

# Prad Calibration

PRad weekly meeting

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50 Calibration runs (snake scan runs)

[ 889 890 893 894 895 896 916 918 919 923 ]

[ 924 925 926 927 928 929 932 933 934 935 ]

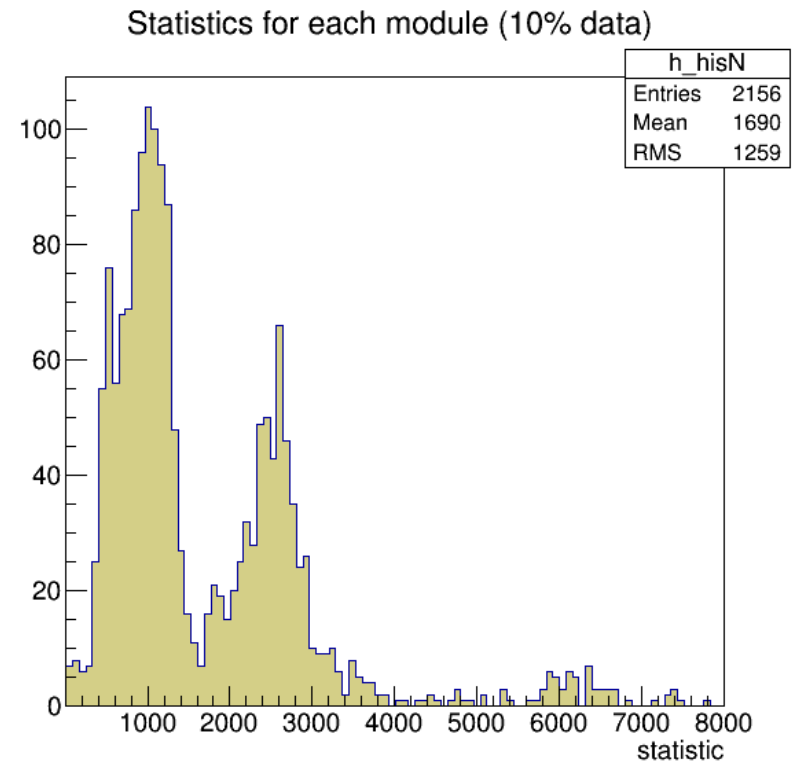
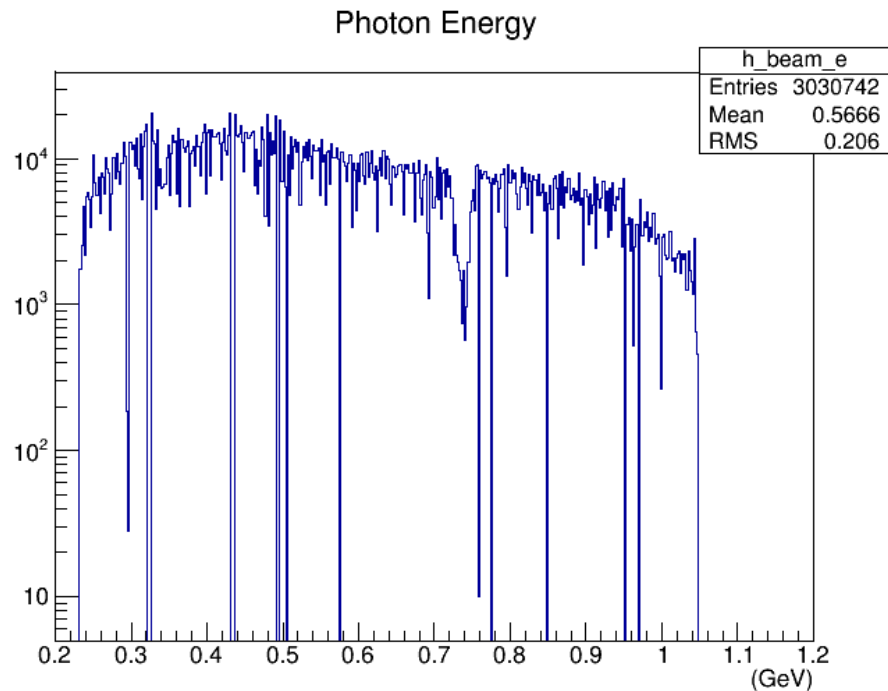
[ 946 947 948 949 950 951 952 953 955 956 ]

