

# Analysis of Peak Height to Pedestal RMS

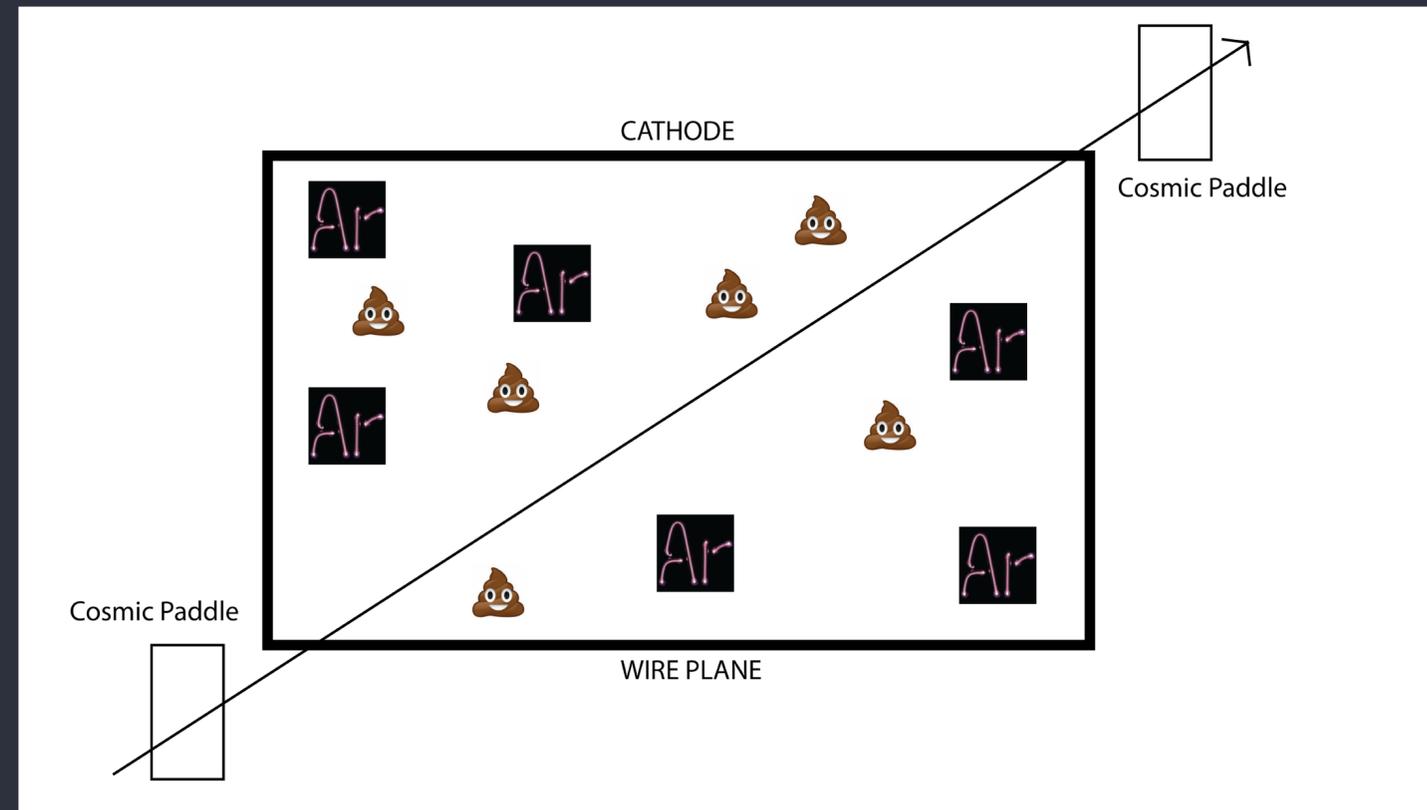
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## Signal To Noise Ratio

In order to measure how the signal information has been lost over time due to liquid argon impurities. As the impurity increases, we want to see how the signal to noise ratio shifts.

