

# *Beams Week in Review*

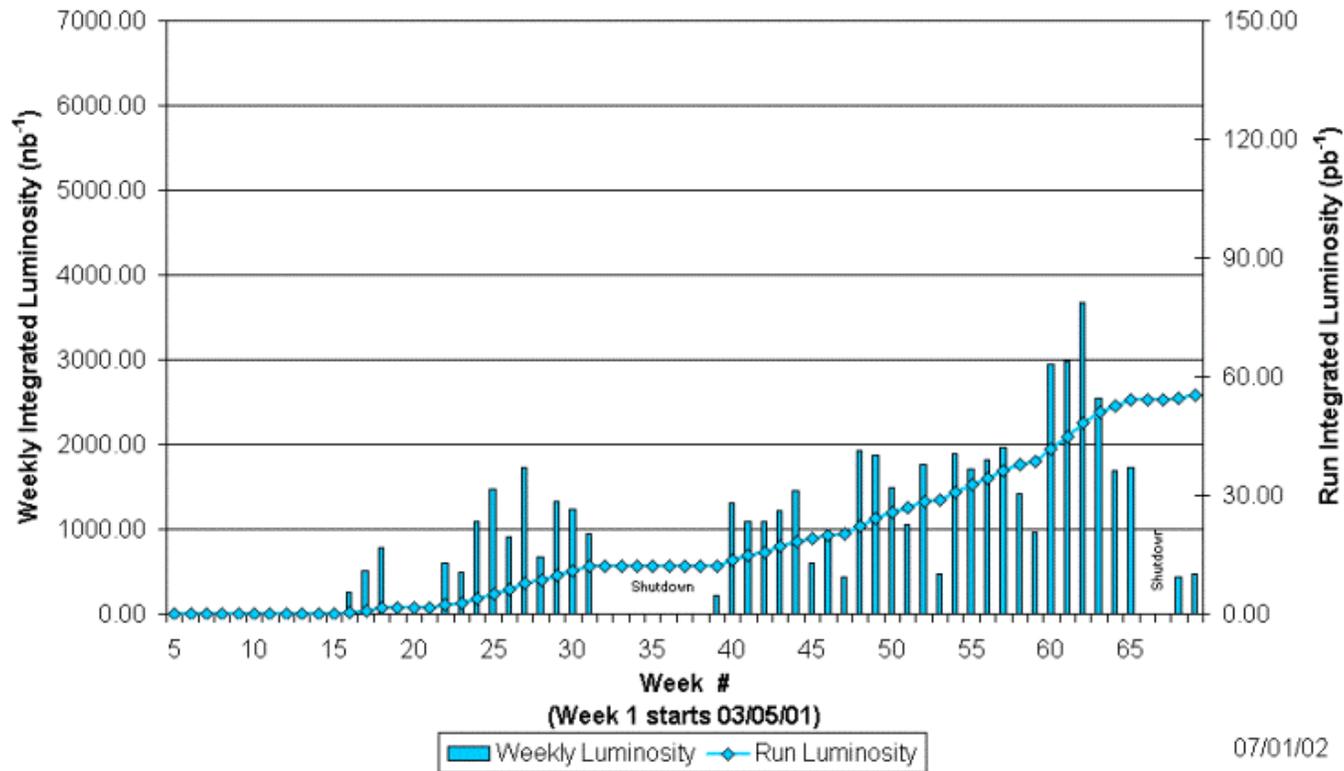


- Working towards pre-shutdown luminosity
- Still trying to hit stride/unstable operation
  - HV703 load switch resolved (for now)
  - humidity/air conditioning issues
  - D0 access
  - feeder 41 failure
  - variety of store to store issues

