AGS pp Run Discussion

Waldo for Haixin Huang

May 22, 2009
RHIC Spin Collaboration Meeting

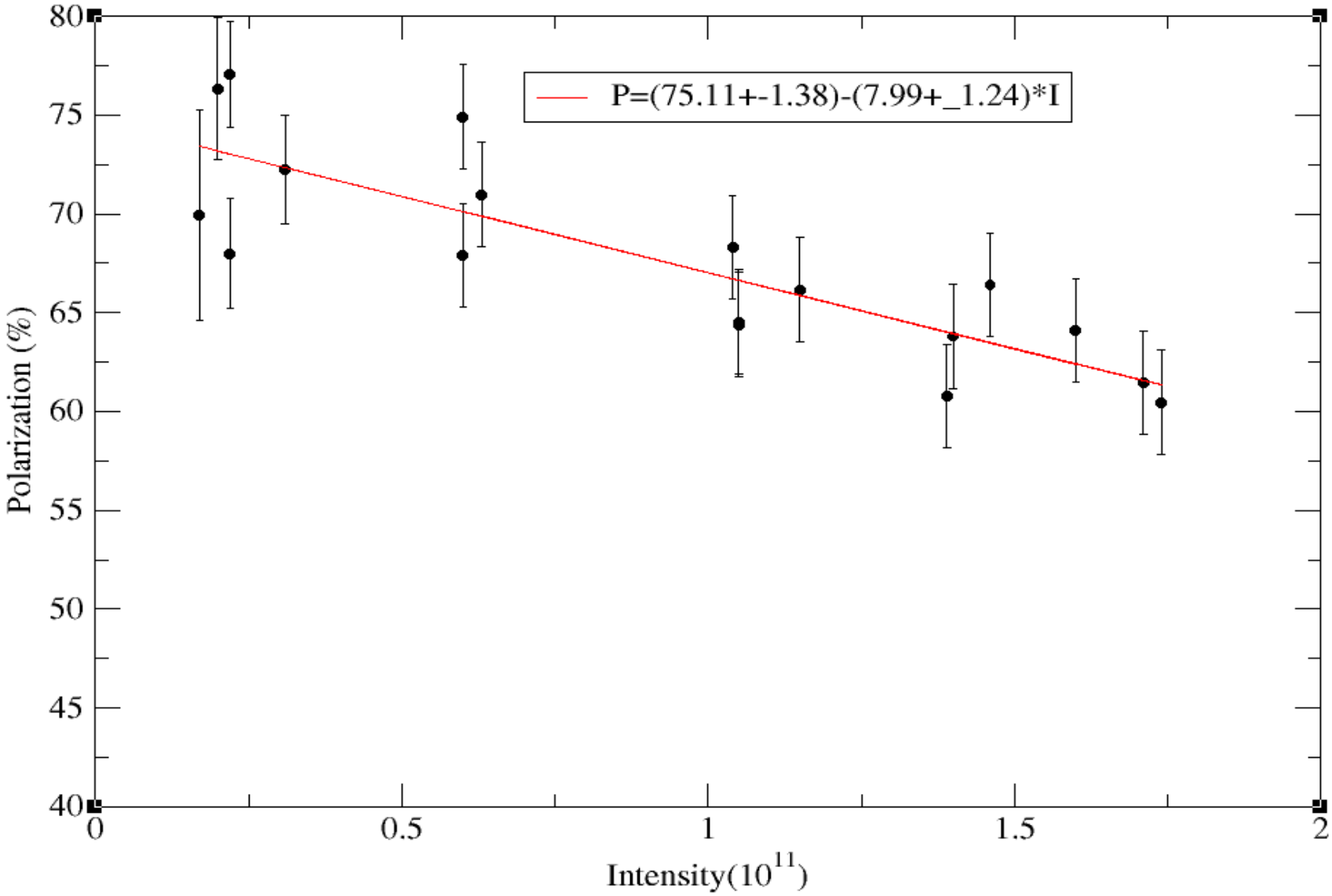
Status As of Now

- The horizontal emittance is smaller now compared to two weeks ago. With 1.3*10^11, it is 9-10 pi and was 11-12 pi.
- Polarization measured at AGS extraction is between 60-70% with 1.3-1.5*10^11.
- Tune jump quads are installed last Wednesday. P/S test started this week.
- AGS Model study continues.

