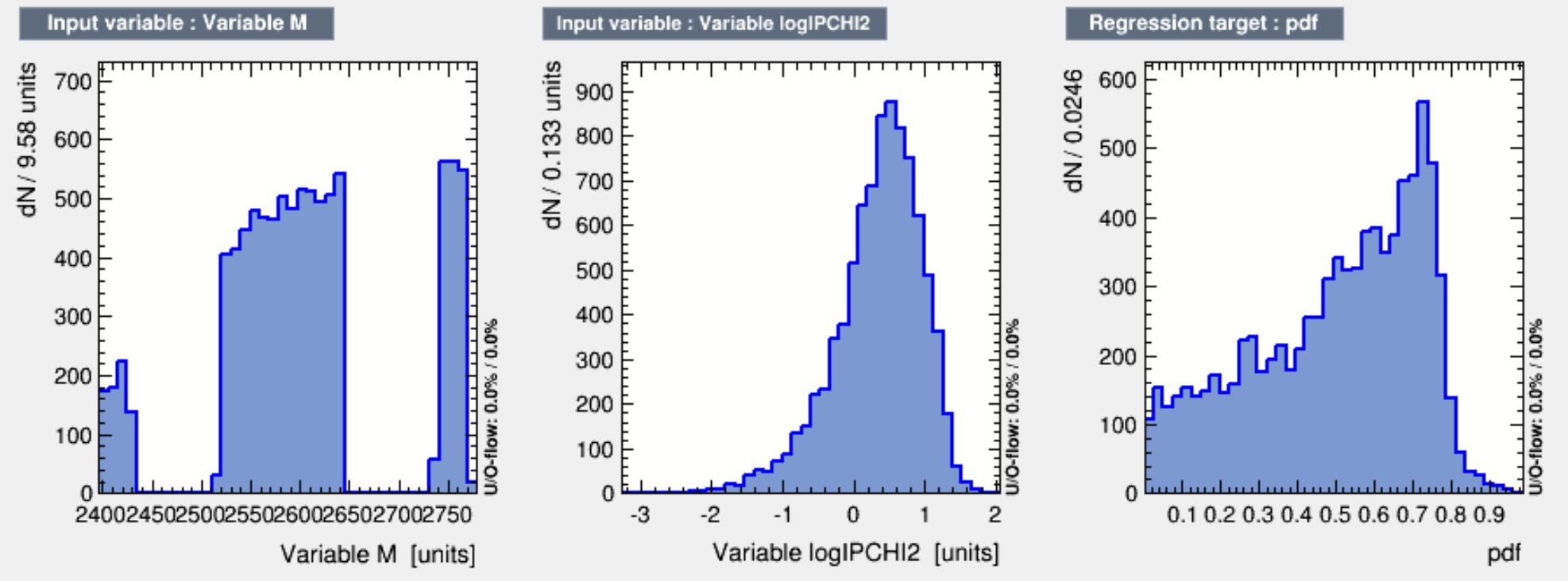
组会报告

敖冬

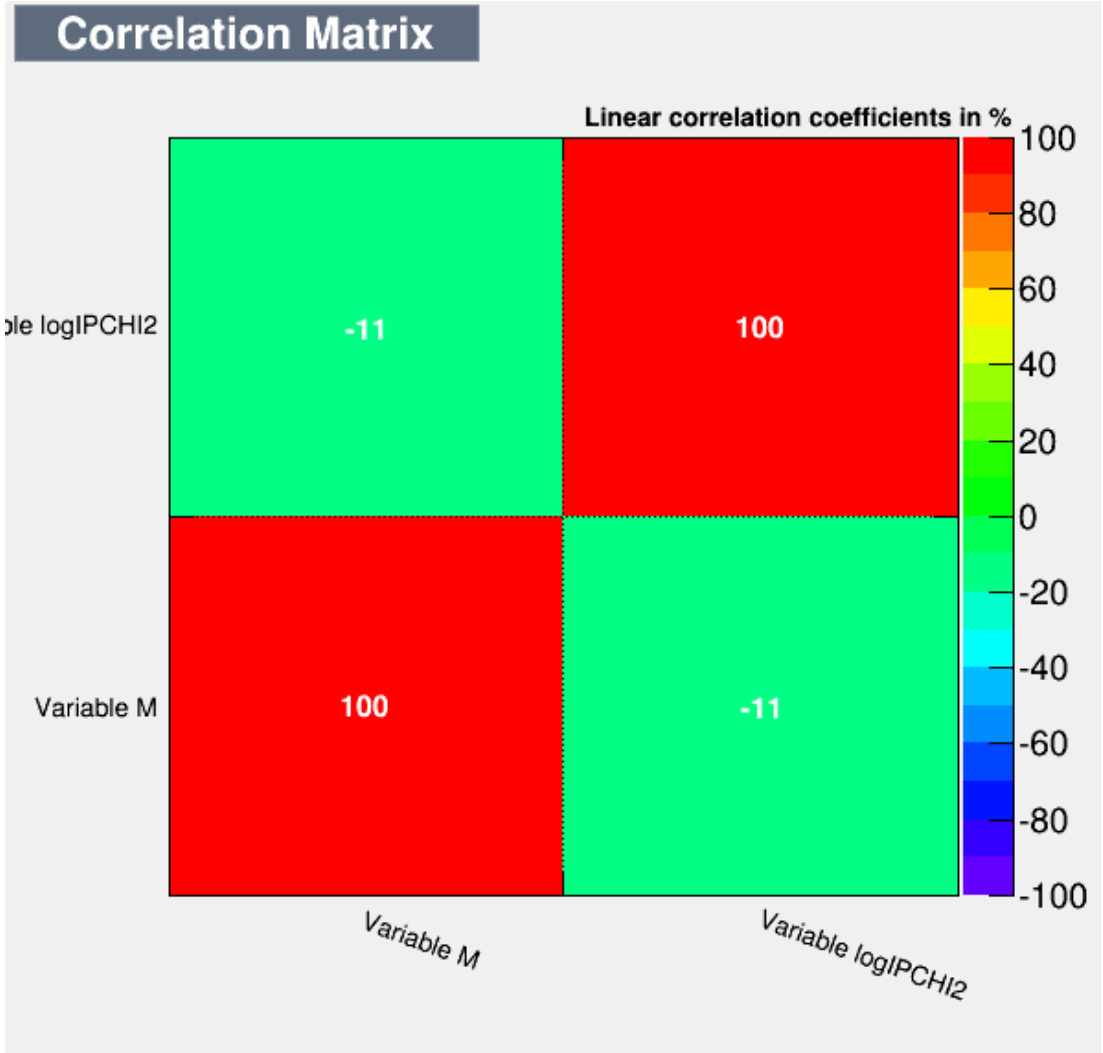
Modeling $P(\log(\chi^2_{IP})\,|M)$

- Use TMVARegression method
- $P(\log(\chi^2_{IP})\,|M) = \frac{P(\log(\chi^2_{IP}),M)}{P(M)}$
- Get $P(\log(\chi^2_{IP})\,, M)$ and $P(M)$ using RooNDKeysPDF and RooKeysPdf
- Using $\log(\chi^2_{IP})$ and M as input variables for training , $P(\log(\chi^2_{IP})\,|M)$ as regression target.

