JET Z VERTEX

11/21/2009

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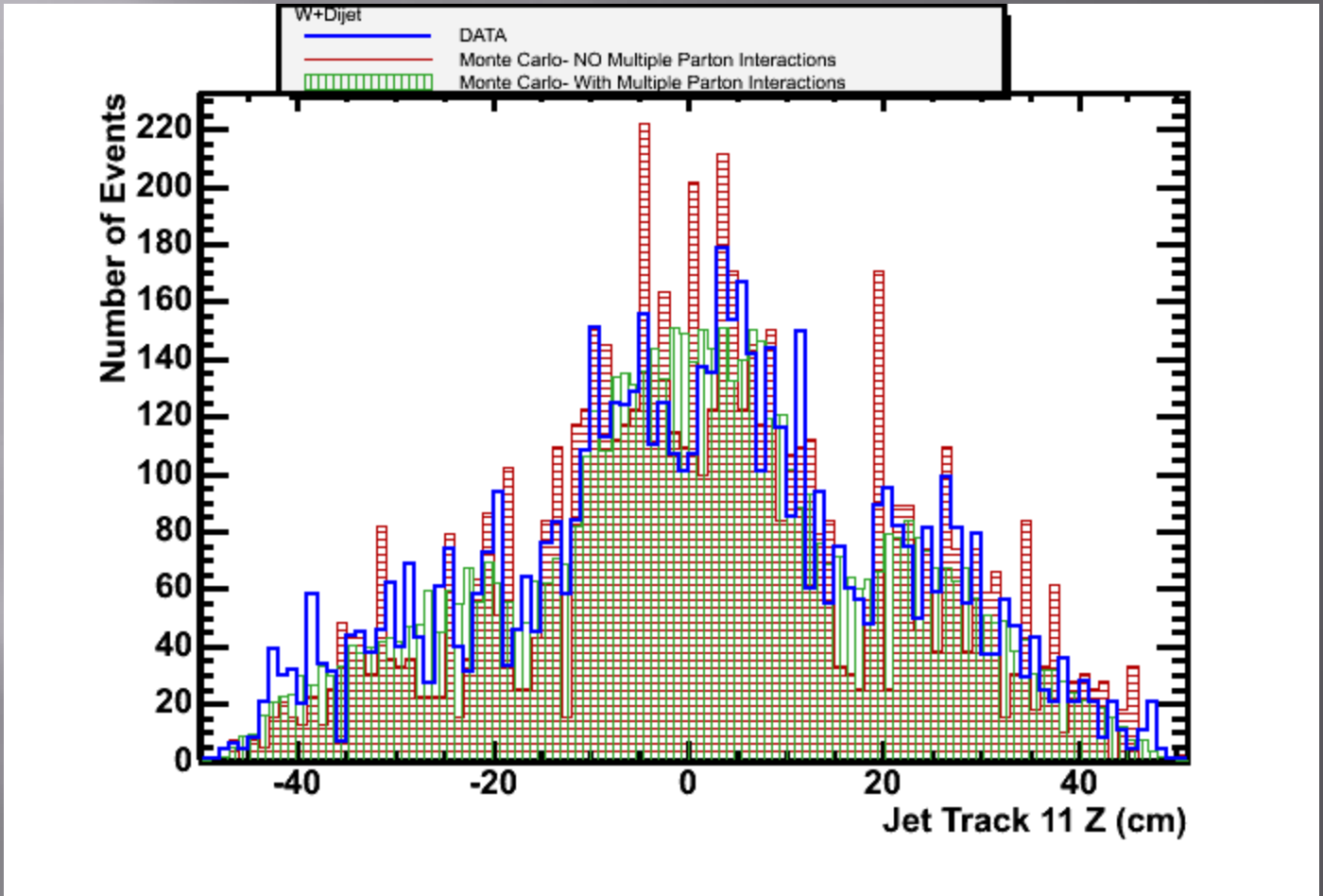
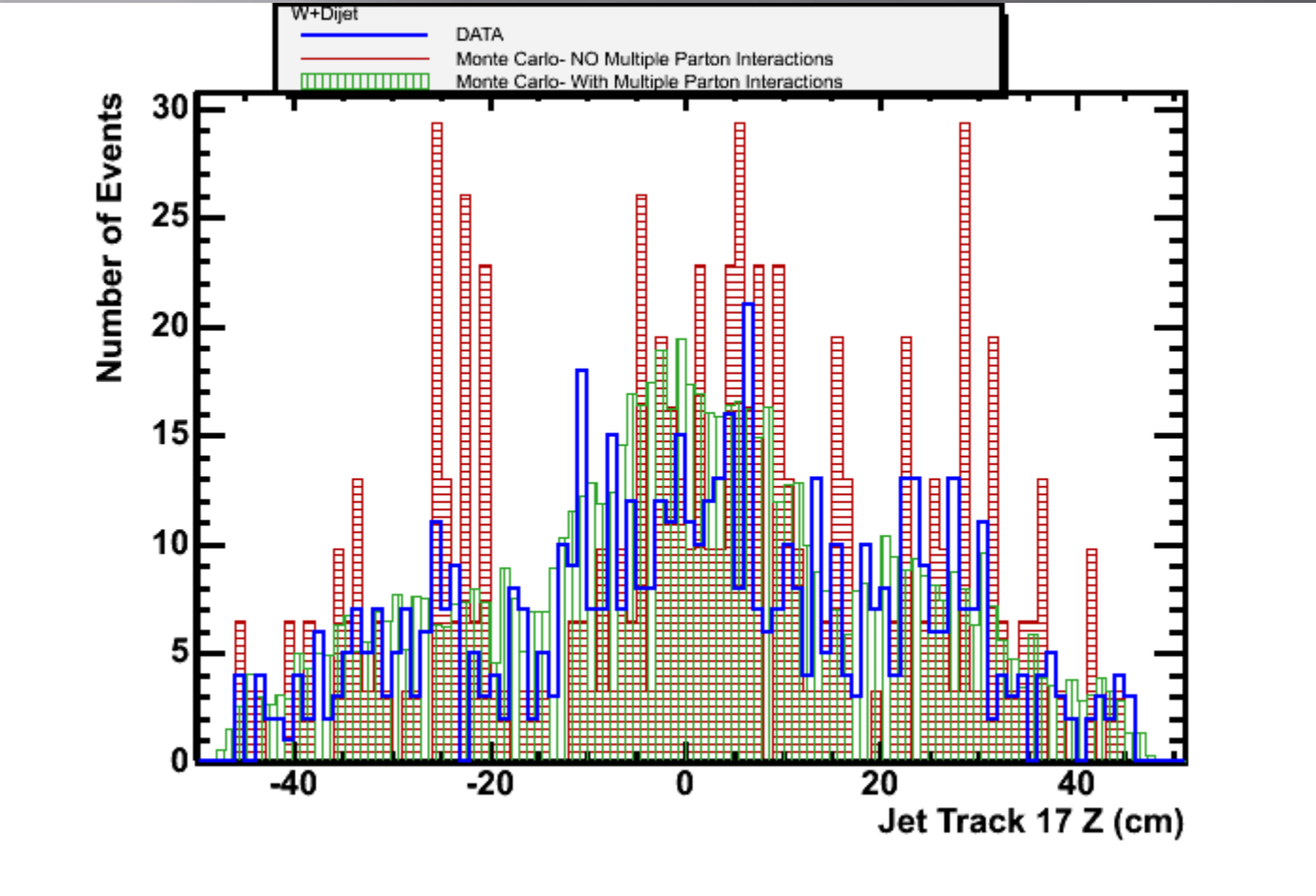
Track 11 Z in the Jet

