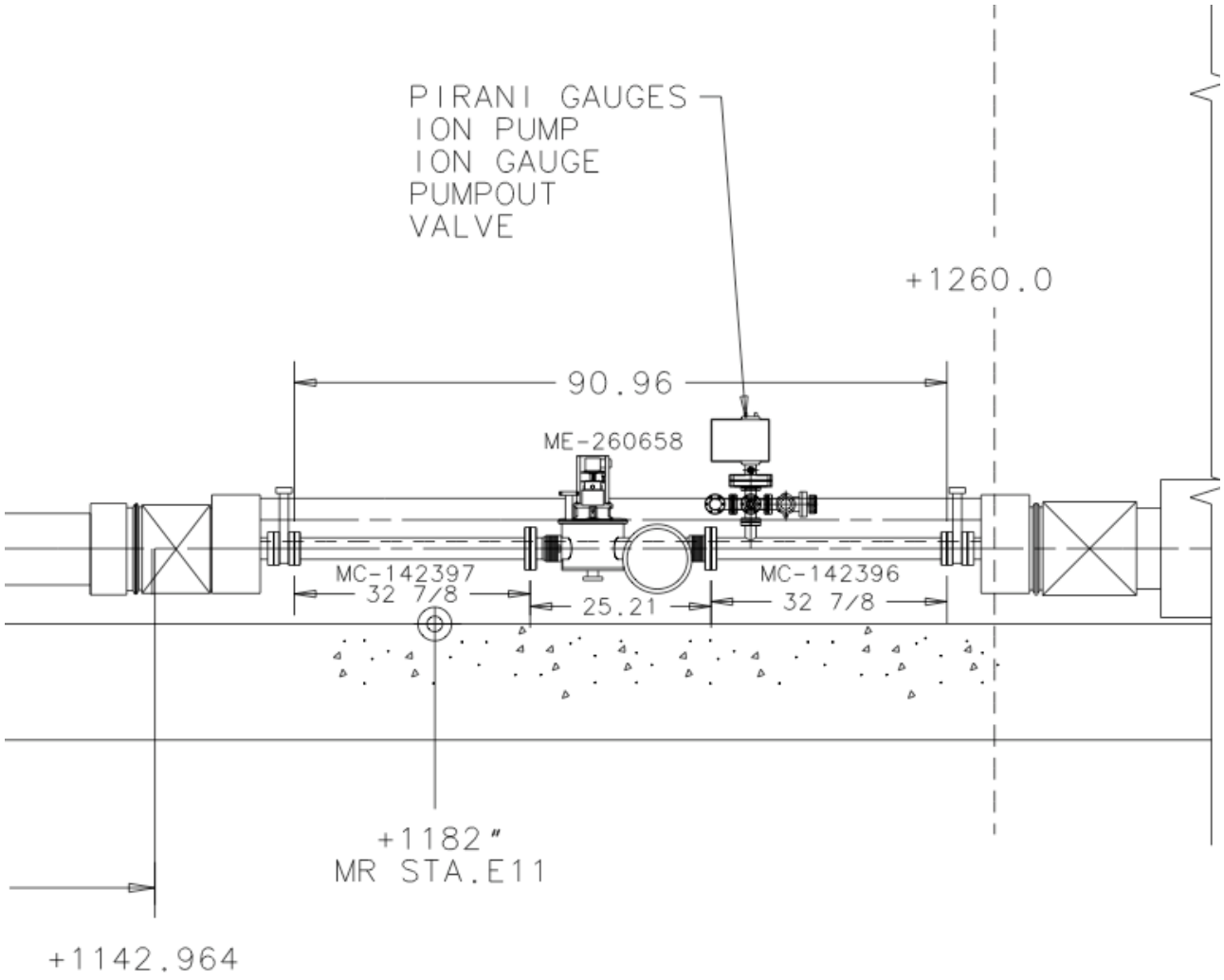
Flying Wires For Crystal Collimation

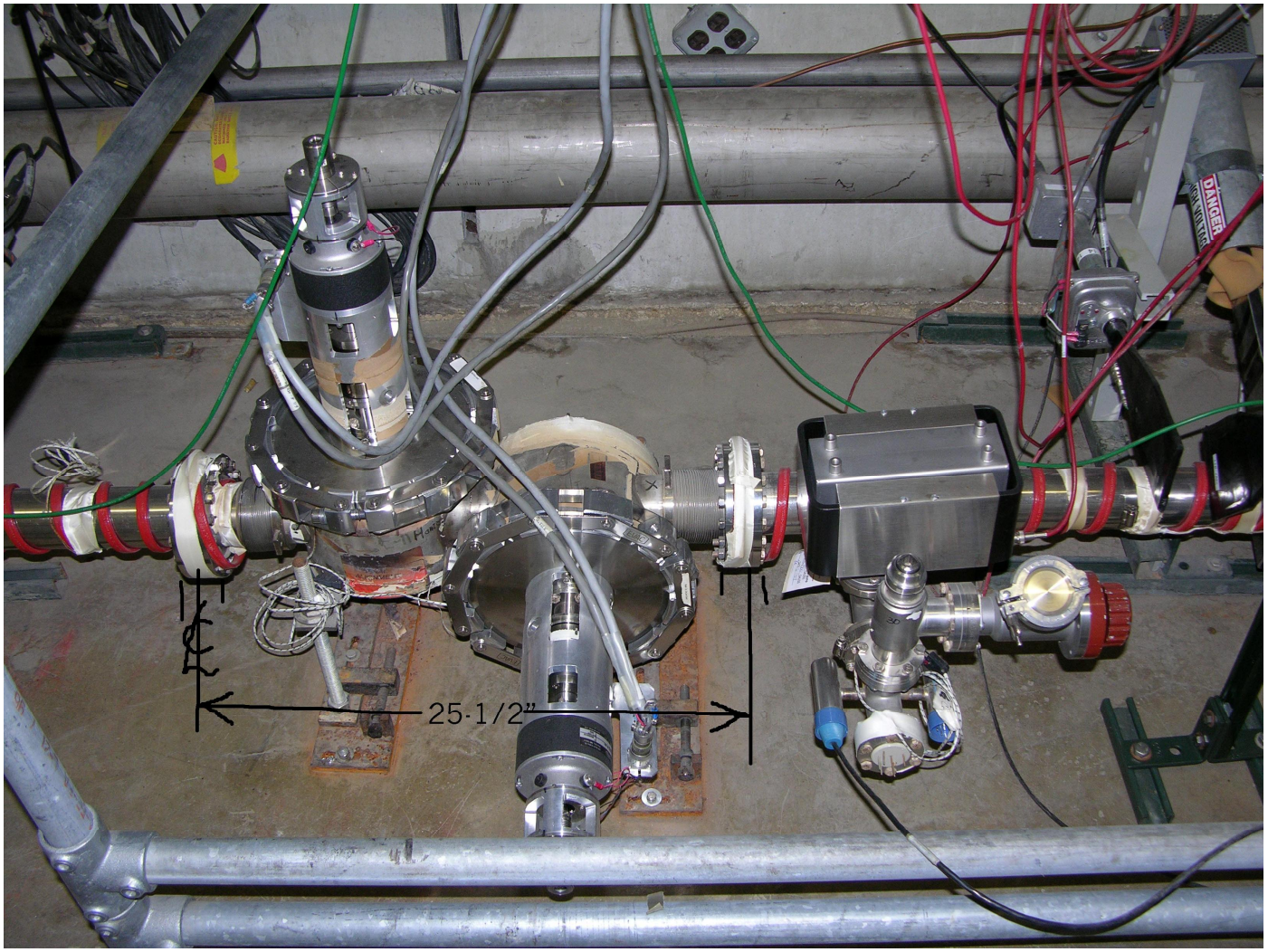
Jim Zagel

8/7/2008