In order to use relevant data, we filtered data to find only Minimally Ionizing Particles (MIPs) that cross both the cathode and wire planes. This is so we can compare the signal from near the anode and near the cathode. Signals near the cathode travel through more of the liquid argon and have a higher chance of being absorbed by the impurities.

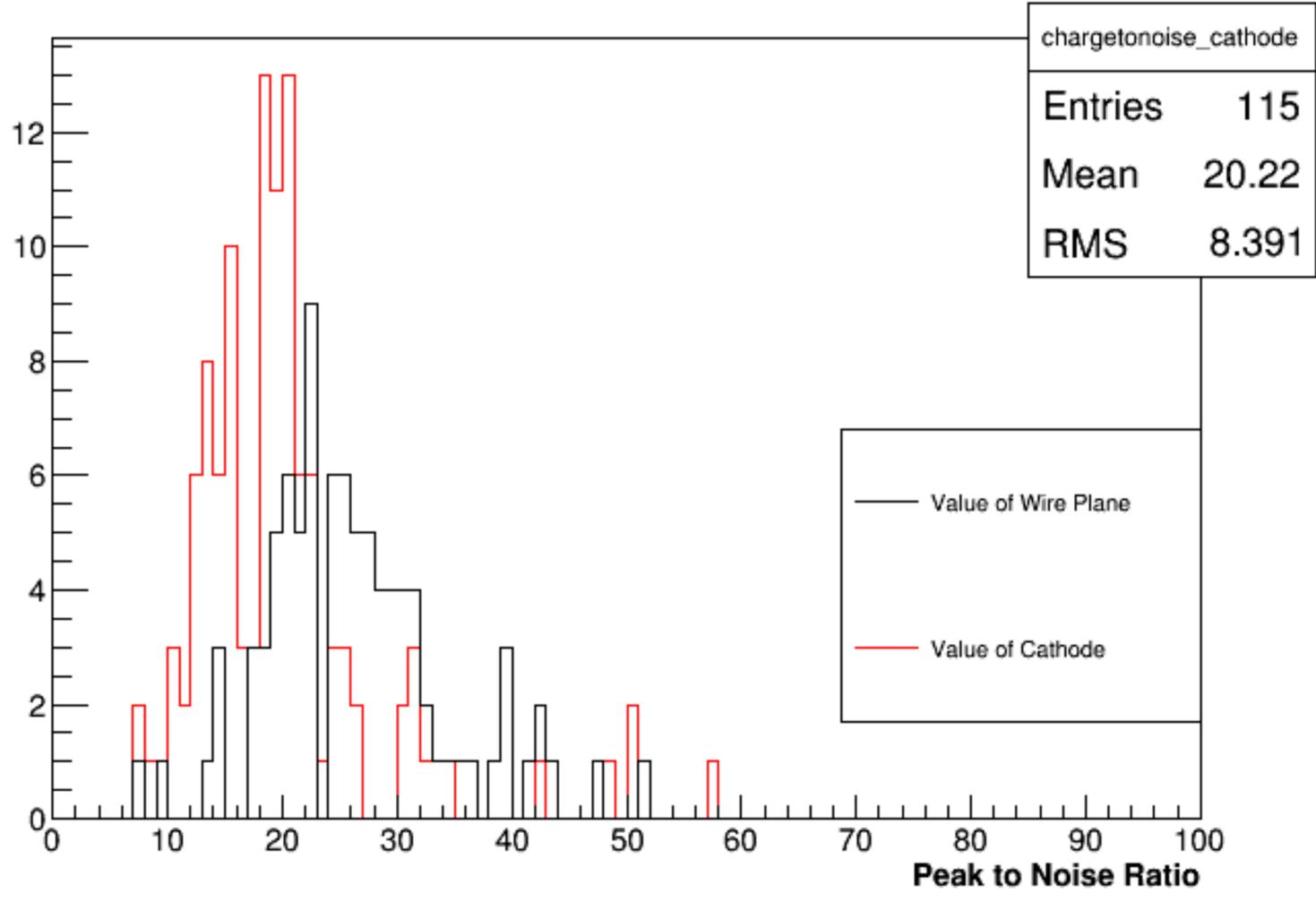




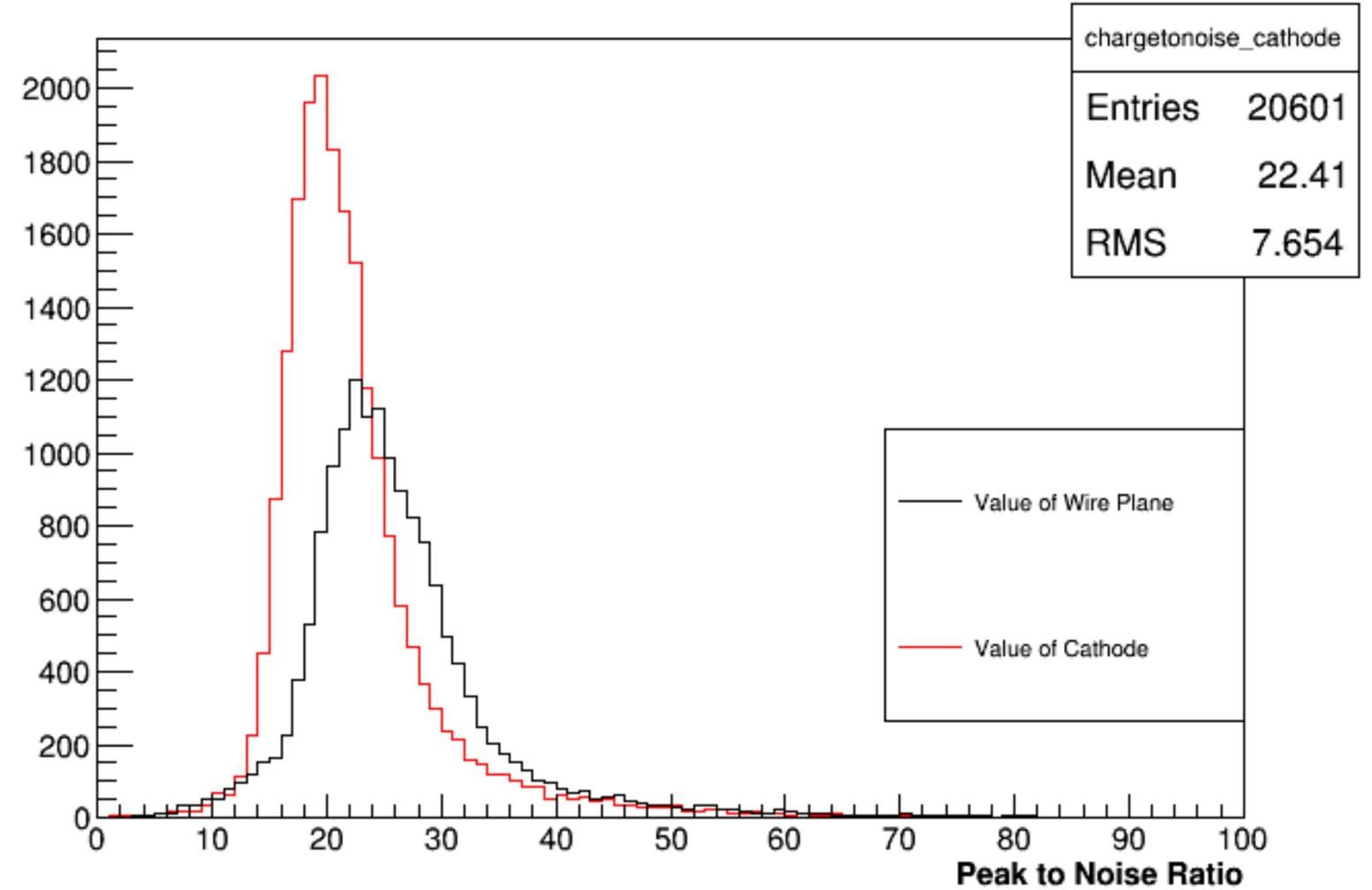
