RHIC Polarimetery: p-Carbon

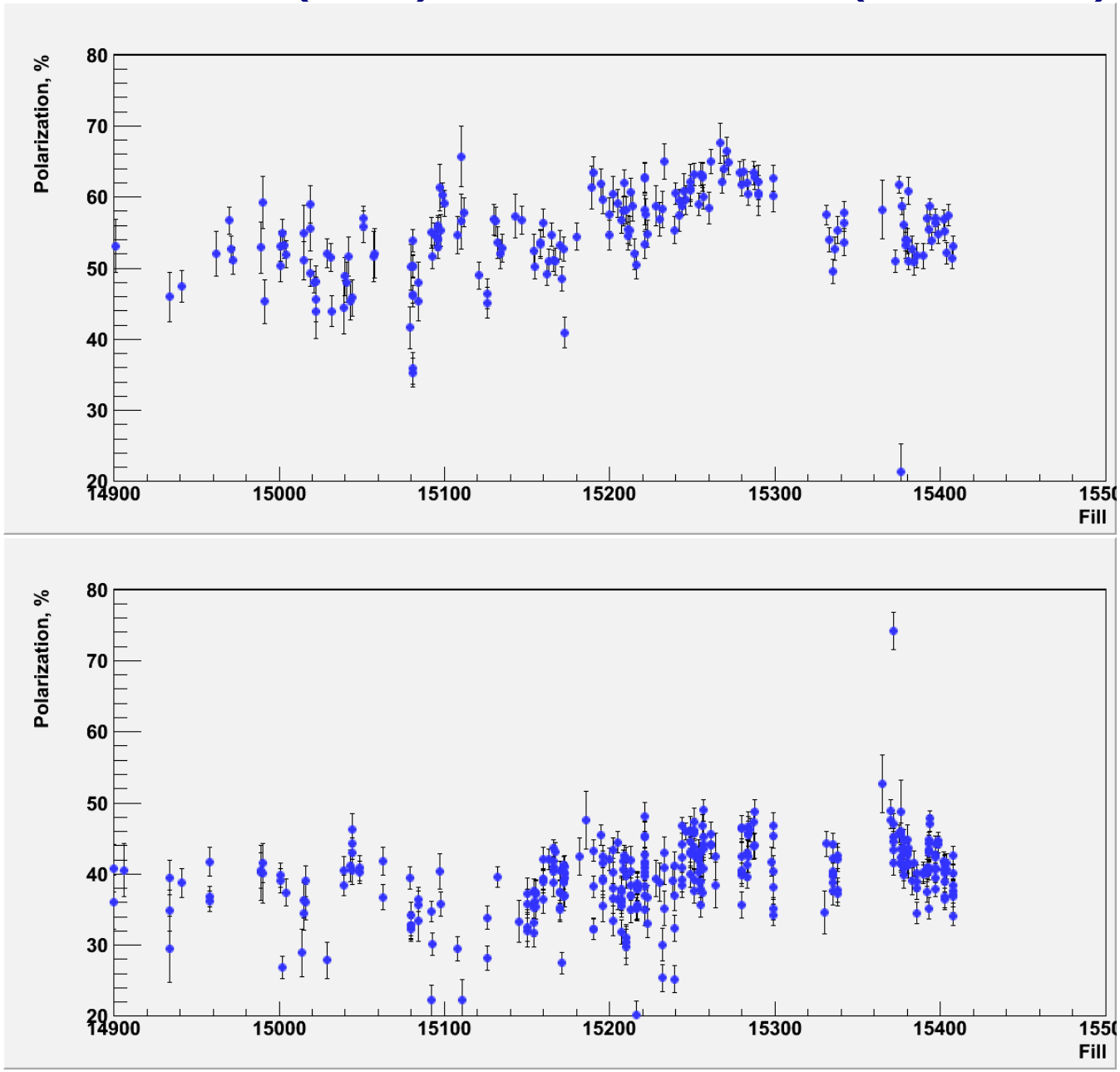
Status

Dmitri Smirnov for CniPol group

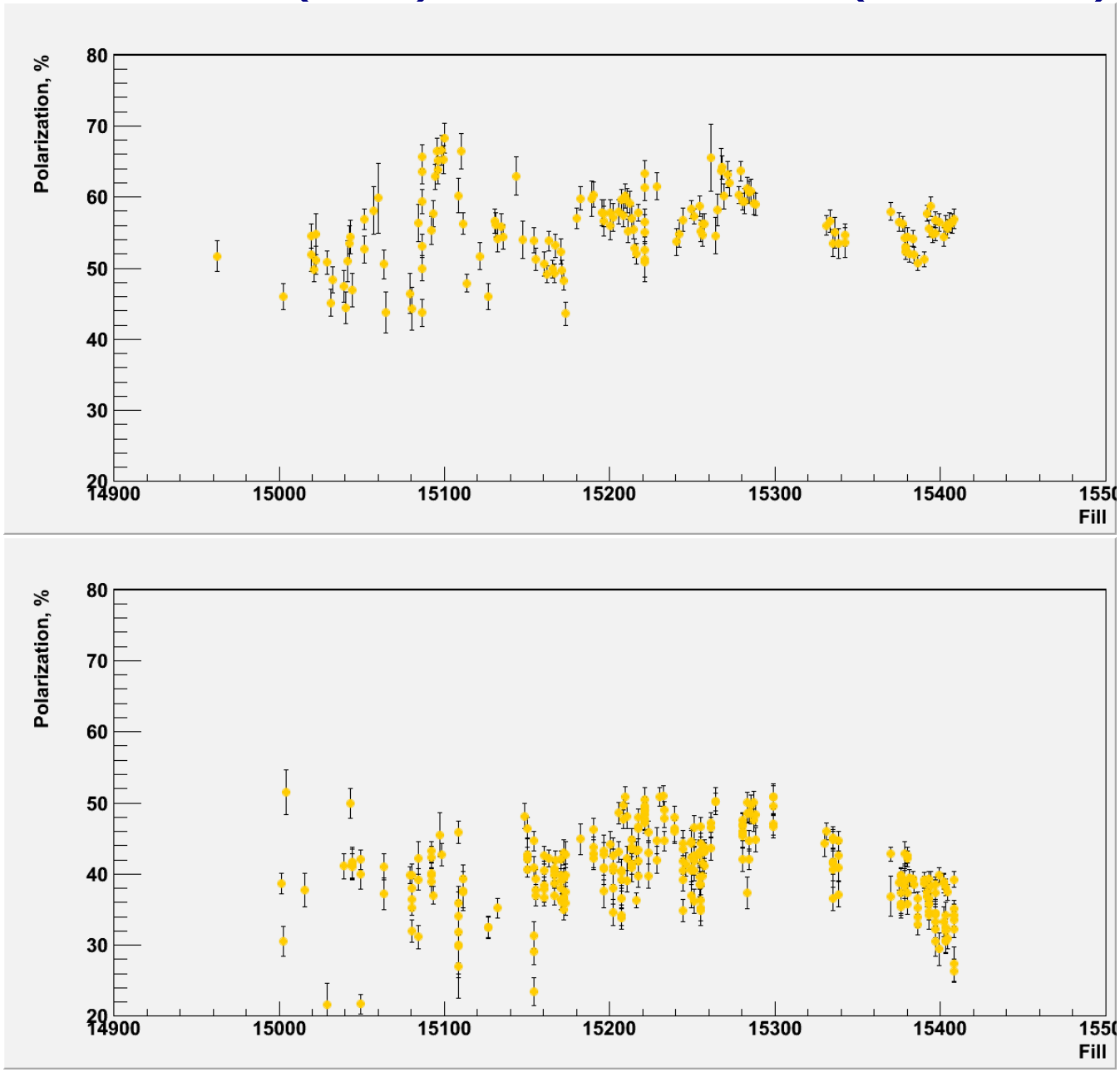
