VERTEX CONFIRMATION FOR JETS

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OUTLINE:

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SAMPLES

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CONCLUSION AND PLANS

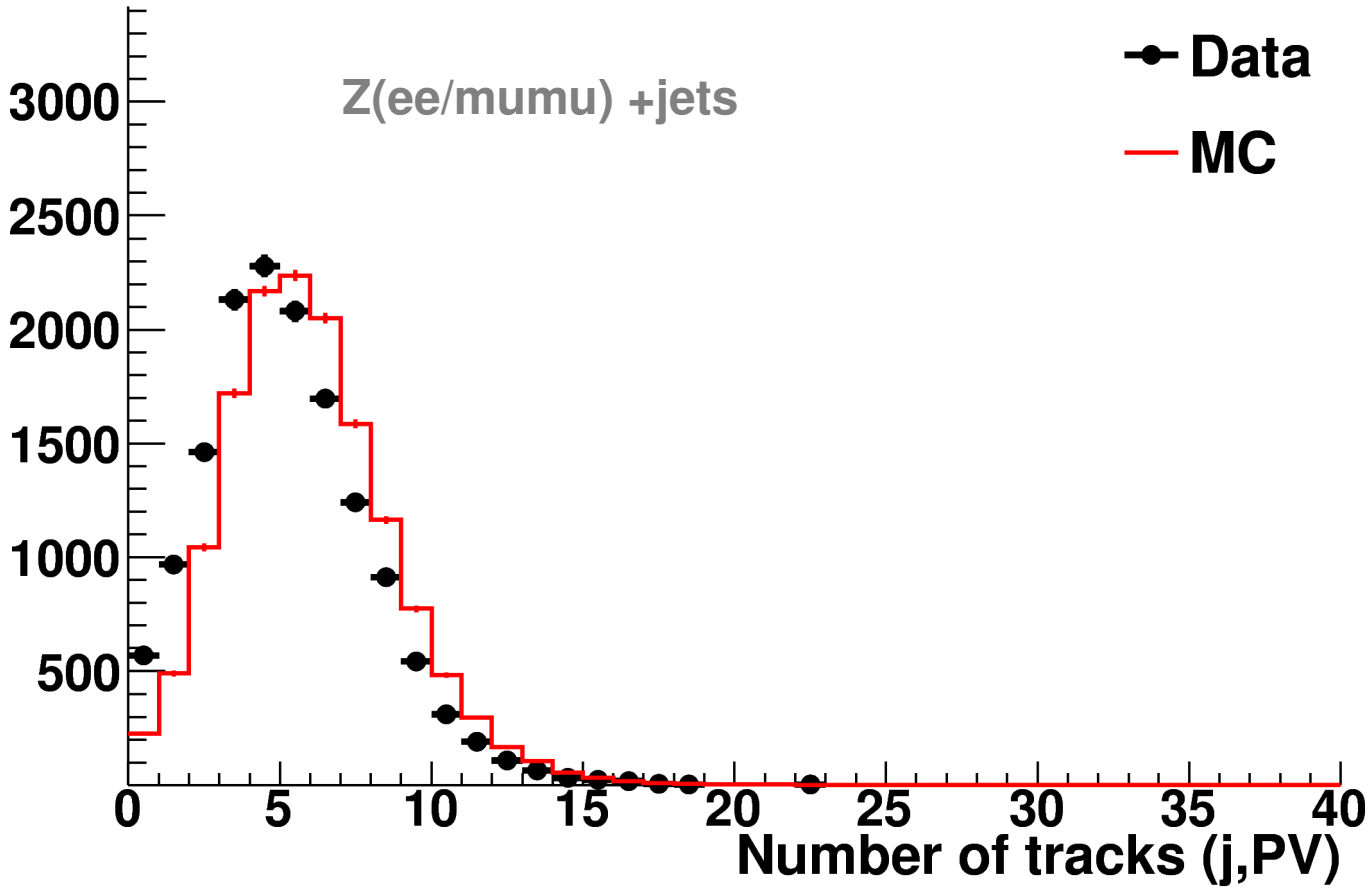
INTRODUCTION

WHY?

Vertex confirmation, i.e., ntrkMultiplicity0 >= 2, is being applied for b-tag purposes

Simulation does not describe track variables

Need to correct MC with Scale Factors



SAMPLES AND SELECTION

SAMPLES:

3 different samples being used. The agreement between them is reasonable.

DIJET, PHOTON+JET and Z(ee/mumu)+JET

SELECTION:

The selection is done in such way the existence of the jet is assured.

Try to be as less unbiased as possible, i.e., not bias the existence of the jet.

Please see last CALGO meetings for details.

METHOD:

Tag and Probe to measure efficiency (eff = # of all evts/ # of evts w/ vtx conf

Scale Factor = Data eff / MC eff

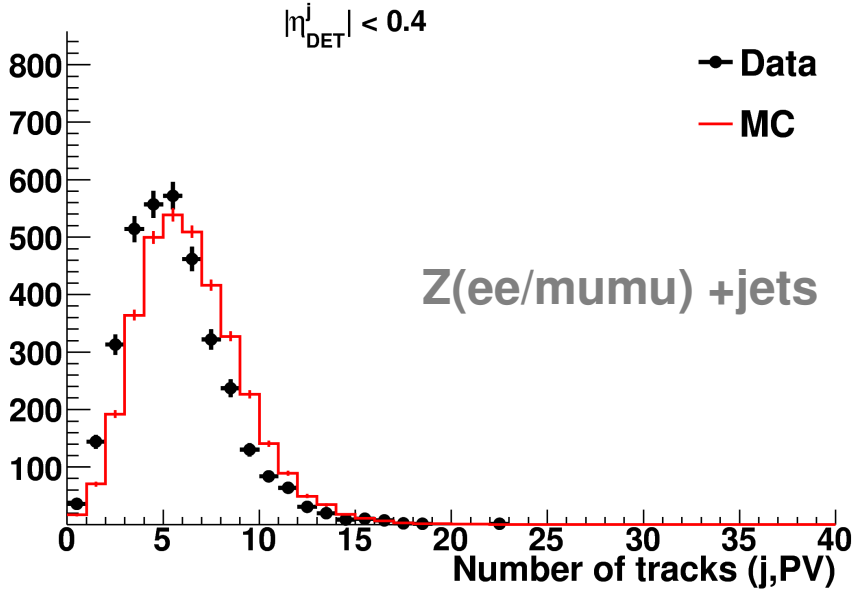
THIS TALK:

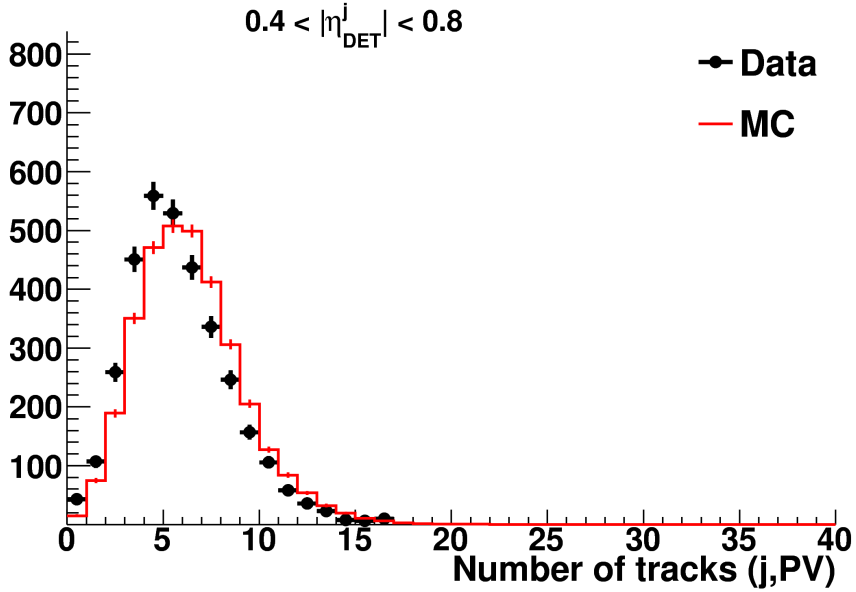
Try to fit constant to pT dependence in different detector eta bins

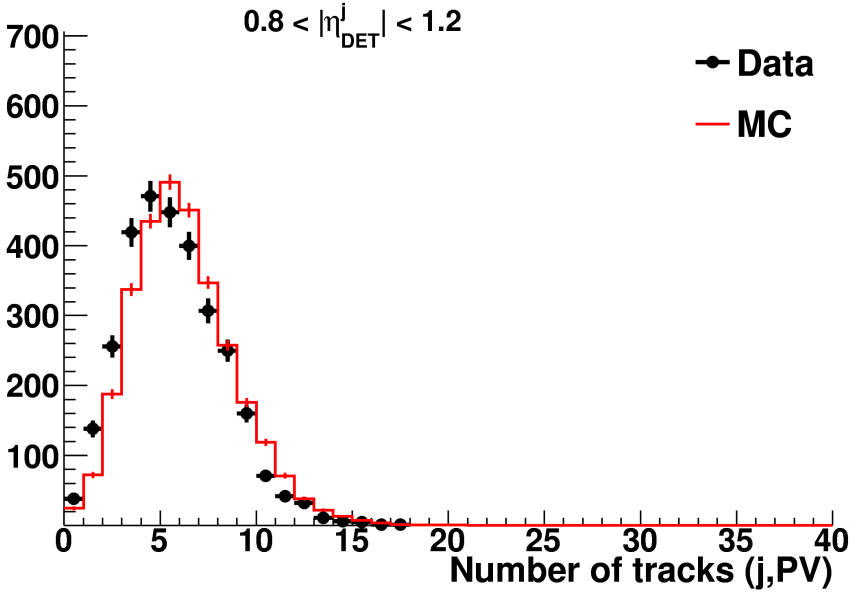
SF are plotted against <jet pT> in different Z (photon) pT bins.

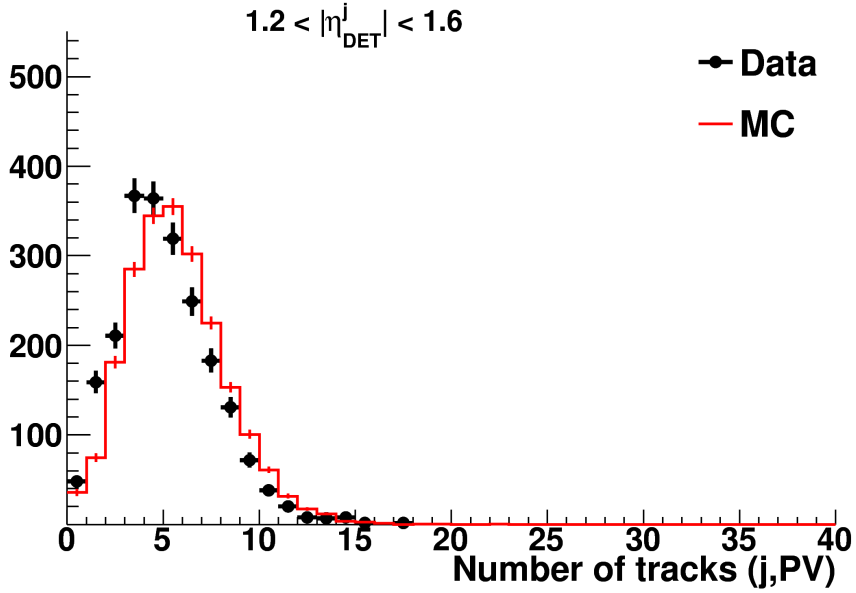
Compare photon+jet and z+jet samples.

