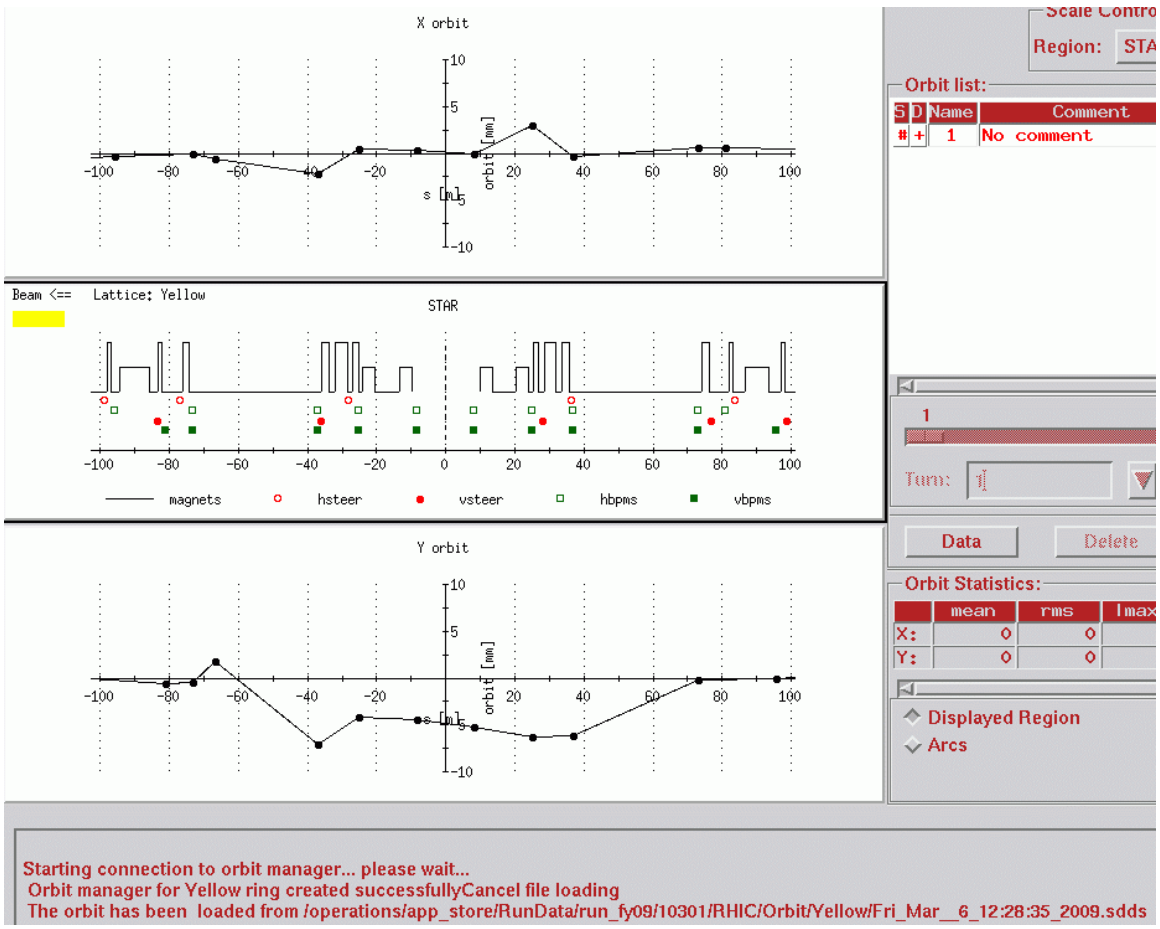
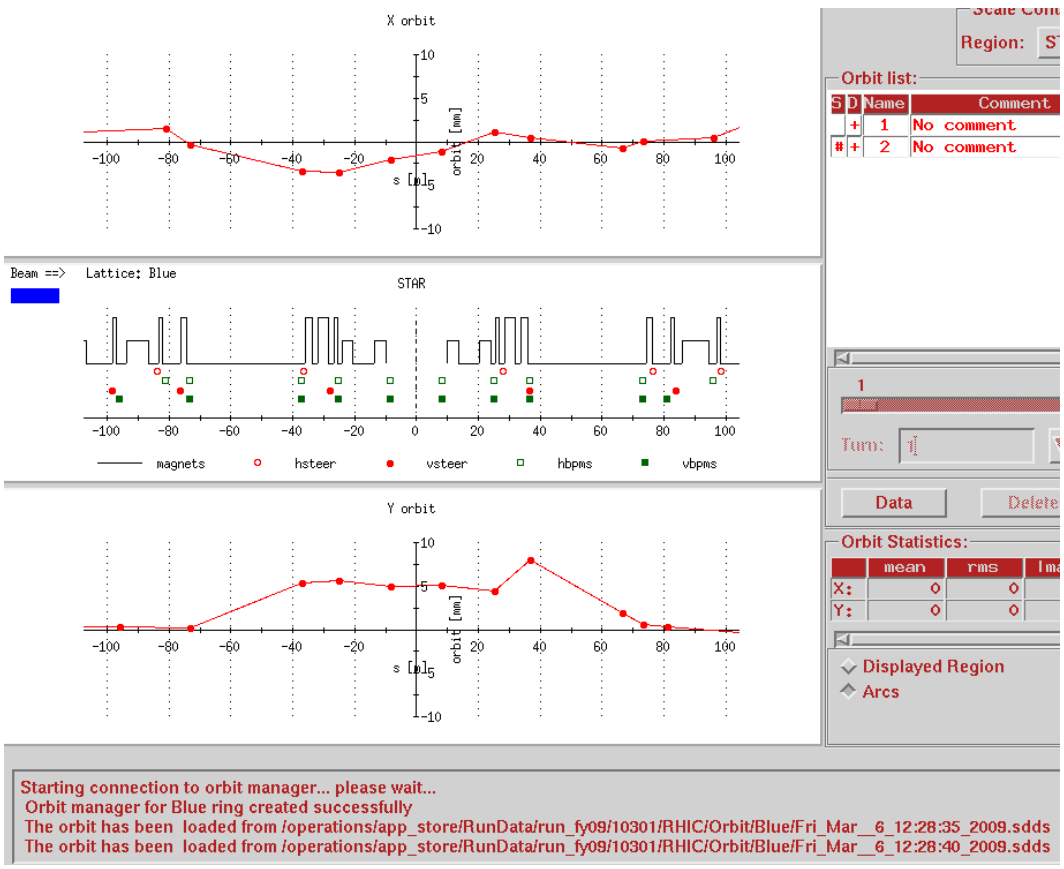
STAR: Injection orbit in Yellow (Fill 10301)



