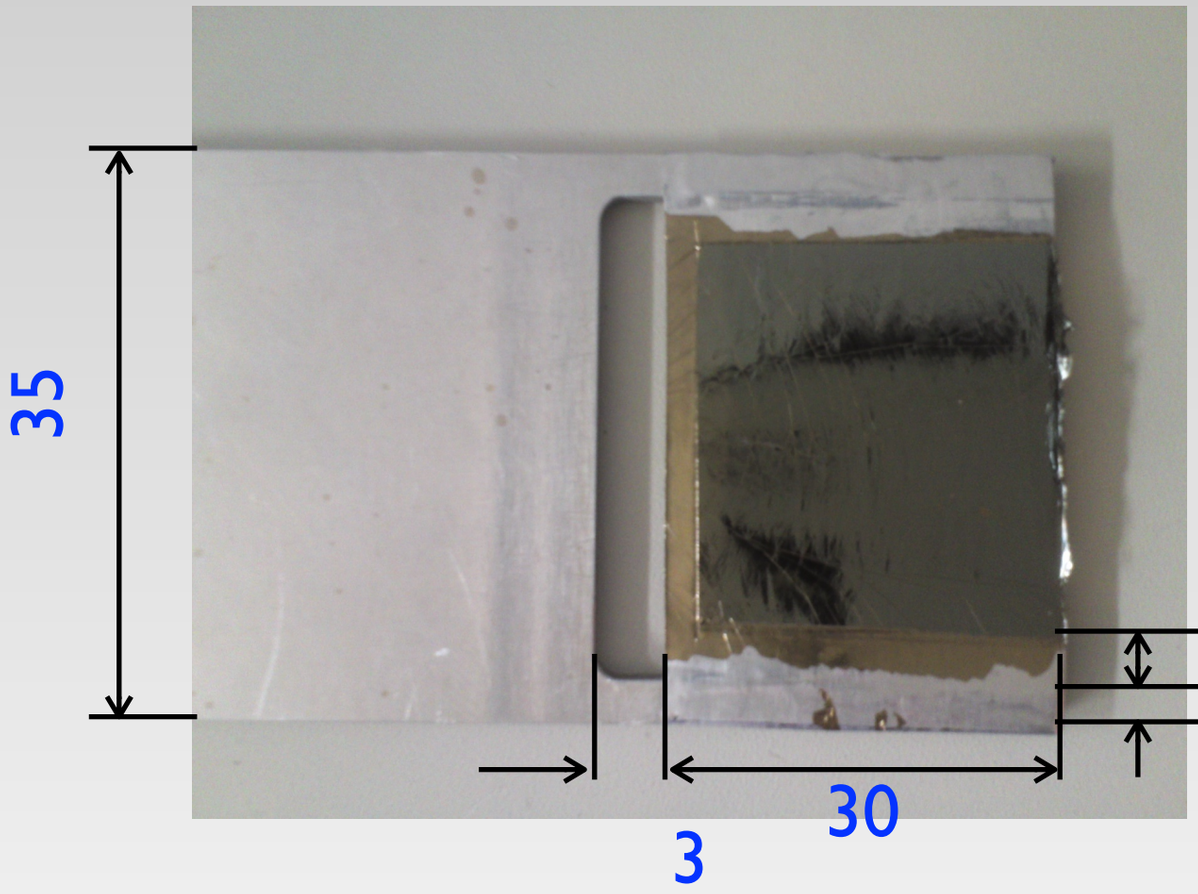
Informations for Analysis and others

1. Foil Geometry
2. Capacitance of S7 bunch monitor
3. Dispersions
