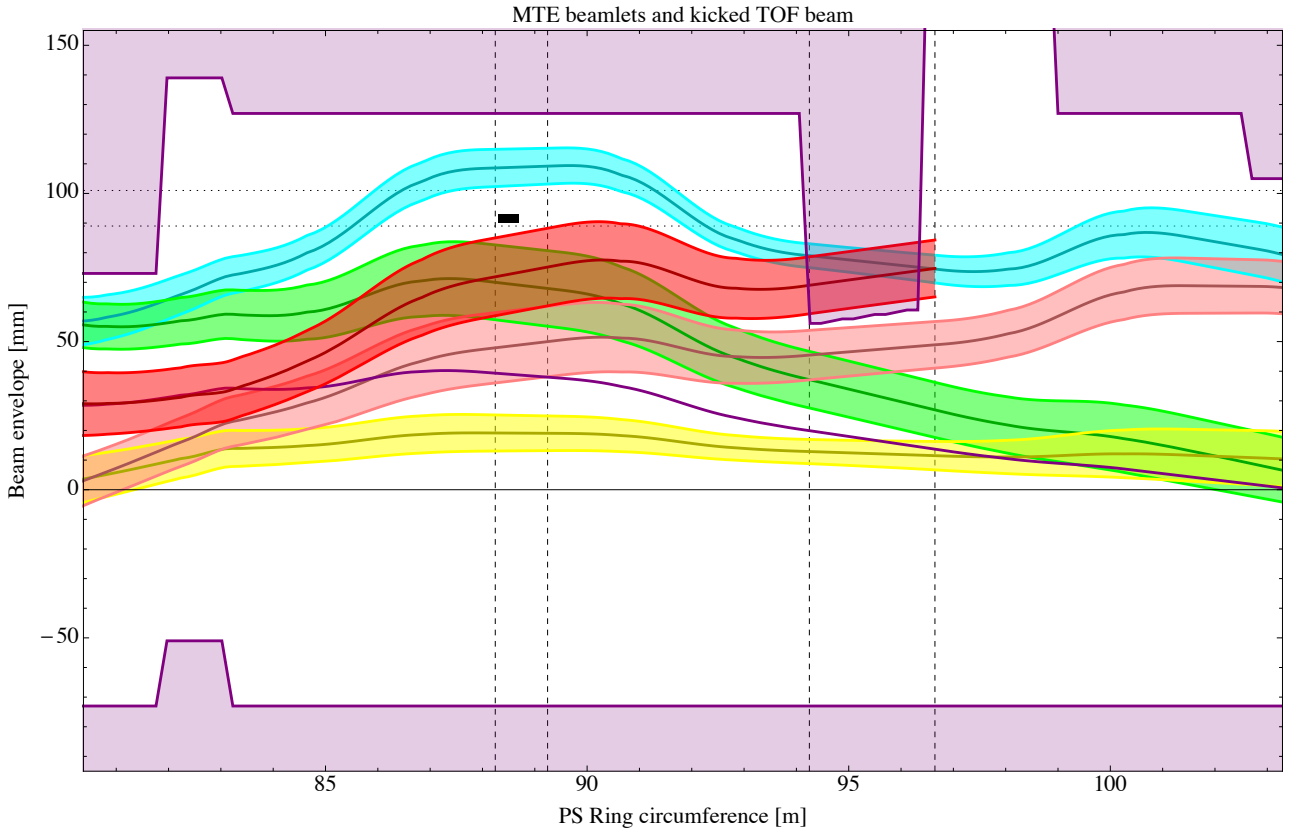
Aperture and geometry for the dummy septum in SS15