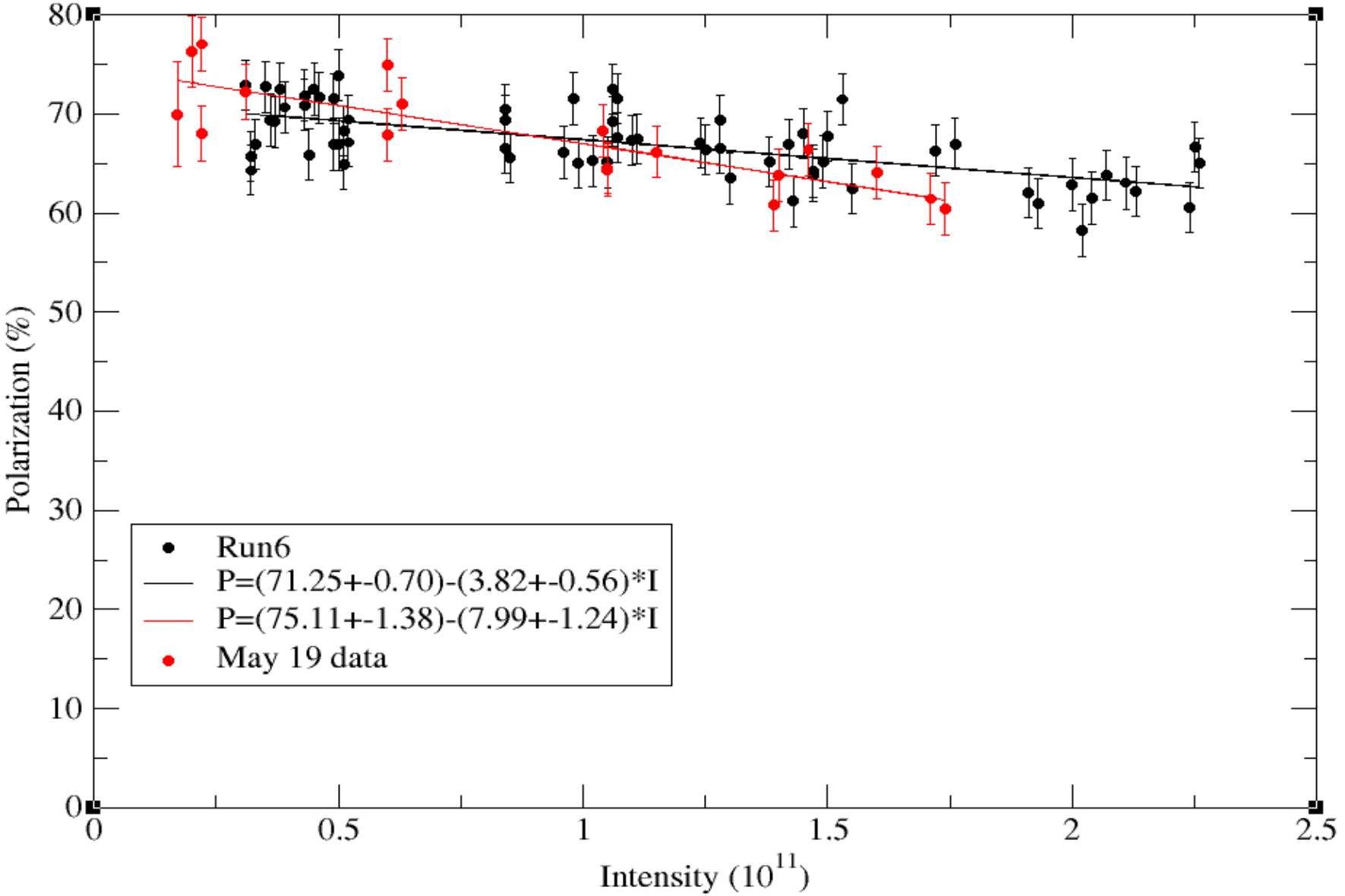
Job List Before the End of May

- Smaller Vert. chromaticity on the ramp means smaller tune spread due to momentum spread and less chance to touch resonances. The transition crossing has been tried by Keith. No positive results.
- What are the emittances in the AGS at injection and extraction? Check emittances with various ways: using jump targets to get beam size information; keep beam on the down ramp and measure emittances. The first attempt there did not show sizable growth.
- Use jump target at injection to check if higher polarization can be achieved.
- Ramp measurement to compare with the past measurements.
- Continue the AGS model study with bare AGS and adding partial snakes.
- More AGS injection polarization measurements to check the input polarization for AGS.