RHIC Spin/STAR, BNL

April 8, 2011

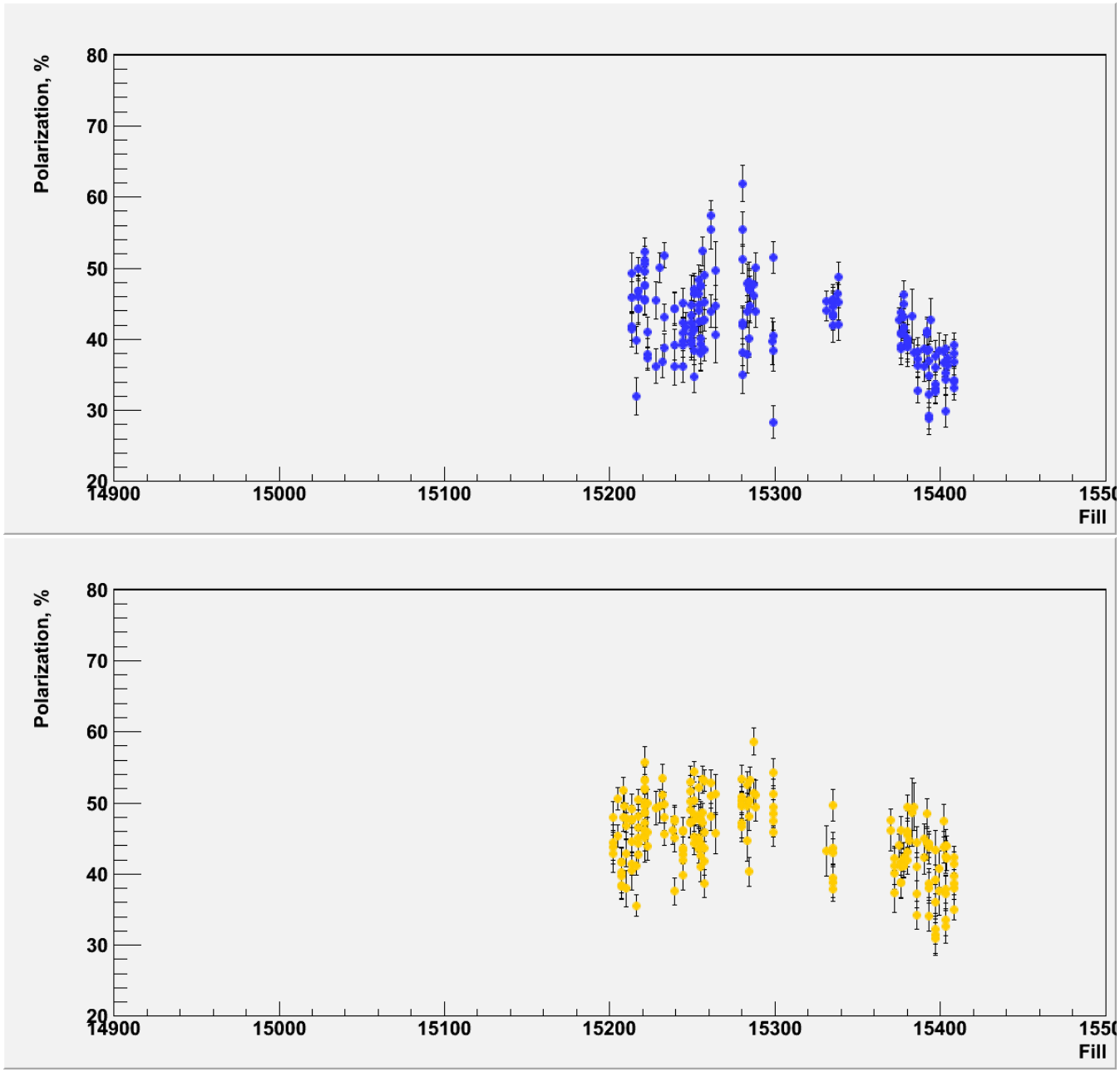
Blue-1 Upstream. Polarization vs Fill Number Injection (top) and Flattop (bottom)



