

HTness study status

2024. 07. 01

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- **Entry different issue: solved**

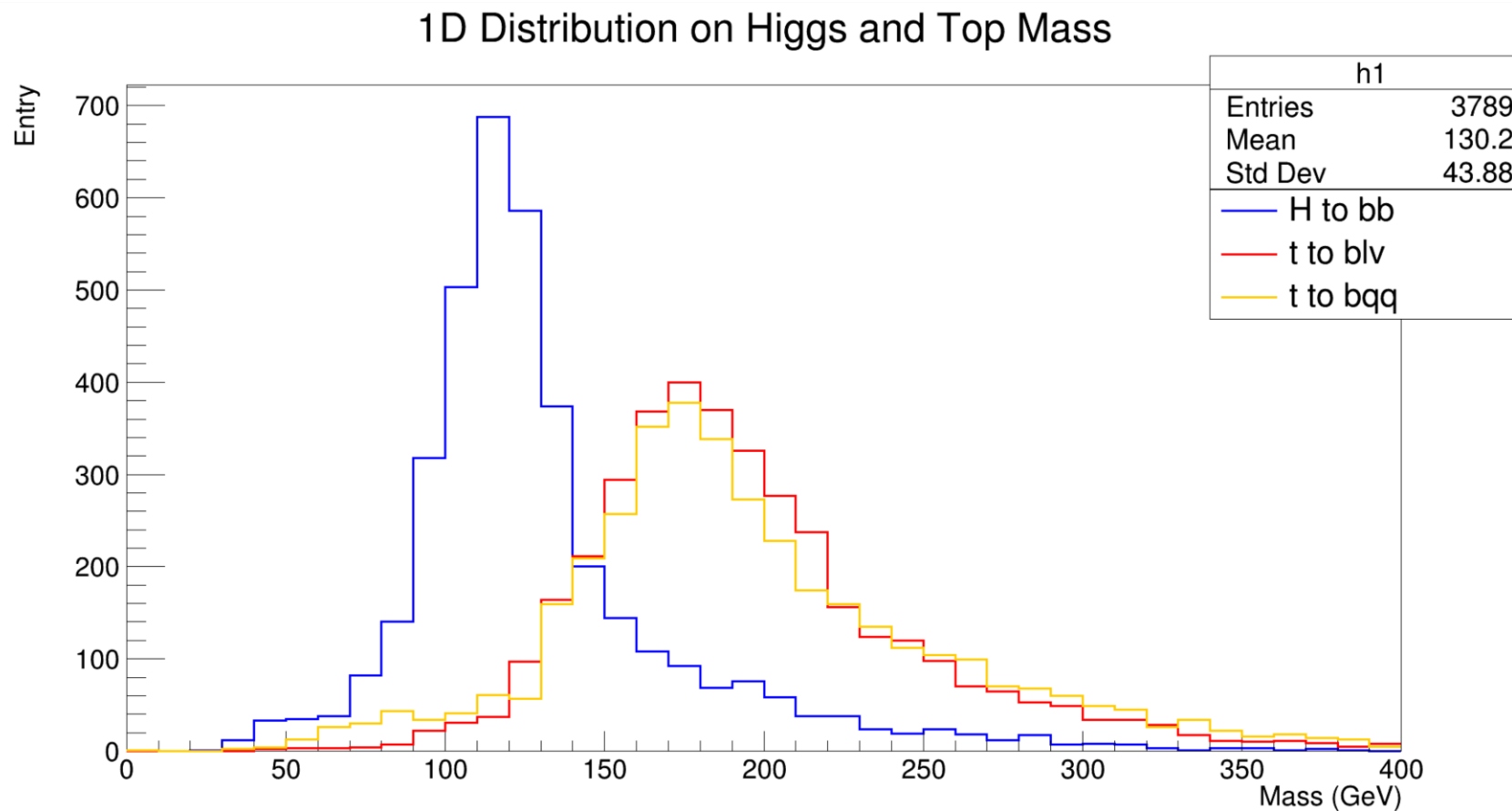
 - ➔ only select the same events that 100% reconstructed HH or tt included