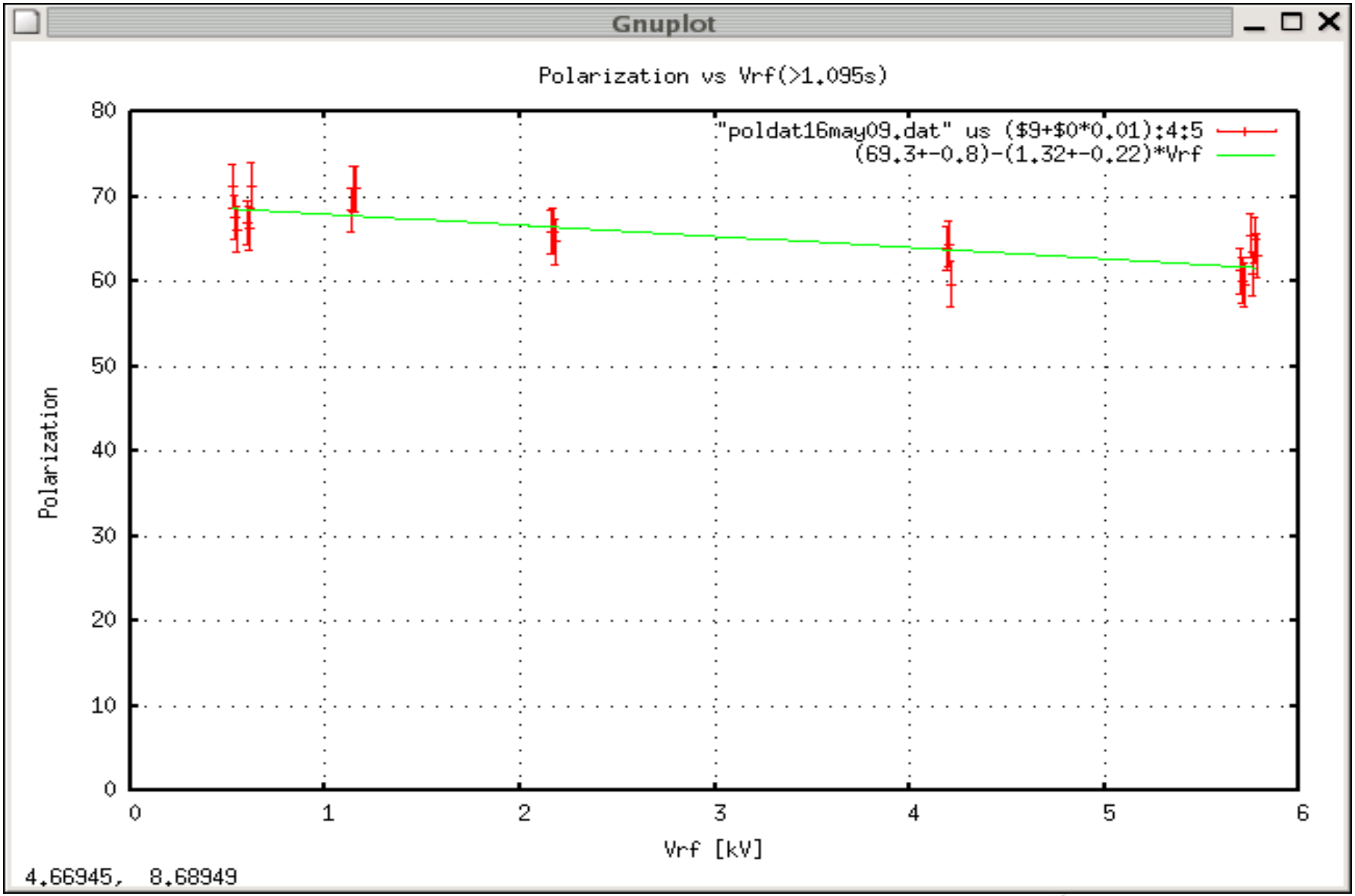
Intensity Scan from Tuesday Night