Corr	[mr]	
yo5-th14	−0.016	
yo5-th12	0.101	
yo5-th10	0.108	
yo5-th8	0.022	
yo5-th6	−0.095	
yo5-th4	−0.058	
yo5-th2	0.166	⇐
yi6-th3	−0.026	
yi6-th5	0.035	
yi6-th7	−0.023	
yi6-th9	0.004	
yi6-th11	−0.014	
yi6-th13	0.043	
yi6-th15	0.095	

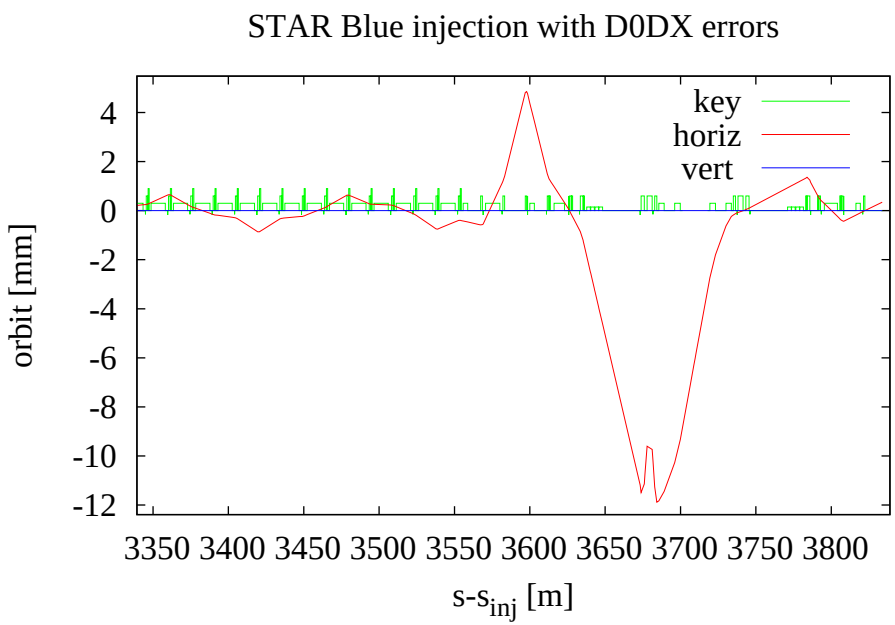
STAR: Injection orbit in Blue (Fill 10301)



Corr	[mr]	
bi5-th15	−0.021	
bi5-th13	0.102	
bi5-th11	0.184	
bi5-th9	0.096	
bi5-th7	−0.090	
bi5-th5	−0.033	
bi5-th3	−0.236	⇐
bo6-th2	−0.017	
bo6-th4	0.055	
bo6-th6	0.046	
bo6-th8	−0.052	
bo6-th10	0.084	
bo6-th12	−0.024	
bo6-th14	−0.035	

