

HL-LHC MD corrections and Dy from 60 deg MD

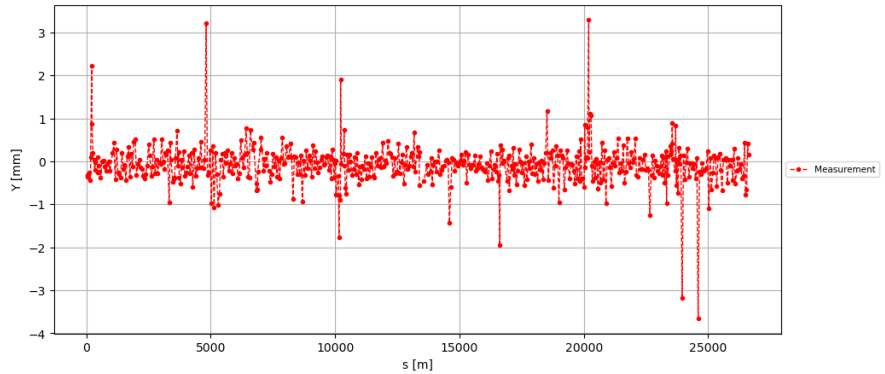
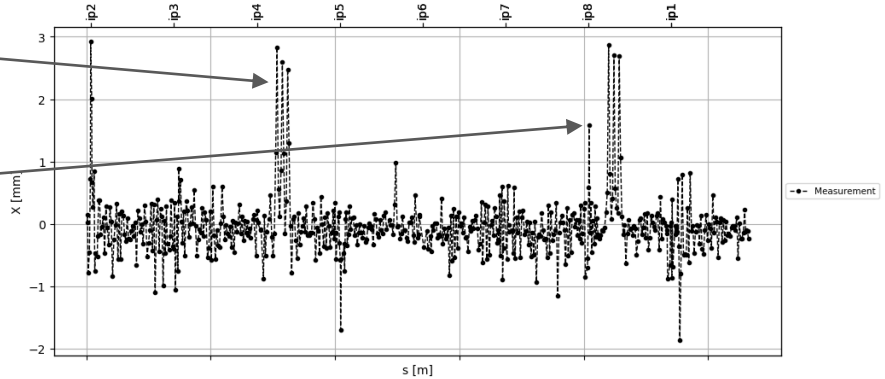
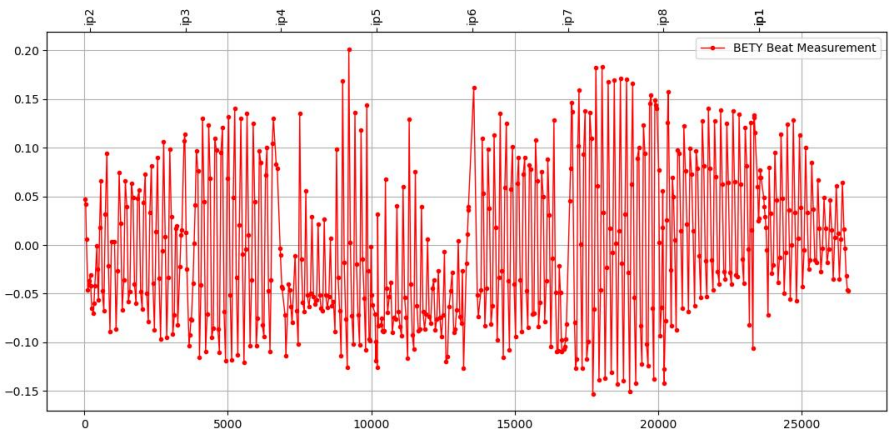
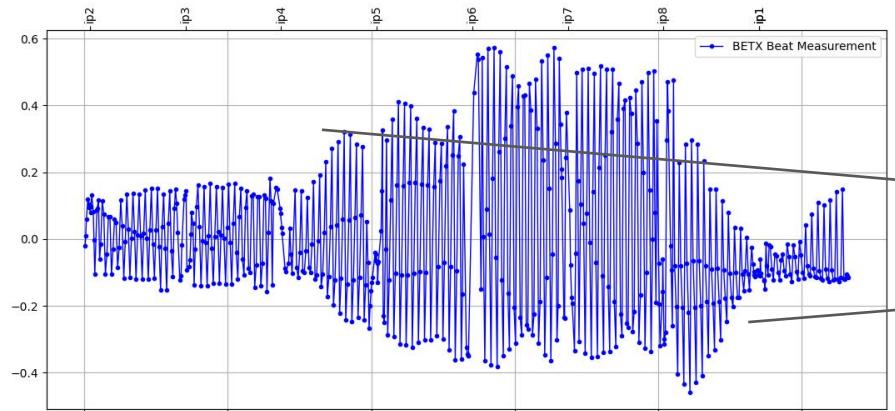
Yannis Angelis
OMC Meeting
17-09-24

Contents

- HL β beating corrections for arc45 and arc85 with local orbit bumps
- 60 deg MD Dy, for both beams including mq tilts and orbit effects

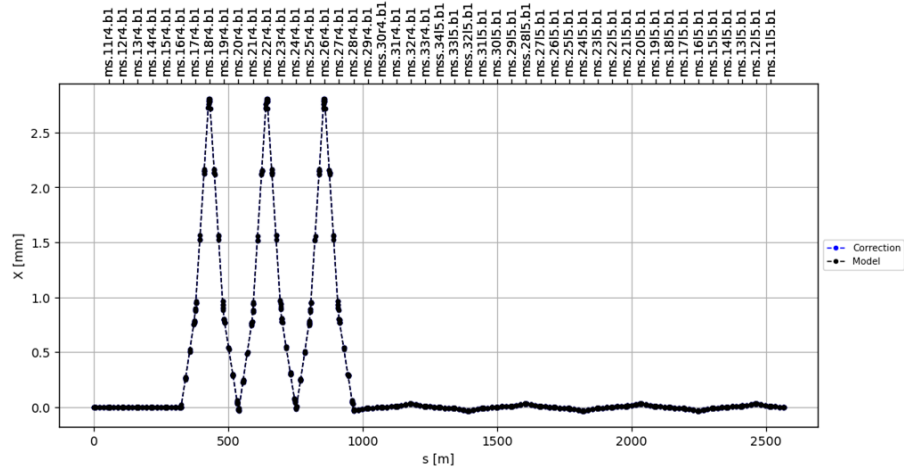
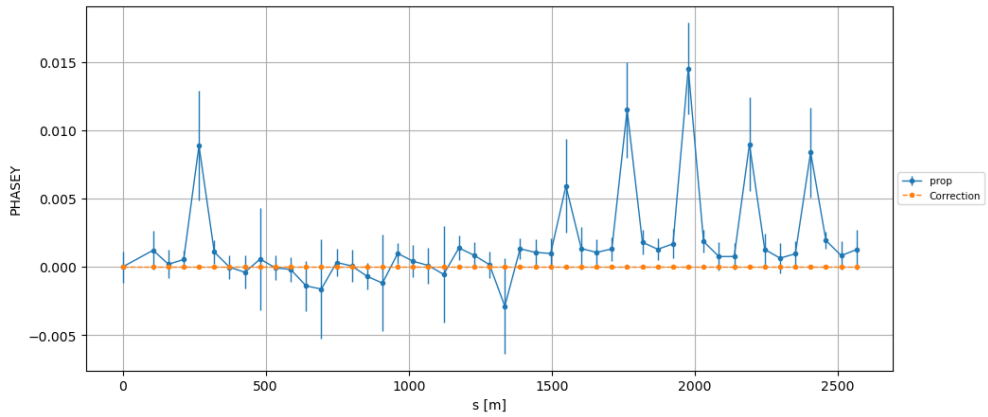
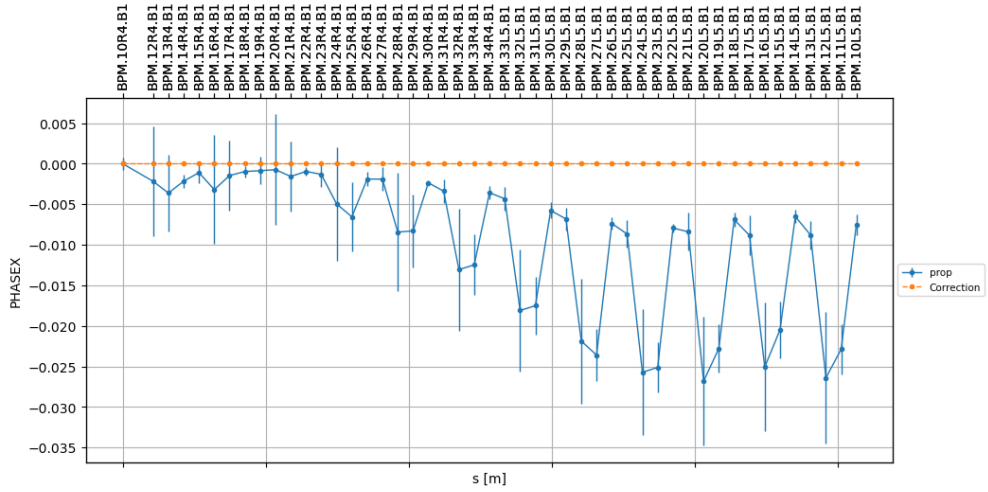
Beam 1 Correction Used ([logbook entry](#))

