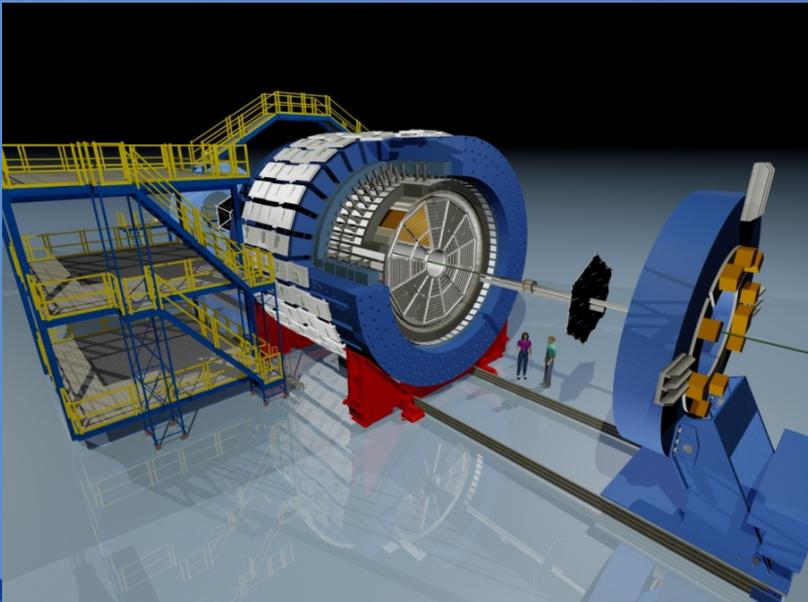


PLOTS AND FIGS FROM PAU RUN

*Bill Christie
For the STAR Collaboration
MAY 11, 2015*



BROOKHAVEN
NATIONAL LABORATORY

a passion for discovery

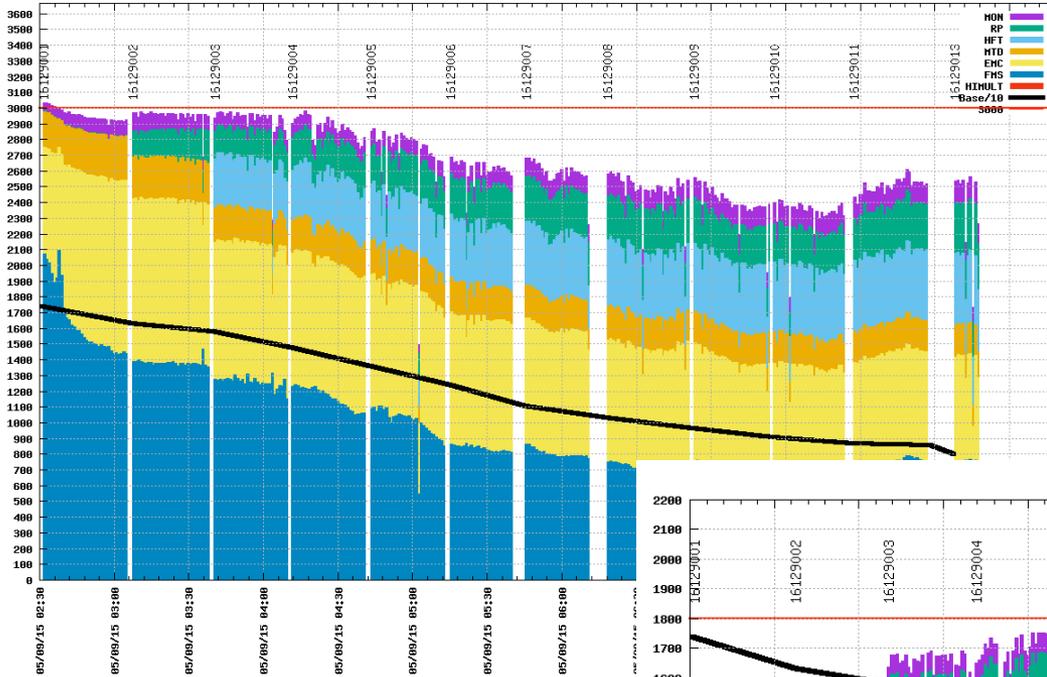


U.S. DEPARTMENT OF
ENERGY

Office of
Science

FILL 19041, 200 GEV PAU, APRIL 9TH

System rates 19041

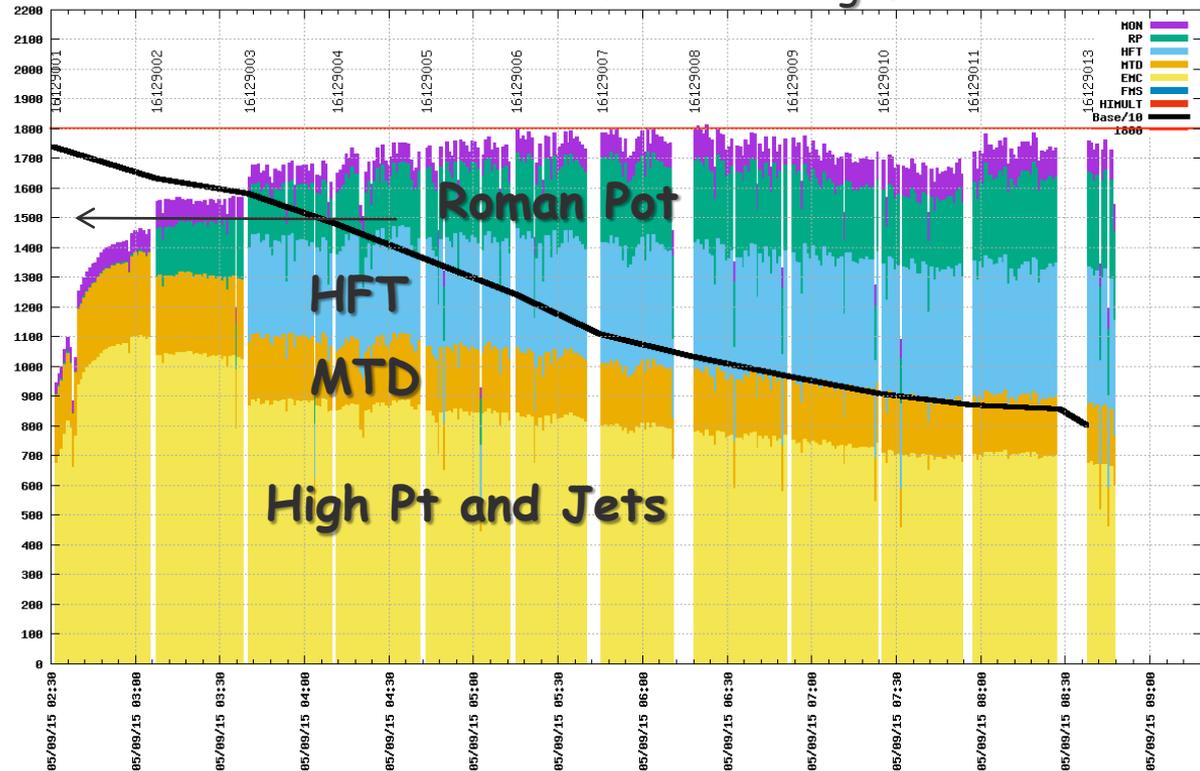


Trigger Bandwidth:

- Maximum rate is 3 kHz