- **Neutrino optimization function: in progress**

 - ➔ about top reconstruction

- **Additional issue: low quality of reconstruction of H to WW**

 - ➔ might be caused by less event selection



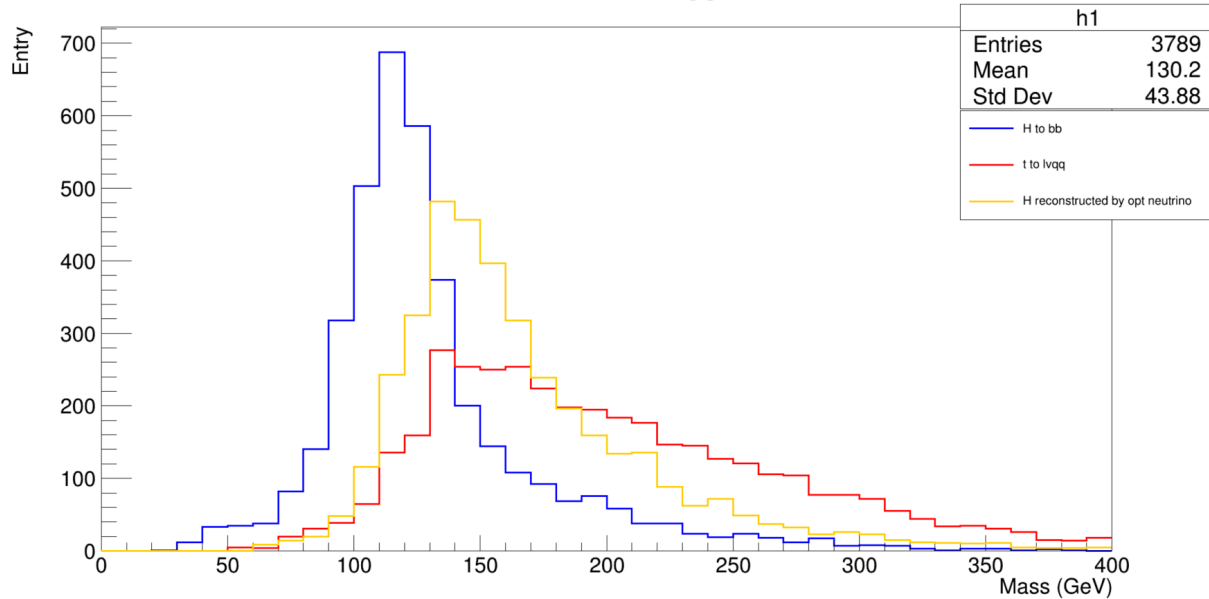
Before:

All of events selected even reconstruction failed

After:

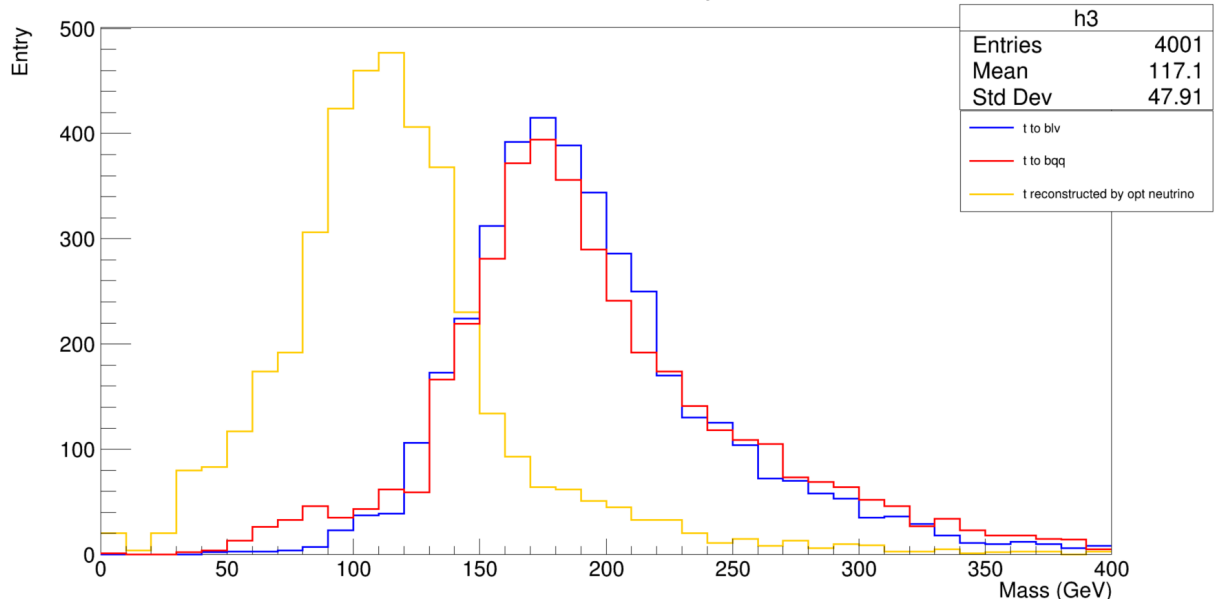
Only select the events exactly 100% succeed reconstructed object included

