

AGS/Booster PP Status

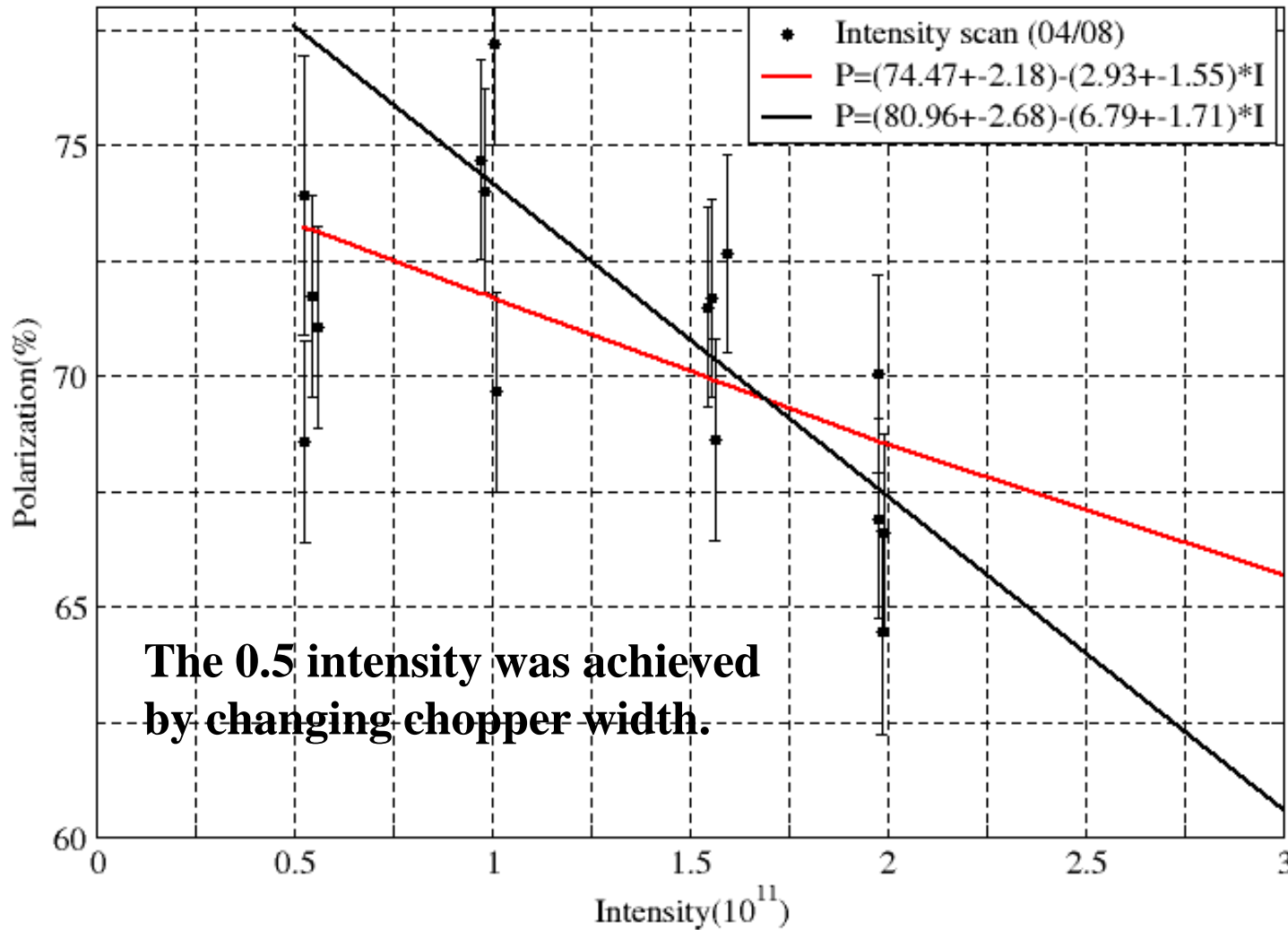
Haixin Huang

April 9, 2013
Time Meeting

Status

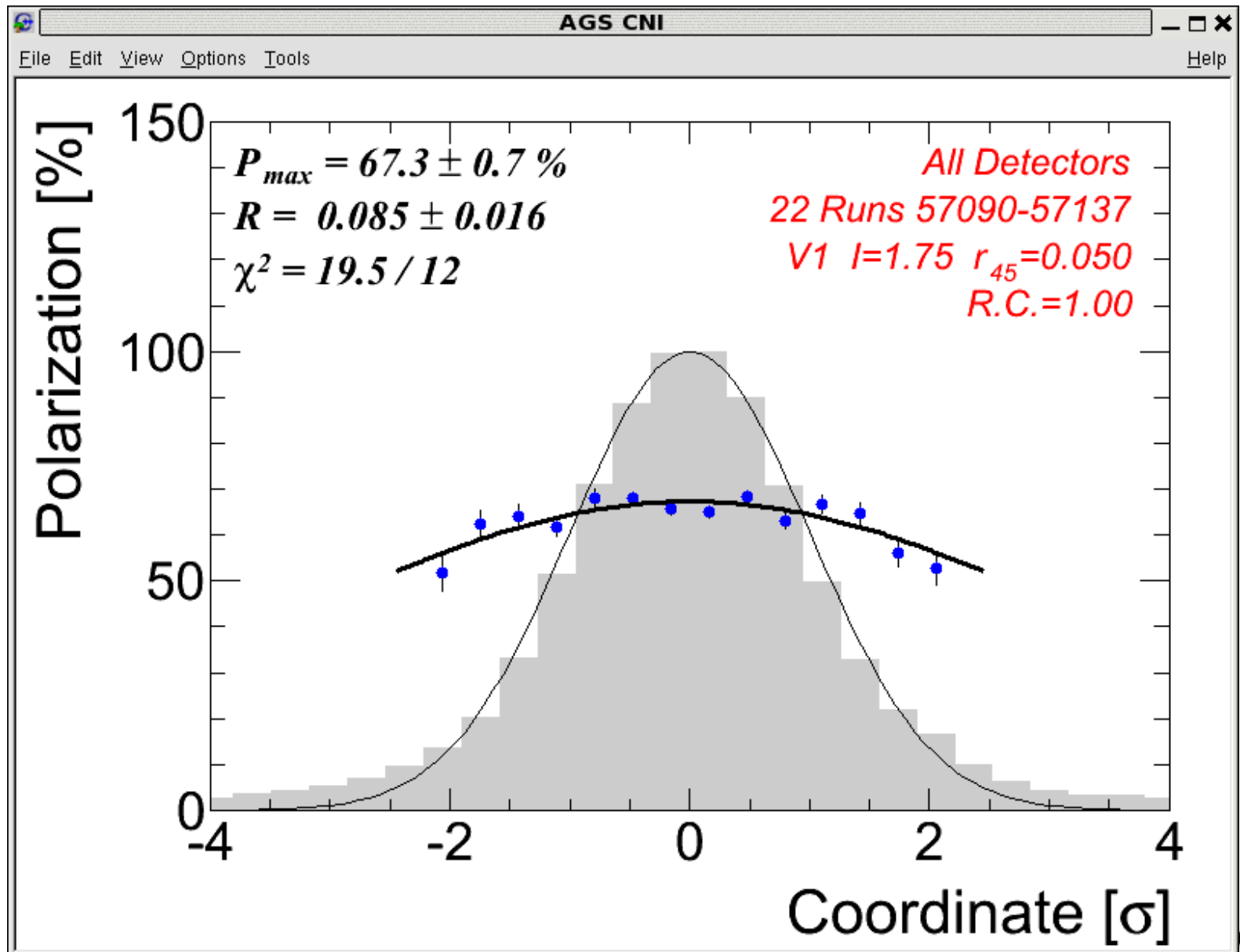
- Siemens repair went well last week behind a store and maintenance.
- Over the weekend, the linac was tuned to give higher output intensity (5×10^{11} at Booster input).
- Polarization in User 4 (fast roll-over) and in User 1 (slow roll-over) with low intensity (1.2^{11}):
 - JQ on : 70.52% (U4) 70.2% (U1)
 - JQ off: 67.3% (U4) 62.8% (U1)
- With High intensity (2.1^{11}):
 - JQ On : 63.8% (U4) 63.3% (U1)
 - JQ off: 61.4% (U4) 53.9% (U1)
- We can clearly see the difference between fast and slow with JQ off. With the tune jump on, there is no appreciable gain from the faster roll-over (simulation shows a gain $\sim 1\%$ with JQ on and certain emittance).