Treat needed for arcs 45, 81



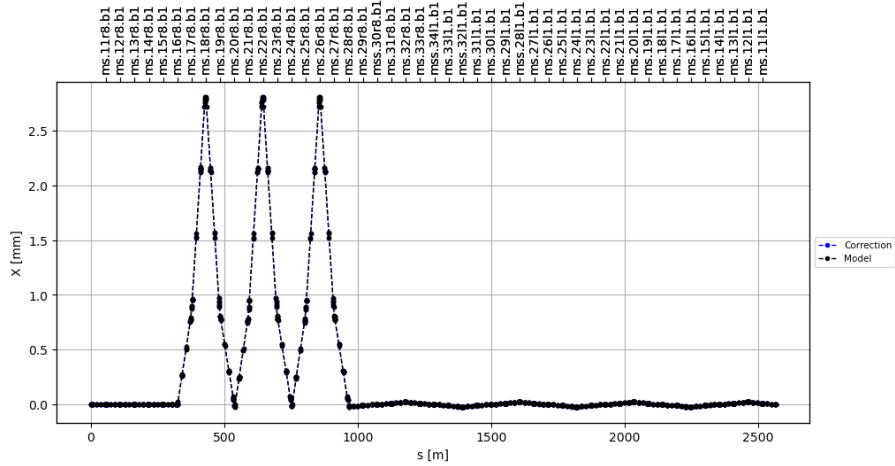
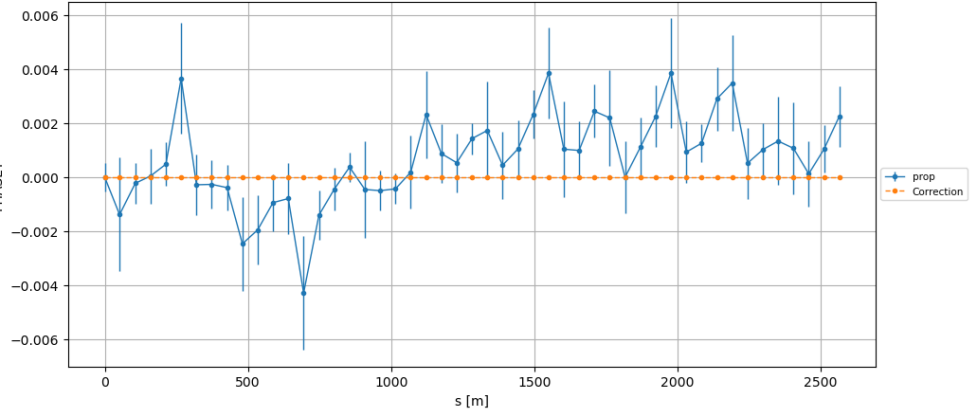
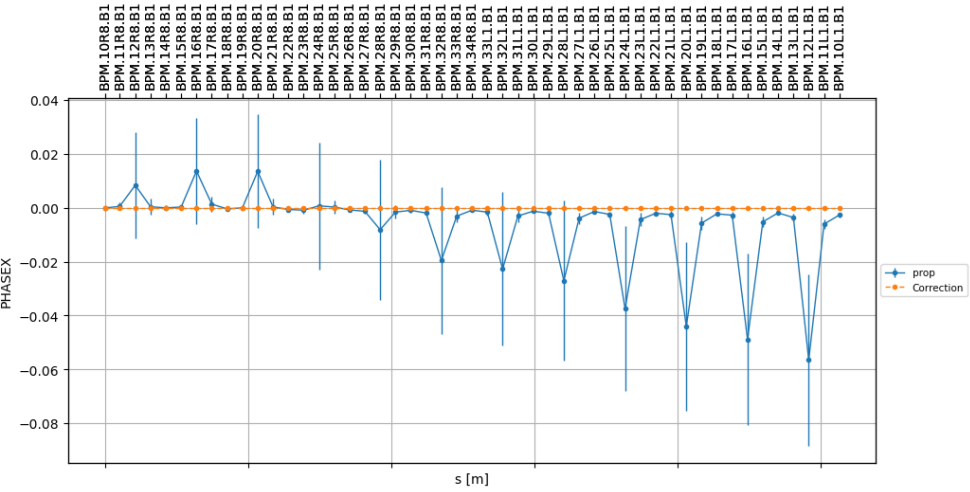
Current Correction Arc 45

Using a model with the bumps during the MD

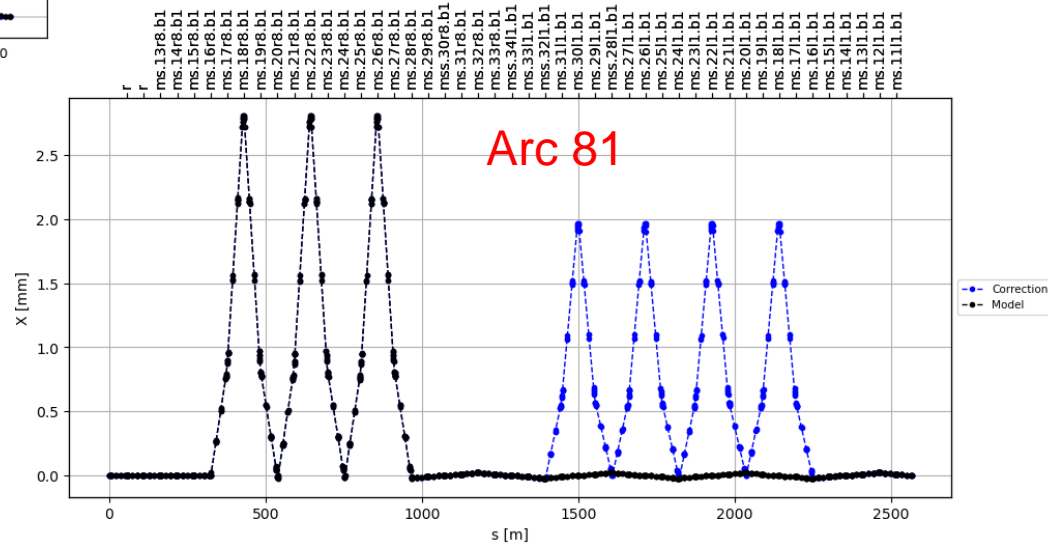
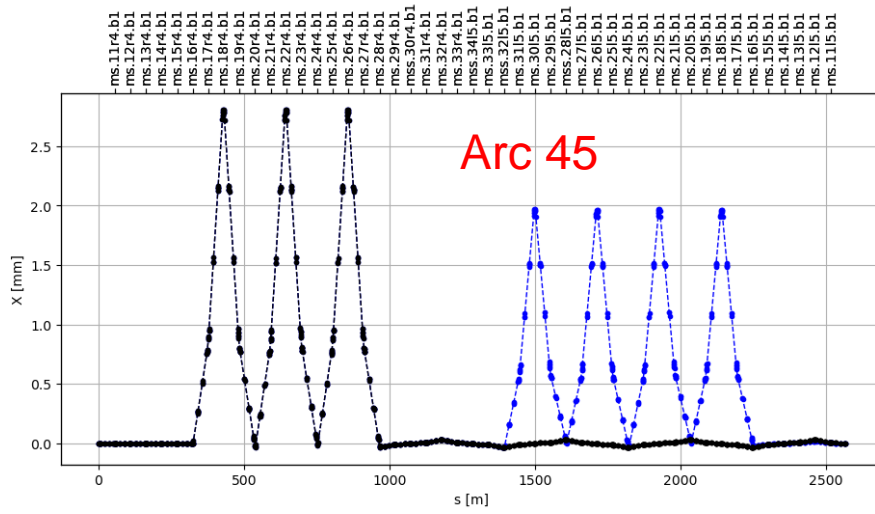


Current Correction Arc 81

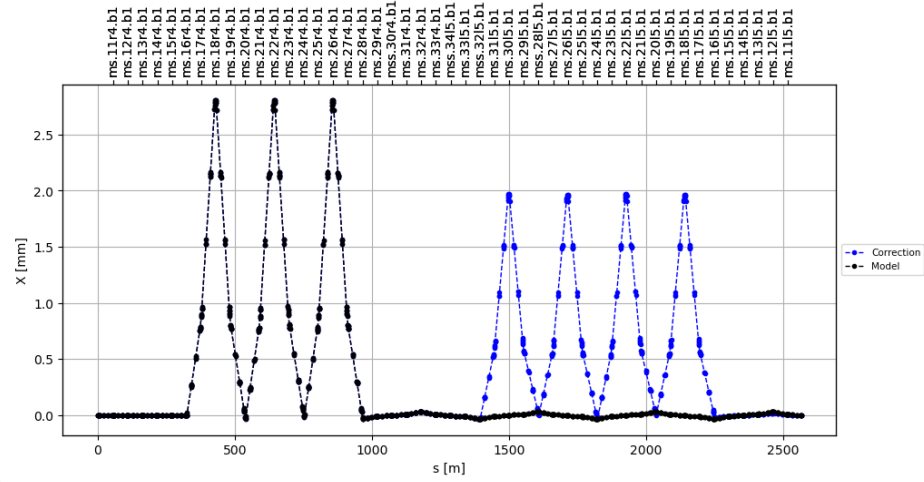
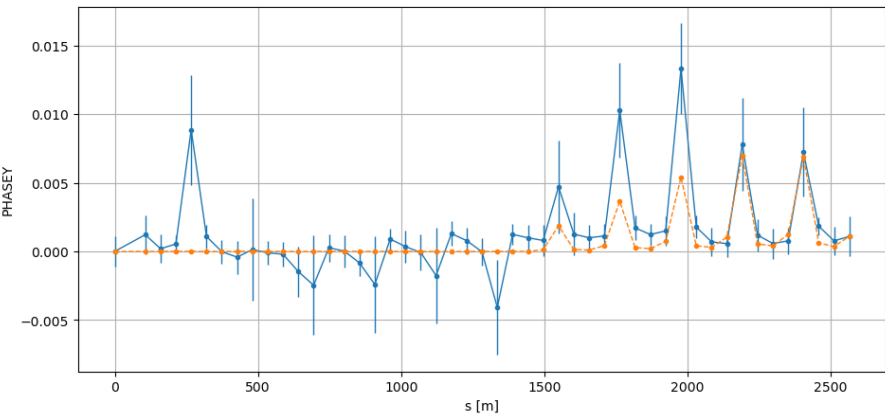
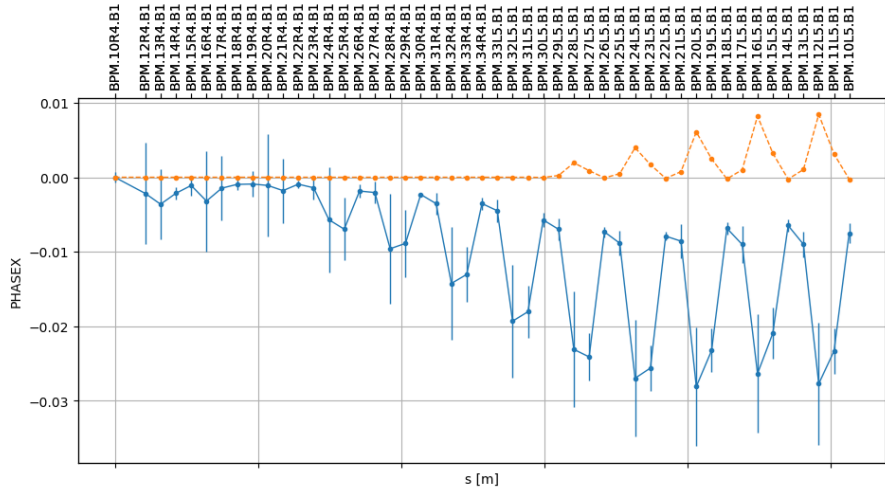
Using a model with the bumps during the MD