1D Distribution on Higgs Mass



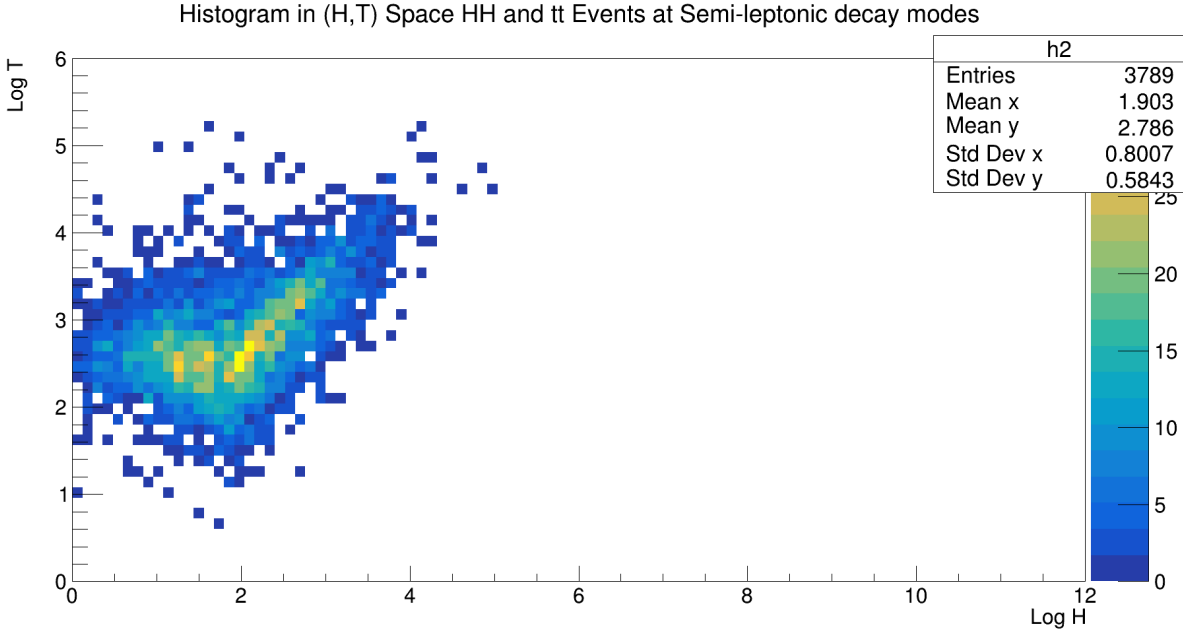
[Higgs mass distributions]