Tweak: to make a closed-orbit bump in model

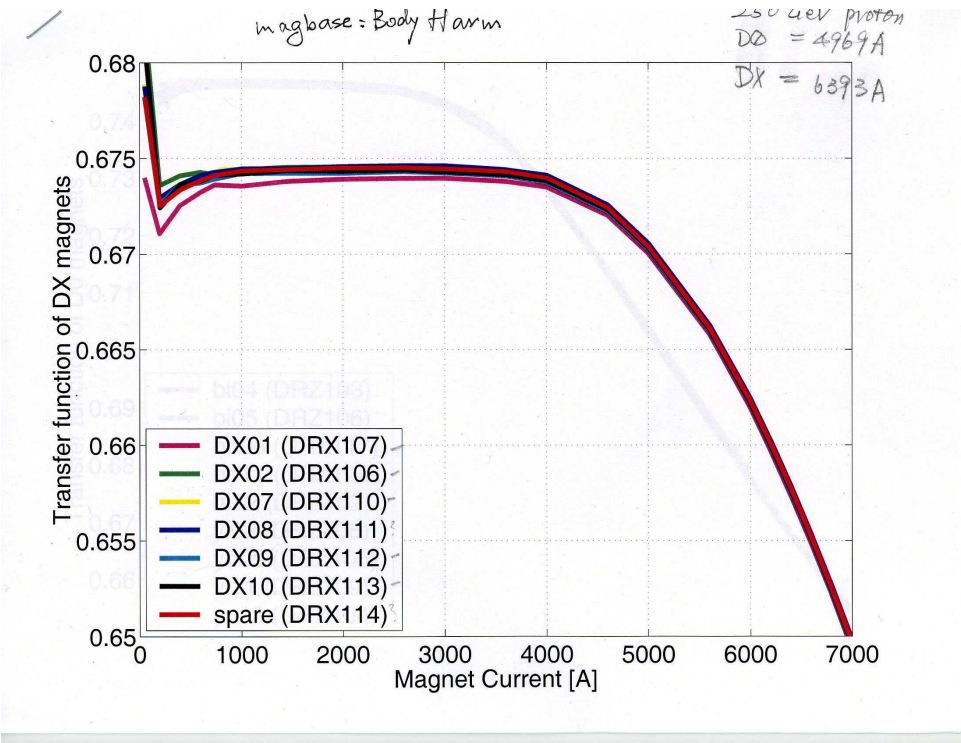
Blue injection simulation

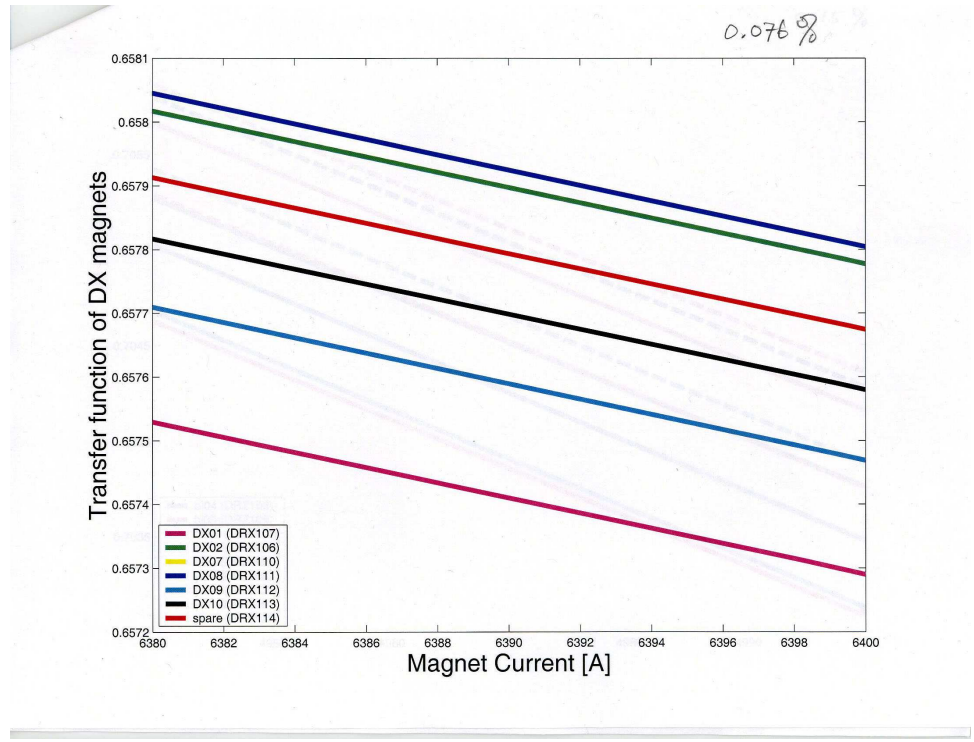


- Similar shape.
- About twice the amplitude seen.
- Used large D0 DX errors.
- Orbit residuals around ring.
  (Not the only solution)

- Use correctors bi5-th13 to bo6-th6
- $\frac{\Delta B_0}{B_0} = 0.8\%$, $\frac{\Delta B_x}{B_x} = -0.9\%$

