

Status of beam-halo alignment

Jim Pivarski

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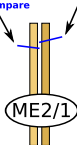
Feature	in old?	in new?
Organized and maintainable	.	yes
Linear track fits ($\phi = A + Bz$) in CSC pair overlaps	yes	yes
Slope (B) constrained to full-fit from all other stations	.	yes
Fiducial chamber-volume cut	hacked	yes
Histograms of everything	yes	yes
Parallel-processing (“gather” and “align” jobs)	.	yes
Customizable fits (allow PG, HW constraints)	.	yes
Combine ME1/1a and b	yes	untested
Error analysis (weak and strong modes)	.	yes
Full-workflow testing and debugging	yes	.
Try Oleg’s radius correction	.	.
Documentation	.	.

New fitting feature

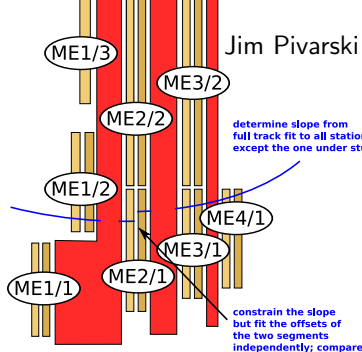
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determine slope and offset of both segments independently, then compare

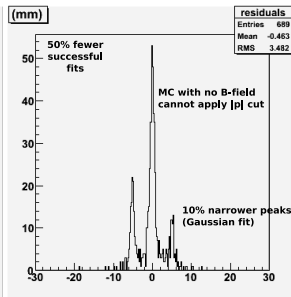
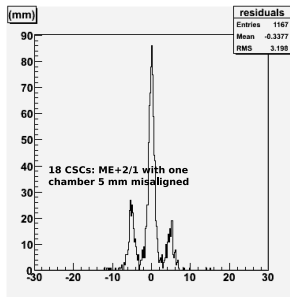


determine slope from full track fit to all stations except the one under study



Old fitting method; precision of "offset residuals" limited by slopes

New method can potentially improve resolution; especially with a high $|p|$ cut





Sun	Mon	Tue	Wed	Thu	Fri	Sat
May 1	2	3	4	5	6	7
	<p>9:00 CSC Online Software (Frank)</p> <p>10:00 Muon DPG [4] (Tim Cox)</p> <p>10:30 Stopped HSCP WG meet</p> <p>3:30p Muon meeting</p>	<p>9:30 Exotica Meeting (Greg Lar)</p> <p>10:00 CSC TF Working Meeting</p>	<p>9:00 CMS General Weekly Meeting</p>	<p>9:30 Exotica non-resonant sign-off</p>	<p>9:30 Exotica Photon Working G</p>	
8	9	10	11	12	13	14
	<p>7 PH-DPG Tracking Meeting (K)</p> <p>9:00 CSC Online Software (Frank)</p> <p>10:30 Stopped HSCP WG meet</p> <p>3:30p Muon meeting</p>	<p>10:00 CSC TF Working Meeting</p>	<p>9:00 CMS General Weekly Meeting</p>			
15	16	17	18	19	20	21
	<p>9:00 CSC Online Software (Frank)</p> <p>10:30 Stopped HSCP WG meet</p> <p>3:30p Muon meeting</p>	<p>Beam-halo alignment drop-de</p> <p>9:30 Exotica Meeting (Greg Lar)</p> <p>10:00 CSC TF Working Meeting</p>	<p>9:00 CMS General Weekly Meeting</p>		<p>Global Muon alignment sign-off</p> <p>9:30 Exotica Photon Working G</p>	
22	23	24	25	26	27	28
	<p>CMS Physics Week</p> <p>9:00 CSC Online Software (Frank)</p> <p>10:30 Stopped HSCP WG meet</p> <p>3:30p Muon meeting</p>	<p>10:00 CSC TF Working Meeting</p>	<p>Drop-dead date for all AICa</p> <p>9:00 CMS General Weekly Meeting</p>			
29	30	31	Jun 1	2	3	4
	<p>9:00 CSC Online Software (Frank)</p> <p>10:30 Stopped HSCP WG meet</p> <p>3:30p Muon meeting</p>	<p>9:30 Exotica Meeting (Greg Lar)</p> <p>10:00 CSC TF Working Meeting</p>	<p>9:00 CMS General Weekly Meeting</p>		<p>9:30 Exotica Photon Working G</p>	
5	6	7	8	9	10	11
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