

Status Report

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X(3872) Decay Modes

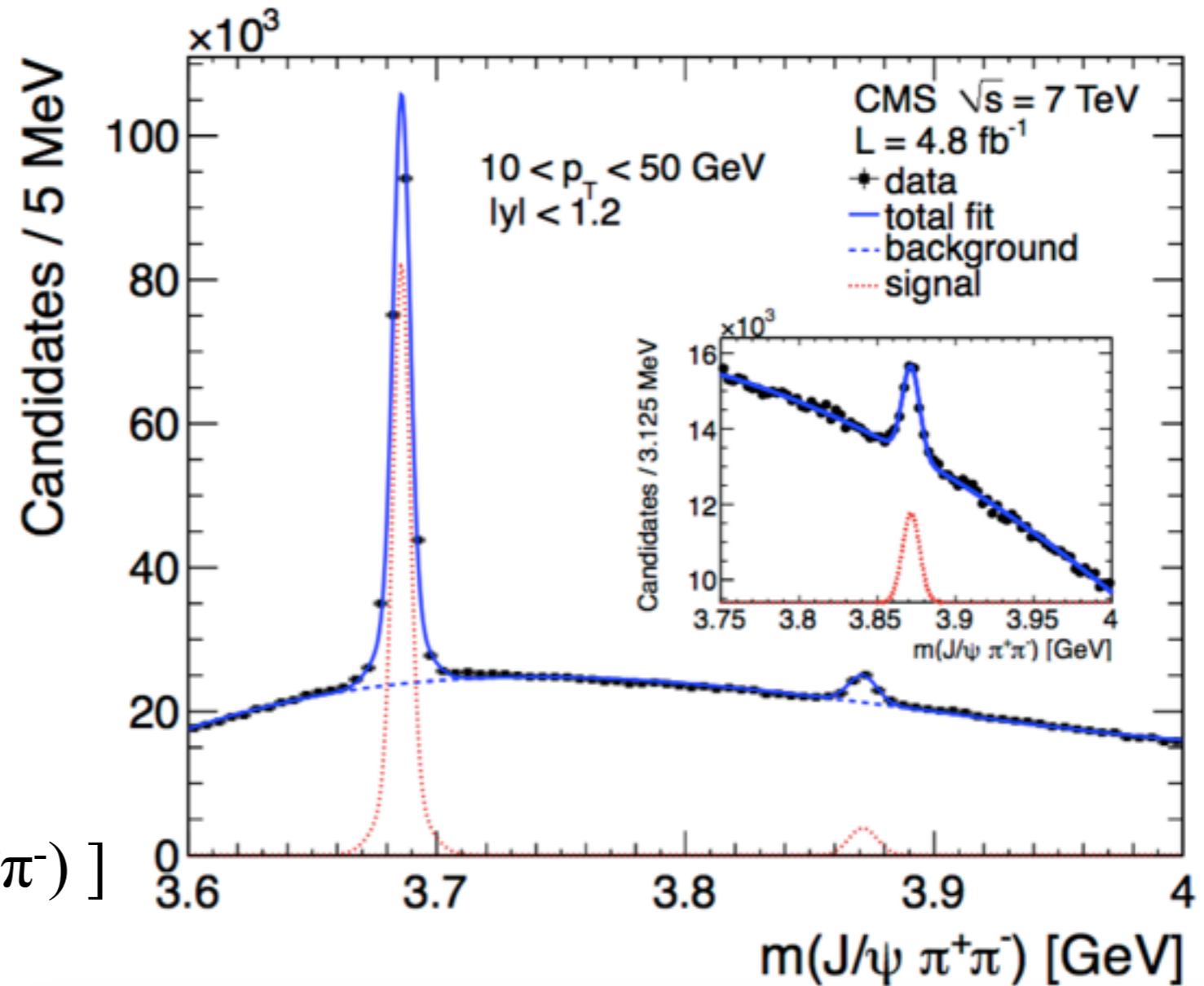
X(3872) DECAY MODES

	Mode	Fraction (Γ_i/Γ)	
Γ_1	e^+e^-		
Γ_2	$\pi^+\pi^- J/\psi(1S)$	>2.6 %	intermediate ρ^0 resonance
Γ_3	$\rho^0 J/\psi(1S)$		
Γ_4	$\omega J/\psi(1S)$	>1.9 %	
Γ_5	$D^0\bar{D}^0\pi^0$	$>3.2 \times 10^{-3}$	$J^{PC} = 1^{++}$
Γ_6	$\bar{D}^{*0}D^0$	$>5 \times 10^{-3}$	
Γ_7	$\gamma\gamma$		
Γ_8	$D^0\bar{D}^0$		
Γ_9	D^+D^-		
Γ_{10}	$\gamma\chi_{c1}$		
Γ_{11}	$\eta J/\psi$		
Γ_{12}	$\gamma J/\psi$	$>6 \times 10^{-3}$	
Γ_{13}	$\gamma\psi(2S)$	[a] >3.0 %	

