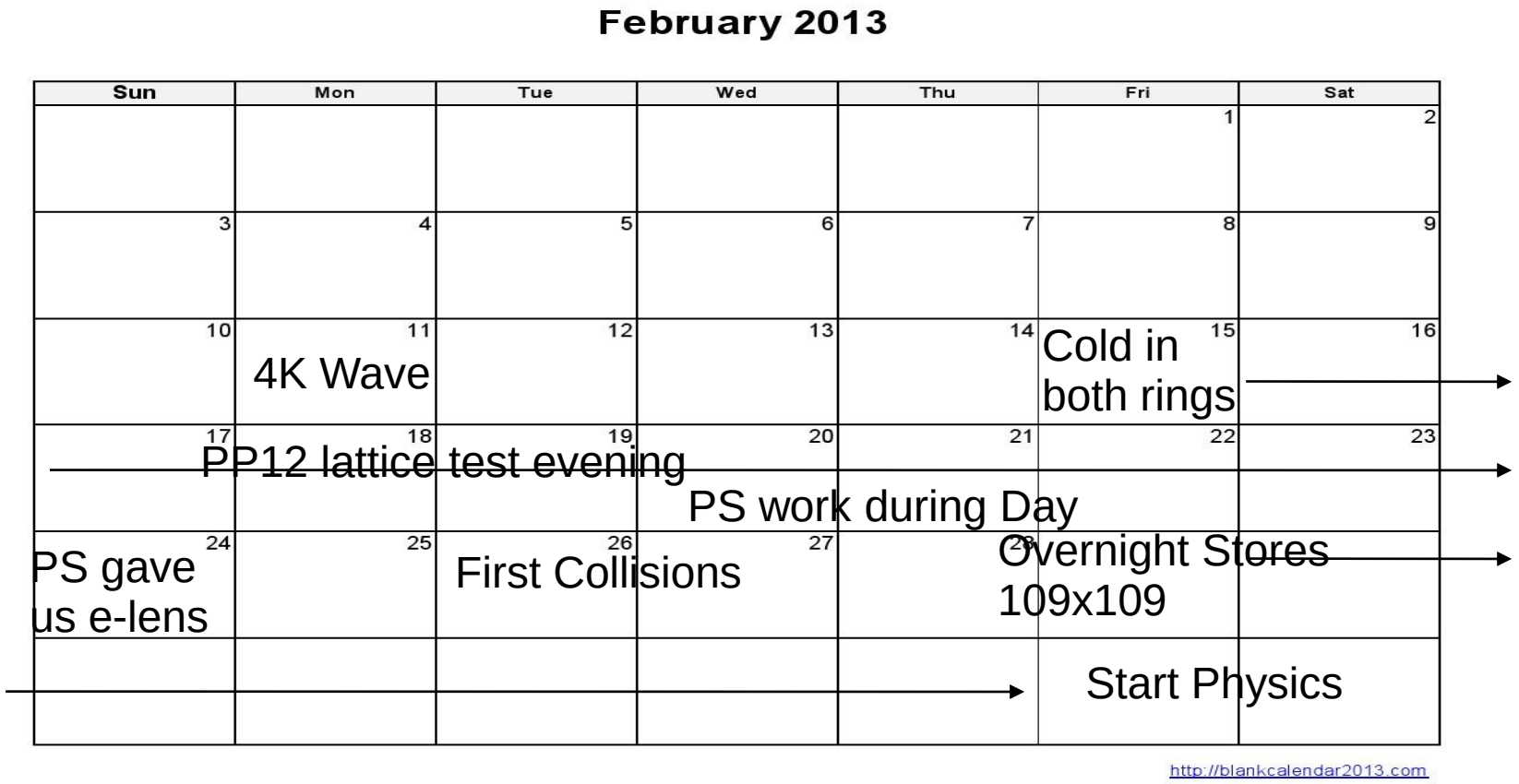