[ 957 958 960 961 962 965 966 967 968 969 ]

[ 970 971 972 973 974 975 976 977 978 979 ]

Dead channels : G16 G107 G900 W835

Electron beam energy 1.1 GeV photon beam energy 0.22GeV ~ 1.05GeV

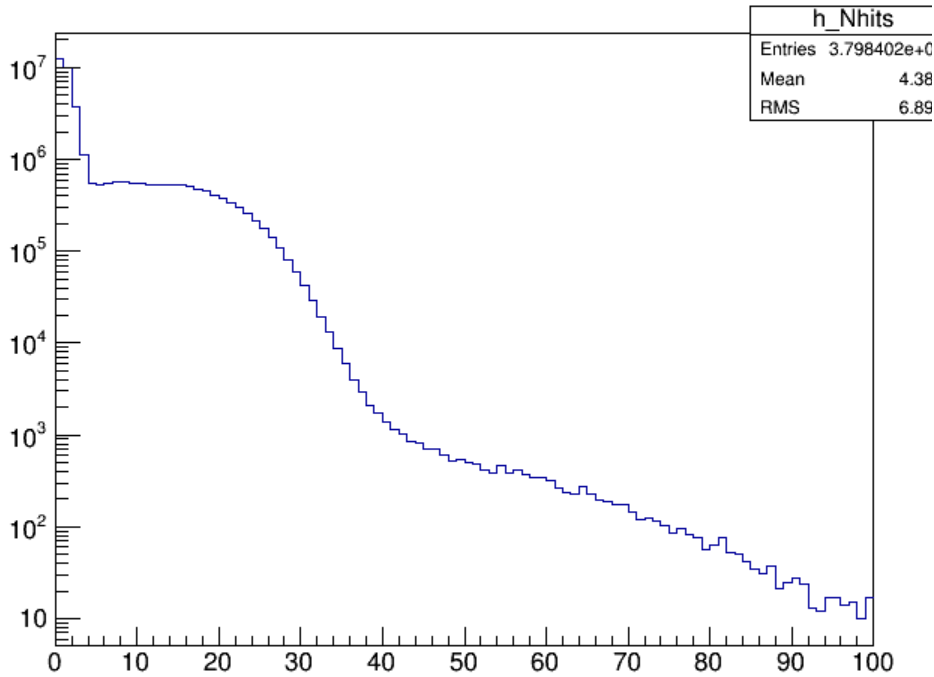


Cuts used :

