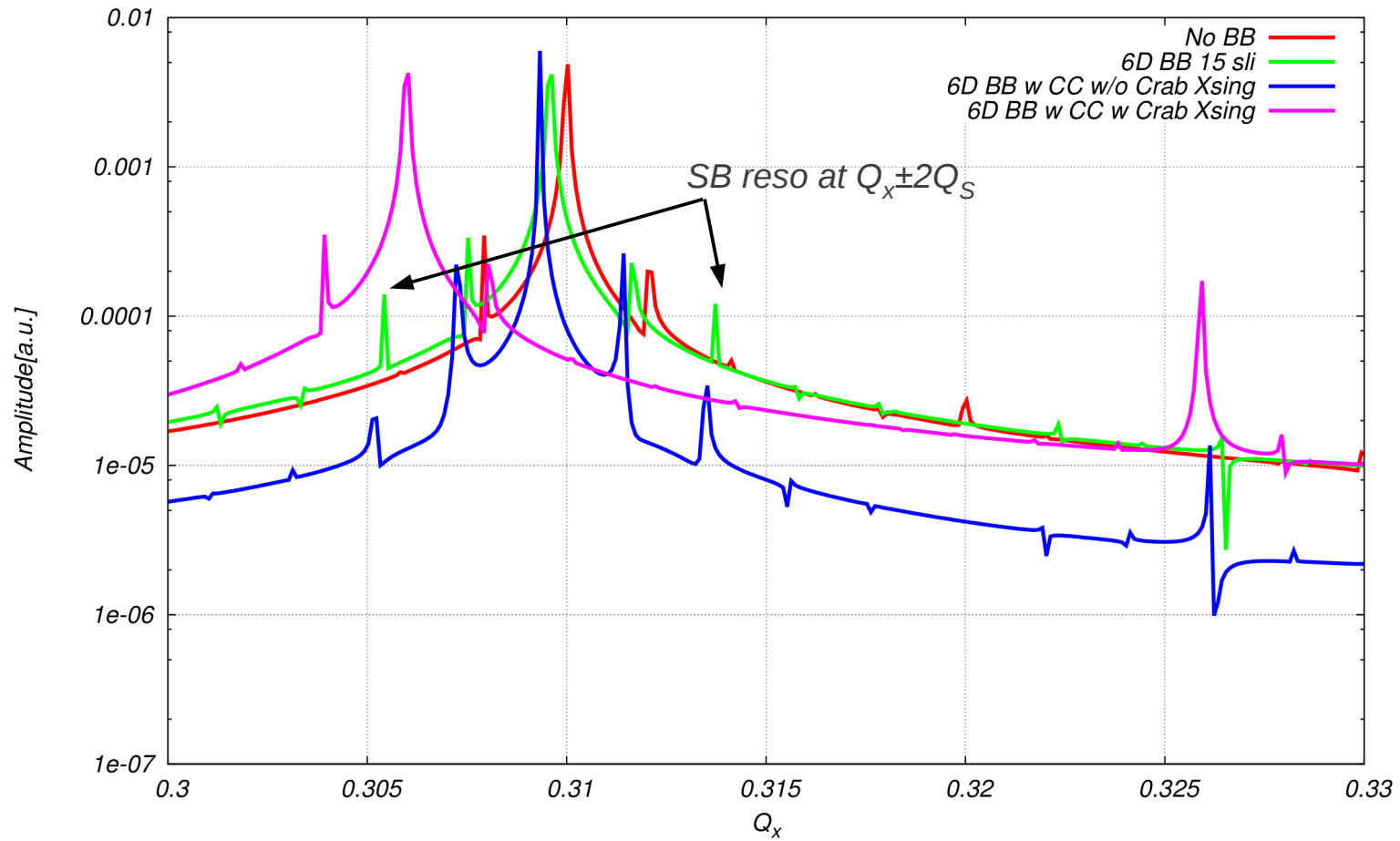