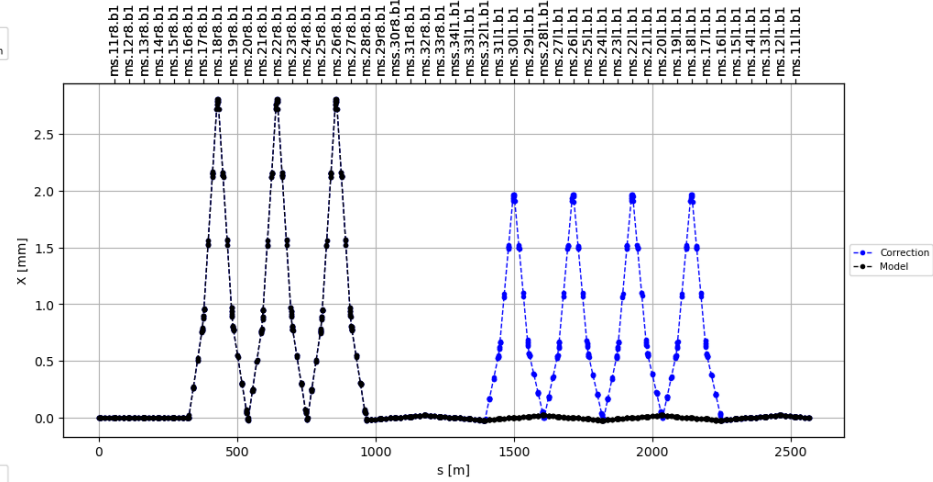
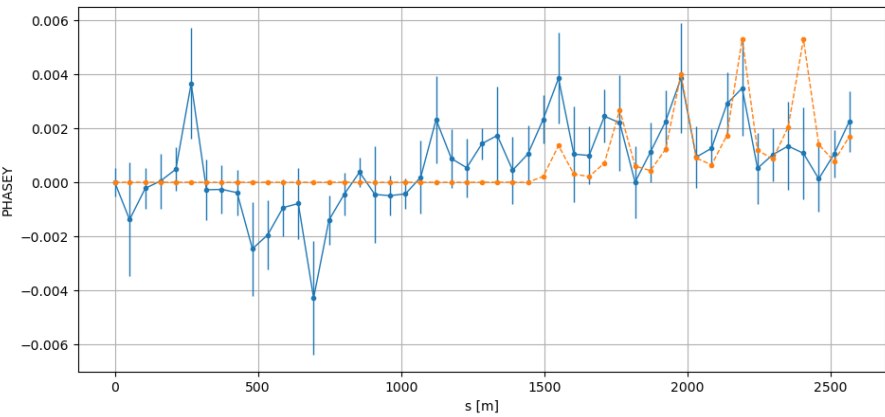
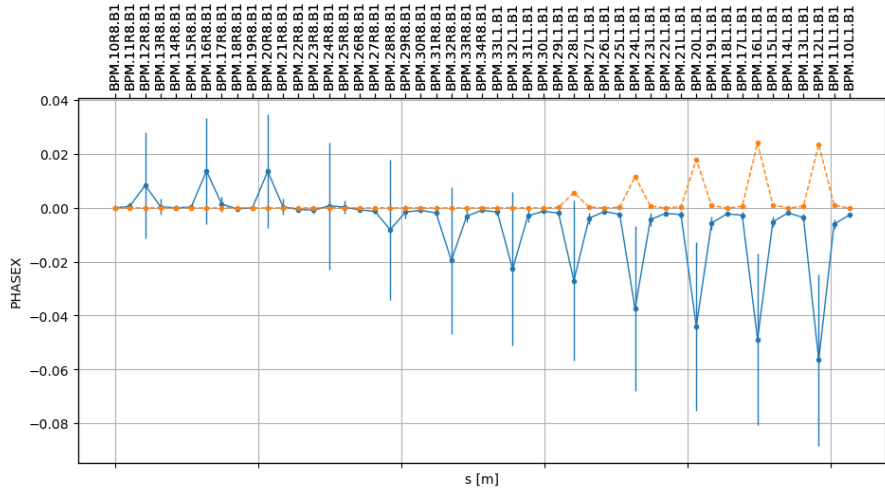
Similar bumps at L5 and L1 side of the arcs



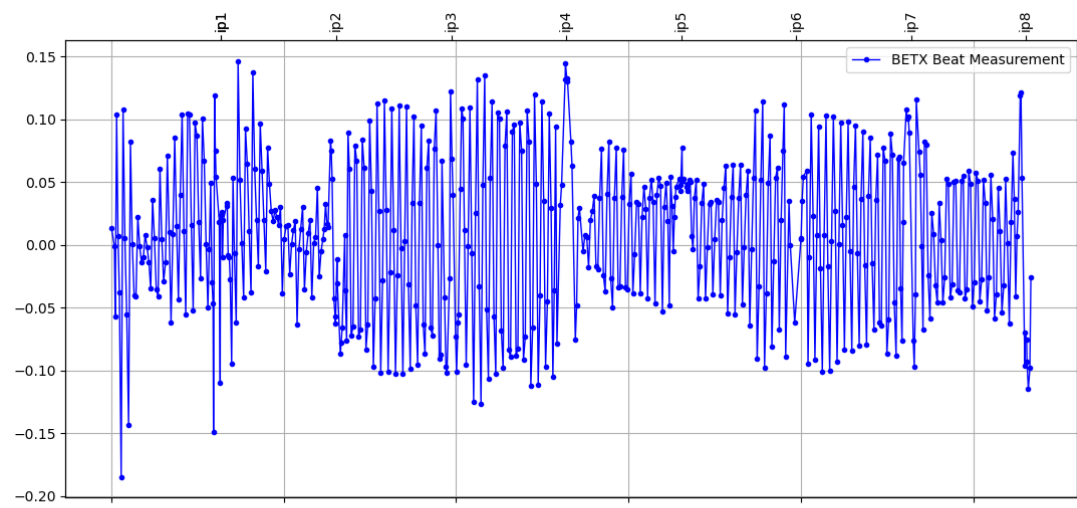
Arc45 Beam 1



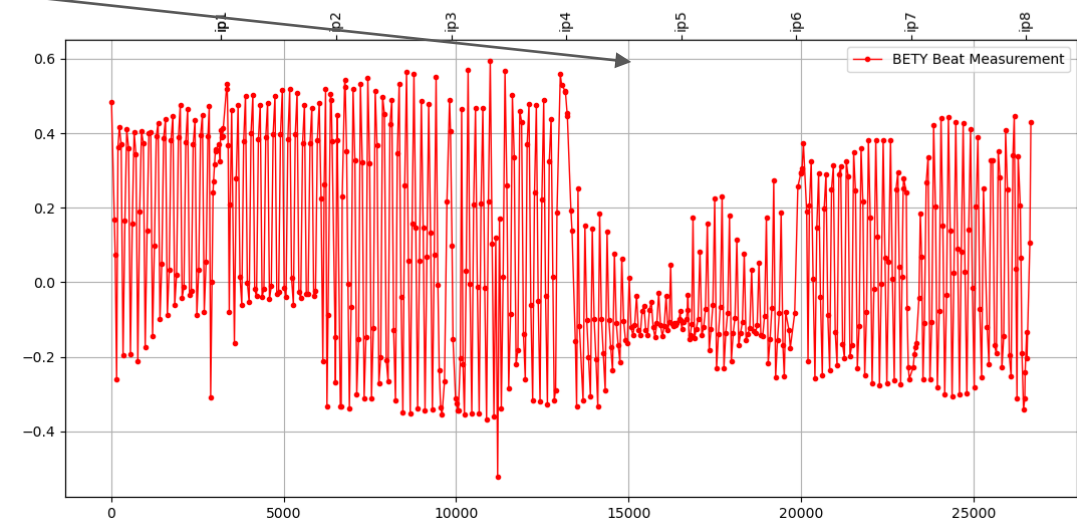
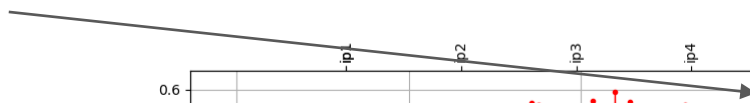
Arc81 Beam 1



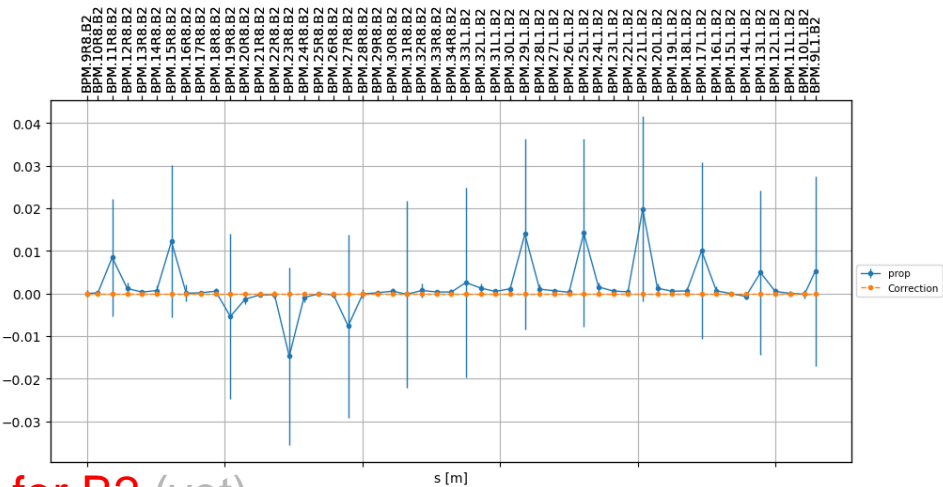
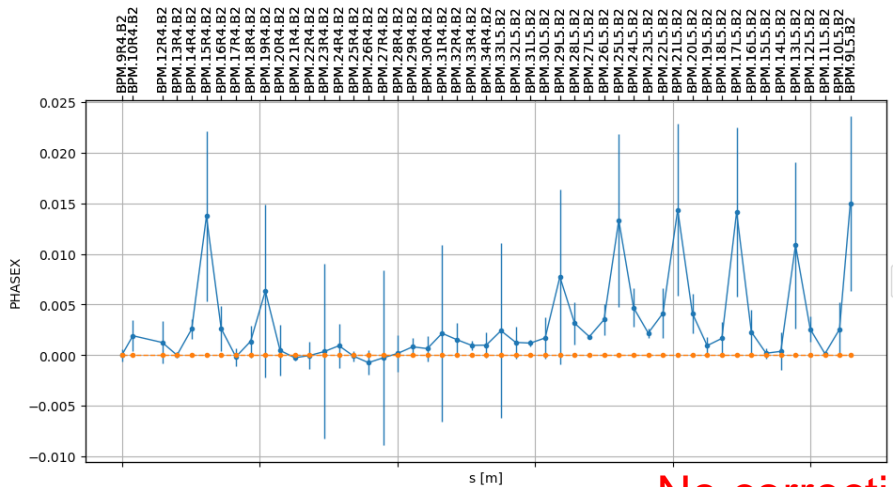
Beam 2 ([logbook entry](#))



