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# COMPARISON OF RHO FOR CLAS12 AND COMPASS

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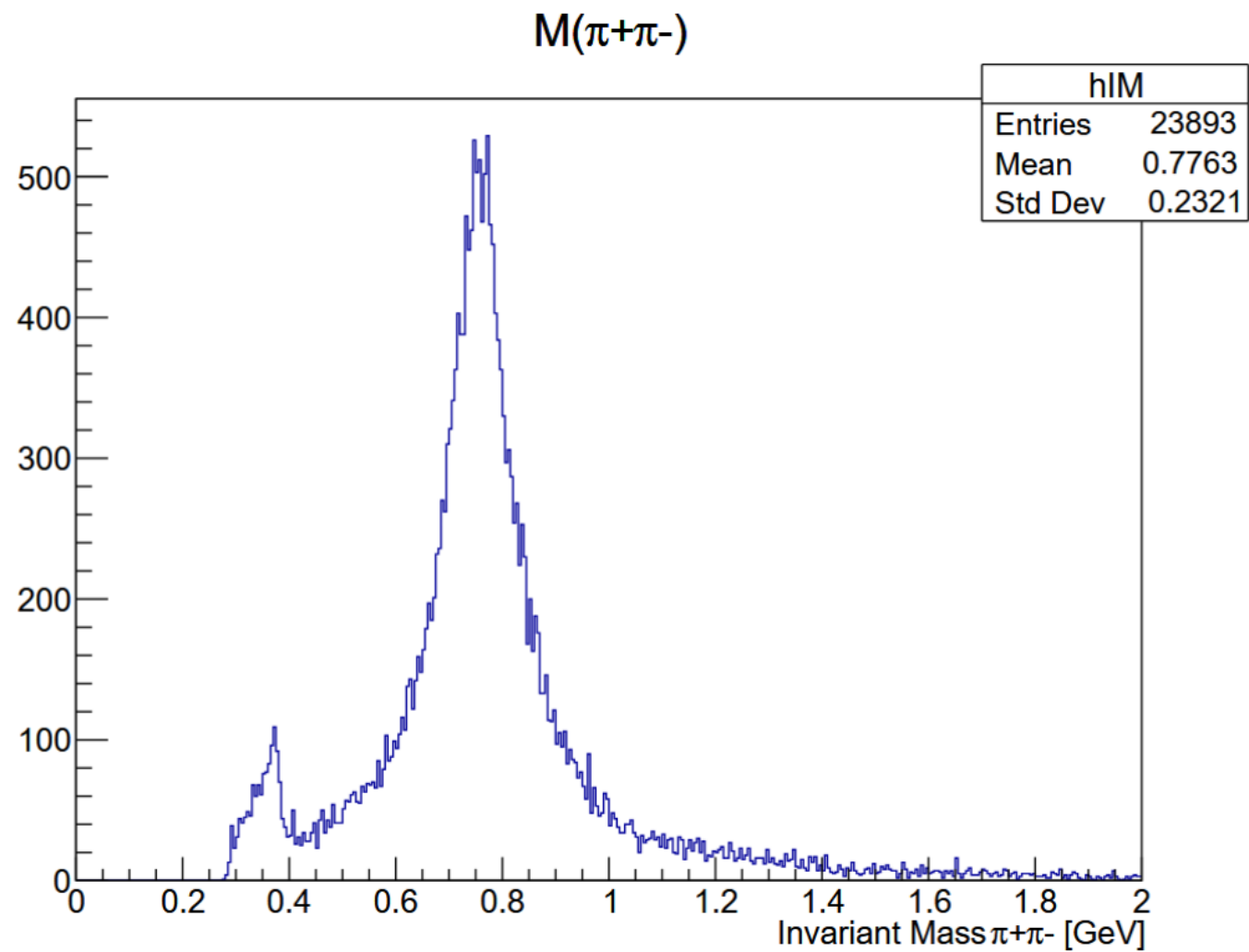
# DATA