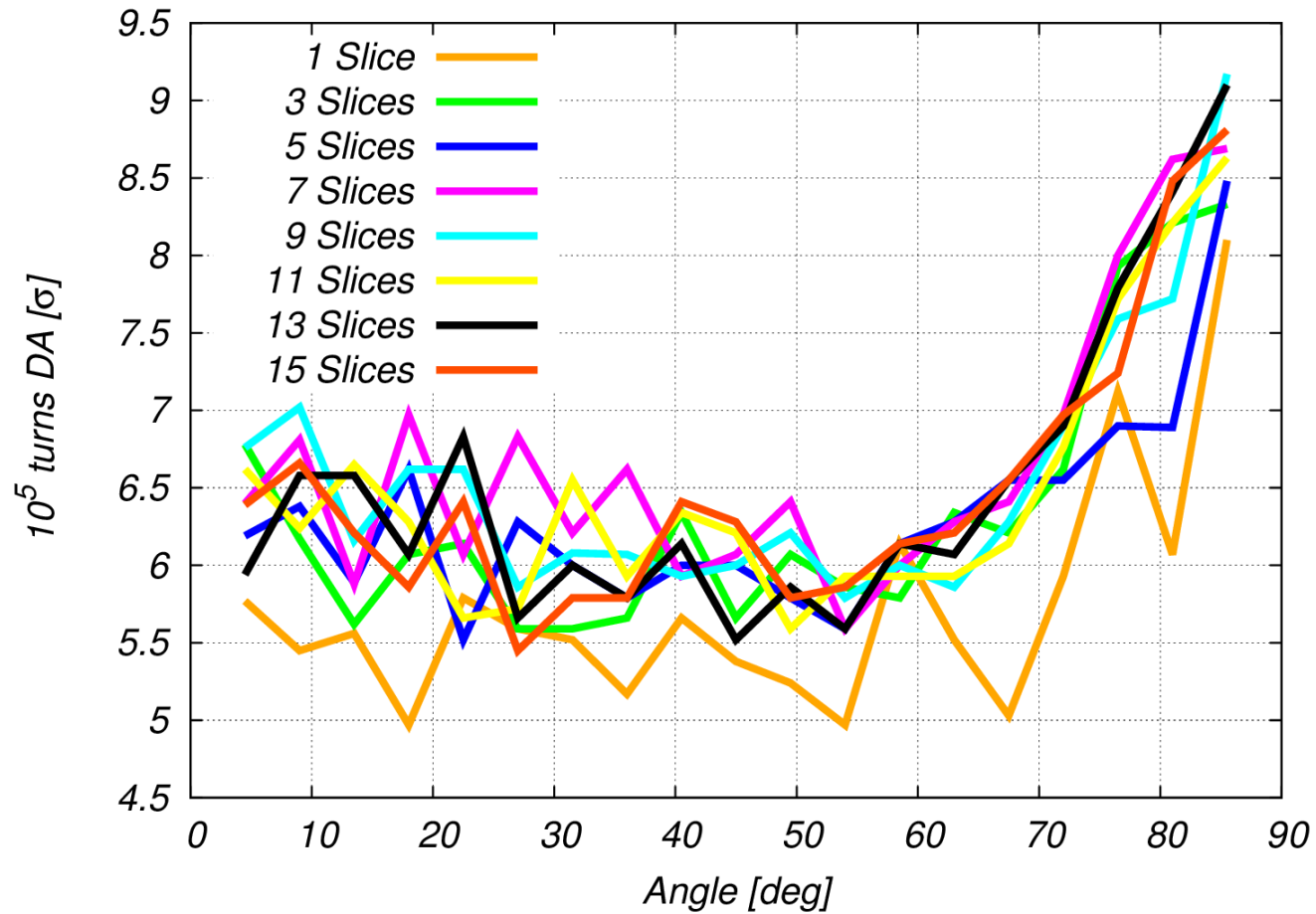
Crab crossing.