TFW Tunnel Location

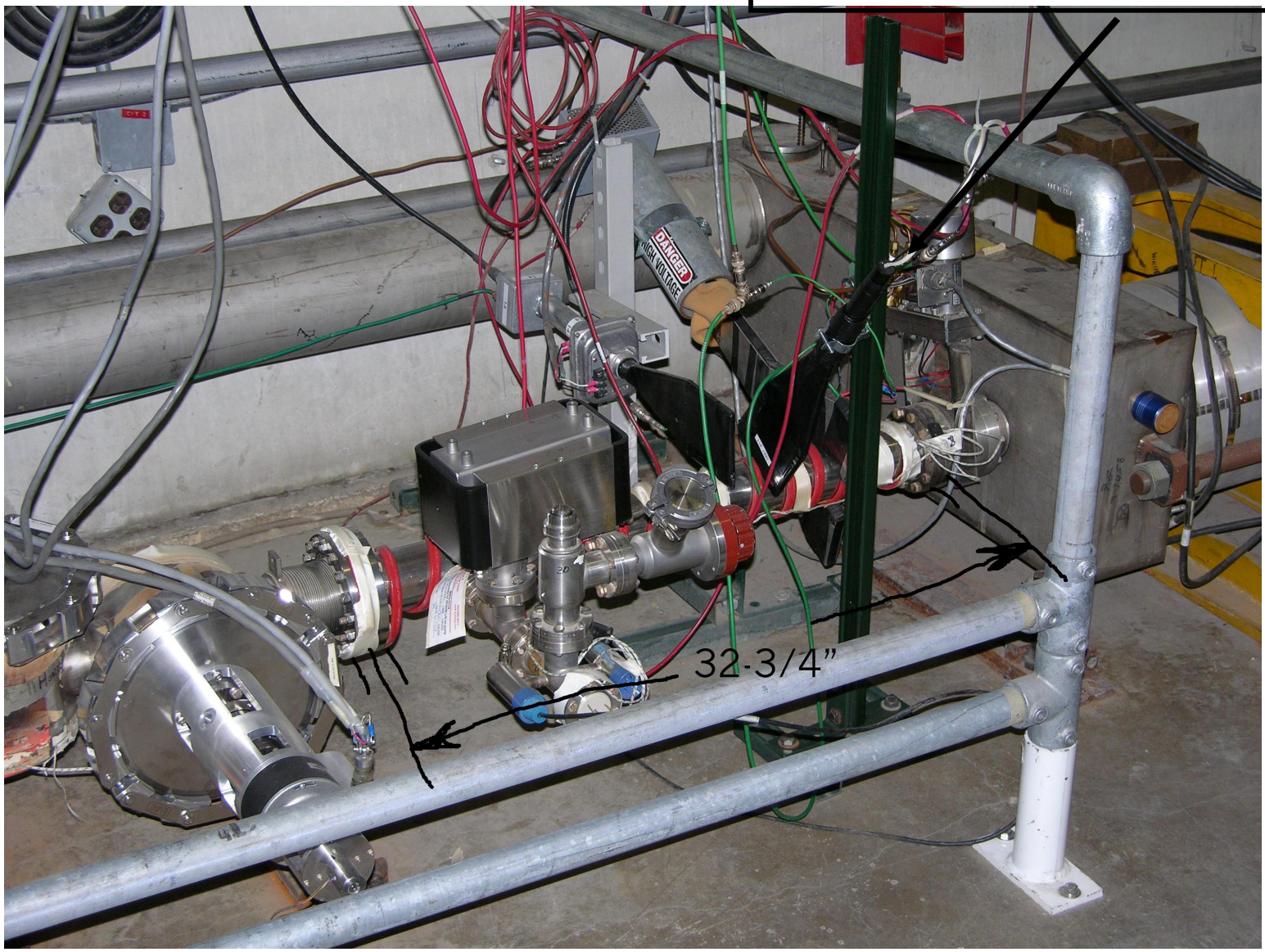


E-11 Flying Wire

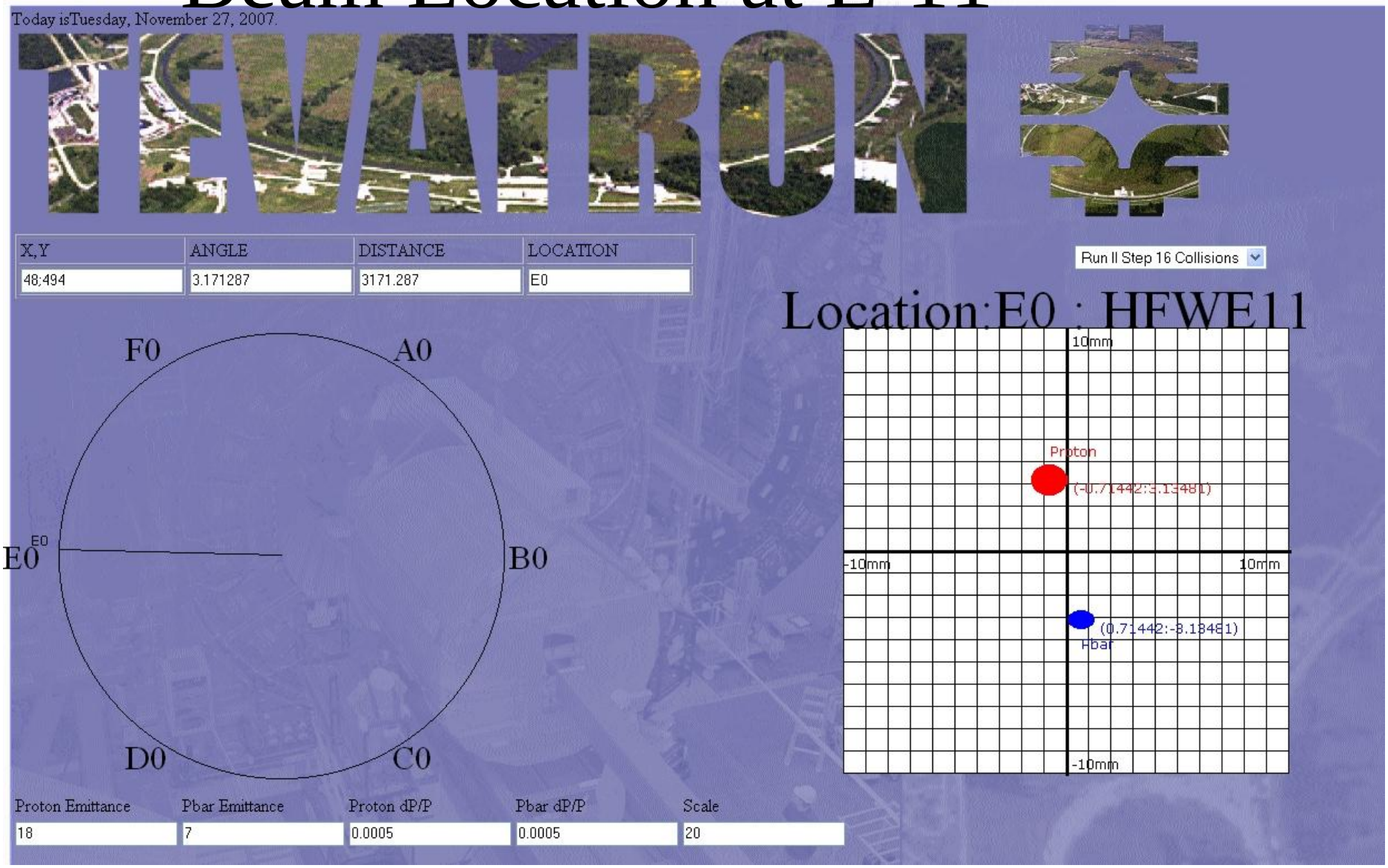


