

Réunion OPERA

21 octobre 2010

Florian Brunet

- Rappels
- Test outil de reconstruction de gerbe em :
 - Bug batch ccali : fin
 - Electrons & Gammas
- A venir

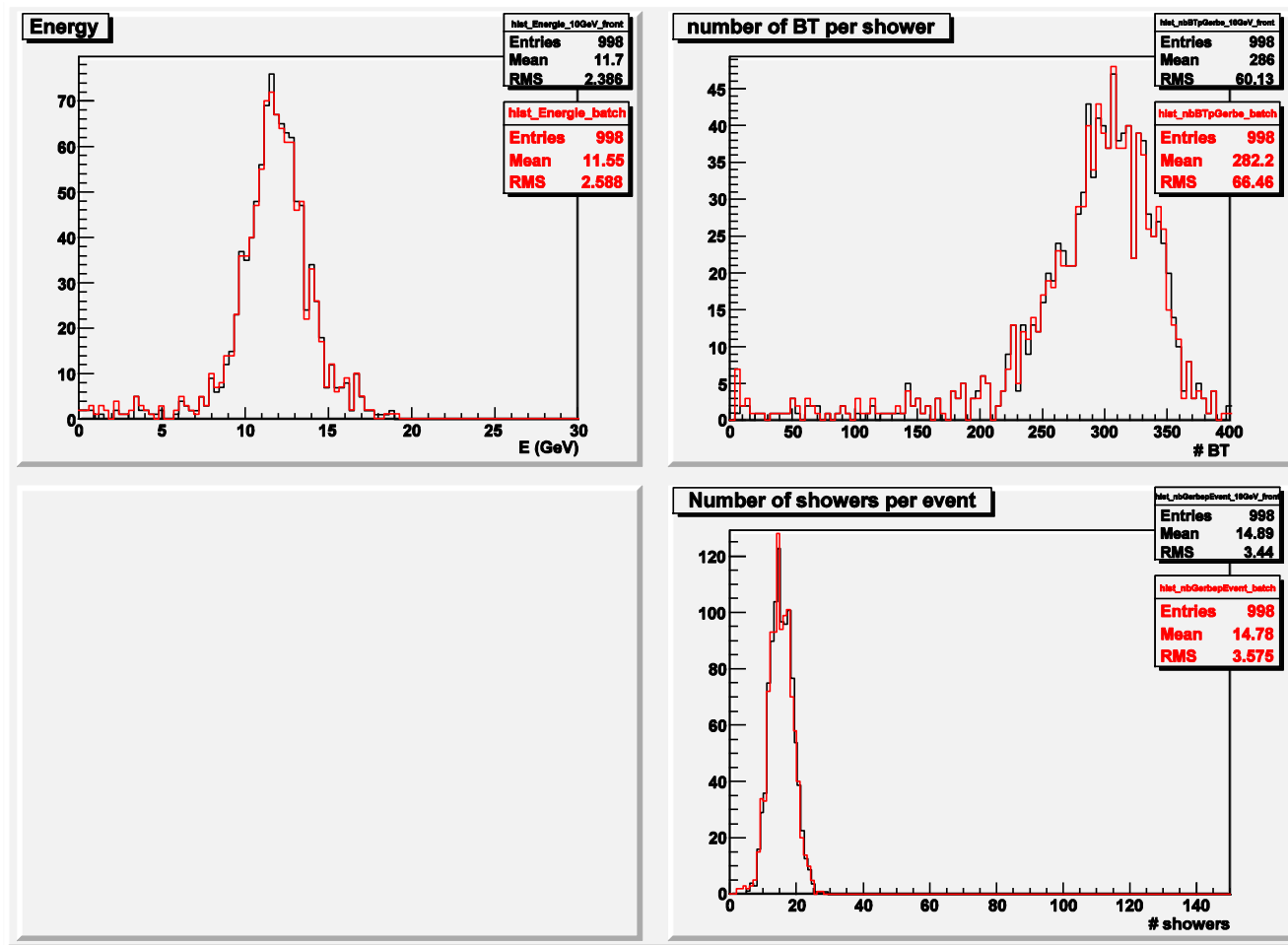
Rappels

- OpRelease 3.2 SL4/5 : OpSim – OpDigit – OpEmuIO – OpEmuRec (Link, Track, Shower)
- Simulation : électrons & gammas $\rightarrow$ 10,6, 4 & 1.5 GeV
interagissant avant la brique & aléatoirement
- Validation de l'outil de reconstruction des gerbes dans OpEmuRec et résultats à basse énergie