4. Injection with COD
5. Machine schedule

8 May 2014 y.ishi

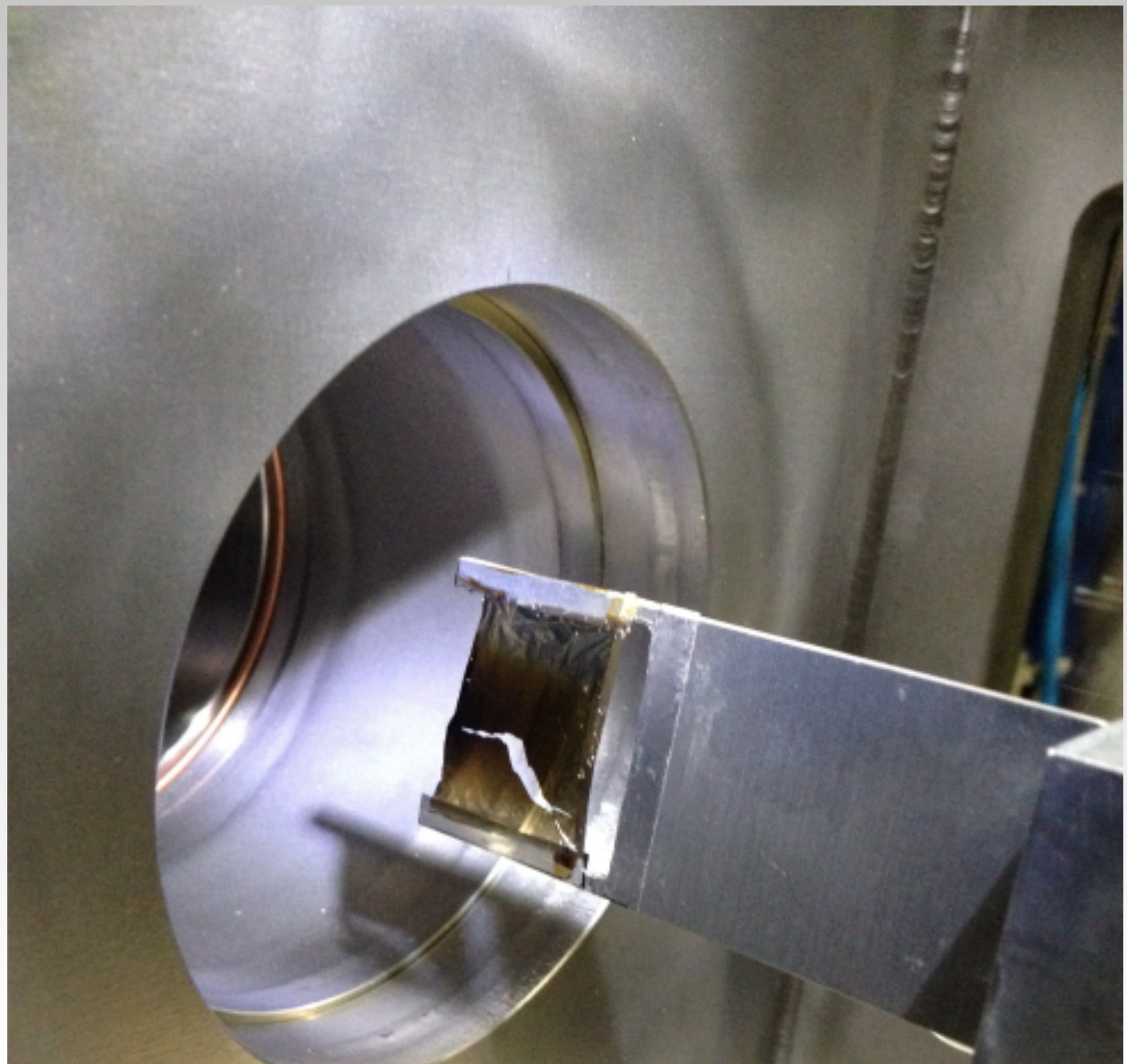
Foil frame geometry