NtrkMultiplicty0 in different detEta

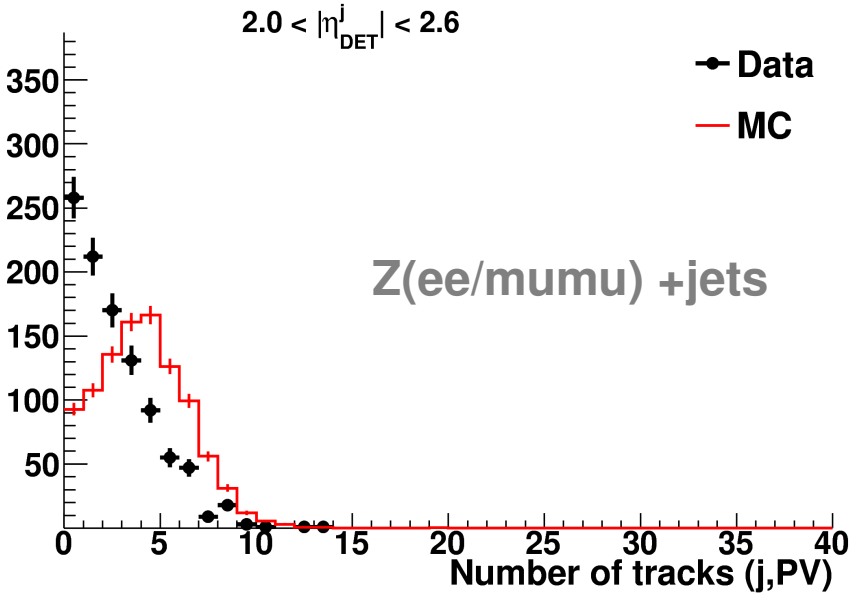


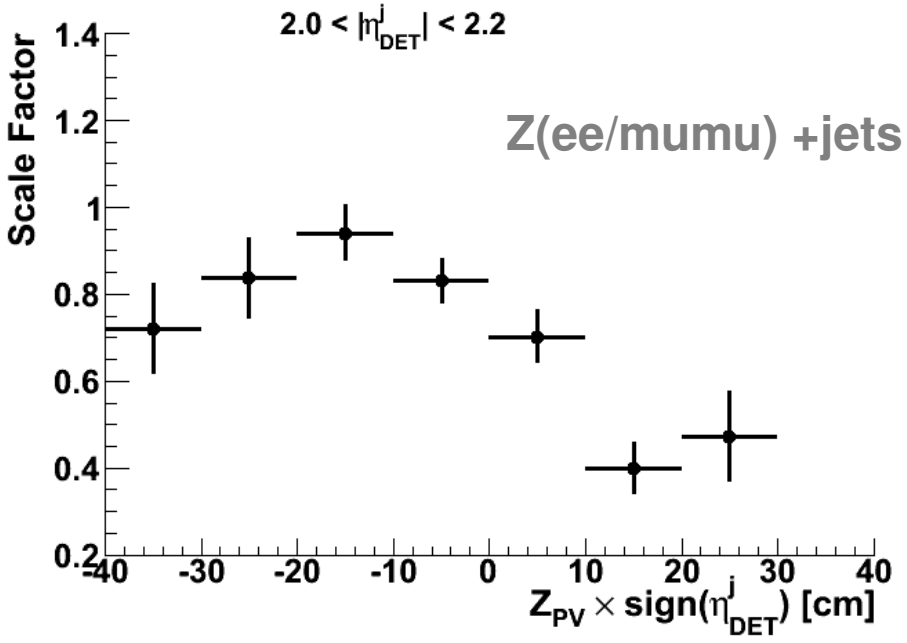


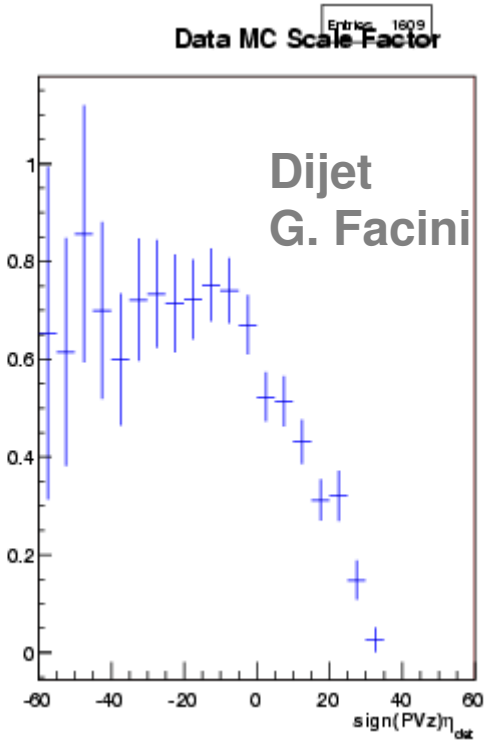




FORWARD REGION (eta detector > 1.6)







Too many things to correct and huge corrections.