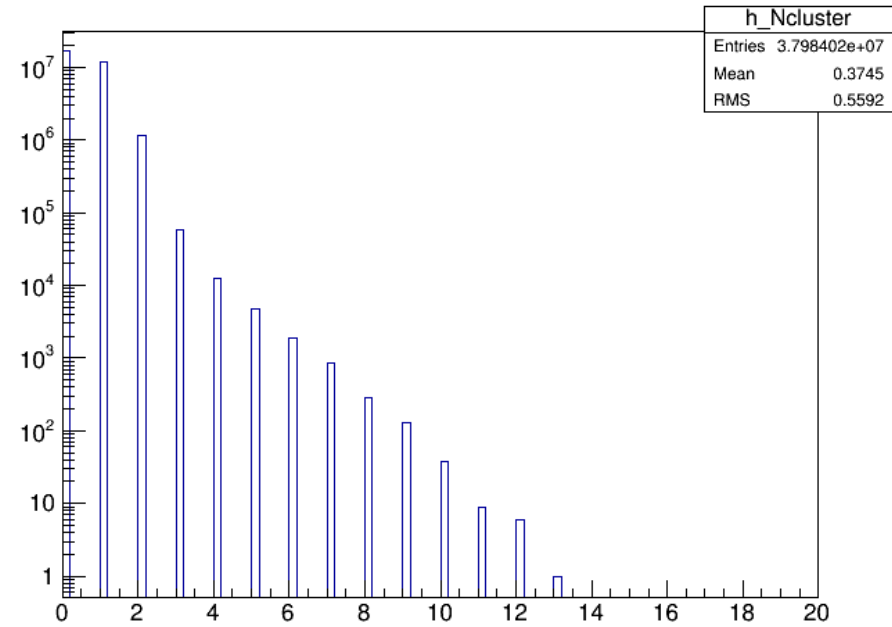
Nhits > 100

Ncluster > 3

Number of hits



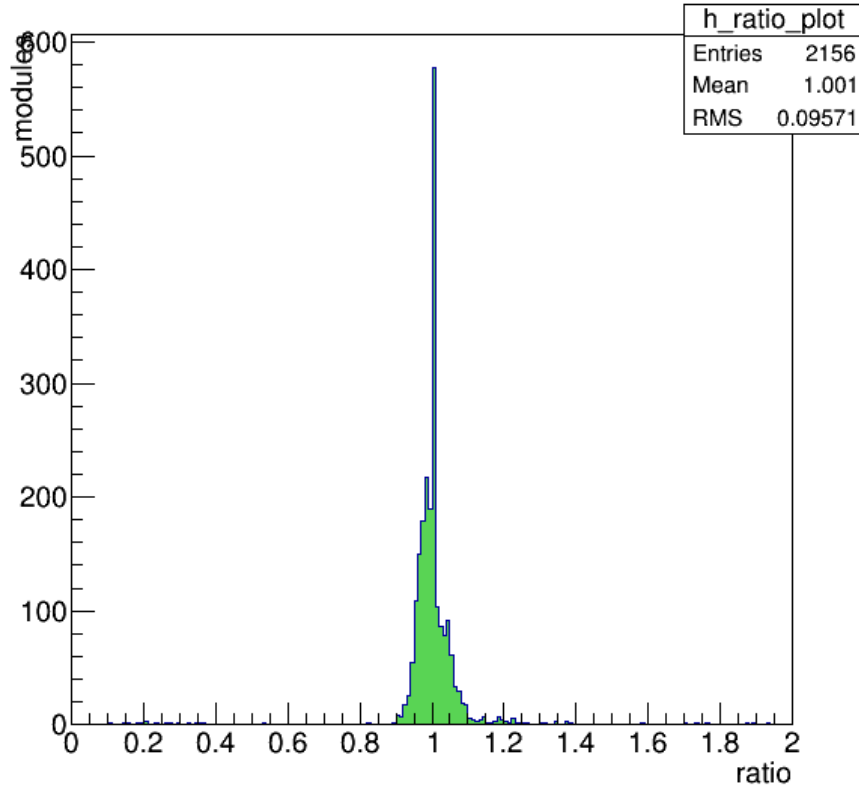