AGS Polarization Intensity Scan (4/7)

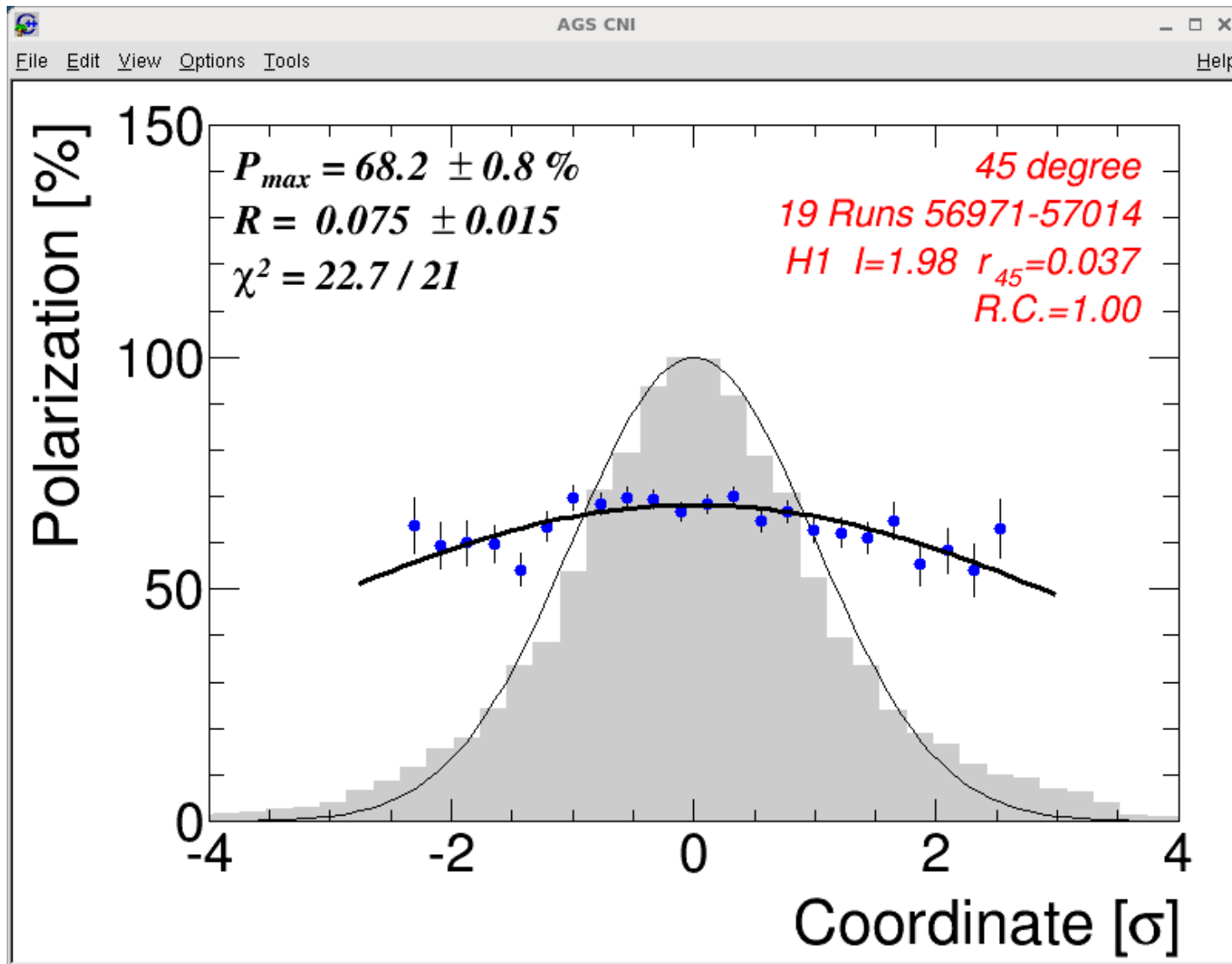


The 0.5 intensity was achieved by changing chopper width.

Horizontal Polarization Profile



Vertical Polarization Profile



Emittance

- Over the weekend, the linac was tuned to give higher output intensity (5×10^{11} at Booster input).
- Emittance at AGS extraction is still reported larger than last year by about 1-2 pi compared to 12(H) and 16(V) at 2×10^{11} . The difference of AGS setup this year:
 - 1) AGS $h=8$ instead of $h=12$ (going to switch today);
 - 2) Booster scraping moved to different location;
 - 3) More jump quad pulses during transition crossing (did not see difference when adding them);
 - 4). faster ramp near end (did not see difference when the change was made);
 - 5). chrom_x difference between 200-300ms (we changed it back to last year's settings, but saw no difference);
 - 6). higher vertical tune on the later part of the ramp;
 - 7). Horizontal damper is used (helped to reduce emittance). AGS damper has been adjusted to reduce remittance at flattop.