



DQM status report DESY CMS Group meeting

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on behalf of the DQM Team

Data certification

Remote offline DQM has been working very well!

→ significant contribution to CMS-wide data certification

As of March 30th, certification results are available in

- 1) Run Registry
- 2) in JSON files for use with CRAB

They can be found at:

<https://cms-service-dqm.web.cern.ch/cms-service-dqm/CAF/certification/>

Data certification: cont.d.

Current status:

- manual entry of by-run and subsystem (entered by shifters)
- DCS entry of by-LuminositySections and subsystem (done automatically) (shown on next slide)

Planned:

- automatic certification by-LuminositySections
- offline DQM upgrade to handle histograms by-LuminositySections: 36x

RunRegistry upgrade defined and scheduled

- work starting now; results expected by June/July

Run Registry: March 30th

CMS

CMS DQM Run Registry (Global)

Workspace

Tools

Login

LS Ranges

Runs

Refresh

Table

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Run Number	Group	Section From	Section To	PhysDecl	PIX	FPIX	CASTOR	CSC+	CSC-	DT0	DT+	DT-	EB+	EB-	EE+	EE-	ES+	ES-	HBHEa	HBHEb	HBHEc	H0	HF	RPC	TIBTID	TOB	TEC+	TEC-	
132448	BeamCommissioning10	1	520		X	X	X	✓	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X	
132442	Collisions10	292	335		X	X	X	✓	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	
		274	291		X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	
		273	273		✓	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	
		272	272		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	
		150	271		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		148	149		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
		136	147		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		134	135		✓	✓	X	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		44	133		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		43	43		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓
1	42		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
132440	Collisions10	157	401		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		141	156		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	
		139	140		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	X	✓	✓	✓	✓
		86	138		✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓
		85	85		✓	✓	X	✓	✓	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓
		84	84		✓	✓	X	✓	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X
		1	83		X	X	X	✓	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	X	X	X	X

HV information per Luminosity Section is being filled since March 30th (Run 129863)

Online DQM

Online DQM:

running smoothly with offline-style plots available in real time
(a few examples are shown on the next slides)

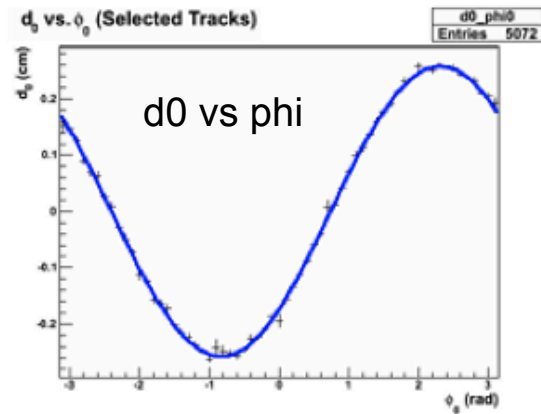
Smooth running mostly due to dedicated efforts over the last months in:

- documentation / shift instructions / tutorials
- software bug fixes and upgrades
- continuous support from on-call experts and field managers

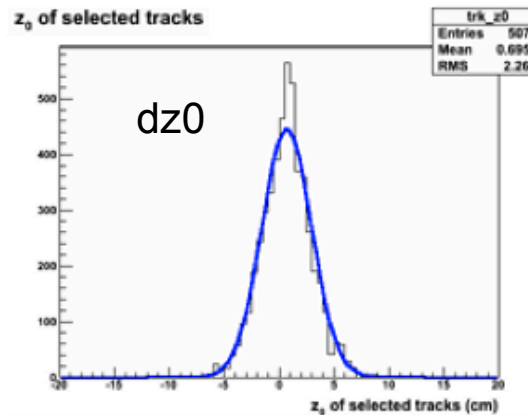
Backup slides....