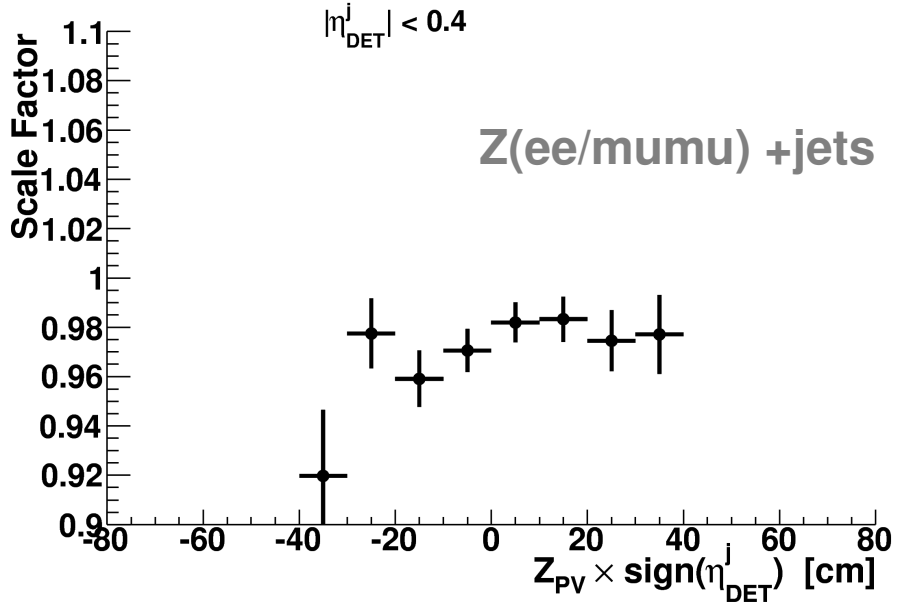
The plan is to try a PVZ*sign(etadet) feducial cut,

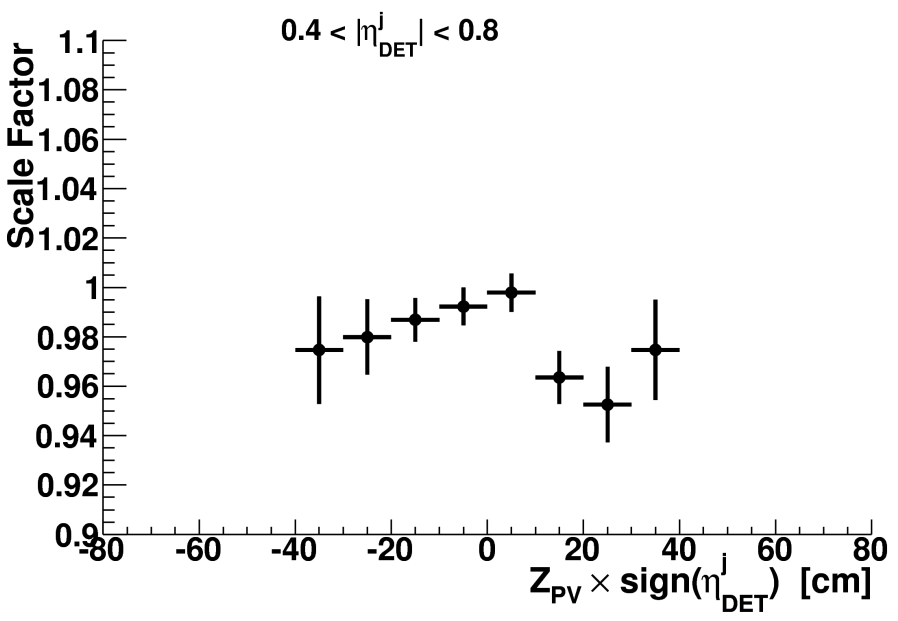
or do not advice vertex confirmation in such regions.

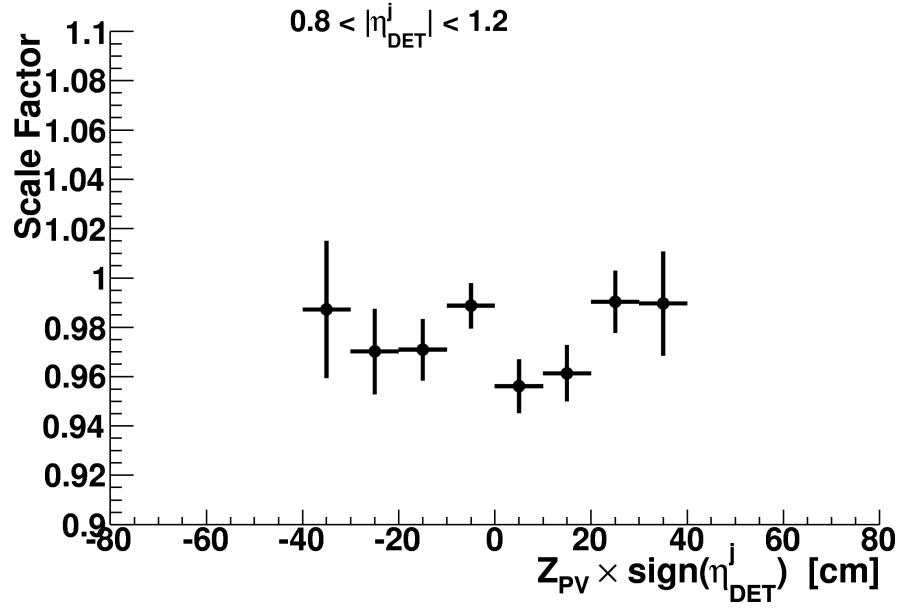
I do not think it can be measured in tag and probe method.