# Integrated Luminosity



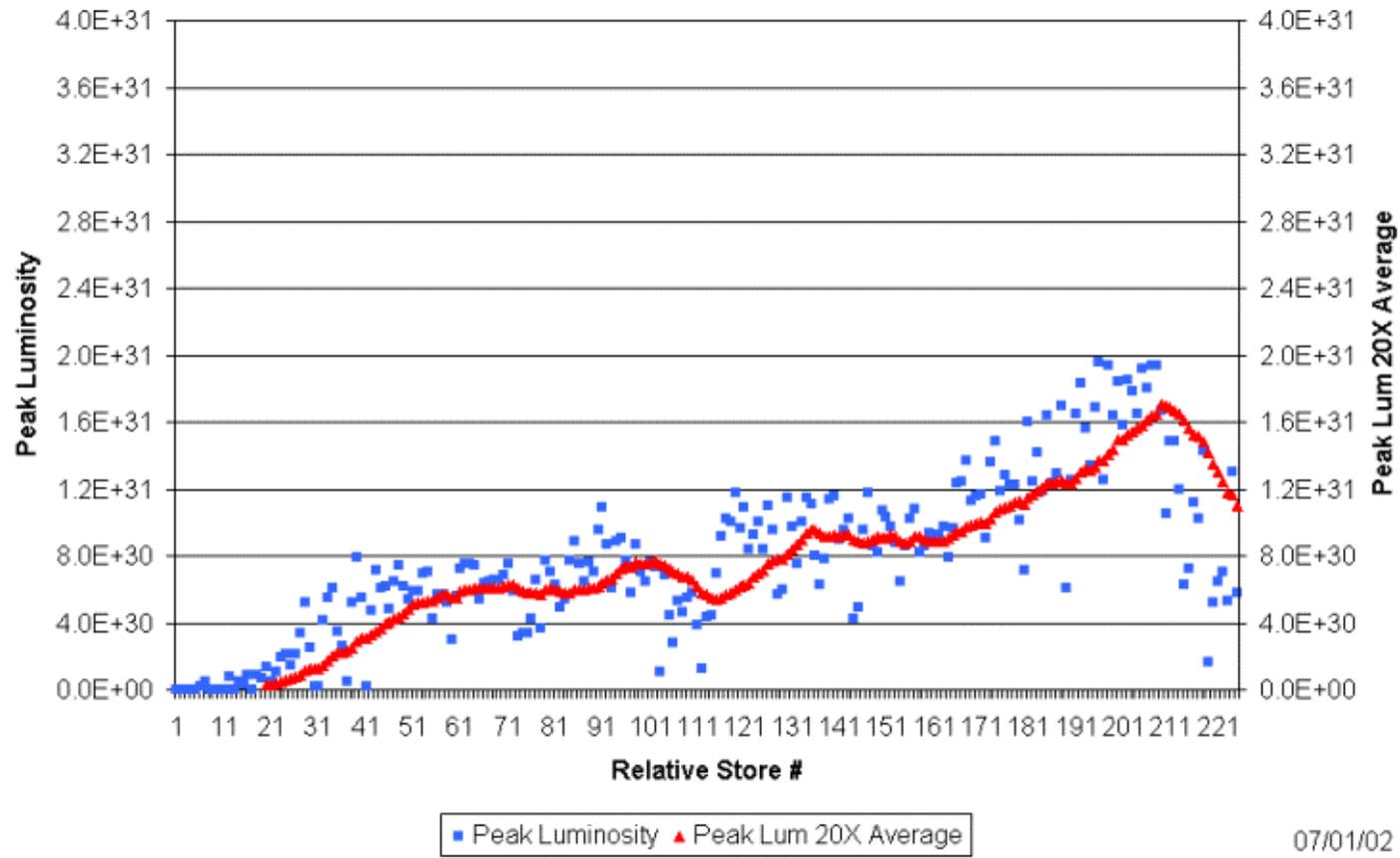
Collider Run IIA Integrated Luminosity



# Peak Luminosity



Collider Run IIA Peak Luminosity



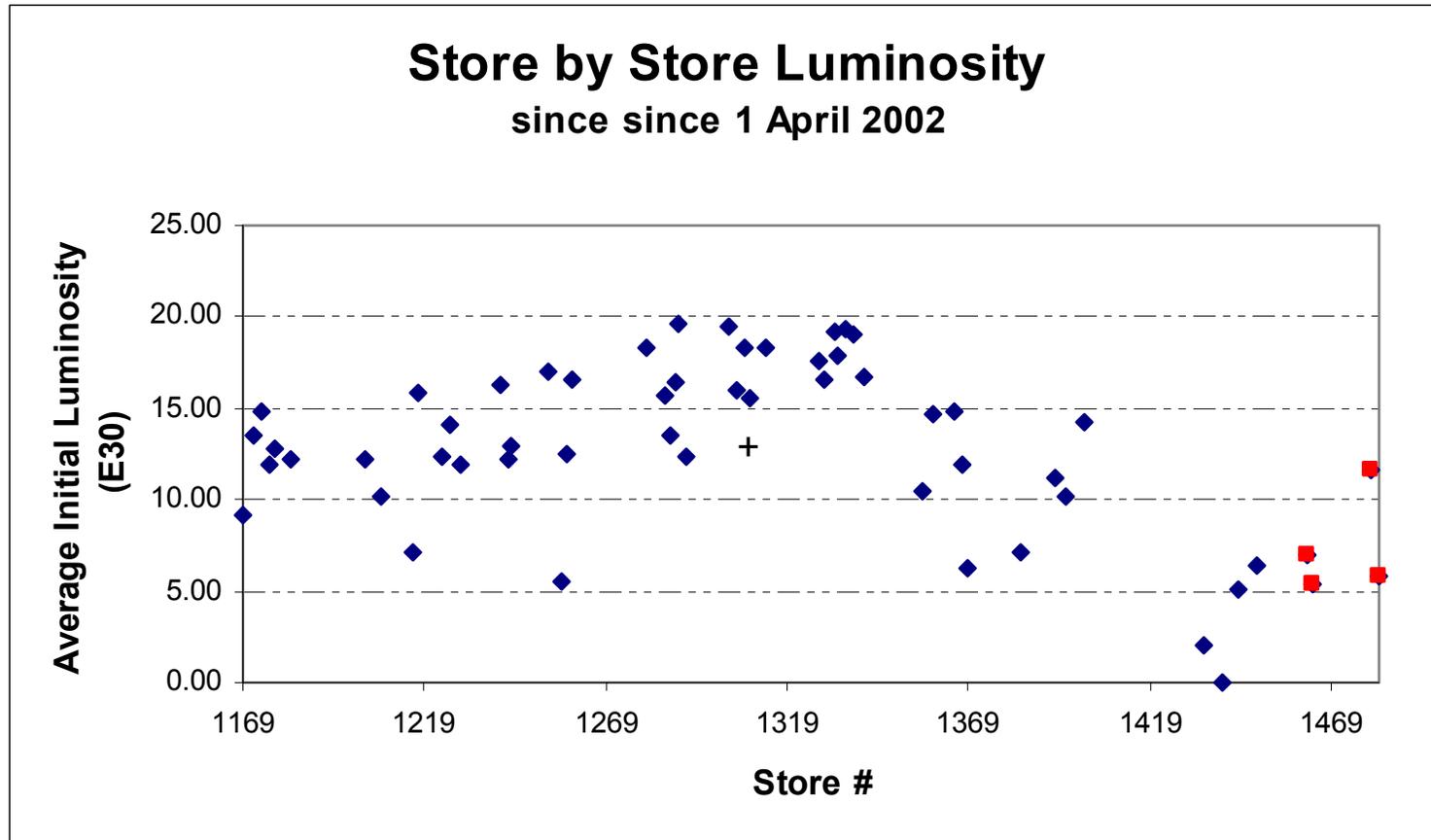