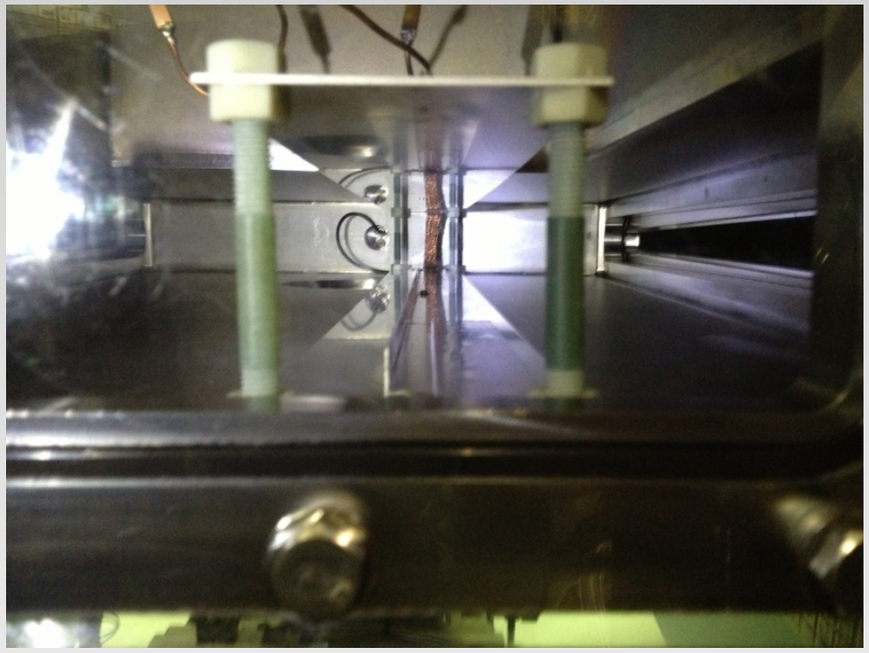
thickness of the frame : 2 mm

unit in mm

Current Shape of the Foil



bunch monitor capacitance



