



Brief STAR report 200GeV - Status

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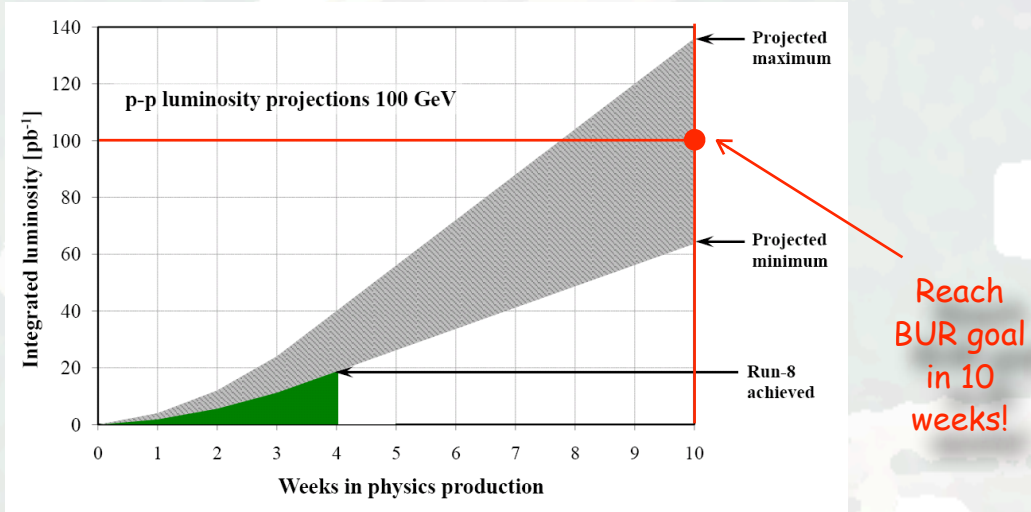


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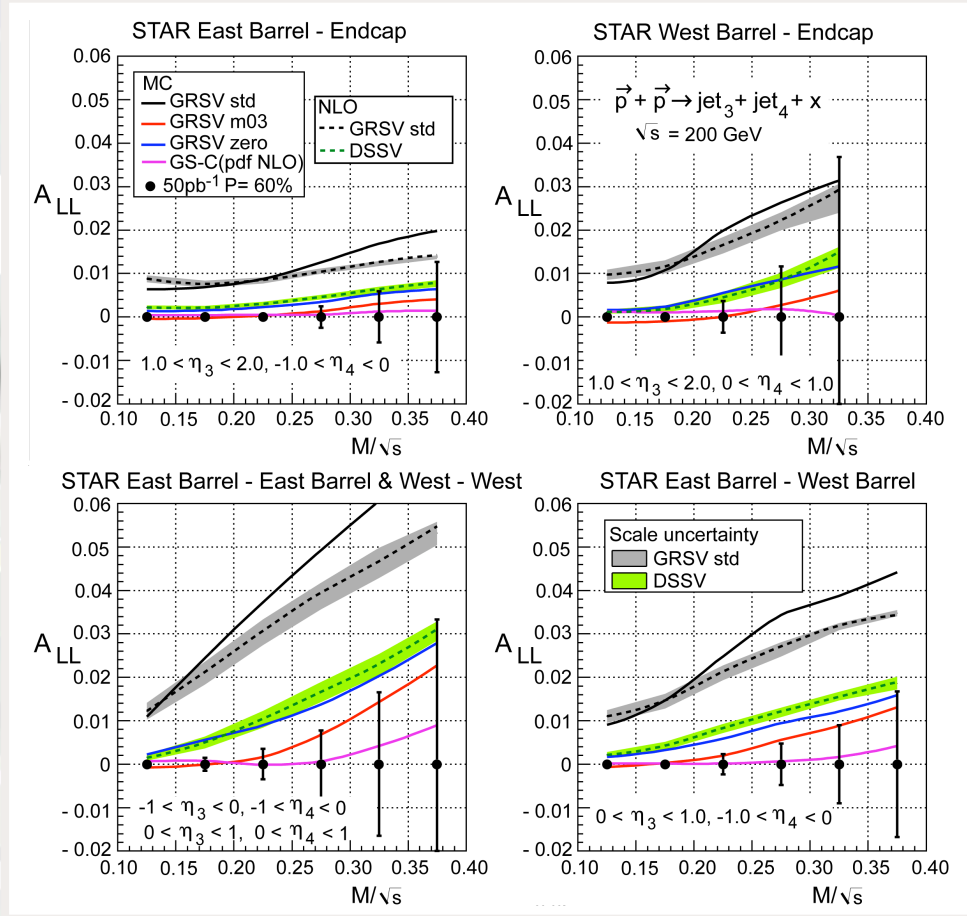