E-11 Flying Wire

New High Gain Paddle



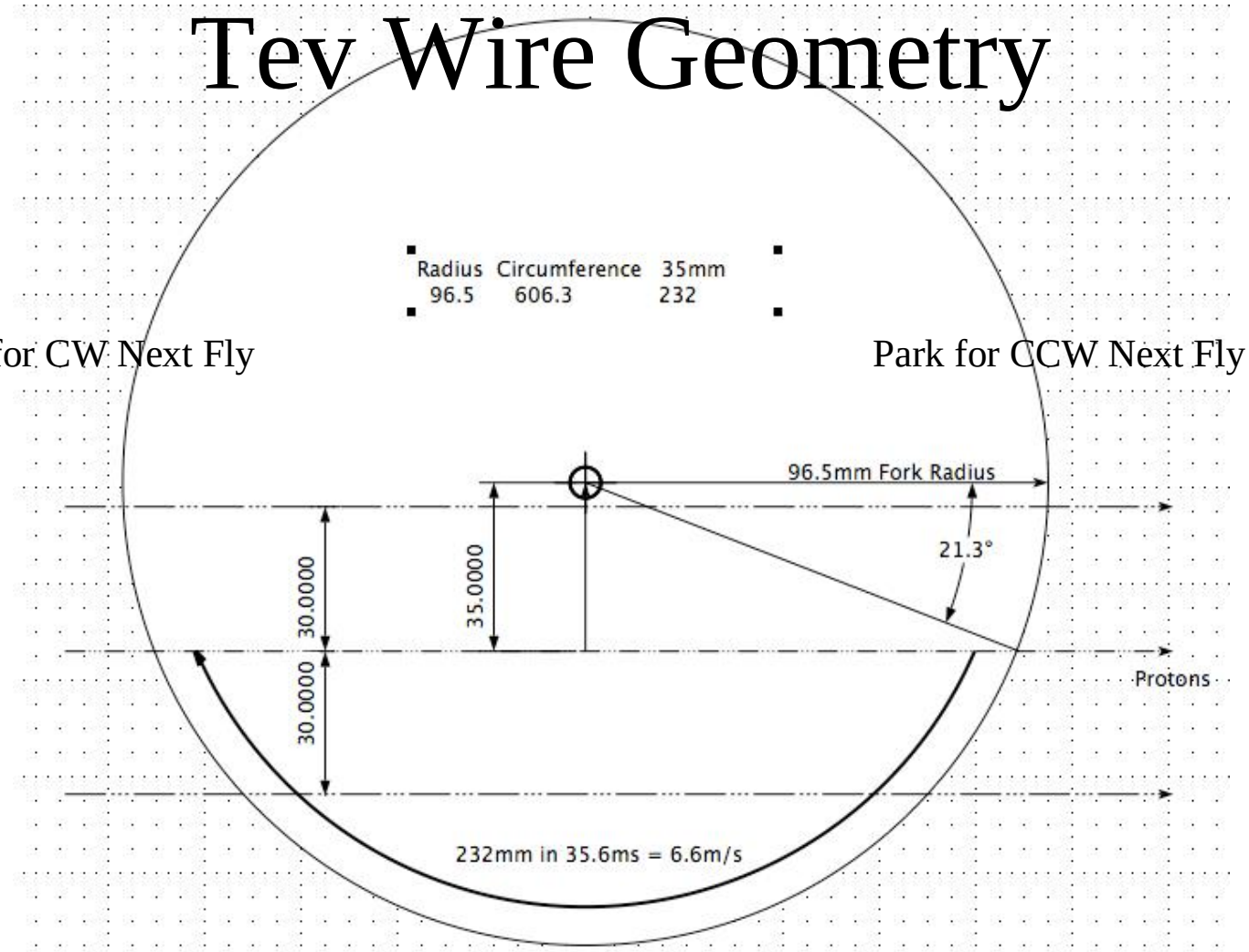
Beam Location at E-11



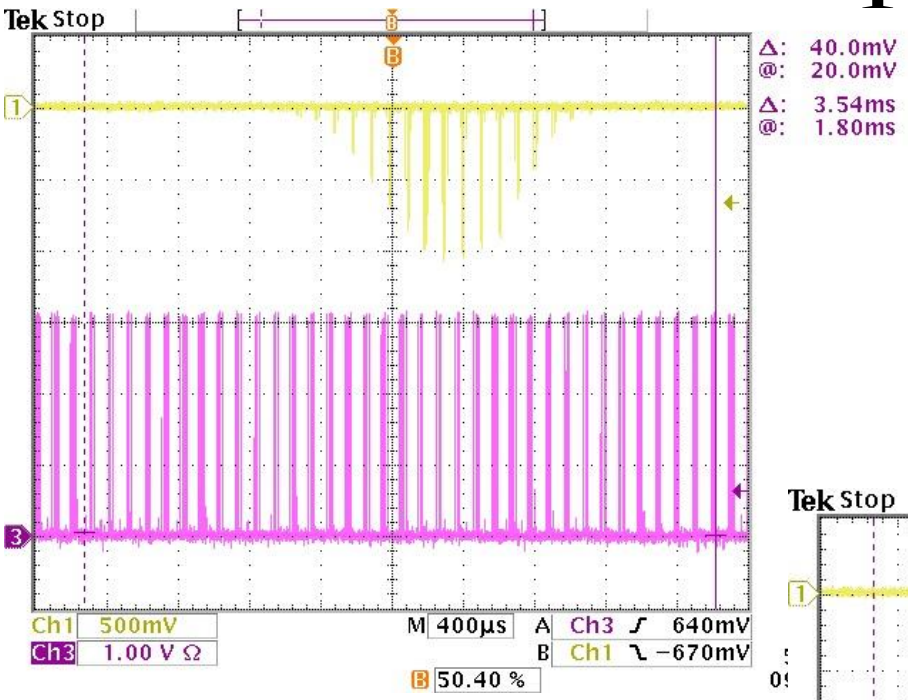