# High Purity Run Data



### Peak Height to Pedestal RMS, run8564-8582 (High Purity)



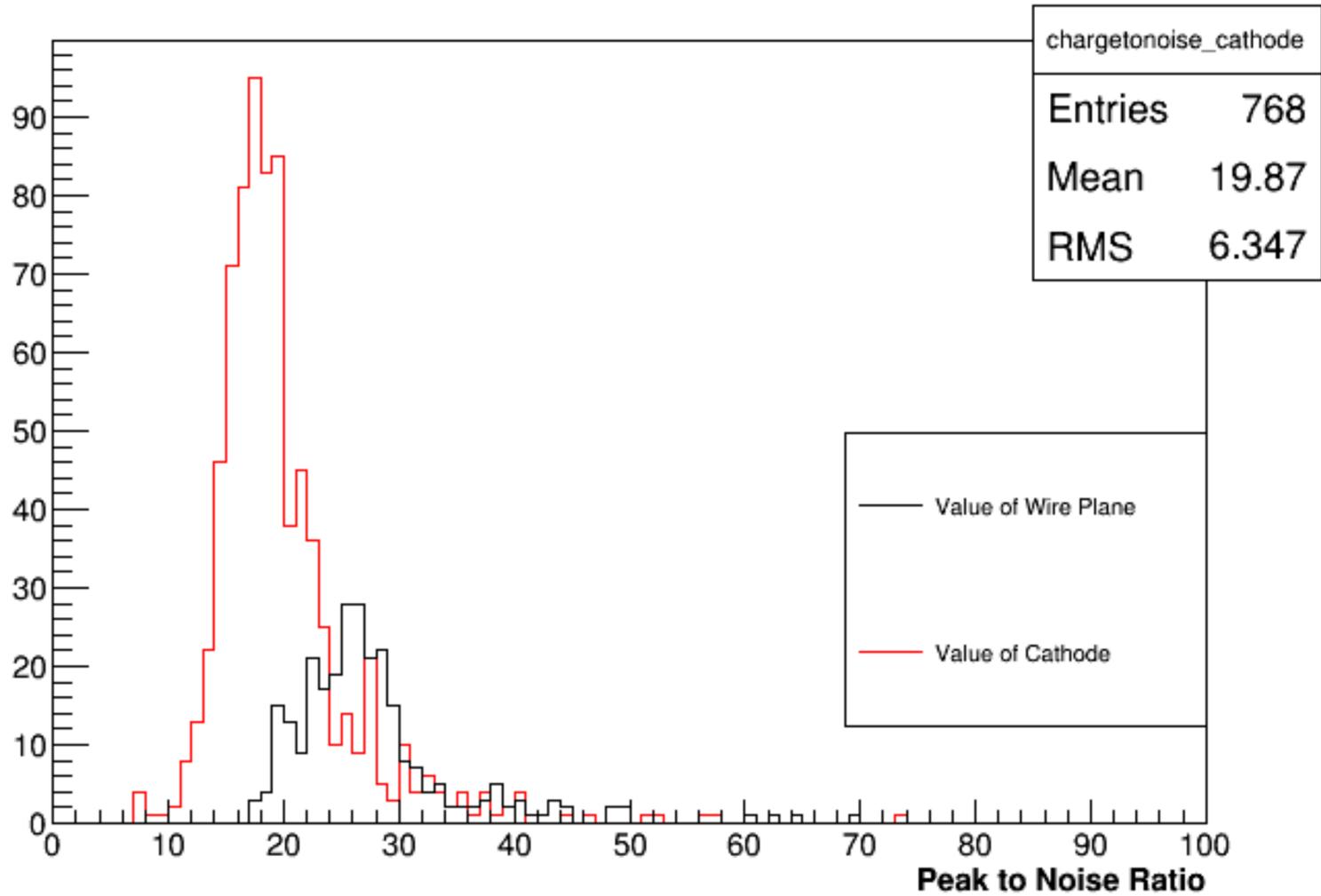
### Peak Height to Pedestal RMS, run8723-8735 (High Purity)