Measured DX Transfer Functions

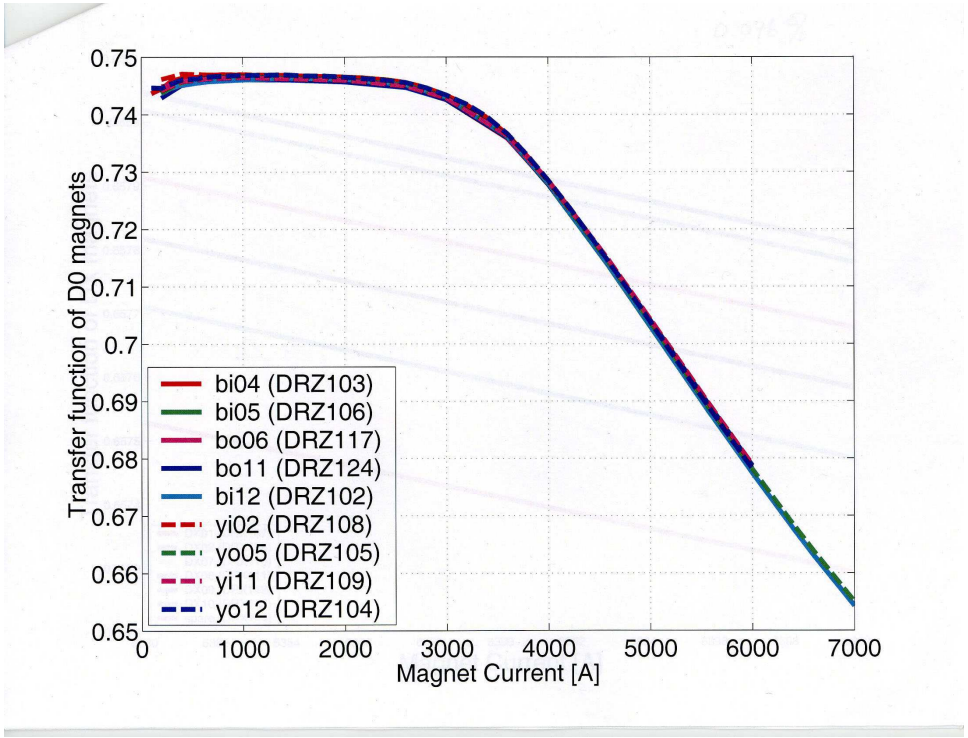


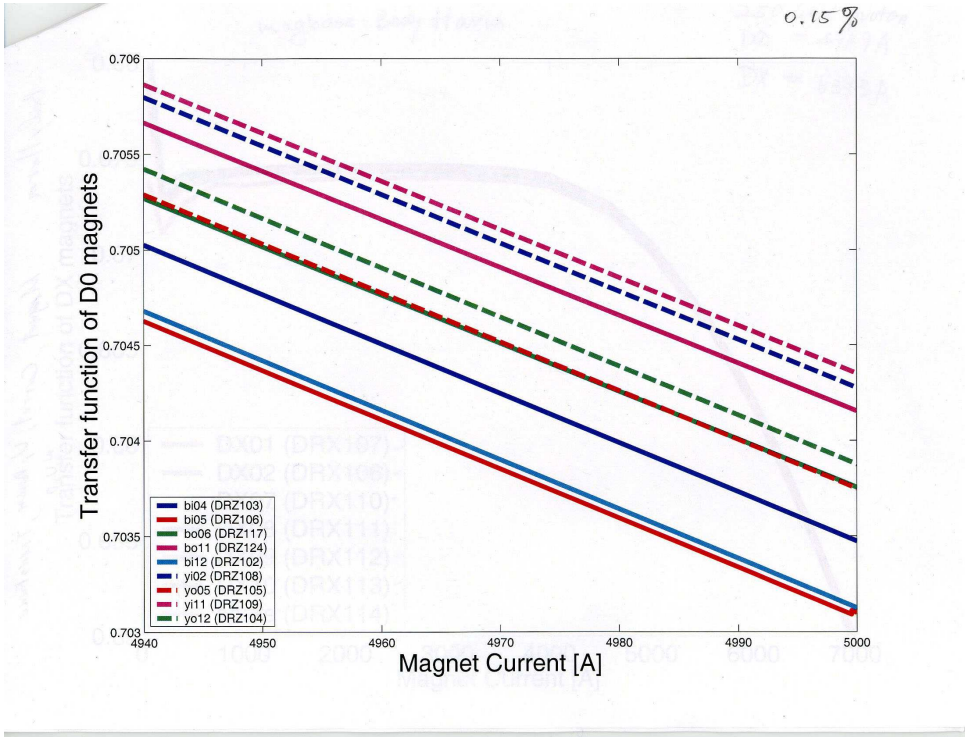


- Only half of the DX magnets were measured.
- $\sim 2\%$ variation at injection.