29/03/2012



C. Hernalsteens, M. Giovannozzi, and S. Gilardoni

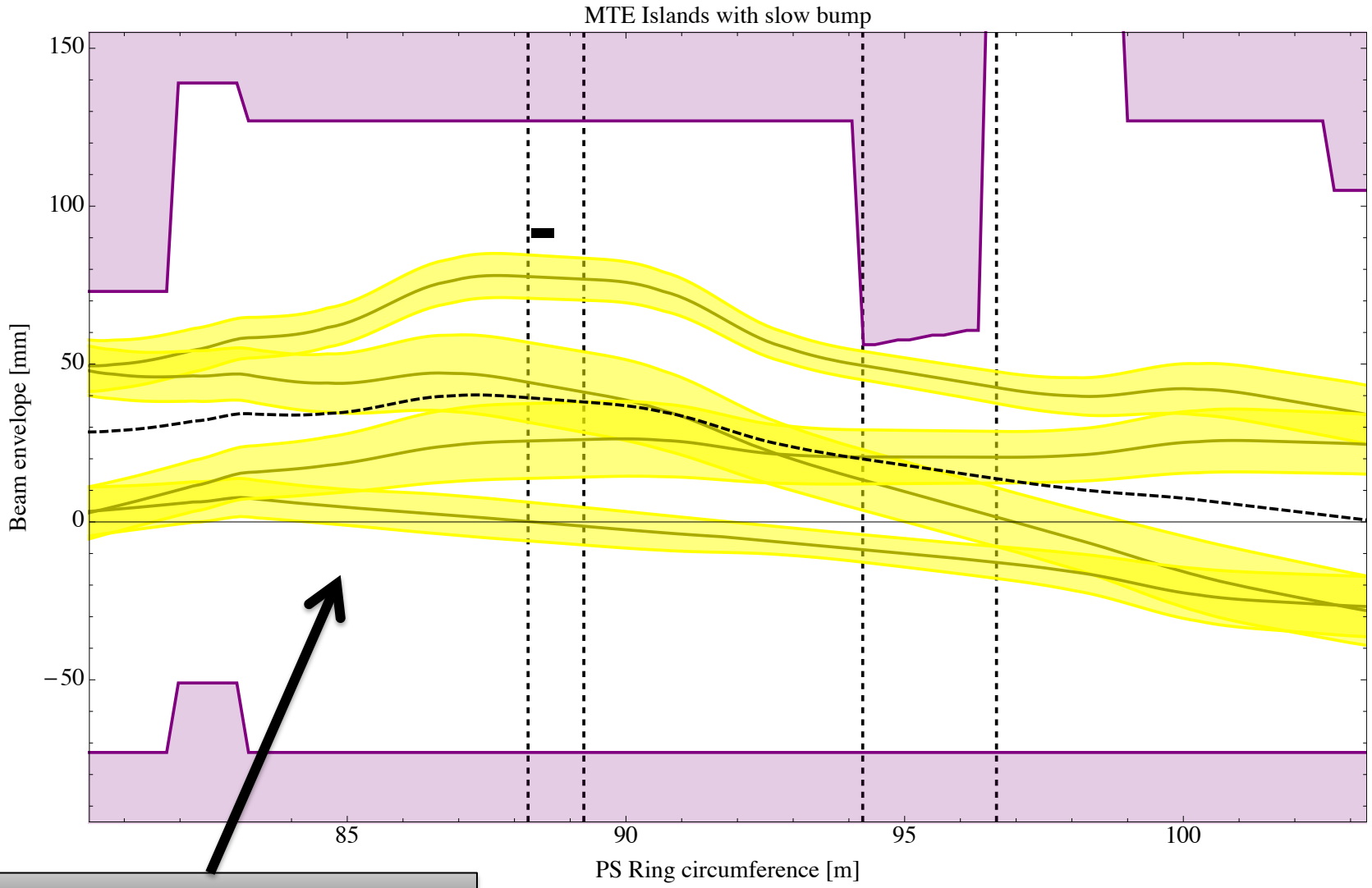
Beam envelopes

- Envelopes are computed using

Delta P / P	0.3 E-3