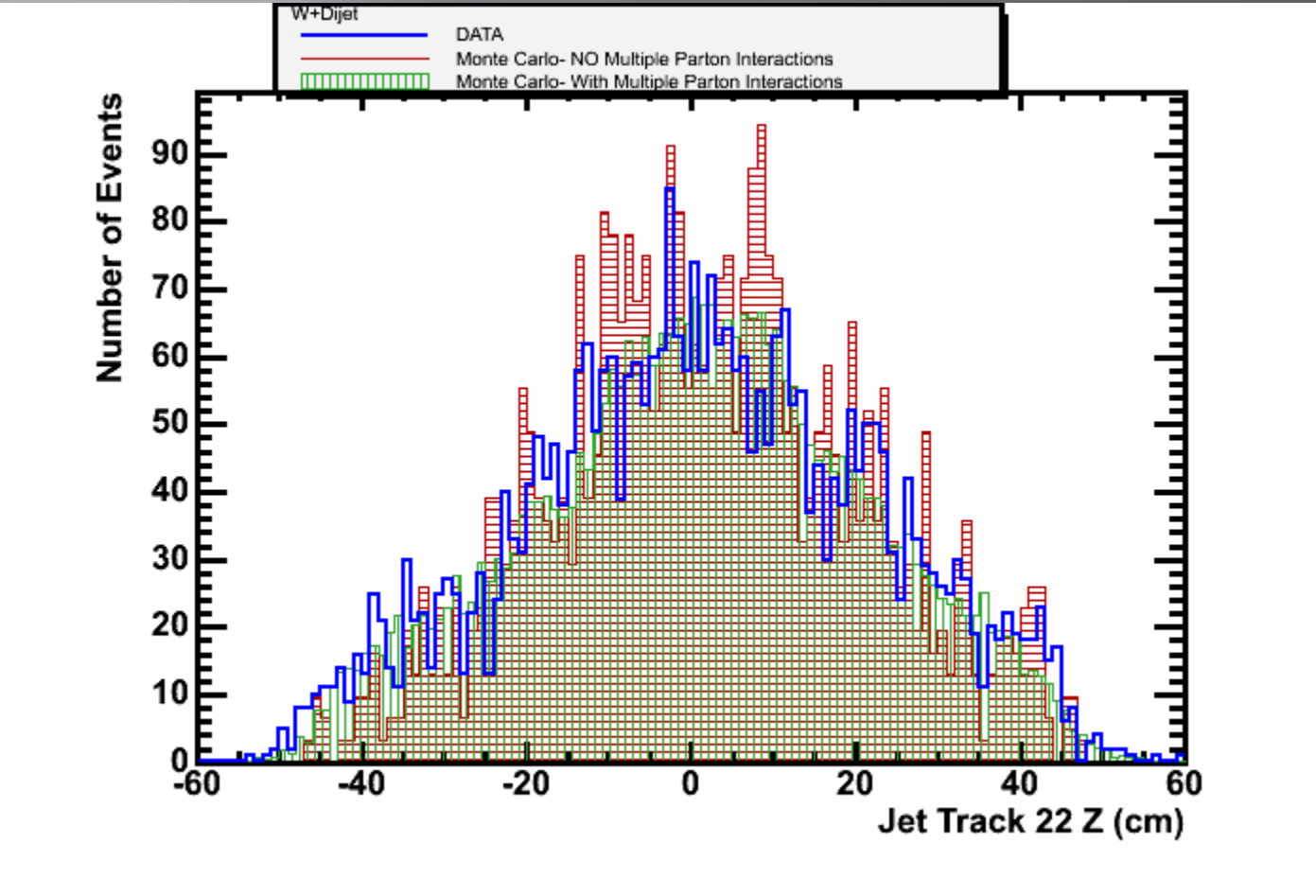


1. Only the Track 11 included in the Jet is plotted above
2. Note the Dip around zero ,Expanded Plot of that region on next slide
3. Looks Gaussian enough !