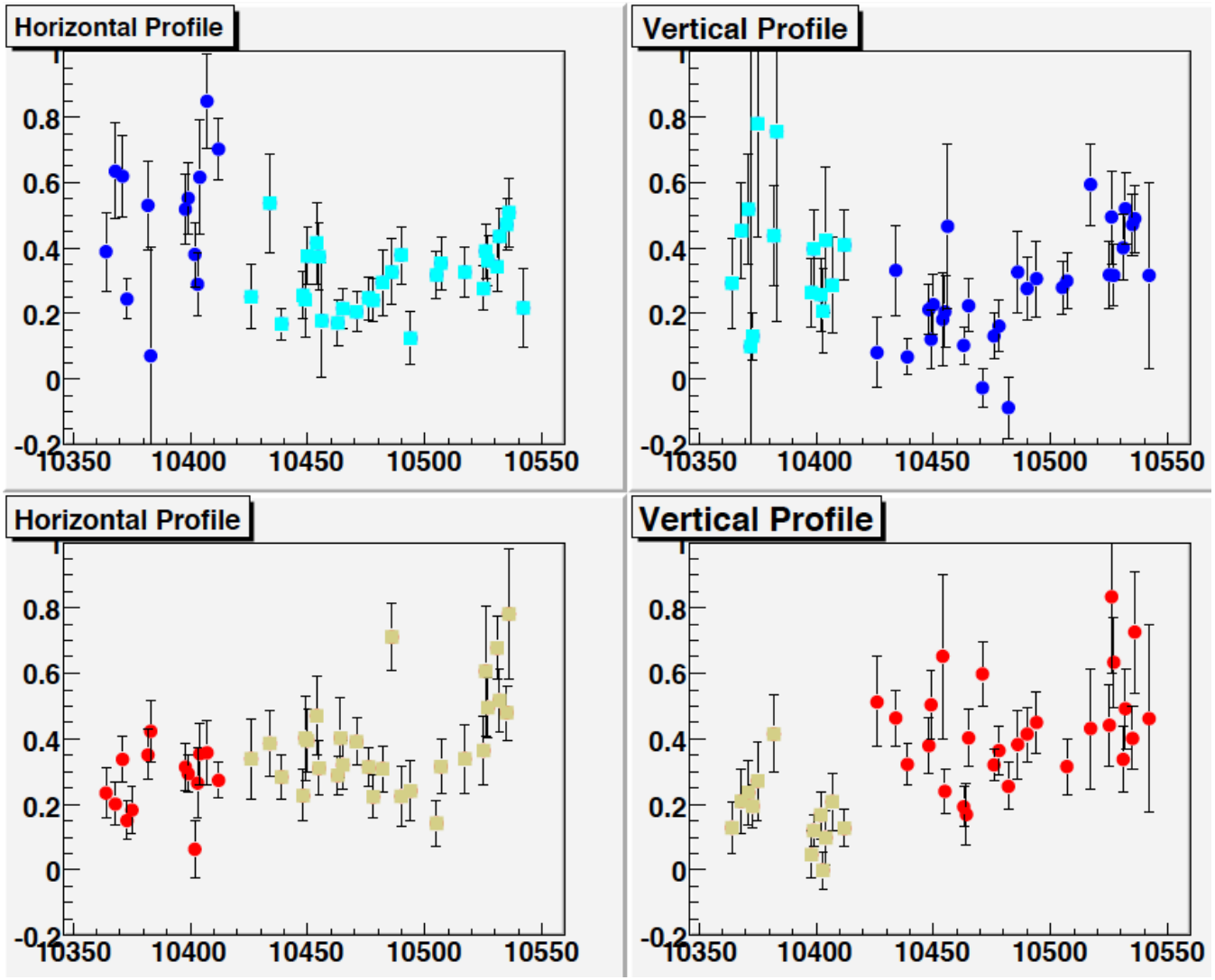
Yellow-2 Upstream. Polarization vs Fill Number Injection (top) and Flattop (bottom)