Tev Wire Geometry

Park for CW Next Fly

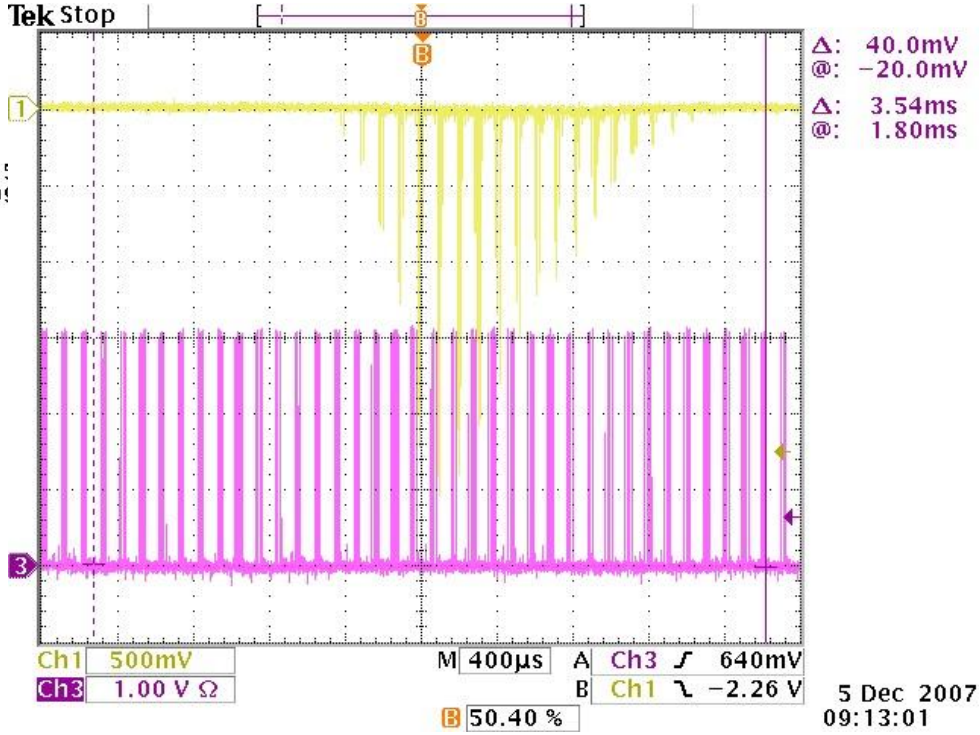
Park for CCW Next Fly



HG Paddle Losses