STAR Run 9 200GeV program (Gluon polarization)

Projected performance / assumptions - STAR 200GeV program



- Precision inclusive measurements, in particular inclusive jet production
- Di-Jet production - Probe x dependence of $\Delta g(x)$
- Substantial improvement of gluon polarization reflected in highest PAC recommendation!



Assumption: $FOM = P^4 \cdot L \sim 6.5 \text{ pb}^{-1}$
 $P \sim 0.6 / L_{\text{delivered}} \sim 100 \text{ pb}^{-1} \quad L_{\text{recorded}} \sim 50 \text{ pb}^{-1}$

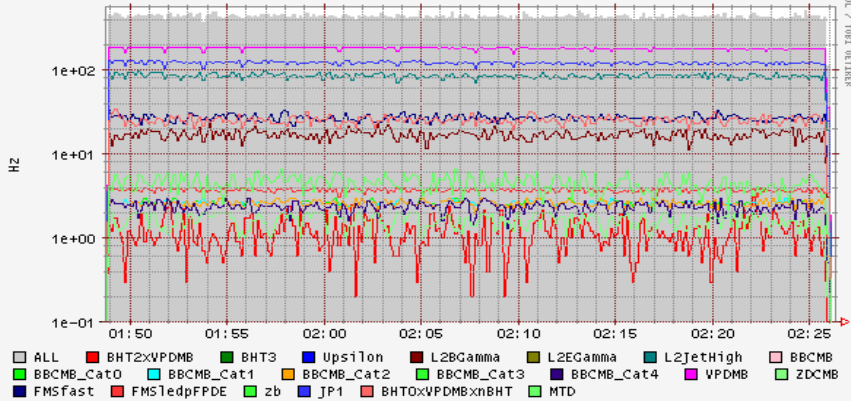
NOTE: $(P=0.50/P=0.60)^4 \sim 2 / (P=0.55/P=0.60)^4 \sim 1.4$



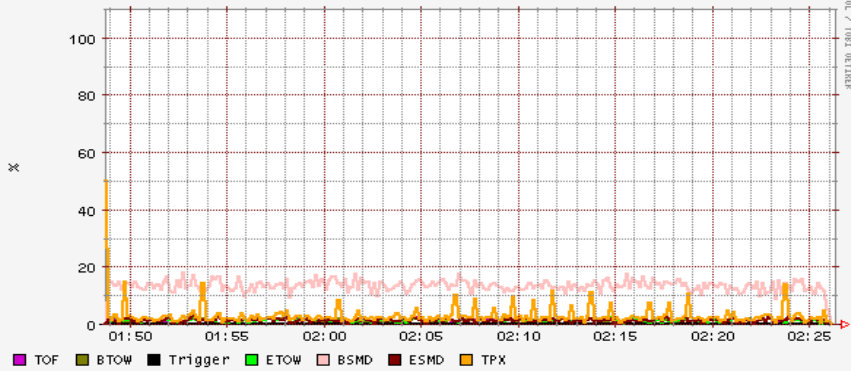
STAR run status

Deadtime / DAQ

10132004_Trigger_Rates



10132004_Deadtime



DAQ deadtime low:

~5% for jets

~15-20% for other triggers

RUNNING [to RCF] 10128059 production2009_200GeV_Single [PHYSICS]

In progress...