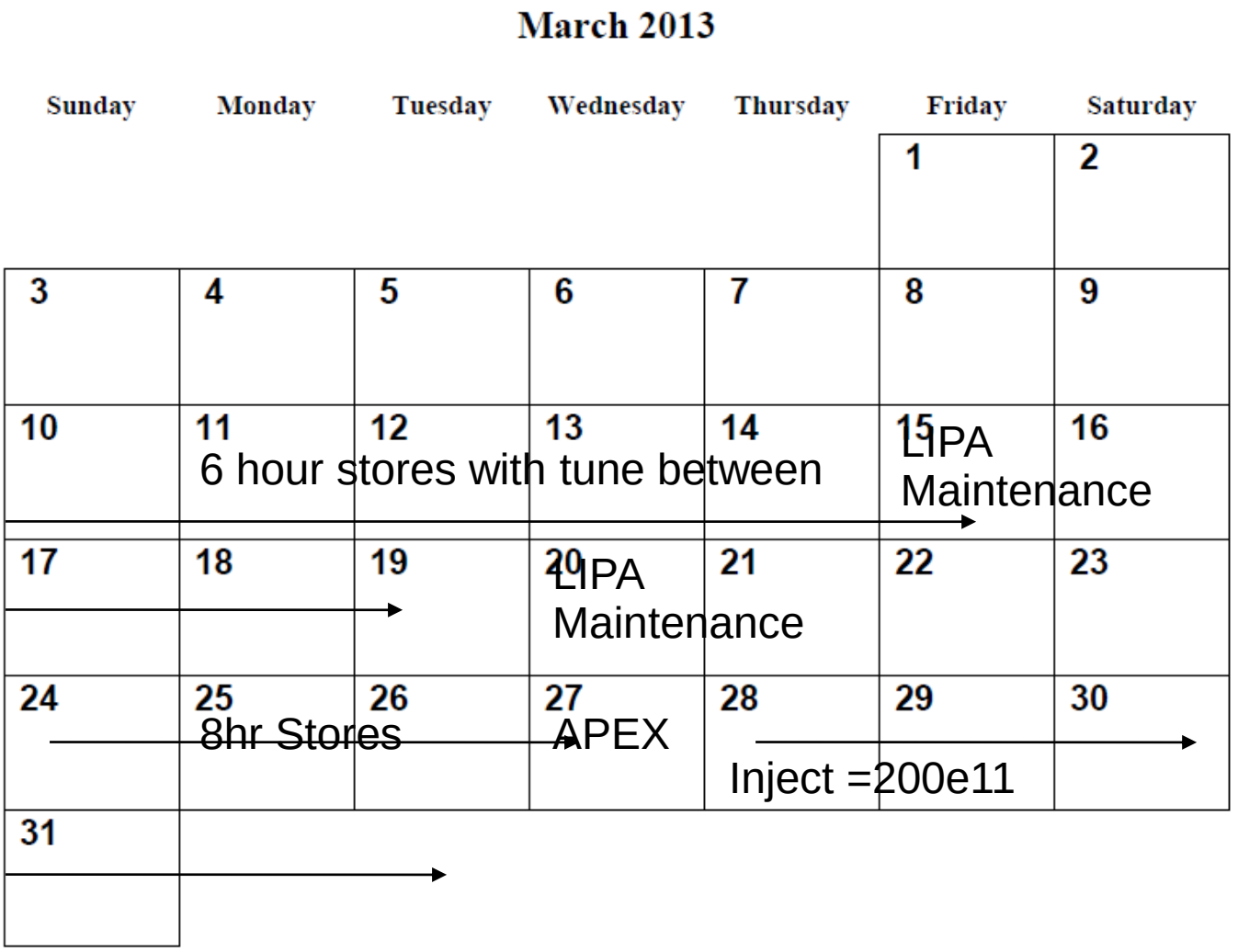
The Story So Far