Check SB Resonances

SB reso at $Q_x \pm 2Q_S$

Legend:
- No BB
- 6D BB 15 sli
- 6D BB w CC w/o Crab Xsing
- 6D BB w CC w Crab Xsing

Amplitude[a.u.] vs Q_x

Check DA vs #slices

β^*=10cm. θ=720μrad. I=2.2 10^{11} ppb. Case without errors (seed #1). 10^5 turns.

Check DA vs #slices

β*=10cm. θ=720μrad. I=2.2 10^{11} ppb. Case with errors (seed #1). 10^5 turns.

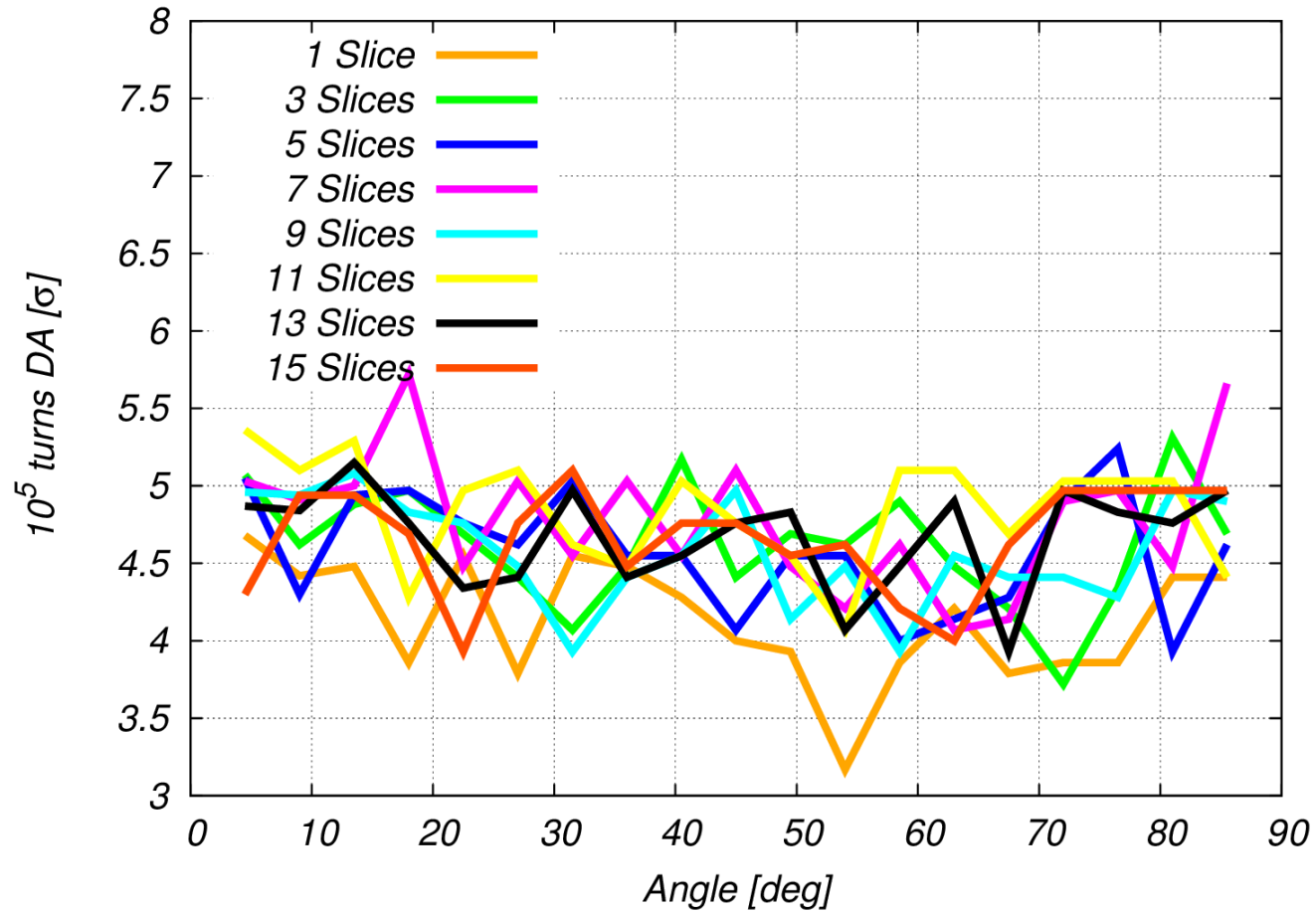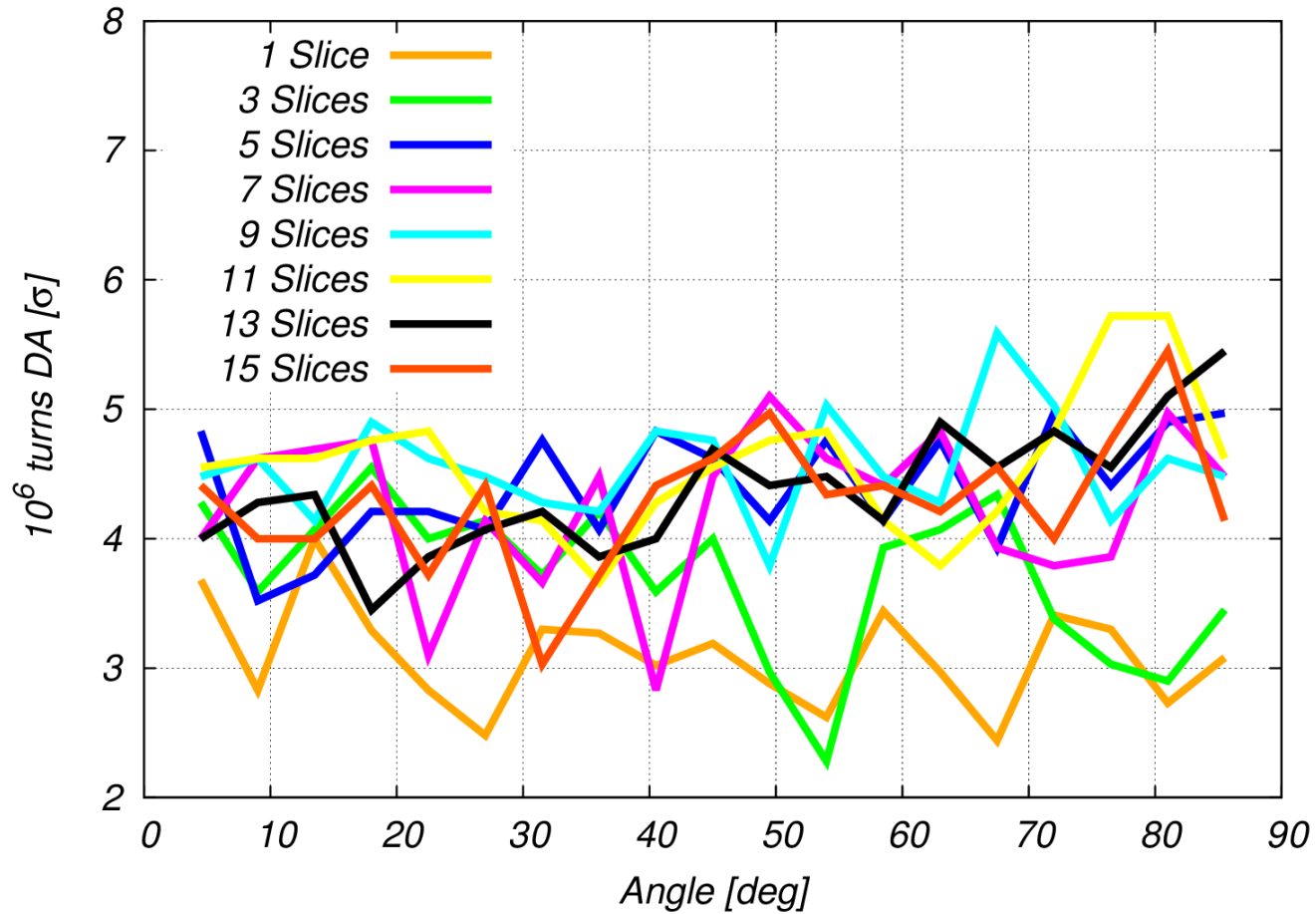# Check DA vs #slices

β^*=10cm. θ=720µrad. I=2.2 10^{11} ppb. Case without errors (seed #1). 10^6 turns.

Check DA vs #slices

β*=10cm. θ=720µrad. I=2.2 10^{11} ppb. Case with errors (seed #1). 10^6 turns.