



Title

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MET

Missing Et at low luminosity

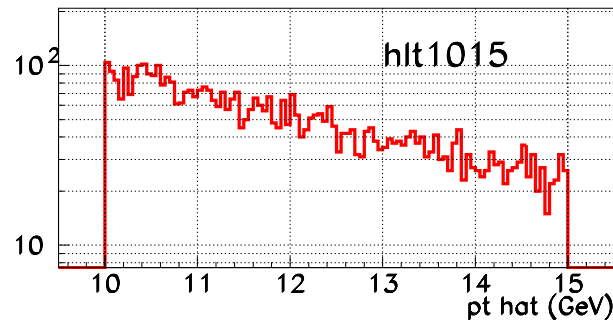
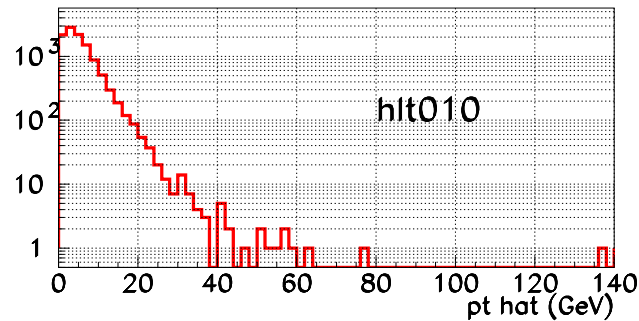
Pal Hidas

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Pt hat of hlt010

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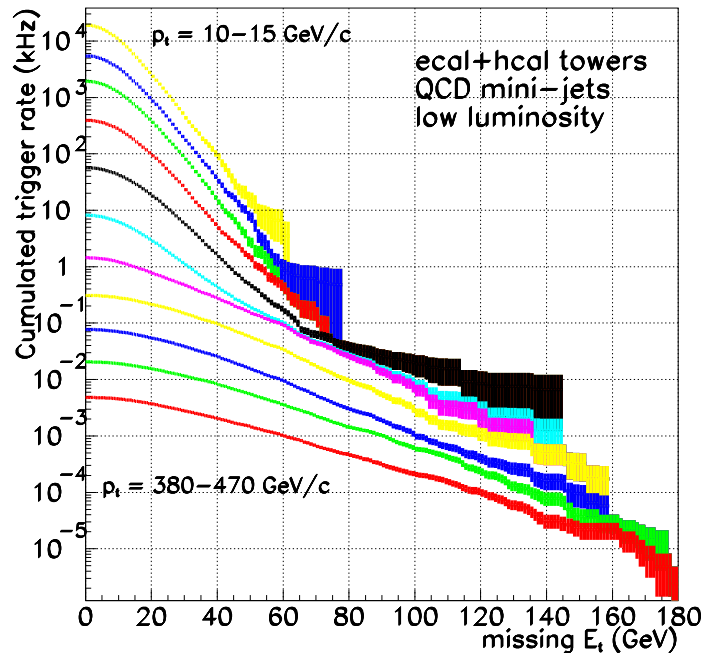


- **hlt010 looks like minimum bias**
 - pt hat distribution is like that
 - pythia sigma is 55.22 mb
 - hlt1015 : 8.87mb
- **Pythia manual states :**
 - around a few times of the regularization cut (3→10 GeV/c) the cross section calculation is not correct, but the distributions are OK
 - it seems they are not
- **do not use hlt010 ?**
- **or cut at 10 GeV pthat ?**



Level 2 MET rate

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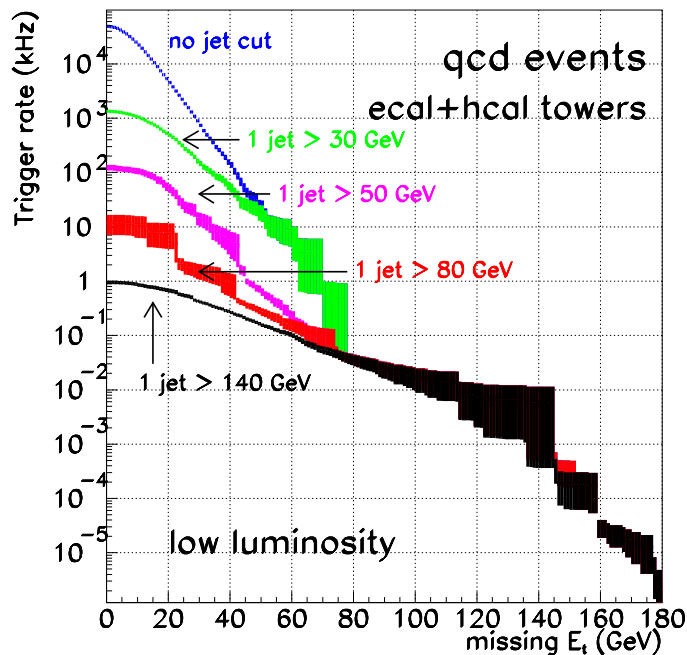