March 2013
Sunday
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
6 hour stores with tune between
LIPA
Maintenance
17
18
19
20
21
22
23
LIPA
Maintenance
24
25
26
27
28
29
30
8hr Stores
APEX
Inject =200e11
31

April 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3 Maintenance	4 Switch Fy12 Lattice	5	6 Pushed Intensity
7 Reach 200e11 At FT	8	9	10 APEX	11 Rotator Tuning	12	13
14	15 MD Studies	16	17 Maintenance Golden Store 17396	18	19	20
21	22	23	24 APEX	25 Machine Dev.	26 Pushed Bunch Intensity	27
28	29	30 Test corrected Optics	APEX	Machine Dev.		

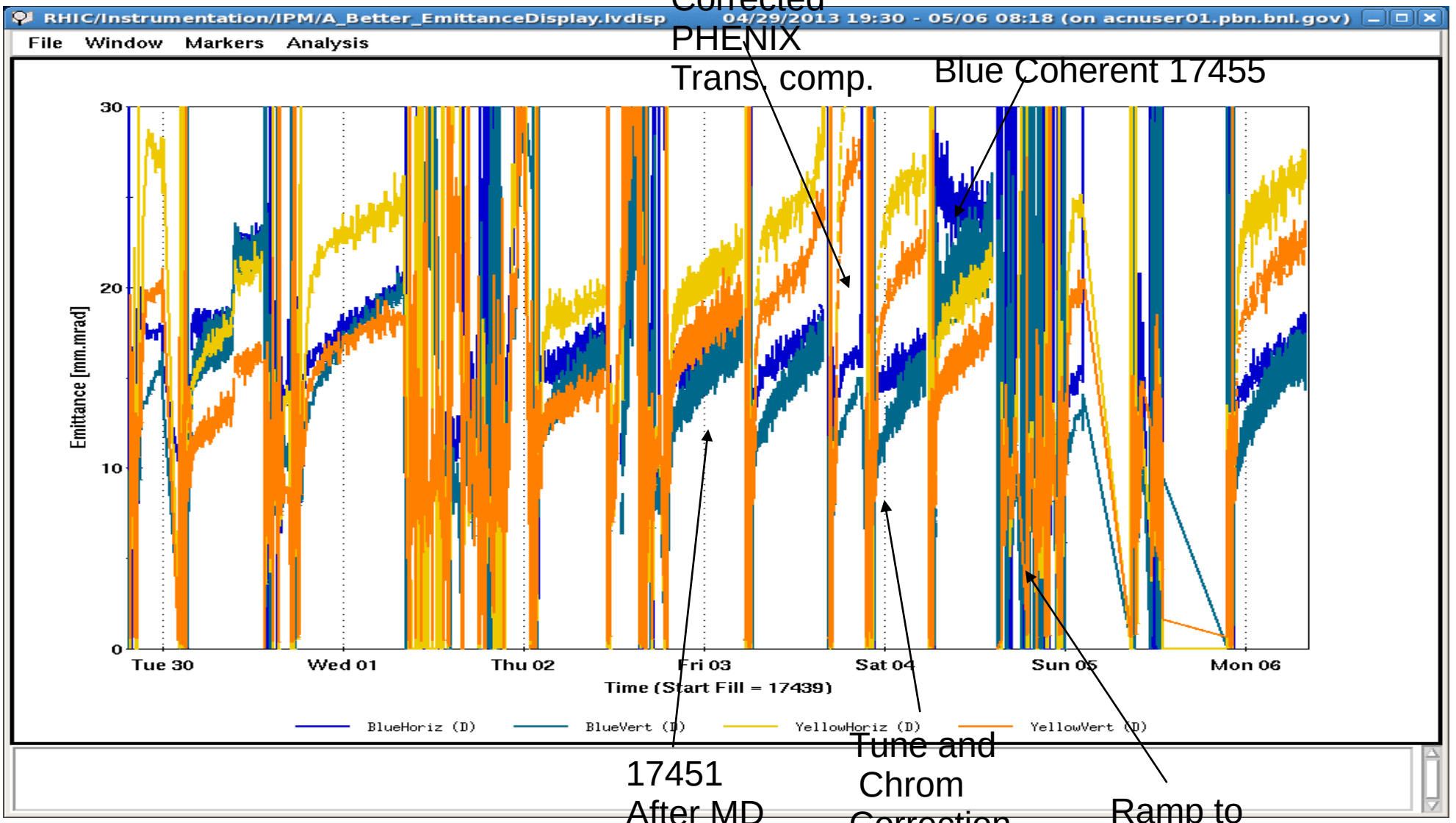
May 2013

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 APEX	2 MD Studies	3	4
5	6	7	8 Maint.	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

