

TDIS change of parking: aperture considerations for protons

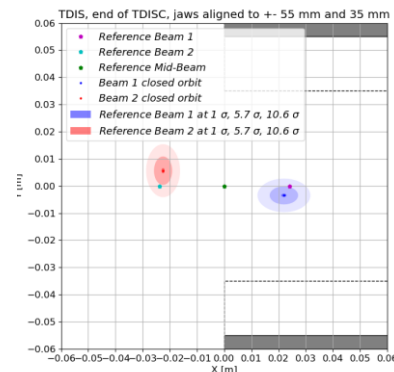
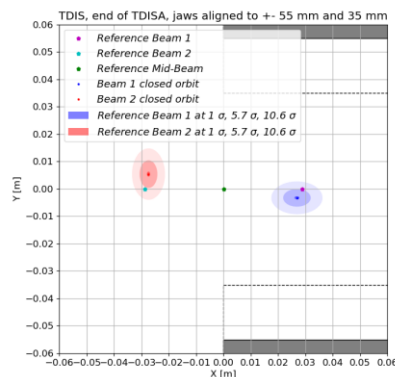
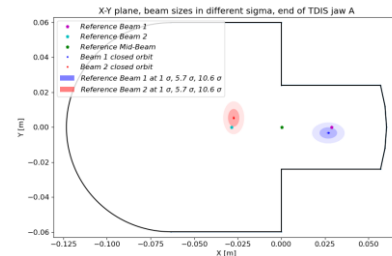
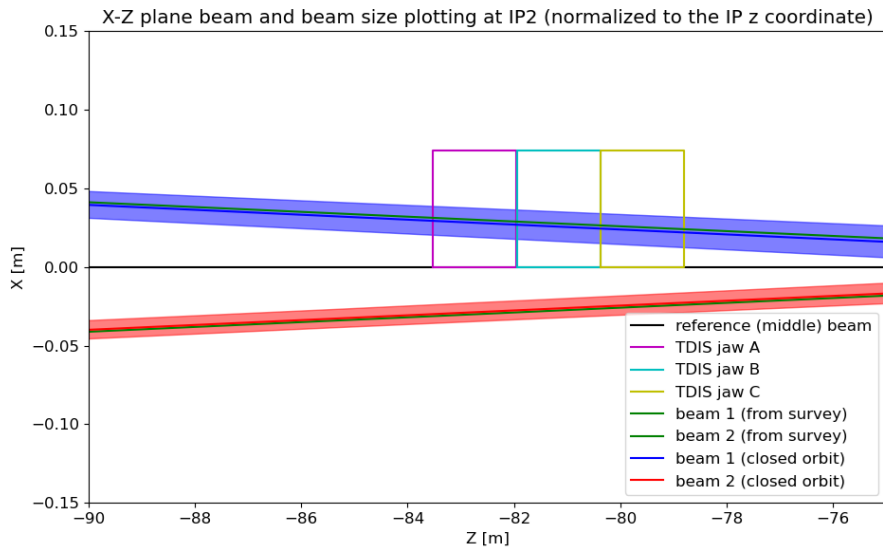
S. Lampaki, R. De Maria

TDIS Point 2

Injection optics, $\beta^*=10$ m

Crossing: 170 μ rad V, Separation: -3.5 H

Angular offset: 40 μ rad H



Tip of jaw, closer to Beam 1 and 2, but not significantly so.

At flat top, emittance reduces, and β^* stays the same, larger aperture margin in other configurations.