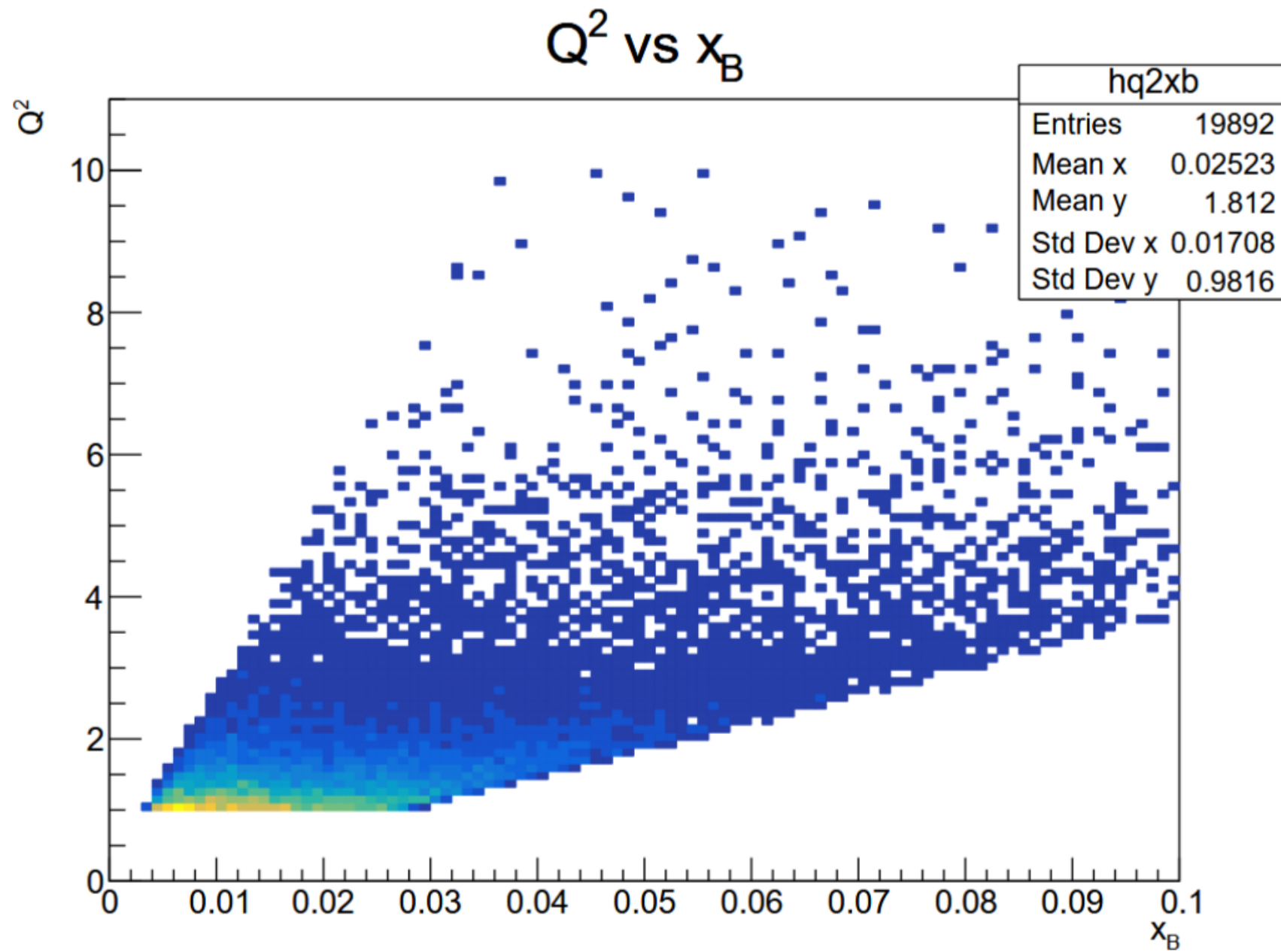
- Compass:
  - 2016 Period 9, slot 8
  - Channel :  $\mu p \longrightarrow \mu' \rho^0 X \longrightarrow \mu' \pi^+ \pi^- X$
- CLAS12
  - Fall 2018 inbending dataset
  - Pass2, Forward and Central Detectors
  - Channel:  $e p \longrightarrow e' \rho^0 X \longrightarrow e' \pi^+ \pi^- X$