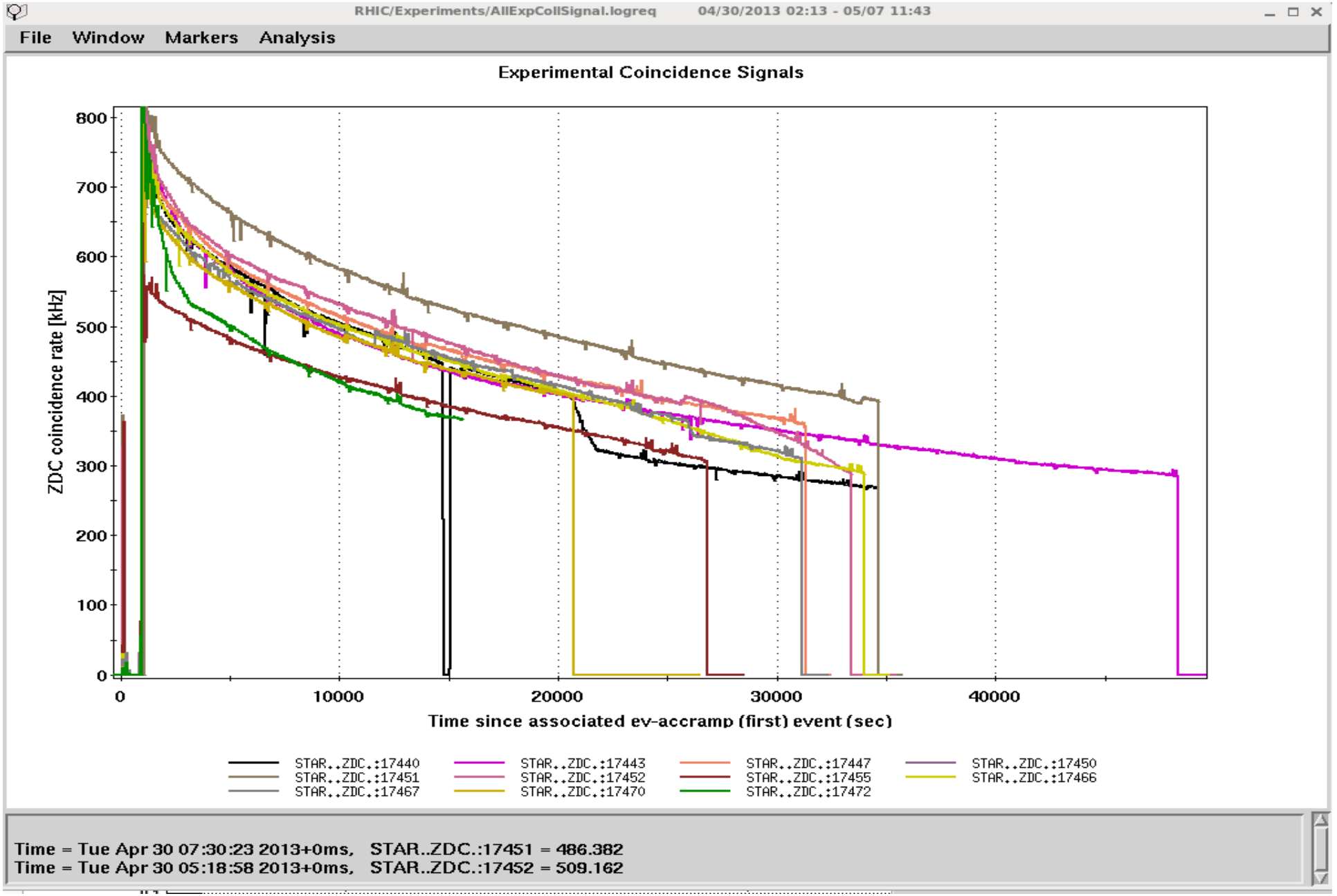
Past week

- Machine Development
  - Applied Optics Correction to Yellow Rotator Ramp and Store
  - Applied Dpx matching using GammaT quads on Blue energy and rotator ramp
- Yellow Emittance Blow up during collisions:
  - Was bad before MD corrections
  - Got worse after orbit corrections to remove PHENIX transverse Component
- Lost or damaged stores:
  - Blue coherence before energy ramp (blew up emittance)
  - BBQ cross 'locking' before energy ramp
  - Abort kick pre-fire
  - Two ramp into 'bad' collision orbits
- Damaged Yellow RF cavities