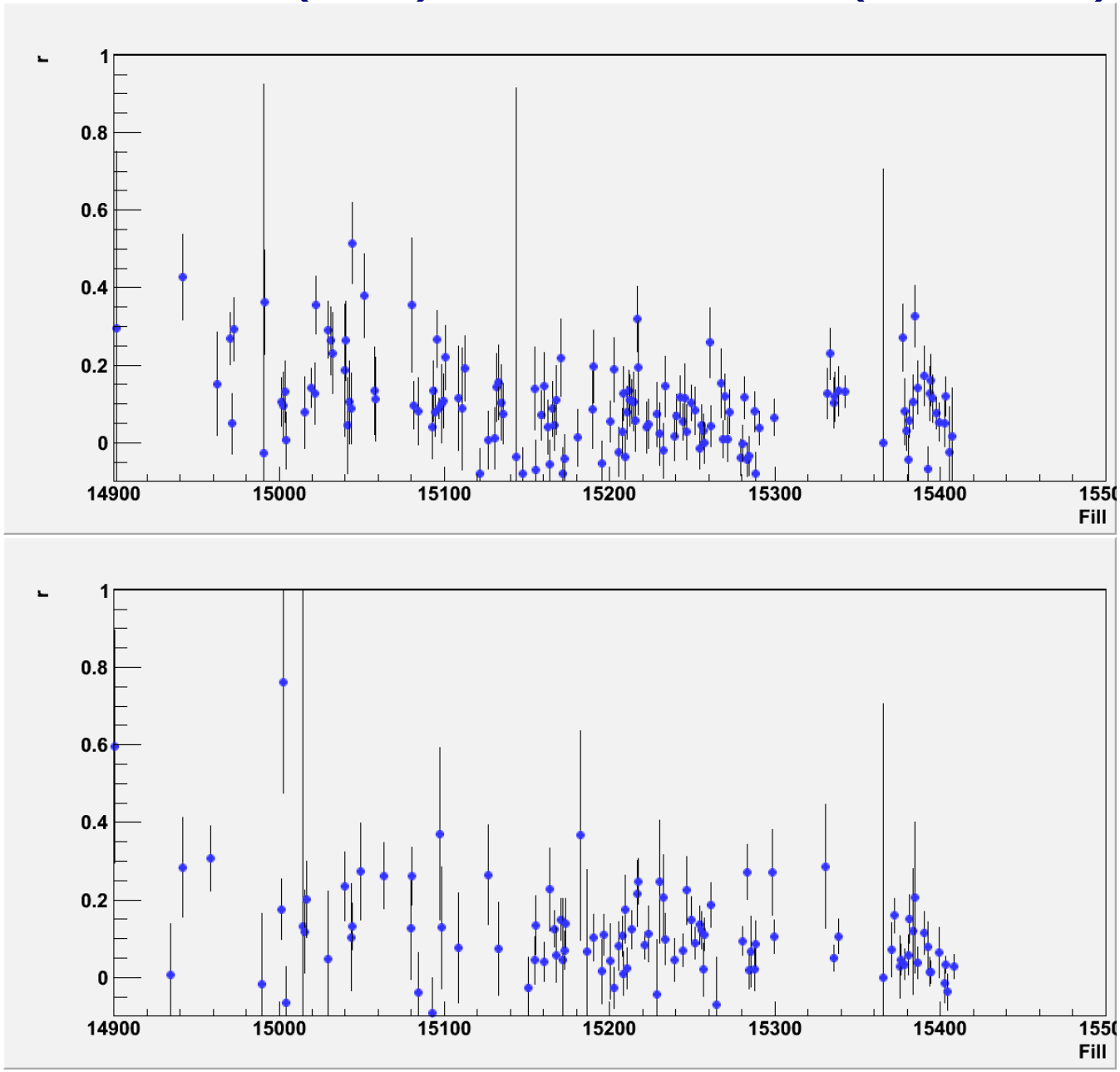
B2 and Y1 Downstream. Polarization vs Fill Number Flattop



