MET_PEM trigger study summary

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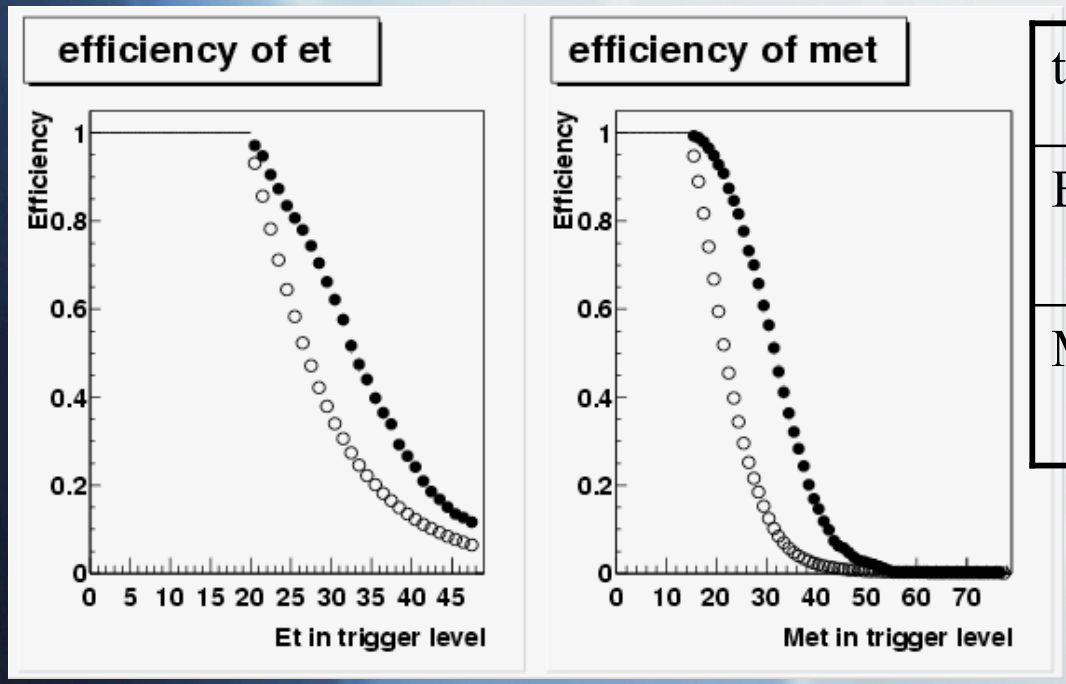
TL2D Bank info. with W selection1

- Check TL2D Bank information with W selection
- W selection : Met > 20 GeV

  plug standard el cut without iso cut
- Efficiency plot for Et and Met

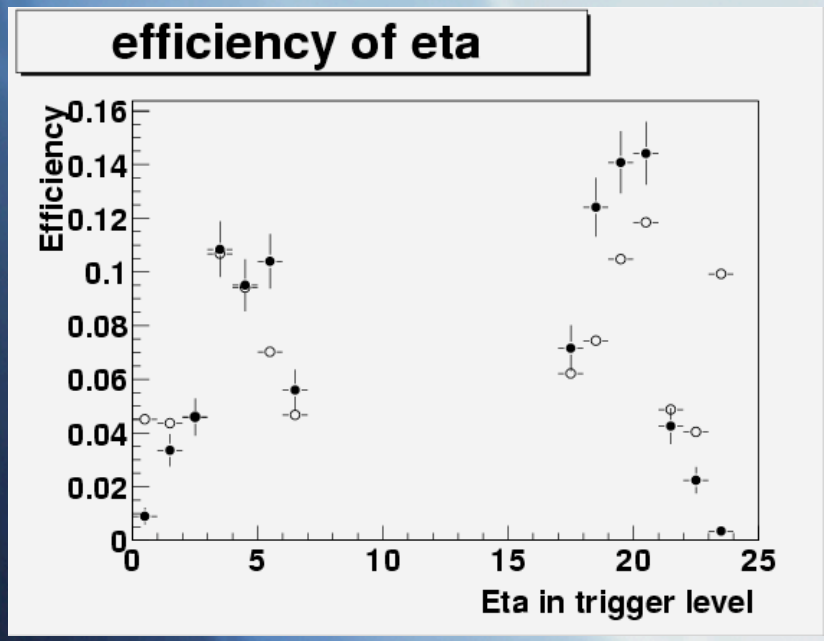


threshold	W sel	W/o W sel
Et : 25	16.54% reject	35.60% reject
MET : 20	5.14% reject	33.24% reject

Black : after w selection
Empty: before w selection

TL2D Bank info. with W selection2

- Eta dependance



threshold	W sel	W/o W sel
Tow 1	0.89%	4.49%
Tow 2	3.35%	4.36%
Tow 23	2.23%	4.03%
Tow 24	0.34%	9.92%