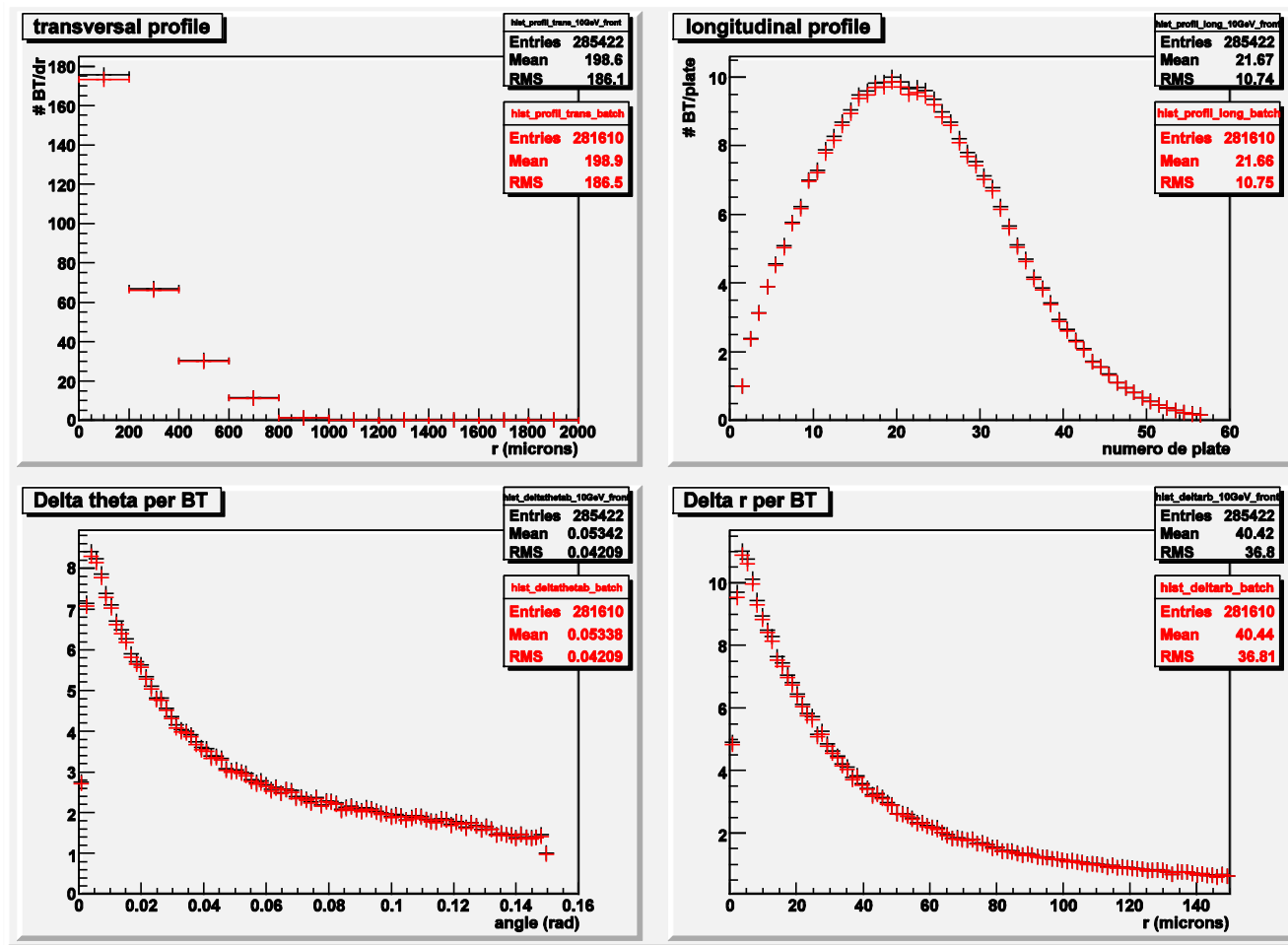
Bug batch ccali : FIN

- fedra.link.DoCorr false
- fedra.link.DoShr false
- fedra.link.shr.Wmin 10
- fedra.link.shr.Tmin 0.01
- fedra.link.shr.Tmax 0.6
- fedra.link.Chi2Max 3.5
- fedra.link.WbaseMin 8
- fedra.link.DTMax 0.05
- fedra.link.DZbase -214.
- **fedra.link.BinXY 400.**
- **fedra.link.CellXY 100.**
- fedra.link.AccPos 5
- fedra.link.AccAng 0.07
- fedra.EdbDebugLevel 2
- fedra.align.skip_align true
- fedra.track.momentum 1.
- fedra.track.ProbMin 0.005
- fedra.track.NsegMin 2
- fedra.track.NgapMax 3

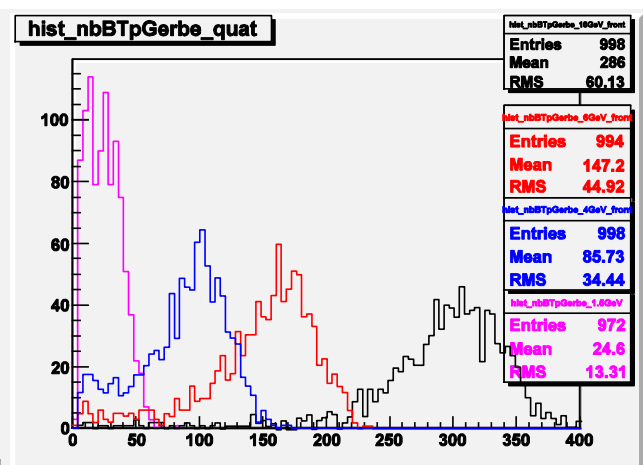
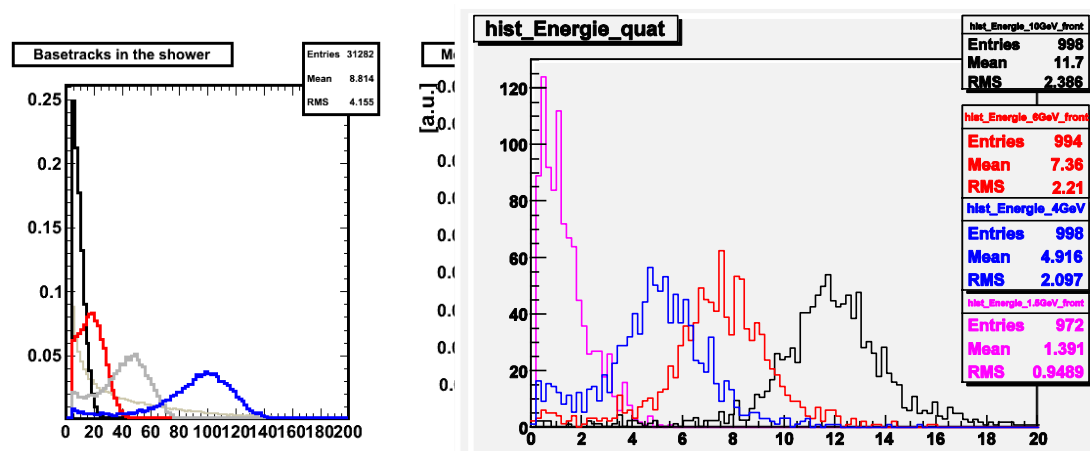
Bug batch ccali : FIN



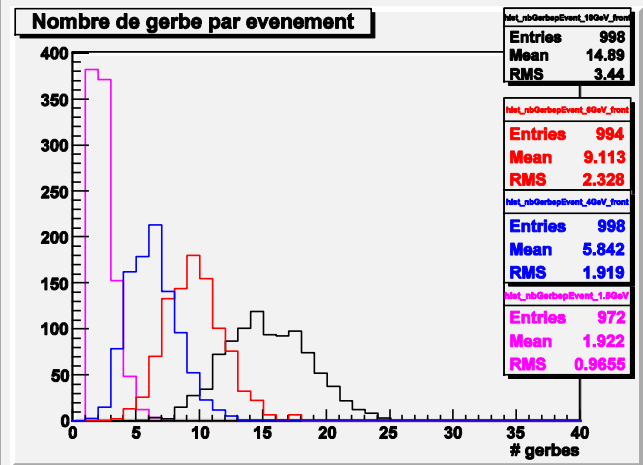
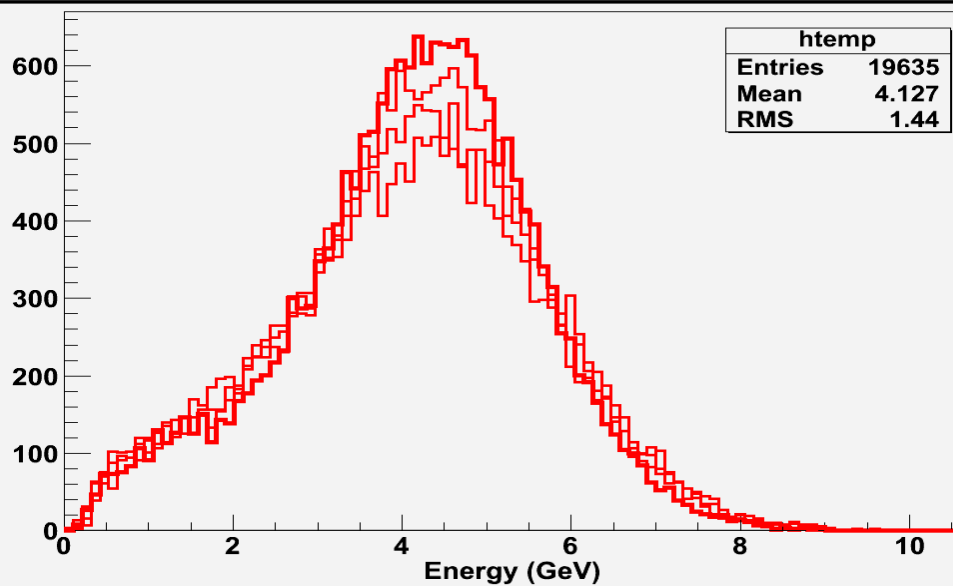
Bug batch ccali : FIN