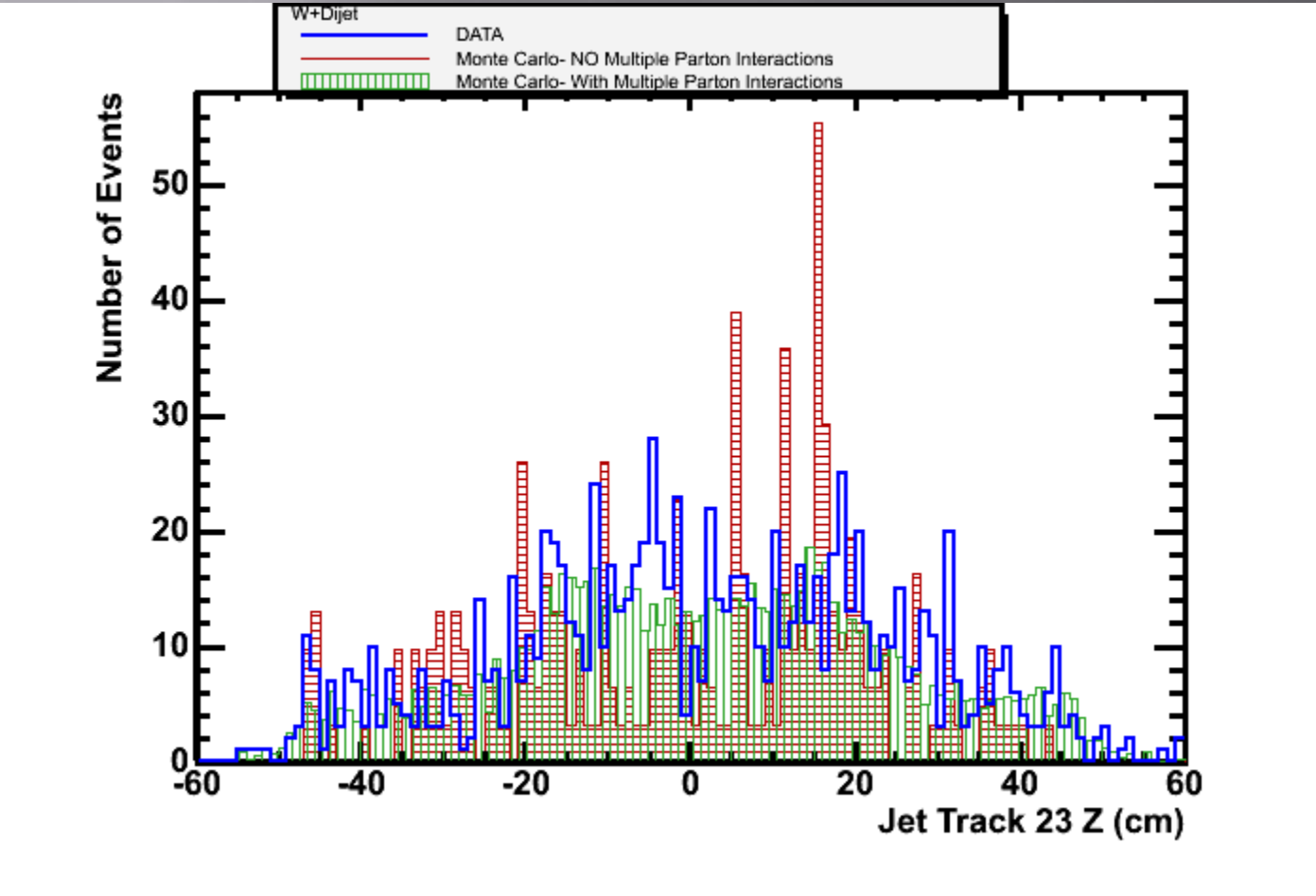
Track 17 Z in the Jet



Track 22 Z in the Jet

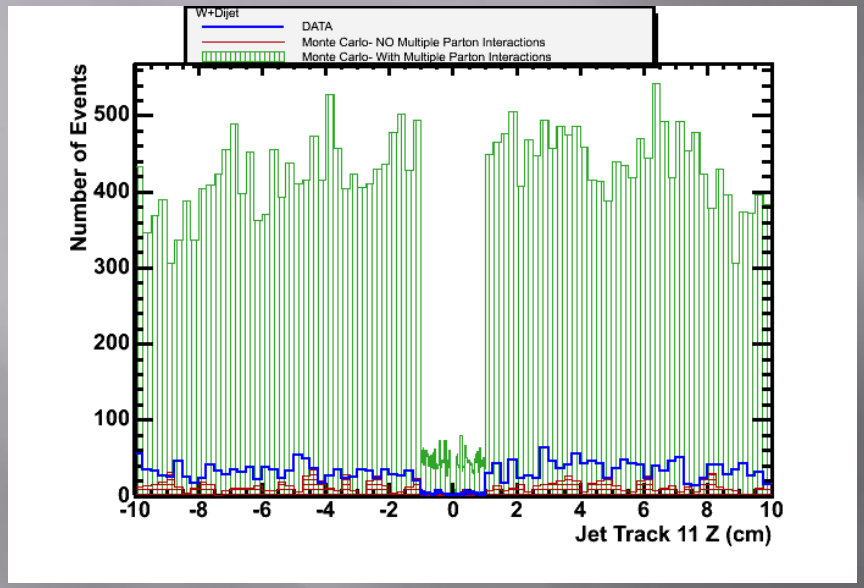


Track 23 Z in the Jet