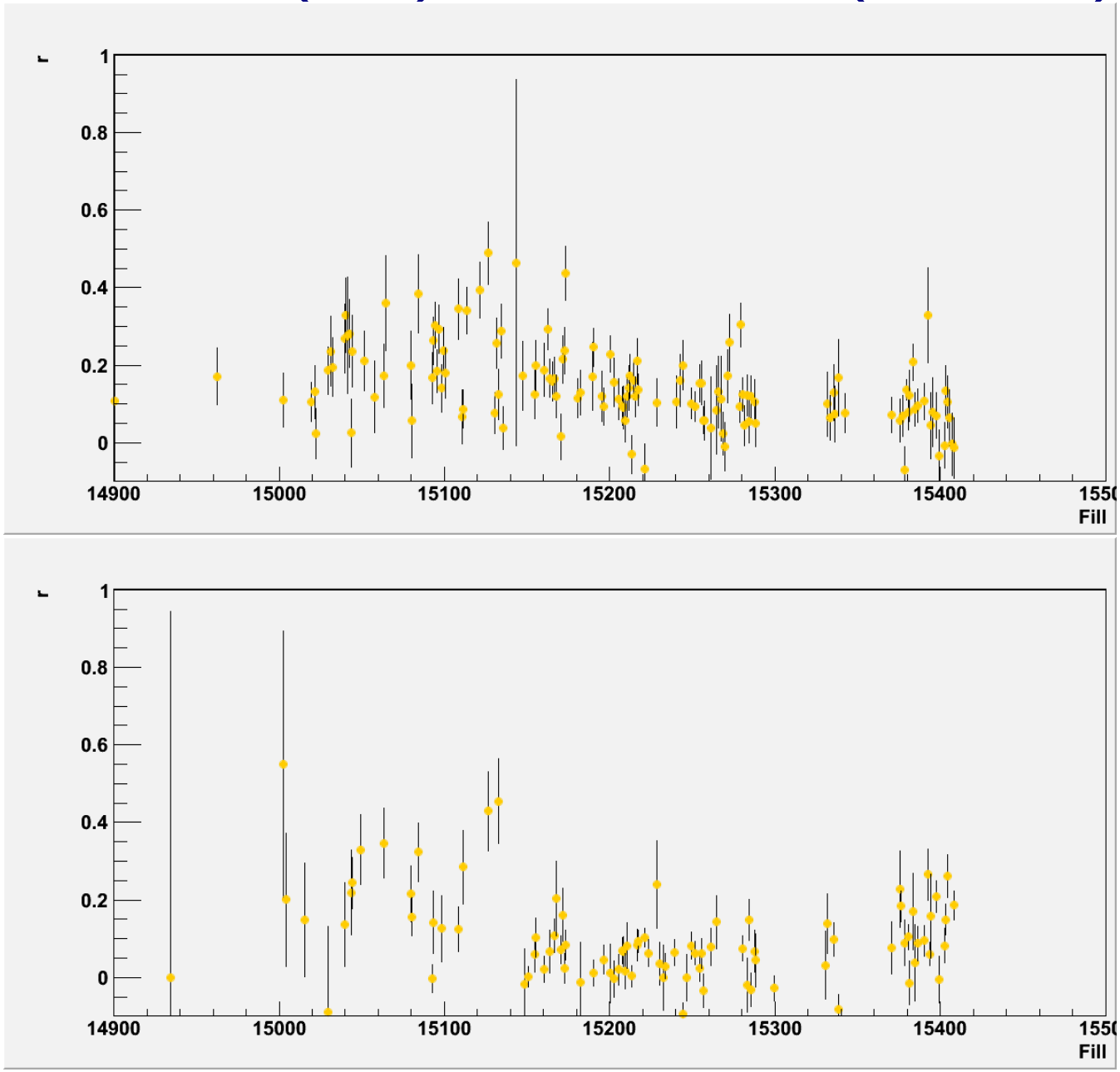
"Profile Ratio" r in Run 9



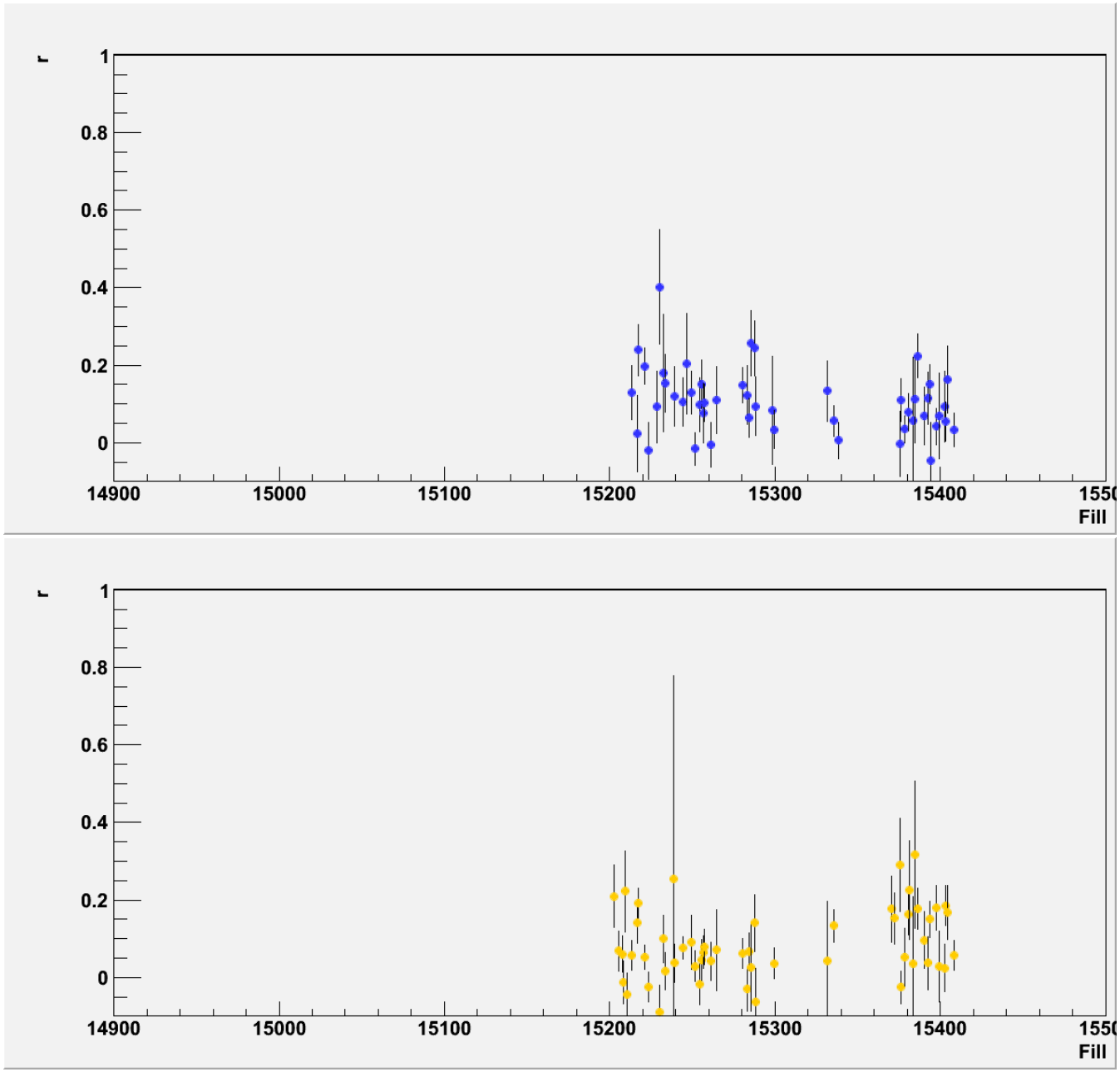
Blue-1 Upstream. "Profile Ratio" r vs Fill Number