

RHIC Polarimetry: p-Carbon

Status

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Offline Status

- Many improvements in the offline analysis
 - Intensity and polarization profiles available
 - “Ratio of polarization profiles” r is calculated for each run
- See current results at <http://yellowpc.rhic.bnl.gov/rundb/>

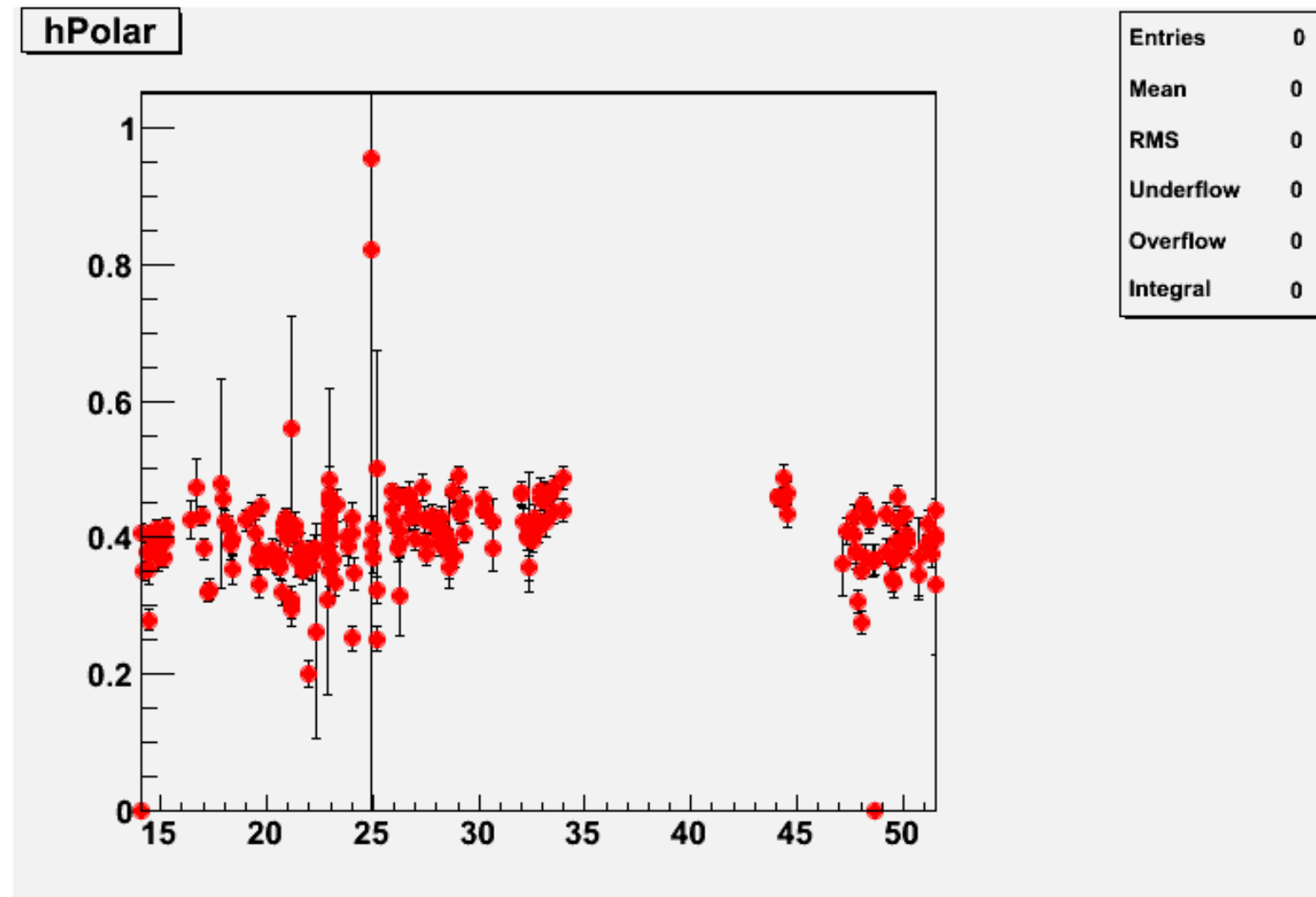


Cnipol Run Index

Run	Date & Time	Polarimeter	Polarization, %	r	Type	Beam Energy, GeV	Target	Num. of Events		Analyzed (version)
								Total	Processed	
15336.303	Mar 24, 2011 14:37:47 Thu	Y2U				249.73	V Target3	988,931	988,931	v1.3.8
15336.302	Mar 24, 2011 14:24:17 Thu	Y2U	55.0 ± 2.1	0.07 ± 0.07		23.70	V Target3	37,323,853	37,323,853	v1.3.8
15336.002	Mar 24, 2011 14:17:58 Thu	B1U	52.7 ± 1.7	0.12 ± 0.06		23.70	V Target1	60,192,253	60,192,253	v1.3.8
15336.201	Mar 24, 2011 14:14:02 Thu	B2D	65.5 ± 2.0	0.05 ± 0.06		23.70	H Target3	61,423,457	61,423,457	v1.3.8
15335.009	Mar 24, 2011 13:02:01 Thu	B1U								v0.0.0
15335.210	Mar 24, 2011 13:01:02 Thu	B2D	41.9 ± 2.3	-0.06 ± 0.13		249.73	H Target3	45,108,581	45,108,581	v1.3.8
15335.209	Mar 24, 2011 12:59:11 Thu	B2D	45.6 ± 2.1	0.19 ± 0.19		249.73	H Target3	56,249,746	56,249,746	v1.3.8
