



Auto QA for level 2 W trigger

Maxence



Automation why?

Why ? -> Difficult task by eye and easy computable

	L2btowW						L2etowW	
Run #	Status	Eta,Phi			Soft ID		Tower RDO	
		Hot	Warm	Dead	Hot	Warm	Hot	Warm
14086001		(26,66)			~995, ~1305	~1679	~620	
14086013		(26,66)			~780, ~995, ~1305	~800	~620	
14086016							~620	
14086018		(33,39)	(26,66)		~780, ~995	~1305	~620	
14086019		(26,66)			~780, ~995, ~1305	~1679	~620	
14086020		(26,66)			~780, ~995, ~1305	~1679	~620	
14086022		(26,66)			~780, ~995, ~1305	~1679	~620	

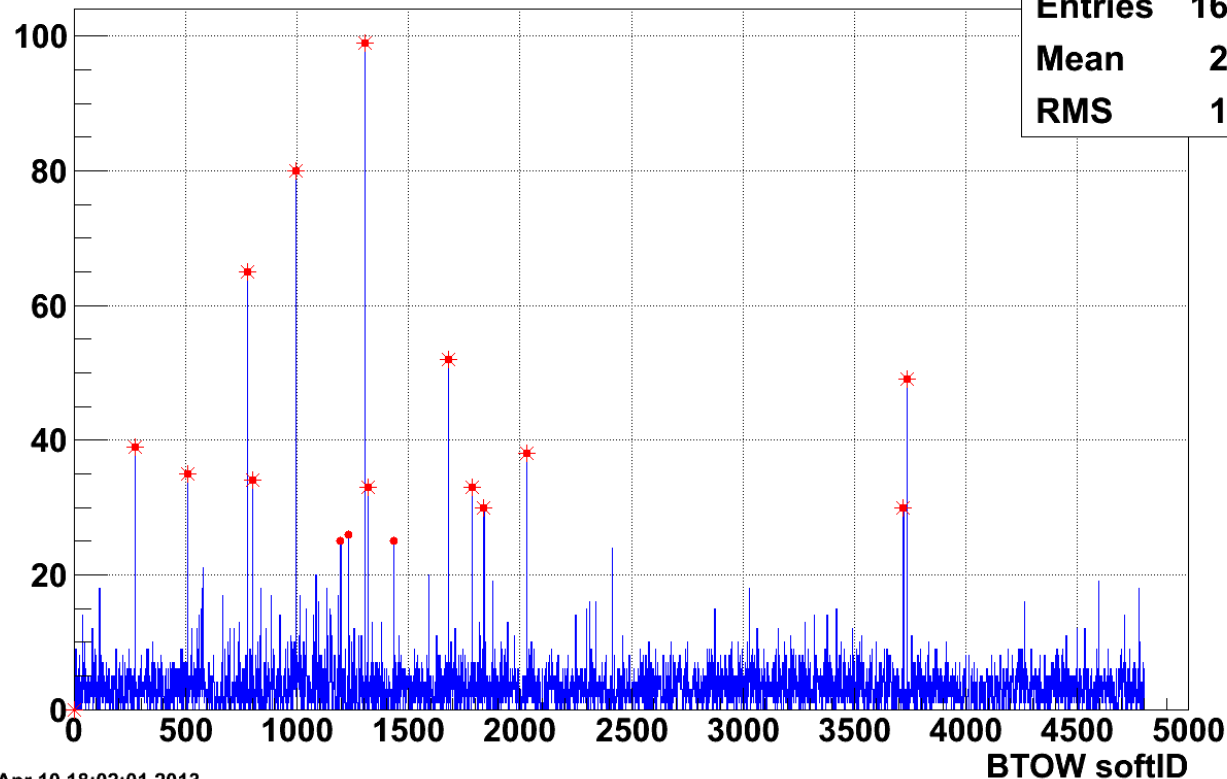
How? -> Stand alone macro running on the Root file used by the macros that create the L2monitoring PDFs



One Example : run14086001

Run #	L2btowW					L2etowW	
	Status	Eta,Phi			Soft ID		Tower RDO
		Hot	Warm	Dead	Hot	Warm	Hot
14086001		(26,66)			~995, ~1305	~1679	~620

W-BTOW-accepted: acc seed tower ET>5.00 GeV



Hot (*) = over $6\sigma_{\text{RMS}}$
Warm (•) = bet. 5 and $6\sigma_{\text{RMS}}$

BTOW – SoftID		
49	3737.5	(hot)
30	3720.5	(hot)
38	2032.5	(hot)
30	1838.5	(hot)
33	1786.5	(hot)
52	1679.5	(hot)
53		