Electrons Front : 10, 6, 4, 1.5 GeV



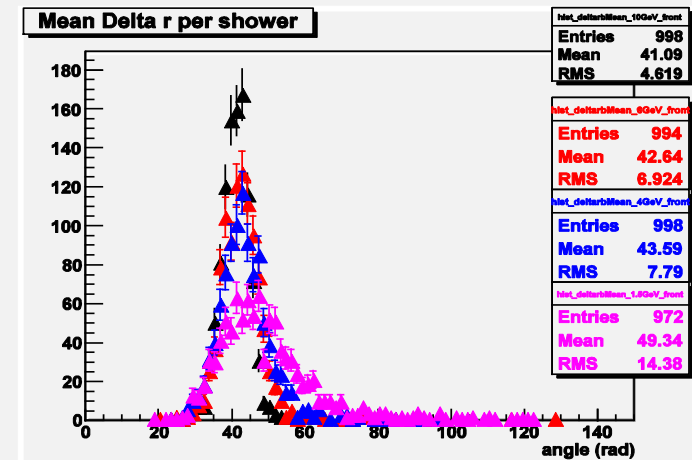
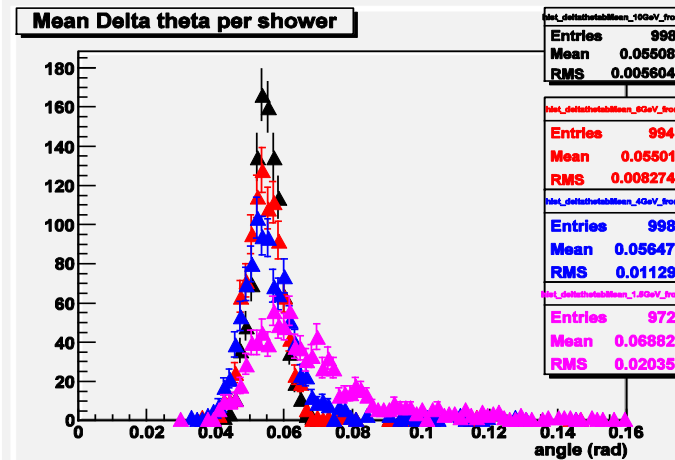
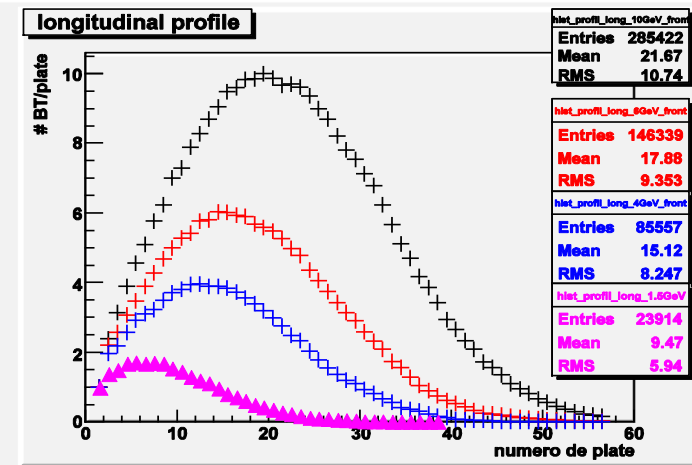
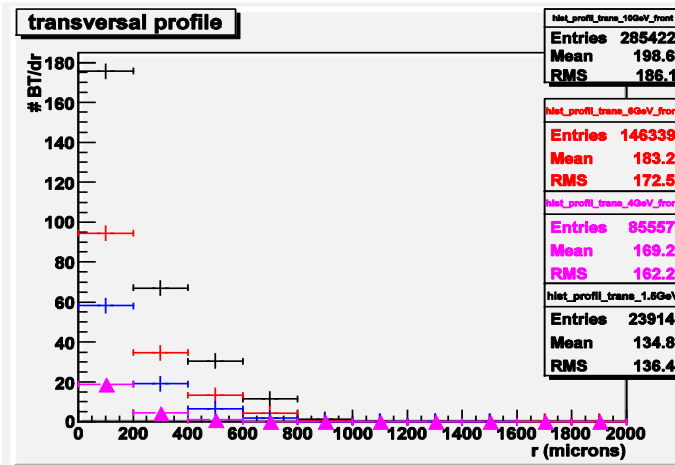
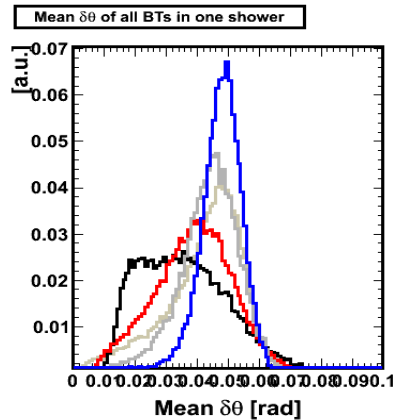
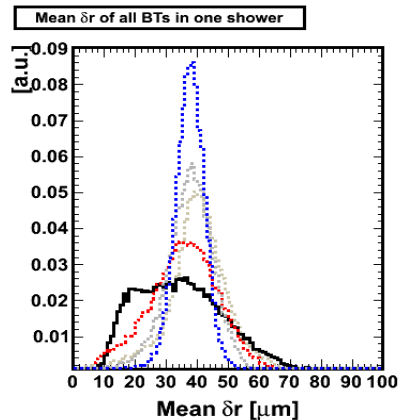
4GeV: 100, 85, 75, 65 percent scann Eff.