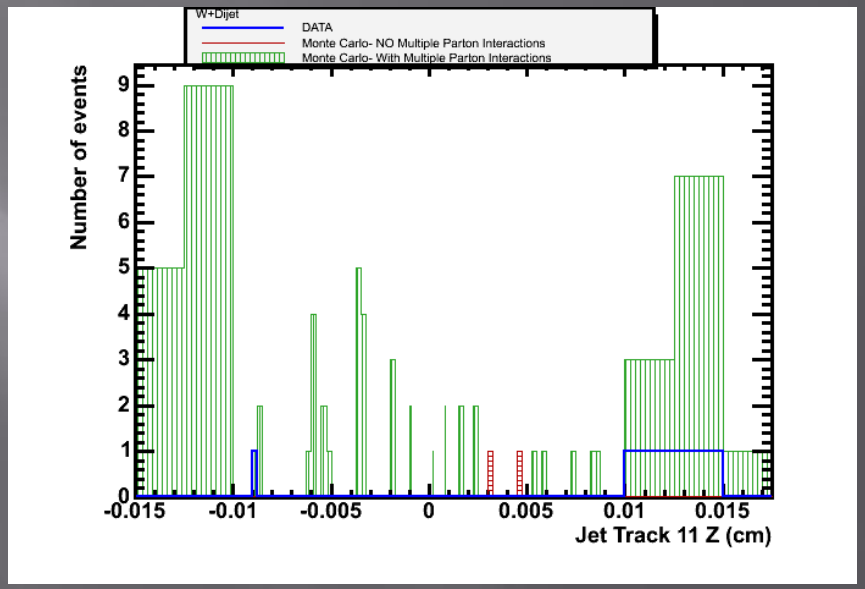


Expanded Track 11 Z

RANGE [-10,10]

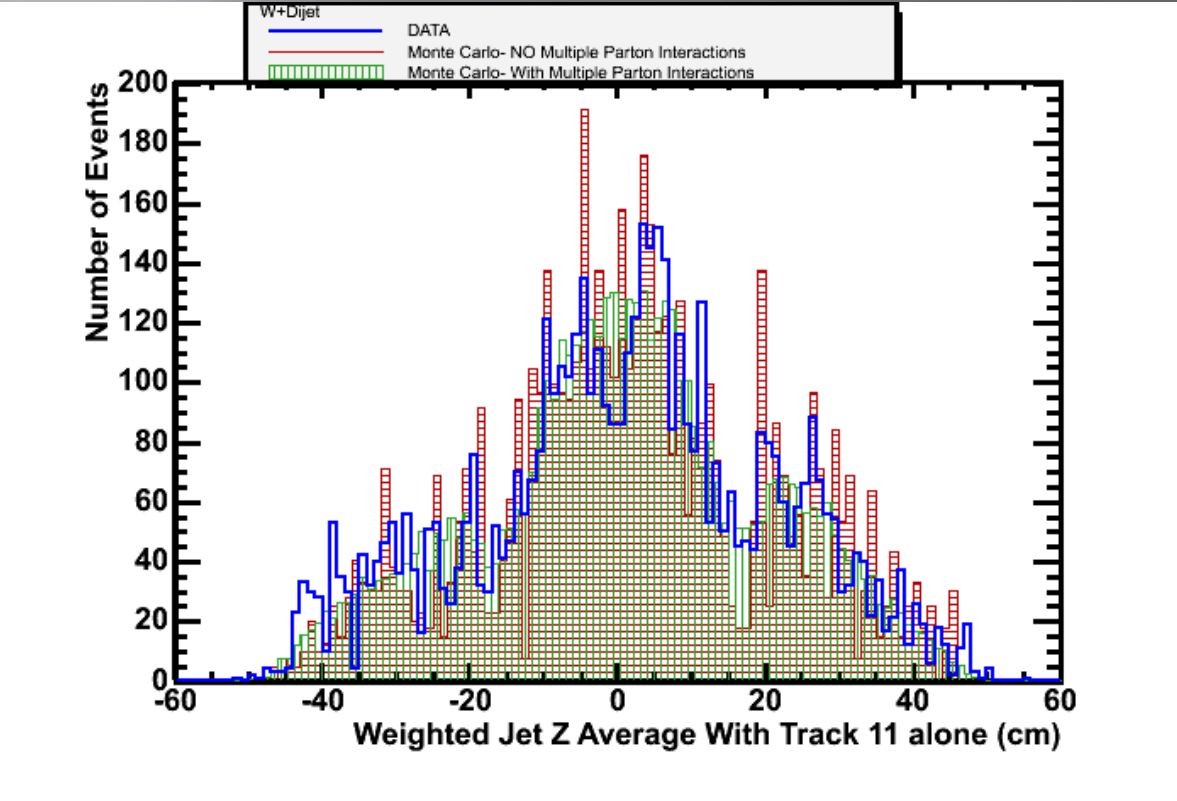


RANGE[-0.015,0.015]



