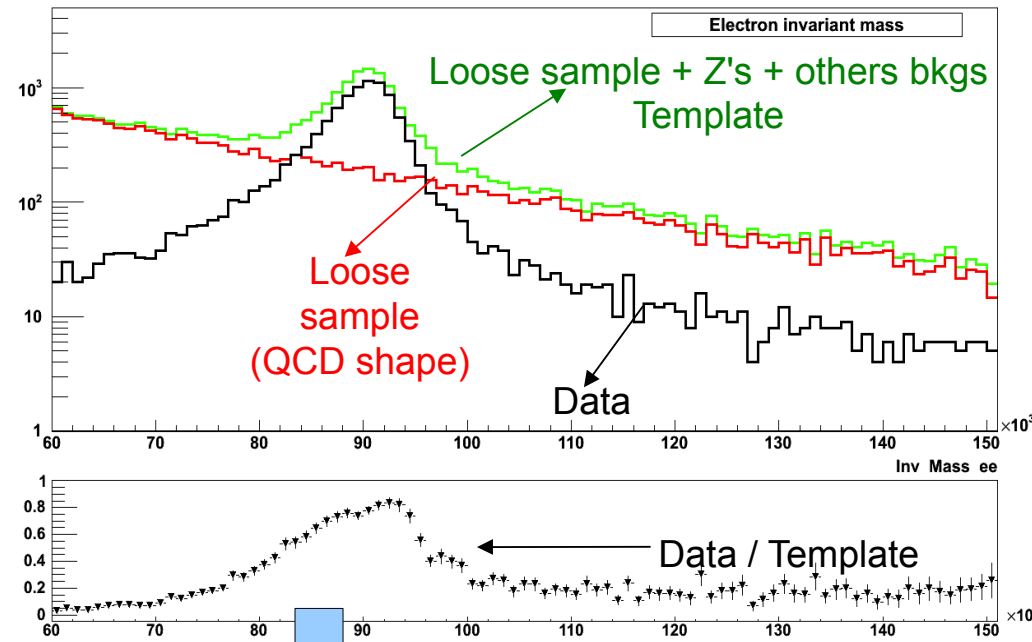


# QCD background estimation: Dielectron invariant mass

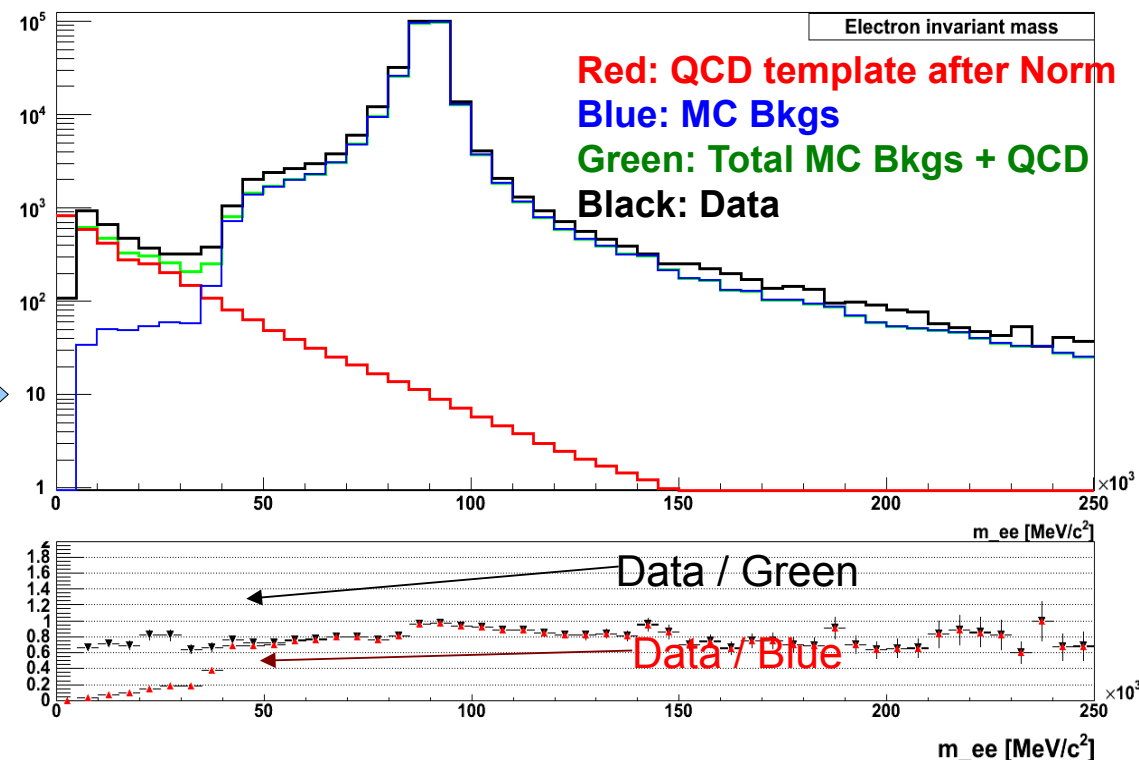


The **QCD Template** is obtained using the standard electron triggers into the analysis “just” with LOOSE quality.

Method used over the Invariant mass of the dielectron inclusive AND after  $\geq 2$  jets requirement, to check its consistency.

$$\text{Norm\_Factor} = (\# \text{Data} / \# \text{QCD}) * \text{Fraction}$$

$$\text{Norm\_Factor} = 0.214 \pm 0.006$$



```

FCN=-5.56736e+06 FROM MIGRAD STATUS=CONVERGED 80 CALLS refittedTr81 TOTAL
11 EDM=8.02104e-06 STRATEGY= 1 ERROR MATRIX ACCURATE
EXT PARAMETER are also var STEP FIRST
NO. NAME VALUE ERROR SIZE DERIVATIVE
1 frac0 1.08940e-02 2.80331e-04 4.39585e-03 -1.02923e+00
2 frac1 9.89104e-01 2.65300e-03 4.31835e-03 -2.56144e-01
ERR DEF= 0.5
EXTERNAL ERROR MATRIX. NDIM= 25 NPAR= 2 ERR DEF=0.5
PARAMETER CORRELATION COEFFICIENTS
NO. GLOBAL 1 2
1 0.04405 1.000 -0.044
2 0.04405 -0.044 1.000
***** TH1F *data
** 4 **CALL FCN TH1F *mc3
***** TH1F *mc1
***** TH1F *mc2
***** TH1F *mc4
fit status:
# of data events 294652.0
# of QCD events 15006.7231741
mc->Add(mc3)
mc->Add(mc1)
mc->Add(mc2)
mc->Add(mc4)
  
```

**TFractionFitter Tool**  
(To obtain the Fraction)