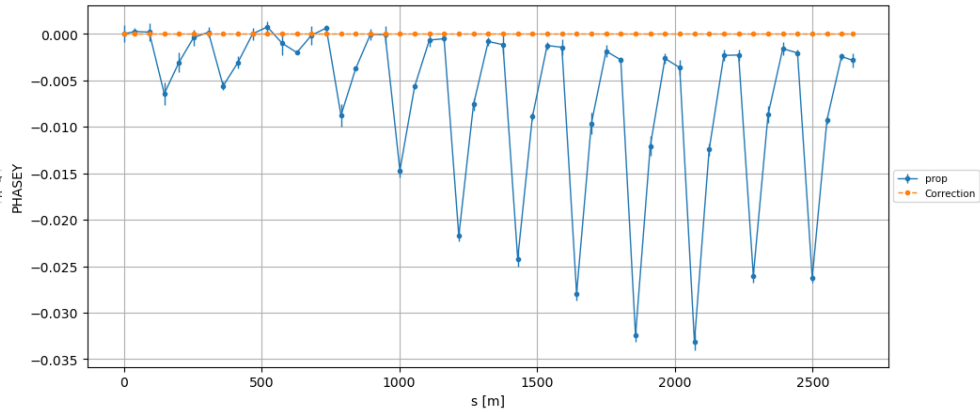
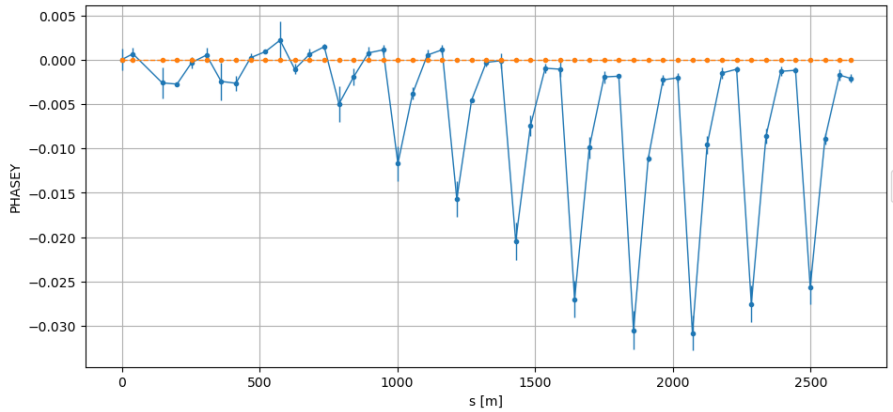
Arc 45?



Arc45 and Arc81 Beam 2



No corrections for B2 (yet)

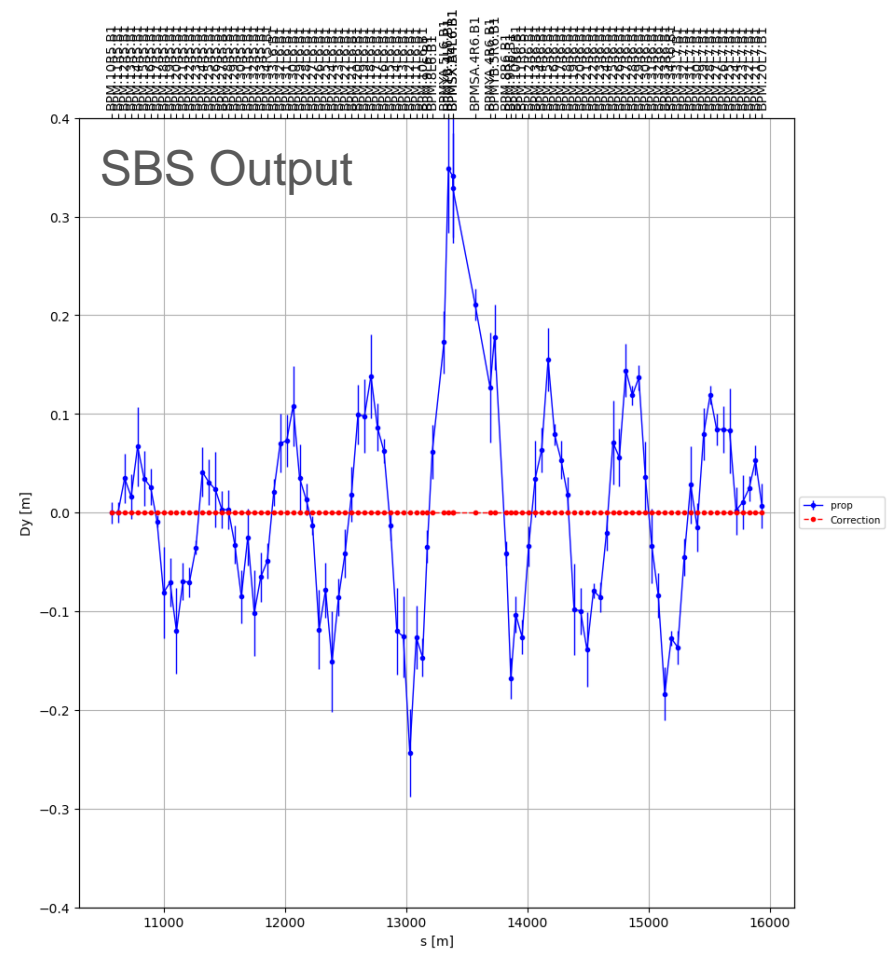
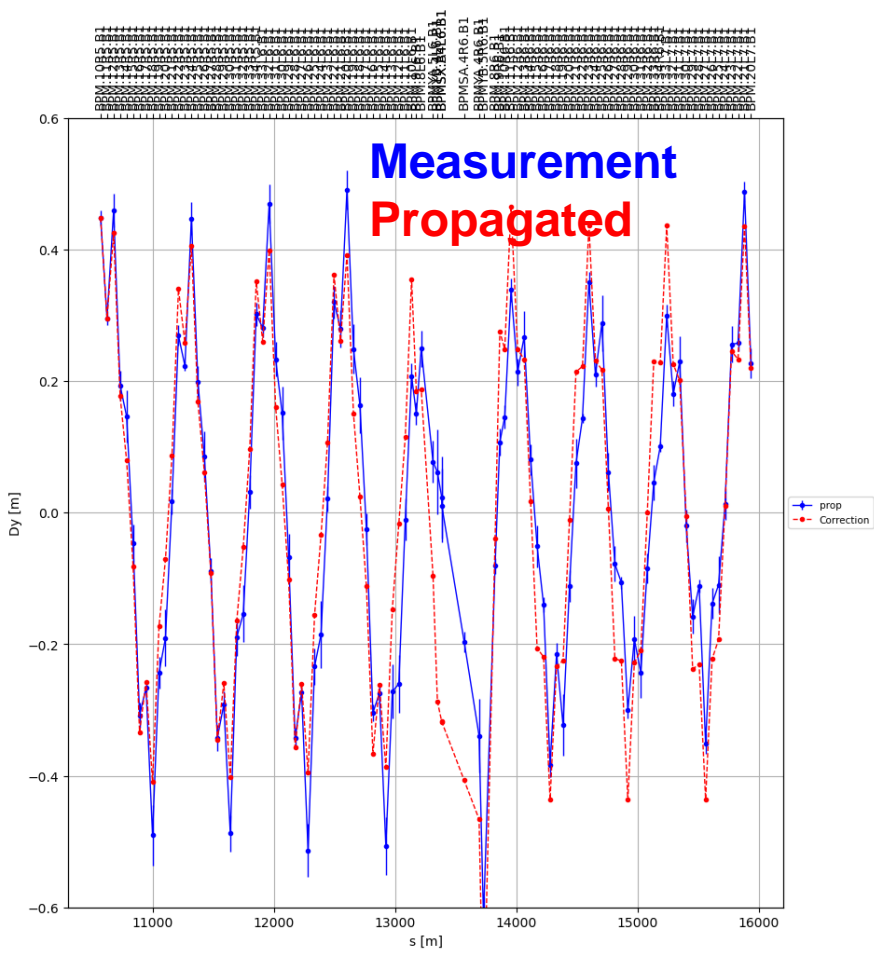


60 deg MD Dy (Preliminary)