Emittance 1 sigma core	0.4 microns
Emittance 1 sigma islands	0.35 microns

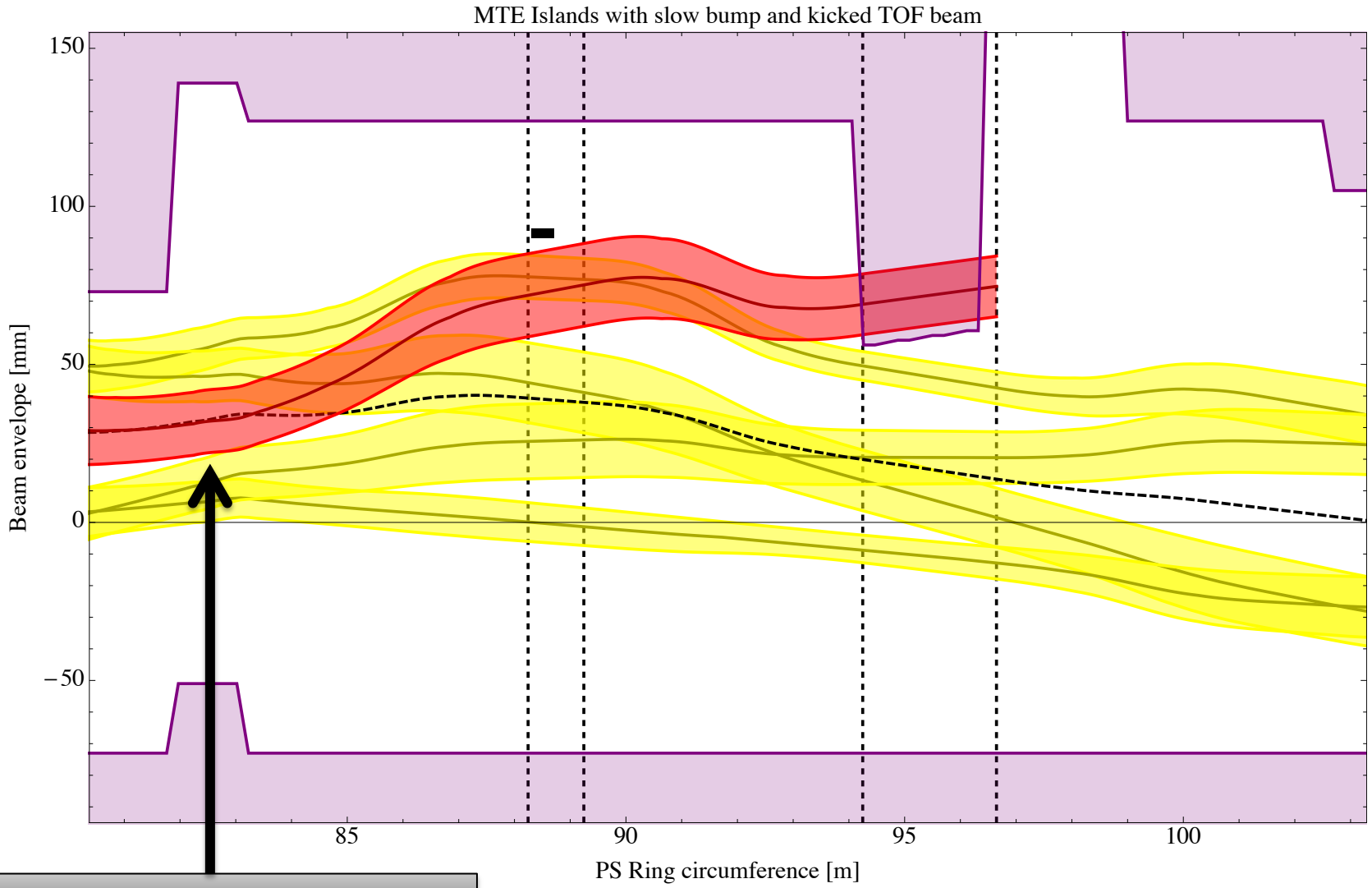
- Optical parameters are computed with PTC, for the islands and for the core