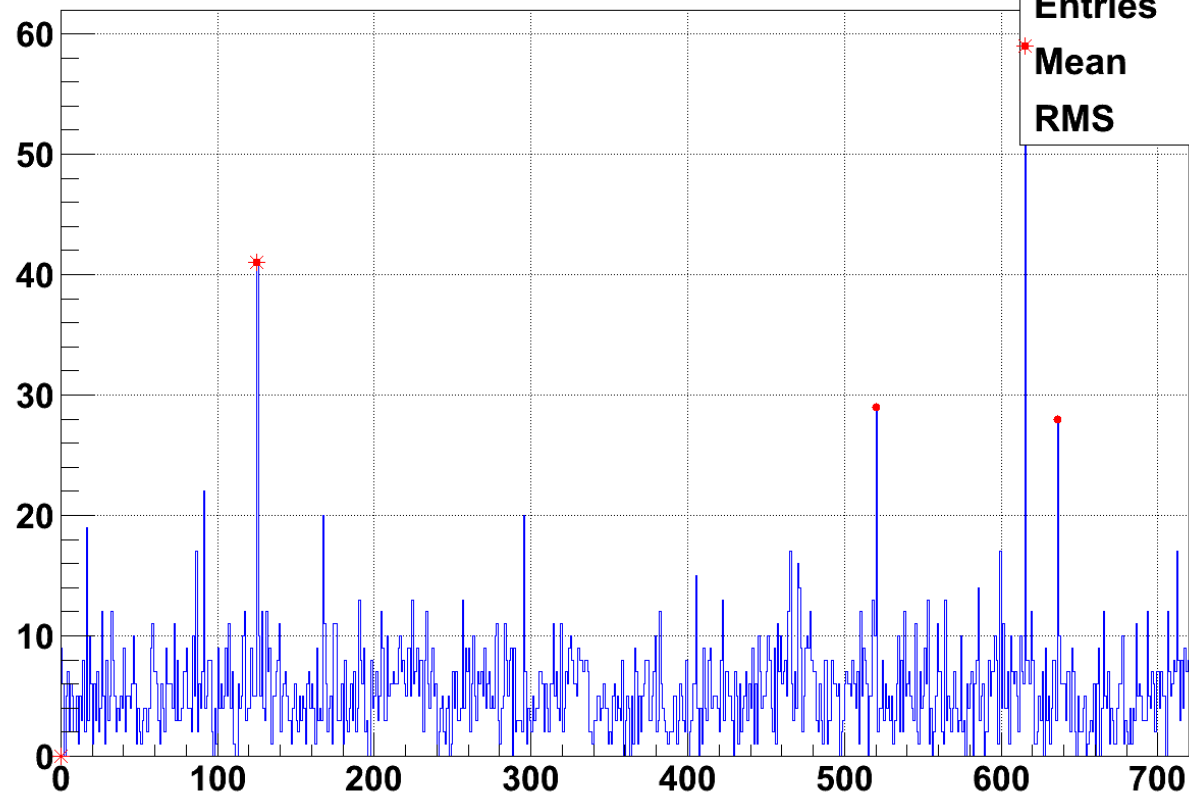
Text output



One Example : run14086001

Run #	L2btowW						L2etowW	
	Status	Eta,Phi			Soft ID		Tower RDO	
		Hot	Warm	Dead	Hot	Warm	Hot	Warm
14086001		(26,66)			~995, ~1305	~1679	~620	

ETOW: Seed Tower RDO



h2

Entries 4009
Mean 361.8
RMS 208.4

Hot (*) = over $6\sigma_{\text{RMS}}$
Warm (•) = bet. 5 and $6\sigma_{\text{RMS}}$