- If tower 1 and 24 are excluded,

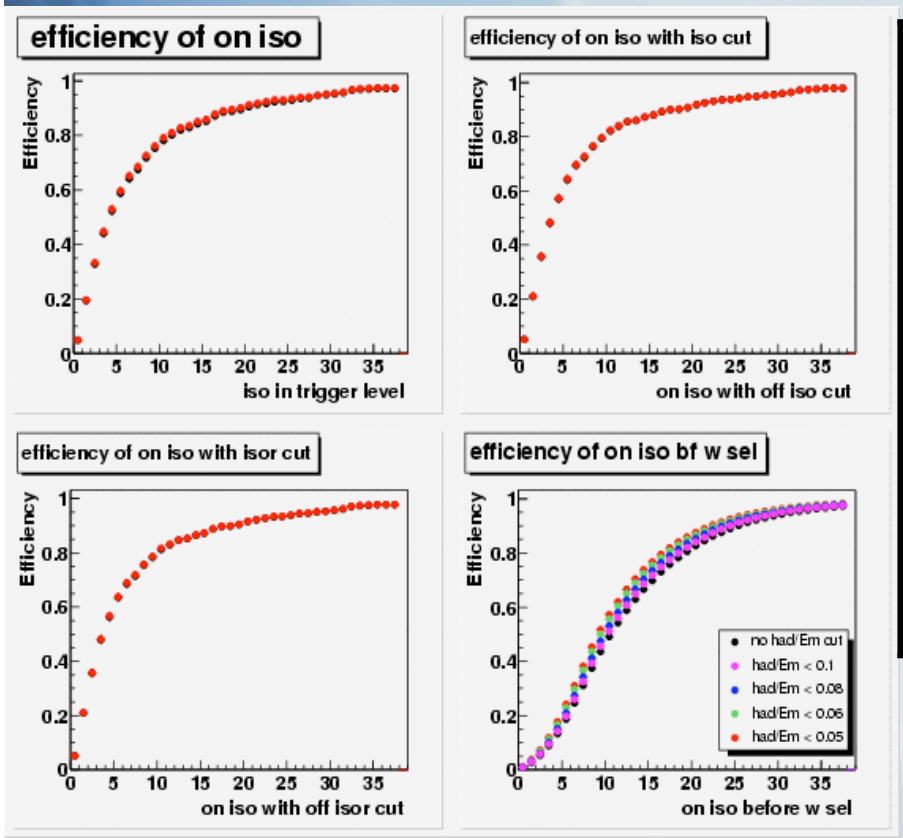
  1.23% rejected in W signal : 14.41% rejected in total

- If tower 1,2,23,and 24 are excluded,

  6.81% rejected in W signal : 22.80% rejected in total

TL2D Bank info. with W selection3

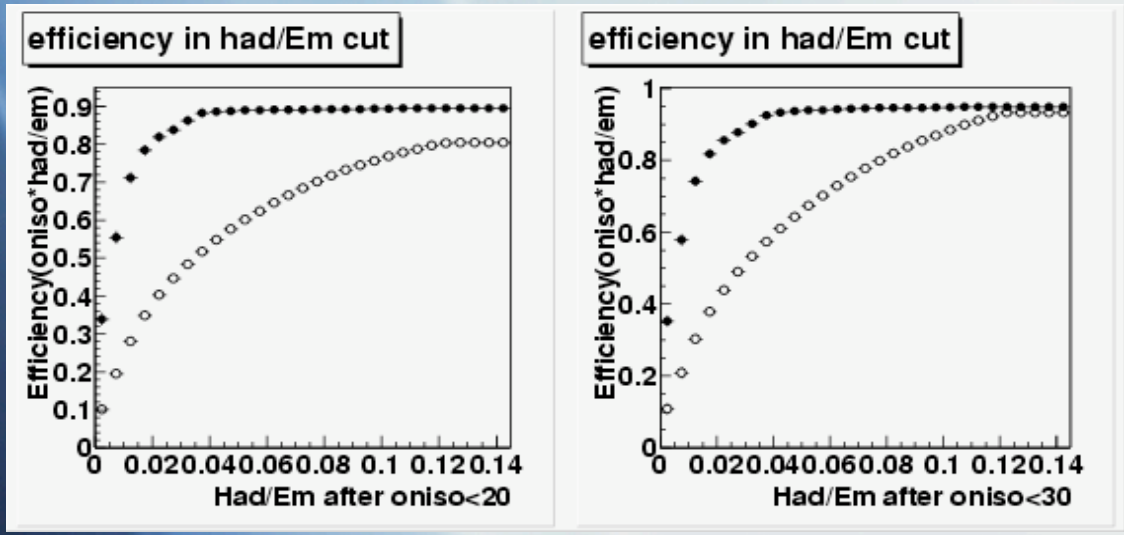
- Isolation cut



threshold	W sel	W/o W sel
Iso < 20 +had/Em (<0.075)	10.62% reject 10.95% reject	19.48% reject 31.61% reject
Iso < 30 +had/Em (<0.075)	5.14% reject 5.59% reject	6.39% reject 22.37% reject

TL2D Bank info. with W selection4

- Had/Em Efficiency plot



Black : after w selection
Empty: before w selection

- Left plot : Had/Em efficiency after iso < 20
- Right plot : Had/Em efficiency after iso < 30

 y-axis : iso cut efficiency × had/Em cutefficiency

Summary(reject rate) unit: %

red : dangerous, blue : looks o.k, green : good

	W sel	W/o W sel	Z (CP) sel	W/o Z sel
Et > 25	16.64	35.60	27.90	12.55
MET>20	5.14	33.24		
Eta tow exclude				
(1,24)	1.23	14.41	2.05	
(1,2,23,24)	6.81	22.80	9.30	
Iso < 20	10.62	19.48	4.80	24.63
+ had/EM<0.75	10.95	31.61	4.87	41.22
Iso < 30	5.14	6.39		
+ had/EM<0.75	5.59	22.37		