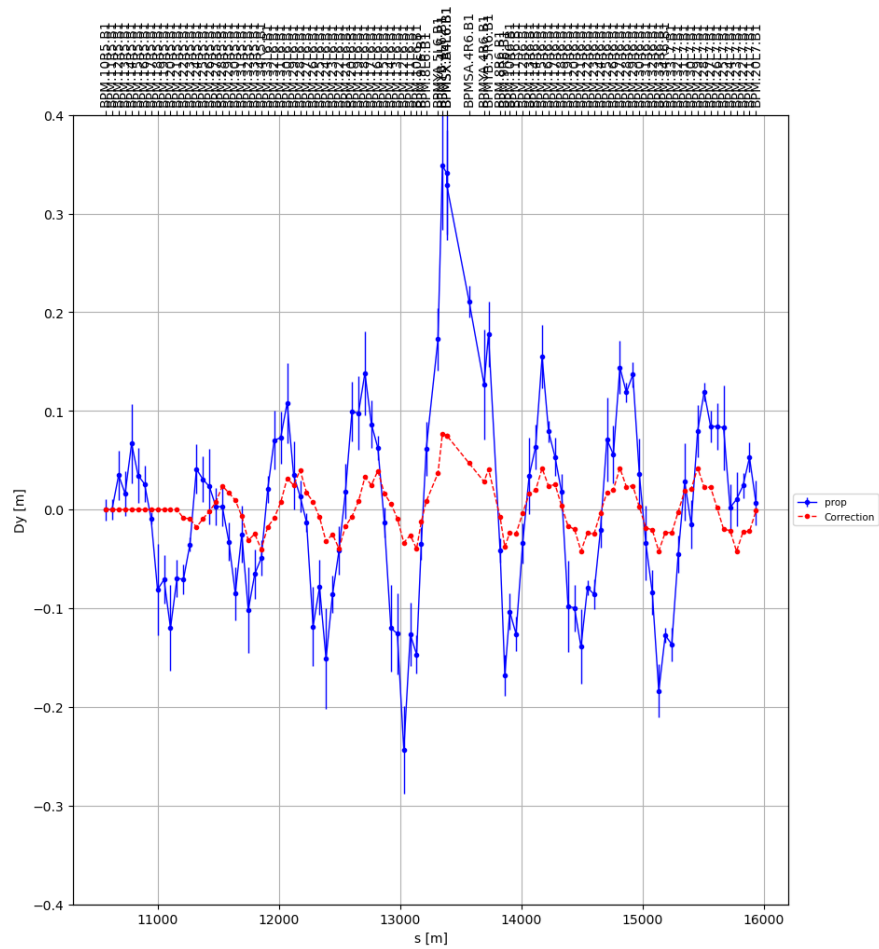
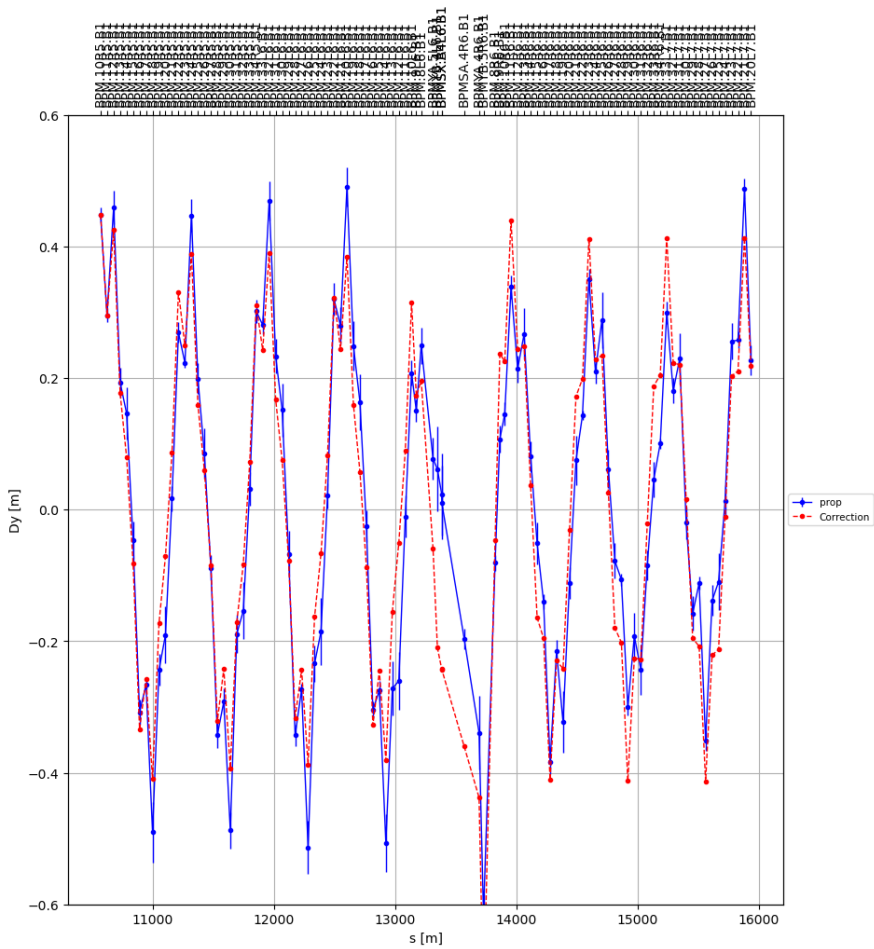
MQ tilts and orbit

- The usual suspects (MQ.29R5.B2 along with 21 and 25)
- Orbit correctors strengths extracted from Isa (RCBV11.R5B2-RCBV29.R5B2)

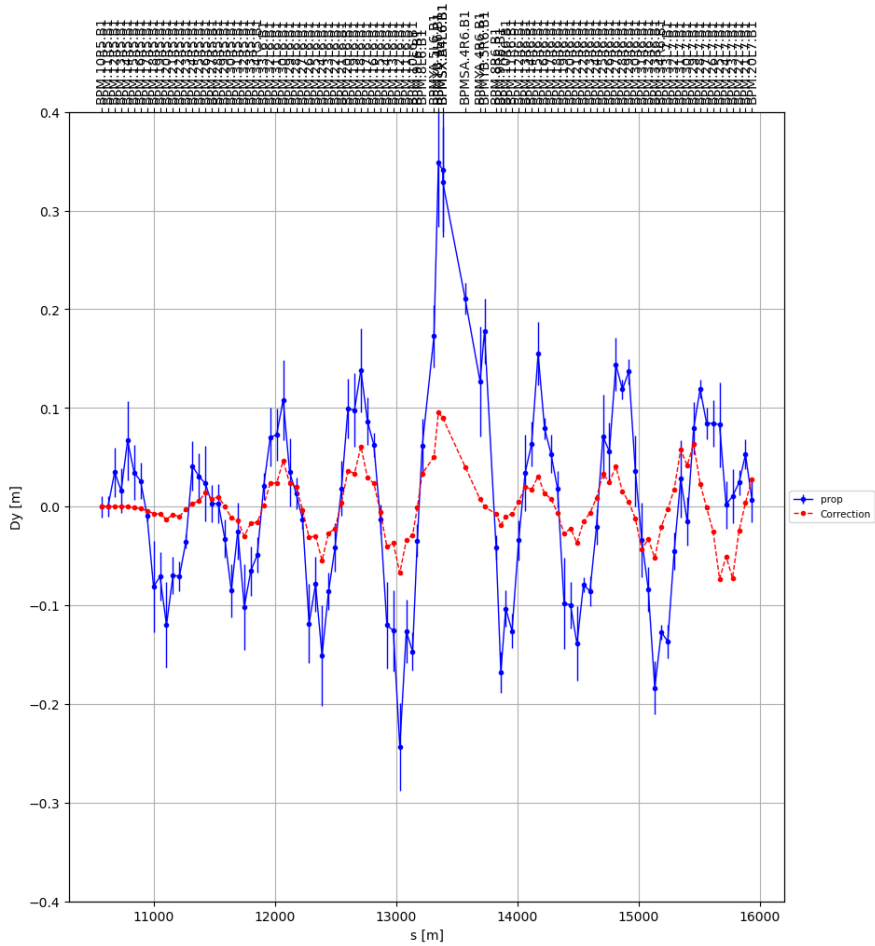
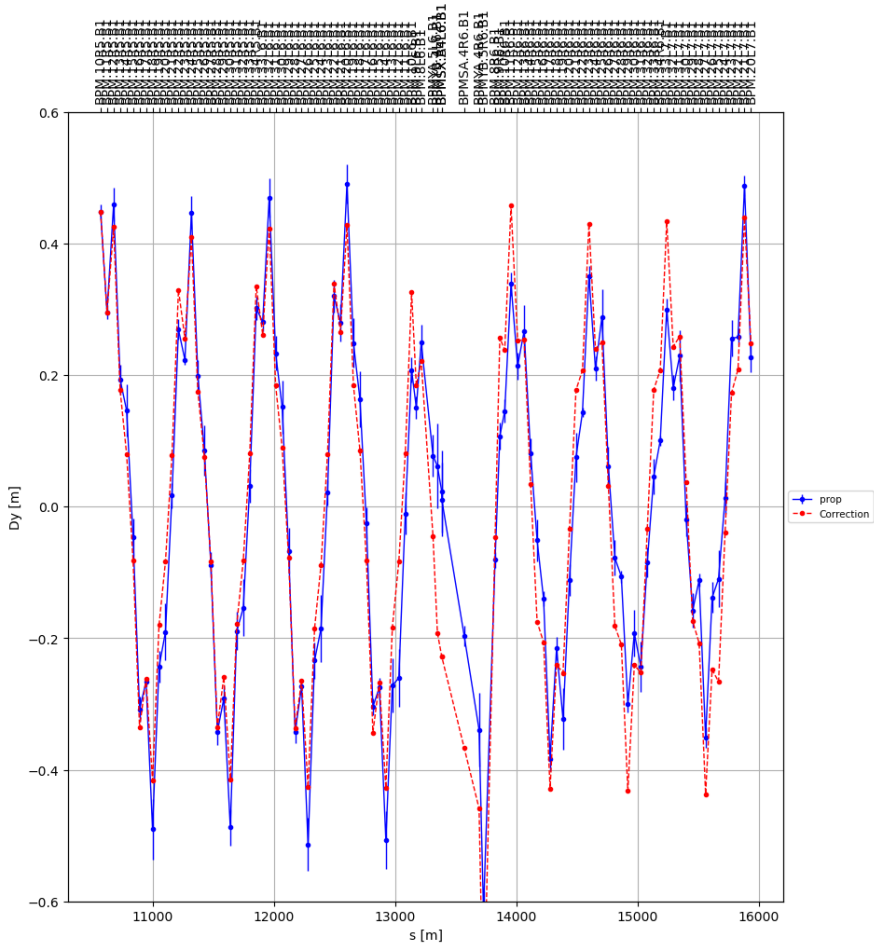
Beam 1