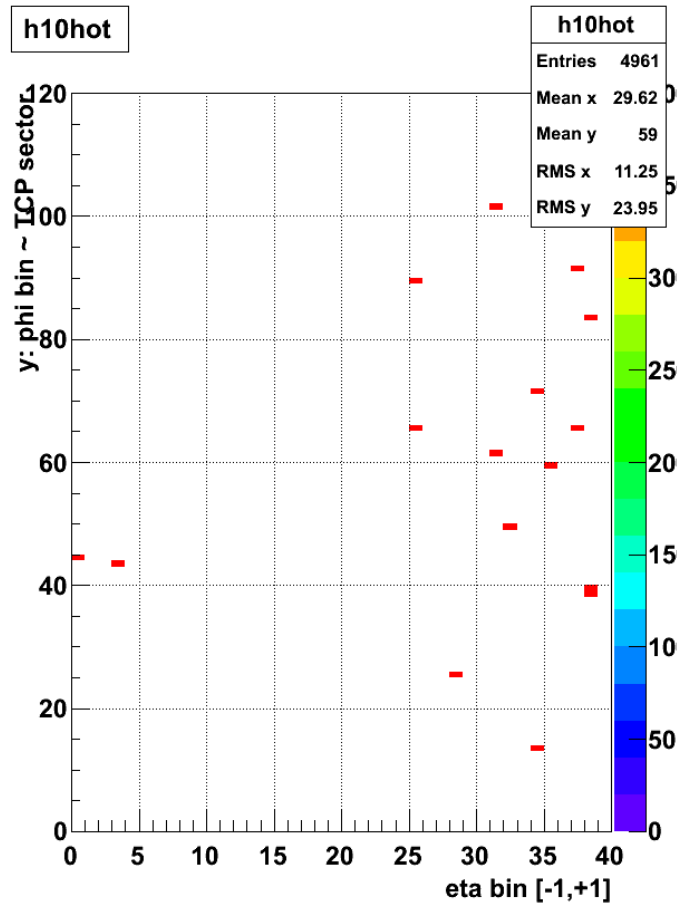
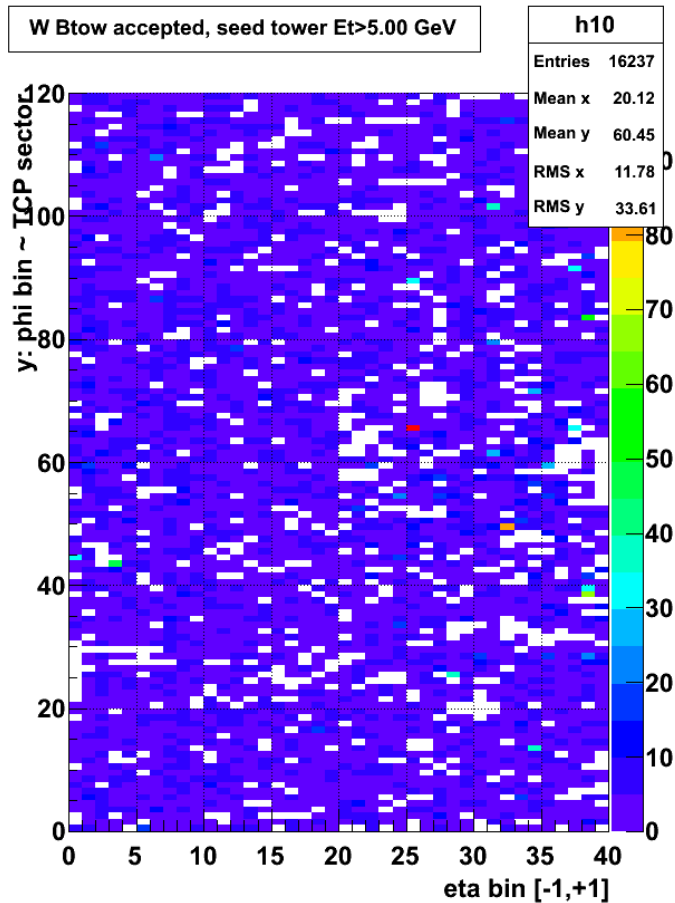
ETOW		
28	636.5	
59	615.5	(hot)
29	520.5	
41	125.5	(hot)

Text output



One Example : run14086001

Run #	Status	L2btowW			Soft ID		L2etowW	
		Eta,Phi			Tower RDO			
		Hot	Warm	Dead	Hot	Warm	Hot	Warm
14086001		(26,66)			~995, ~1305	~1679	~620	