1D Distribution on Top Mass

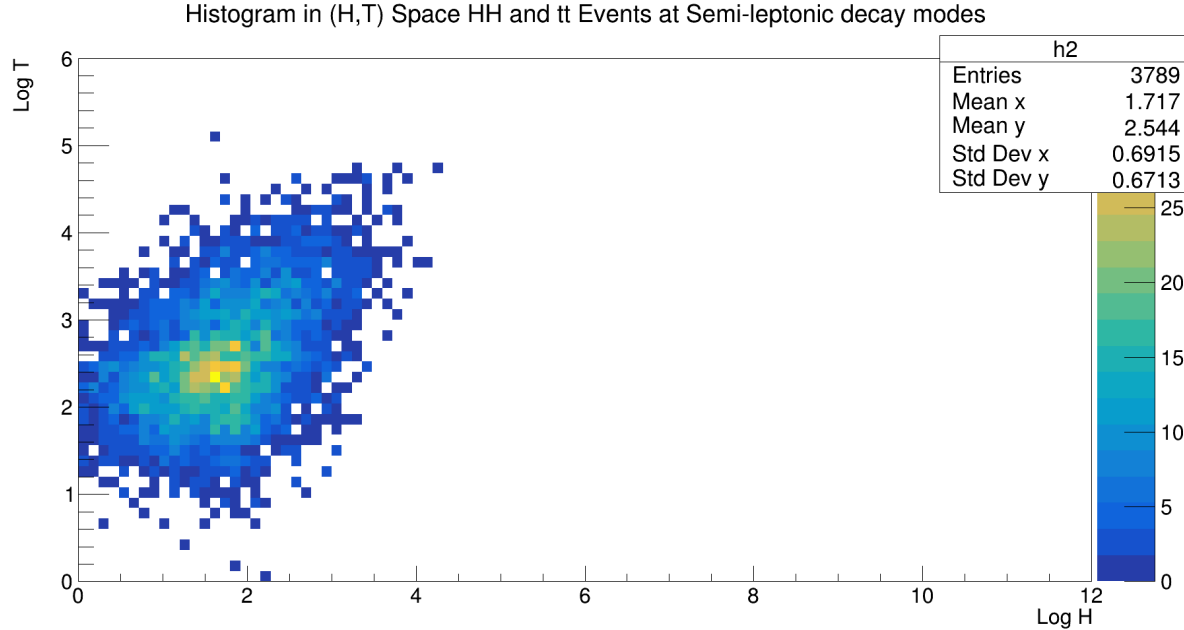


[Top mass distributions]

Higgsness and Topness Distributions



[HT space distribution (signal)]