- 80–230 GeV/c bins are still missing
 - replaced by neighbours
- 60 Hz at 80 GeV
 - expect bigger on high statistics
- above 80 GeV the slope is different
 - other reason for fake missing Et ?
 - detector response below ?
 - leptonic W,Z above ?
- I want to check it now



Calo Jet+ MET rate

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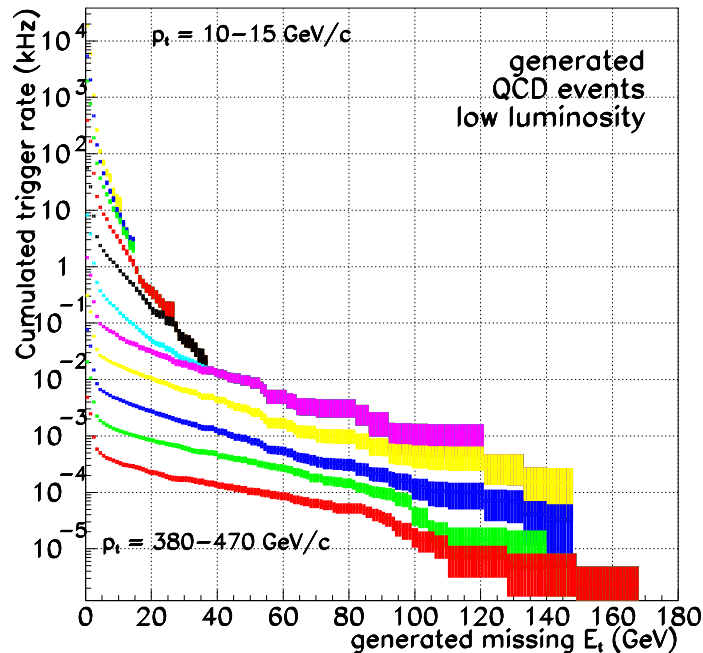


- 60 Hz at 80 GeV
- it becomes pure MET trigger
 - at 80 GeV ?
 - or some later ?
 - we need the missing bins
- MET background is not accompanied by jets
 - leptonic W,Z ?



Generated MET rate

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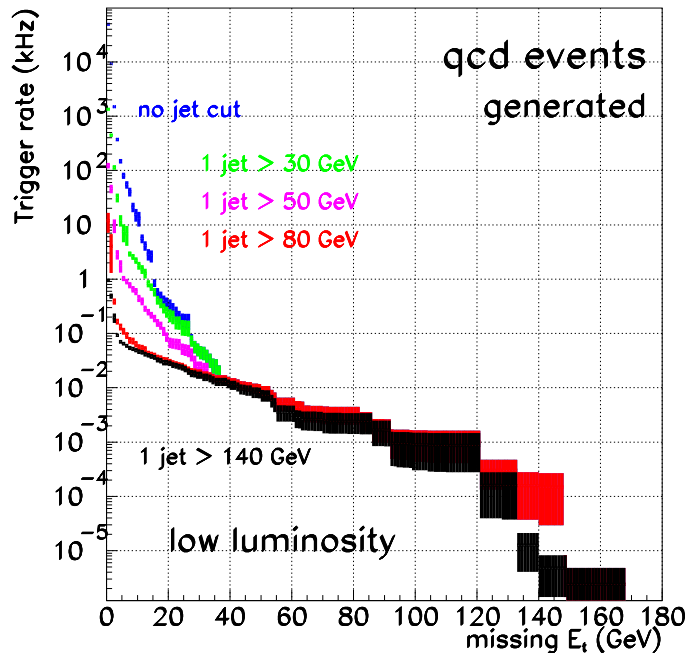