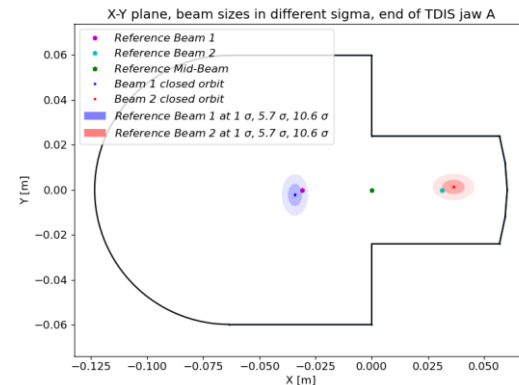
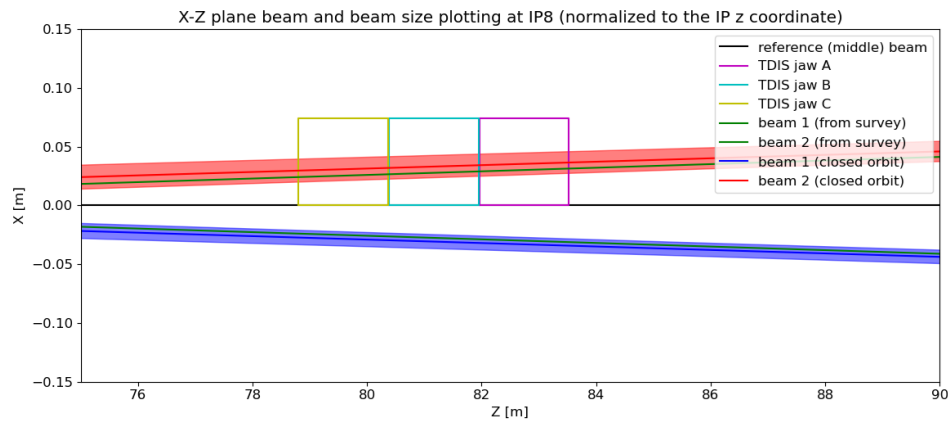
TDIS Point 8

Injection optics: $\beta^* 10\text{m}$

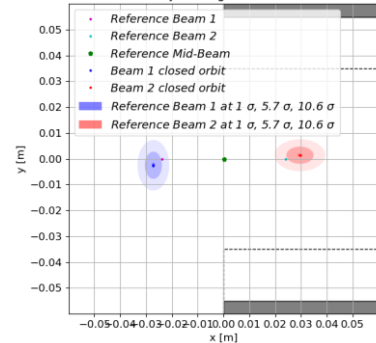
Crossing: -170 murad H ,

Separation: -3.5 V

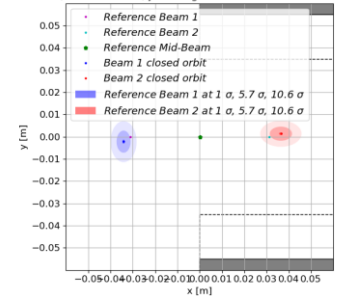
Angular offset: -40 murad V



TDIS, start of TDISC, jaws aligned to $\pm 55\text{ mm}$ and 35 mm



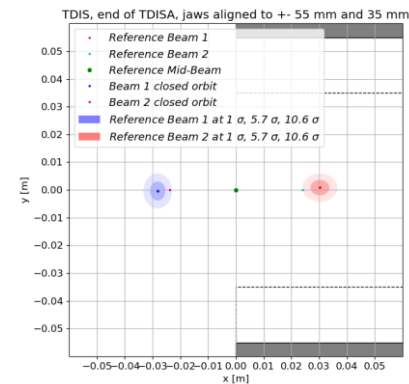
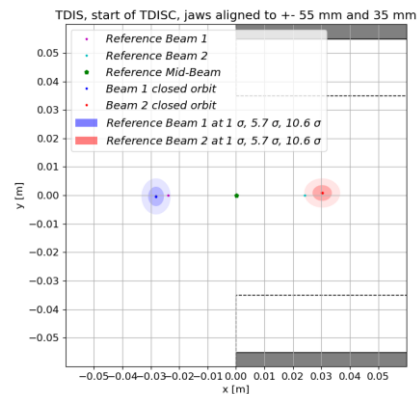
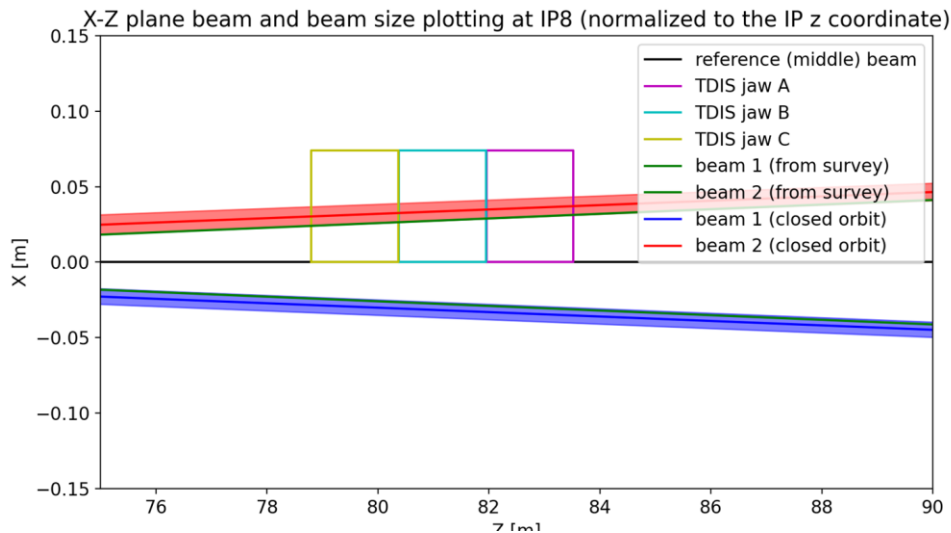
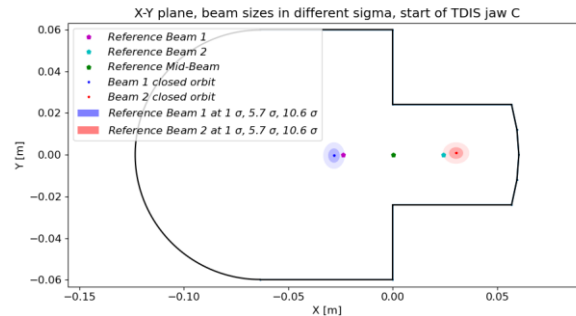
TDIS, end of TDISA, jaws aligned to $\pm 55\text{ mm}$ and 35 mm



