Theta_gamma vs Pt

MILOU

FFS

$$\frac{d^3\sigma^{DVCS}}{dx\,dQ^2\,dt} = \frac{\pi^2\alpha^3 s\left(1+(1-y)^2\right)}{2xR^2Q^6} e^{-b|t|} F_2^2\left(x,Q^2\right)\left(1+\rho^2\right)$$

Written by P. Saull [1999]
Based on:
Frankfurt, Freund and Strikman (FFS)
[Phys. Rev. D 67, 036001 (1998).
Err. Ibid. D 59 119901 (1999)]

GPDs-based

Written by E. Perez, L Schoeffel, L. Favart
[arXiv:hep-ph/0411389v1]
Based on:
A. Freund and M. McDermott
All ref. in: http://durpdg.dur.ac.uk/hepdata/dvcs.html

- GPDs, evolved to next-to-leading order
- provide the real and imaginary parts of Compton form factors (CFFs), used to calculate cross sections for DVCS and DVCS-BH interference.
- Proton dissociation ($ep \rightarrow e\gamma Y$) can be included.

Kinem. cuts

- $1.5 < Q^2 < 100\ GeV^2$
- $10^{-4} < x < 0.1$
- $0 < |t| < 1.5\ GeV^2$
- Radiative corrections: OFF
- t slope = 5.00 (costant)

30 X 325:

- E_el = 10 GeV
- $0.0039 < y < 0.67$

Total xsec= 0.186 nb (FFS_ALLM)
Total xsec= 0.376 nb (GPDs)