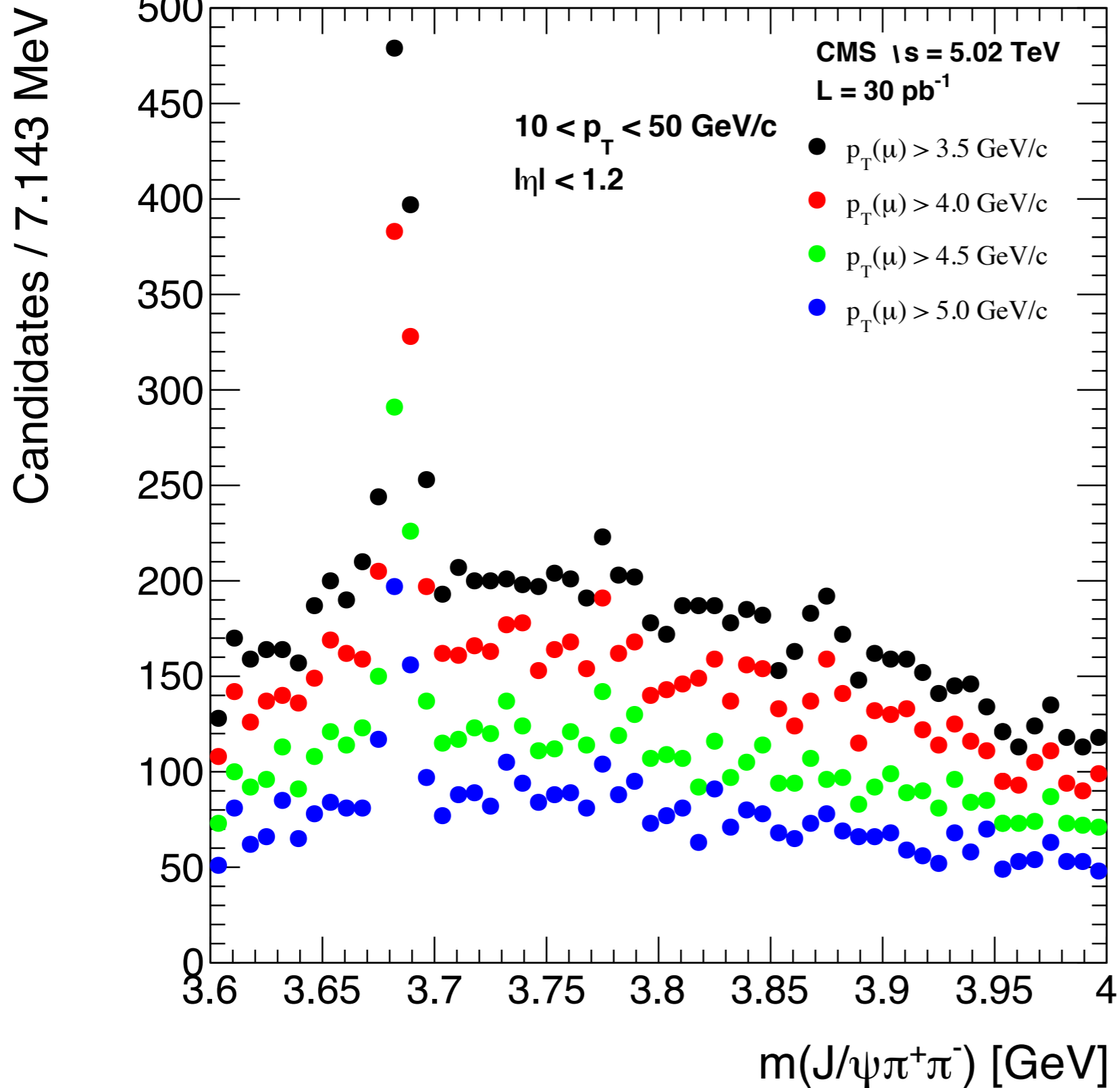
[a] BHARDWAJ 11 does not observe this decay and presents a stronger 90% CL limit than this value. See measurements listings for details.

X(3872) at pp 7TeV in data 2011

- $p_T(\mu^+\mu^-) \cong 7 \text{ GeV} - 2.1 \text{ fb}^{-1}$
- $p_T(\mu^+\mu^-) \cong 10 \text{ GeV} - 2.7 \text{ fb}^{-1}$
- $p_T(\mu) > 4 \text{ GeV}$ for $|\eta| < 1.2$
- $p_T(\mu) > 3.3 \text{ GeV}$ for $1.2 < |\eta| < 2.4$
- $Q < 300 \text{ MeV}$
 $[Q = m(J/\psi\pi^+\pi^-) - m(J/\psi)^{\text{pdg}} - m(\pi^+\pi^-)]$
- $\Delta R = \sqrt{\Delta\eta^2 + \Delta\phi^2} < 0.55$



Pick for $\psi(2S)$ and X(3872)



- High purity track cut
- $Q < 300 \text{ MeV}$
 $[Q = m(J/\psi\pi^+\pi^-) - m(J/\psi)^{\text{pdg}} - m(\pi^+\pi^-)]$
- $\Delta R = \sqrt{\Delta\eta^2 + \Delta\phi^2} < 0.55$
- $10 < p_T < 50 \text{ GeV}/c$

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