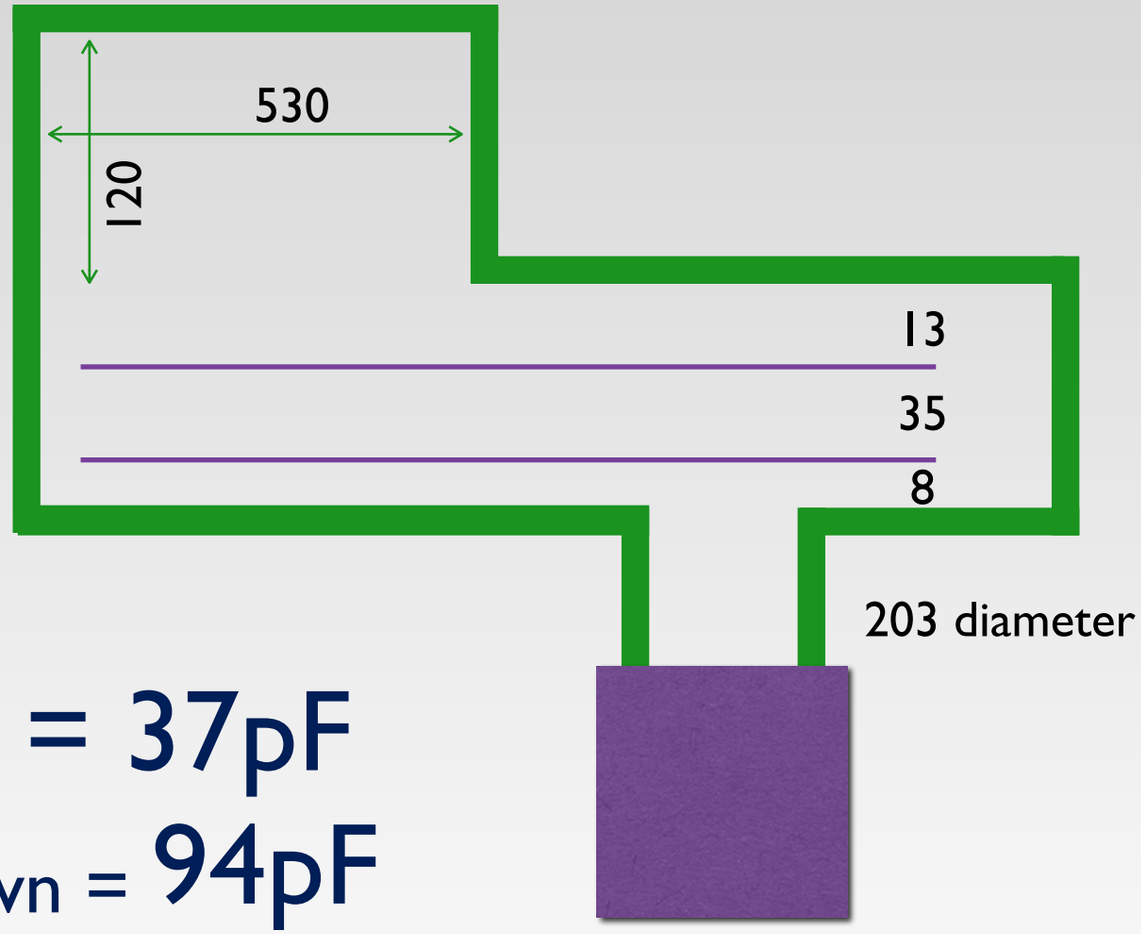


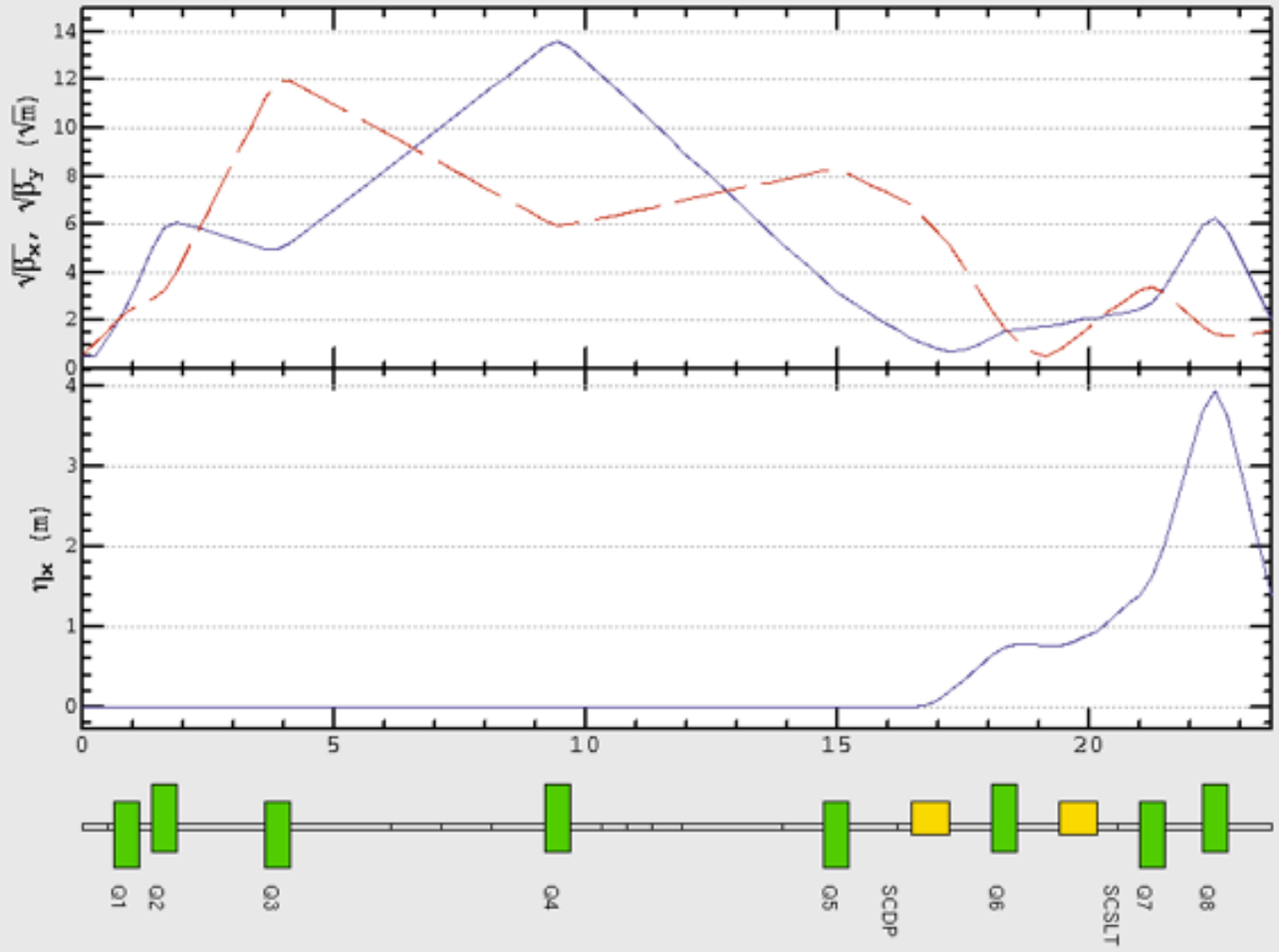
plate geometry
length 1000 mm
width 100 mm
thickness 2 mm