Electrons Front : 10, 6, 4, 1.5 GeV

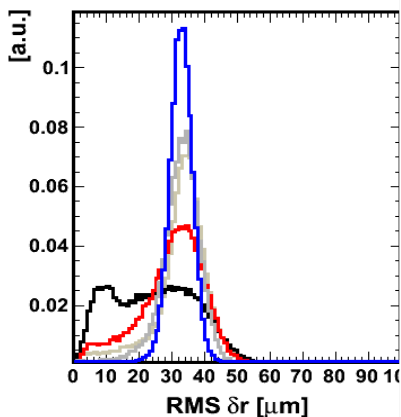
	Mean	RMS
10 GeV	11.7	2.4 (20%)
6 GeV	7.4	2.2 (30%)
4 GeV	4.9	2.1 (43%)
4 GeV « F&F »	4.1	1.4 (34%)
1.5 GeV	1.4	0.9 (65%)

Electrons Front : 10, 6, 4, 1.5 GeV

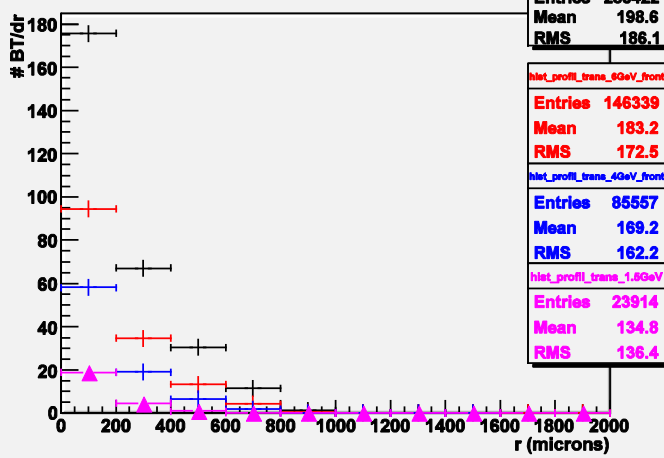


Electrons Front : 10, 6, 4, 1.5 GeV

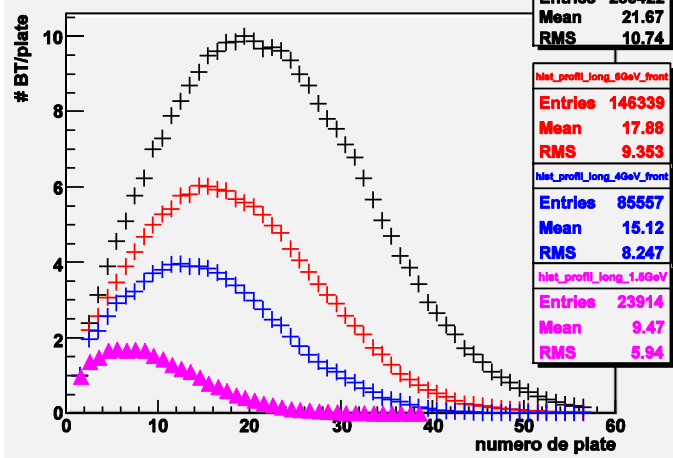
RMS δr of all BTs in one shower



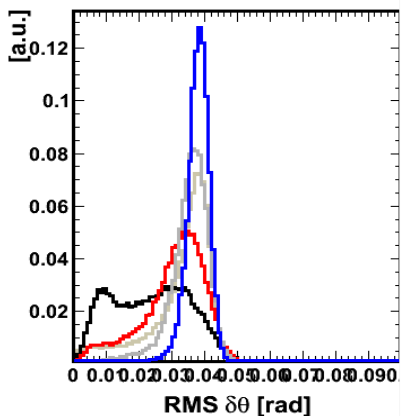
transversal profile



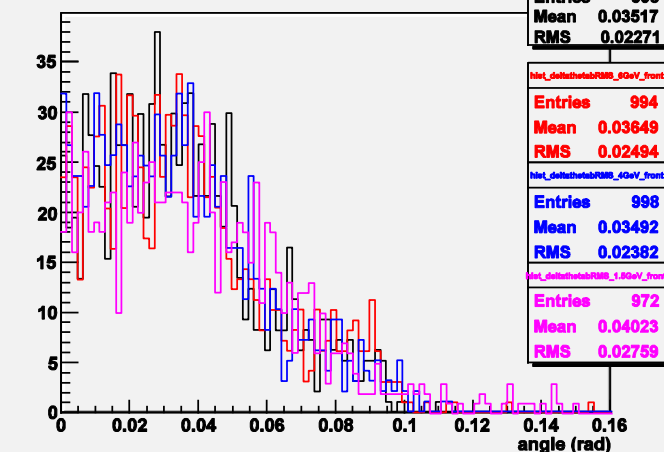
longitudinal profile



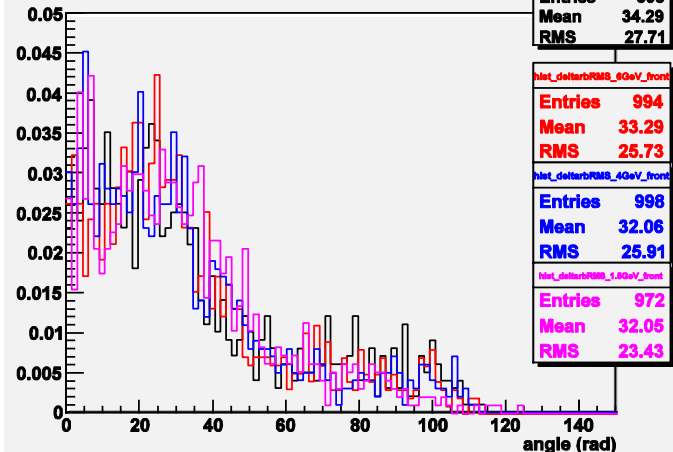
RMS $\delta\theta$ of all BTs in one shower