Beamspot in online DQM

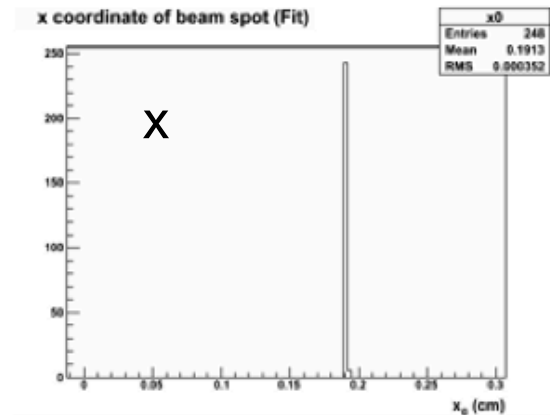
00 - d0-phi0 of selected tracks



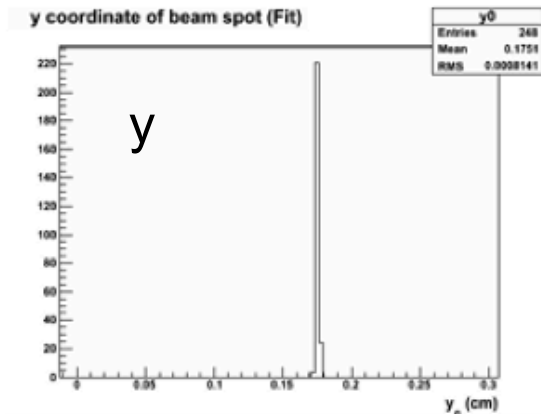
01 - z0 of selected tracks



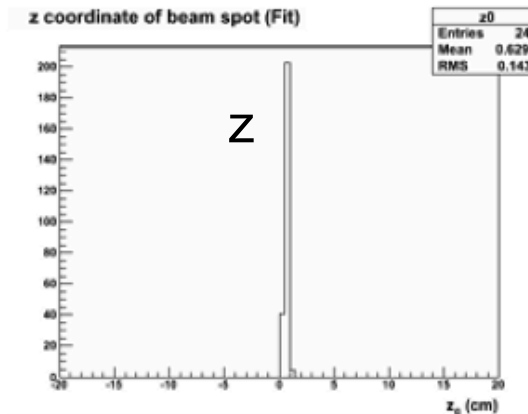
02 - x position of beam spot



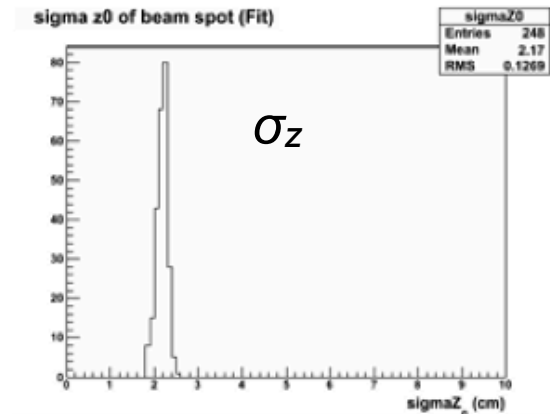
03 - y position of beam spot