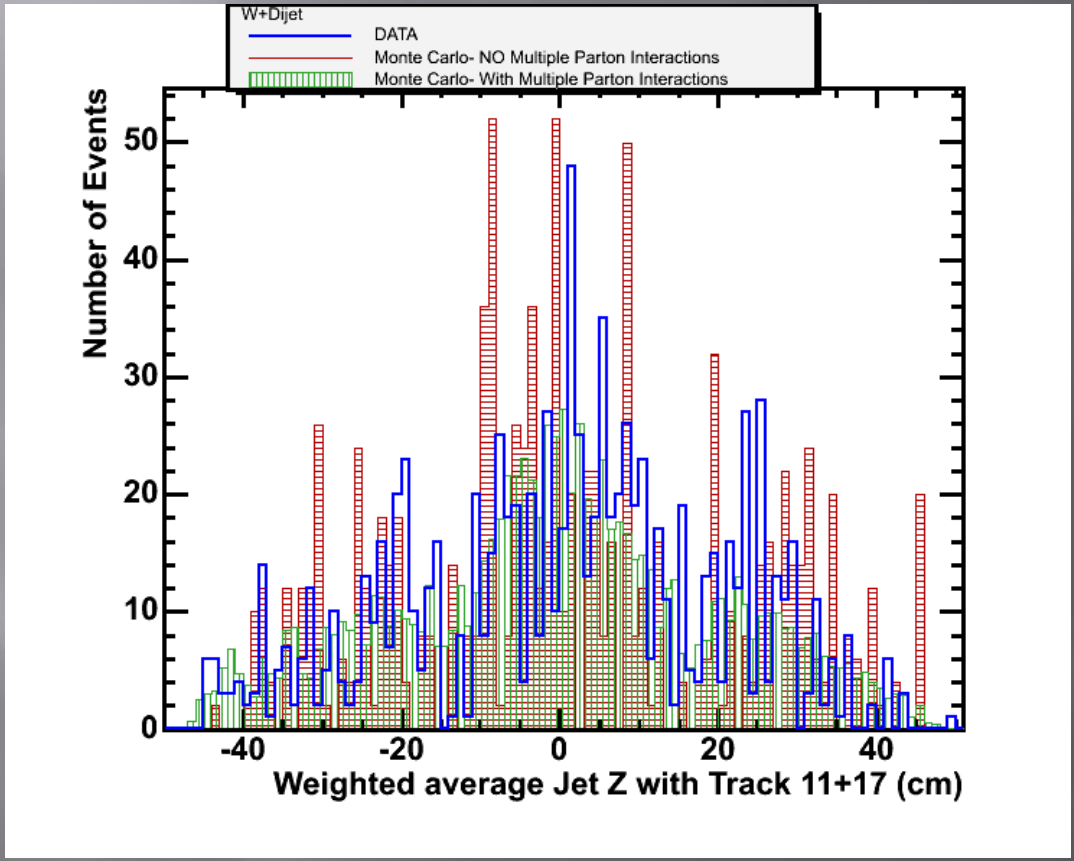
1. In the plot of the left the Dip Observed in the previous slide is seen
2. In the Plots on the right ,Please observe the Region right next to Zero
3. Problem thatI had of too many Track Z ==0 is not there any more

Weighted Jet Average Z With Track 11 Alone



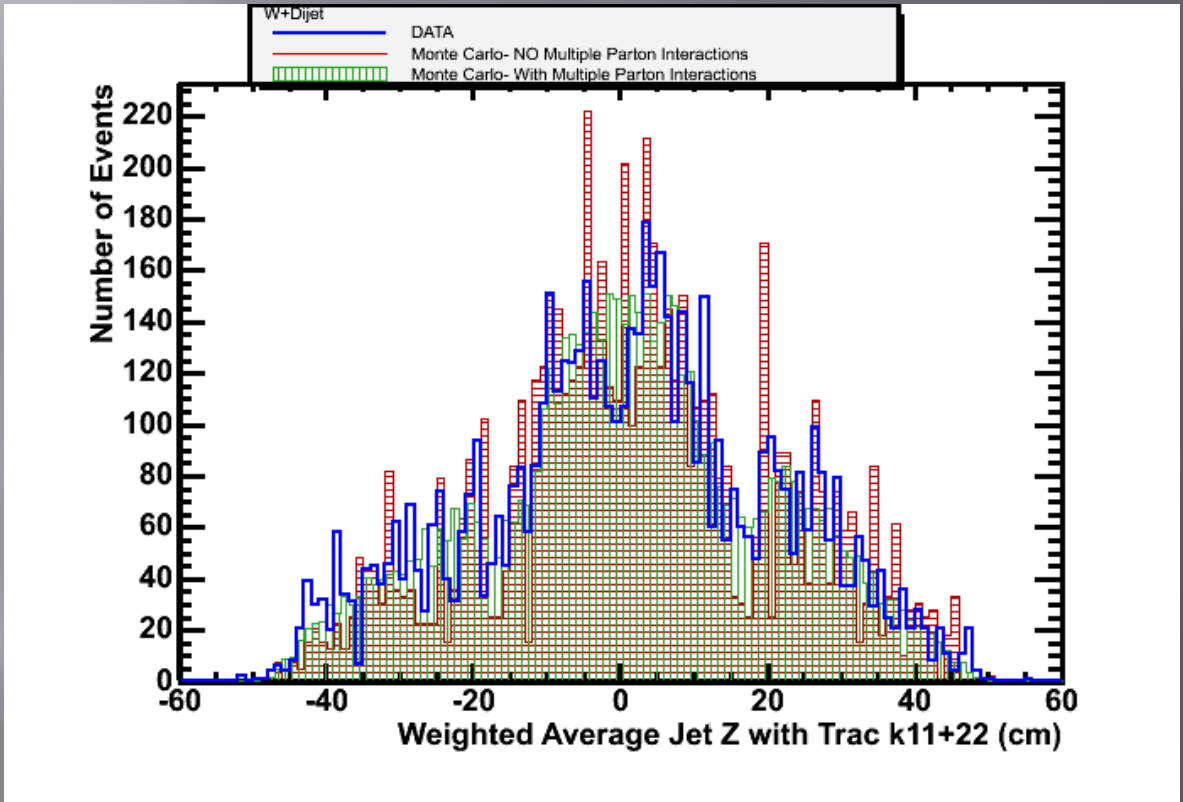
1. Track 11 Statistics Dominates over Track 17,22,23
2. Not a perfect gaussian -- Reason might the Weighted Calculation