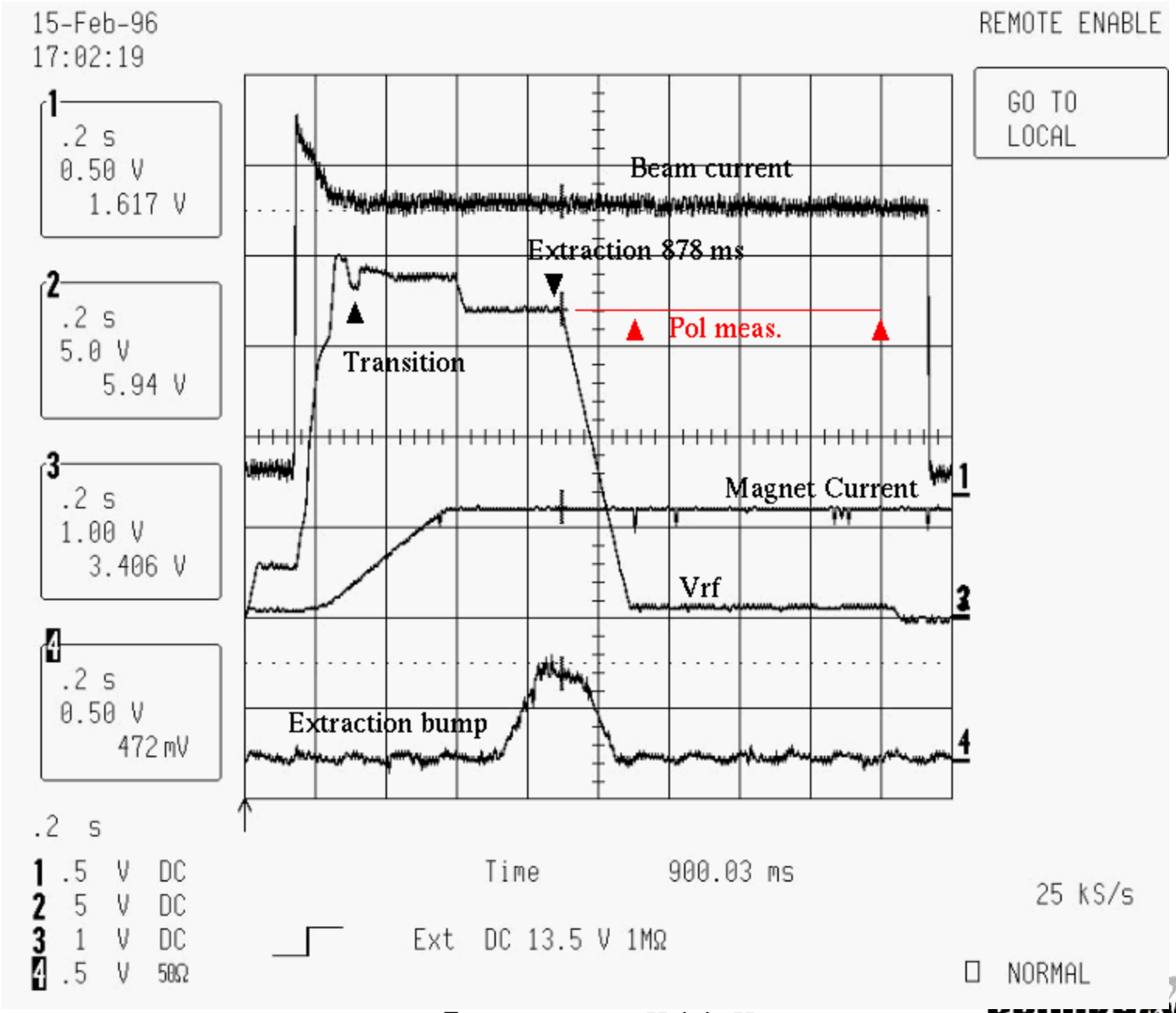


