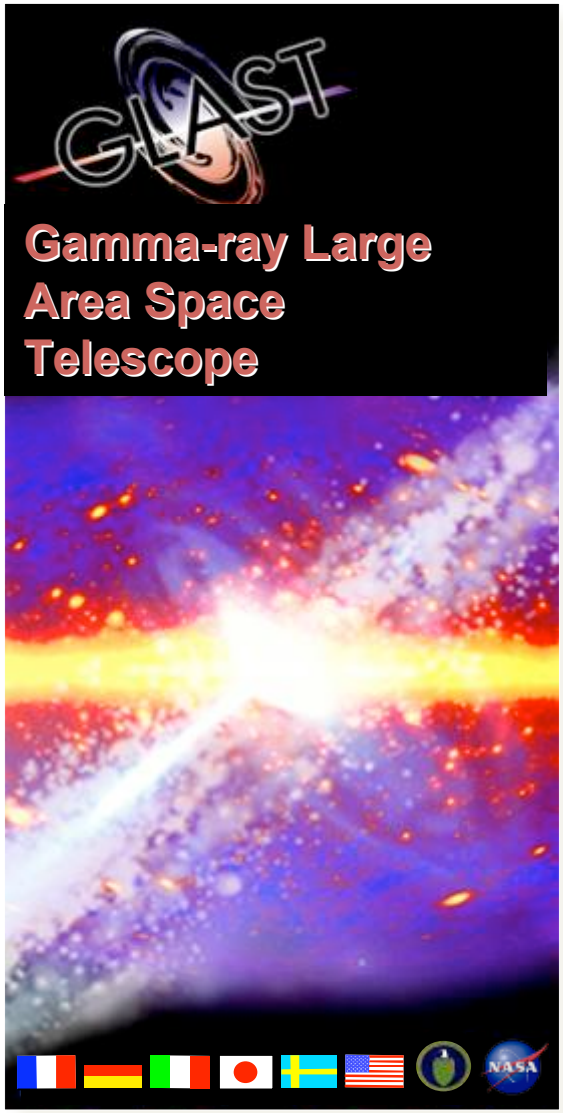


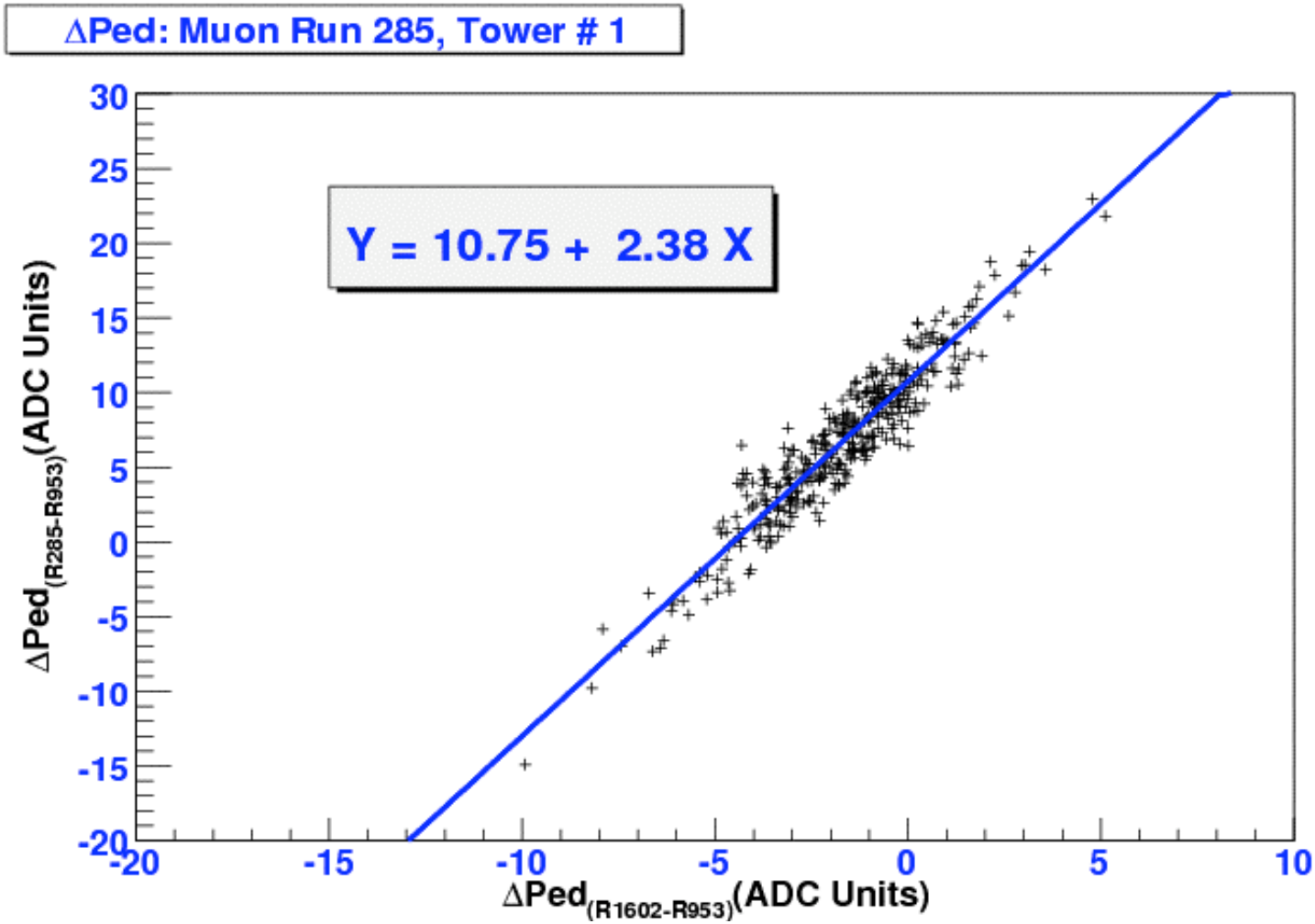
Temperature Estimation Using Pedestals

Aous Abdo
NRL

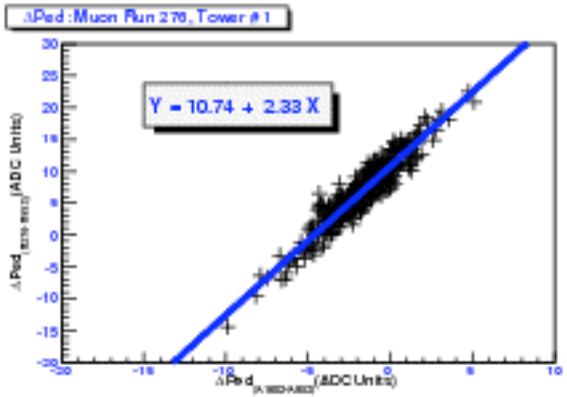
❖ Compare the difference in pedestal distributions for a Muon run to two runs with known Temperatures (953 and 1602).

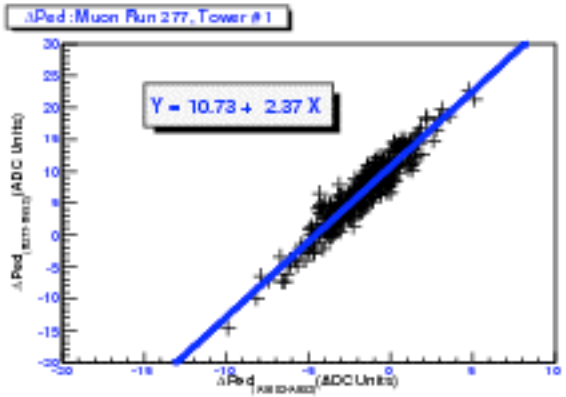
❖ From the slope of the distribution we estimate the temperature according to:

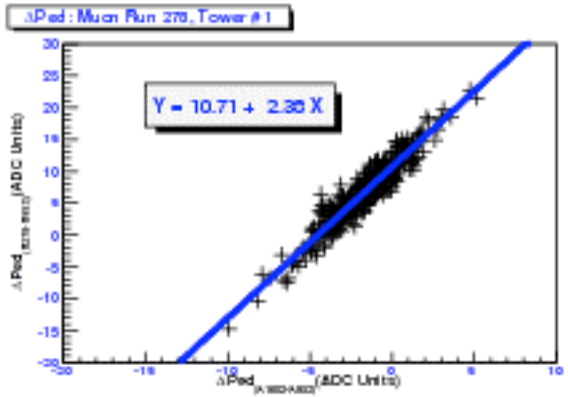
Ti = T953 + Slope * |T1602-T953|

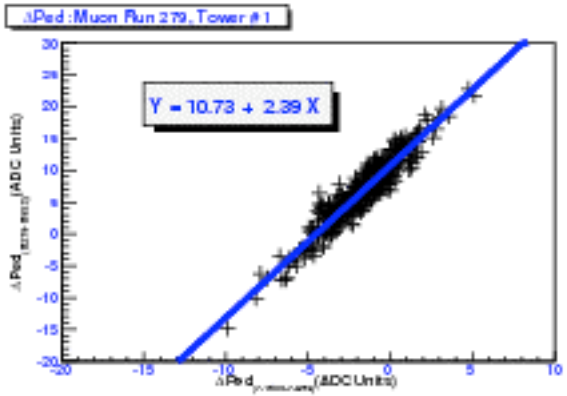


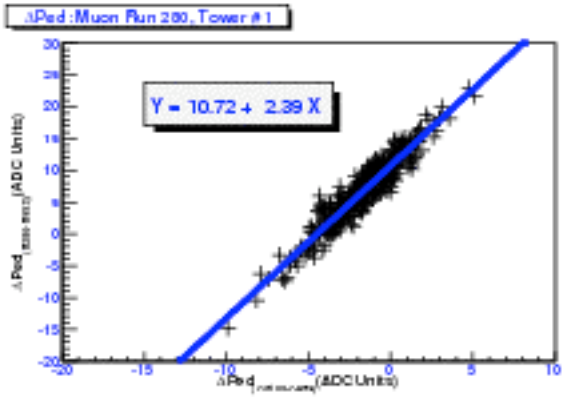
Do this for the 10 Muon runs we have (276-285)
Distributions for Tower 1