$C_{up} = 37pF$

$C_{down} = 94pF$

$C_{up} / C_{down} = 0.4$

Optics of 11MeV BEAM LINE

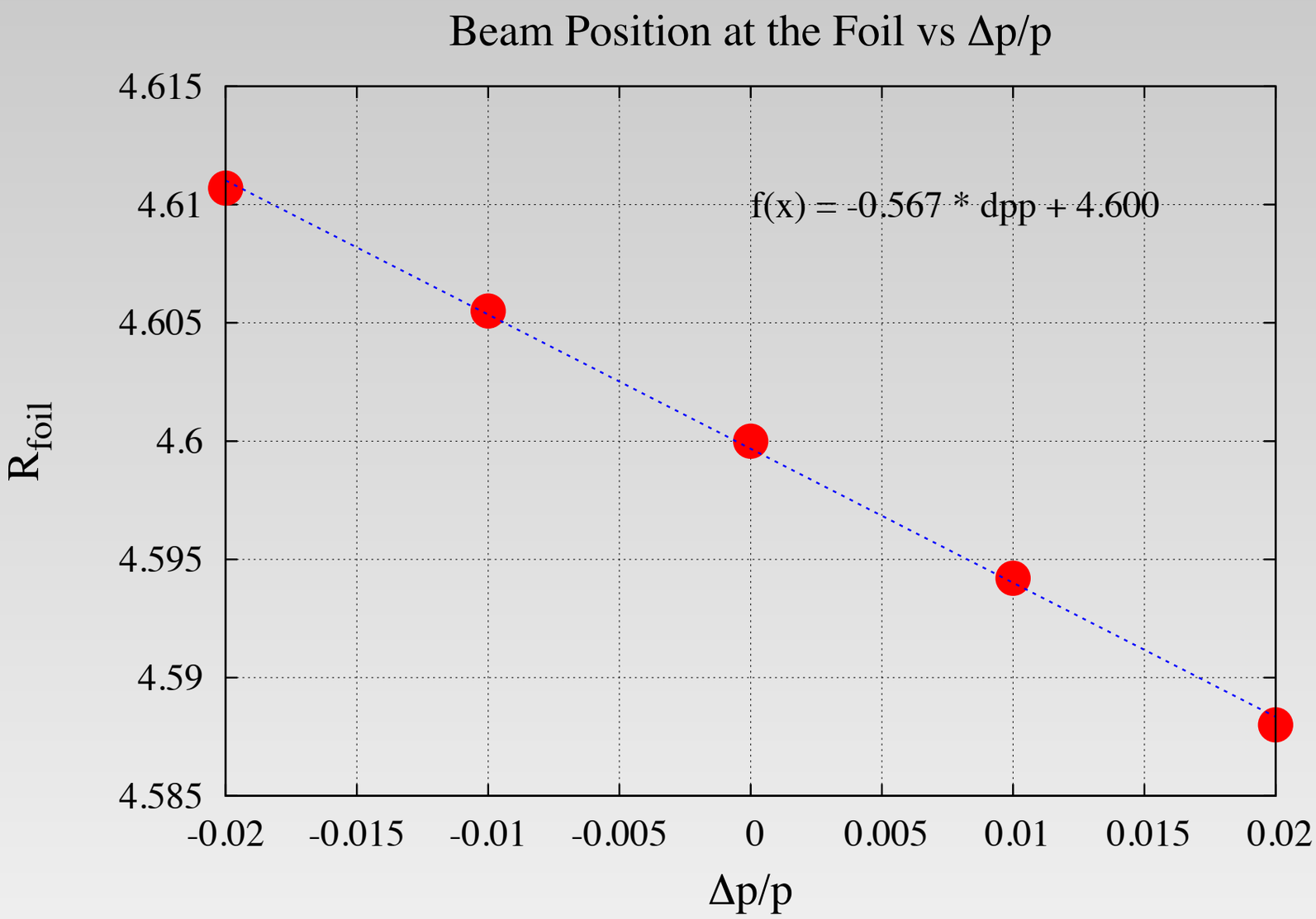


1. The matching conditions at the matching point for alpha and beta are determined by backward tracking from the closed orbit in the main ring.