Number of clusters



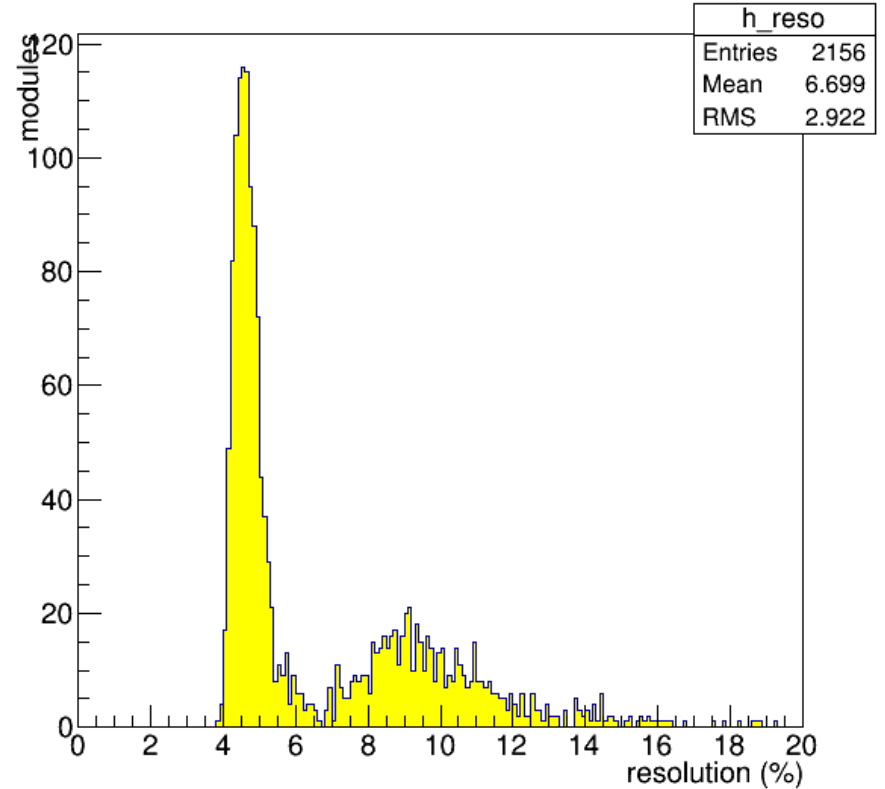
Start with 10% data ( only read event.id%10 = 0 )