20 X 250:

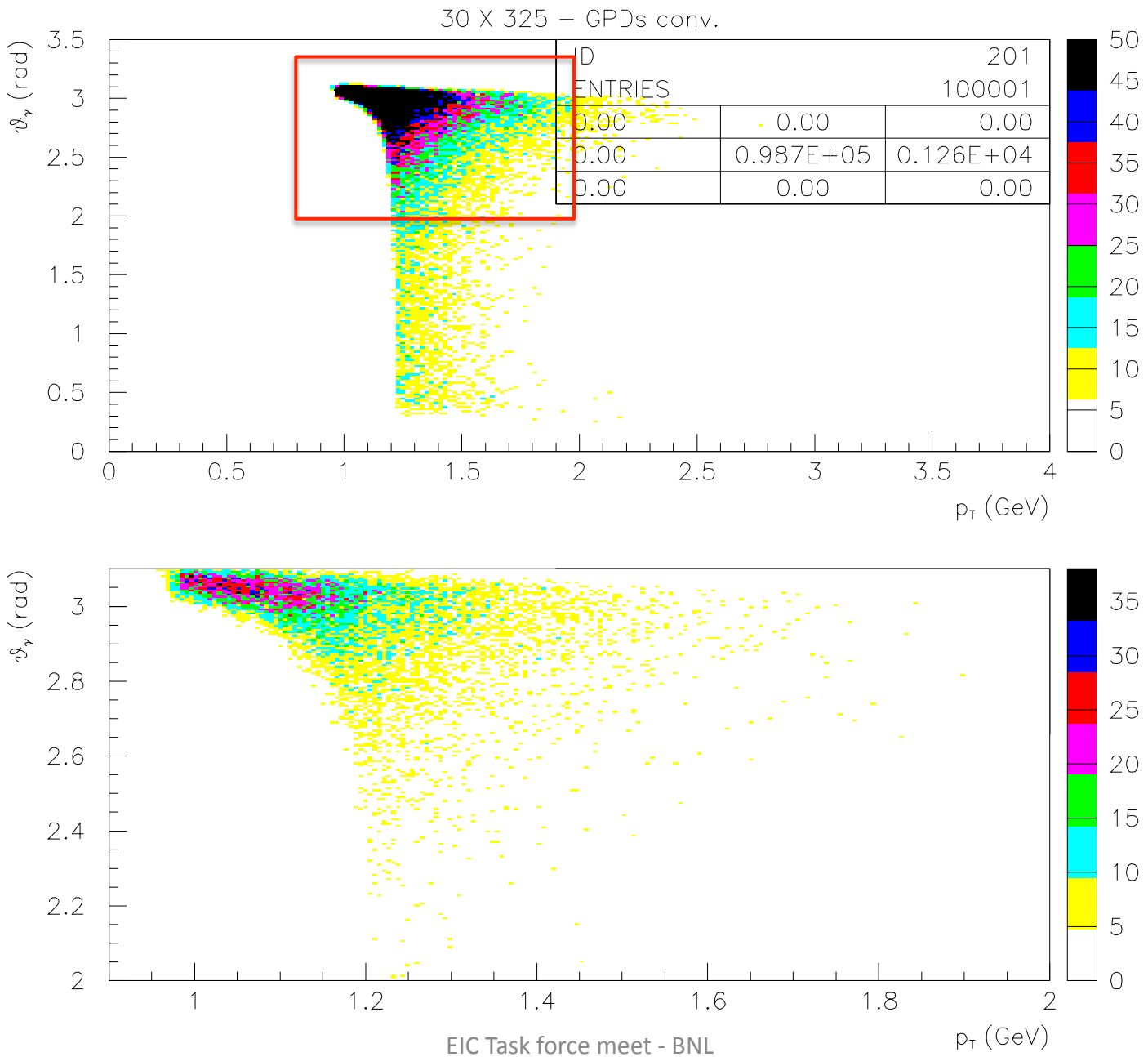
- E_el = 5 GeV
- $0.005 < y < 0.99$

Total xsec= 0.16 nb (FFS_ALLM)
Total xsec= 0.32 nb (GPDs)

