STAR Status

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Time Meeting, 2/24/15

STAR runs a very diverse Physics Program in p+p

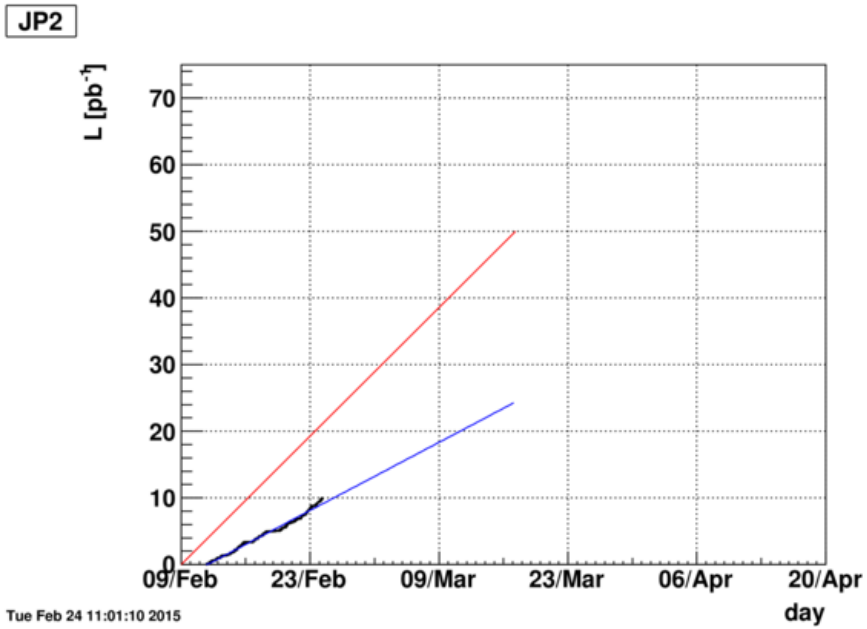
- Heavy Flavor
  - Charm Using Heavy Flavor Tracker
  - Beauty using b→Upsilon →di-leptons
- Roman Pots
  - Glueball search (Central production)
  - Elastic scattering
  - Diffraction
- Spin
  - Longitudinal (now) Mainly Delta G using mid-rapidity Jets
  - Transverse (second half): Forward TSSAs of π^0, direct γ using new preshower detector

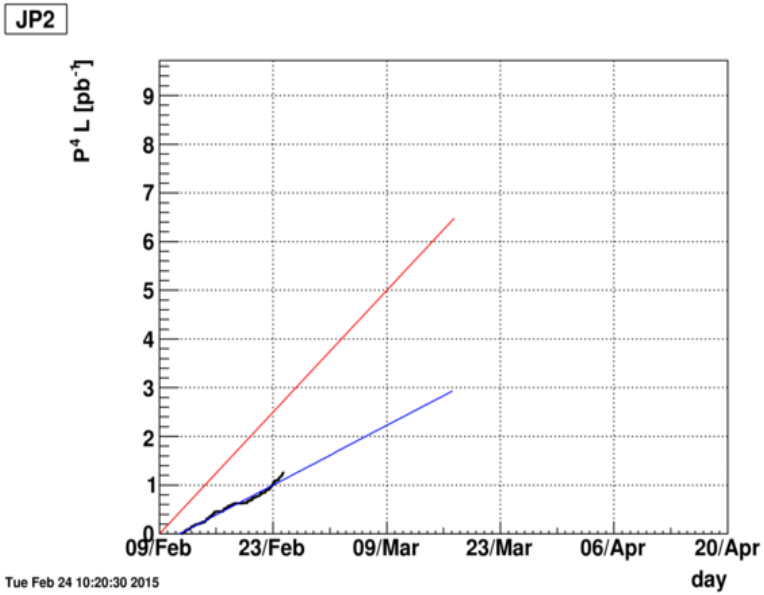
STAR Trigger Mix for pp, longtitudinal

Trigger	Evts	Hz	Evts	Hz
RP_SD	8158	6	8158	6
RP_SDZ	1502	1	1501	1
RP_SDT	4805	3	4803	3
RP_RPZMU	8526	7	8523	7
RP_ET	275024	211	274948	213
RP_CP	86527	66	86506	67
RP_CPT	64430	51	64414	51
RP_CPX	65945	52	65932	54
JP2	126396	98	126370	107
JP2-bsmd	122237	95	122213	104
AJP	102826	80	102799	69
EHT0	25834	23	25824	19
JP1	36521	32	36513	29
JP2*L2JetHigh	114741	87	114719	97
EHT0*EJP1*L2Egamma	19279	14	19272	12
BHT2*BJP1*L2Bgamma	39072	45	39060	34