Aperture around SS15



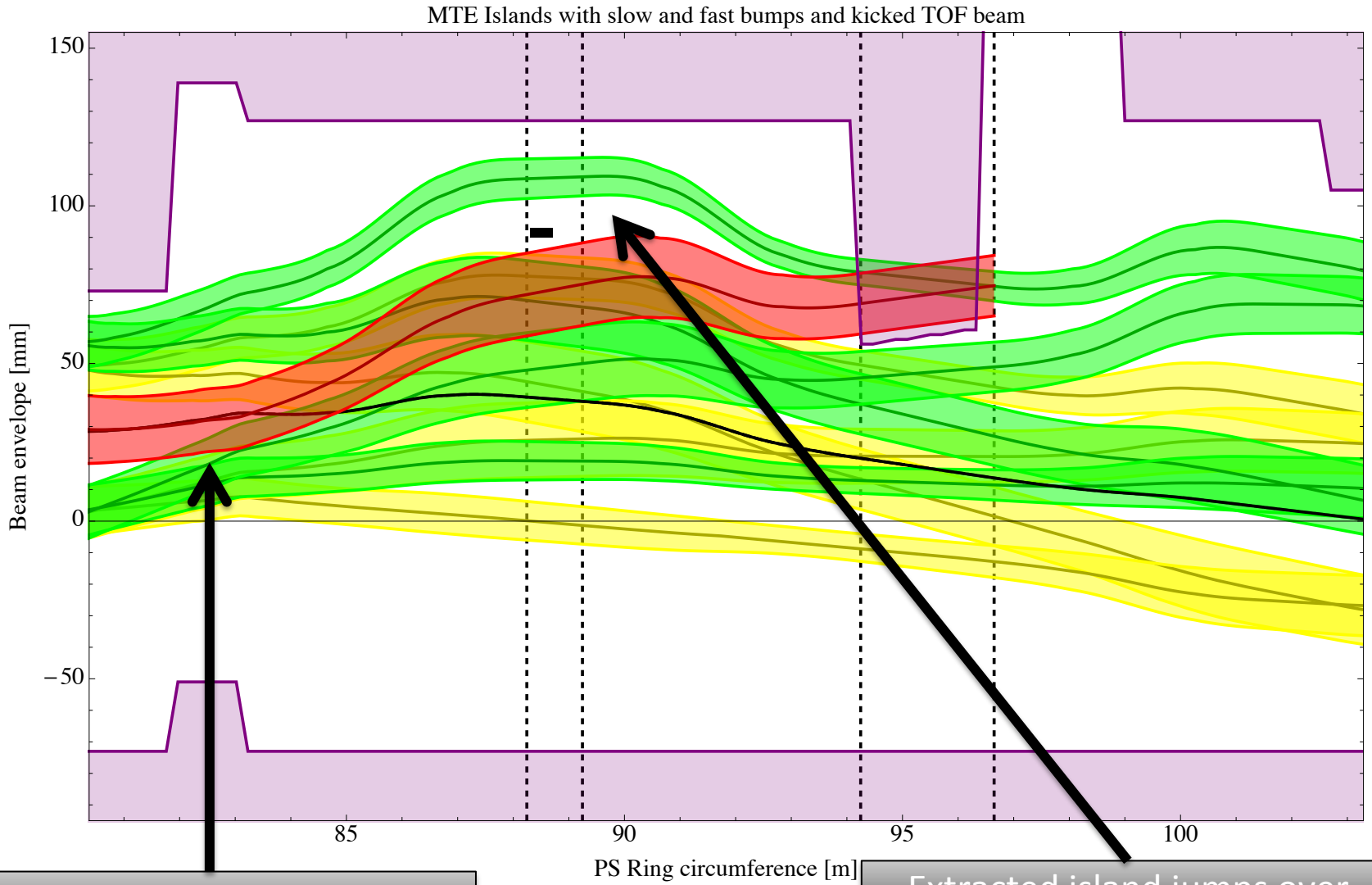
Circulating islands

Aperture around SS15



Kicked TOF beam

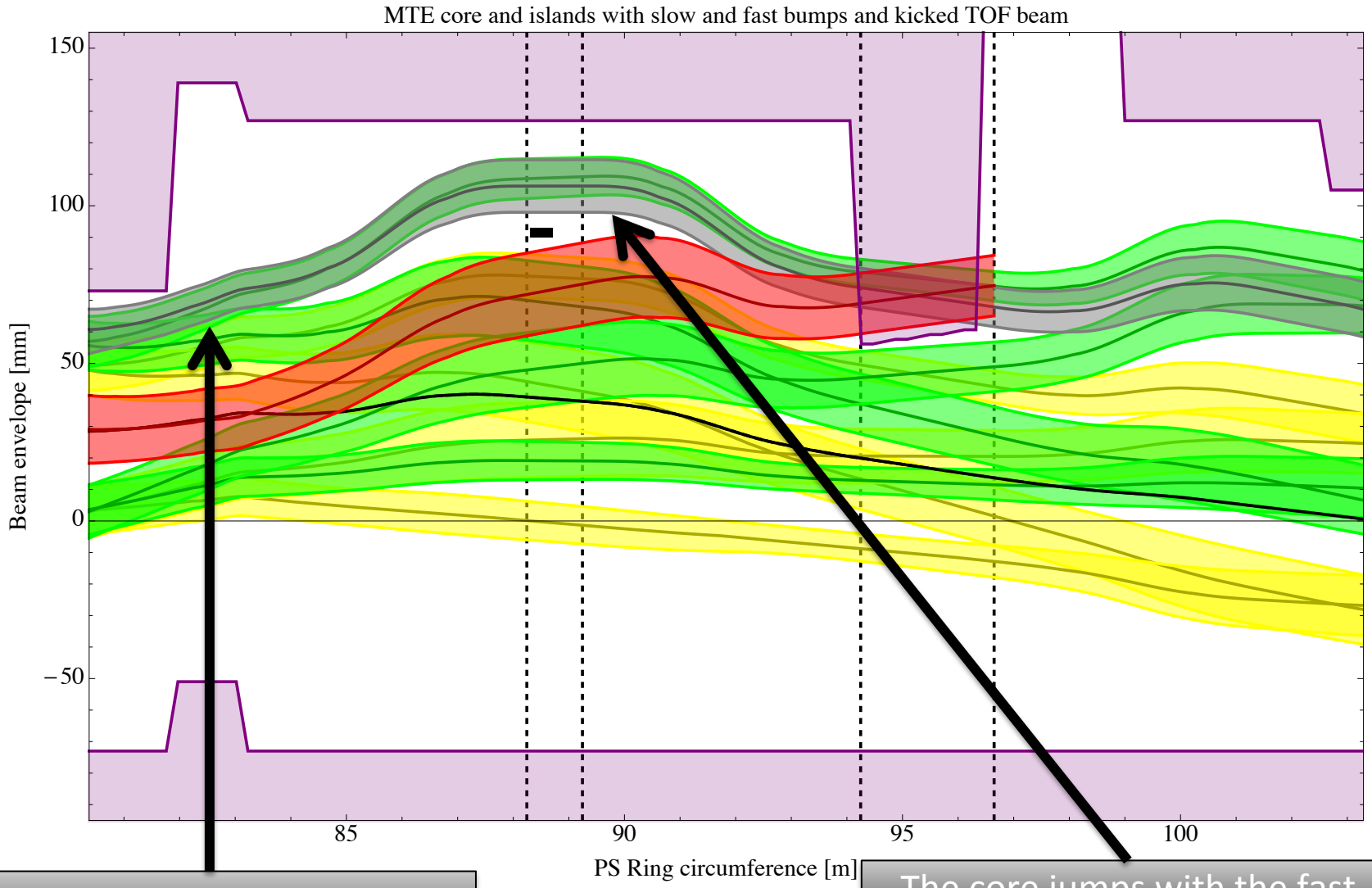