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# COMPASS EXCLUSIVE CUTS

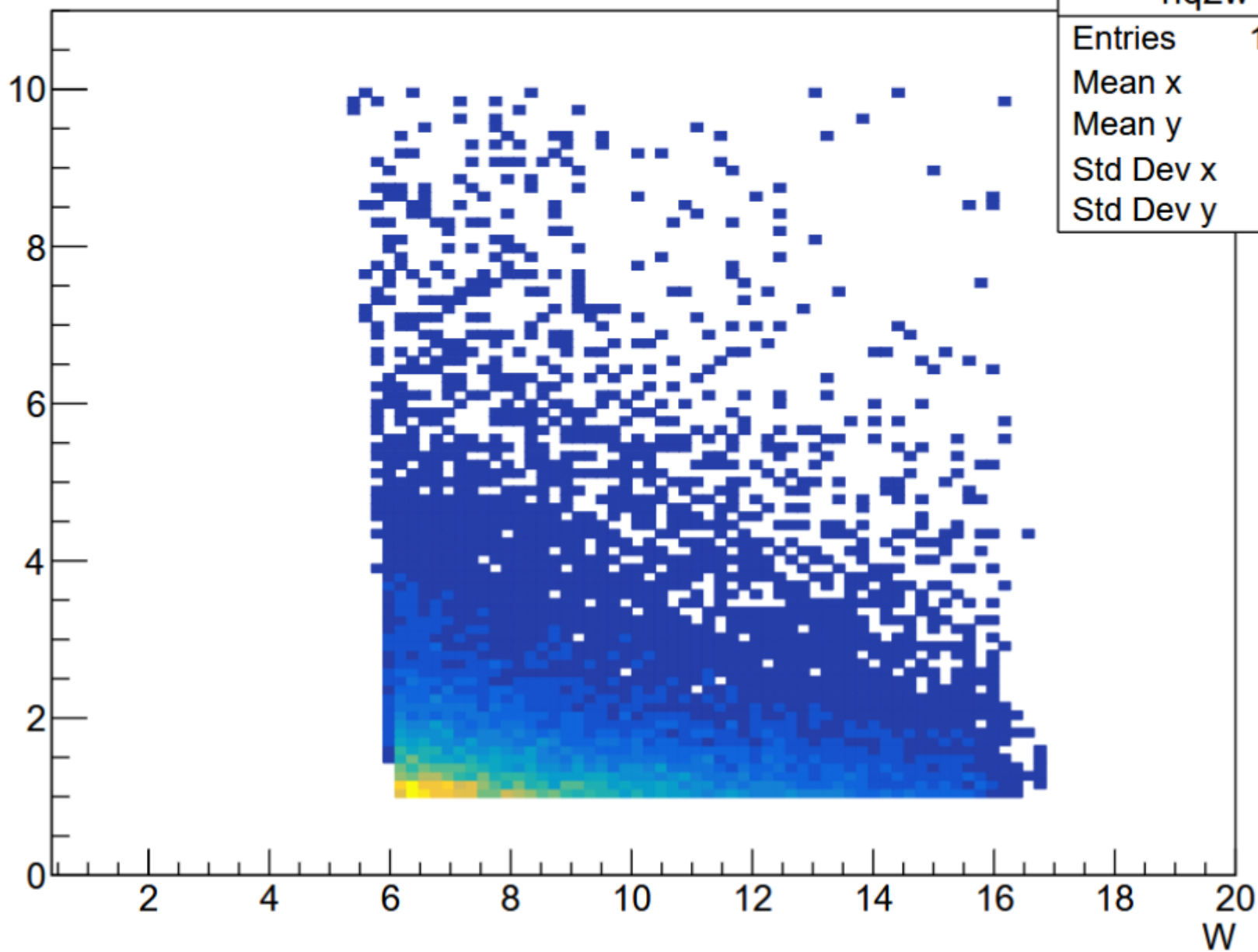
- $W > 5 \text{ GeV}$
- $0.1 < y < 0.9$
- $1.0 < Q^2 < 10 \text{ GeV}$
- $\nu > 20 \text{ GeV}$
- $0.01 < p_T^2 < 0.5 (\text{GeV}/C)^2$
- $0.5 < \text{Invariant Mass} < 1.1 \text{ GeV}/C^2$
- $-2.5 < E_{\text{Miss}} < 2.5 \text{ GeV}$
- Momentum of  $\rho^0 > 15 \text{ GeV}/C$