- We run many programs with cascading Triggers, the highest threshold ones typically unprescaled.
- We tune early in stores to hold rate close to 3 kHz, while holding Detector deadtime in "reasonable" range.

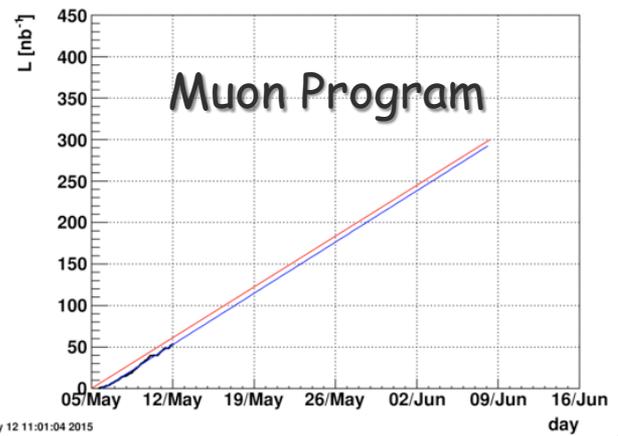
HFT program:

- Depending on the store intensity/luminosity, we bring on the Roman Pot and HFT programs after one or two data runs (data run ~ 30 minutes).
- We balance rates to fill, without exceeding, TPC bandwidth of 1875 Hz.