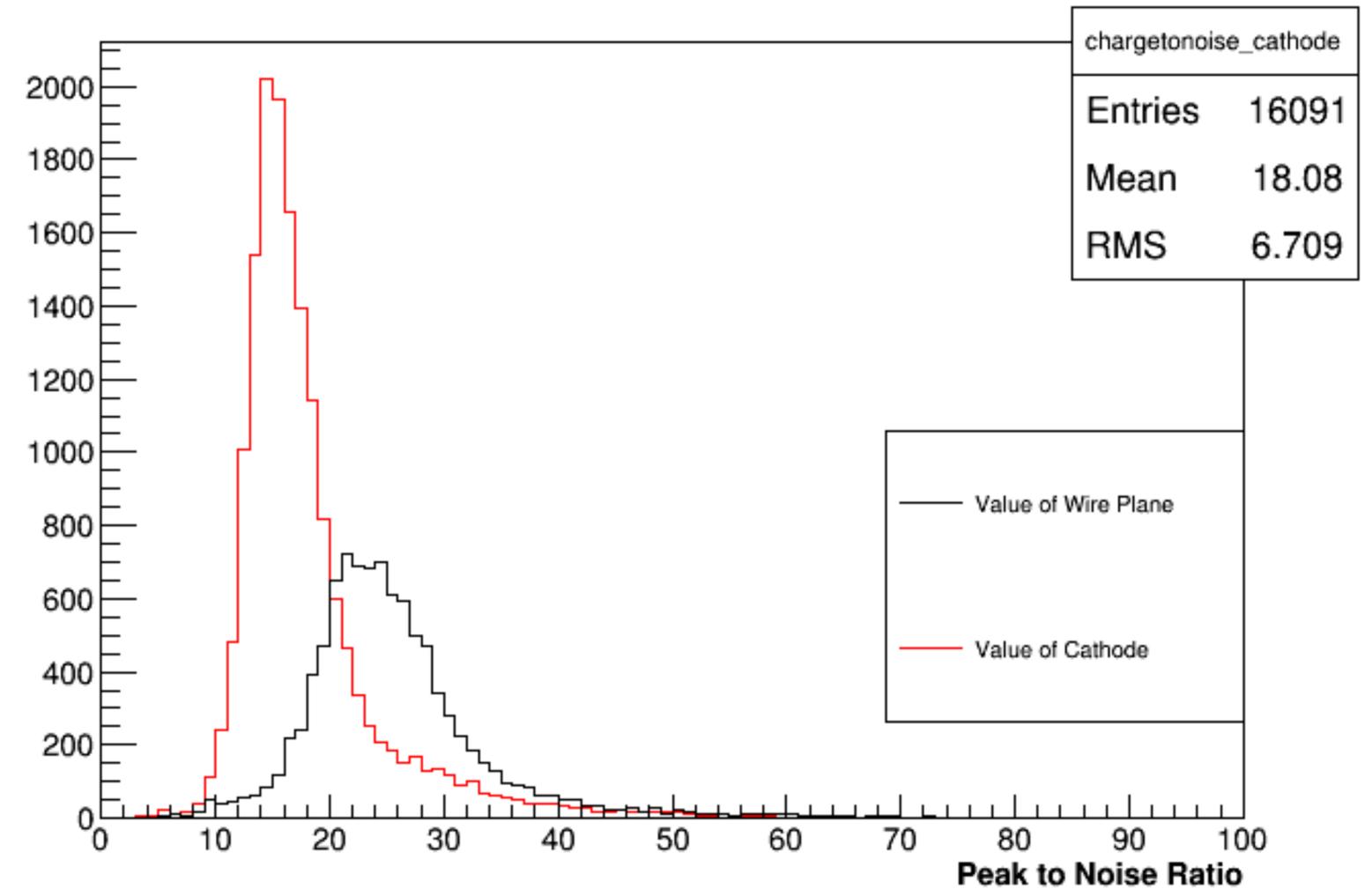


# Medium Purity Run Data

### Peak Height to Pedestal RMS, run9278-9281 (Middle Purity)



### Peak Height to Pedestal RMS, run9293-9306 (Middle