15335.208	Mar 24, 2011 12:58:28 Thu	B2D	45.1 ± 9.2	0.26 ± 0.53		249.73	H Target3	2,955,970	2,955,970	v1.3.8
15335.308	Mar 24, 2011 12:58:04 Thu	Y2U	41.6 ± 1.6	0.12 ± 0.19		249.73	V Target3	62,722,384	62,722,384	v1.3.8
15335.307	Mar 24, 2011 12:57:18 Thu	Y2U	41.5 ± 4.8	-0.81 ± 0.66		249.73	V Target3	7,696,706	7,696,706	v1.3.8
15335.109	Mar 24, 2011 12:55:46 Thu	Y1D	43.0 ± 2.0	-0.03 ± 0.20		249.73	H Target5	58,202,009	58,202,009	v1.3.8
15335.008	Mar 24, 2011 12:55:07 Thu	B1U	44.1 ± 1.7	-0.04 ± 0.11		249.73	V Target1	60,164,425	60,164,425	v1.3.8
15335.108	Mar 24, 2011 12:54:02 Thu	Y1D	19.6 ± 18.6	-2.00 ± 3.46		249.73	H Target5	1,036,062	1,036,062	v1.3.8
15335.007	Mar 24, 2011 12:53:56 Thu	B1U	33.2 ± 10.4	-2.00 ± 3.49		249.73	V Target1	1,790,559	1,790,559	v1.3.8
15335.306	Mar 24, 2011 12:49:57 Thu	Y2U	36.5 ± 1.6	-0.10 ± 0.15		249.73	V Target3	65,026,554	65,026,554	v1.3.8
15335.207	Mar 24, 2011 12:49:51 Thu	B2D	45.1 ± 1.7	0.04 ± 0.09		249.73	H Target3	88,224,915	88,224,915	v1.3.8
15335.107	Mar 24, 2011 12:45:45 Thu	Y1D	37.8 ± 1.7	0.15 ± 0.09		249.73	H Target5	86,162,202	86,162,202	v1.3.8