# $Q^2$ vs $W$

$Q^2$



hq2w

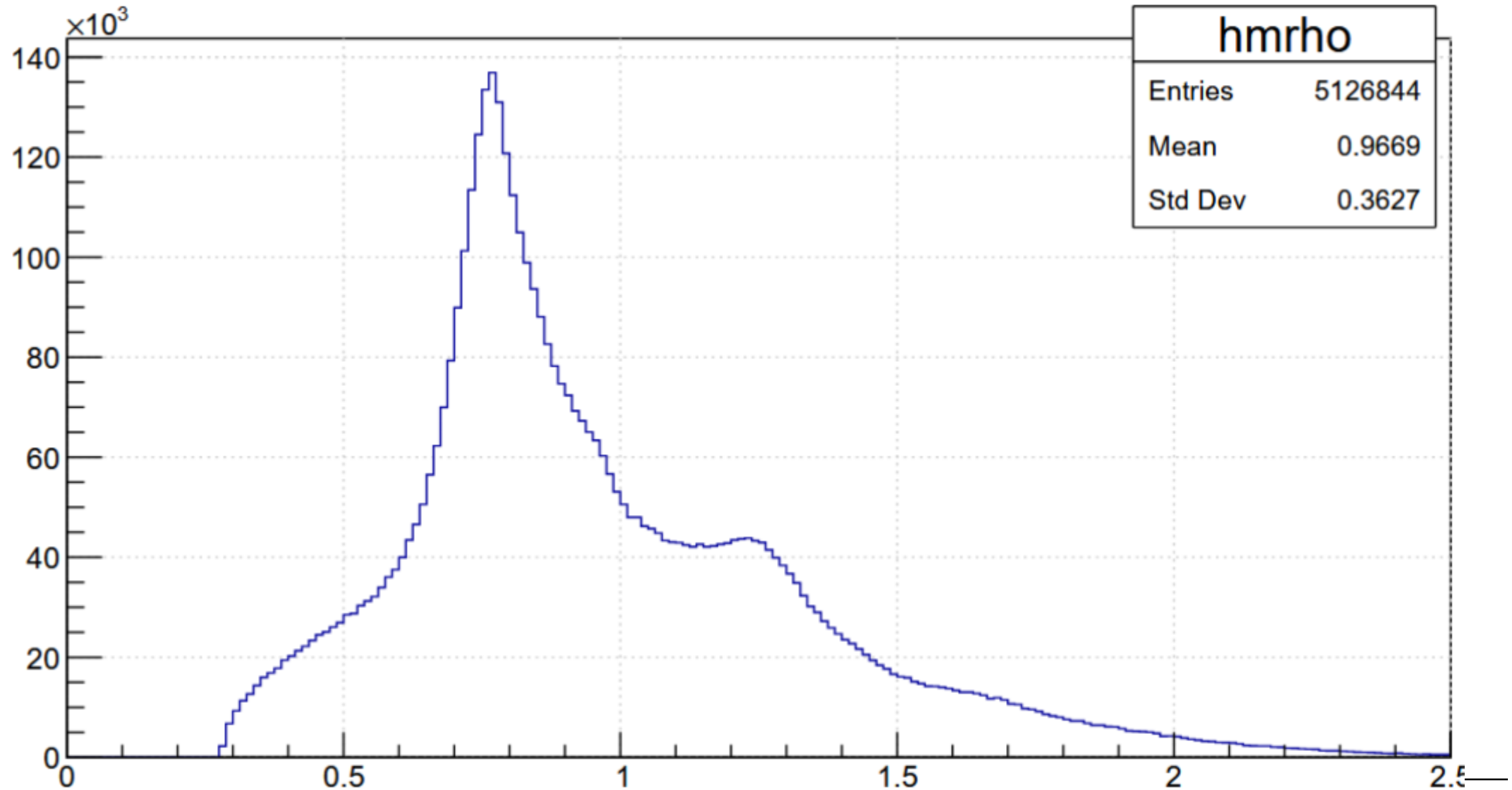
Entries	19892
Mean x	9.163
Mean y	1.9
Std Dev x	2.543
Std Dev y	1.184