Tip of jaw closer to Beam 1 and 2, but not significantly so.

TDIS Point 8

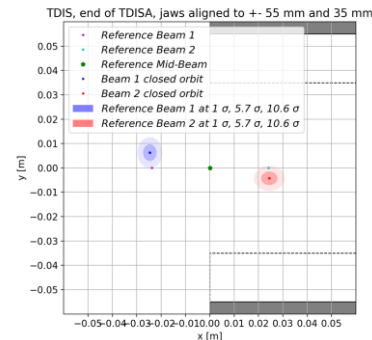
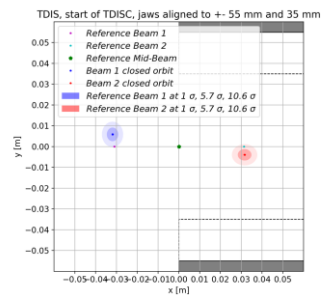
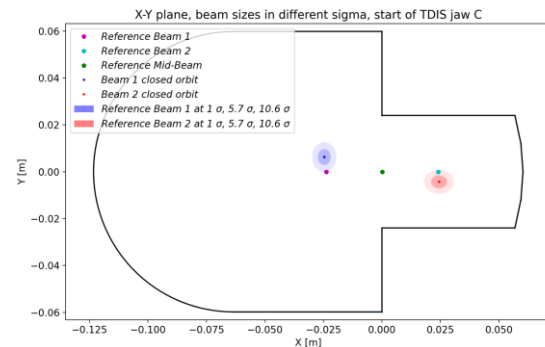
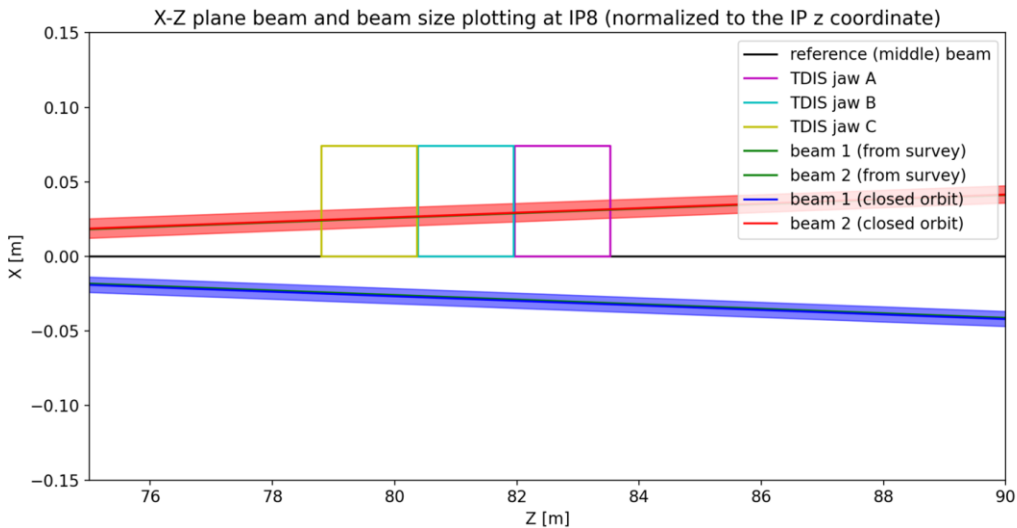
pp 6.8 TeV $\beta^*=2.0\text{m}$
Crossing: -200 μrad H,
Separation: -1.0 V
Angular offset: 0 μrad V



Tip of jaw closer to Beam 1 and 2, but not significantly so.