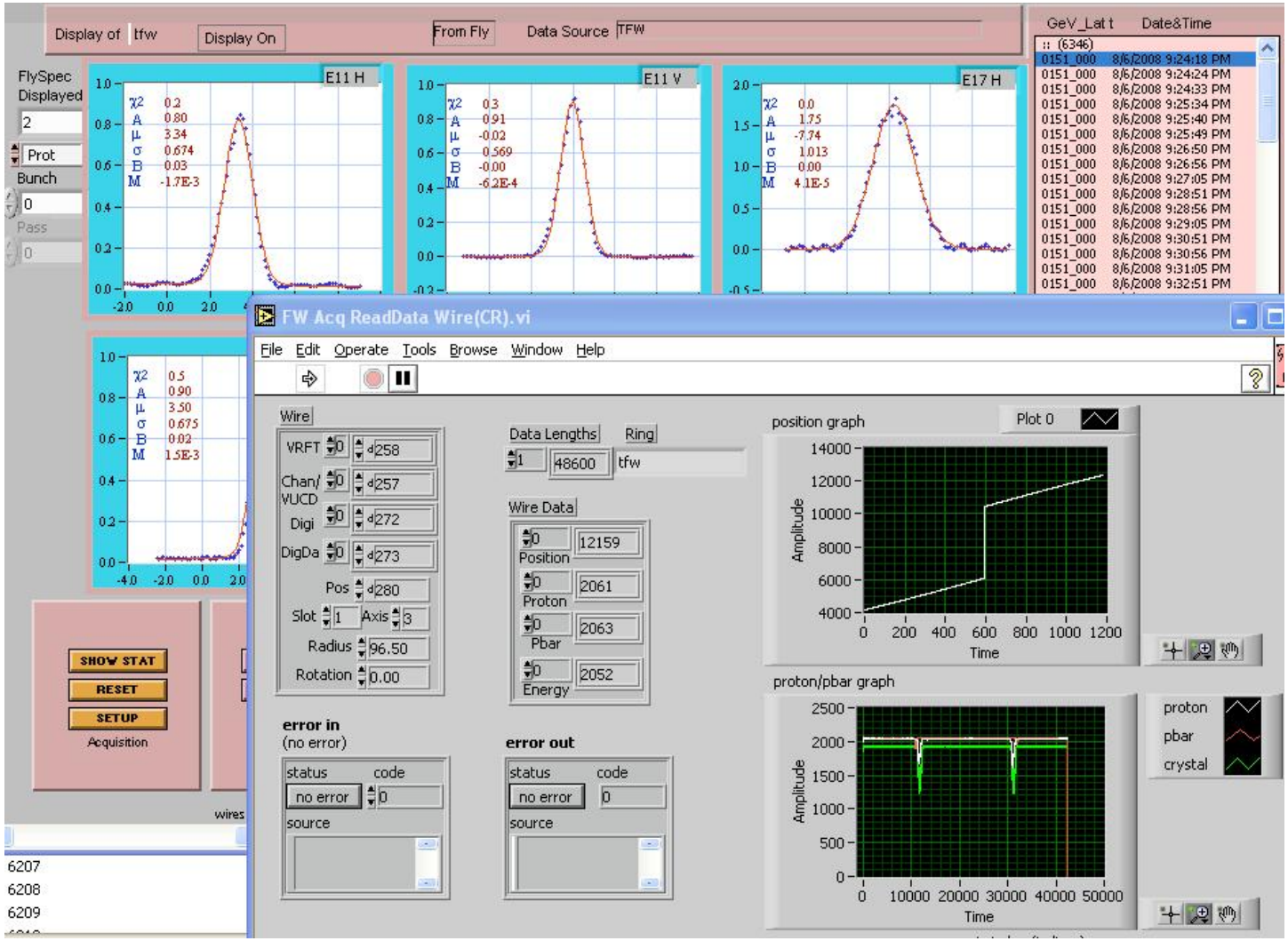


700 Volts



900 Volts

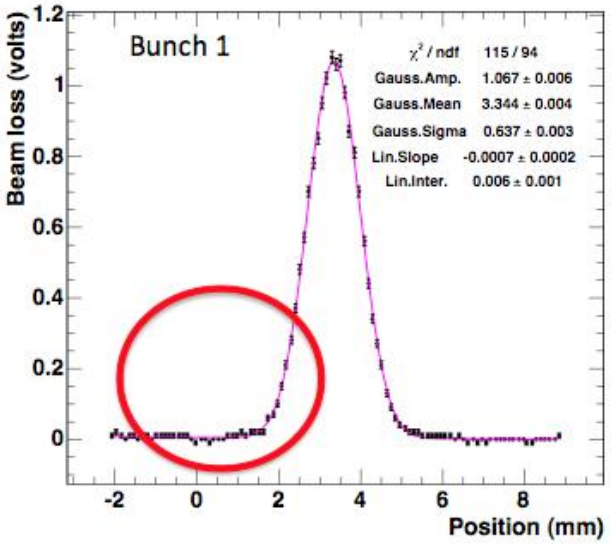
Normal Fly Raw Data Read



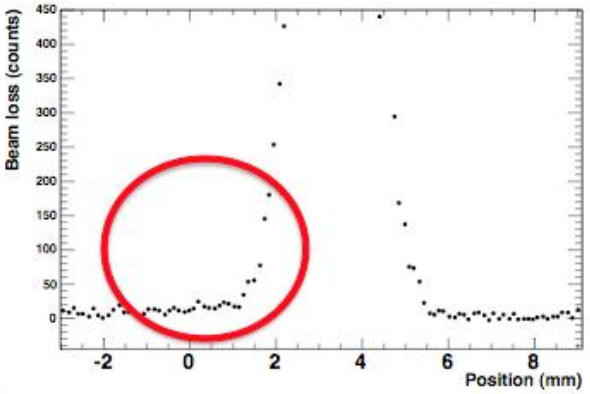
Where to look

Diffusion Rate of the Beam Halo with Flying Wire

E11 Horizontal
(low-gain paddle)