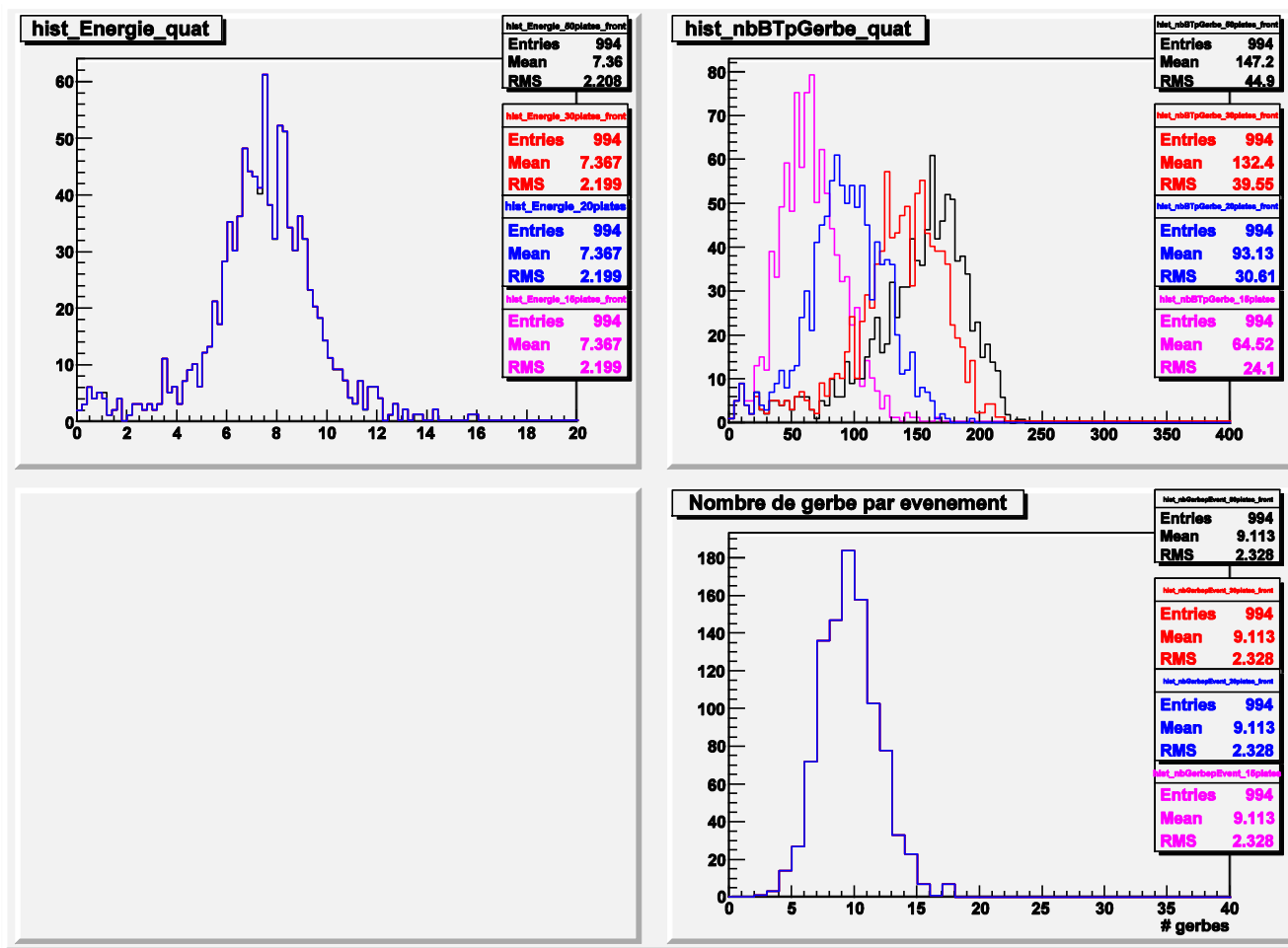
RMS Delta theta per shower



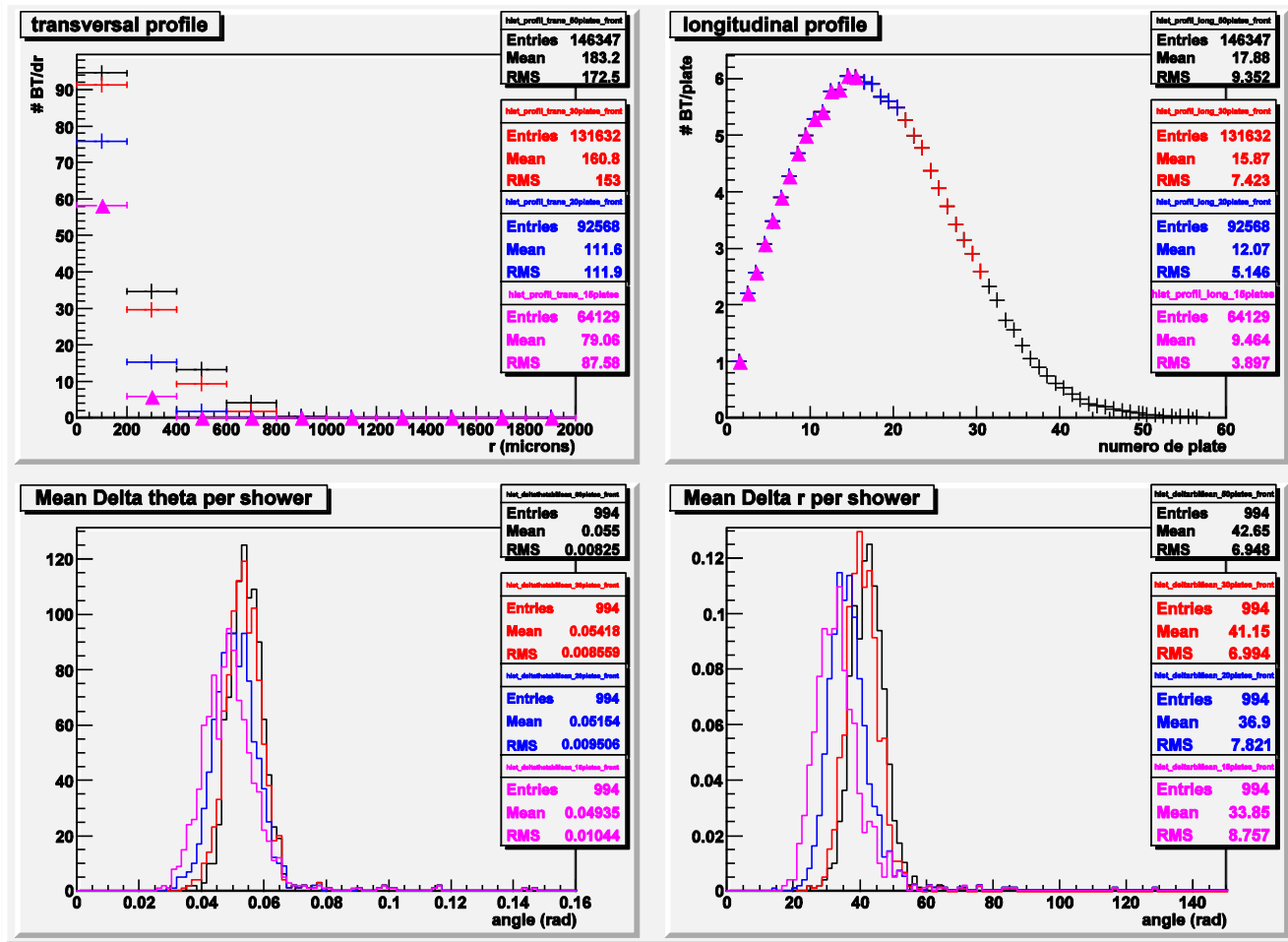
RMS Delta r per shower



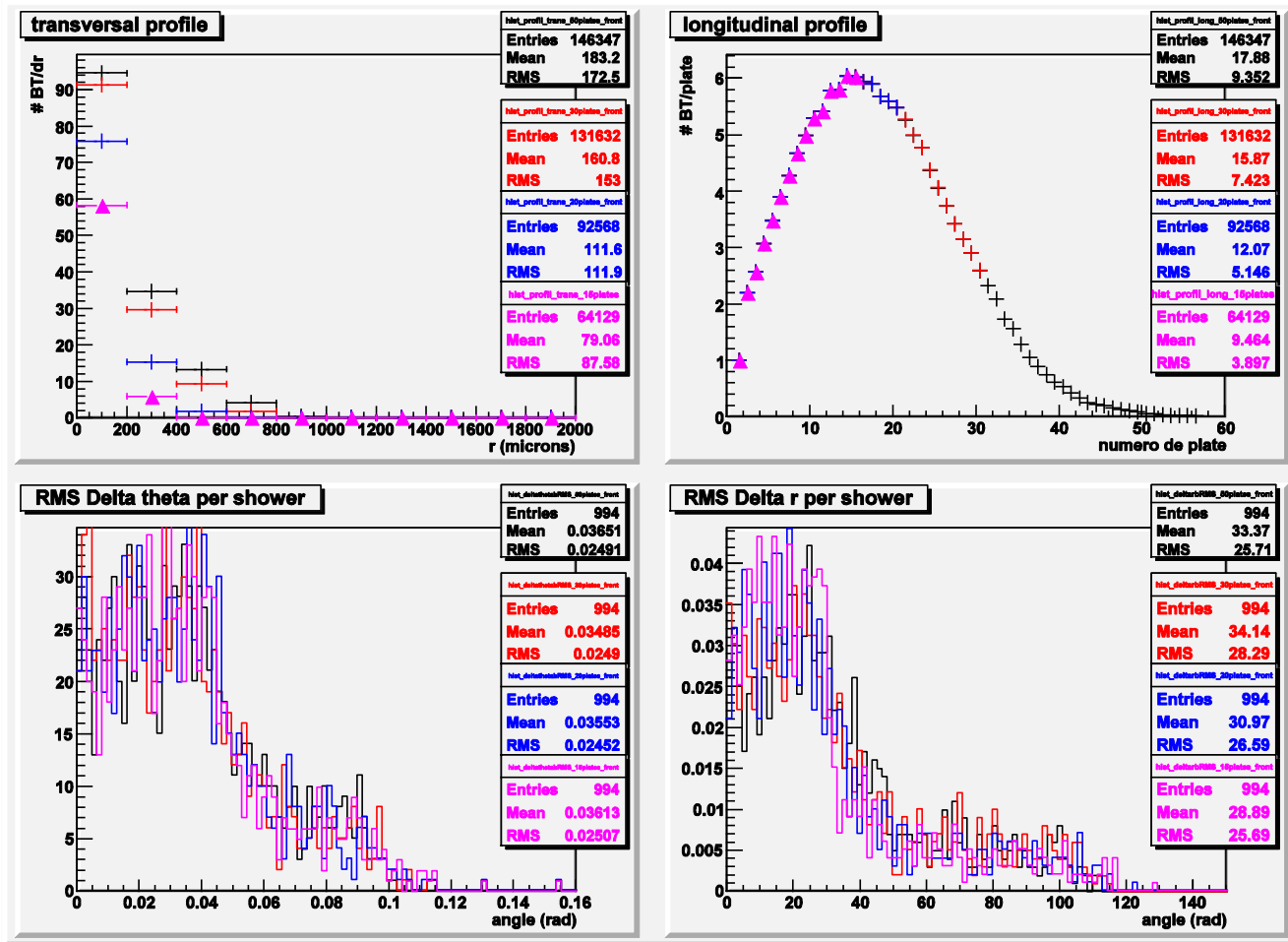
e^- 6 GeV : 50, 30, 20 & 15 plates



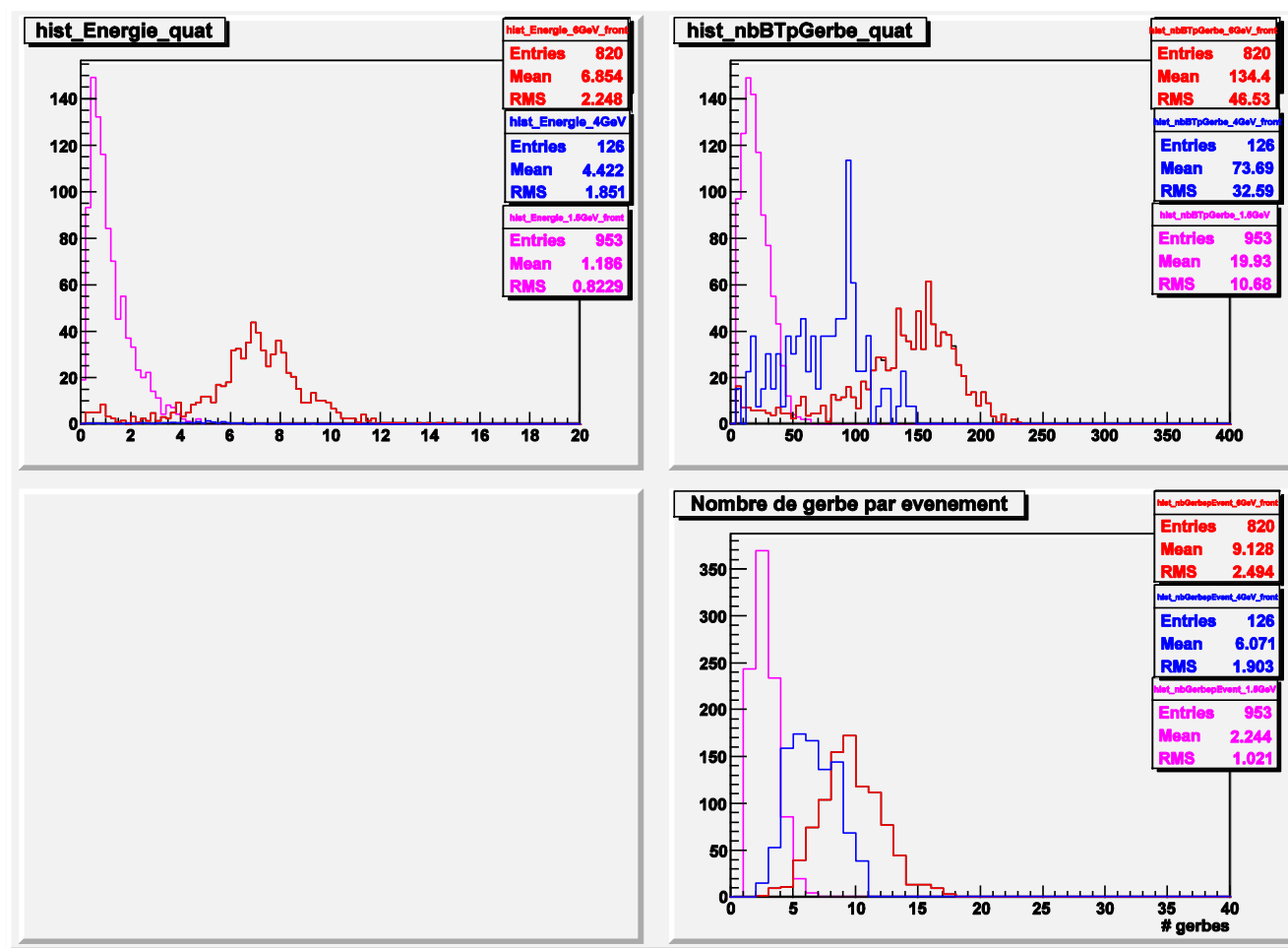
e^- 6 GeV : 50, 30, 20 & 15 plates



e^- 6 GeV : 50, 30, 20 & 15 plates



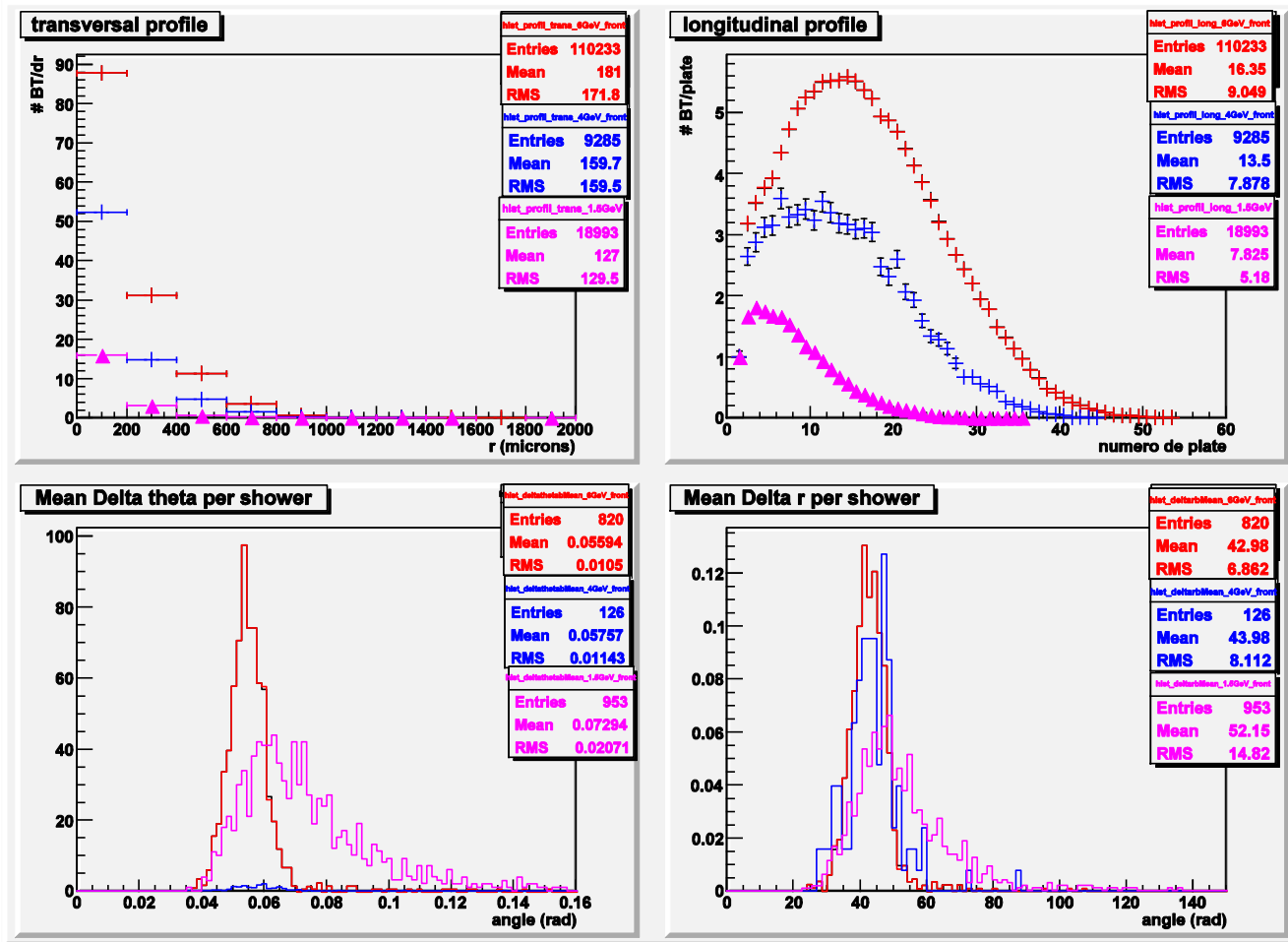
Gamma Front : 6, 4, 1.5 GeV