Injection (top) and Flattop (bottom)



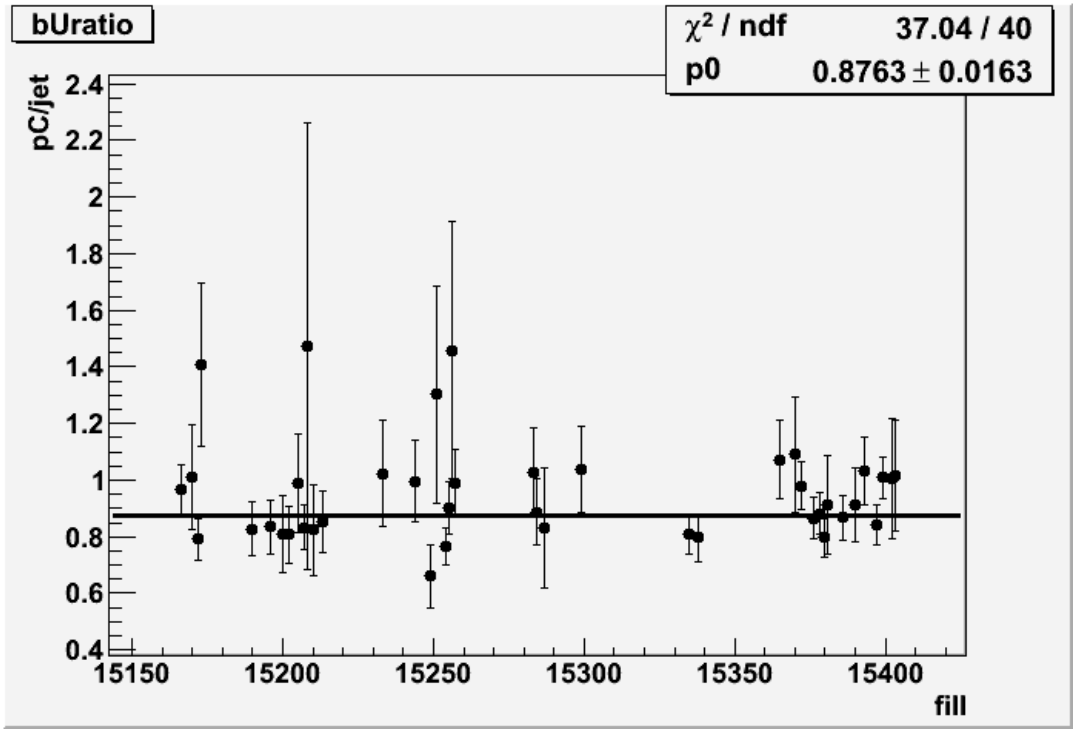
Yellow-2 Upstream. "Profile Ratio" r vs Fill Number
Injection (top) and Flattop (bottom)