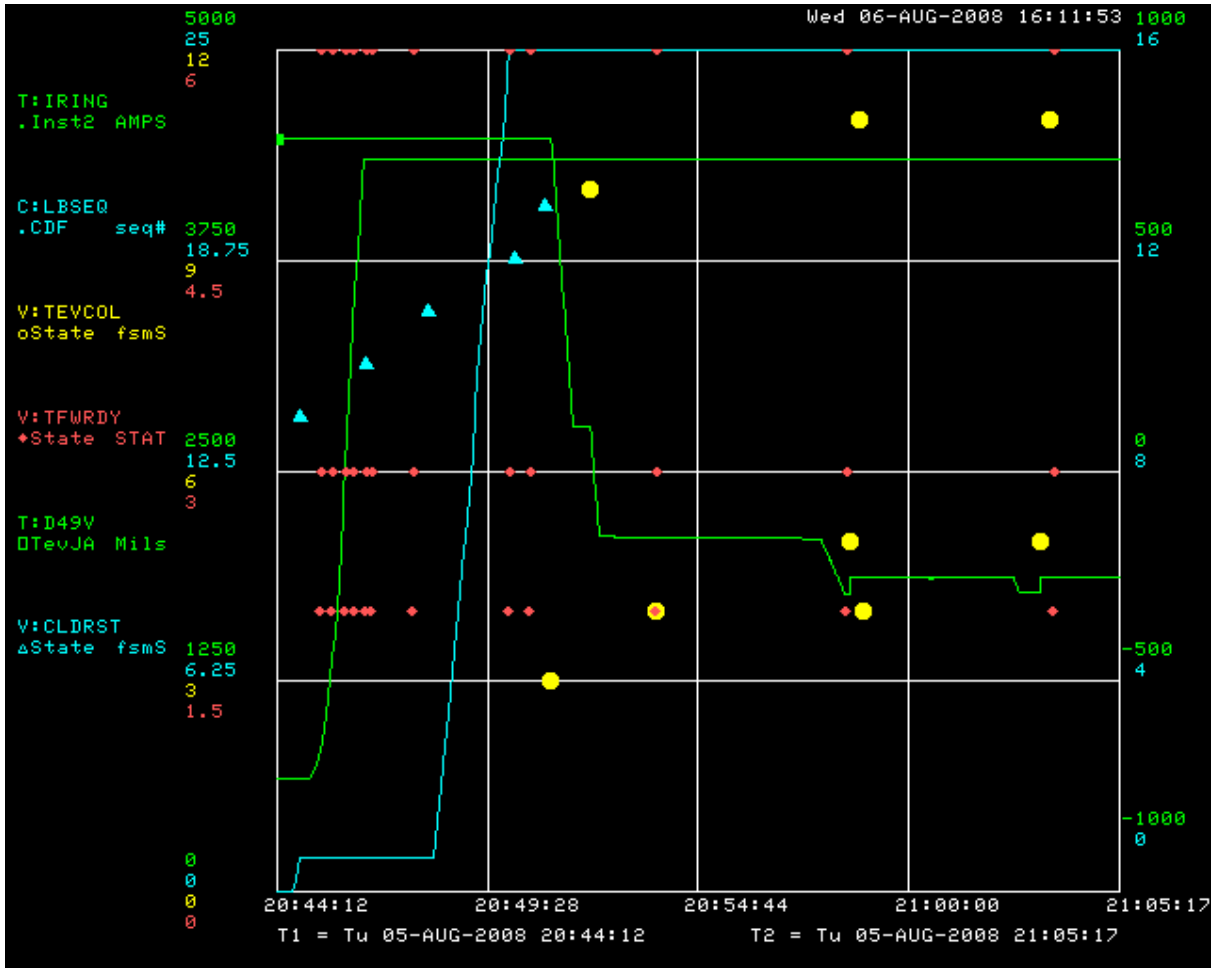
E11 Horizontal
(high-gain paddle)



- Calibrate data from high-gain paddle (E11H) against that from low-gain paddle
- Study the growth rate of the beam halo using data from high-gain paddle