Weighted Jet Average Z With Track 11 + 17



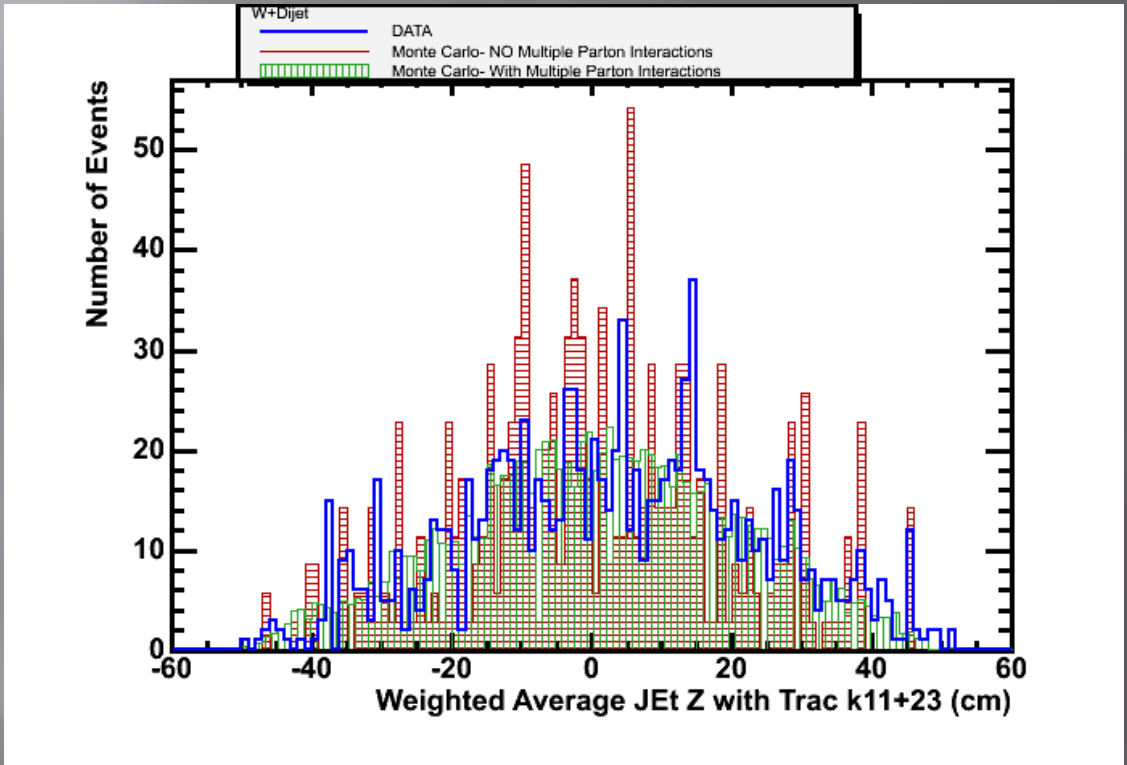
1. Low Track 17 Statistics Dominates the average calculation
2. Too Less statics too comment on