Started Fri May 8 12:23:14 2009
 Duration 0 days, 0 hr, 7 min, 23 s

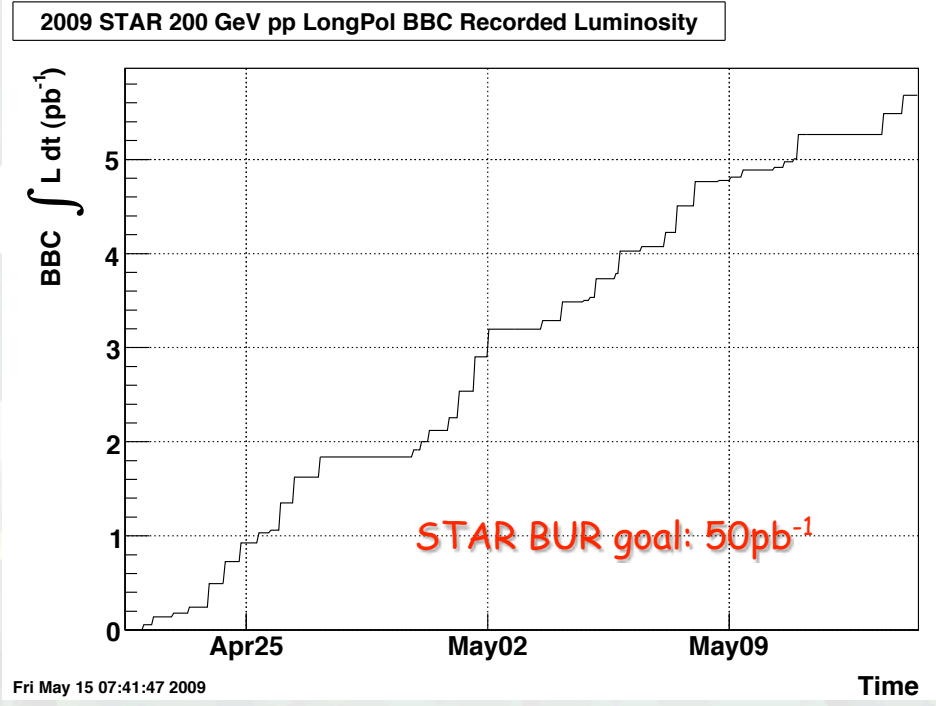
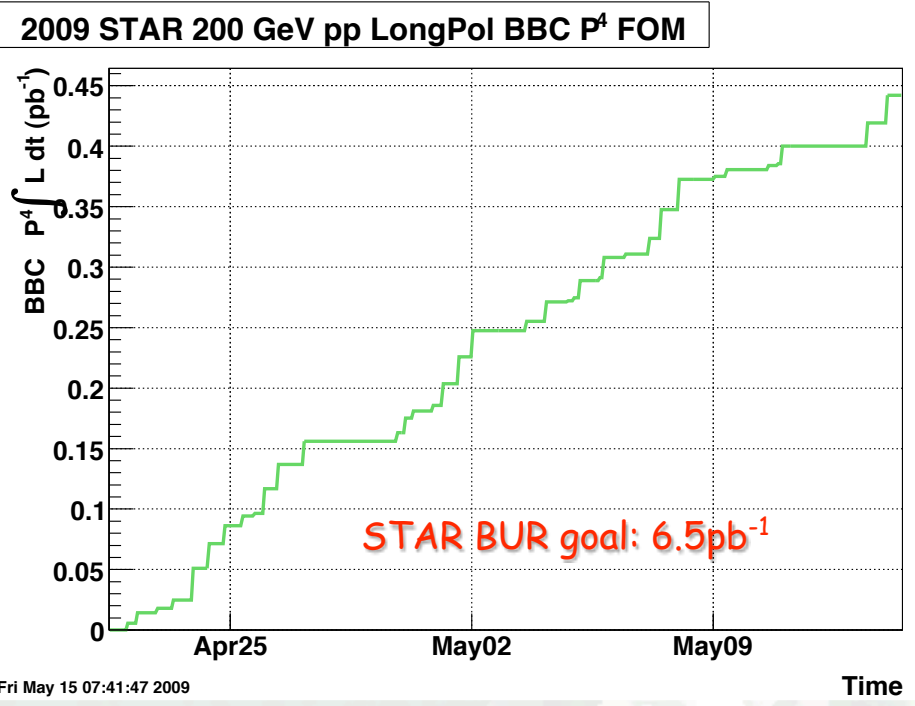
Trigger	DAQ Evts.	DAQ Rate (Hz)	LO Evts.	LO Rate (Hz)	Scaler Rate (Hz)	Scaler Deadtime	Built	Xpress	Abt	Err
BHT2*VPDMB	757	0	757	1	0	-1%	756	0	0	1
BHT3	1775	4	9699	21	0	-1%	1772	0	7924	3
Upsilon	370	1	9699	21	0	-1%	370	370	9328	0
L2BGamma	2577	7	9699	21	0	-1%	2574	2574	7120	3
L2EGamma	1100	3	50109	127	0	-1%	1094	1094	49007	6
L2JetHigh	22428	53	50109	127	0	-1%	22375	0	27669	53
BBCMB	1296	4	1297	3	0	-1%	1294	0	0	2
BBCMB-Cat0	1587	4	1588	4	0	-1%	1585	0	0	2
BBCMB-Cat1	1553	4	1554	4	0	-1%	1551	0	0	2
BBCMB-Cat2	1530	4	1531	3	0	-1%	1528	0	0	2
BBCMB-Cat3	1296	4	1297	3	0	-1%	1294	0	0	2
BBCMB-Cat4	1296	4	1297	3	0	-1%	1294	0	0	2
VPDMB	78966	190	79005	184	0	-1%	78792	0	0	174
ZDCMB	1002	2	1003	3	0	-1%	1002	0	0	0
FMSfast	100774	241	100823	238	0	-1%	100771	100771	0	3
FMSledIPDE	1579	4	1581	3	0	-1%	1579	1579	0	0
zb	375	0	3146	10	0	-1%	375	375	2771	0
JP1	69691	165	69735	172	0	-1%	69505	0	0	186
BHTO*VPDMB*IBHT2	15864	39	15871	34	0	-1%	15834	0	0	30
MTD	2768	6	3146	10	0	-1%	2761	2761	375	7
ALL	313479	688	313455	753	0	0%	287300	109524	25761	433