Yellow Collision Emittance Story

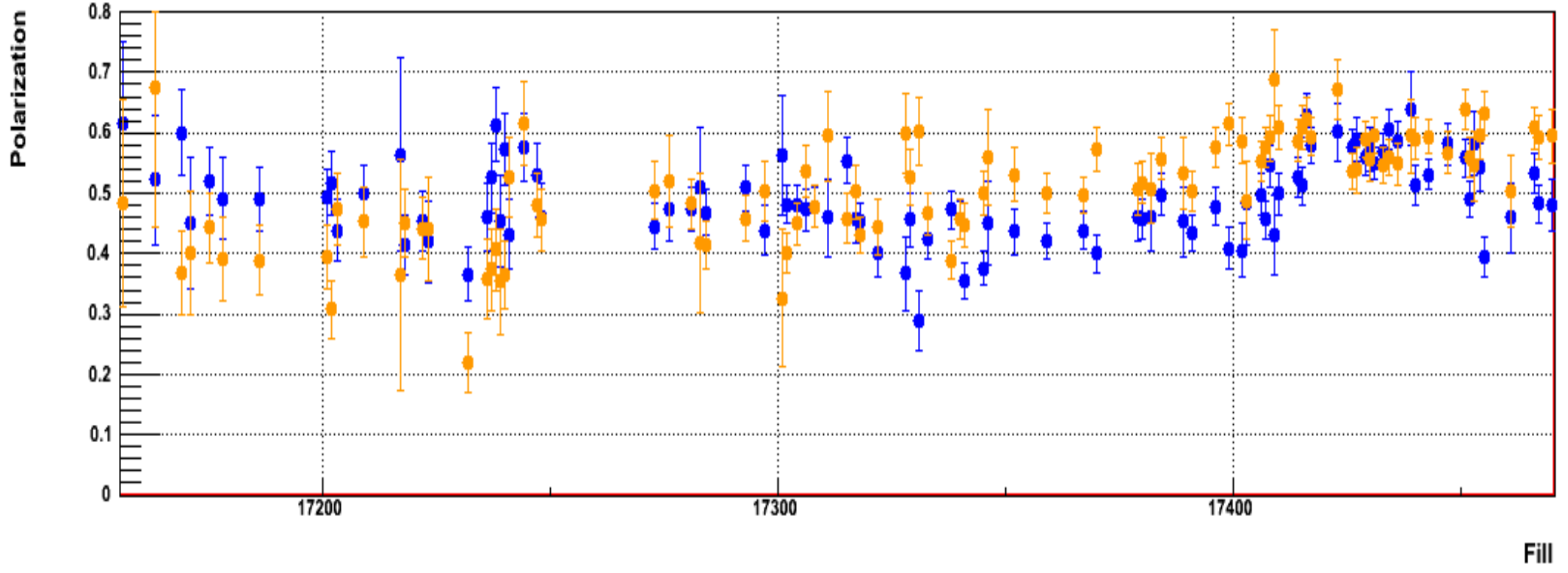


Best Lumi was 17451 (after MD)



Blue Polarization Suffered since 17455

04-30	17440	0.0393 +- 0.0012	0.5906 +- 0.0333	0.0394 +- 0.0013	0.5126 +- 0.0338
05-01	17443	0.0387 +- 0.0010	0.5938 +- 0.0277	0.0403 +- 0.0010	0.5310 +- 0.0251
05-02	17447	0.0404 +- 0.0013	0.5669 +- 0.0340	0.0398 +- 0.0013	0.5822 +- 0.0349
05-03	17451	0.0377 +- 0.0011	0.6385 +- 0.0340	0.0387 +- 0.0012	0.5580 +- 0.0321
05-03	17452	0.0399 +- 0.0012	0.5592 +- 0.0335	0.0409 +- 0.0012	0.4898 +- 0.0308
05-03	17453	0.0400 +- 0.0021	0.5447 +- 0.0562	0.0395 +- 0.0019	0.5824 +- 0.0529
05-04	17454	0.0386 +- 0.0014	0.5946 +- 0.0399	0.0376 +- 0.0014	0.5435 +- 0.0393
05-04	17455	0.0403 +- 0.0013	0.6323 +- 0.0370	0.0408 +- 0.0014	0.3941 +- 0.0331
05-05	17461	0.0427 +- 0.0024	0.5026 +- 0.0595	0.0432 +- 0.0024	0.4590 +- 0.0580
05-06	17466	0.0411 +- 0.0012	0.6074 +- 0.0334	0.0388 +- 0.0012	0.5337 +- 0.0335
05-06	17467	0.0381 +- 0.0012	0.5927 +- 0.0357	0.0414 +- 0.0012	0.4829 +- 0.0311
05-07	17470	0.0398 +- 0.0016	0.5943 +- 0.0452	0.0401 +- 0.0017	0.4796 +- 0.0427