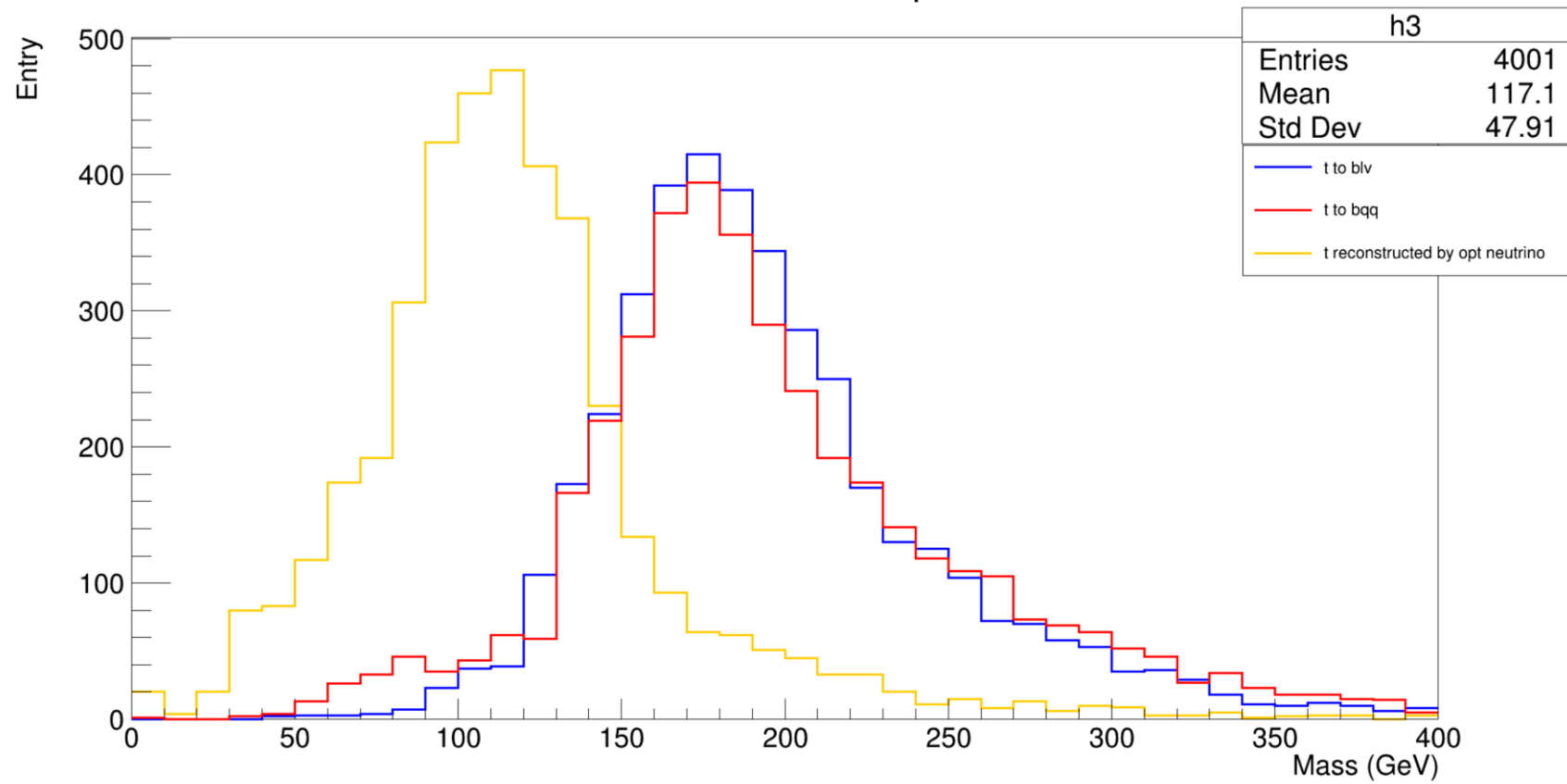


[HT space distribution (background)]

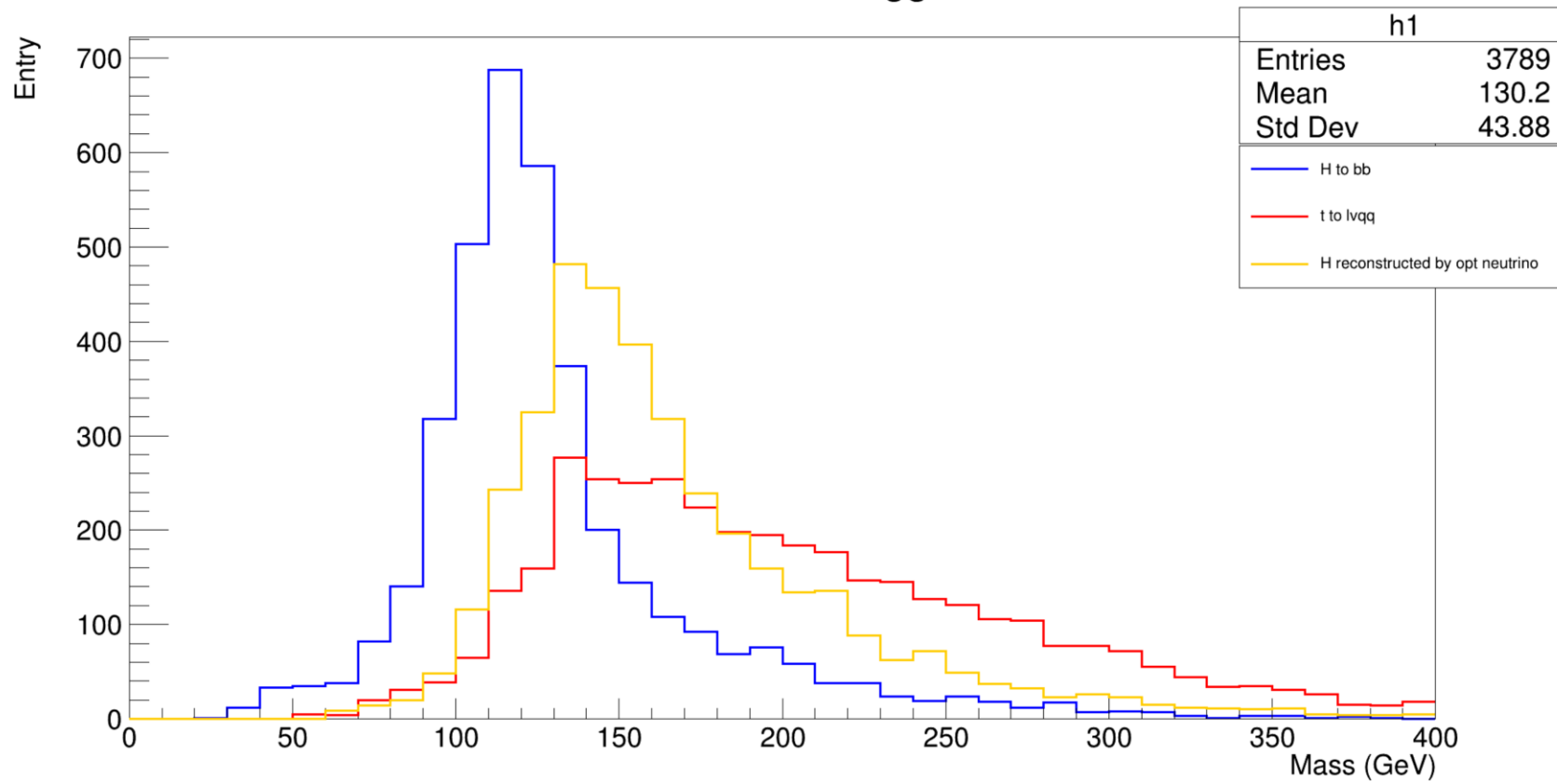
- W reconstruction (at signal channel) improve
- Higgsness and Topness calibration
- Preparing to make control plot