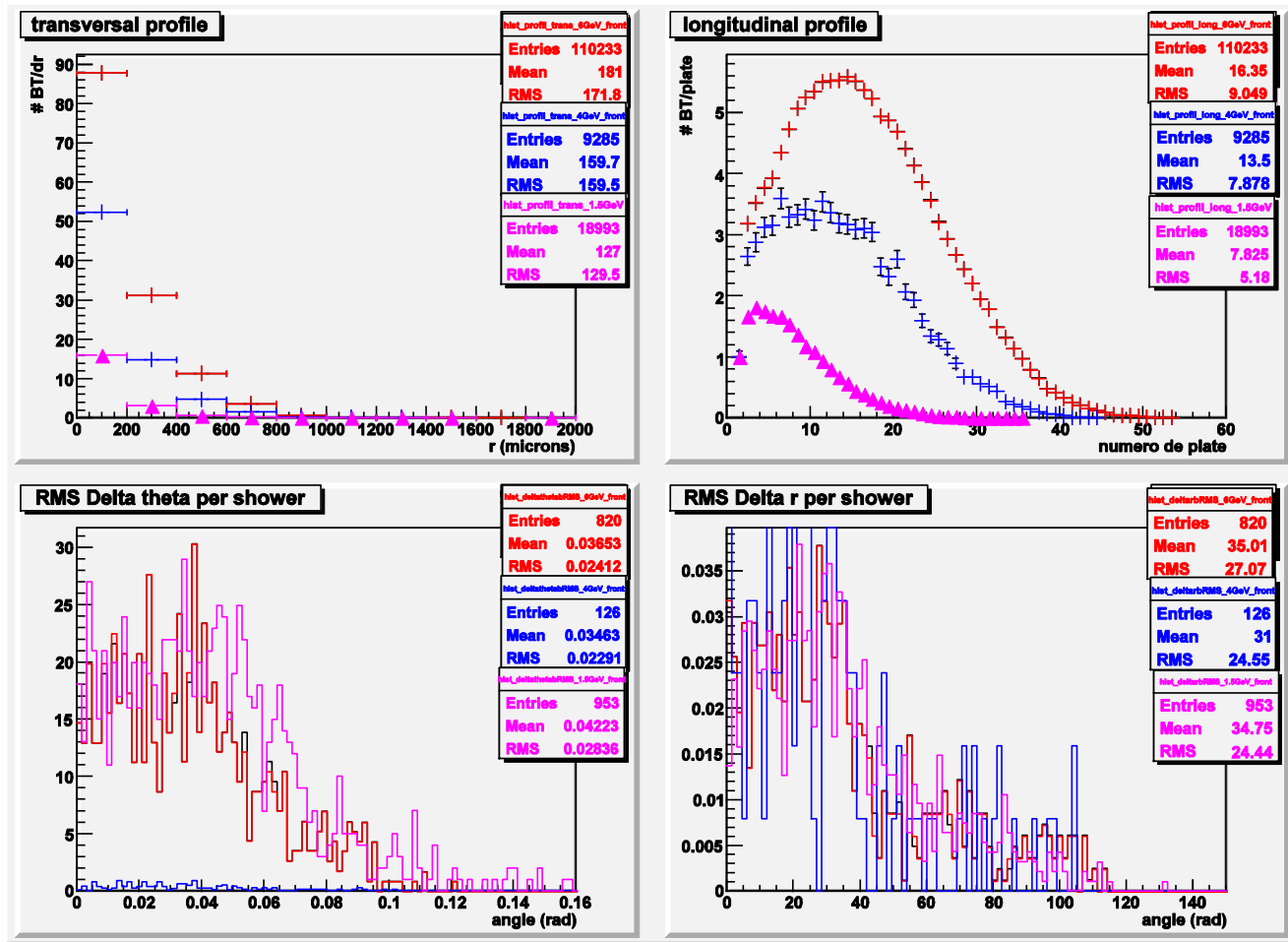
Gamma Front : 6, 4, 1.5 GeV

	MEAN	RMS
6 GeV	6.9	2.2 (32%)
4 GeV	4.4	1.9 (43%)
1.5 GeV	1.2	0.8 (67%)

Gamma Front : 6, 4, 1.5 GeV

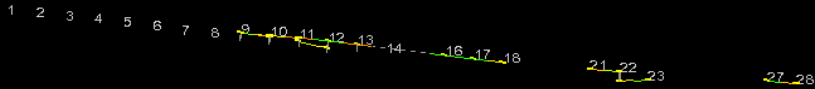


Gamma Front : 6, 4, 1.5 GeV

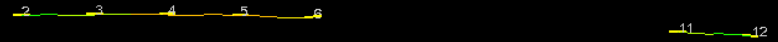


Gerbe gamma 0.5 GeV : Exemples

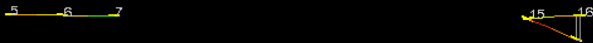
P = 0.82 GeV [0.55 , 1.60]



