$\chi_{c0}(4500)$

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

OMITTED FROM SUMMARY TABLE
was $X(4500)$

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

Seen by AAIJ 17C in $B^+ \to \chi_{c0}K^+$, $\chi_{c0} \to J/\psi\phi$ using an amplitude analysis of $B^+ \to J/\psi\phi K^+$ with a significance (accounting for systematic uncertainties) of 6.1 σ.

$\chi_{c0}(4500)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
4474± 3± 3	24k	[1] AAIJ	21E	LHCB	$B^+ \to J/\psi\phi K^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$4506\pm11^{+12}_{-15}$	4289	[2,3] AAIJ	17C	LHCB	$B^+ \to J/\psi\phi K^+$

[1] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 20 σ.
[2] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 6.1 σ.
[3] Superseded by AAIJ 21E.

$\chi_{c0}(4500)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
77± 6$^{+10}_{-8}$	24k	[1] AAIJ	21E	LHCB	$B^+ \to J/\psi\phi K^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$92\pm21^{+21}_{-20}$	4289	[2,3] AAIJ	17C	LHCB	$B^+ \to J/\psi\phi K^+$

[1] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 20 σ.
[2] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 6.1 σ.
[3] Superseded by AAIJ 21E.

$\chi_{c0}(4500)$ DECAY MODES

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

$\chi_{c0}(4500)$ BRANCHING RATIOS

$\Gamma(J/\psi\phi)/\Gamma_{total}$ Γ_1/Γ

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	24k	[1] AAIJ	21E	LHCB	$B^+ \to J/\psi\phi K^+$

• • • We do not use the following data for averages, fits, limits, etc. • • •

seen   4289   [2,3] AAIJ   17C   LHCB $B^+ \to J/\psi\phi K^+$

[1] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 20 σ.
[2] From an amplitude analysis of the decay $B^+ \to J/\psi\phi K^+$ with a significance of 6.1 σ.
[3] Superseded by AAIJ 21E.

$\chi_{c0}(4500)$ REFERENCES

AAIJ	21E	PRL 127 082001	R. Aaij et al.	(LHCb Collab.)
AAIJ	17C	PRL 118 022003	R. Aaij et al.	(LHCb Collab.) JP
Also		PR D95 012002	R. Aaij et al.	(LHCb Collab.)