Backup

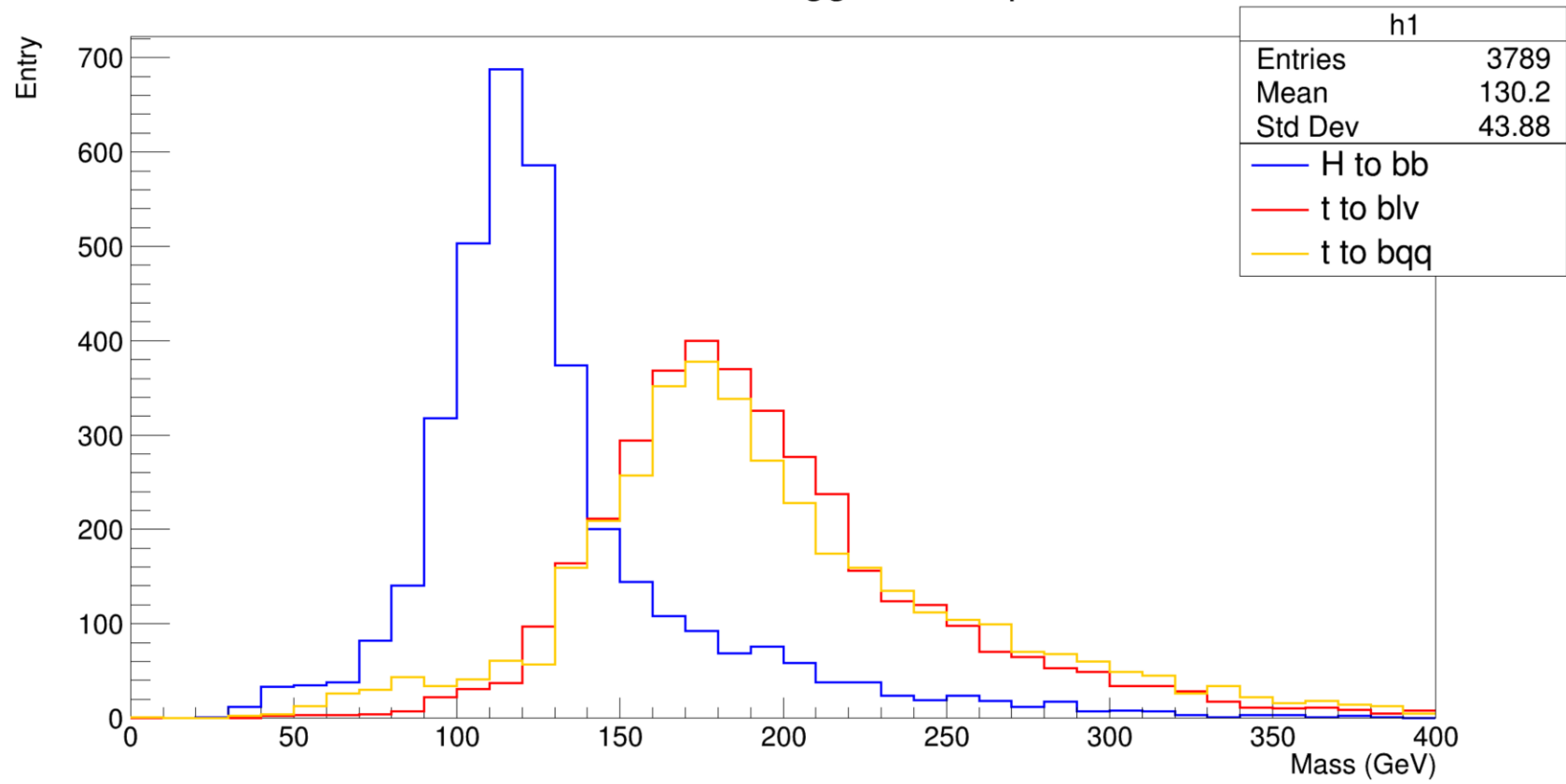
1D Distribution on Top Mass



1D Distribution on Higgs Mass

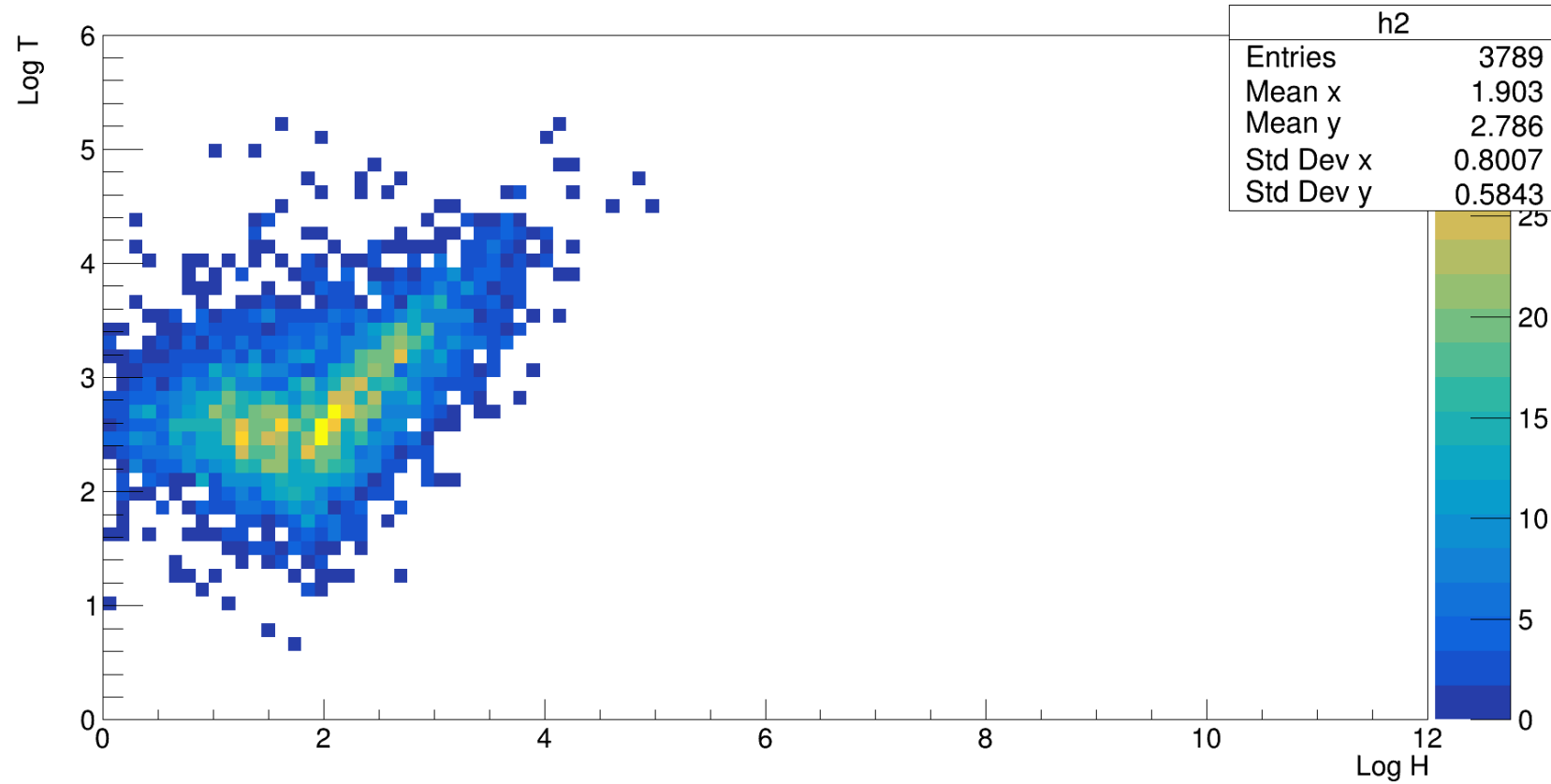


1D Distribution on Higgs and Top Mass



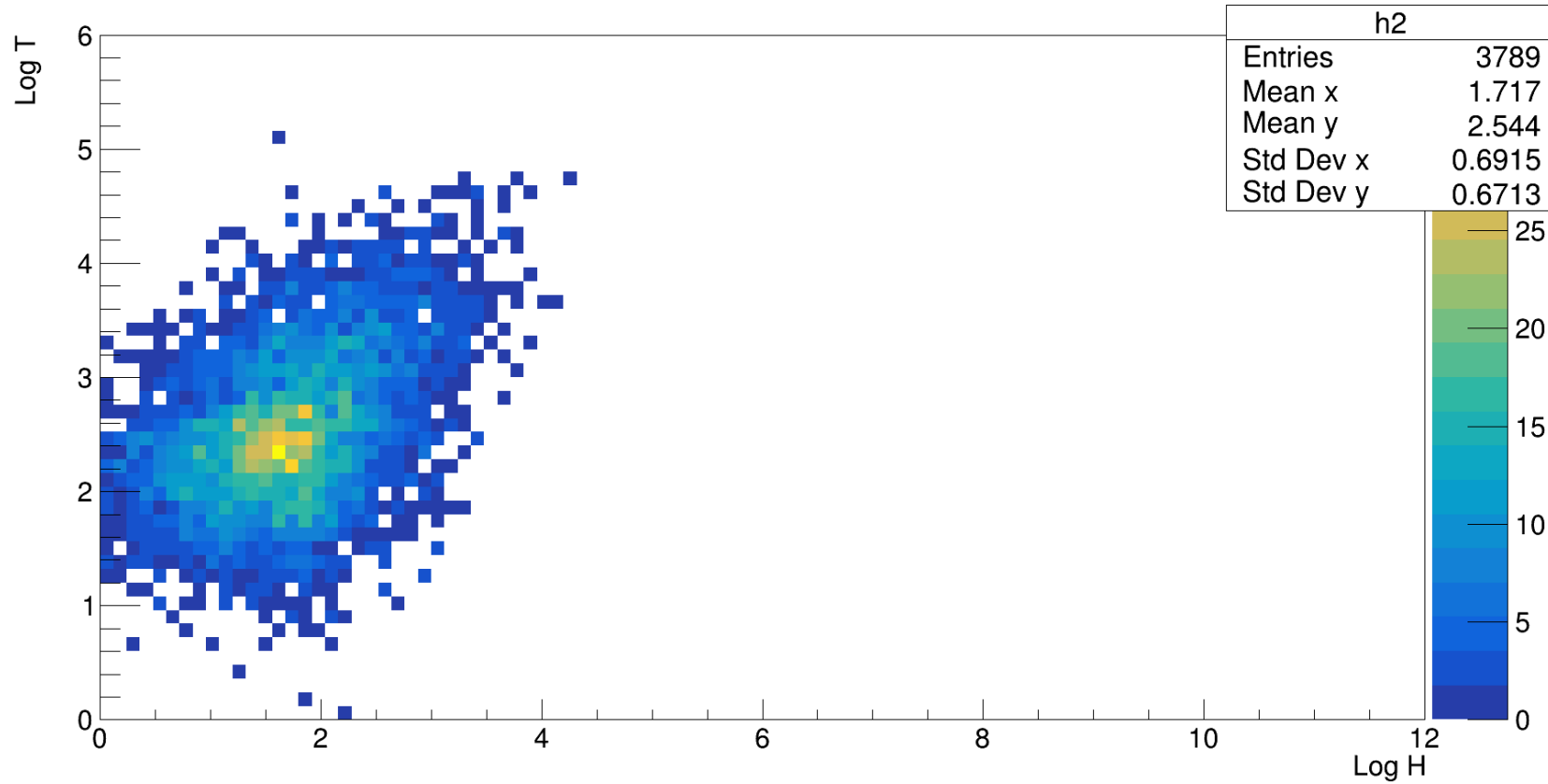
HT space distribution (signal)

Histogram in (H,T) Space HH and tt Events at Semi-leptonic decay modes



HT space distribution (background)

Histogram in (H,T) Space HH and tt Events at Semi-leptonic decay modes



1D Distribution on Higgs Mass