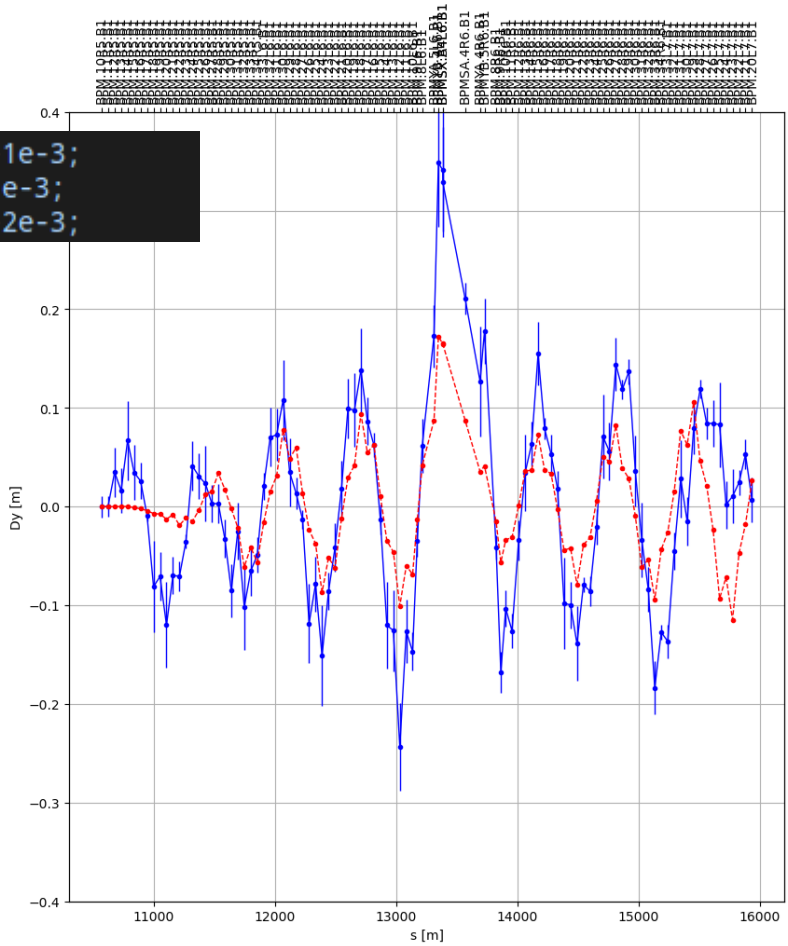
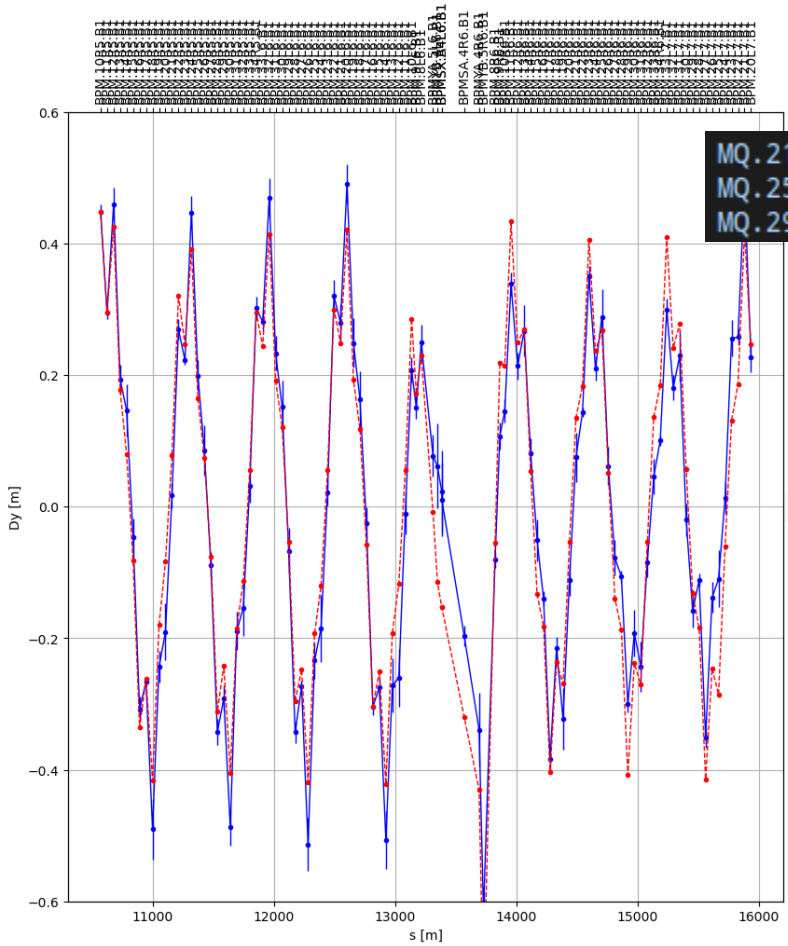
Beam 1, MQ tilts



Beam 1, orbit correctors

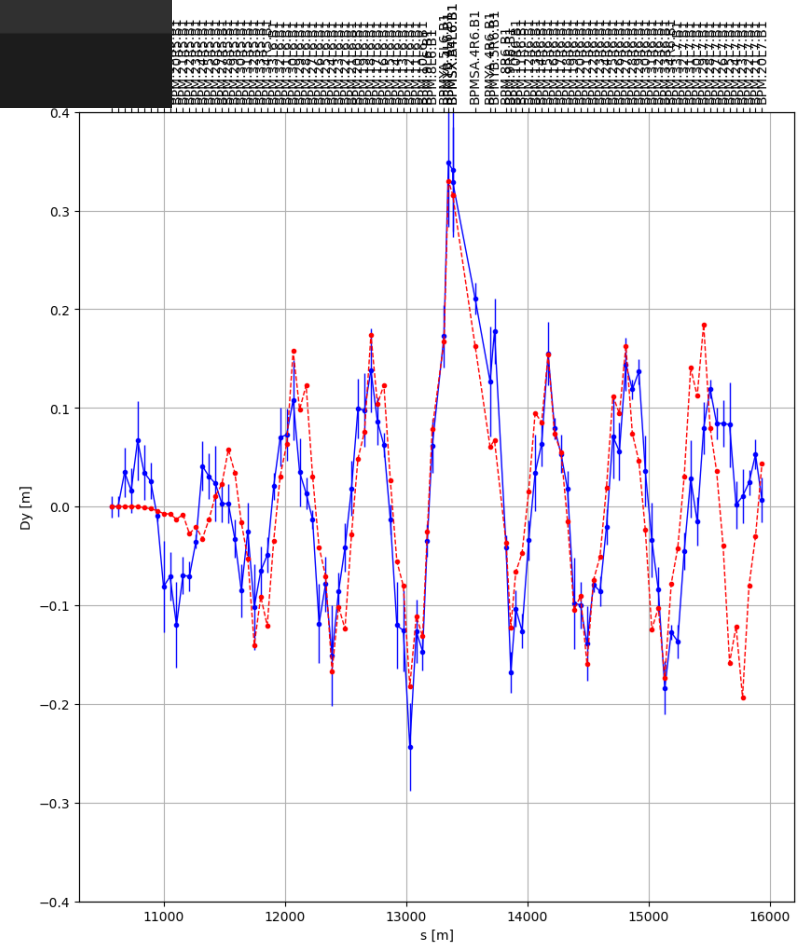
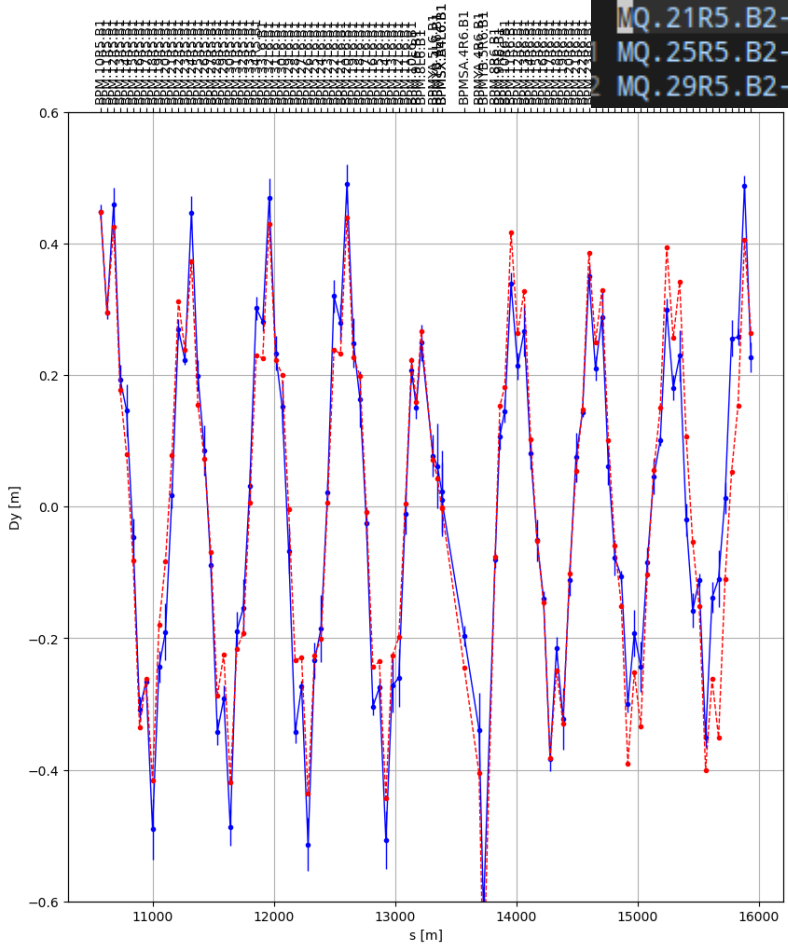