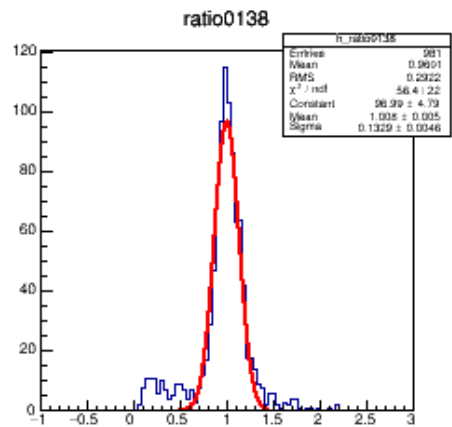
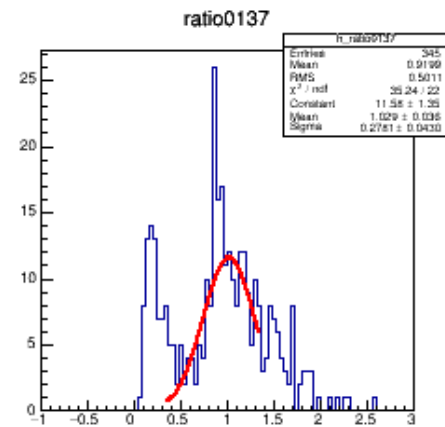
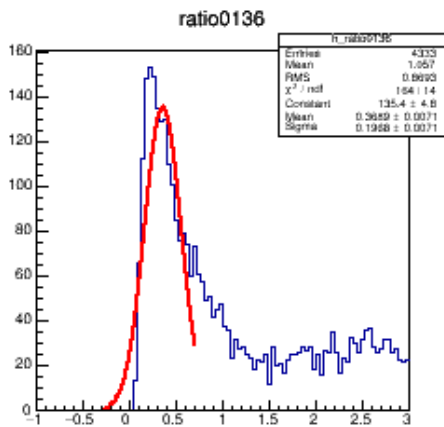
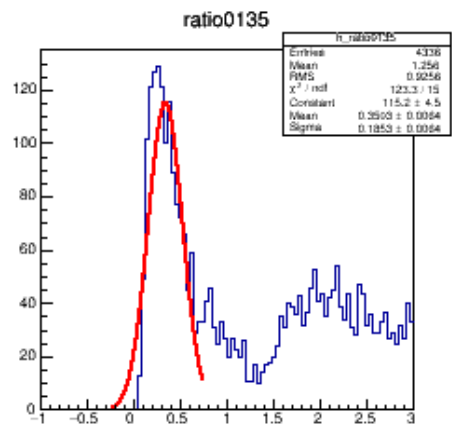
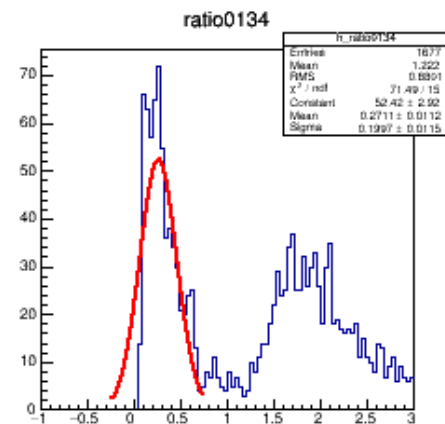
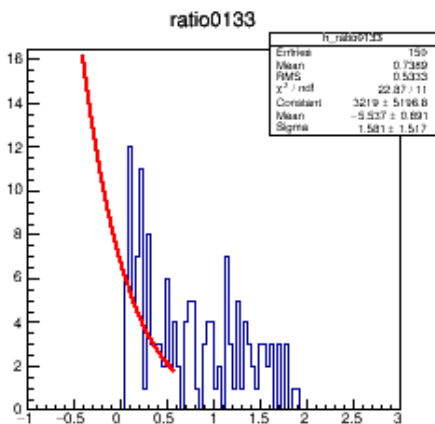
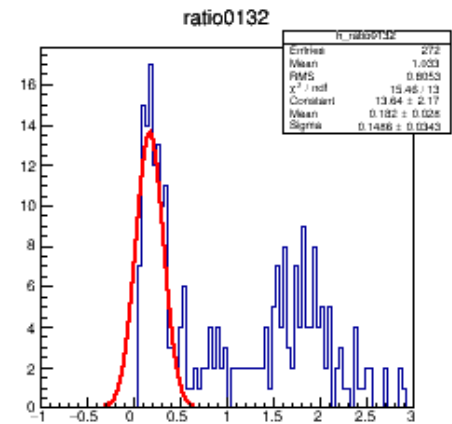
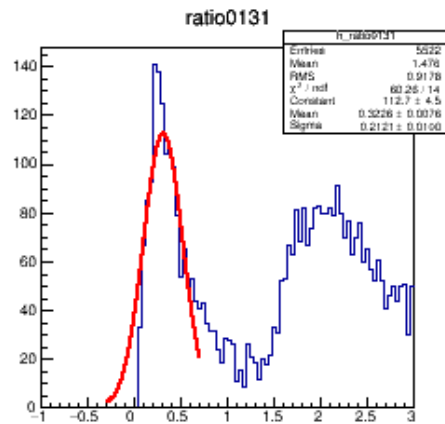
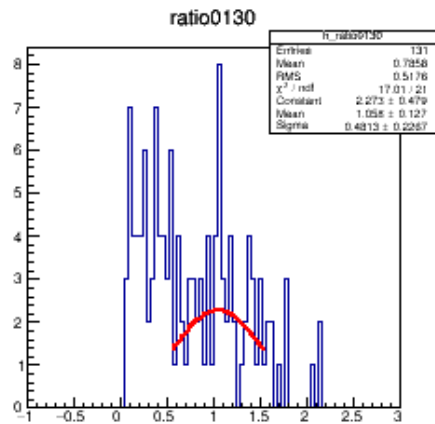
Calculate ratio =  $e_{\text{rec}} / e_{\text{photonbeam}}$  .

ratio =  $e_{\text{rec}} / e_{\text{beam}}$  (Round1)



Energy Reconstruction Resolution (Round1)