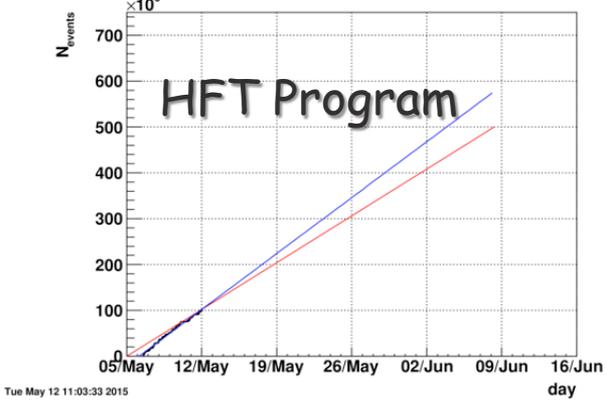


GOAL PROJECTIONS

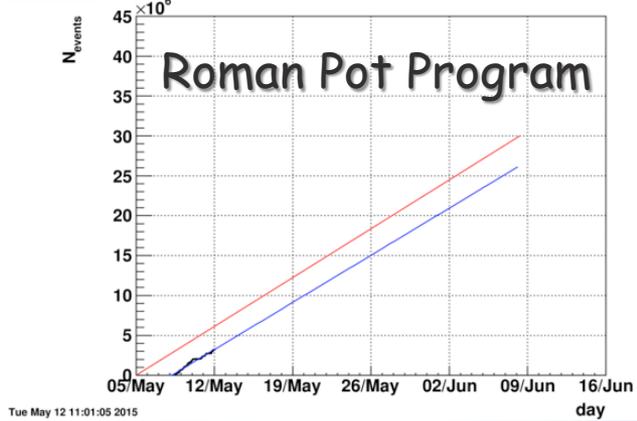
dimuon



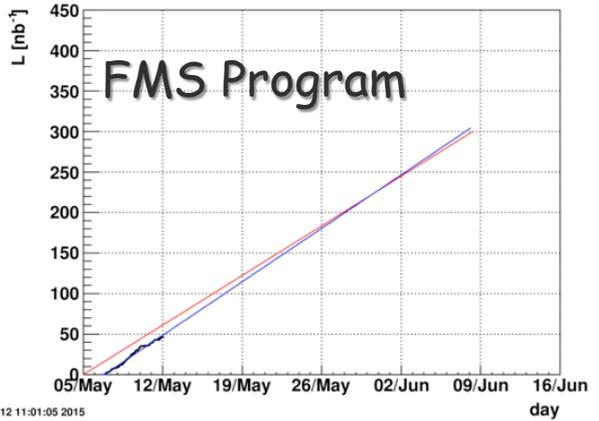
VPDMB-5-effective-sum_pclist



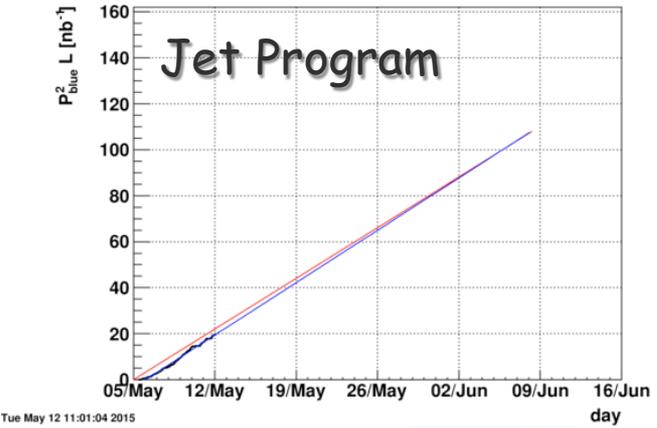
RP_SD



FMS-sm-bs3



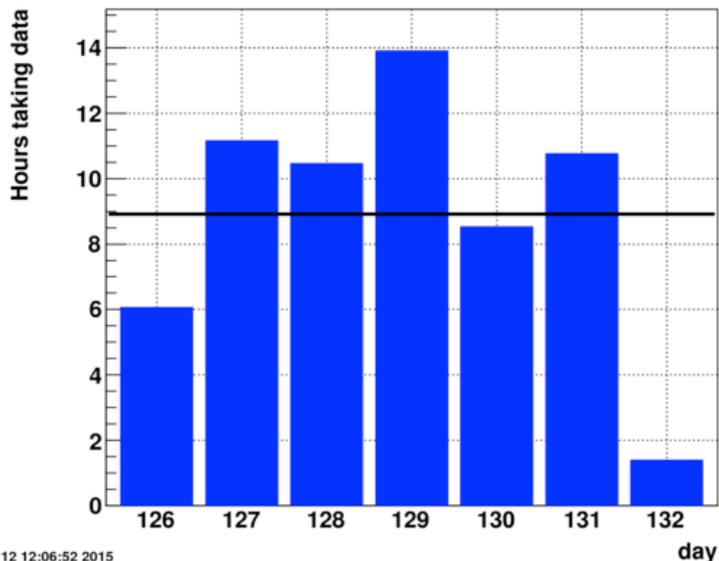
JP2



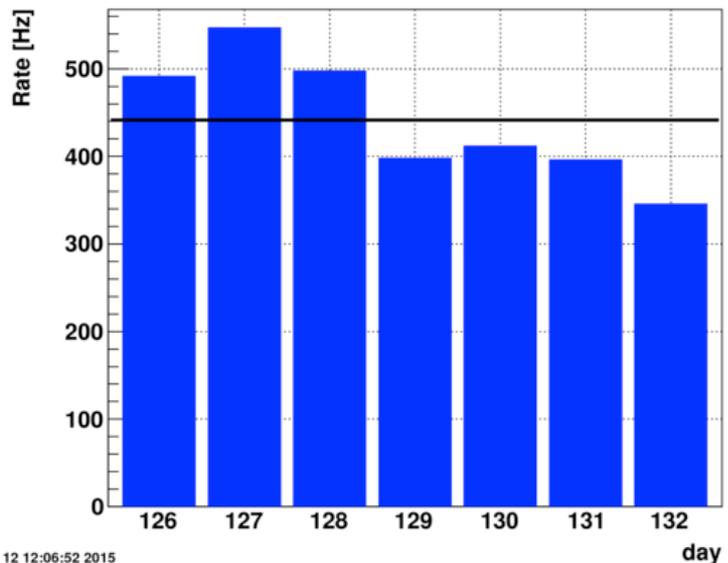
To achieve all of our Physics program goals as rapidly as possible, we balance the STAR system so that both the high luminosity and high event sum programs track together to a common end date.

PARAMETERS RELATED TO REACHING HFT GOALS

hours_perday_pxlst.txt