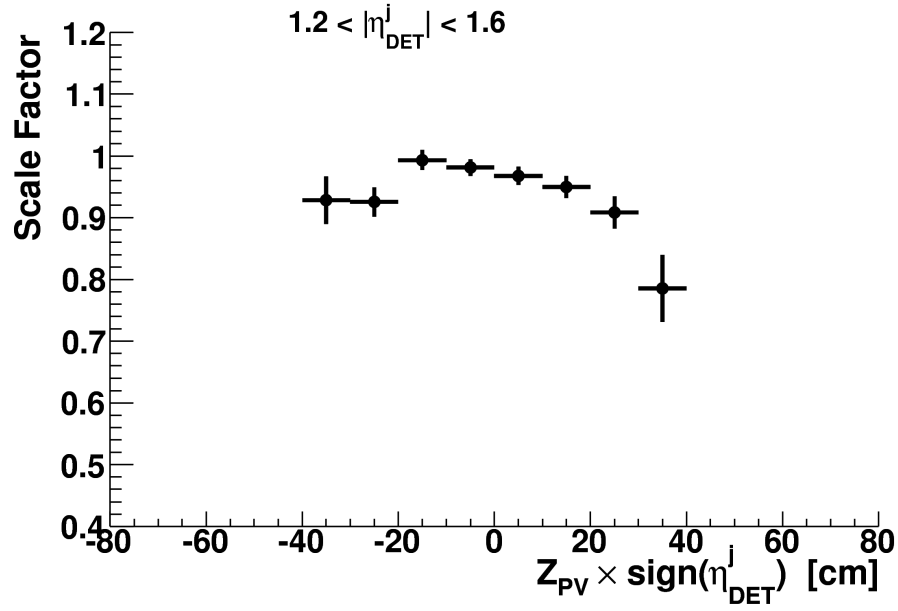
In this talk I will show only |etaDet| < 1.6