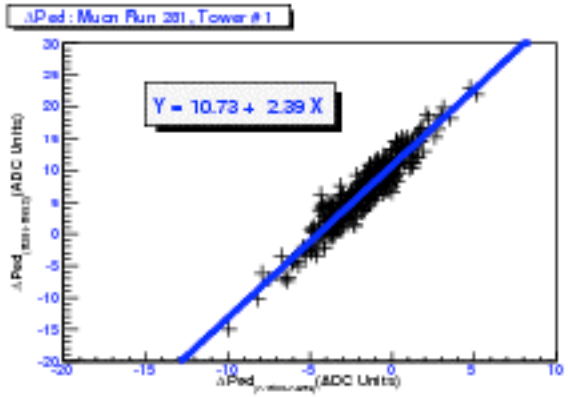


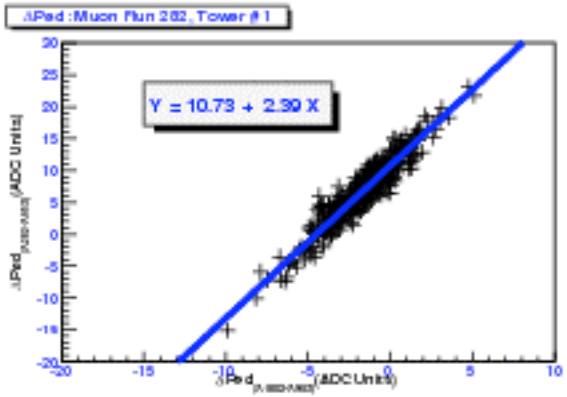


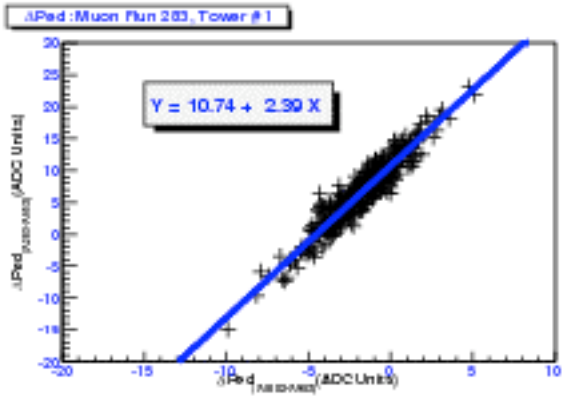


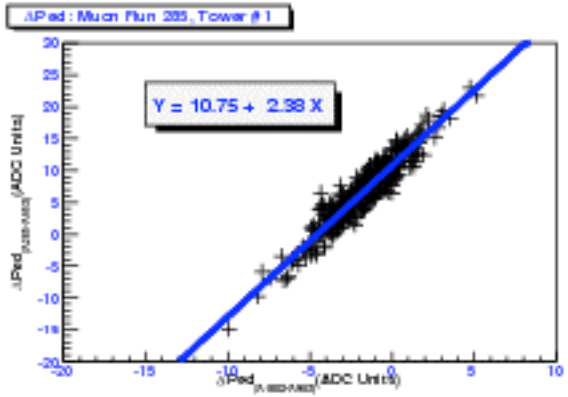


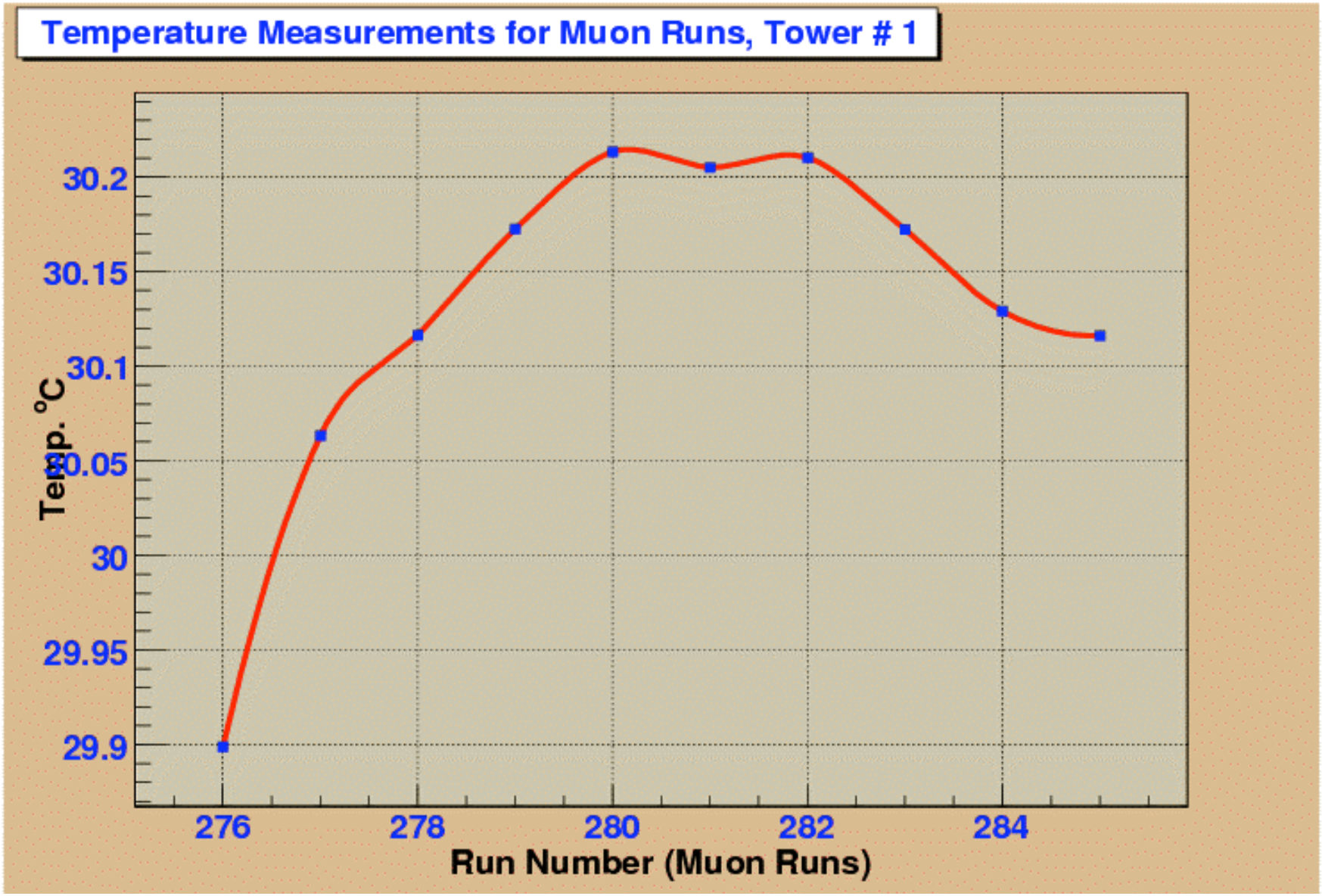




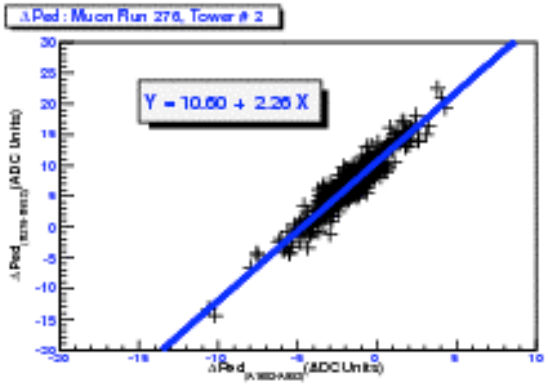