Detector	State	Dead.	Evts	Hz	kB/s	Err	Evb	State	Built	Err	Hz	MB/s	Written	Free GB	RCF W+S
TOF	RUNNING	1%	352835	715	1927	706	legacy01	RUNNING	61881	0	132	0	N.A.	N.A.	N.A.
BTOW	RUNNING	2%	324767	696	6777	0	legacy02	RUNNING	61600	1	123	0	N.A.	N.A.	N.A.
FTP	READY	0%	6001	0	0	0	evb01	RUNNING	54728	84	112	22	4 GB	1053 [95%]	42+57
Trigger	RUNNING	0%	353574	856	4442	0	evb02	DEAD	0	0	0	0	0 GB	0 [-1%]	0+0
PMD	DEAD	-1%	0	0	0	0	evb03	DEAD	0	0	0	0	0 GB	0 [-1%]	0+0
ETOW	RUNNING	2%	324767	696	1427	0	evb04	RUNNING	54564	95	113	19	4 GB	1051 [95%]	35+37
FGT	DEAD	-1%	0	0	0	0	evb05	RUNNING	54488	74	115	22	4 GB	1034 [94%]	51+48
PP2PP	waiting...	0%	1001	0	0	0	evb06	RUNNING	53205	93	105	19	4 GB	1048 [95%]	34+31
BSMD	RUNNING	18%	123671	258	3896	0	evb07	RUNNING	53546	95	116	24	4 GB	1047 [95%]	34+51
ESMD	RUNNING	3%	353384	718	13317	0	evb08	RUNNING	53977	80	112	20	4 GB	1048 [95%]	36+50
TPX	RUNNING	1%	237871	487	112007	721	ALL		324508	521	673	126	24 GB	6281 [95%]	232+274