2. Eta and Eta' are also determined by backward tracking with different momentum starting from the closed orbits for each momentum.

initial point =(alphax=1.40 betax=0.265 alphay=-0.867 betay=0.325 ex=0 epx=0)

matching point =(alphax=8.41 betax=4.22 alphay=-0.69 betay=2.63 ex=1.38 epx=-2.5) 6m from the machine center

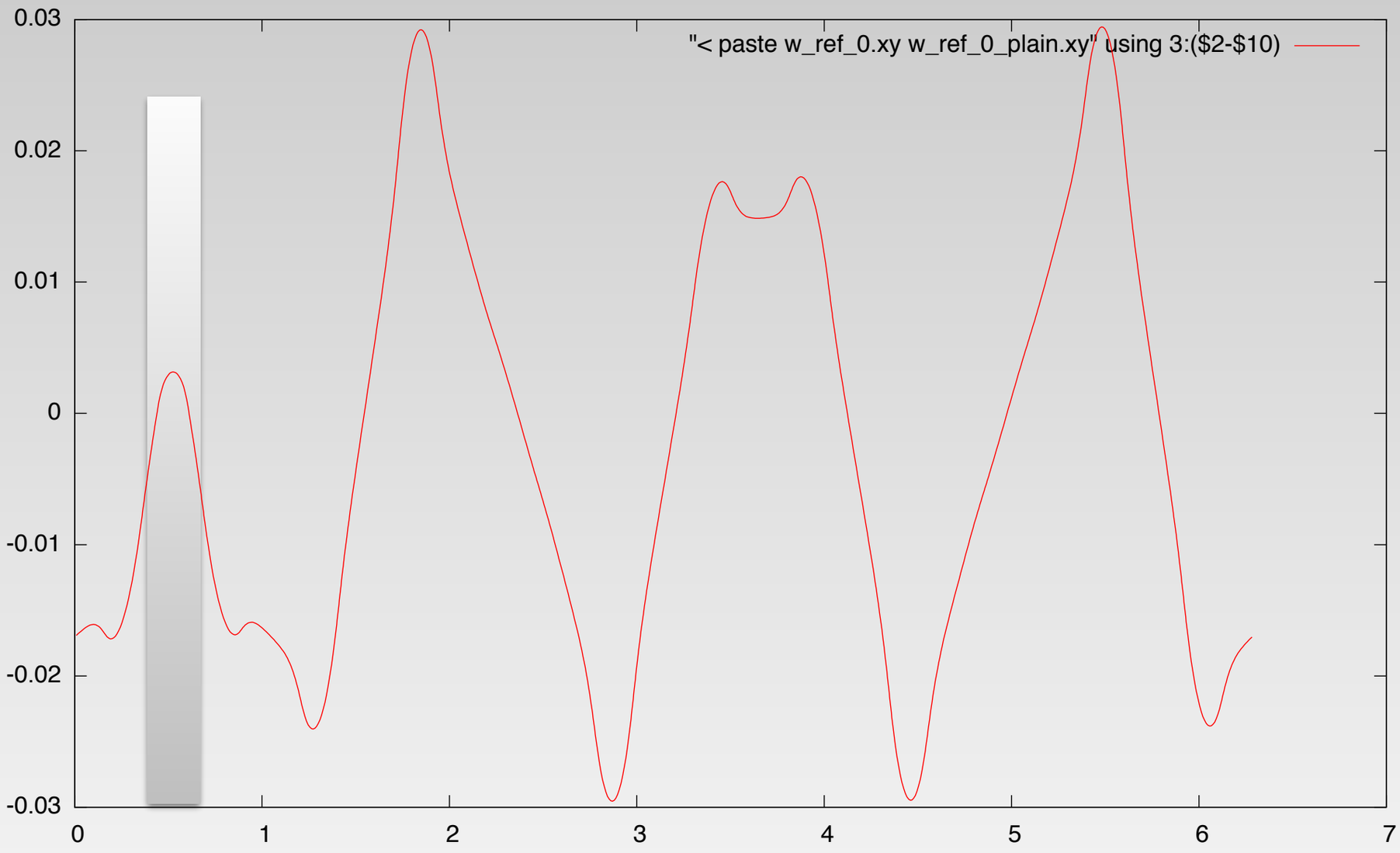


1. R position at the foil of H- particle launched from the matching point with different momentum.

2. In this study, Eta and Eta' are zero at the matching point.

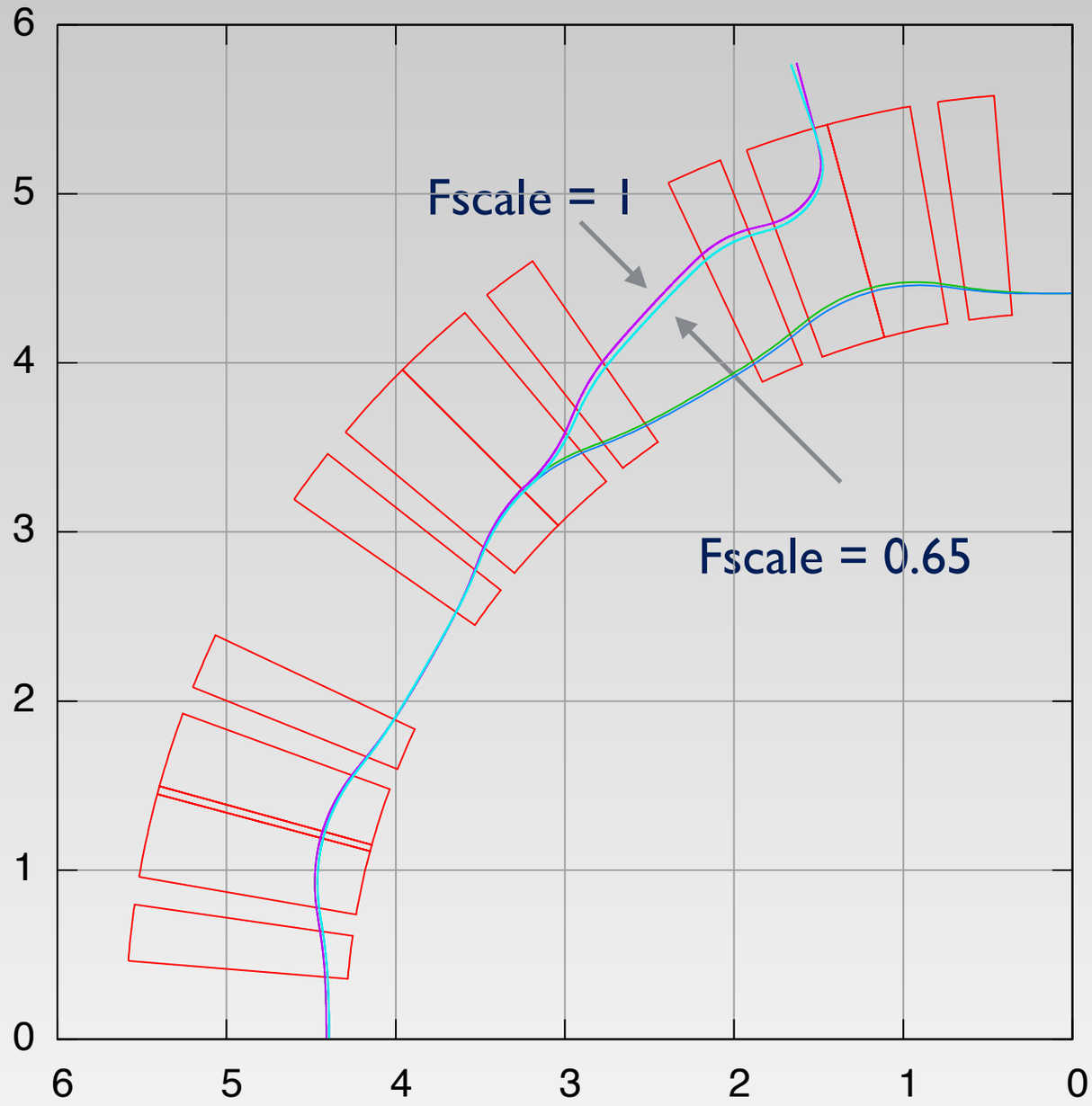
3. Eta at the foil is about -0.6m which is consistent with Uesugi-san's result -0.7m.

