

$\chi_{c1}(4274)$ 

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

was  $X(4274)$ 

This state shows properties different from a conventional  $q\bar{q}$  state. A candidate for an exotic structure. See the review on non- $q\bar{q}$  states.

Seen by AAIJ 17C in  $B^+ \rightarrow \chi_{c1} K^+$ ,  $\chi_{c1} \rightarrow J/\psi \phi$  using an amplitude analysis of  $B^+ \rightarrow J/\psi \phi K^+$  with a significance (accounting for systematic uncertainties) of  $6.0 \sigma$ .

 **$\chi_{c1}(4274)$  MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>4274 <math>\begin{smallmatrix} +8 \\ -6 \end{smallmatrix}</math> OUR AVERAGE</b>				
$4273.3 \pm 8.3 \begin{smallmatrix} +17.2 \\ -3.6 \end{smallmatrix}$	4289	<sup>1</sup> AAIJ	17C LHCb	$B^+ \rightarrow J/\psi \phi K^+$
$4274.4 \begin{smallmatrix} +8.4 \\ -6.7 \end{smallmatrix} \pm 1.9$	22	<sup>2</sup> AALTONEN	17 CDF	$B^+ \rightarrow J/\psi \phi K^+$

<sup>1</sup> From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of  $6.0 \sigma$ .

<sup>2</sup> From a fit to the invariant mass spectrum with a significance of  $3.1 \sigma$ .

 **$\chi_{c1}(4274)$  WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>49 <math>\pm 12</math> OUR AVERAGE</b>				
$56 \pm 11 \begin{smallmatrix} +8 \\ -11 \end{smallmatrix}$	4289	<sup>1</sup> AAIJ	17C LHCb	$B^+ \rightarrow J/\psi \phi K^+$
$32.3 \begin{smallmatrix} +21.9 \\ -15.3 \end{smallmatrix} \pm 7.6$	22	<sup>2</sup> AALTONEN	17 CDF	$B^+ \rightarrow J/\psi \phi K^+$

<sup>1</sup> From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of  $6.0 \sigma$ .

<sup>2</sup> From a fit to the invariant mass spectrum with a significance of  $3.1 \sigma$ .

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

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad J/\psi \phi$	seen

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

$\Gamma(J/\psi \phi)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$			
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	4289	<sup>1</sup> AAIJ	17C LHCb	$B^+ \rightarrow J/\psi \phi K^+$

<sup>1</sup> From an amplitude analysis of the decay  $B^+ \rightarrow J/\psi \phi K^+$  with a significance of  $6.0 \sigma$ .

 **$\chi_{c1}(4274)$  REFERENCES**

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.)