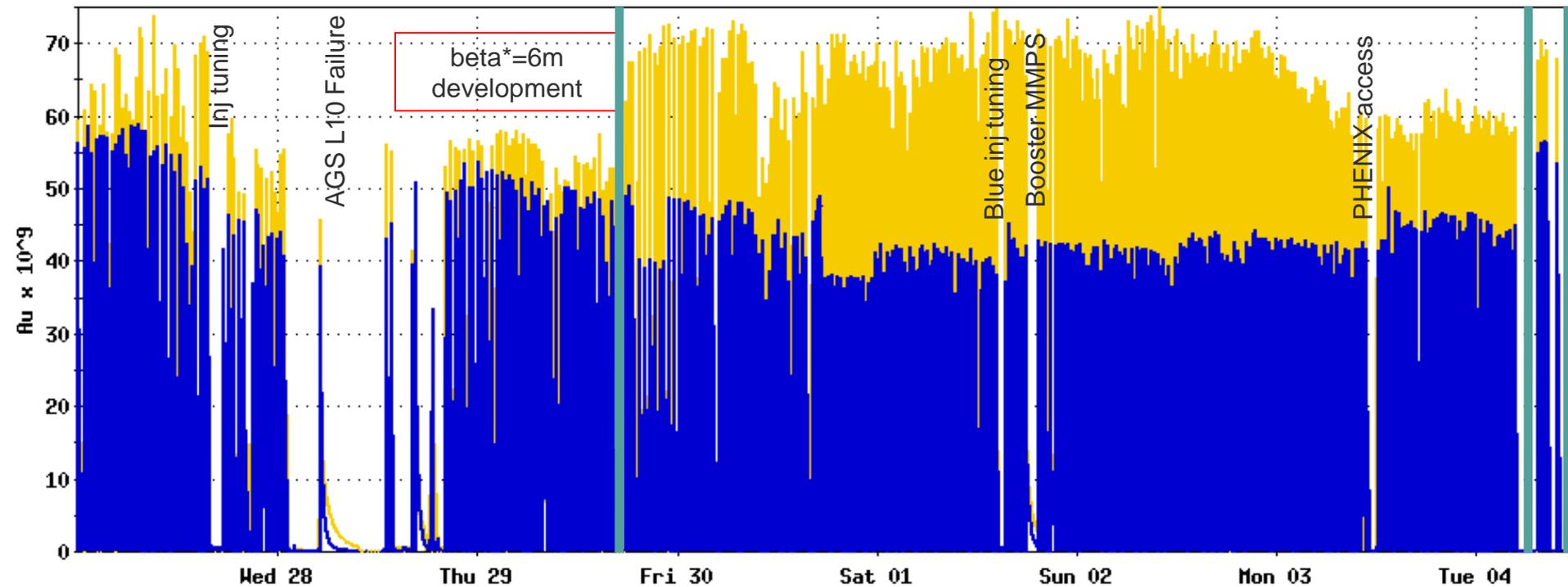


7.7 GeV Low Energy Program

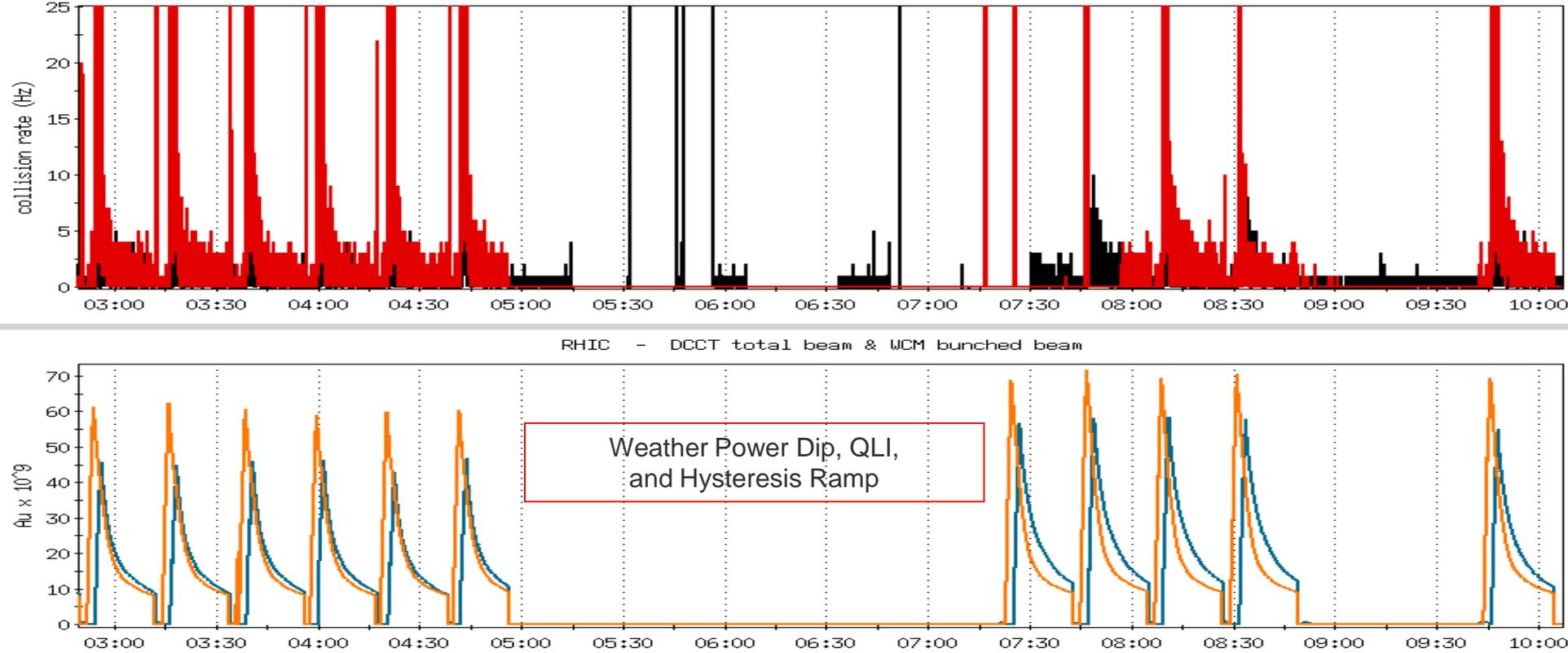
- Into second week of four-week scheduled run
 - No maintenance or APEX; almost always running physics
 - Short maintenance and APEX sessions this week
 - Store lengths reduced from 20 minutes to 15 minutes
 - Successful fix of PHENIX DAQ clock cogging resets
 - Turnaround times less than 4 minutes to second beam
 - Currently in physics 75-80% of wall clock time
 - Operations have maintained a very good rhythm
 - No radiation safety show stoppers
 - ATR stability, losses are current limiting factor
 - Scanning beam parameters during stores
 - Tunes, octupole settings
 - Plenty of parasitic data

7.7 GeV Beam Intensity



- A good week, but still room for improvement
 - Blue intensity is low (70% of yellow), yellow recently down
 - So what helps?
 - Beam lifetime has not changed much over parameter scan
 - Hysteresis appears to help more than physicist tuning

7.7 GeV QLI, Hysteresis Tue May 4



- Hysteresis improved beam intensities by about 20%
 - After a QLI, significant downtime for weather
 - Slightly reduced yellow lifetime, improved blue lifetime
 - Yellow lifetime intensity limited, but blue is not

For Your Consideration...

- Beta* = 6m
 - Initial development unsuccessful
 - Showed no luminosity at PHENIX, no improvement at STAR
 - Confused by additional RF phase changes (a red herring)
 - Revisiting Tue May 4 daytime to rule in or rule out
- Moving to even shorter stores (10 min, 4 stores/hr)
 - Should give additional integrated luminosity improvement
 - Requires loss review, impact evaluation by RSC
 - Perhaps 25-30% integrated luminosity improvement
- Collimation is well-optimized
 - Constant attention from Angelika, operations
- Store turnaround time is well-optimized
 - Little gain to be made here other than minimizing variance