04 - z position of beam spot



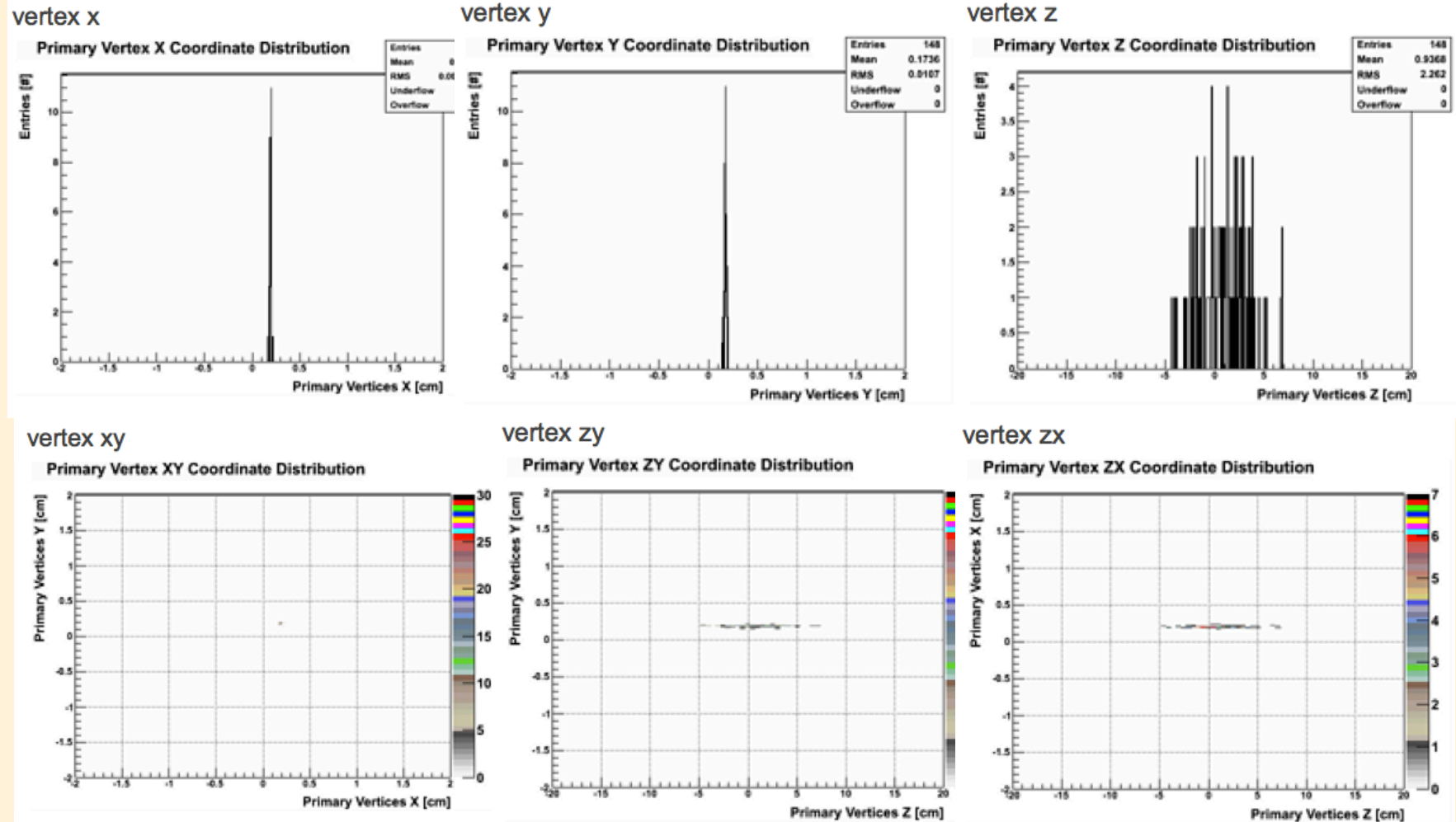
05 - sigma z of beam spot



- Made available online "out of the box" at t = 0
- Being sent to LHC in real time via DIP

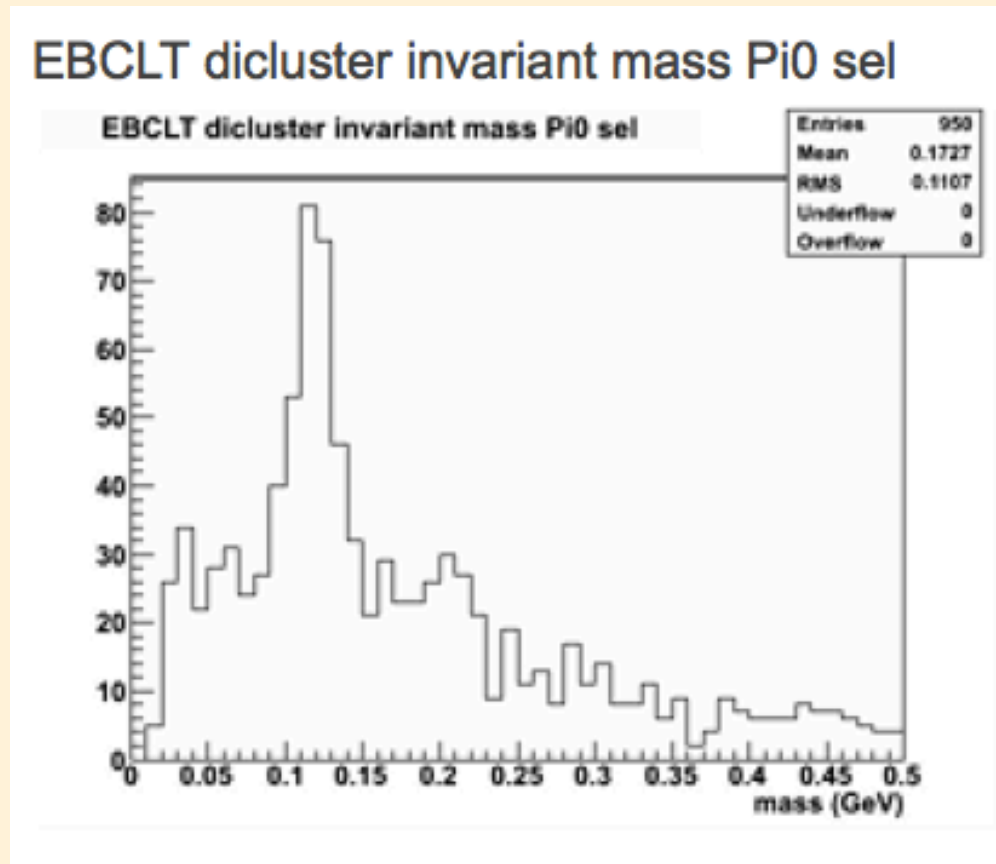
Beamspot in online DQM

Fast beamspot measurement from 3D-vertex distributions obtained with pixel-only tracks