Aperture around SS15



Islands with fast bump

Extracted island jumps over the blade

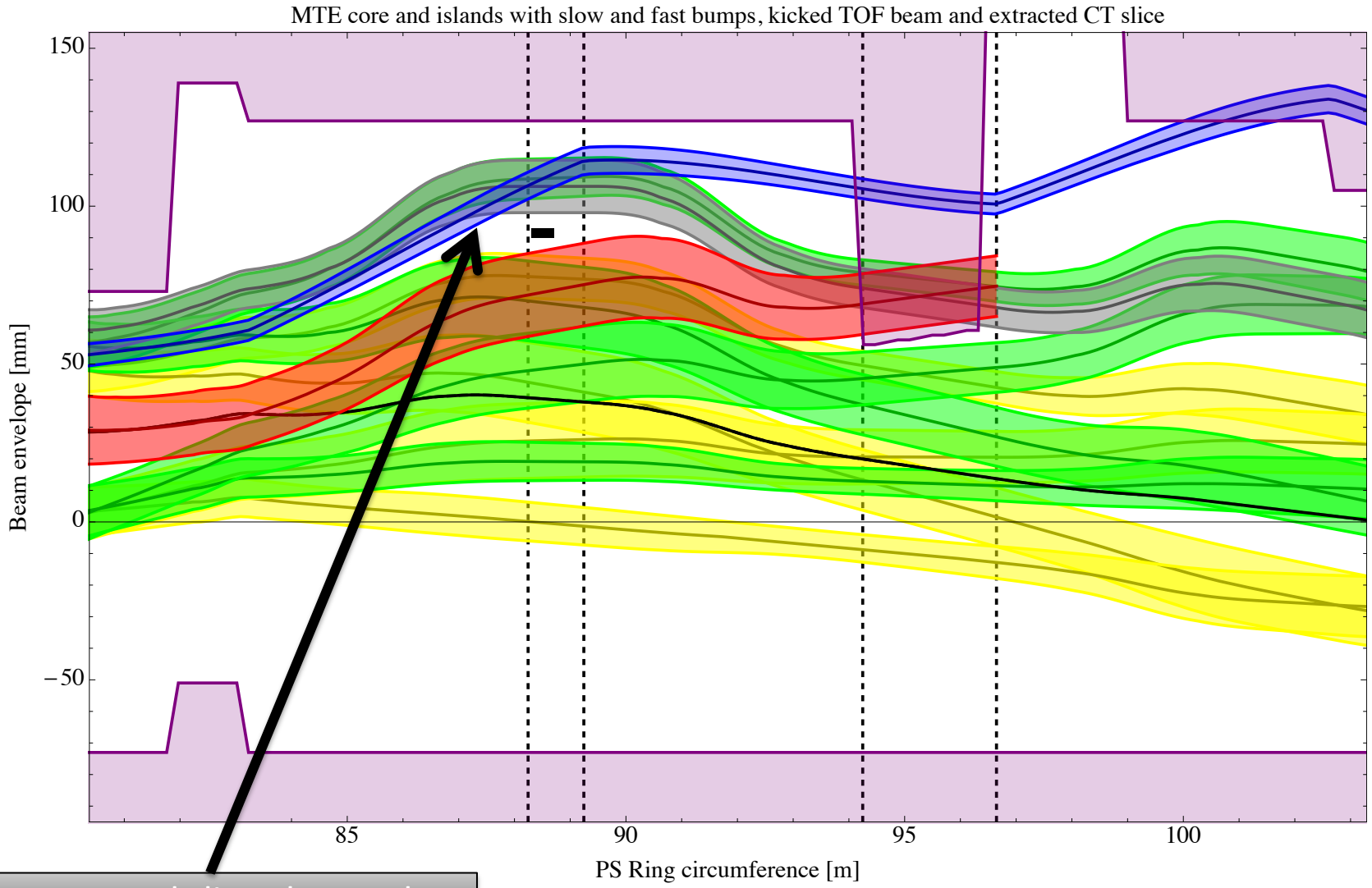
Aperture around SS15



MTE core (fifth turn)