# Store Summary



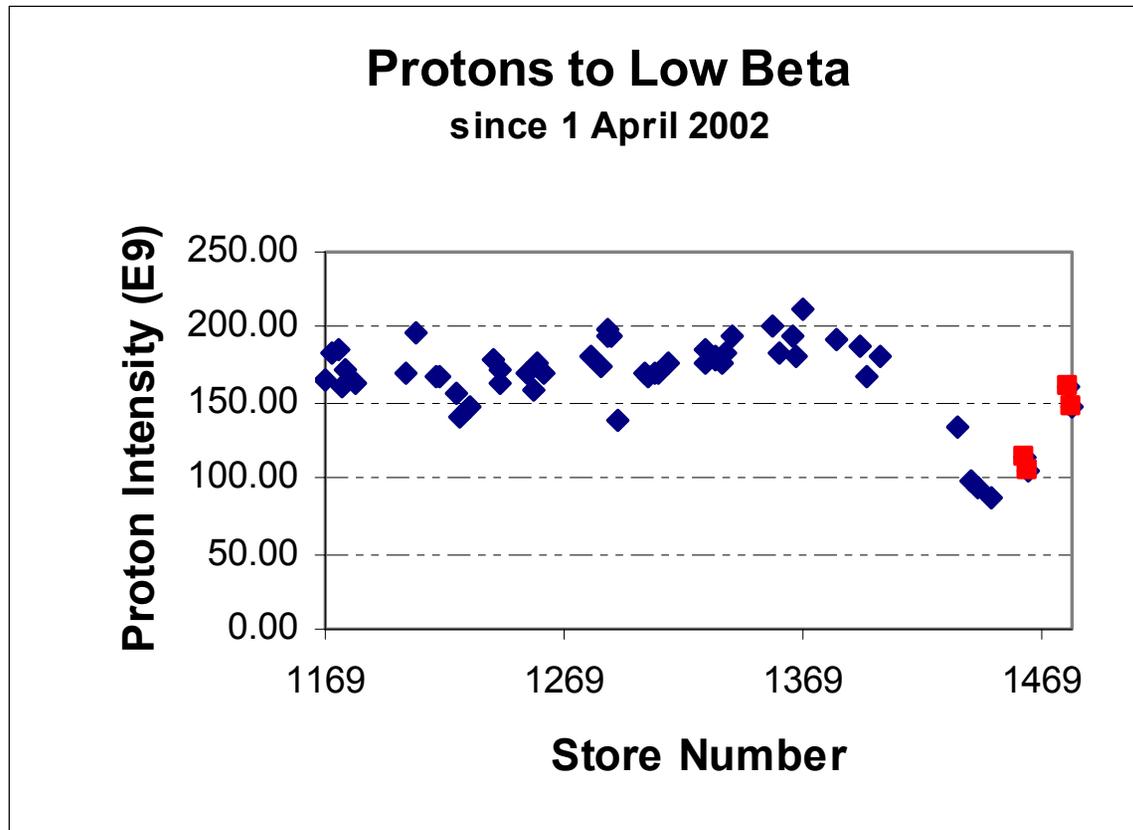
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<u>Store #</u>	<u>Initial Luminosity</u>	<u>Duration</u>	<u>Termination</u>	<u>comments</u>
1462	6.93 E30	9.5 hours	intentional	
1464	5.32 E30	3.7 hours	A4 lead failure /humidity	
1480	12.95 E30	0.5 hours	feeder 41 glitch	
1482	5.83 E30	18.87 hours	intentional	