Blue Upstream. Polarization vs Time: $E_{\text{beam}} = 250 \text{ GeV}$ of 8

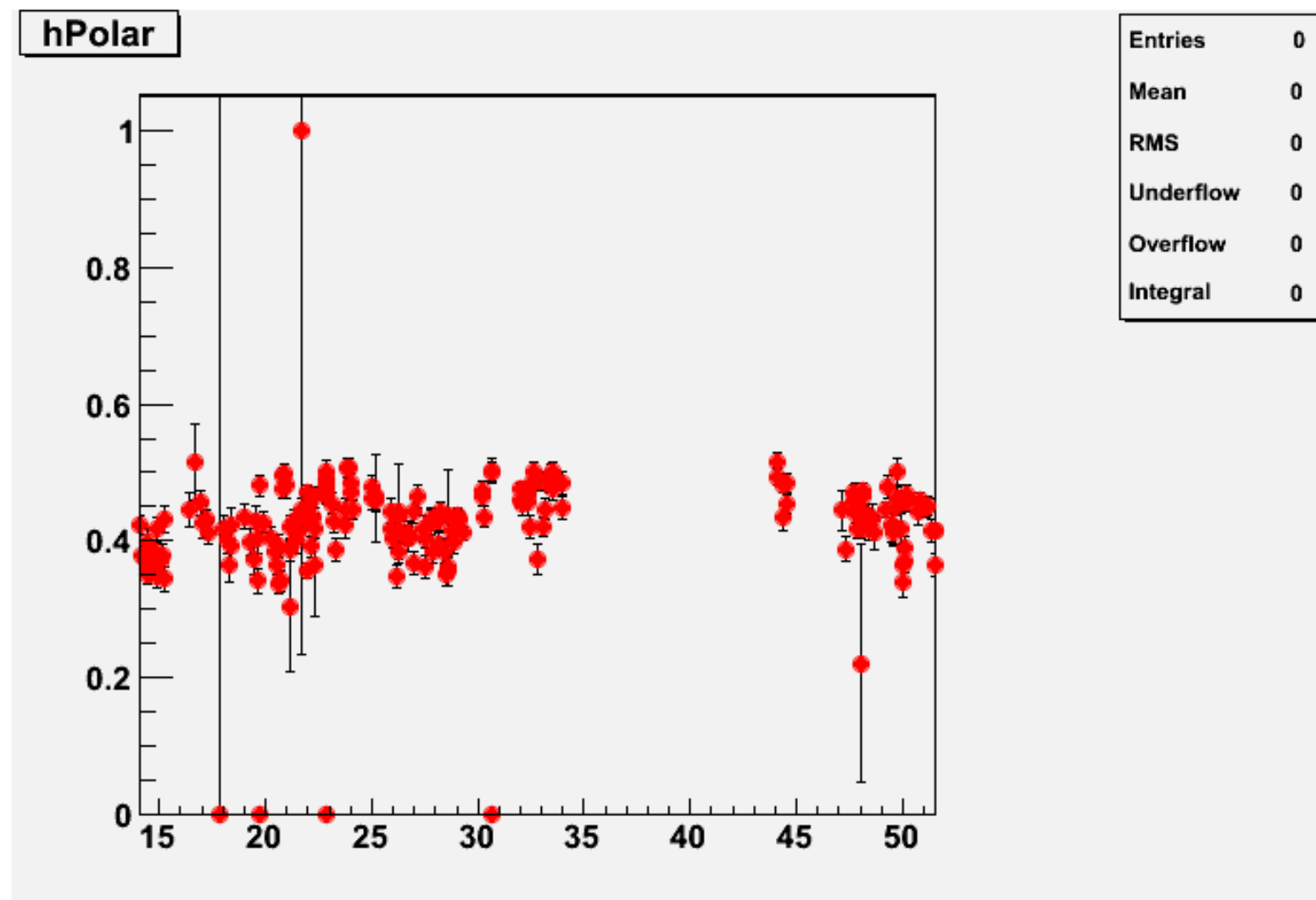
- Days since February 1