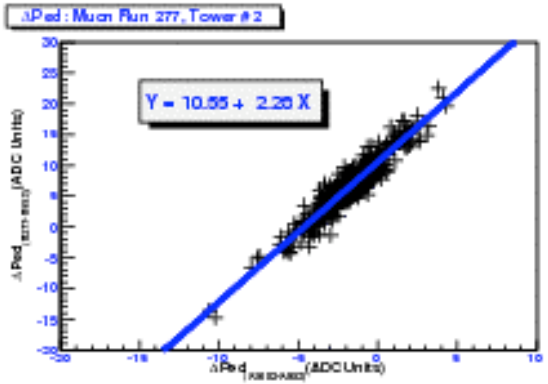


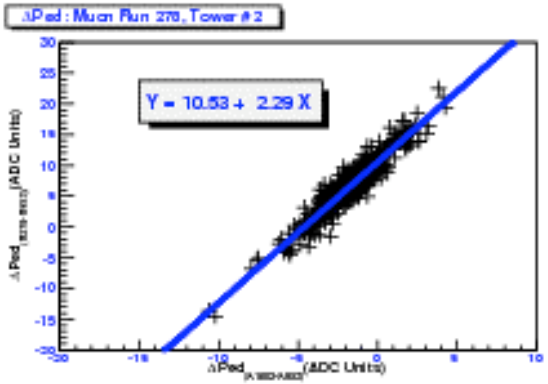


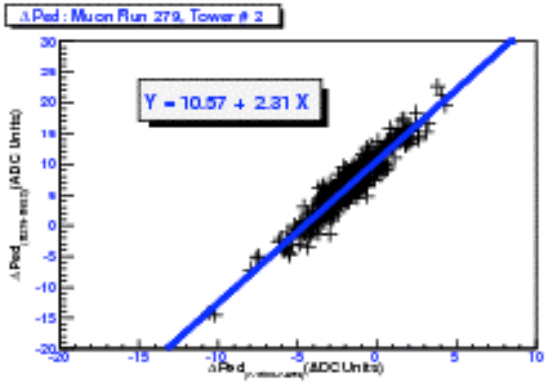

Temperature Measurements for Muon Runs, Tower # 1
30.2
30.15
30.1
30.05
30
29.95
29.9
Temp. °C
276
278
280
282
284
Run Number (Muon Runs)