Beam 1, orbit cor and MQ tilts

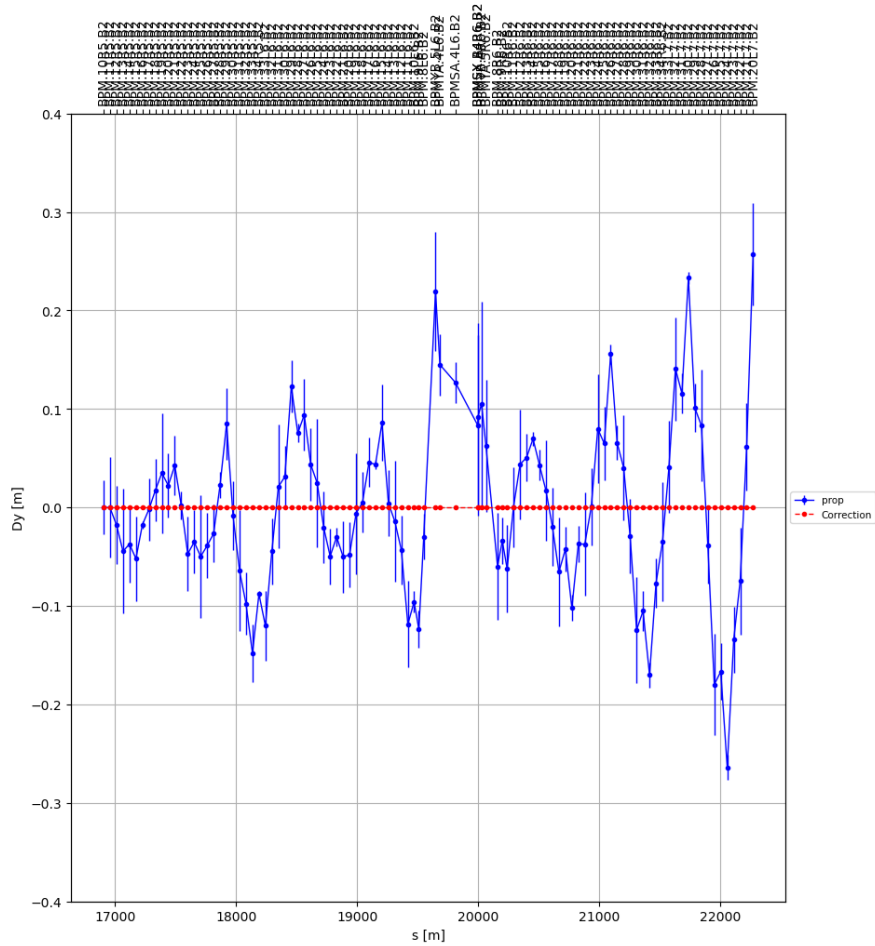
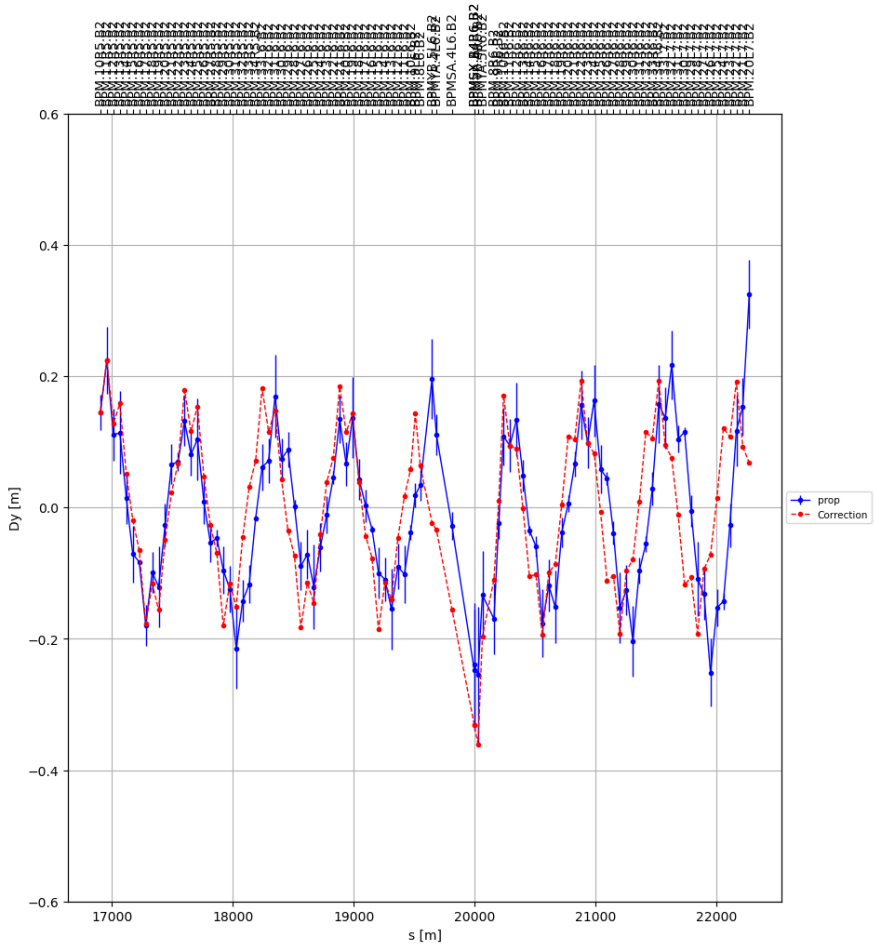


Beam 1, orbit cor and MQ tilts

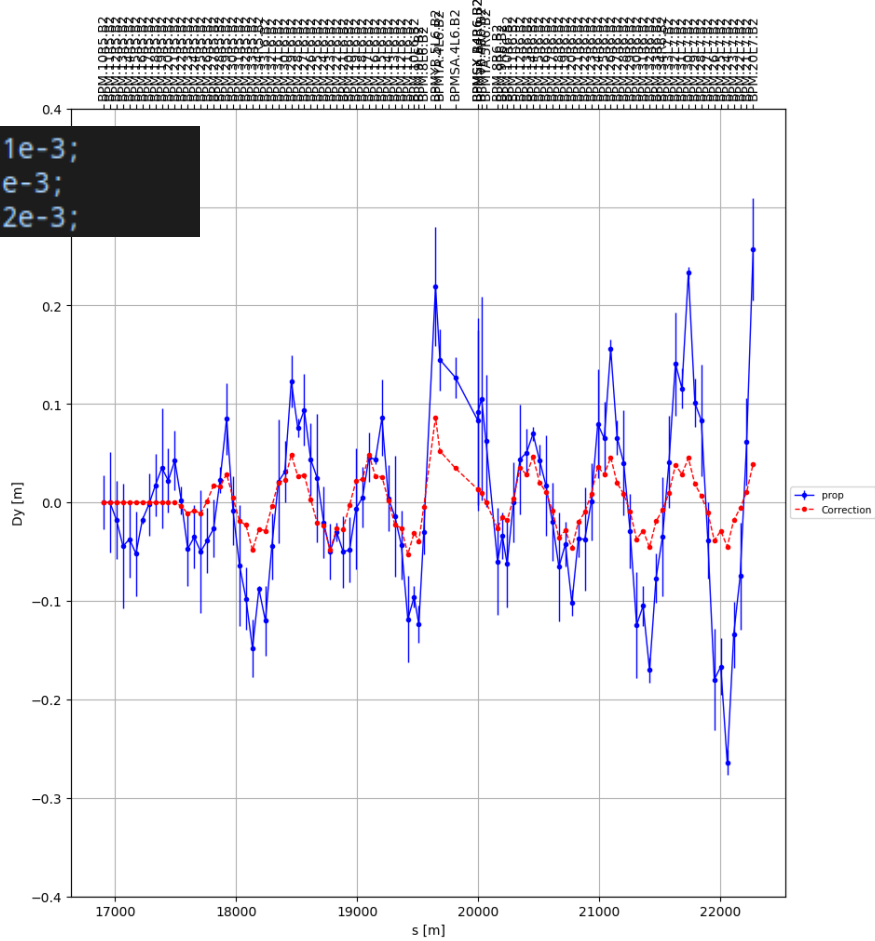
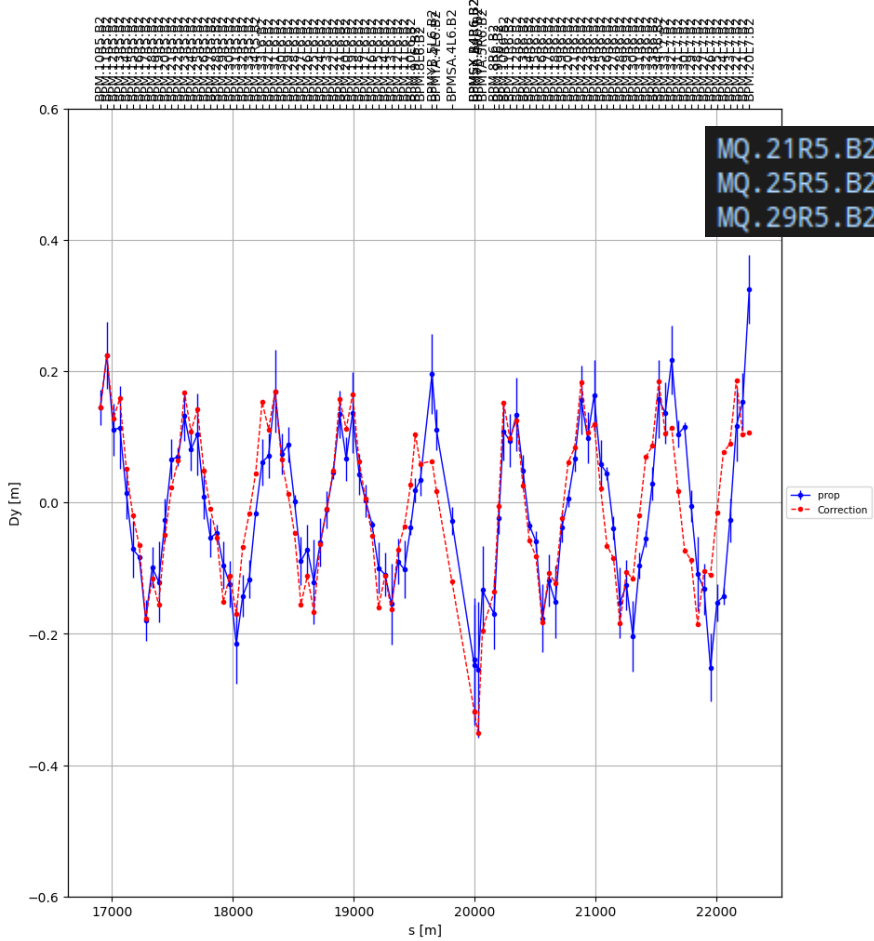
```
MQ.21R5.B2->tilt = -2e-3;  
MQ.25R5.B2->tilt = 2e-3;  
MQ.29R5.B2->tilt = -7e-3;
```