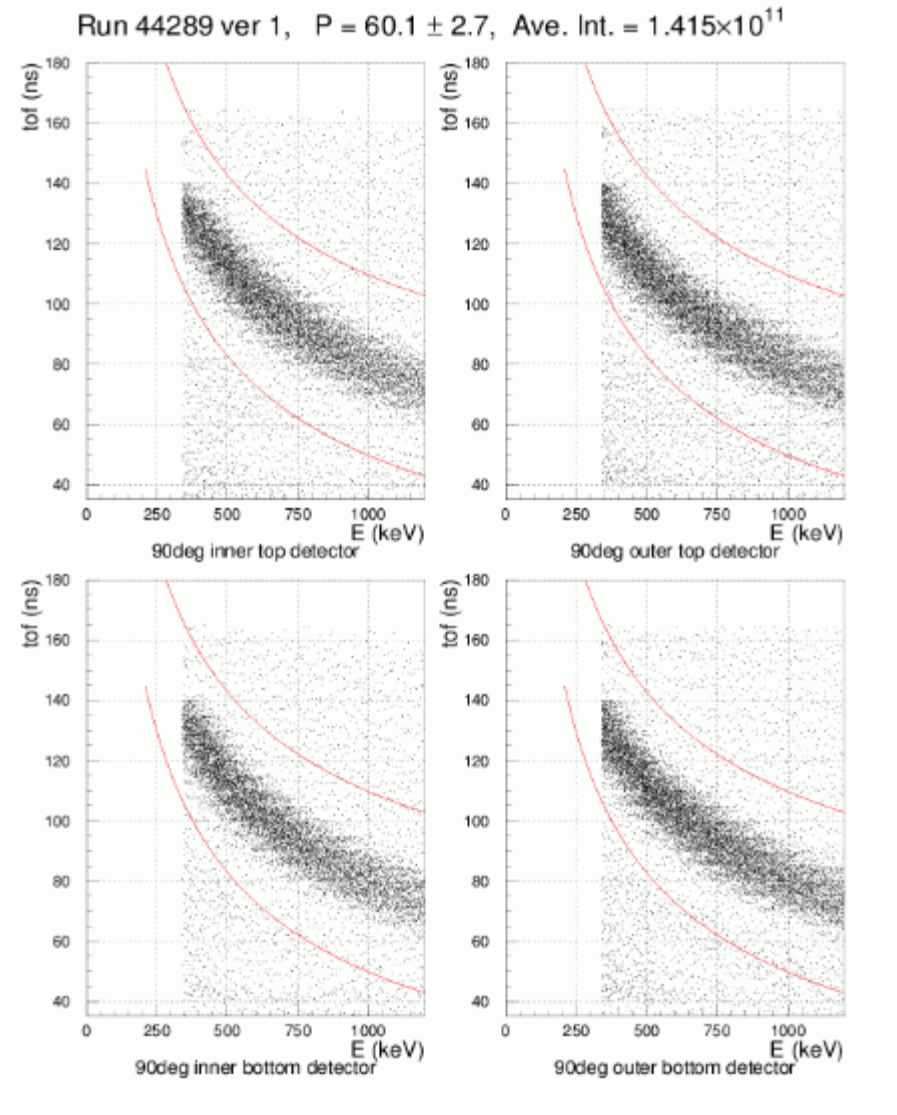
In Comparison with Run6