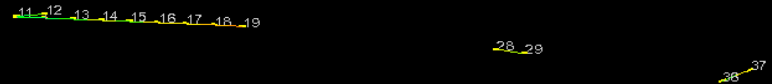
P = 0.35 GeV [0.23 , 0.80]



P= 0.23 GeV [0.14, 0.58]



P = 0.46 GeV [0.31 , 0.89]

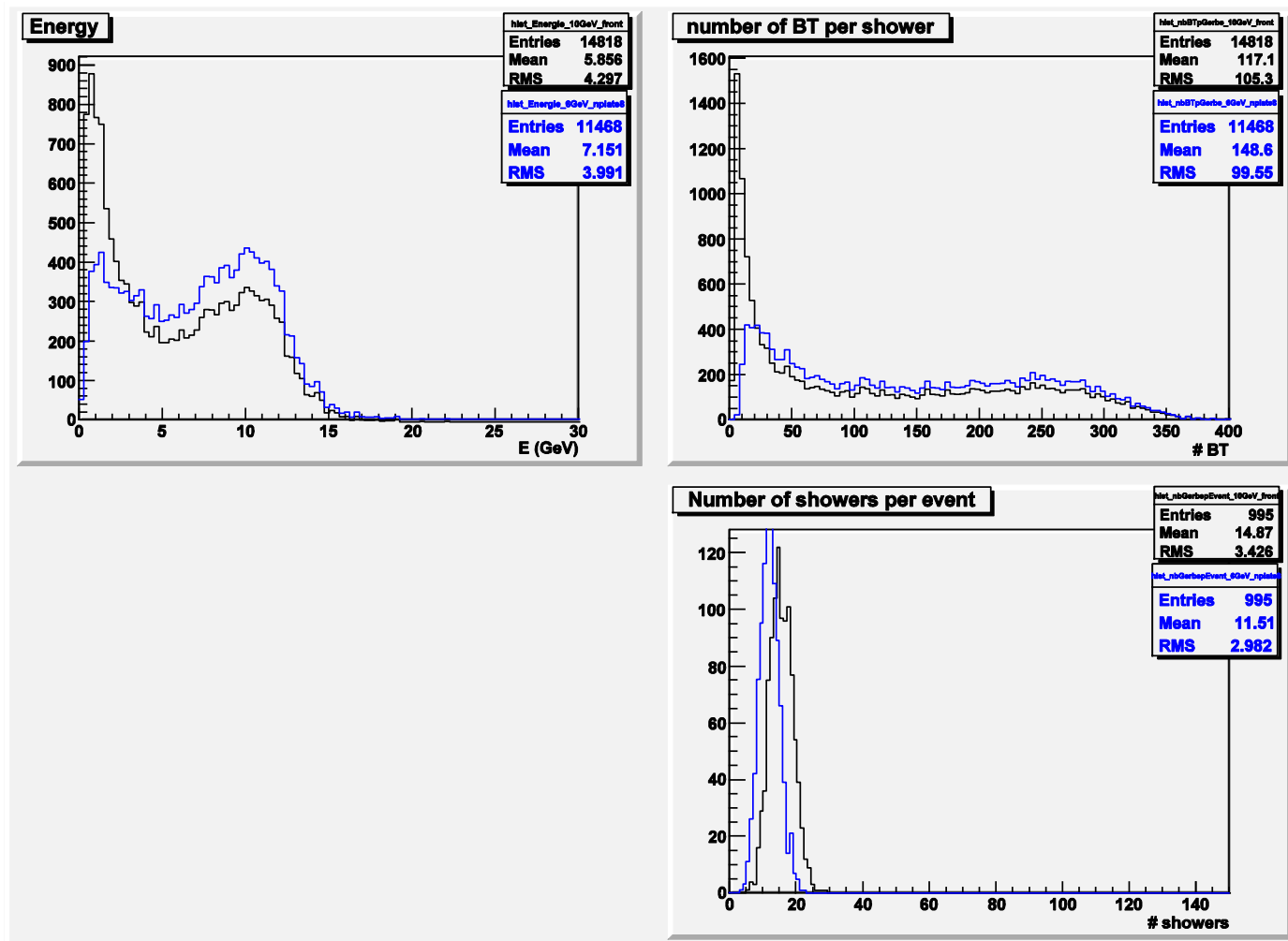


A venir

- JJC (21 – 27/11/10)
- Séminaire de fin de première année (06/01/2011)
- Gerbes manquantes ?
- Reconstruction de gerbes « RANDOM » → debugging
- Reconstruction de gerbes à basse énergie
 - Electron : 1.5 & 0.5 GeV
 - Gamma : 1.5 & 0.5 GeV
- Test nouvelle release de Fedra Shower Rec
- Outil de reconstruction des gerbes gamma de faible énergie
 - Création de l'outil
 - Tests sur les échantillons MC
 - Tests sur les données du test faisceau pion → 90% d'électrons à 1 GeV

Backup slides

Nombre de plates min sur lesquels se propagent les gerbes



Nombre de plates min sur lesquels se propagent les gerbes