10 X 100:

- E_el = 0 GeV
- $0.005 < y < 0.99$

Total xsec= $8.1*10^{-2}$ nb (FFS_ALLM)
Total xsec= 0.16 nb (GPDs)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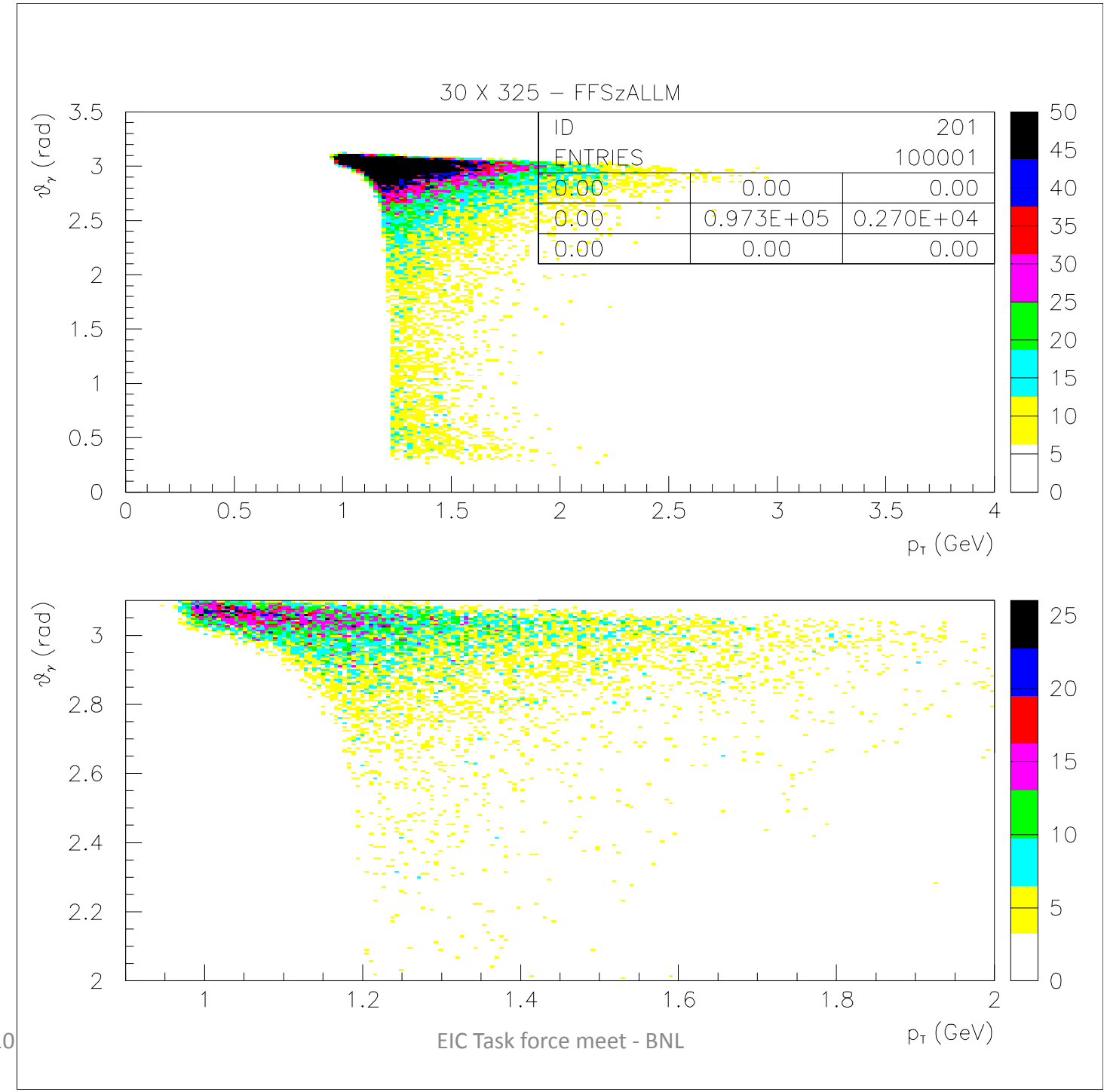
0.00 0.987E+05 0.126E+04
0.00 0.00 0.00
ϑ_γ (rad)