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# CLAS12 EXCLUSIVE CUTS

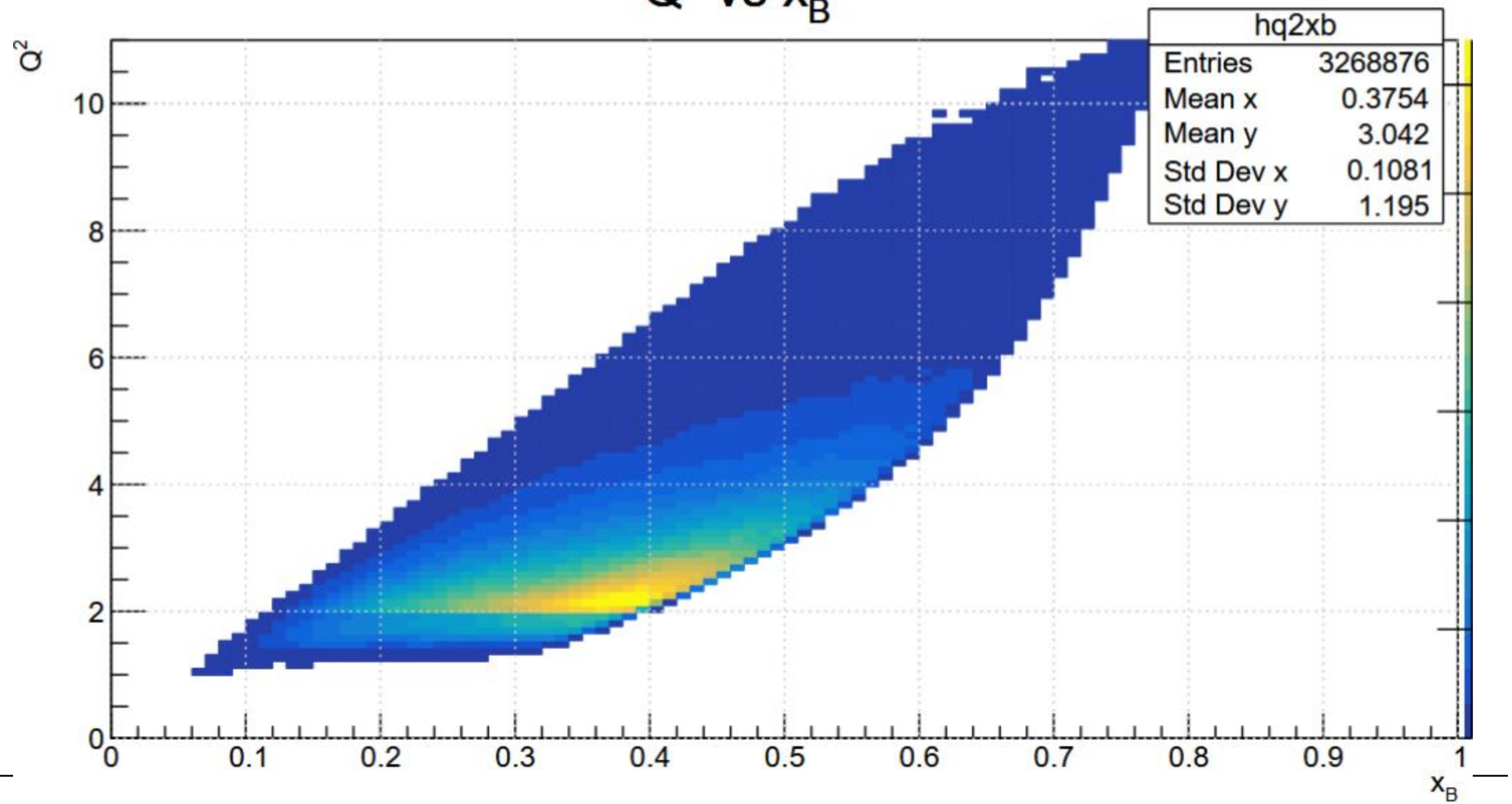
- $W > 2 \text{ GeV}$
- $Q^2 > 1 \text{ GeV}$
- $0.85 < \text{Missing Mass} < 1.05 \text{ GeV}/C^2$
- $0.5 < \text{Invariant Mass} < 1.1 \text{ GeV}/C^2$

invariant mass:  $\pi^+\pi^-$





# $Q^2$ vs $x_B$



## $Q^2$ vs $W$