Purity)

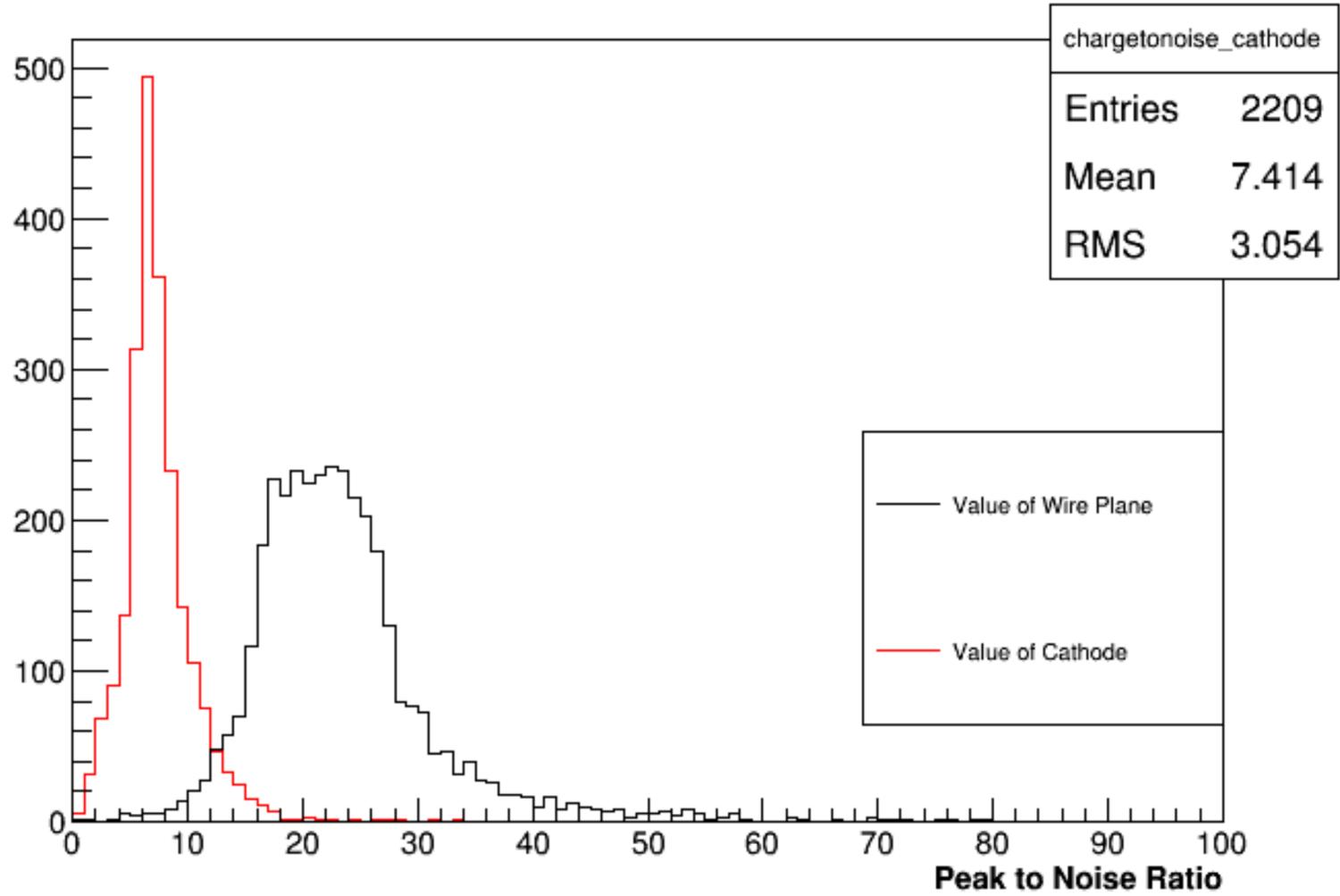




# Low Purity Run Data



Peak Height to Pedestal RMS, run9762-9779 (Low Purity)



Peak Height to Pedestal RMS, run9780-9790 (Low Purity)