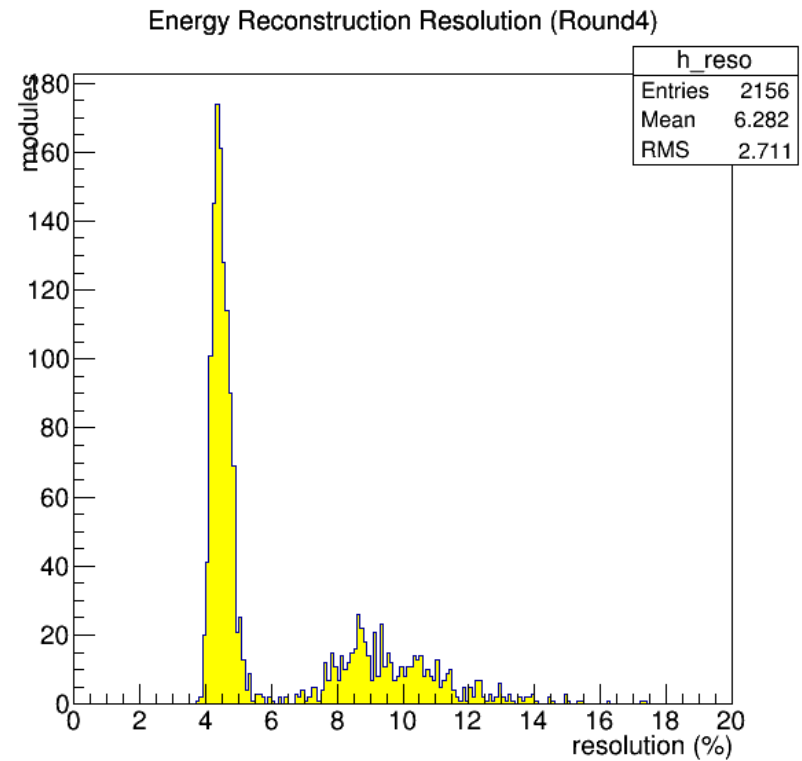
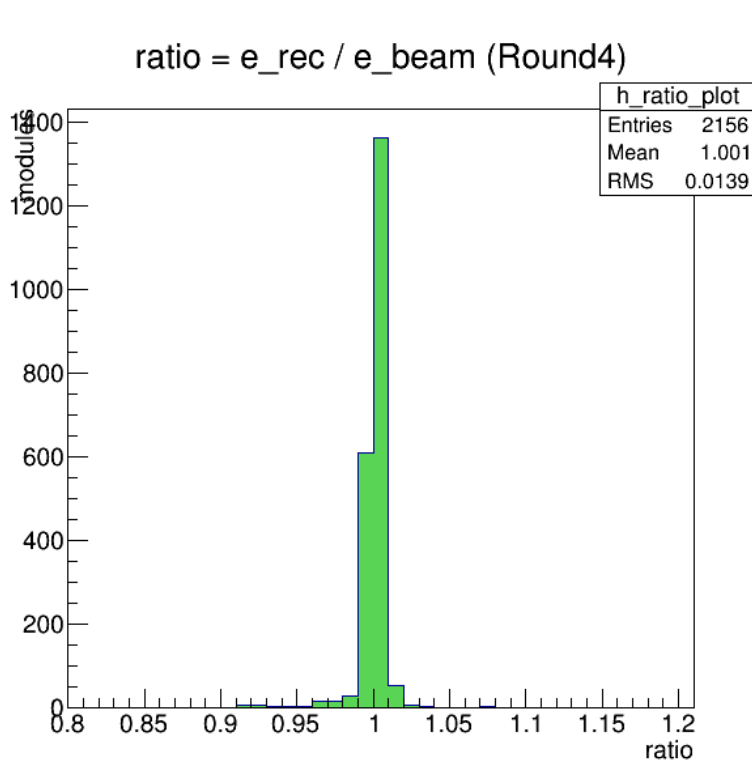


Find mean value of ratio for each module:

ratio\_val[i], where i=module.id

new\_gain[i] = old\_gain[i]/ratio\_val[i].

Then next round ...



Till good enough then do different energy bins get :

ratio[ebin][i] → new\_gain[ebin][i] → fit → gain function ( gain[e] = a \* e + b )