RESULTS – PVZ*sign(eta) dependence

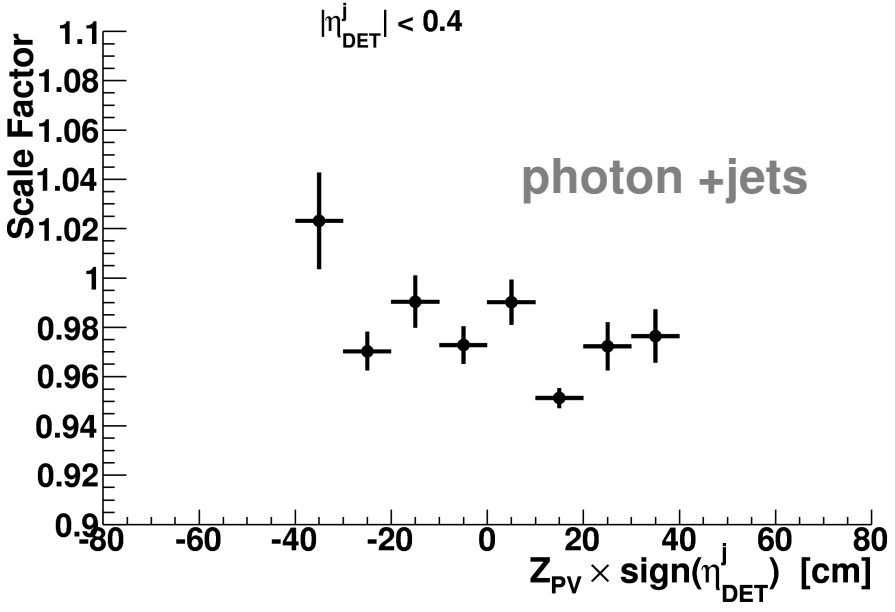


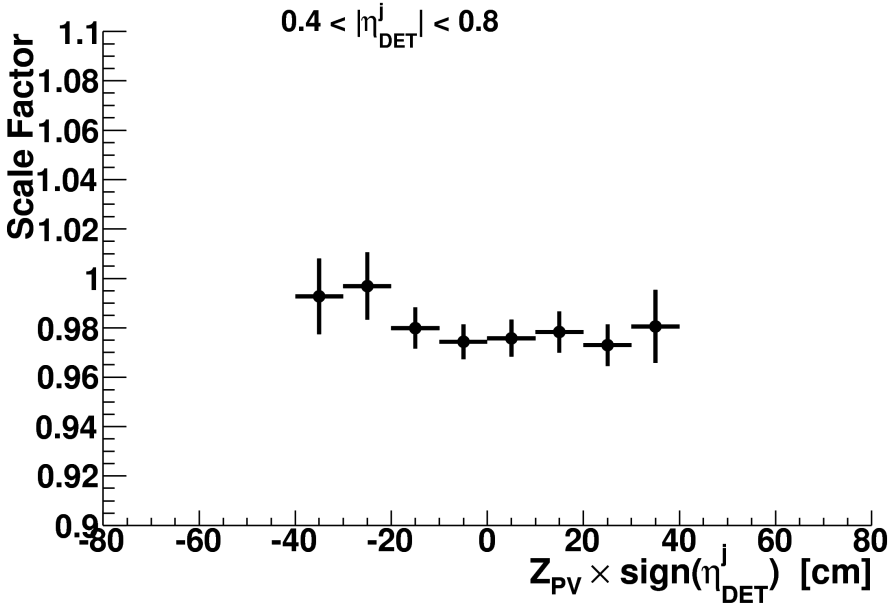


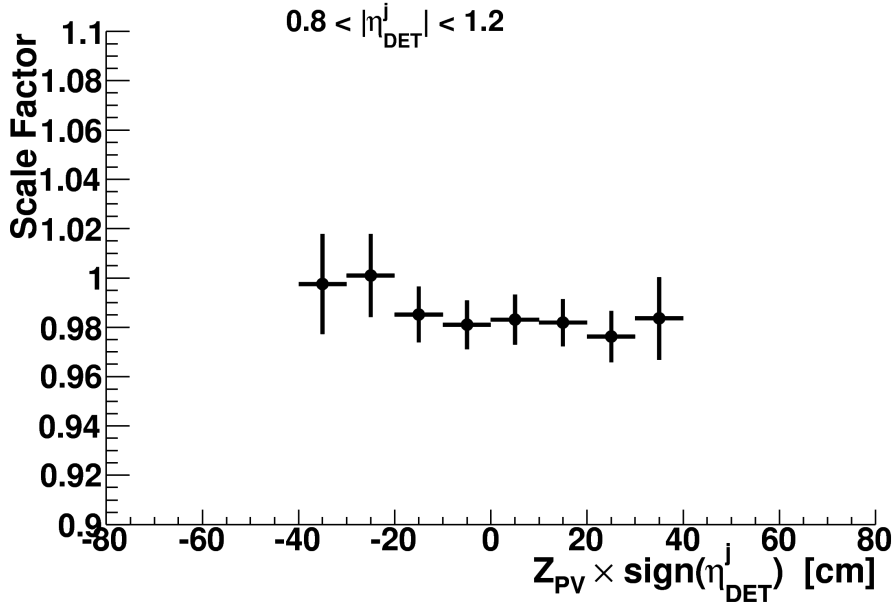


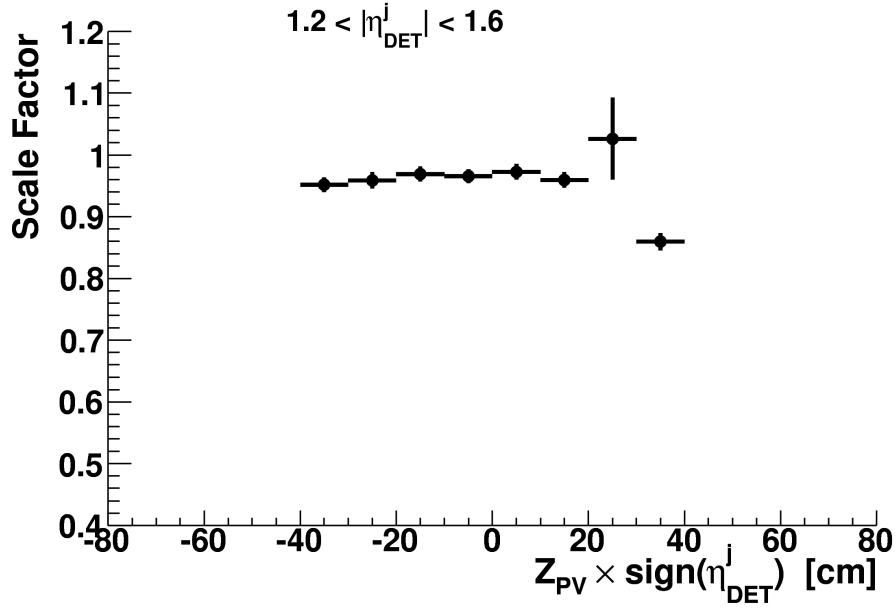


RESULTS – PVZ*sign(eta) dependence

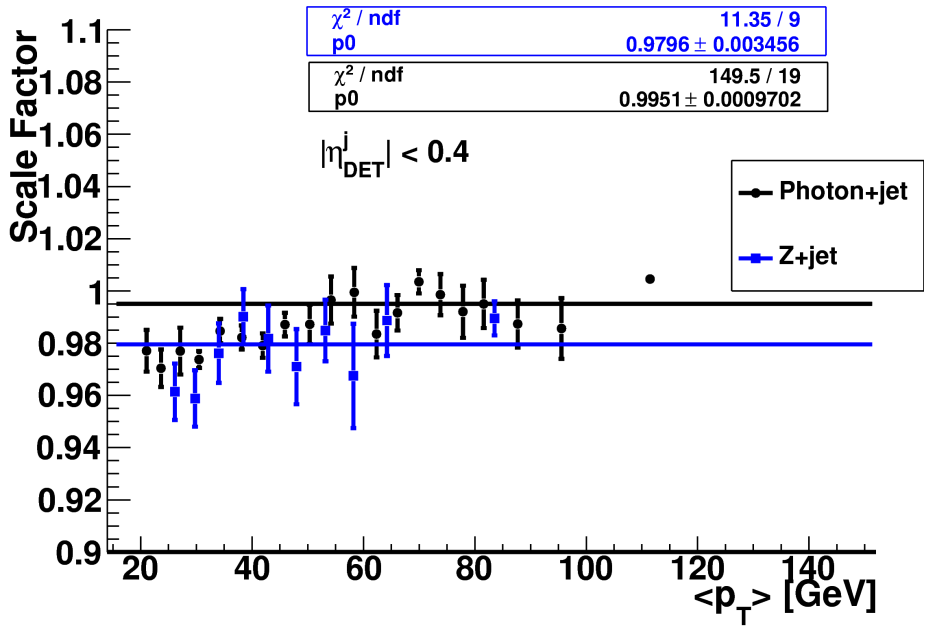


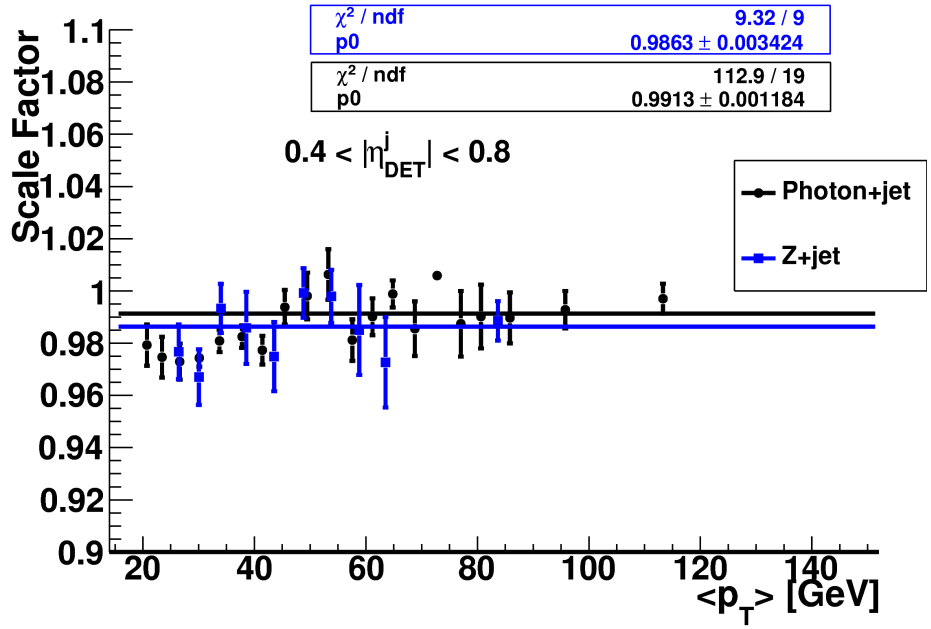


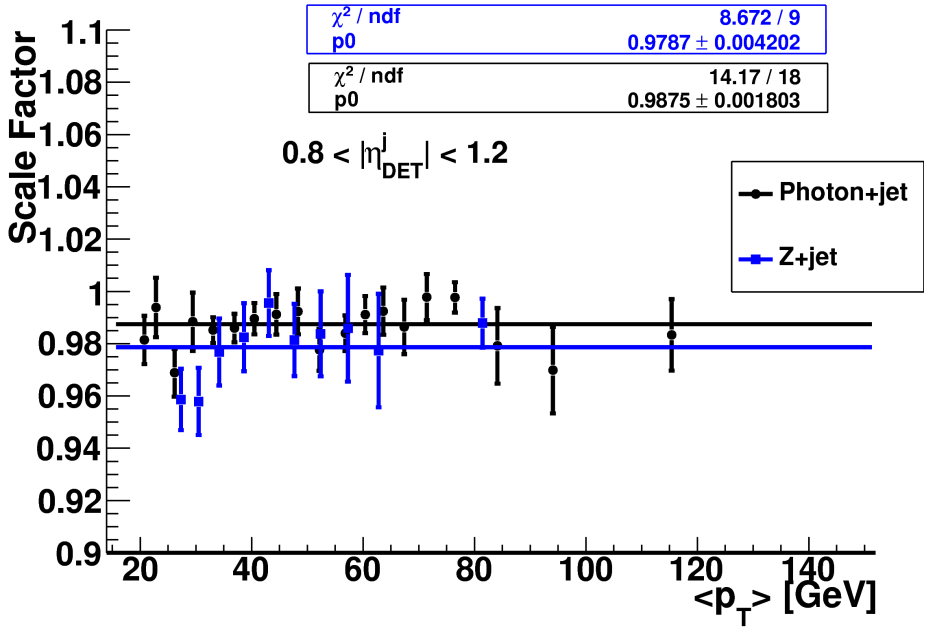