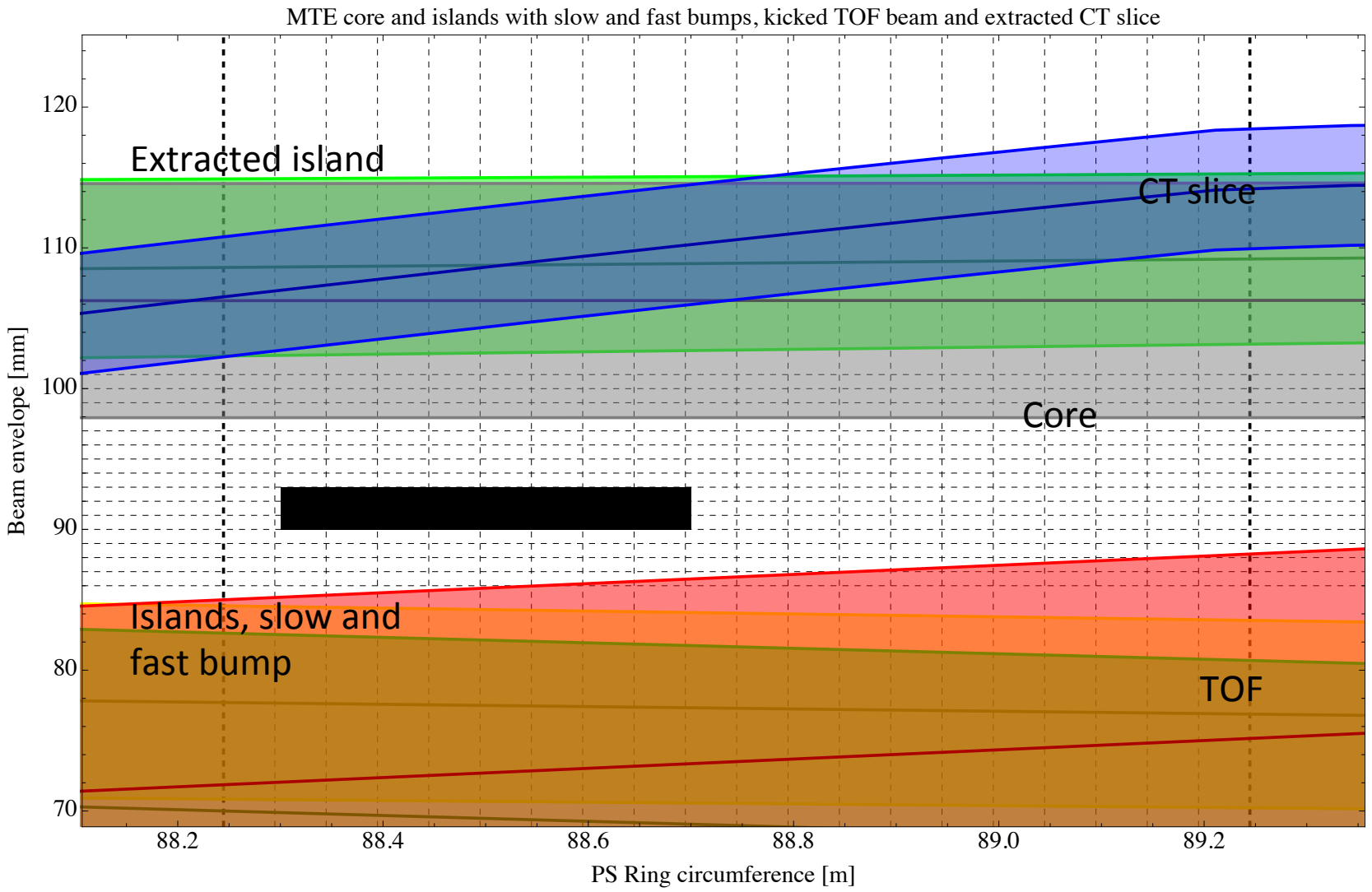
The core jumps with the fast kick (KFA71/79 and KFA04)