Thanks to J. Beebe-Wang

Measured D0 Transfer Functions

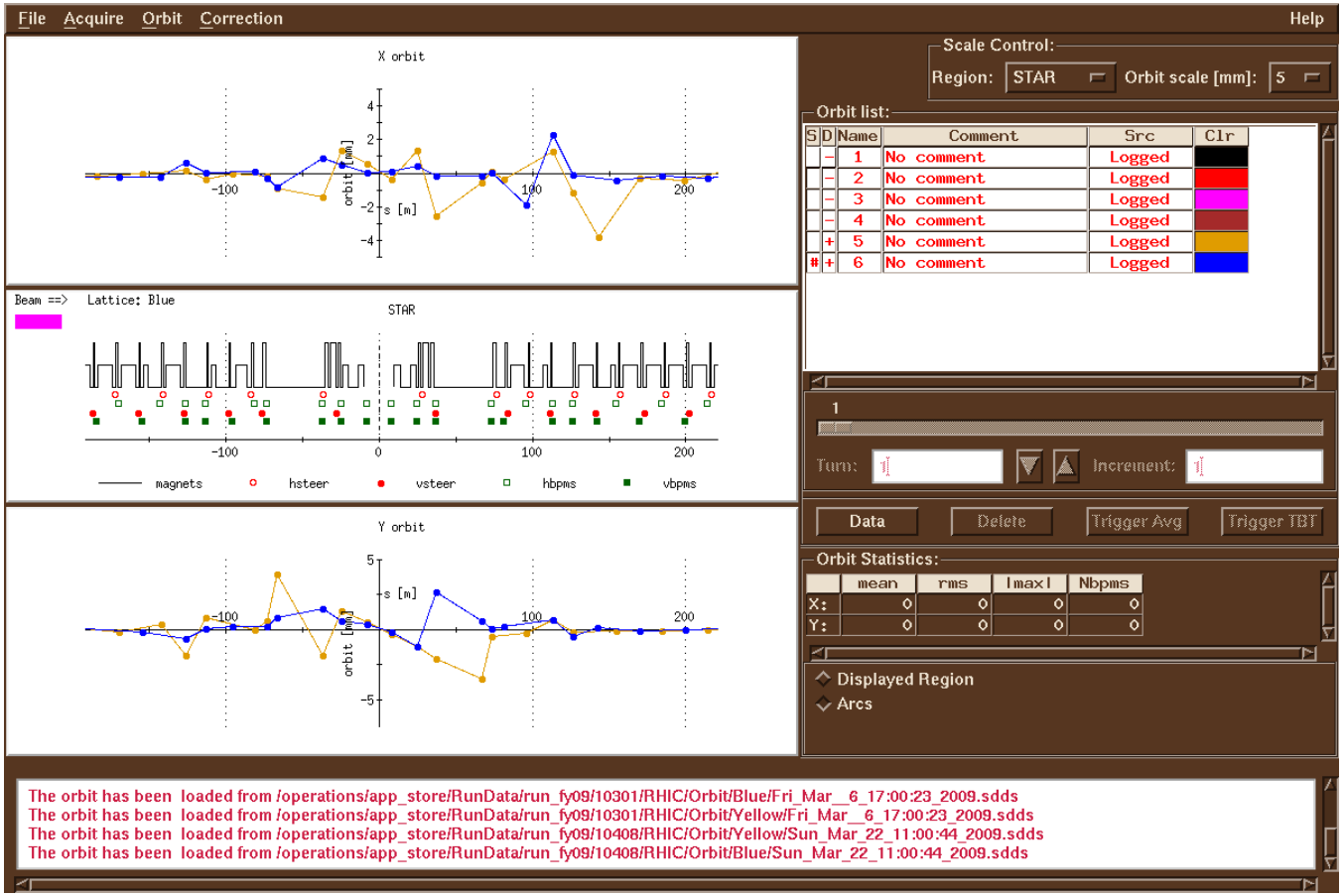




- Only half of the D0 magnets were measured.
- $\sim 1\%$ variation at injection.

Thanks to J. Beebe-Wang

STAR orbits at store for Fill 10408



Large correctors at STAR IR, Fill 10408

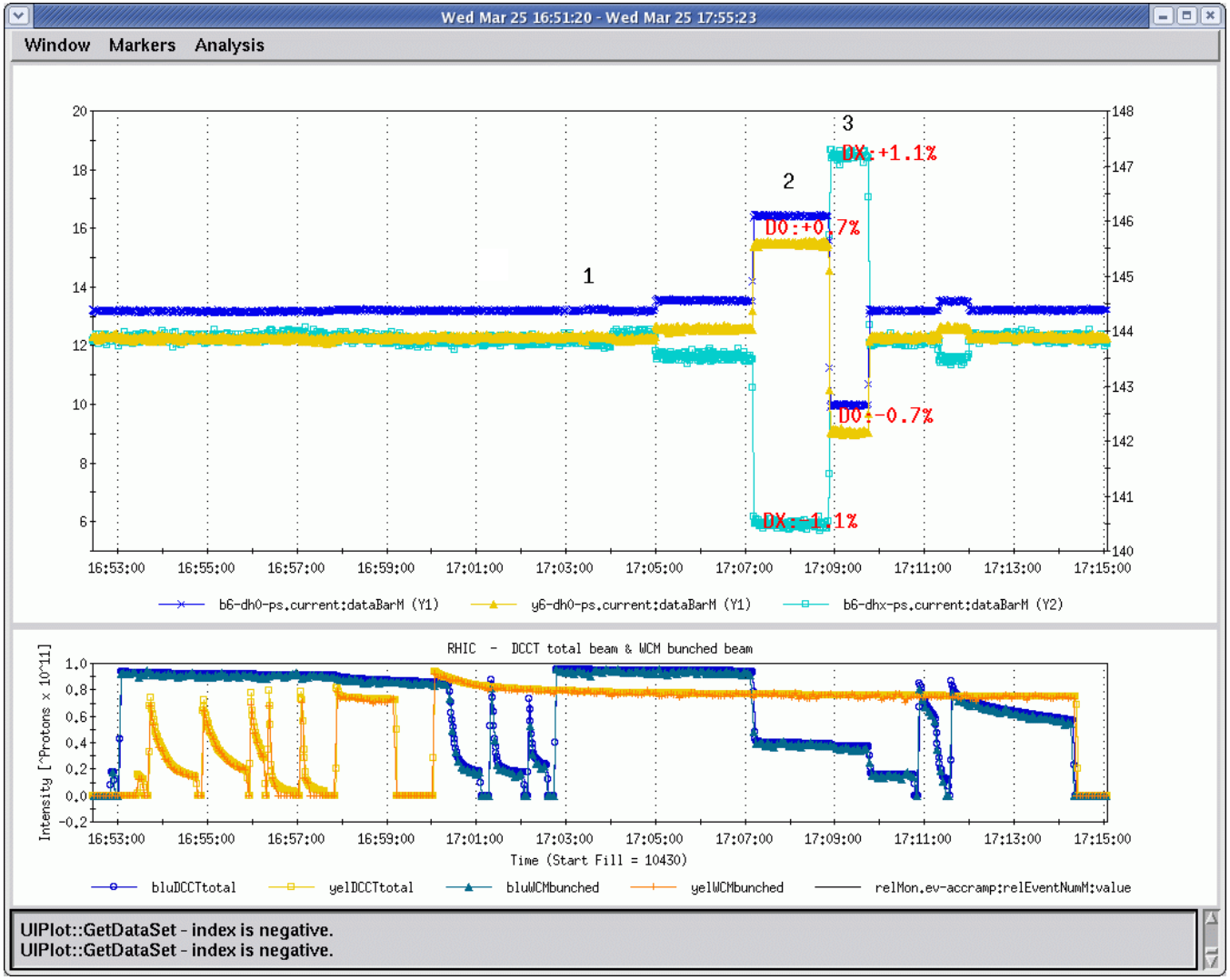
injection:

bi5-th3:	-0.236
yo5-th2:	0.166

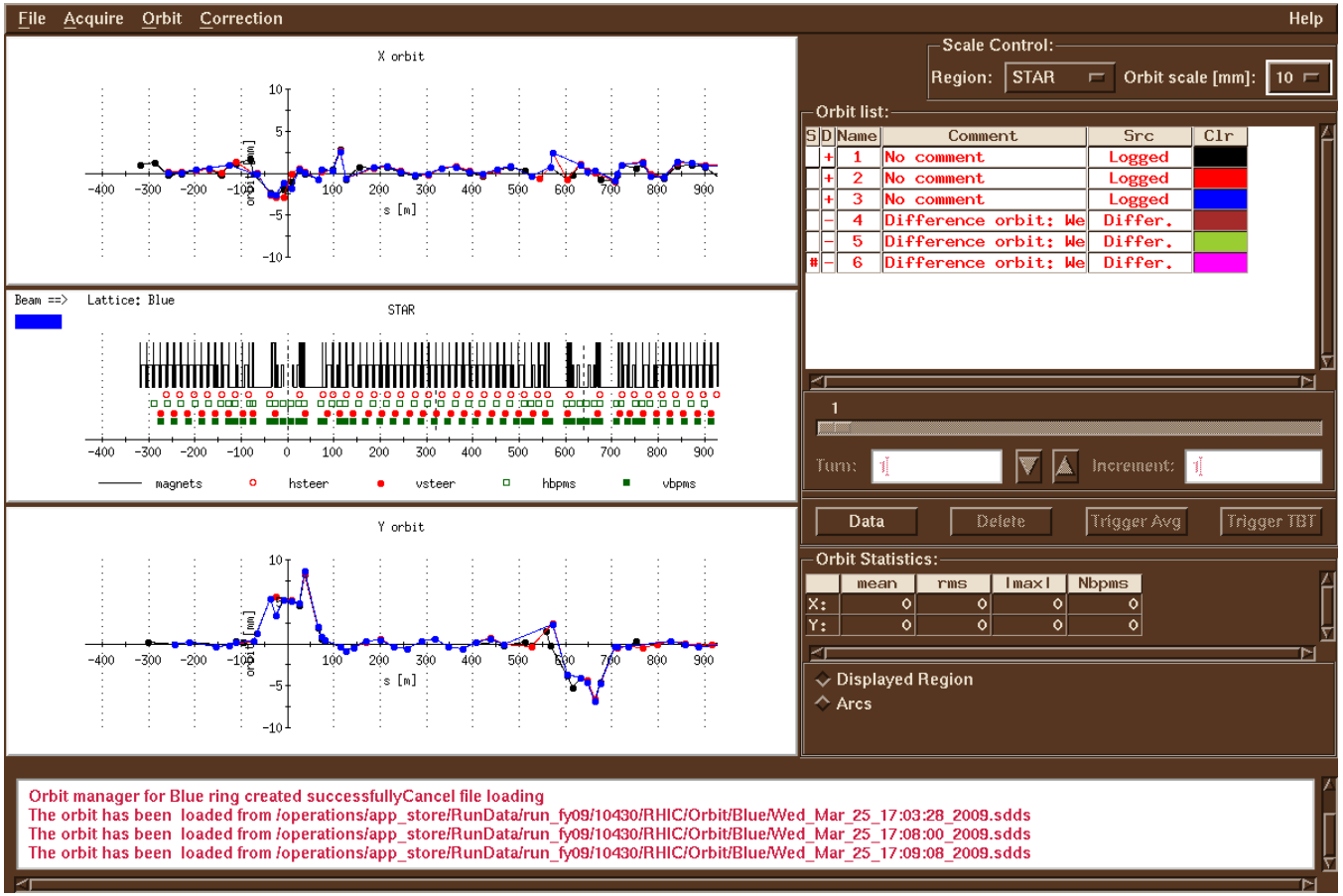
store:

bi5-th3:	-0.202
yo5-th4:	-0.136
yo5-th2:	0.147

10 minutes of data

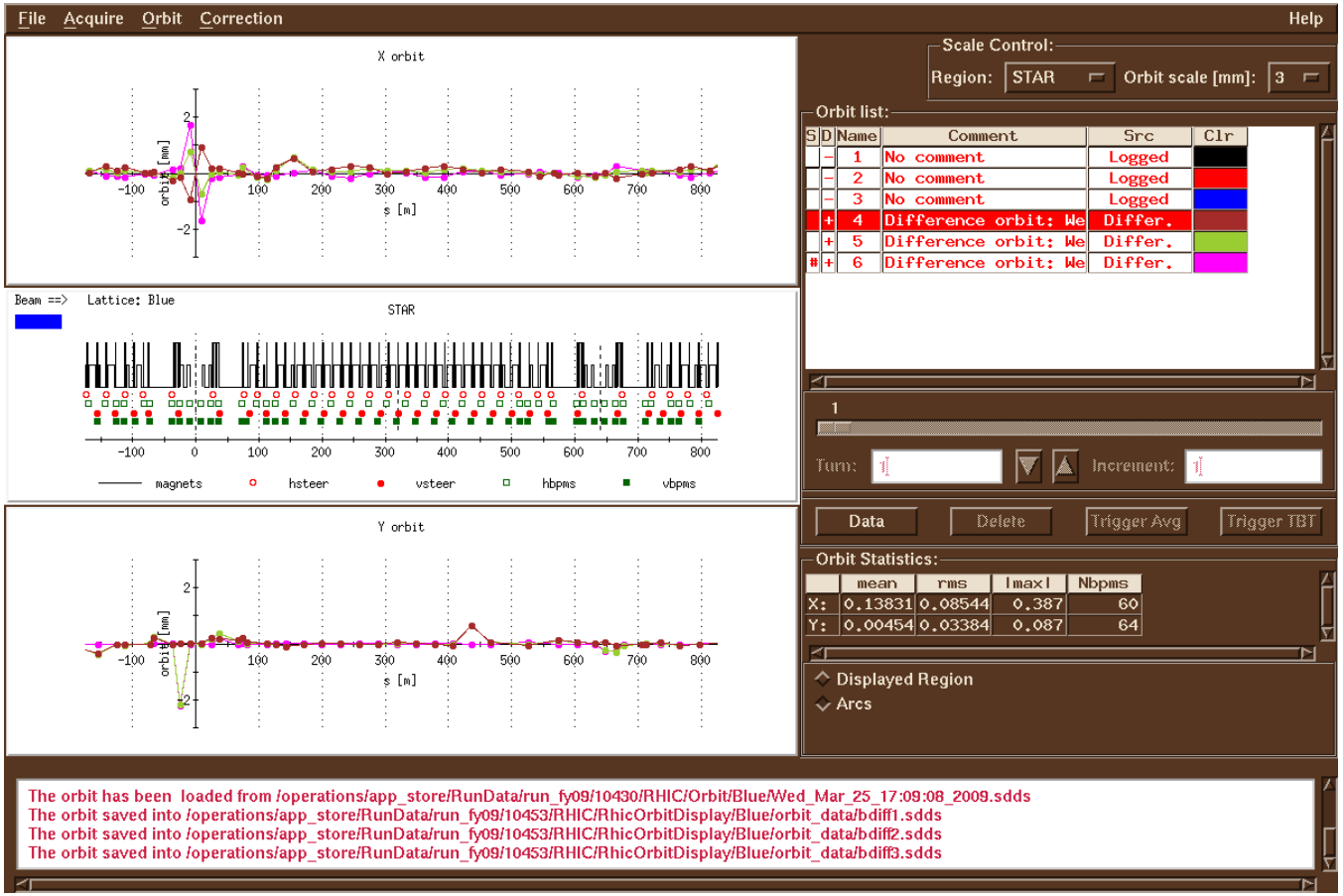


Measured Orbit shifts: blue



- Black: 1
- Red: 2
- Blue: 3

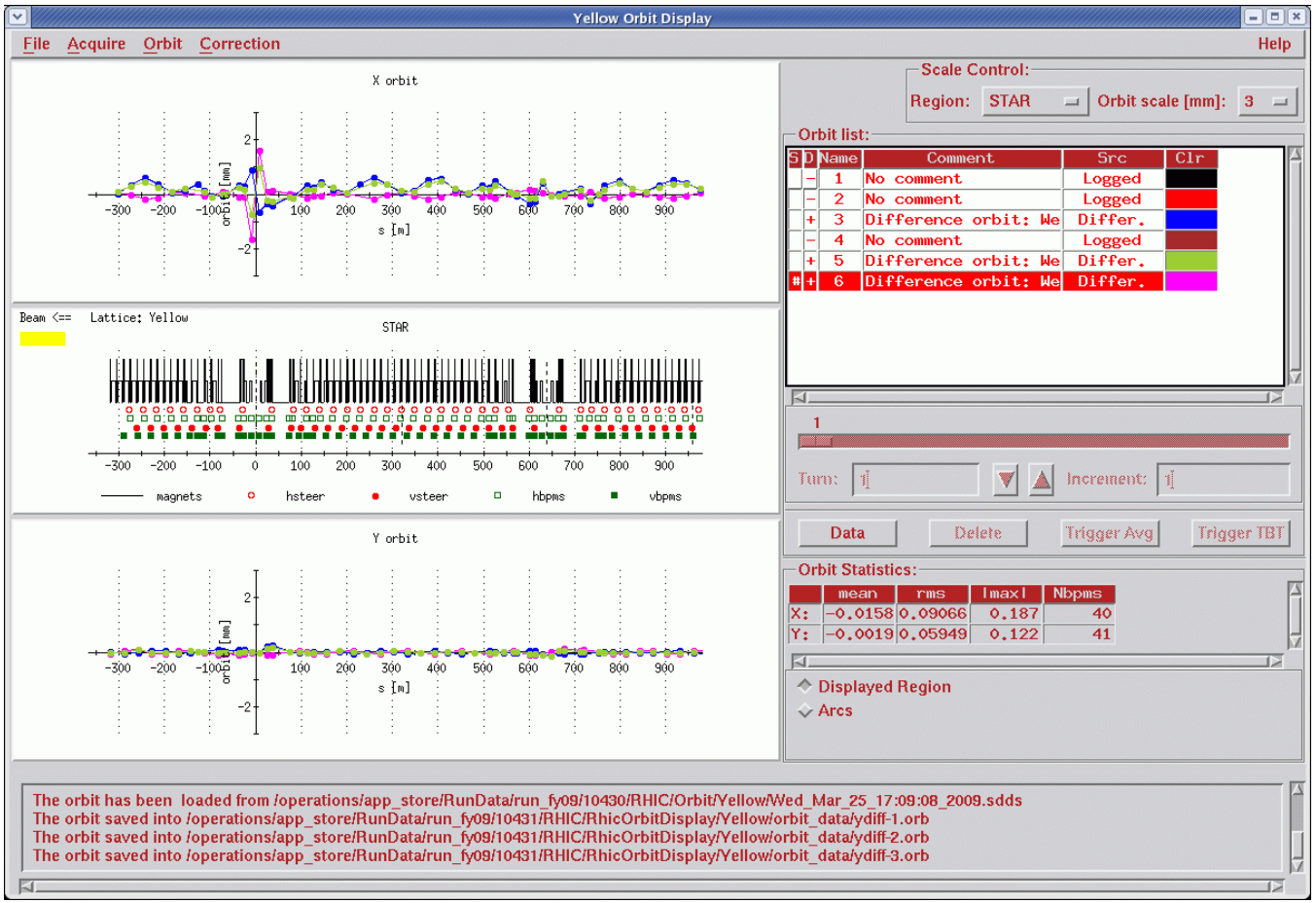
Measured Orbit shifts: blue