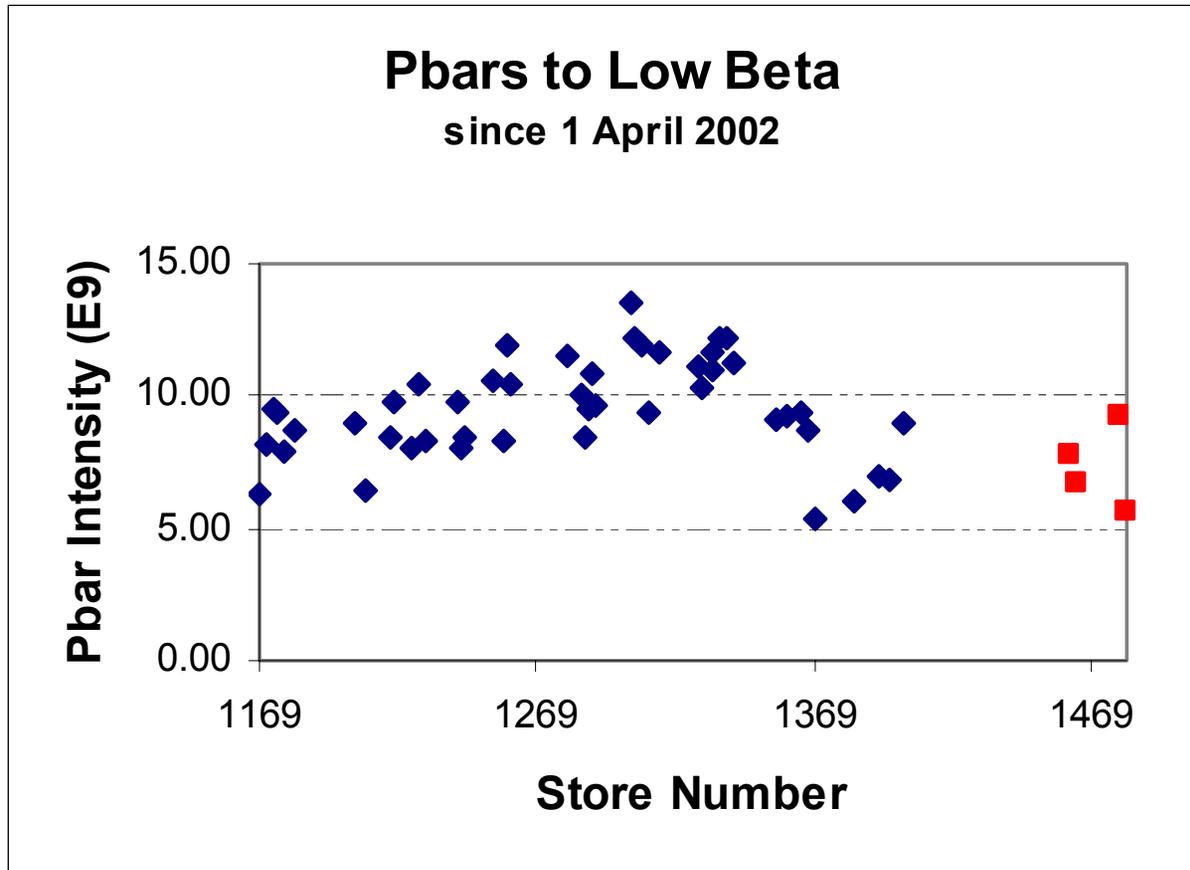
# Initial Luminosity



# Protons to Collision



# *Pbars to Collision*



# *Tevatron Summary*



- Studies
  - F0 horizontal angle change (0.138 mrad)
  - Coupling at 150 GeV and helix
  - Bunch-by-bunch longitudinal damper

# *Pbar Summary*



- Studies
  - Shot Lattice
    - Tunes decoupled on extraction orbit
    - Tunes parsed
    - Beam line to Accumulator match
  - P1 to AP3 emittance preservation
  - Accumulator admittance
- Stacking sluggish
- Shot timing & phase to MI