Aperture around SS15

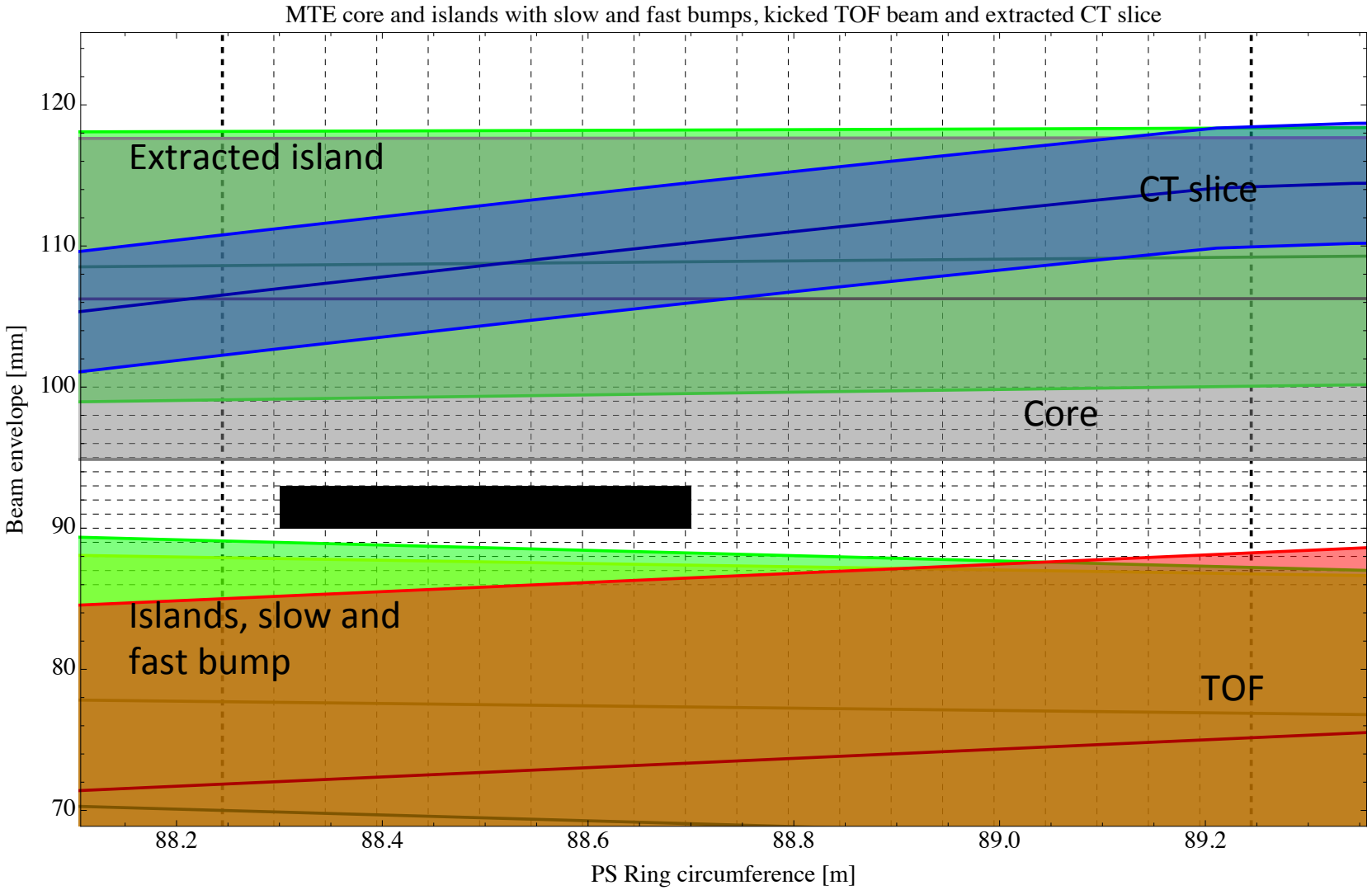


CT extracted slice also on the outside

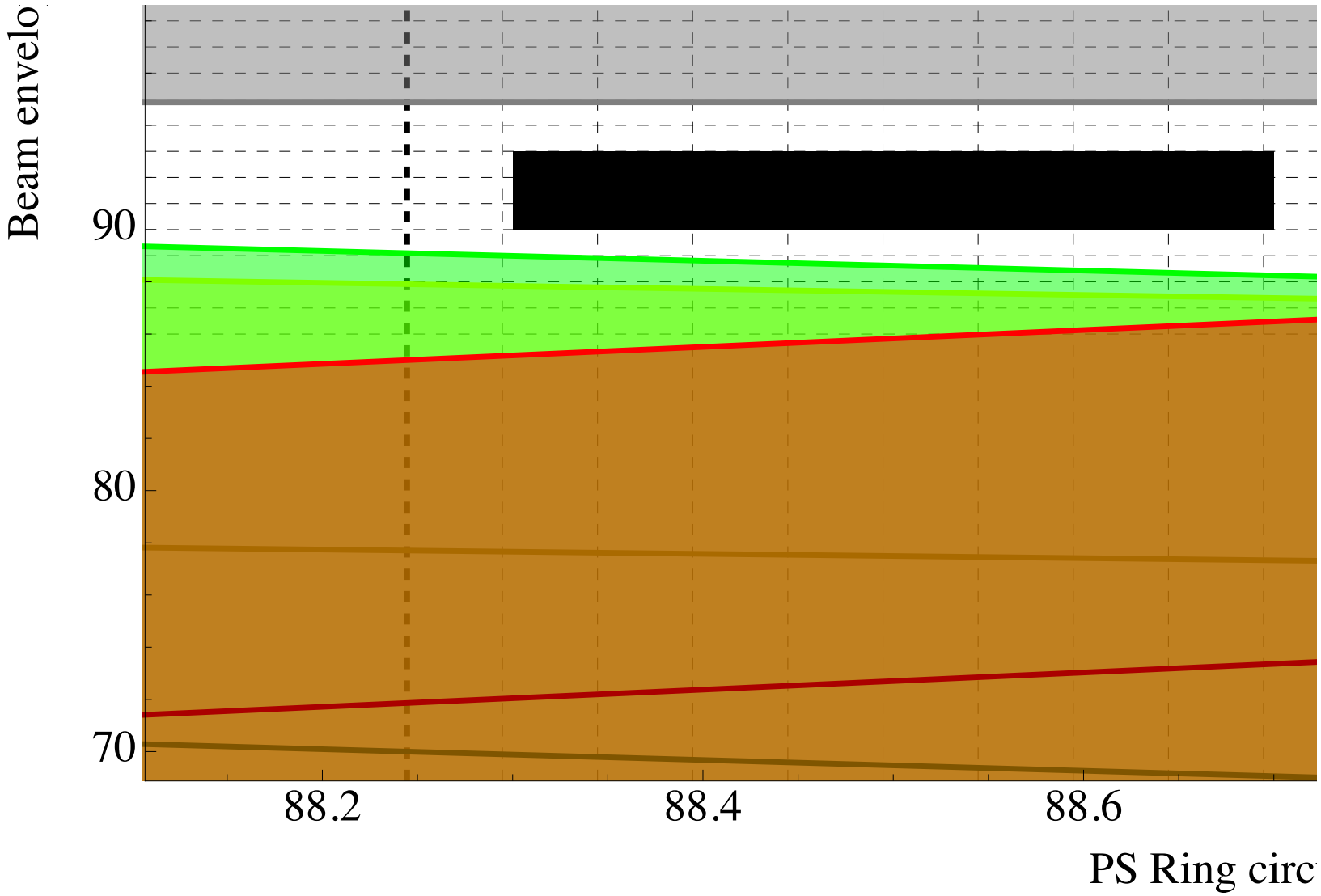
Geometry in SS15



Geometry in SS15



Geometry in SS15 (zoom)