Yellow Upstream. Polarization vs Time: $E_{\text{beam}} = 250 \text{ GeV}$

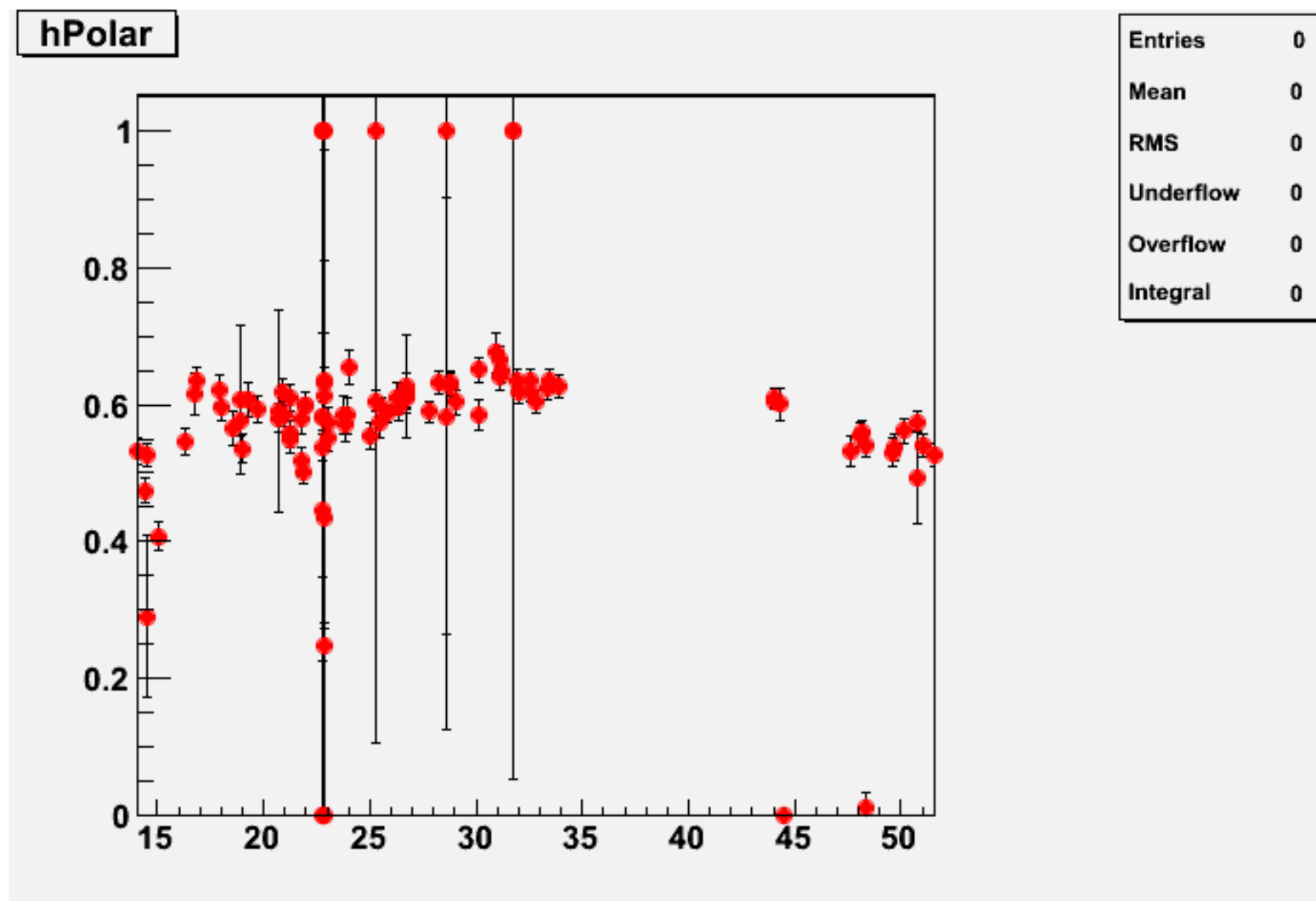
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- Days since February 1