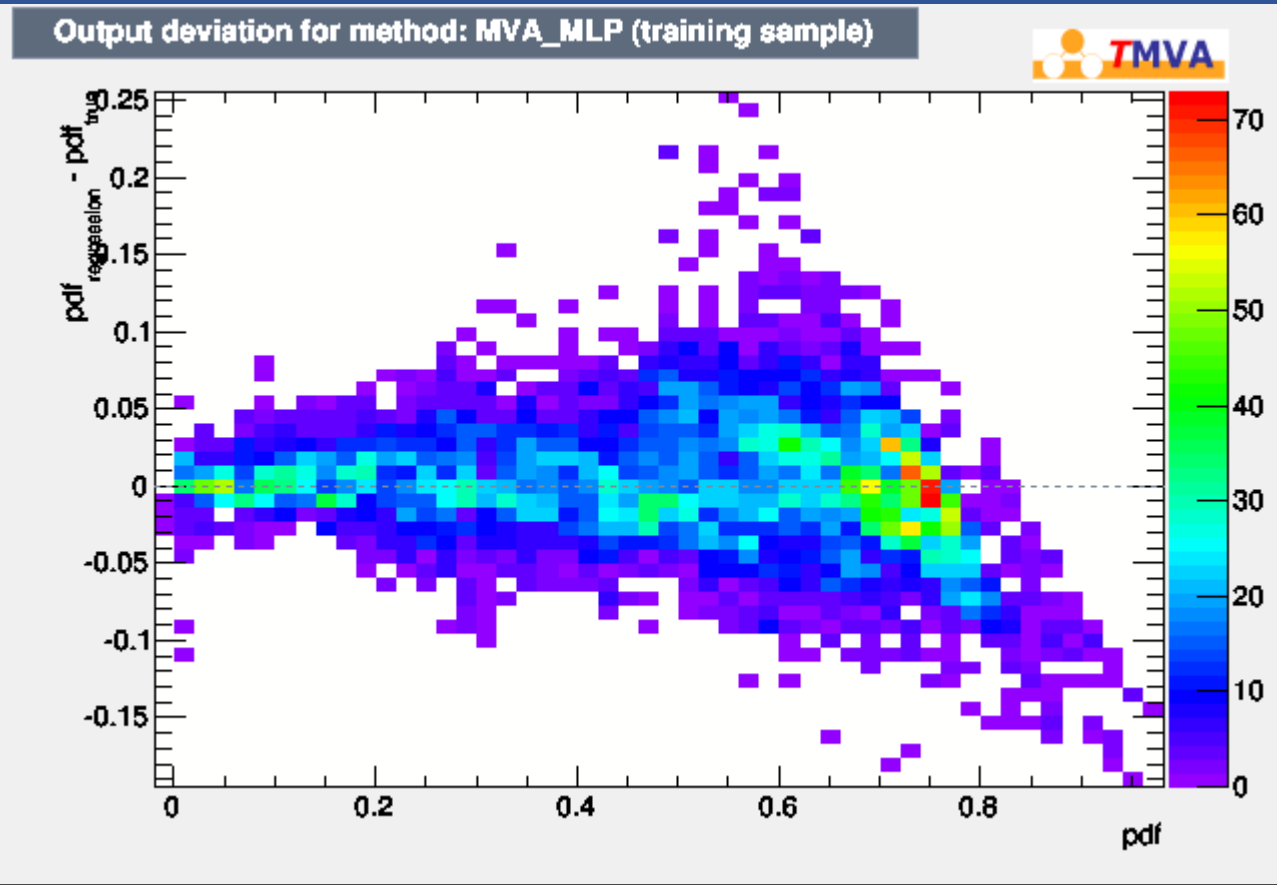
Input variables

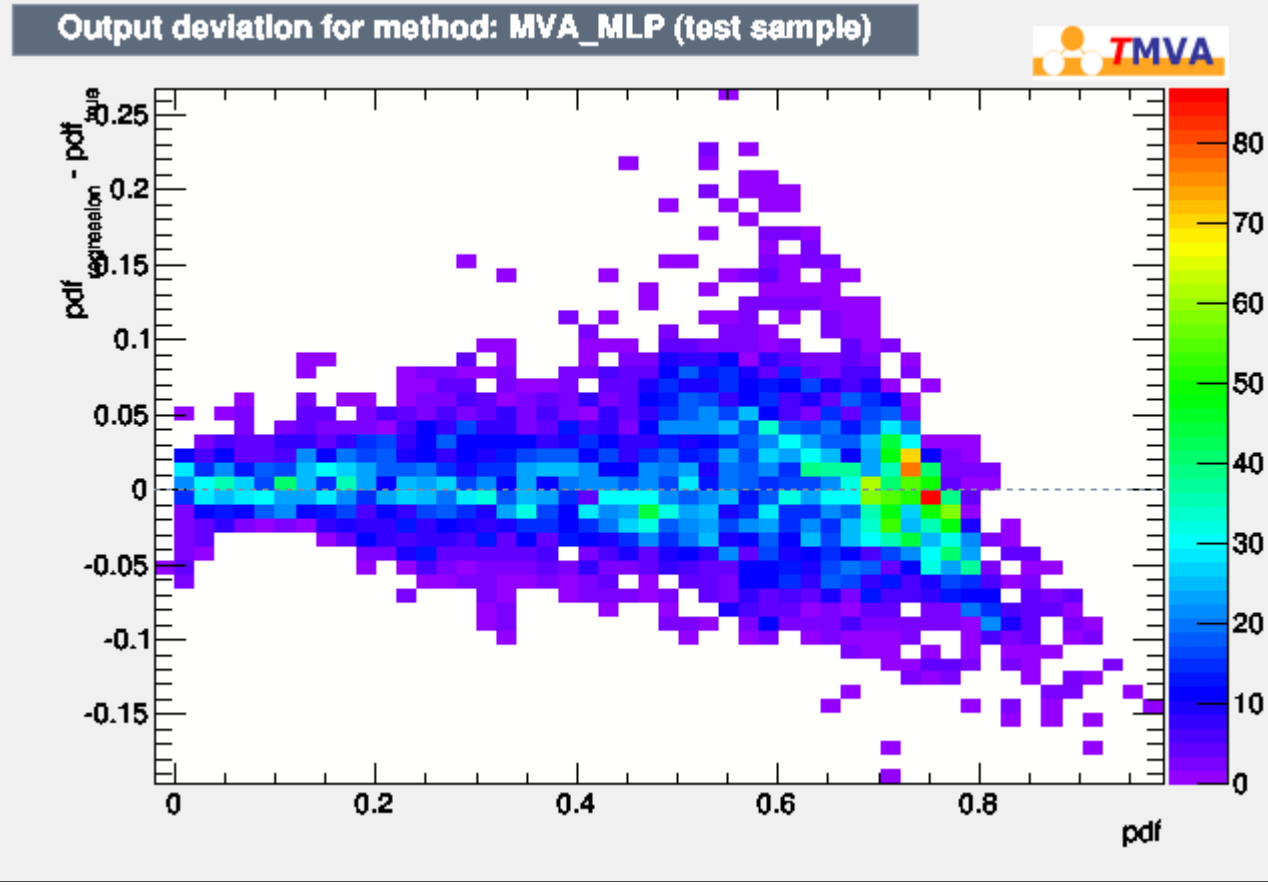


Correlation



$pdf_{regression} - pdf_{true}$

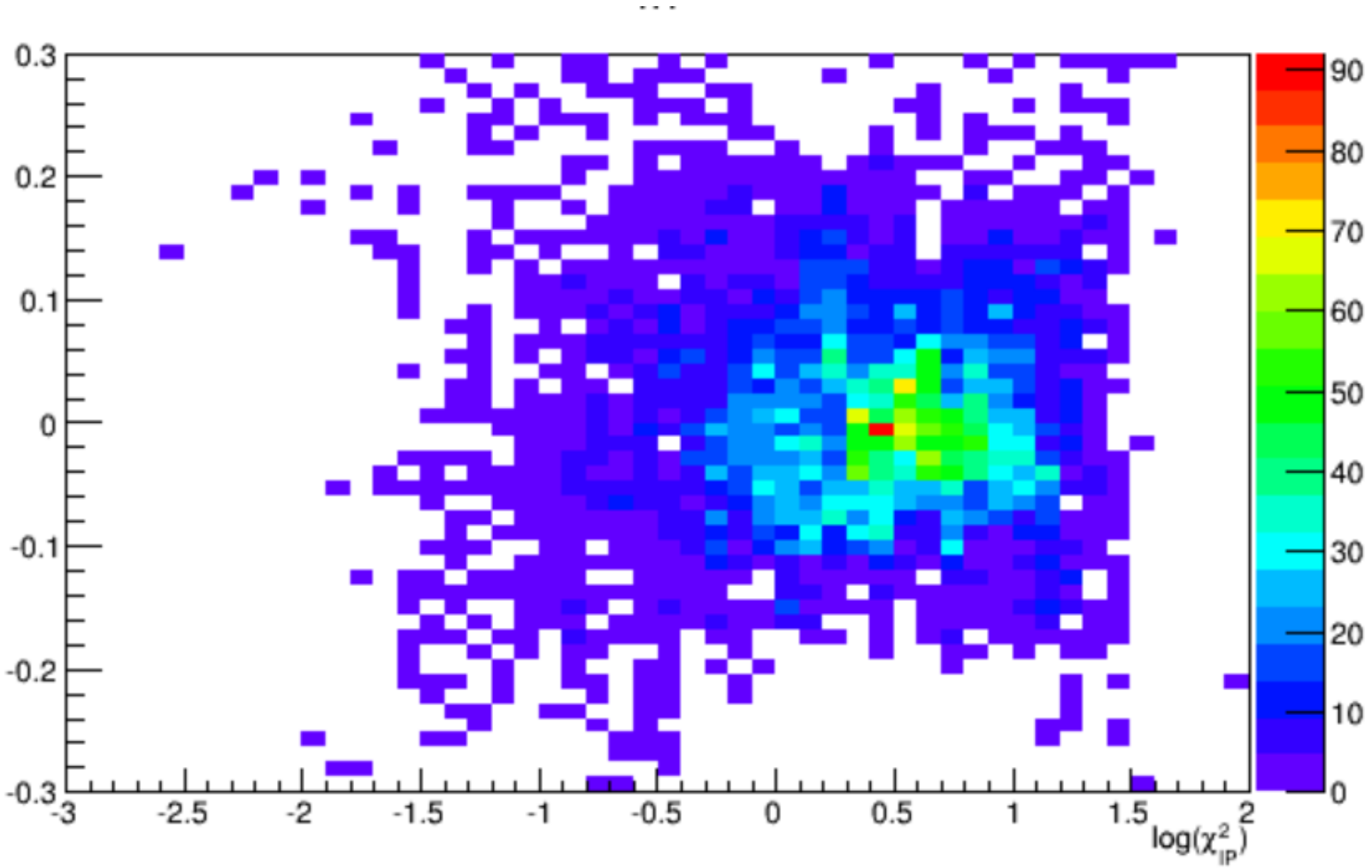




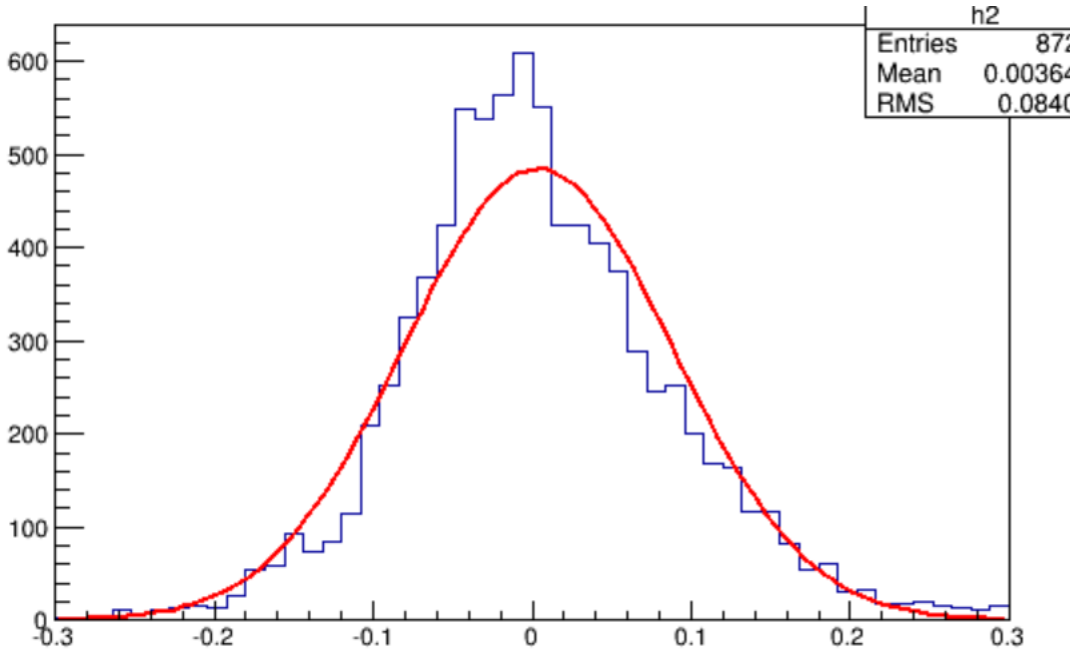
Problem

- $P(\log(\chi^2_{IP}) \,|M)$
- Meet some problem binding this external function as a p.d.f. in RooFit

X- $\log(\chi^2_{IP})$,Y-$(pdf_{regression} - pdf_{true})/pdf_{true}$



$(pdf_{regression} - pdf_{true})/pdf_{true}$




```
FCN=222.594 FROM MIGRAD    STATUS=CONVERGED      65 CALLS          66 TOTAL
                     EDM=1.5597e-09    STRATEGY= 1      ERROR MATRIX ACCURATE
 EXT PARAMETER                                   STEP         FIRST
 NO.   NAME      VALUE            ERROR          SIZE      DERIVATIVE
  1  Constant     4.84146e+02   6.44681e+00   5.40597e-02   6.89359e-06
  2  Mean         3.65293e-03   9.16056e-04   9.44830e-06   1.20302e-02
  3  Sigma        8.43978e-02   6.57681e-04   2.18134e-05   1.43646e-02
                               ERR DEF= 0.5
```

X- pdf_{true} ,Y-$(pdf_{regression} - pdf_{true})/pdf_{true}$