Trigger	Evts	Hz	L0 Evts	Hz
VPDMB-5	183023	144	182984	142
BBCMB	5352	5	5351	5
BHT0*VPDMB-30	21515	20	21508	18
BHT1*VPDMB-30	111727	100	111700	100
BHT0*BBCMB*TOF0	43619	31	43610	34
BHT1*BBCMB*TOF0	24318	21	24314	20
BHT2*BBCMB	55528	61	55508	43
singlemuon-5	18634	13	18630	12
emuon-30	14652	10	14649	10
dimuon	37837	36	37822	30
bbc-mtdcosmic	21863	17	21861	18
FMS-LED	1224	1	1223	1
VPDMB-novtx	2979	2	2978	2
ZDCMB-trgonly	14399	12	14394	12
ZEROBIAS	4565	5	4565	4
ALL	***1301927***	***1032***	***1301546***	***1014***

Integrated Luminosity and Figure of merit vs. longitudinal spin goal of 50pb^{-1} (6.5 pb^{-1} (assumes 60% polarization))

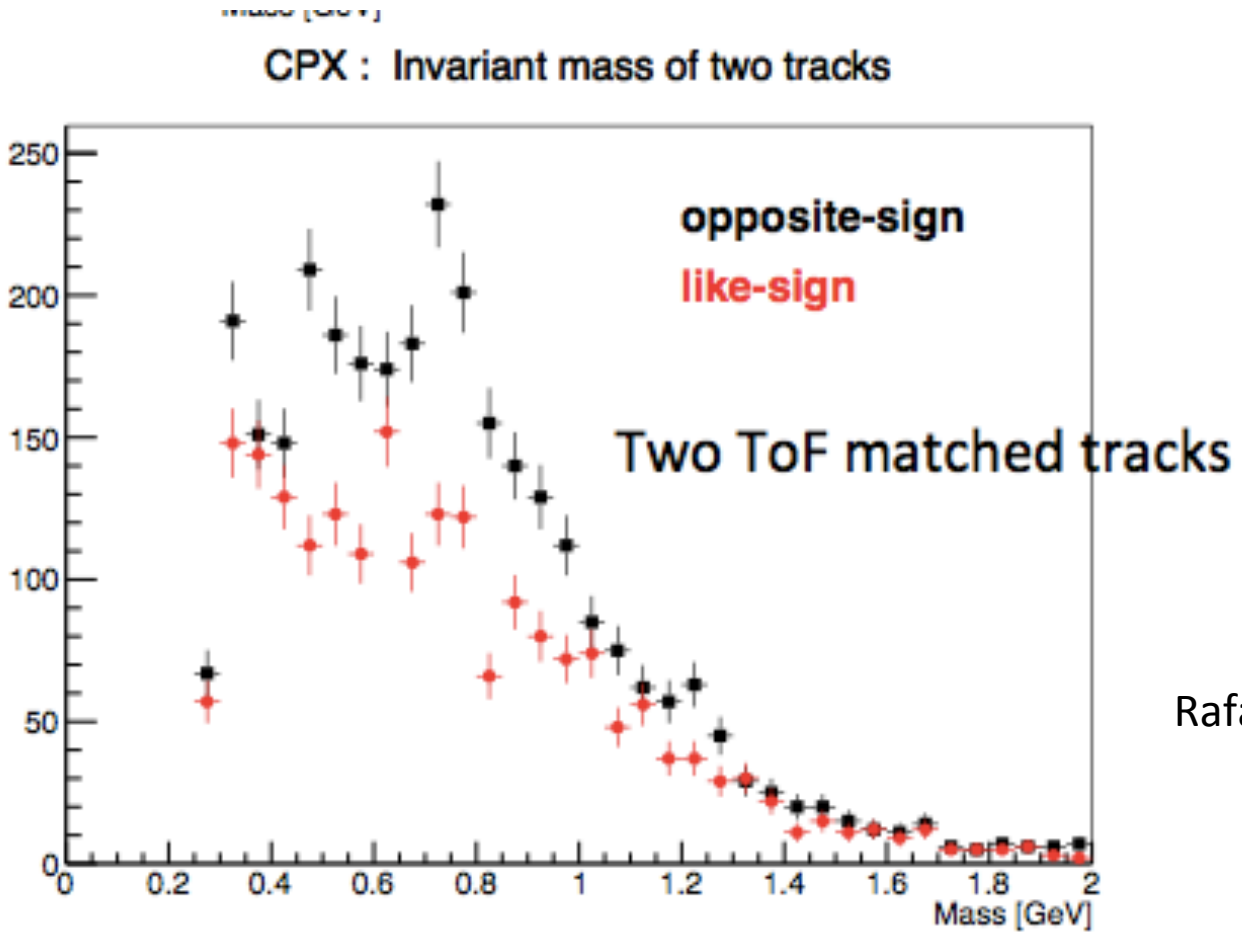




New Subsystems Online

- Roman Pots
  - Routinely Operated, no impact on beam
  - Triggers implemented, data taking is smooth
- Forward Preshower (FPS)
  - Integrated into STAR

Invariant Mass distribution of central tracks with RP tag



Rafal Sikora

Summary

- STAR is up and Running smoothly
- Working towards longitudinal spin physics program goal (polarization helps…)
- Depending on progress, we might switch over to transverse earlier (and come back to complete long. goal after completion of transverse goal)
- We will ask for transverse store soon to calibrate local polarimeters.

- **STAR is taking good physics data**