Diff Orbs:

- Brown: 2 – 1
- Green: 3 – 1
- Magenta: 3 – 2

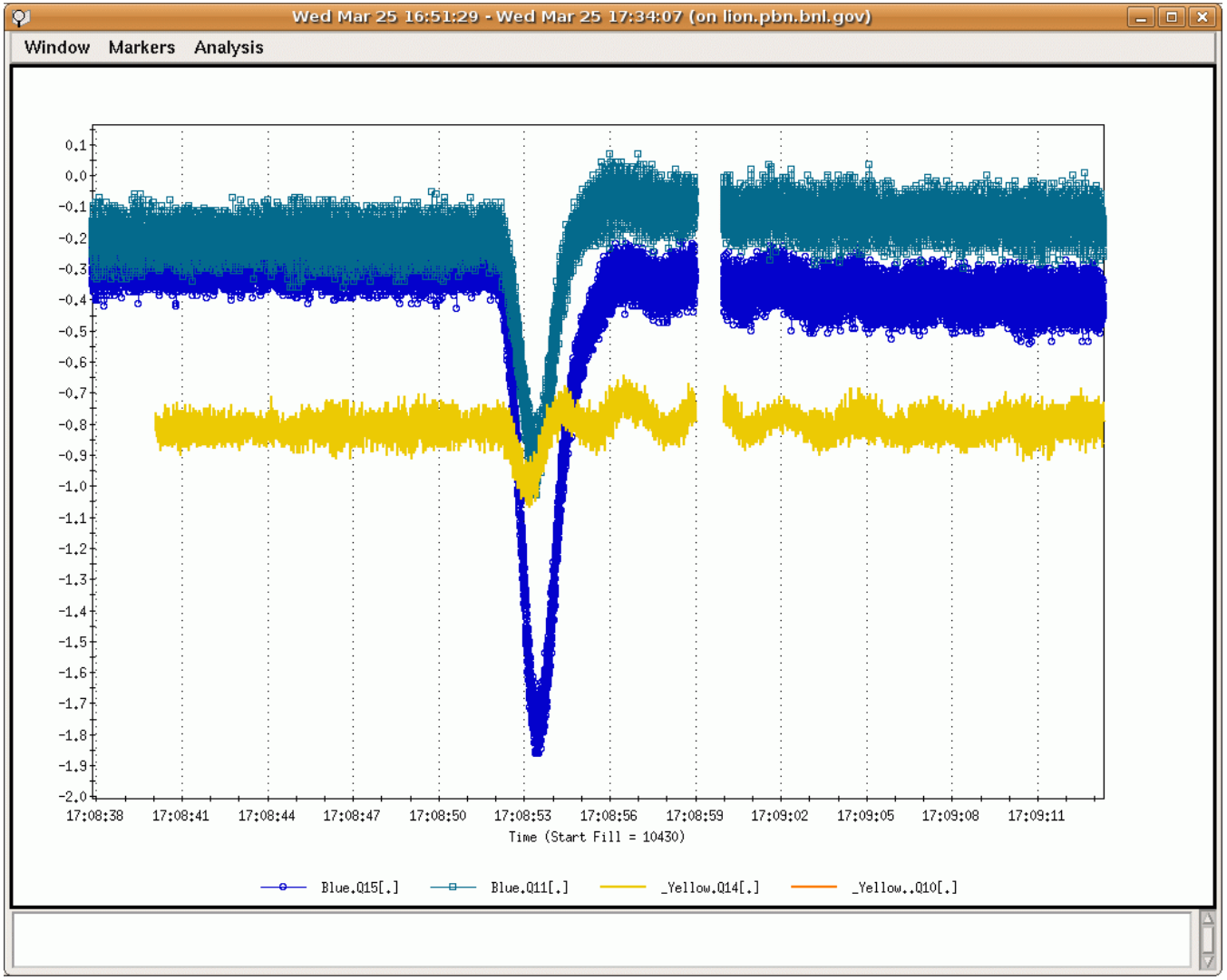
Measured Orbit shifts: yellow



Diff Orbs:

- Blue: 2 – 1
- Green: 3 – 1
- Magenta: 3 – 2

Blue beam losses



Radial loops off.

1st loss at 17:08:53