- 80–230 GeV/c bins are still missing
 - replaced by neighbours
- 3 Hz at 80 GeV
 - expect bigger on high statistics
- we want 1 Hz at 80 GeV for pure MET trigger
 - generator level still higher
 - is it leptonic W/Z ?
 - does Pythia have them ?
 - I want to check it now
 - then we can vetoon leptons ?
- at low luminosity (Yellow 2000–004)
 - inclusive W : 374 Hz (MET>0)
 - inclusive Z : 111 Hz (MET>0)



Gen Jet+ MET rate

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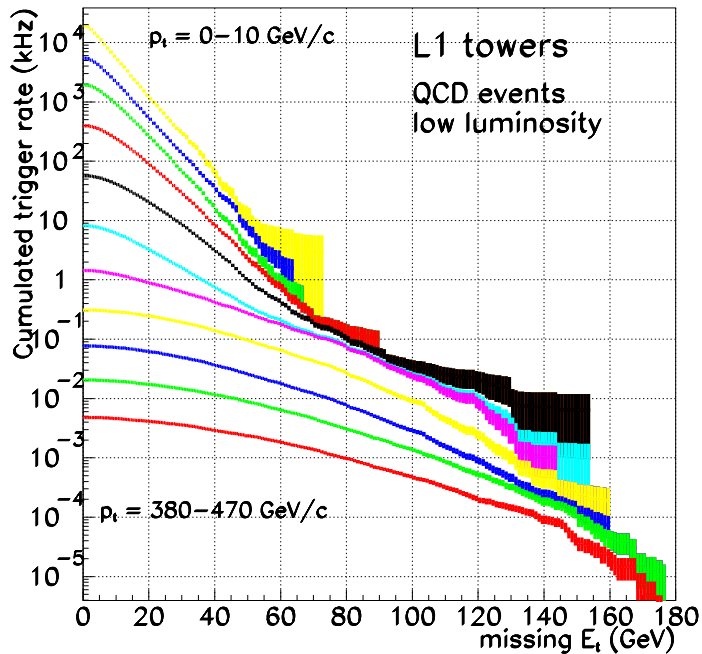


- for high MET it becomes independent of the jet cut
 - missing E_t is not related then to jets ?
 - leptonic W/Z ?
- at 80 GeV : 3 Hz
 - the same as pure MET
- we need better statistics anyway



Level 1 MET rate

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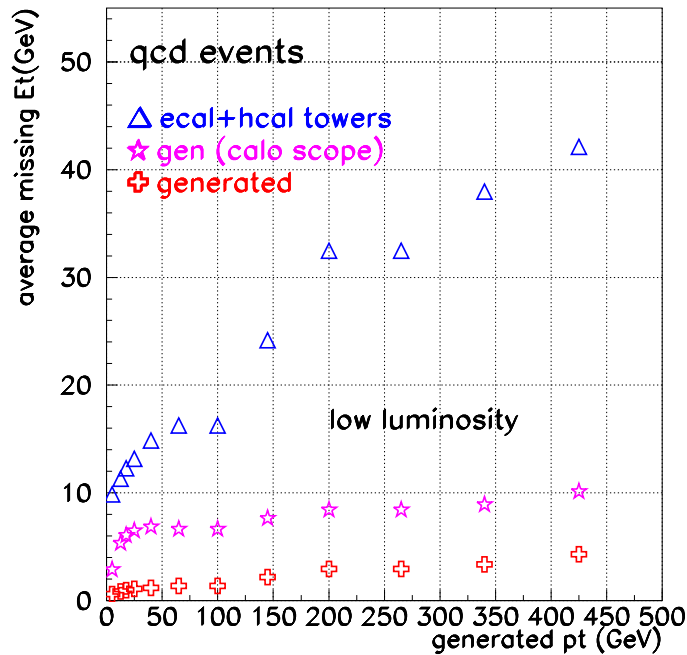


- 80–230 GeV/c bins are still missing
 - replaced by neighbours
- 150 Hz at 80 GeV
 - it is higher than the Level 2 rate
- below 40 GeV the L1 rate is lower
 - but the resolution must be much worse



MET vs pt hat

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- suffers from lack of statistics and missing bins
- the average missing Et contribution from detector coverage does not depend on pt_hat
- the RMS distributions tell us the same