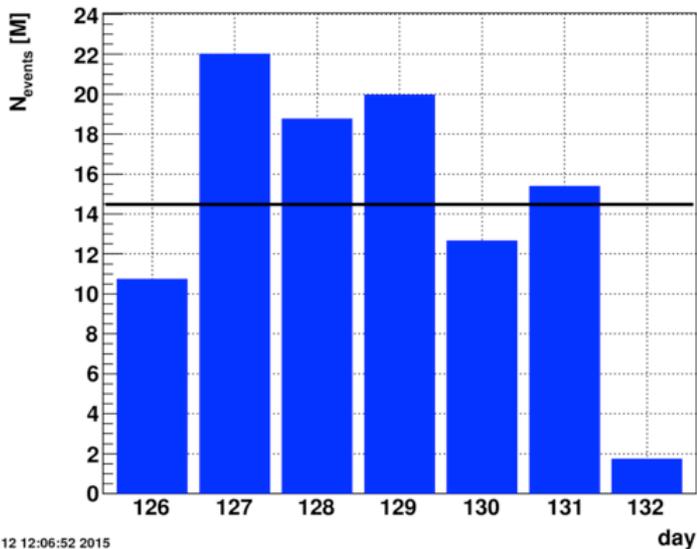


VPDMB-5-effective-sum Average Rate [Hz] PXL+IST



X

VPDMB-5-effective-sum N_{events} PXL+IST



- We currently have about 100 Mevts, out of our 500 Mevts HFT Goal.
- If we can average accumulating 17 Mevts/day, it will take us:
 $400 \text{ Mevts} / 17 \text{ Mevts} = 23 \text{ days. (} \sim \text{April 7}^{\text{th}})$
- Our sampled luminosity goals and HFT goals are currently tracking fairly well together.
- Our quickest route to satisfying all goals is to keep the 7 hour store length, as opposed to dropping to shorter store lengths.

Tue May 12 12:06:52 2015