

$\chi_{c1}(4274)$

$$I^G(J^{PC}) = 0^+(1^{++})$$

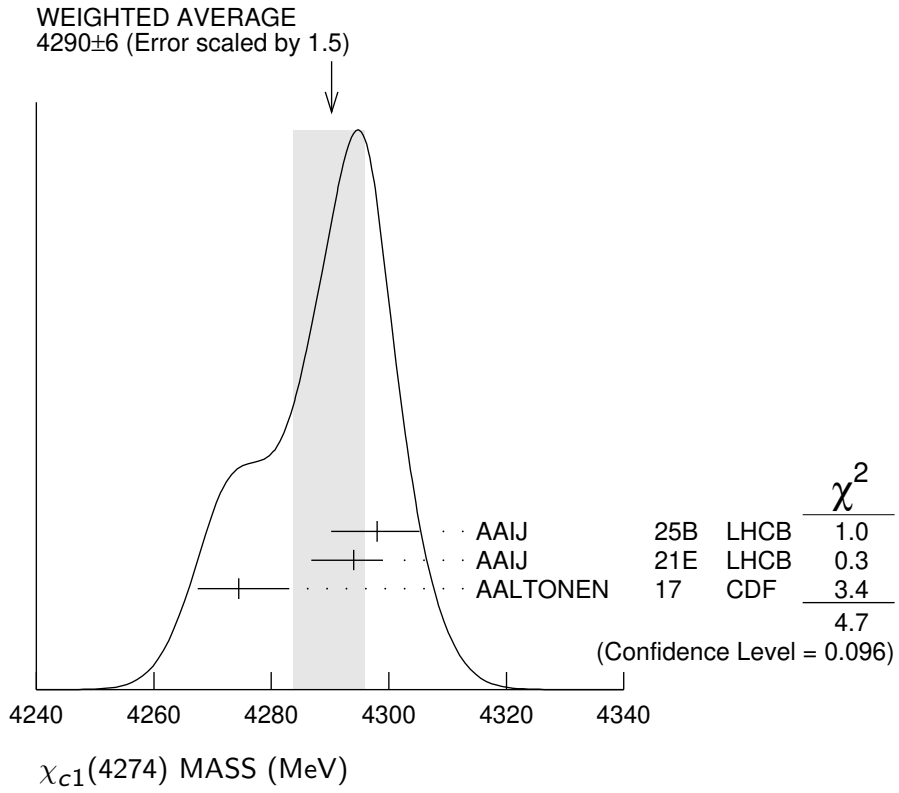
was $X(4274)$

See the review on the "Spectroscopy of Mesons Containing two Heavy Quarks."

$\chi_{c1}(4274)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
4290 ±6	OUR AVERAGE	Error includes scale factor of 1.5. See the ideogram below.		
4298 ±6 $\begin{smallmatrix} +4 \\ -5 \end{smallmatrix}$		1 AAIJ	25B LHCb	$p p \rightarrow p(J/\psi\phi)p$
4294 ±4 $\begin{smallmatrix} +3 \\ -6 \end{smallmatrix}$	24k	2 AAIJ	21E LHCb	$B^+ \rightarrow J/\psi\phi K^+$
4274.4 $\begin{smallmatrix} +8.4 \\ -6.7 \end{smallmatrix}$ ± 1.9	22	3 AALTONEN	17 CDF	$B^+ \rightarrow J/\psi\phi K^+$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
4273.3 ± 8.3 $\begin{smallmatrix} +17.2 \\ -3.6 \end{smallmatrix}$	4289	4,5 AAIJ	17c LHCb	$B^+ \rightarrow J/\psi\phi K^+$

- ¹ From a fit using the five resonances reported in AAIJ 21E, described by relativistic Breit-Wigner distributions.
- ² From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 18σ .
- ³ From a fit to the invariant mass spectrum with a significance of 3.1σ .
- ⁴ From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 6.0σ .
- ⁵ Superseded by AAIJ 21E.



$\chi_{c1}(4274)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
54 ± 8 OUR AVERAGE	Error includes scale factor of 1.2.			
92 $\begin{smallmatrix} +22 & +33 \\ -18 & -19 \end{smallmatrix}$		¹ AAIJ	25B LHCb	$p p \rightarrow p(J/\psi\phi)p$
53 ± 5 ± 5	24k	² AAIJ	21E LHCb	$B^+ \rightarrow J/\psi\phi K^+$
32.3 $\begin{smallmatrix} +21.9 \\ -15.3 \end{smallmatrix} \pm 7.6$	22	³ AALTONEN	17 CDF	$B^+ \rightarrow J/\psi\phi K^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
56 ± 11 $\begin{smallmatrix} +8 \\ -11 \end{smallmatrix}$	4289	^{4,5} AAIJ	17C LHCb	$B^+ \rightarrow J/\psi\phi K^+$

¹ From a fit using the five resonances reported in AAIJ 21E, described by relativistic Breit-Wigner distributions.

² From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 18 σ .

³ From a fit to the invariant mass spectrum with a significance of 3.1 σ .

⁴ From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 6.0 σ .

⁵ Superseded by AAIJ 21E.

 $\chi_{c1}(4274)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $J/\psi\phi$	seen

 $\chi_{c1}(4274)$ BRANCHING RATIOS

$\Gamma(J/\psi\phi)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	24k	¹ AAIJ	21E LHCb	$B^+ \rightarrow J/\psi\phi K^+$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
seen	4289	^{2,3} AAIJ	17C LHCb	$B^+ \rightarrow J/\psi\phi K^+$	

¹ From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 18 σ .

² From an amplitude analysis of the decay $B^+ \rightarrow J/\psi\phi K^+$ with a significance of 6.0 σ .

³ Superseded by AAIJ 21E.

 $\chi_{c1}(4274)$ REFERENCES

AAIJ	25B	PRL 134 031902	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	21E	PRL 127 082001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	17C	PRL 118 022003	R. Aaij <i>et al.</i>	(LHCb Collab.) JP
Also		PR D95 012002	R. Aaij <i>et al.</i>	(LHCb Collab.)
AALTONEN	17	MPL A32 1750139	T. Altonen <i>et al.</i>	(CDF Collab.)