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)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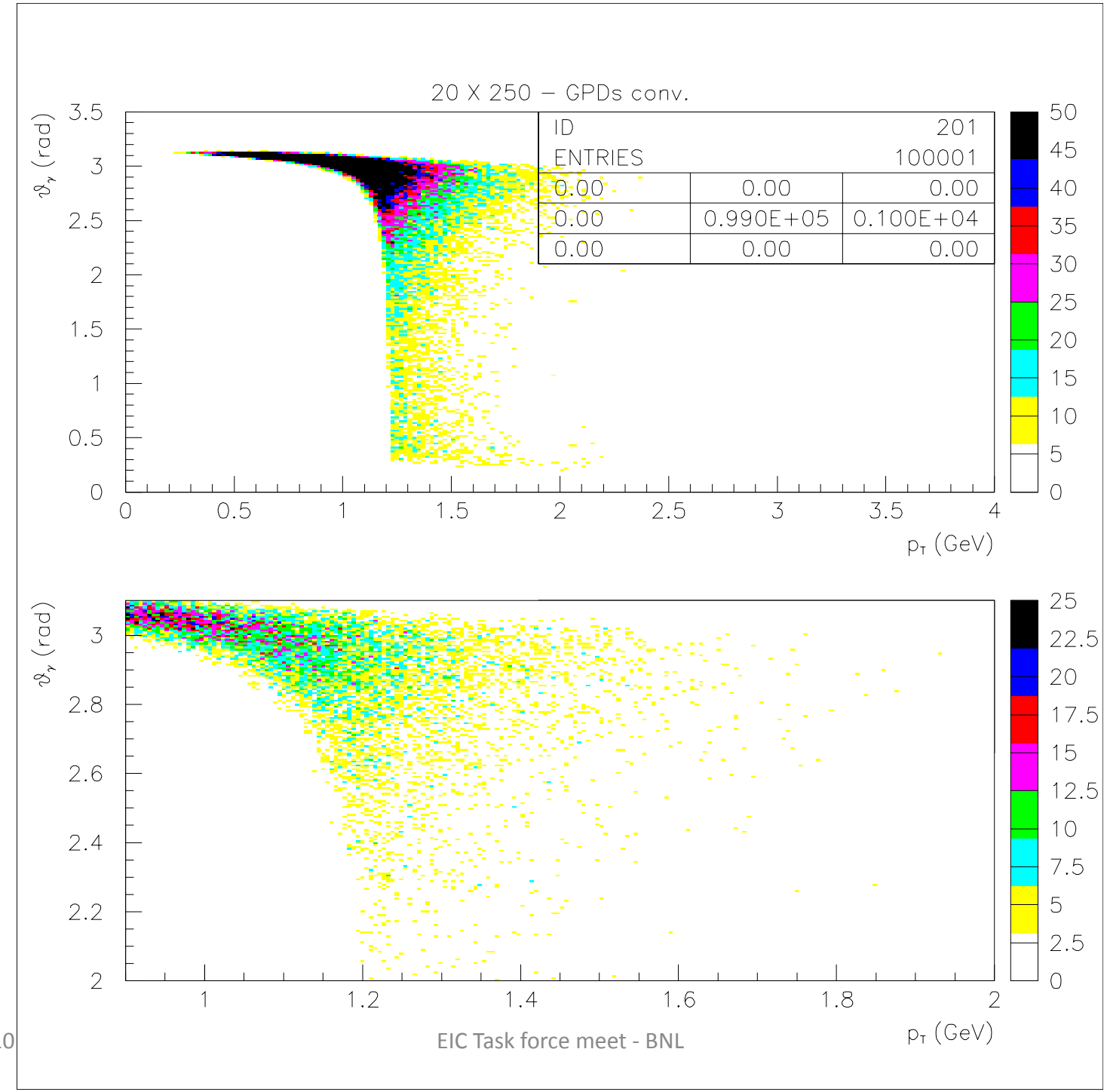
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)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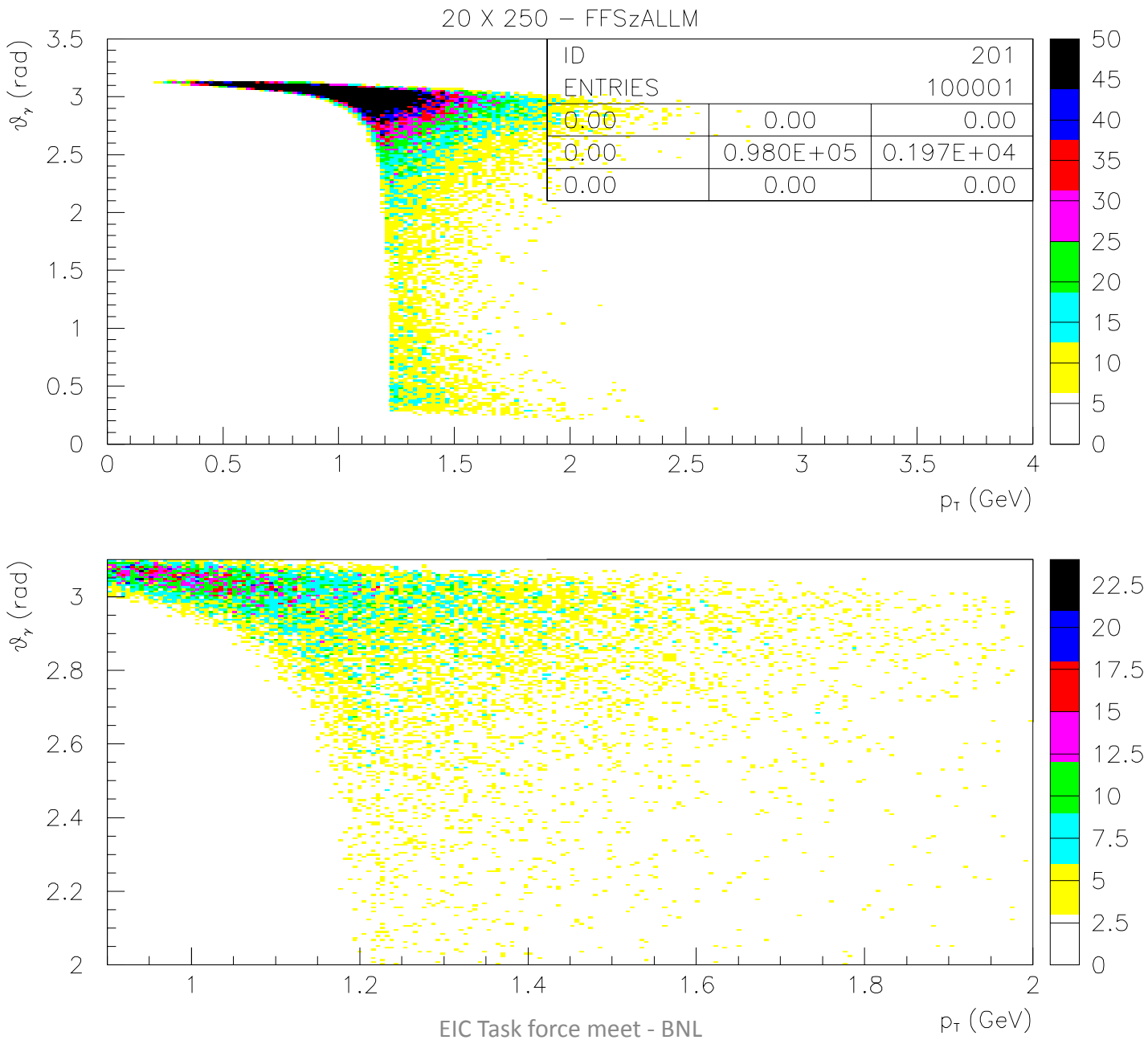