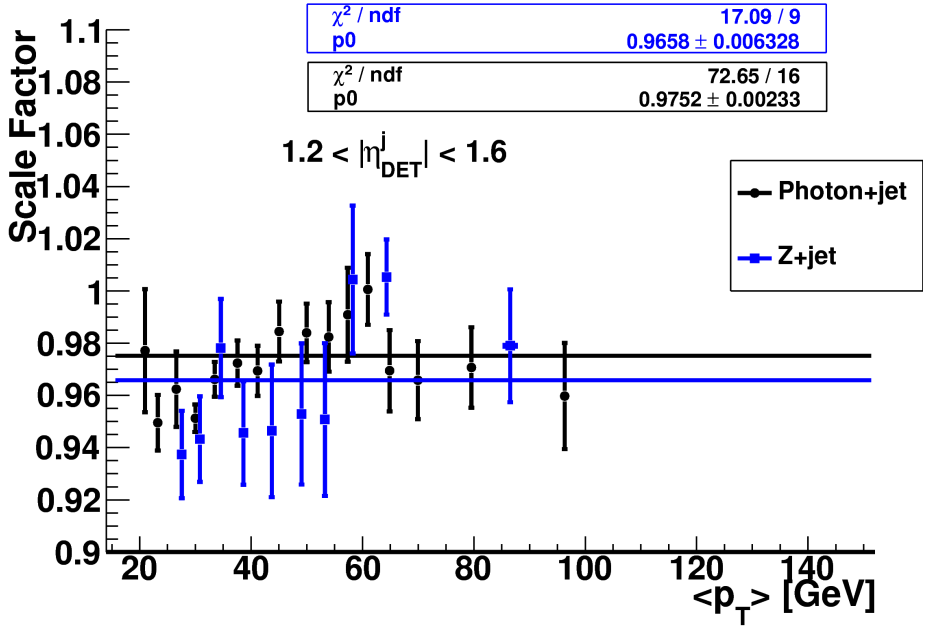


RESULTS – SCALE FACTORS





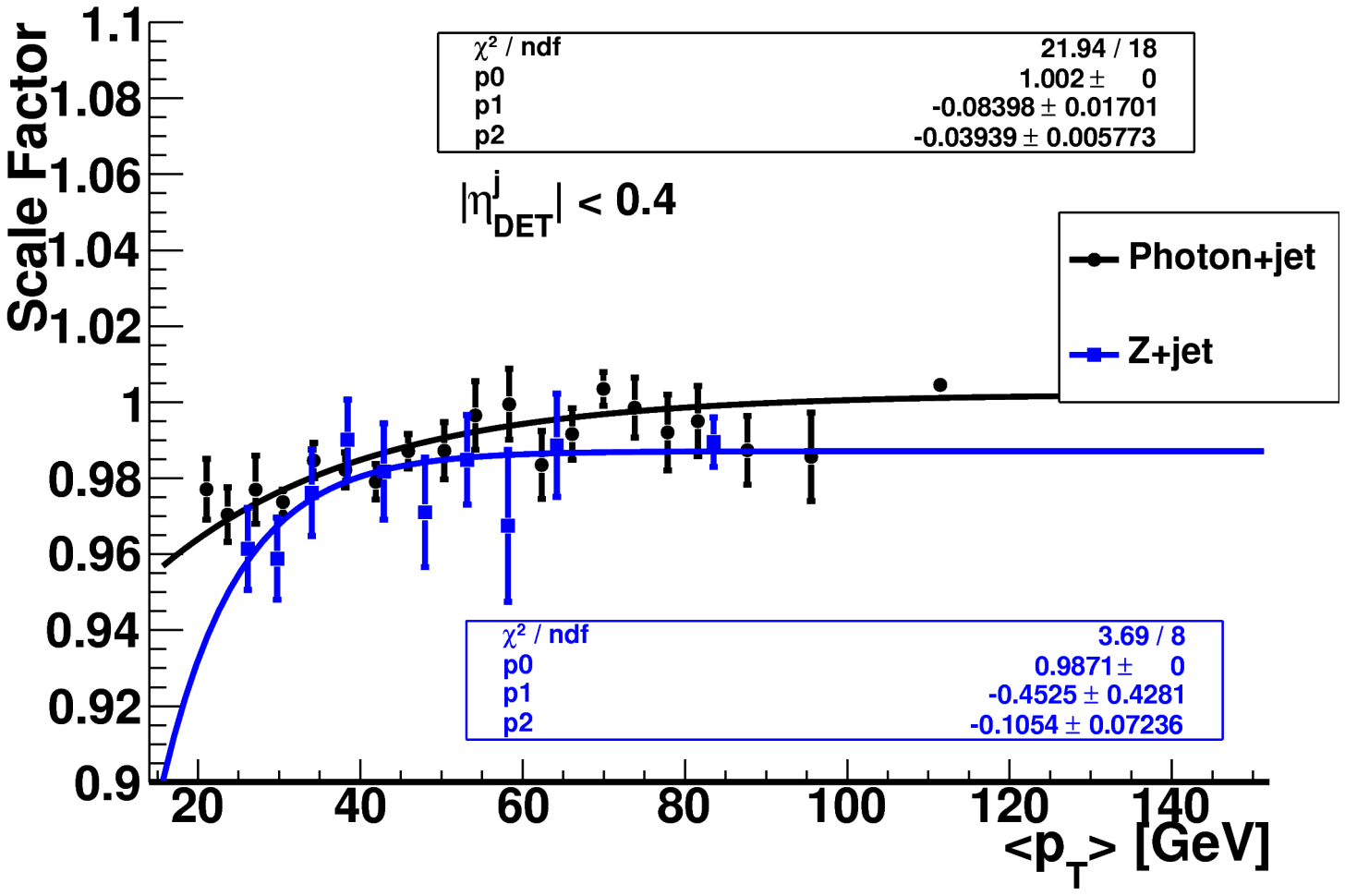




RESULTS – pT dependence?

PT dependence?

Try to fit jet-id like function: [0] + [1]*exp([2]*x)



Dijet sample will be used for the fits.

CONCLUSIONS AND PLANS

CONCLUSIONS:

Jet vertex confirmation scale factors measured in 3 different samples

Found agreement between the samples

For jets in eta > 1.6, MC and DATA are too far way

PVZ*sign(eta) dependence small for jets in eta < 1.6

PLANS:

Finish SF for jets up to 1.6 and use them as in jet-id (removing jets from MC)

Fit dijet sample for central values and for systematics use the differences between samples

Do the same for p17

Missing SSR in photon+jet

New definition of vertex confirmation in discussion