TDIS Point 8

pp 6.8 TeV $\beta^*=2.0\text{m}$
Crossing: 200 μrad V,
Separation: -1.0 H
Angular offset: 0 μrad H



Tip of jaw closer to Beam 1 and 2, but not significantly so.

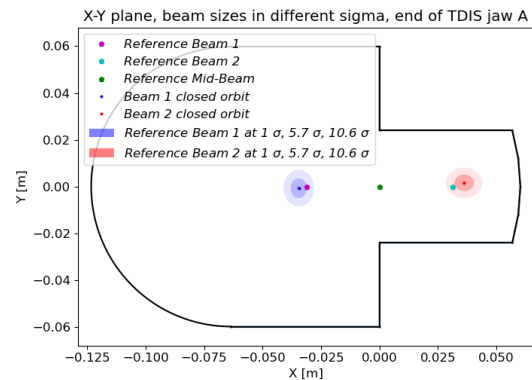
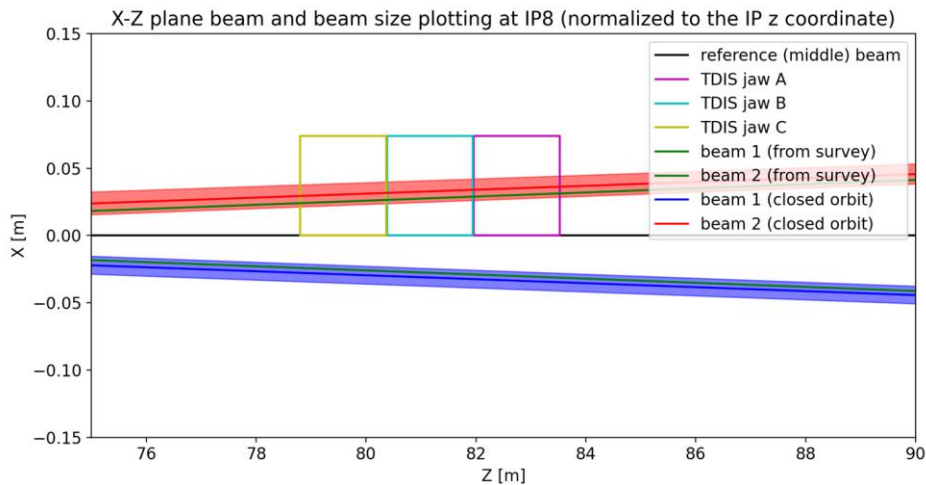
TDIS Point 8

(2023) pp Ref 2.68 TeV $\beta^*=3.1\text{m}$

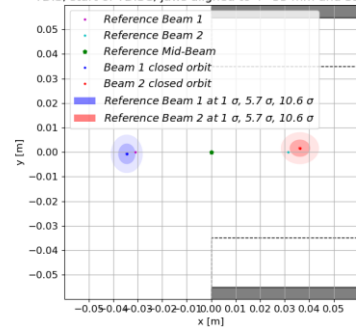
Crossing: -170 μrad H,

Separation: -2.0 V

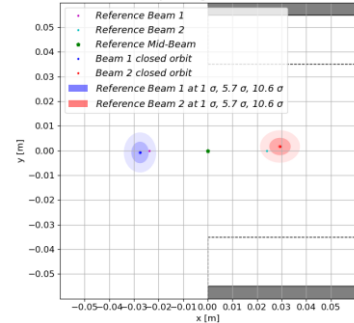
Angular offset: 0 μrad H



TDIS, start of TDISC, jaws aligned to +- 55 mm and 35 mm



TDIS, end of TDISA, jaws aligned to +- 55 mm and 35 mm



Tip of jaw closer to Beam 1 and 2, but not significantly so.