Satomi Shiraishi

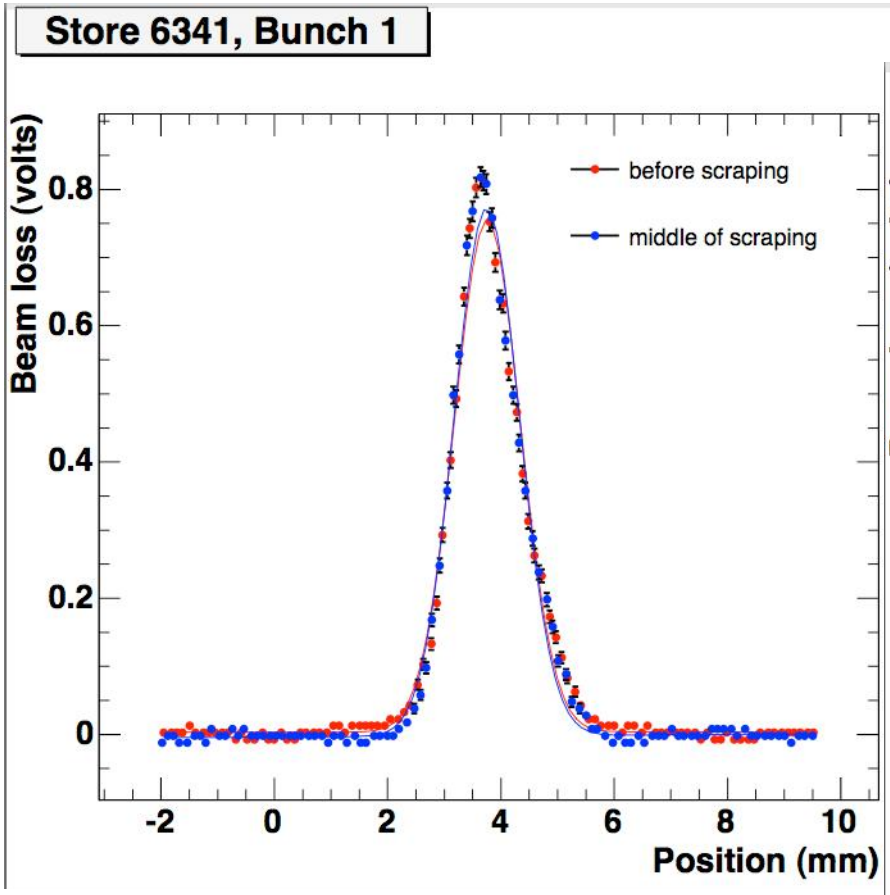
Investigating Losses During Scraping



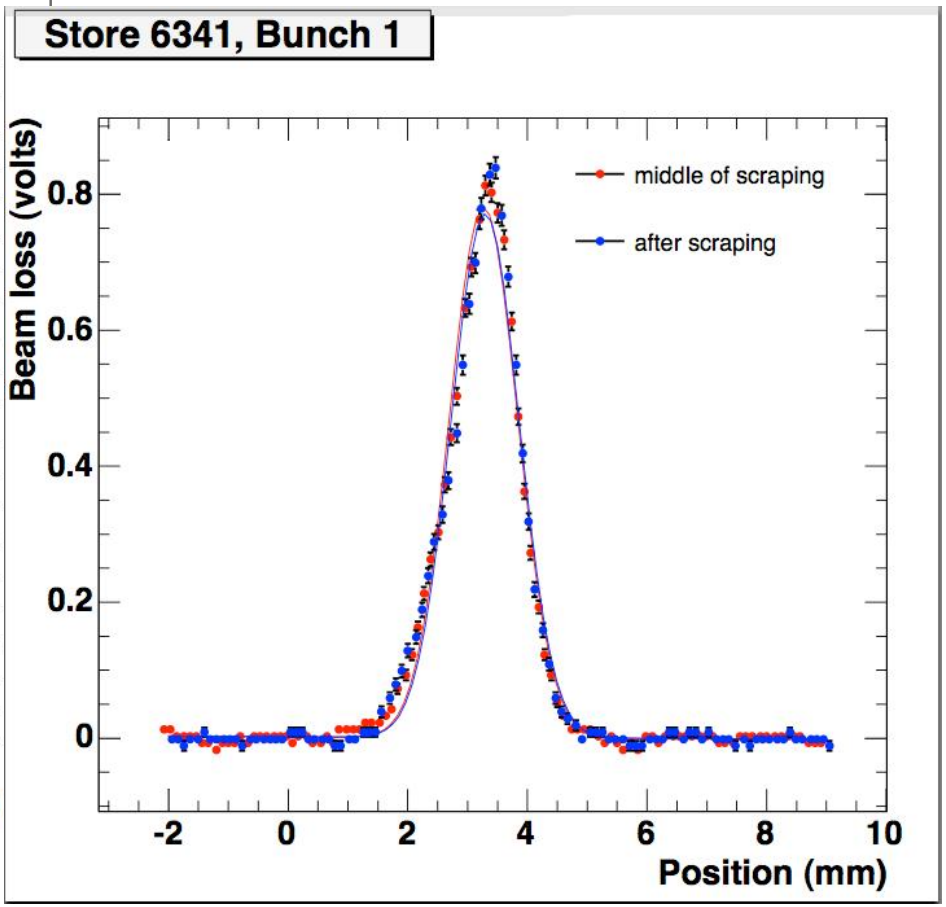
Supplied by Jerry Annala

Scraping Losses

Store6341 E11H bunch1 Fly 5&7



Bunch1 Fly 6&8



Satomi Shiraishi

Conclusion

- D0 Crawling Wire will NOT be installed.
- TEV Flying Wires will be used in the normal mode!
- Losses Monitored with HG Paddle