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)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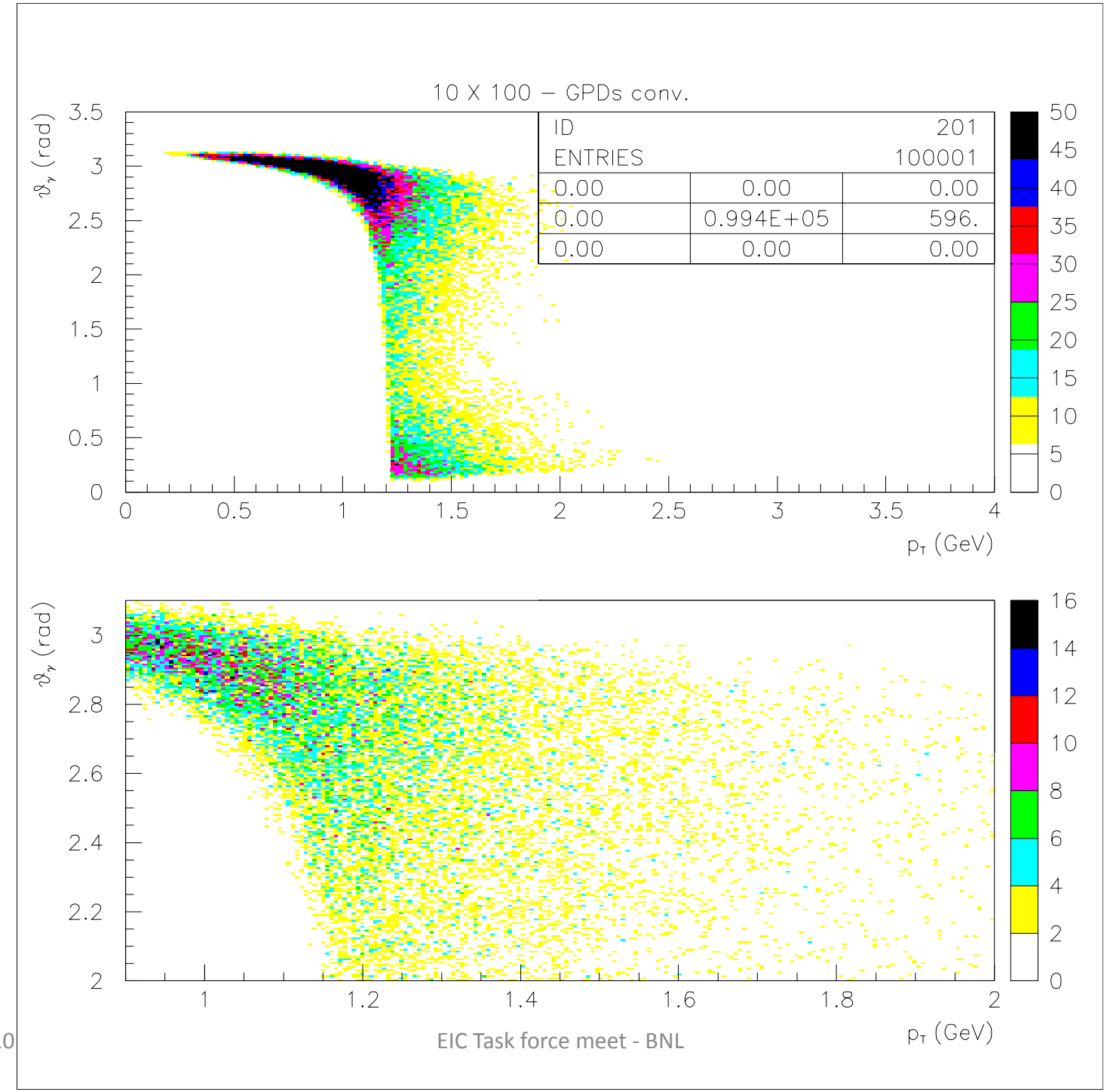
ϑ_γ (rad)
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)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