Weighted Jet Average Z With Track 11 +22



1. Looks similar to the Weighted average with 11 alone

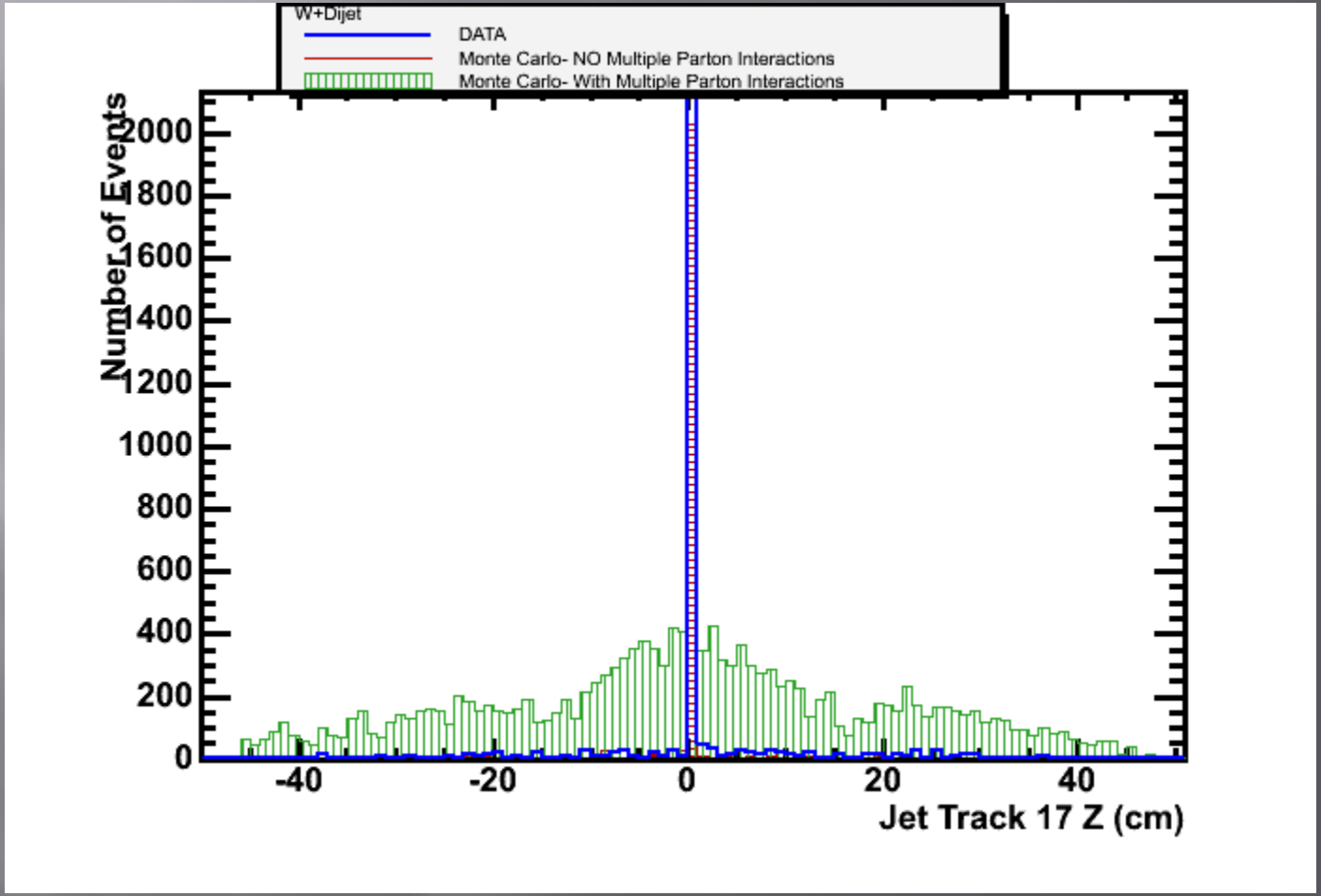
Weighted Jet Average Z With Track 11 + 23



1. Dip near the Zero and ~ 20 cm is not so prominent here

Conclusion

- Allow Atleast One Track 11 and allow the other tracks to be either 17,22,23
- Recommend use ONLY Track 11 in the Weighted Average Calculation.
- Look at the Delta Z between the above average and All other tracks Z i.e 17,22,23 included in that jet


W+Dijet
DATA
Monte Carlo- NO Multiple Parton Interactions
Monte Carlo- With Multiple Parton Interactions
Number of Events
2000
1800
1600
1400
1200
1000
800
600
400
200
0
-40
-20
0
20
40
Jet Track 17 Z (cm)