STAR run status

□ FOM and Luminosity



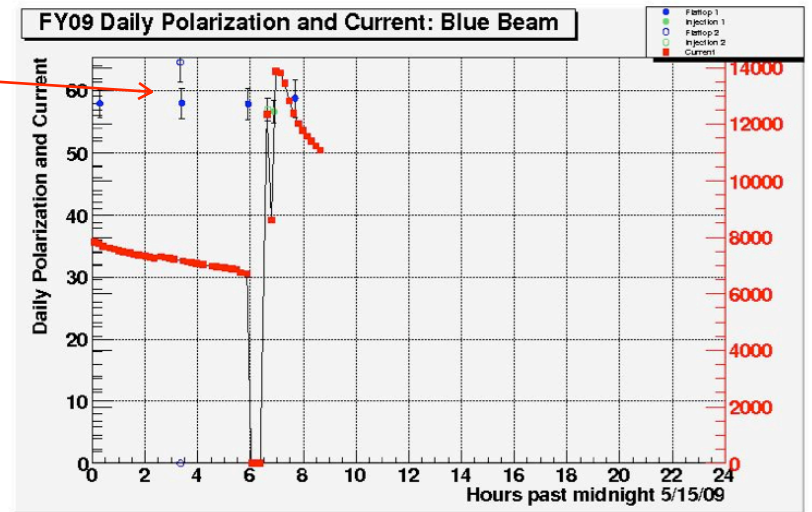
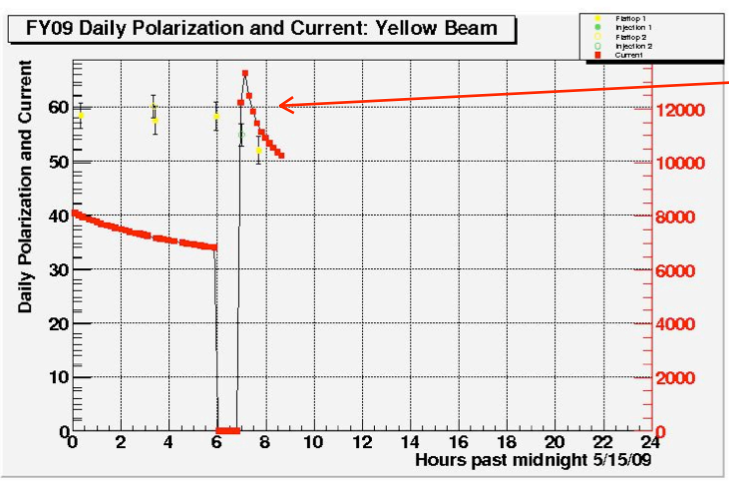
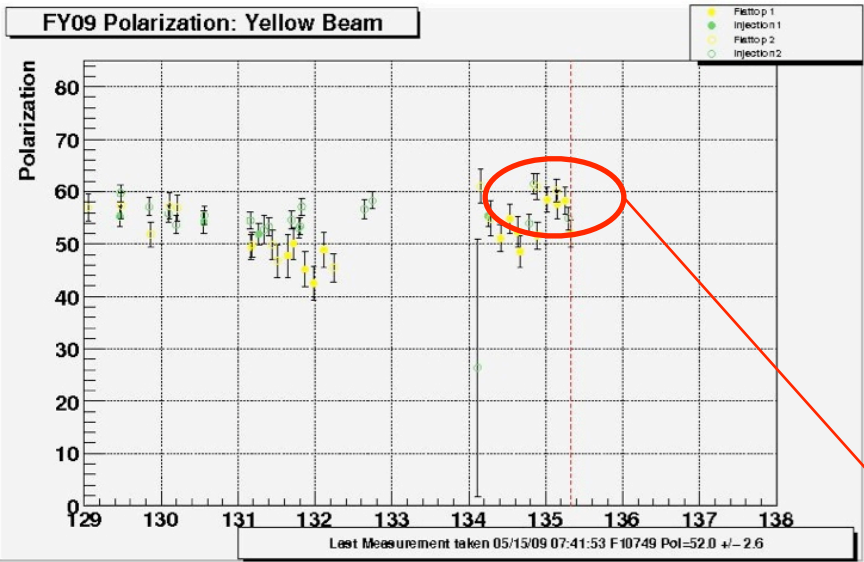
Current status:

- FOM ~ 0.45pb⁻¹
- Luminosity ~5.5pb⁻¹



STAR run status

□ Polarization

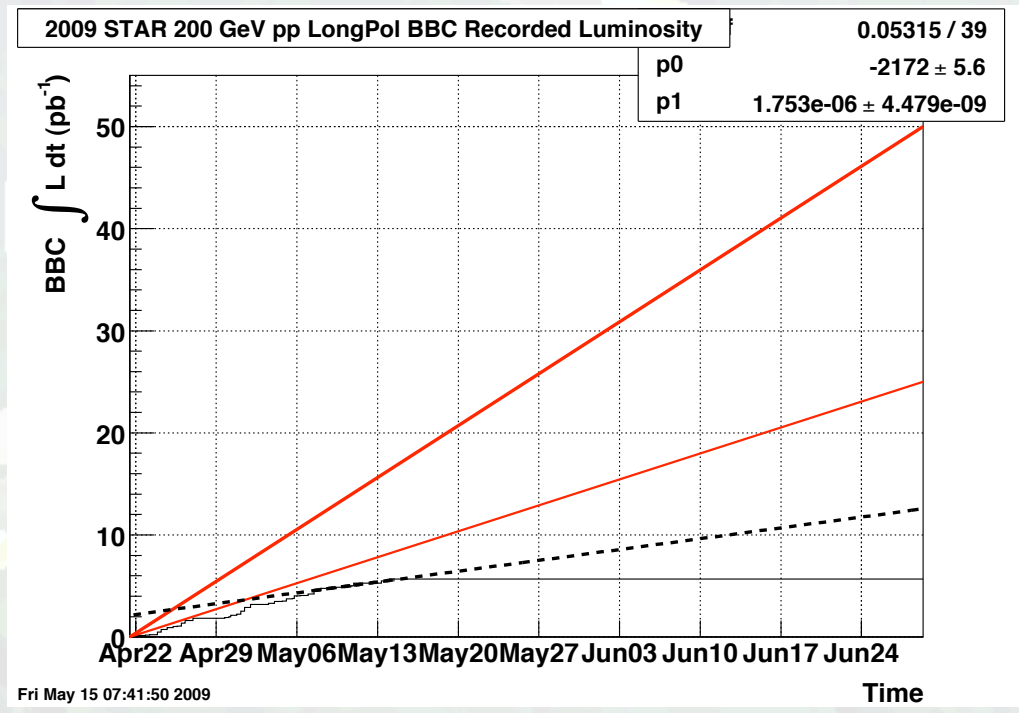
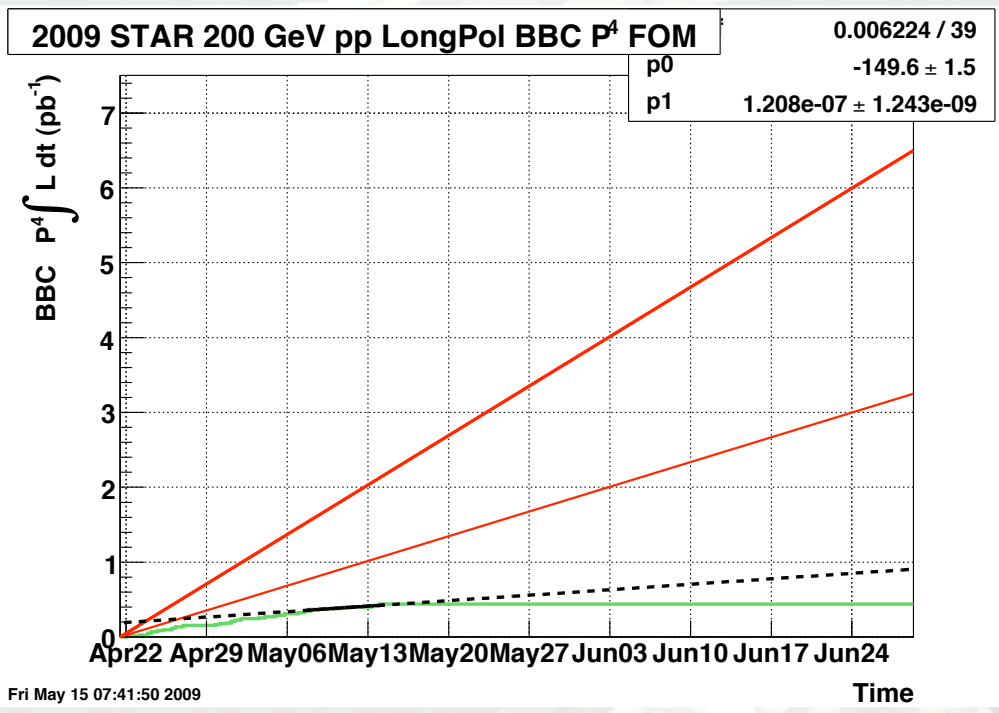


- Encouraging to see ~60%
- What is the reason?
- What has changed?



STAR run status

Projected FOM and Luminosity



- Physics Trigger configuration tuned and stable.
- Constantly working on Crew efficiency (~ three new crews every week) and doing fairly well.
- DAQ Deadtimes low: ~ 5% for Jets, ~ 15 to 20% for other Triggers
- **Need more luminosity, polarization, and uptime!**