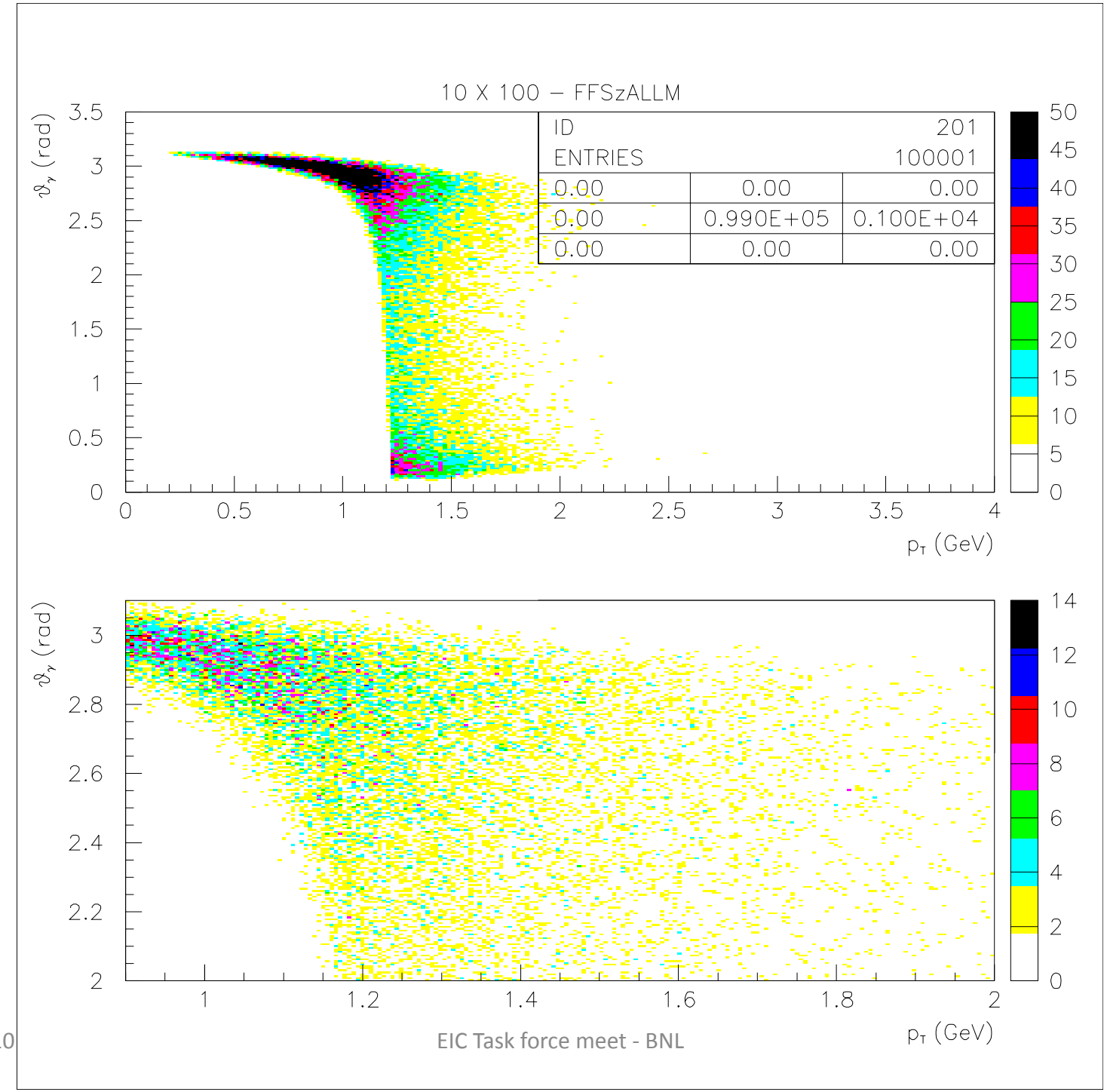
0.00 0.00 0.00
ϑ_γ (rad)
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)


10 X 100 – FFSzALLM
ID 201
ENTRIES 100001
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0.00 0.00 0.00
ϑ_γ (rad)
p_T (GeV)
ϑ_γ (rad)
p_T (GeV)