Online DQM: Online physics

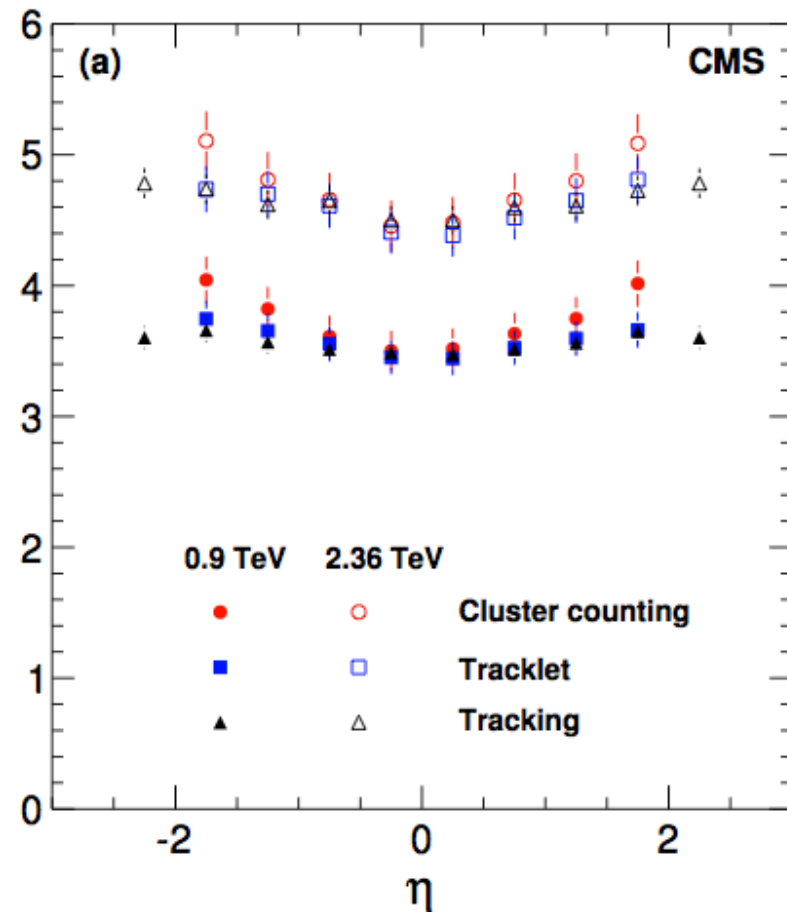
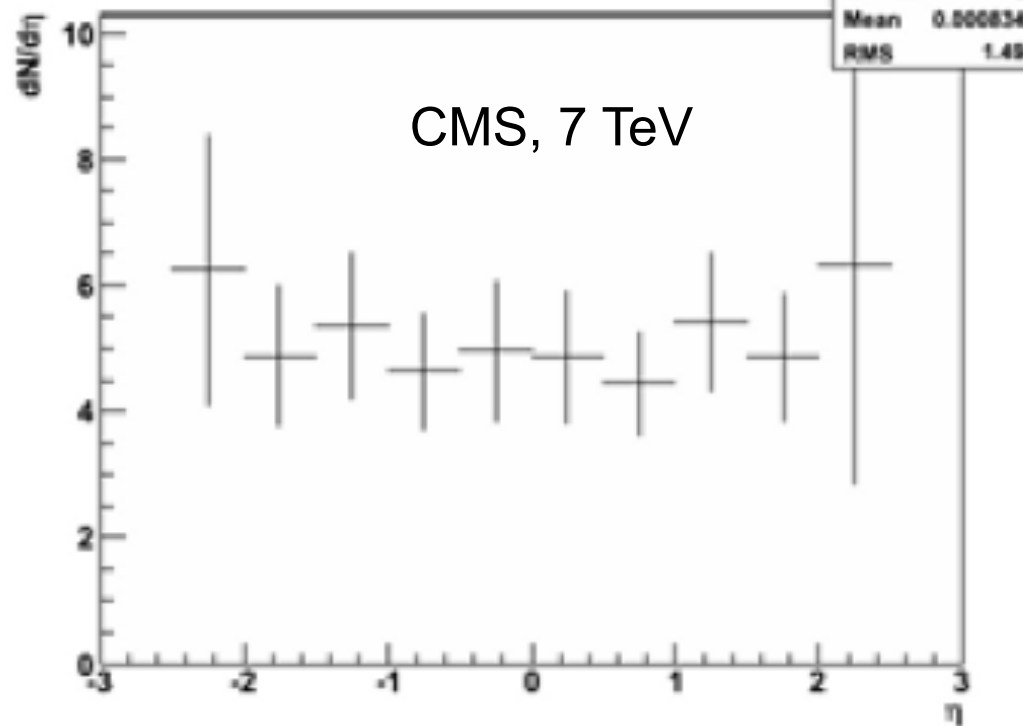
ECAL: π^0



Online DQM: Online physics analysis?

hdNdEtaTracklets12_HLT_L1_BPTX

HLT_L1_BPTX: dN/d η for tracklets12



Charged-hadron multiplicity density ($dN_{ch}/d\eta$) as a function of pseudorapidity....

Online DQM GUI: March 30th