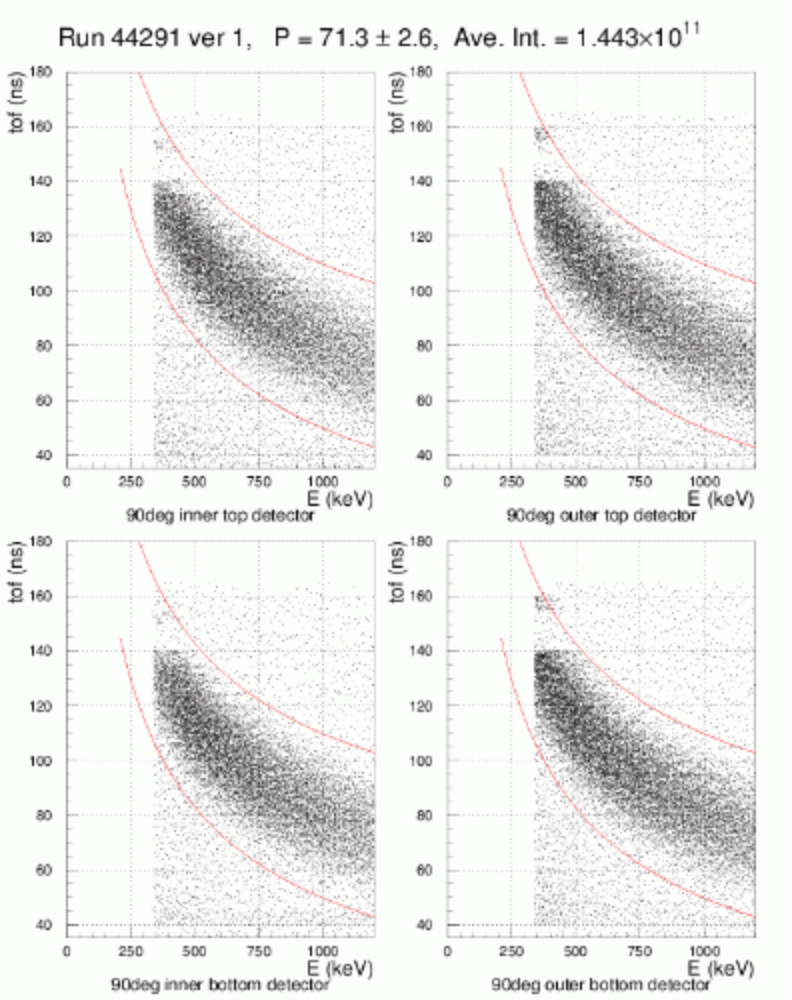


Conundrum: P(Vrf) --- Why this slope?