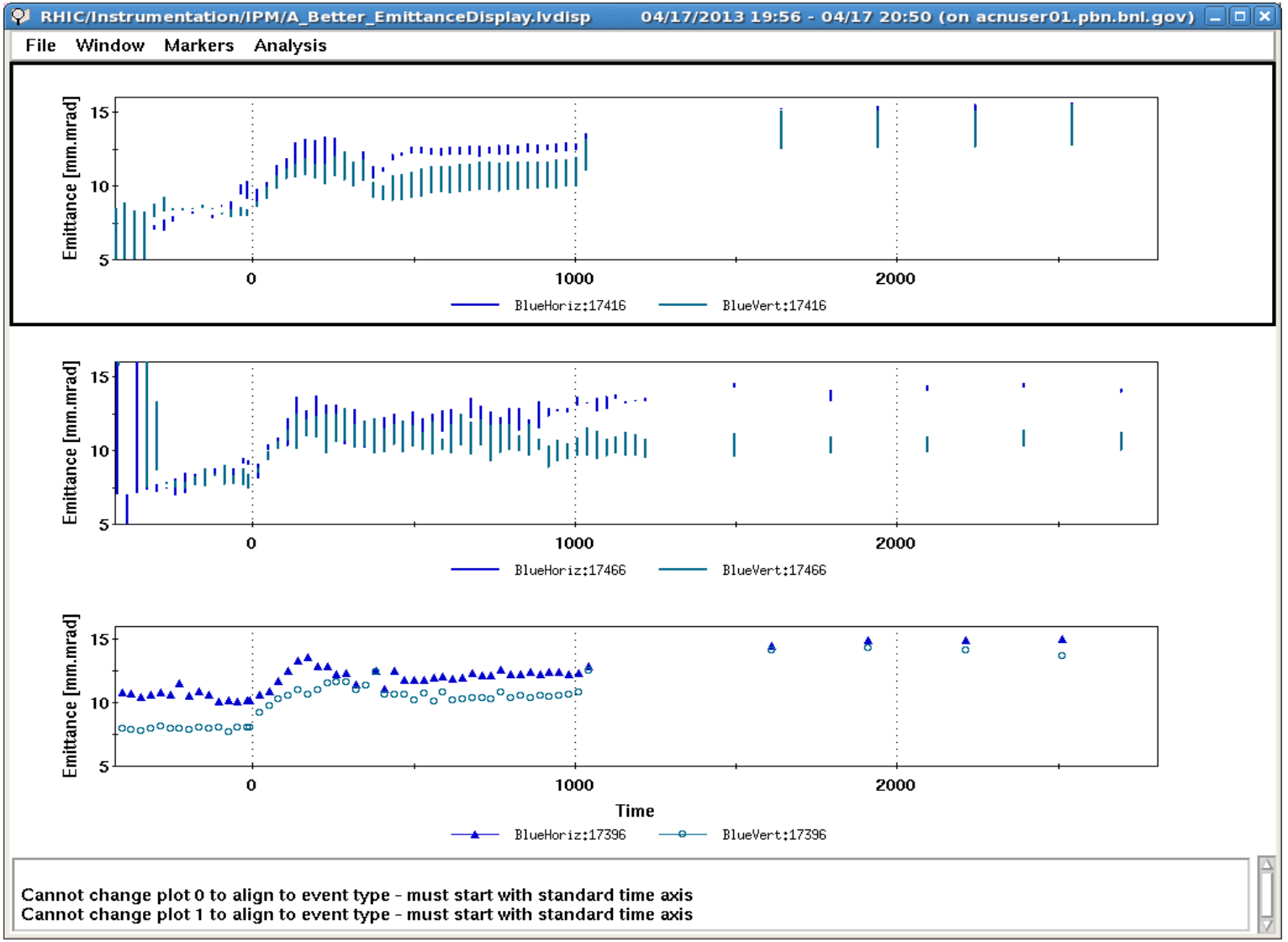


Is a 'bright' Blue beam blowing Yellow up?

Golden Fill 17416

Where we are now

Golden Fill 17396



Yellow Emittance

Golden Fill 17416

Where we are now

Golden Fill 17396

Future Plans

- Control angle creep at IP's
  - Modifying orbit feedback to mask out some redundant bpms
  - Don't make new goal orbit with LISA
- Try and get back to 'good' collision orbit and/or tunes
  - Change tunes slowly to see if can reduce blow-up
  - If all fails maybe controlled blow-up of Blue emittance on rotator ramp.