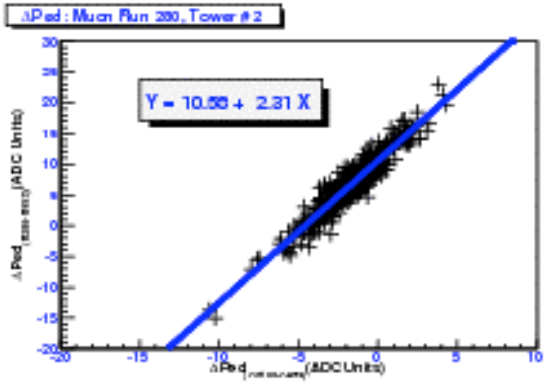
Distributions for Tower 2

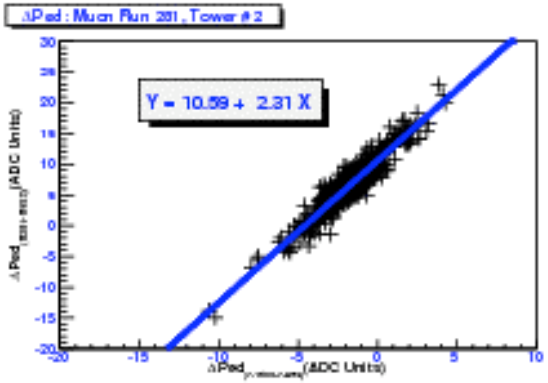


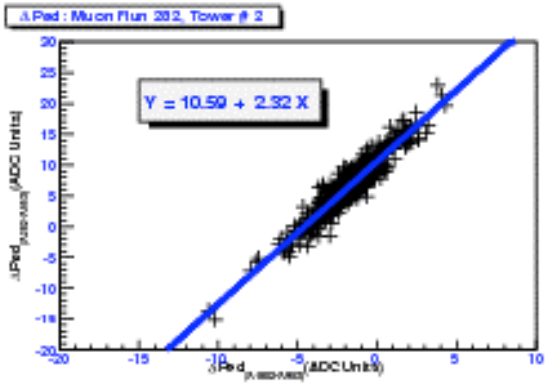


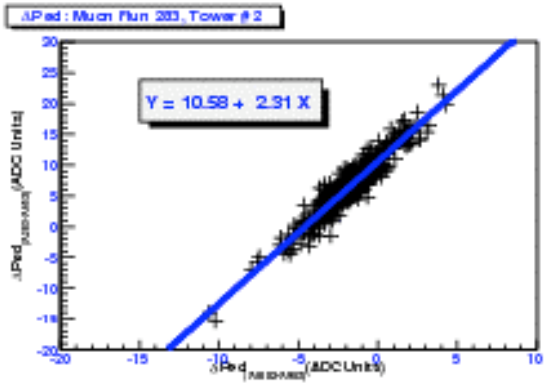


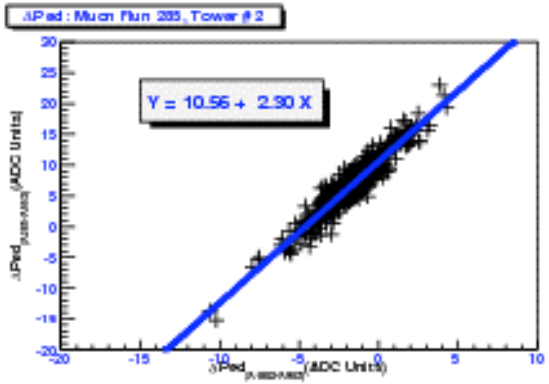


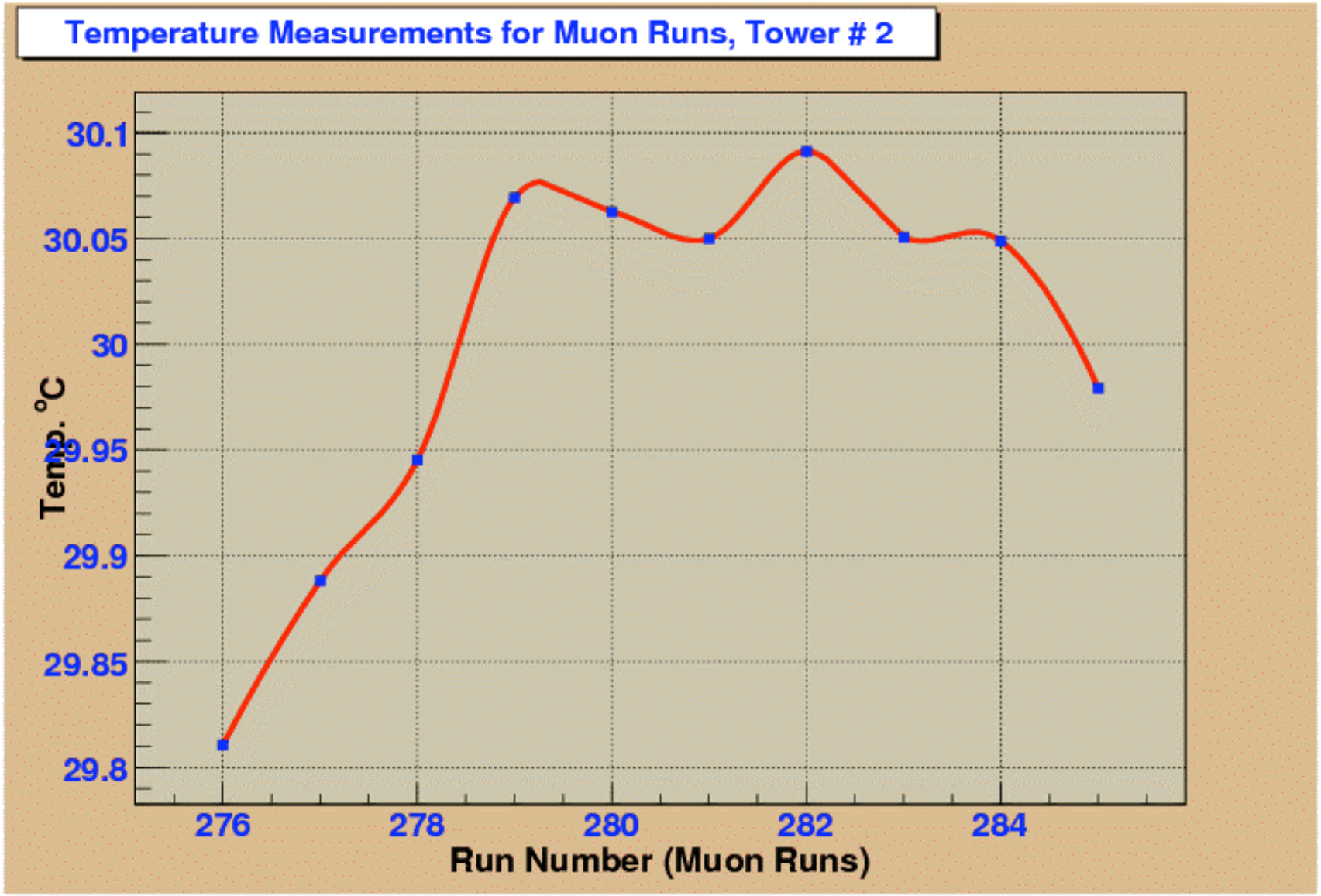











Temperature Measurements for Muon Runs, Tower # 2
30.1
30.05
30
29.95
29.9
29.85
29.8
Temp. °C
276
278
280
282
284
Run Number (Muon Runs)

Check the procedure on runs with known temperatures

Run Number	Temperature Est. Tower 1	Temperature Tower 1
1165	23.05	23.1
1191	21.7	21.8
1198	23.9	23.9
1569	23.9	24.1

Run Number	Temperature Est. Tower 2	Temperature Tower 2
1281	20.5	20.4
1348	21.98	21.8