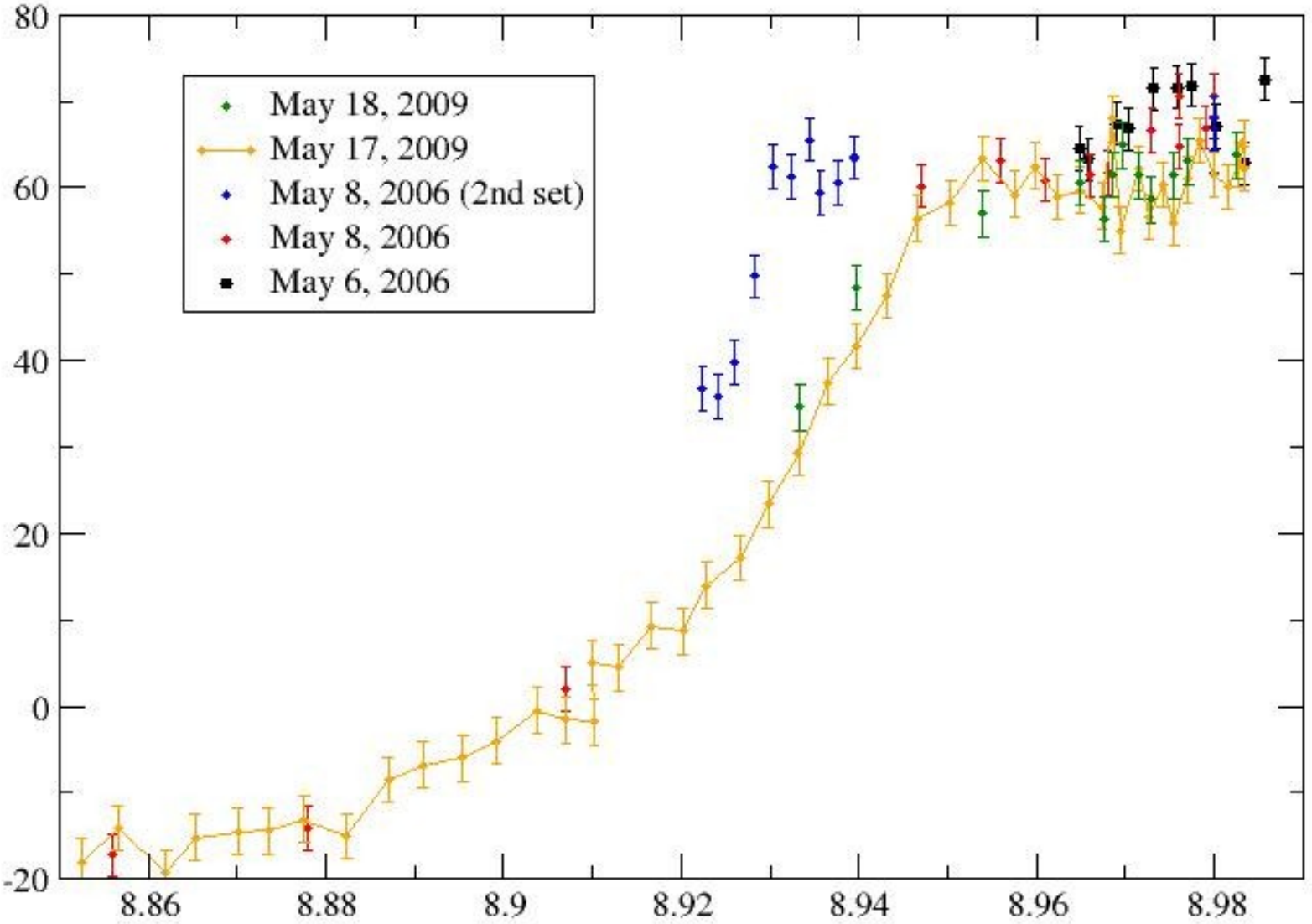



15-Feb-96
17:02:19
REMOTE ENABLE
GO TO LOCAL
1
.2 s
0.50 V
1.617 V
2
.2 s
5.0 V
5.94 V
3
.2 s
1.00 V
3.406 V
4
.2 s
0.50 V
472 mV
Beam current
Extraction 878 ms
Pol meas.
Transition
Magnet Current
Vrf
Extraction bump
.2 s
1 .5 V DC
2 5 V DC
3 1 V DC
4 .5 V 50Ω
Time 900.03 ms
Ext DC 13.5 V 1MΩ
25 kS/s
NORMAL


Run 44289 ver 1, P = 60.1 ± 2.7, Ave. Int. = 1.415×10^11
tof (ns)
E (keV)
90deg inner top detector
90deg outer top detector
90deg inner bottom detector
90deg outer bottom detector


Run 44291 ver 1, P = 71.3 ± 2.6, Ave. Int. = 1.443×10^11
tof (ns)
E (keV)
90deg inner top detector
90deg outer top detector
90deg inner bottom detector
90deg outer bottom detector

0+ Tune Scan from Run6 and Run9



Intensity of Run6: 1.1*10^11, intensity of Run9: 1.5*10^11