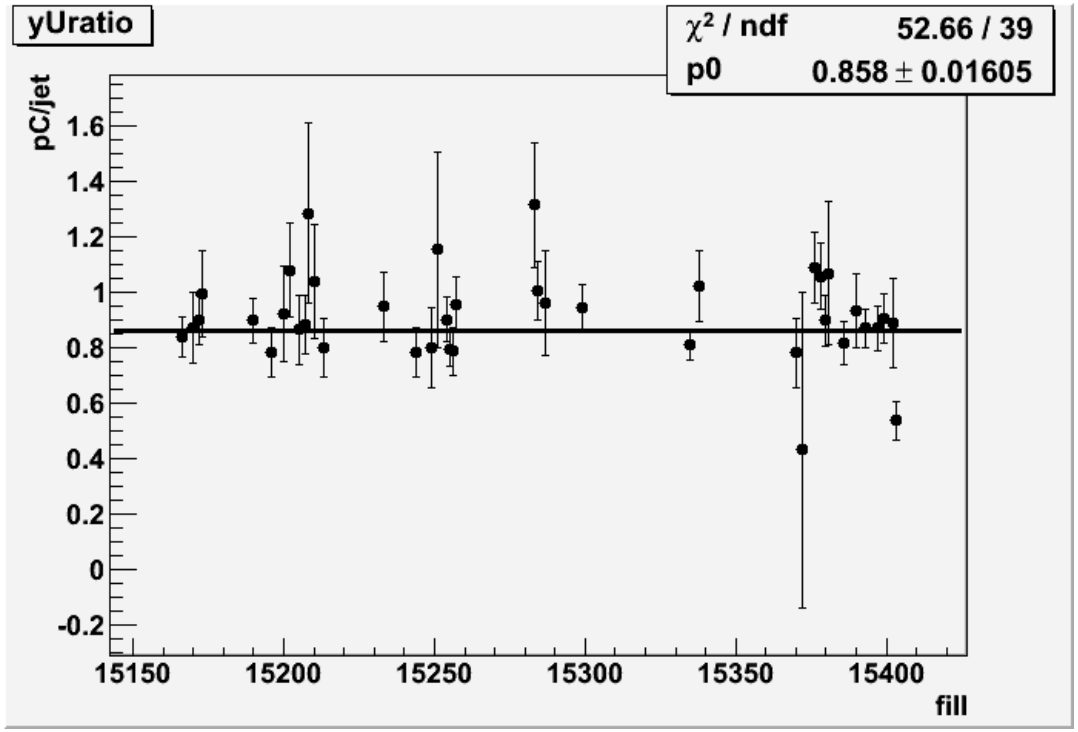


B2 and Y1 Downstream. Polarization vs Fill Number Flattop



p-Carbon and H-jet Polarization Ratio: Blue and Yellow

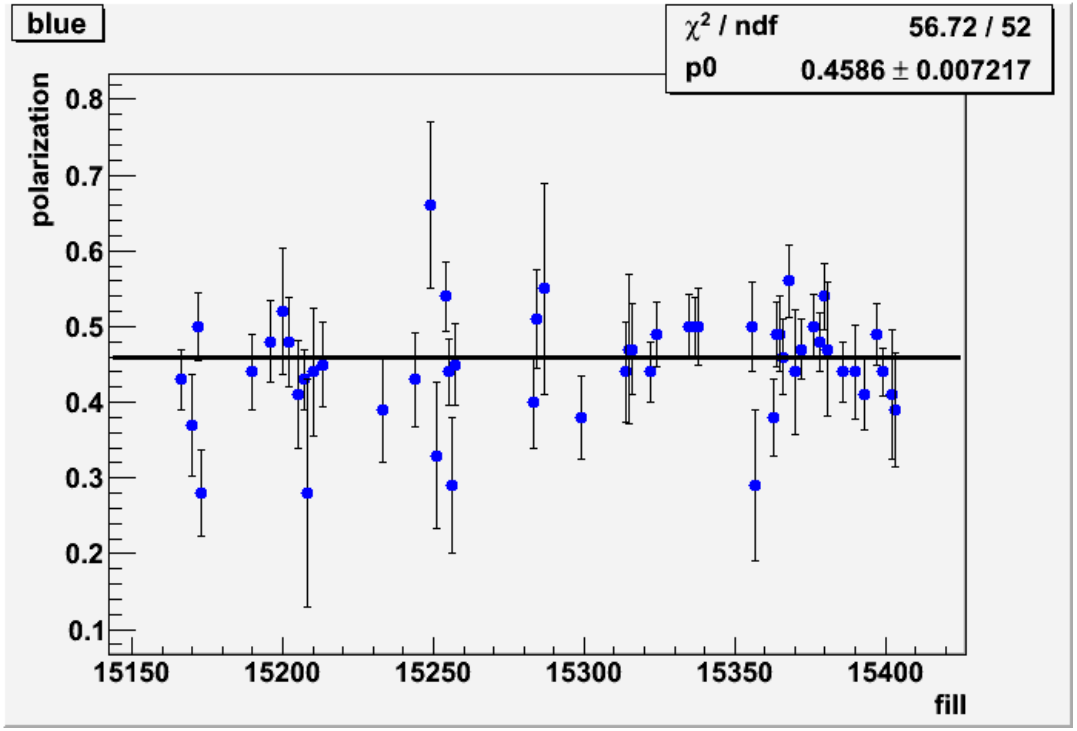


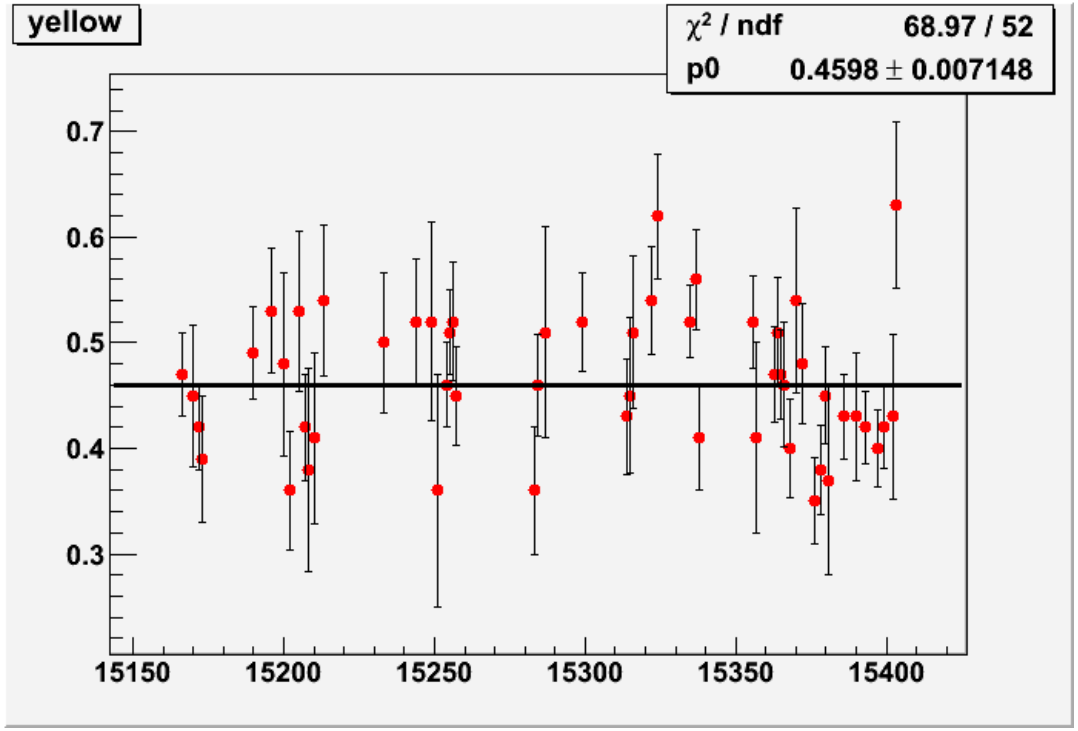


Summary

- There is a clear correlation between the average polarization in a store and polarization profile
- On average the polarization profile is better than in Run 9
- Offline p-Carbon polarization is $\sim 13\%$ lower than measured by the H-jet

Extras


blue
χ^2 / ndf 56.72 / 52
p0 0.4586 ± 0.007217
polarization
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
15150
15200
15250
15300
15350
15400
fill


yellow
χ^2 / ndf 68.97 / 52
p0 0.4598 ± 0.007148
0.7
0.6
0.5
0.4
0.3
15150
15200
15250
15300
15350
15400