Geometry and aperture data

Horizontal aperture

Location	Aperture (outside)	Aperture (inside)
SS14	139 mm	52 mm
MMU14	127.2 mm	71 mm
SS15	127.2 mm	71 mm
MMU15	127.2 mm	71 mm

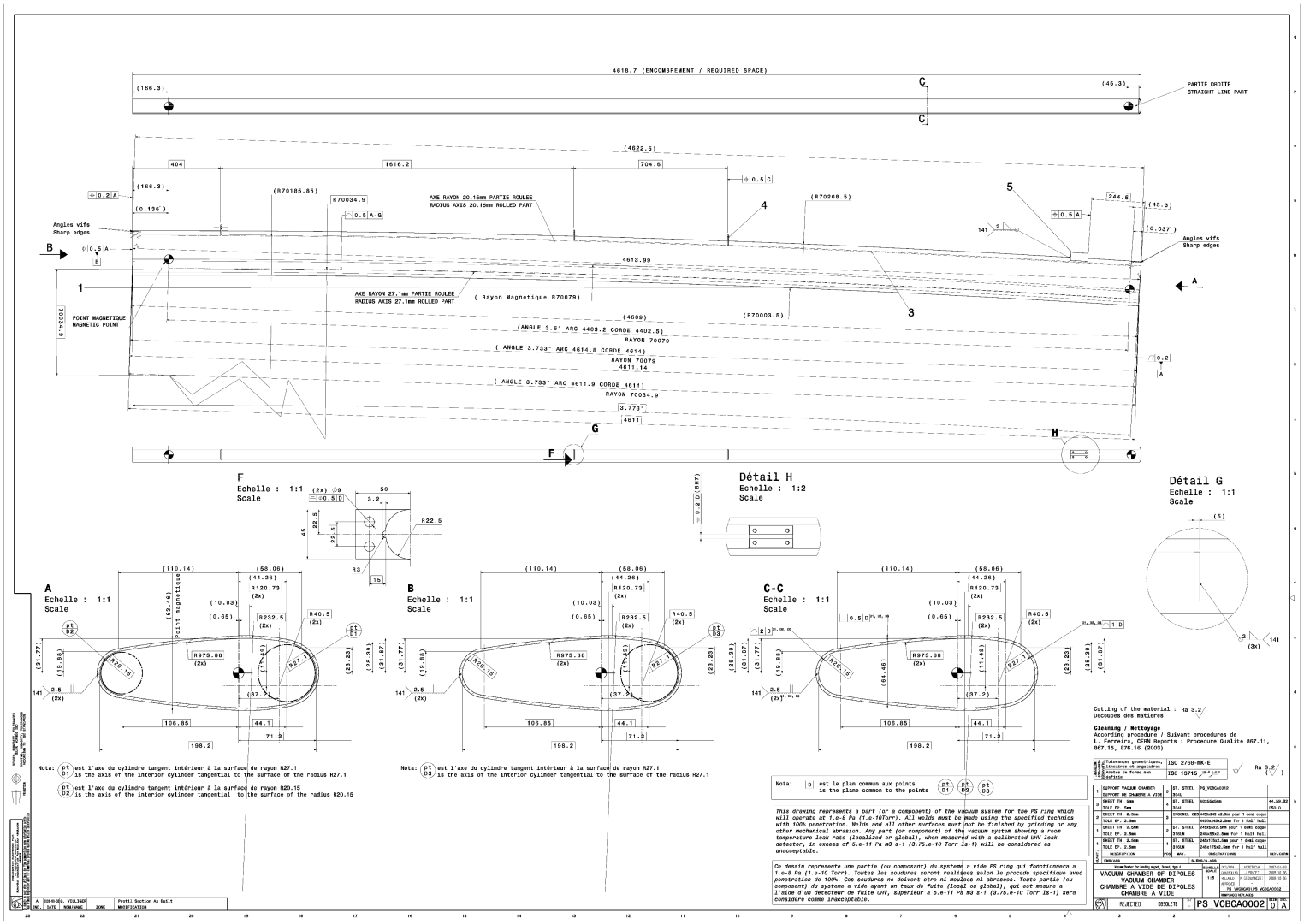
Vertical aperture

Location	Aperture (up)	Aperture (down)
SS14	35 mm	35 mm
MMU14	32 mm	32 mm
SS15	34 mm	34 mm
MMU15	32 mm	32 mm

Dummy septum blade

Length	400 mm
Width	3 mm
X position	90 mm

Aperture of MMU 14 and 15



Aperture of MMU 14 and 15