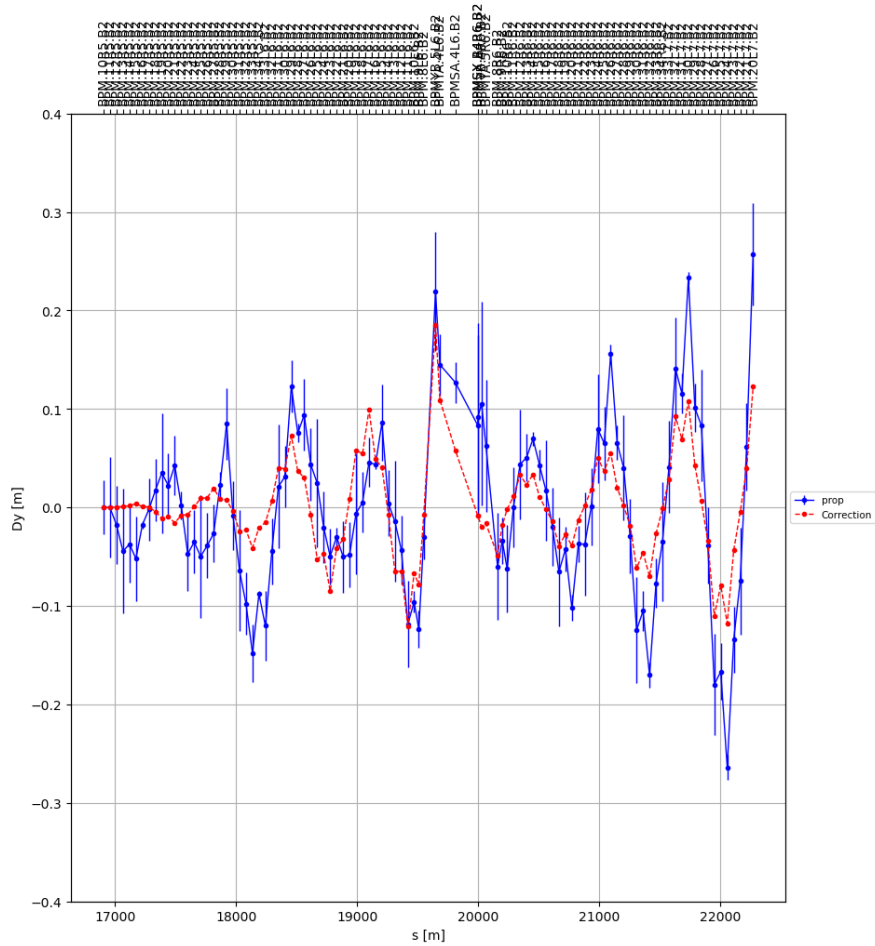
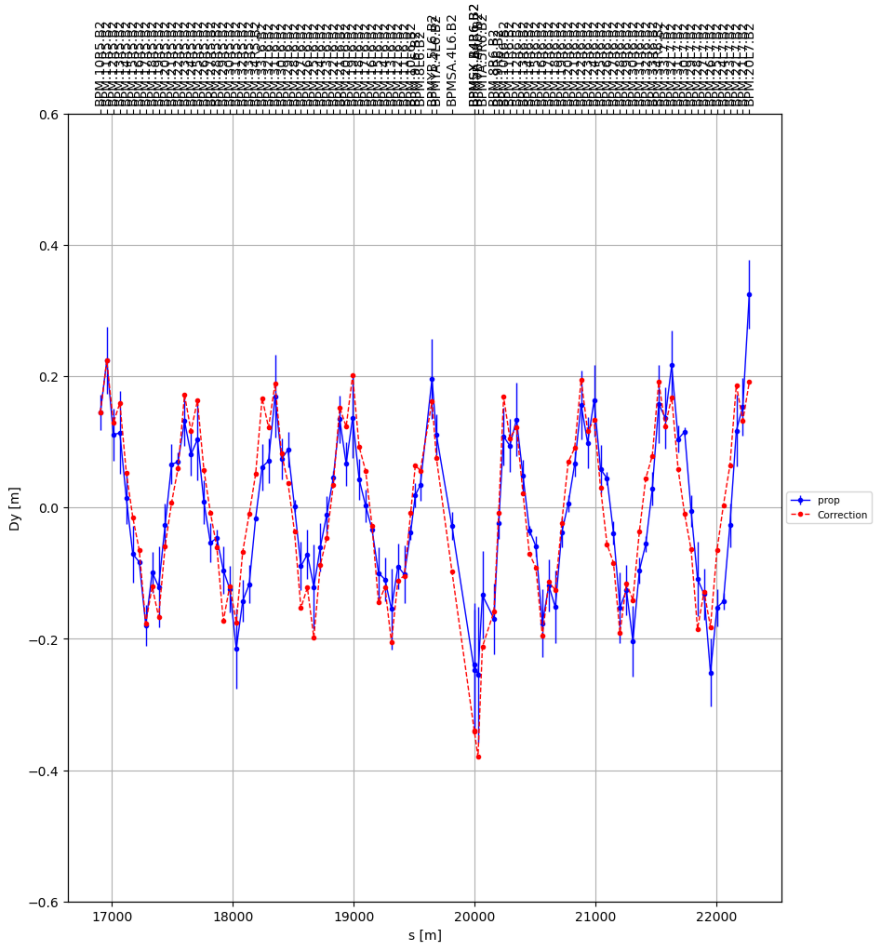
Beam 2



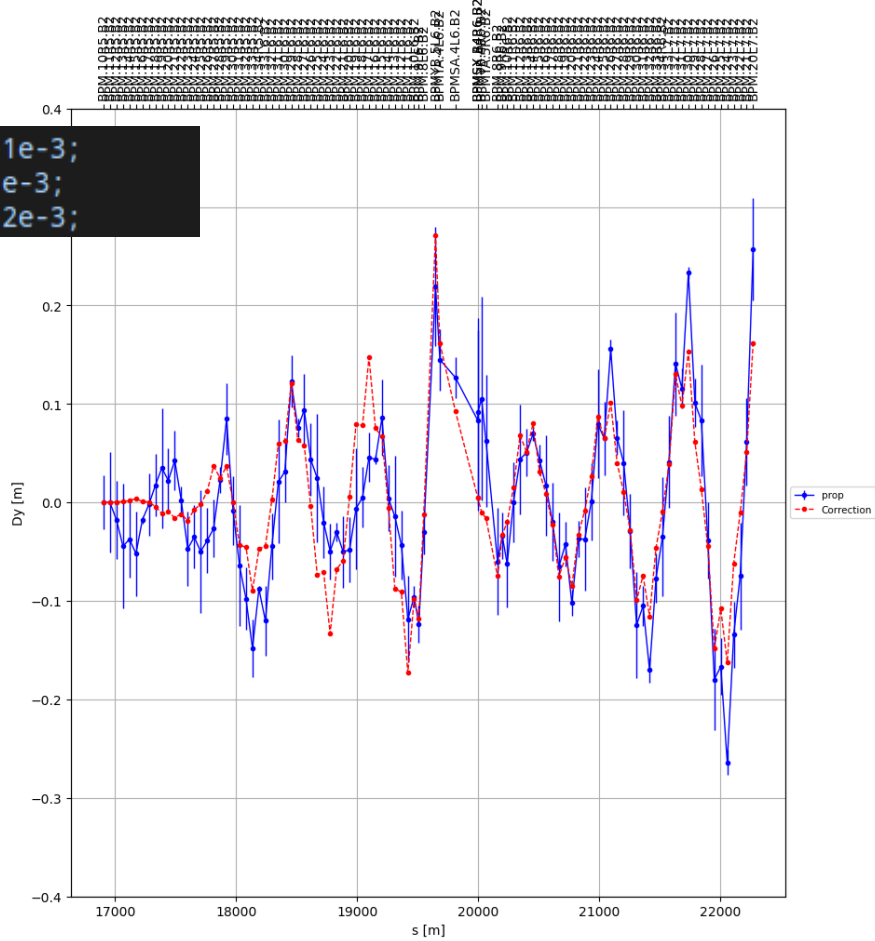
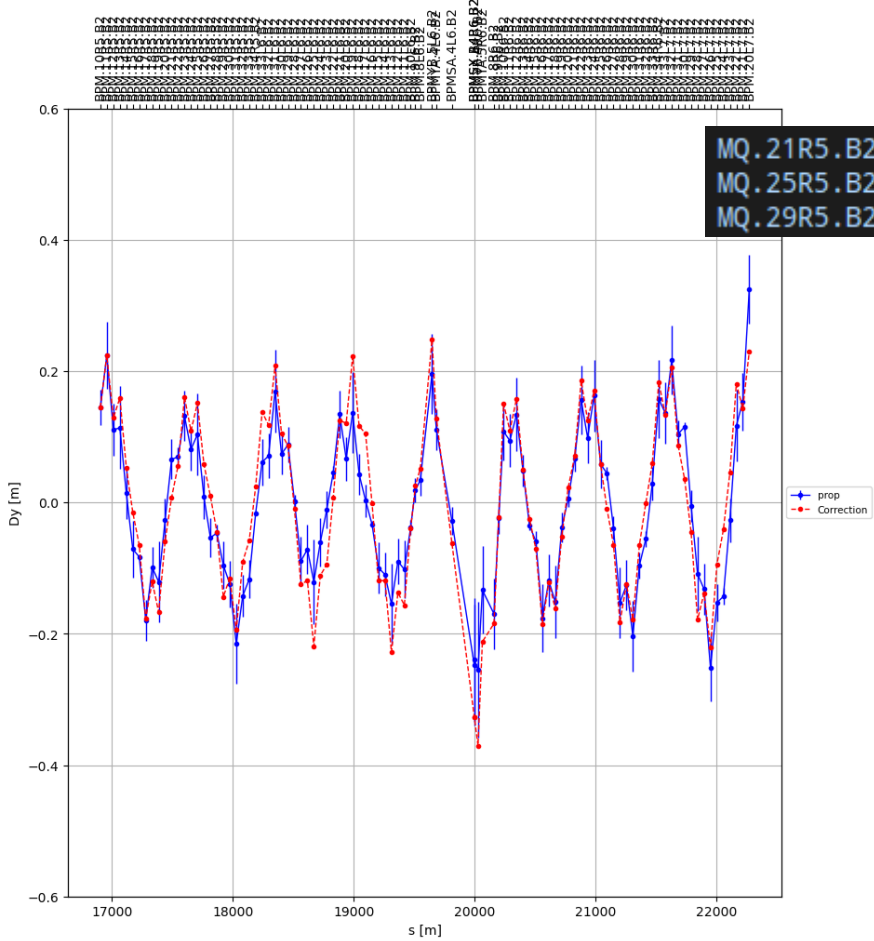
Beam 2, MQ tilts



Beam 2, Orbit correctors



Beam 2, Orbit correctors + MQ tilts



Beam 2, Orbit correctors + MQ tilts