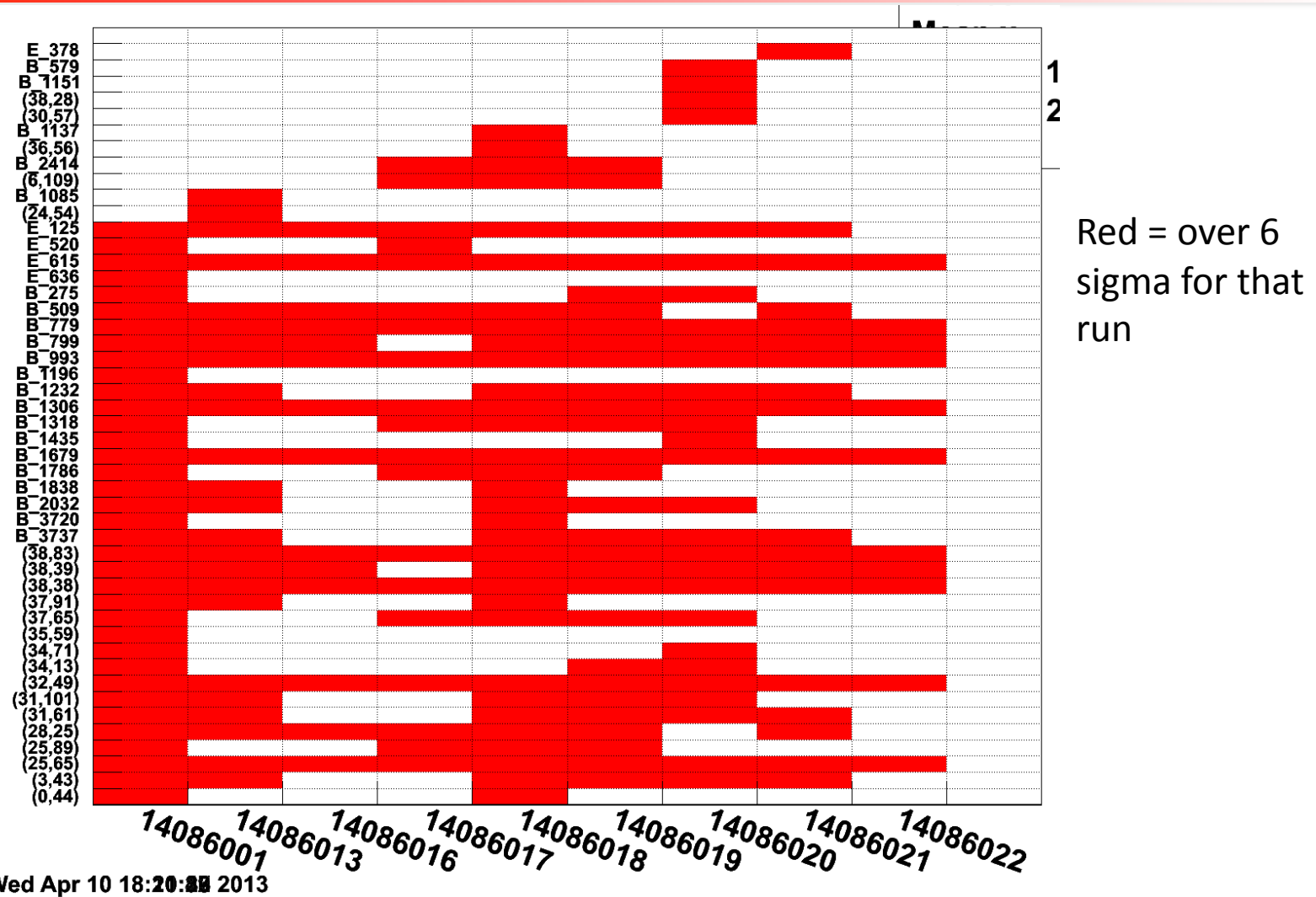
Hot (*) = over $6 \sigma_{\text{RMS}}$

BTOW - Etat,Phi

(0,44)	30
(3,43)	49
(25,65)	99
(25,89)	33
(28,25)	35
etc.....	



One Day summary : 14086



=> To see which channel stay «hot»



Outlook / Questions

- Automation working for L2W
- Probably feasible for L2 Jet
- Where / in which form to put this if needed ?
- Do the 5 and 6 sigma threshold make sense ?
- Minimum stat for a run ?



At the end :

	L2btowW						L2etowW	
Run #	Status	Eta,Phi			Soft ID		Tower RDO	
		Hot	Warm	Dead	Hot	Warm	Hot	Warm
14086001		(26,66)			~995, ~1305	~1679	~620	
14086013		(26,66)			~780, ~995, ~1305	~800	~620	
14086016							~620	
14086018		(33,39)	(26,66)		~780, ~995	~1305	~620	
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14086022		(26,66)			~780, ~995, ~1305	~1679	~620	

RUN 14086001

BTOW - Etat,Phi

(25,65) 99

(32,49) 80

(38,38) 65

BTOW - SoftId

3737 49

1679 52

1306 99 (hot)

993 80 (hot)

779 65 (hot)

ETOW

615 59

RUN 14086010

BTOW - Etat,Phi

BTOW - SoftId

ETOW

RUN 14086013

BTOW - Etat,Phi

(25,65) 75

(32,49) 65

(38,38) 64

(38,39) 56

(38,83) 45

(3,43) 42

BTOW - SoftId

3737 42

1679 45

1306 75 (hot)

993 65 (hot)

799 56 (hot)

779 64 (hot)

ETOW

615 51