Blue Upstream. Polarization vs Time: $E_{\text{beam}} = 24 \text{ GeV}$ of 8

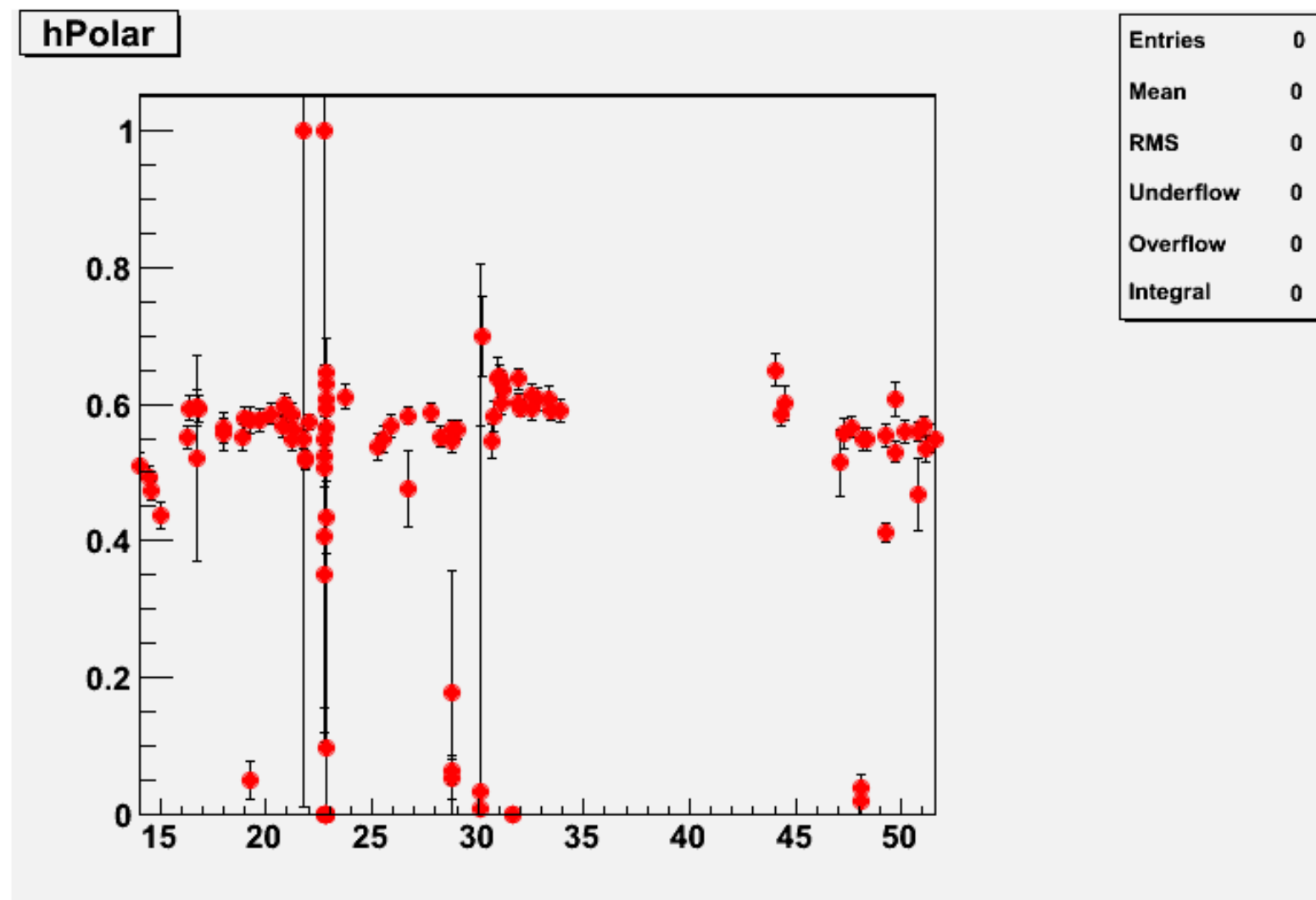
- Days since February 1



Yellow Upstream. Polarization vs Time: $E_{\text{beam}} = 24 \text{ GeV}$

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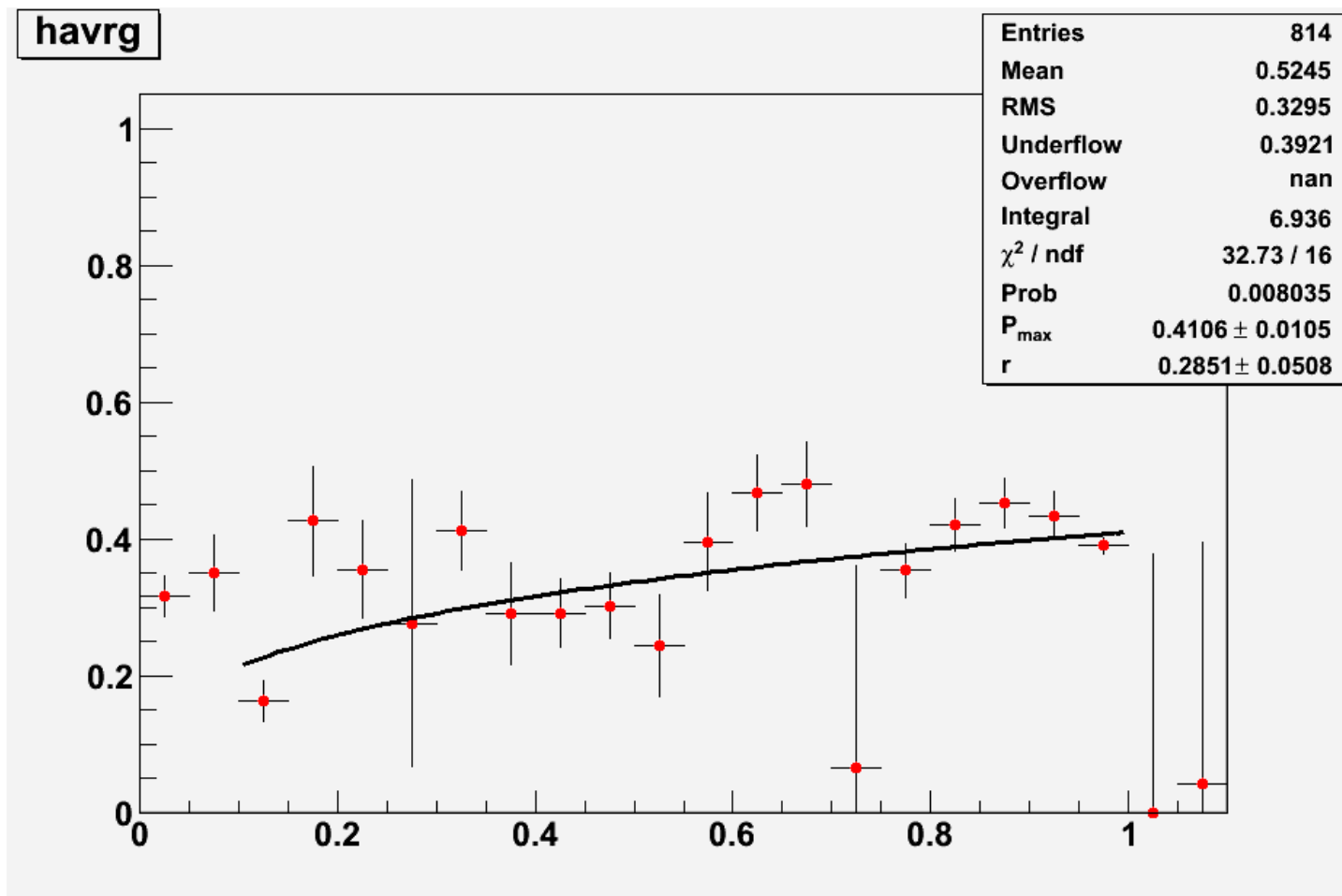
- Days since February 1



Conclusions

- Average polarization in Yellow is higher at $E_{\text{beam}} = 250 \text{ GeV}$
- Average polarization in Yellow is lower at $E_{\text{beam}} = 24 \text{ GeV}$

- Six measurements in fill 15213: 002, 003, 004, 005, 006, 007
- $r = 0.29 \pm 0.05$



- Six measurements in fill 15213: 101, 102, 103, 104, 105, 106
- $r = 0.08 \pm 0.03$