# *MI Summary*

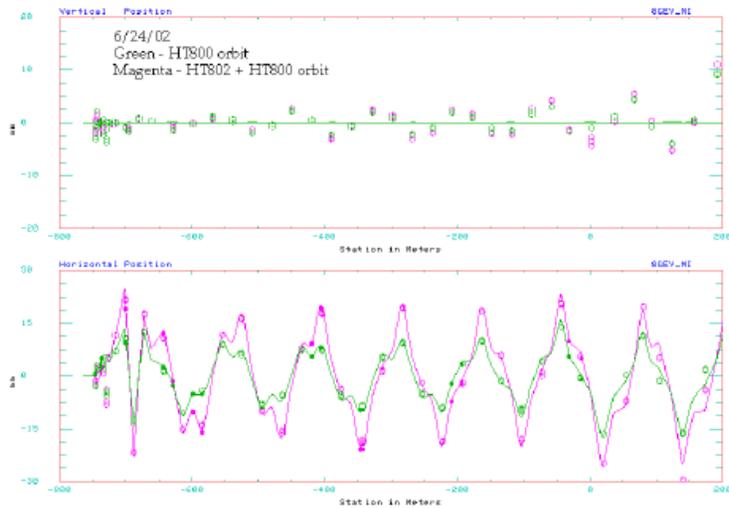


- MI8 beamline study
- Transverse emittance
- 8 GeV coalescing

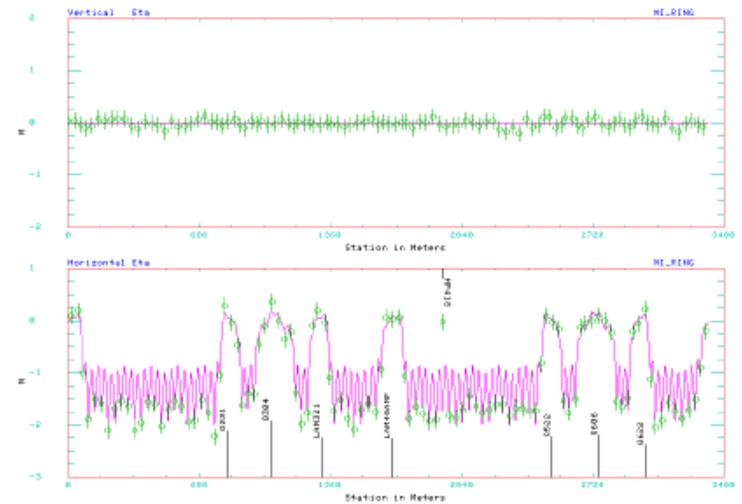
# MI Summary



MI8 Lattice tuning: Comparison between measured BPM  
and calculated position



MI Dispersion Measurement





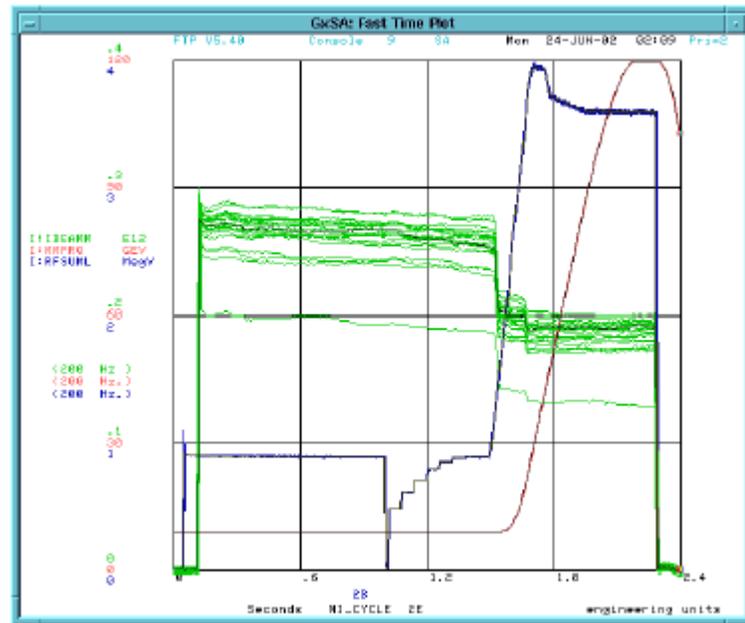
- Flying Wire Study

- Beam intensity
  - coalesced bunch intensity 300E9/bunch
- H- Emittance
  - Injection 15.5 pi-mm-mr
  - Extraction 16.8 pi-mm-mr
- V- Emittance
  - Injection 14.2 pi-mm-mr
  - Extraction 15.1 pi-mm-mr
- Emittance growth is <10% both in H and V planes

# MI Summary



- 8 GeV coalescing



# *Schedule for this Week*



- Five shifts of Tevatron studies in two parts
  - 36 X 12 > 0 X 12 at low beta
    - pbar lifetime vs. proton intensity
    - CDF forward proton detector timing
  - Coupling
  - Tune drift
  - TEL
  - Longitudinal damper
  - Operational studies as needed

# *Schedule for this Week*



- Pbar
  - Beam line lattice
  - Stacking tune up
  - A:EKIK flattop
- MI
  - MI8 lattice
  - 8 GeV coalescing
- Recycler
- MiniBooNe

# Schedule for this Week

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Update 7/1/02 11:25 AM	MONDAY 7/1/02	TUESDAY 7/2/02	WEDNESDAY 7/3/02	THURSDAY 7/4/02	FRIDAY 7/5/02	SATURDAY 7/6/02	SUNDAY 7/7/02
<b>Owls</b> 0000 to 0800		<b>Tev</b> -Store	<b>Tev</b> -tune drift studies  <b>Pbar</b> -stack	Store	<b>Store</b>	Shot set up (110-120 ma)	Stack and store
<b>DAYS</b> 0800 to 1600	Shot set up    -MI8 lattice studies	NTF-PT  <b>Tev</b> -store till noon -Tev 36 X12 -Pbar lifetime VS Protons  <b>Pbar</b> -stack	NTF-PT <b>TEV</b> -tune drift studies  <b>-NOON SHOT SETUP</b>	Store	NTF-FT  <b>Tev</b> -el studies	Stack and store	→
<b>EVES</b> 1600 to 2400	<b>Tev</b> -Store	<b>Tev</b> -OX12 for CDF -coupling @ 150gev  <b>Pbar</b> -P1 AP# lattice -AP3 EKIK FT	Store	Store	<b>Tev</b> -Longit damper studies	Stack and store	→

Schedule can be found at <http://www-bd.fnal.gov/operations/schedules.html>