

**X(4630)**

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

**OMITTED FROM SUMMARY TABLE**

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

Seen by AAIJ 21E in  $B^+ \rightarrow X(4630)K^+$  with  $X(4630) \rightarrow J/\psi\phi$  using an amplitude analysis of  $B^+ \rightarrow J/\psi\phi K^+$  with a significance (accounting for systematic uncertainties) of  $5.5\sigma$ . The  $J^P = 1^-$  assignment is favored over  $2^-$  with a significance of  $3\sigma$  and other assignments are disfavored by more than  $5\sigma$ .

**X(4630) MASS**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$4626 \pm 16^{+18}_{-110}$	24k	<sup>1</sup> AAIJ	21E 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  $5.5\sigma$ .

**X(4630) WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$174 \pm 27^{+134}_{-73}$	24k	<sup>1</sup> AAIJ	21E 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  $5.5\sigma$ .

**X(4630) DECAY MODES**

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

$\Gamma(J/\psi\phi)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$
VALUE	COMMENT
seen	<sup>1</sup> AAIJ 21E 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  $5.5\sigma$ .

**X(4630) REFERENCES**

AAIJ	21E	PRL 127 082001	R. Aaij et al.	(LHCb Collab.)
------	-----	----------------	----------------	----------------