COD

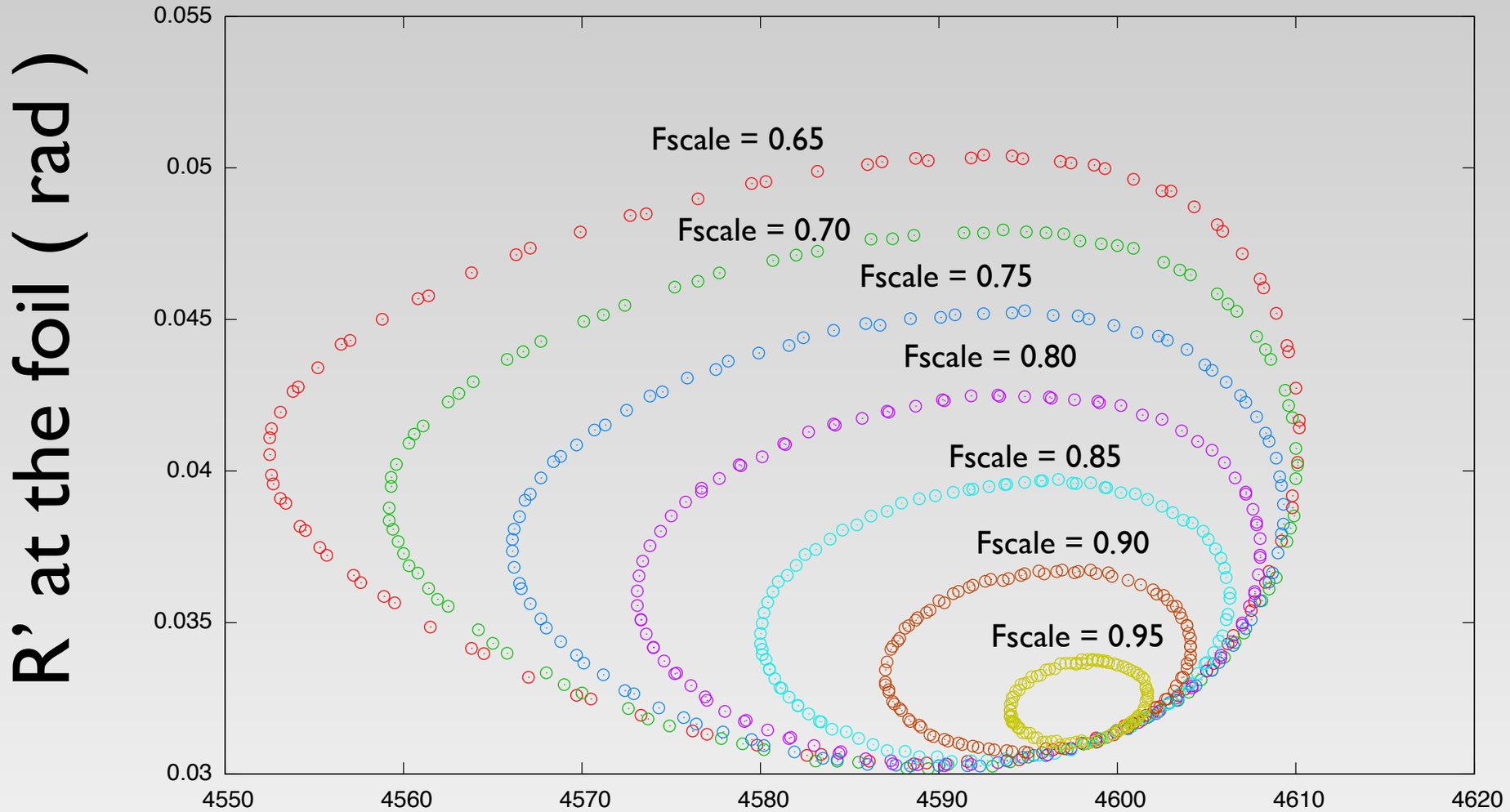


Magnetic field is scaled to imitate the absorption due to the cavity.
For this case, the scale factor is set to Fscale = 0.65.

Injection reference orbit with COD



Injection error due to COD



1. H - beam launched from the matching point with nominal conditions.
2. 100 turn tracking
3. Looking at the foil

machine schedule