

**X(4100)<sup>±</sup>**

$$I^G(J^{PC}) = 1^-(?^{??})$$

## OMITTED FROM SUMMARY TABLE

Properties incompatible with a  $q\bar{q}$  structure (exotic state). See the review on non- $q\bar{q}$  states.

Reported by AAIJ 18AN in the  $\eta_c(1S)\pi^-$  invariant mass distribution in  $B^0 \rightarrow \eta_c(1S)K^+\pi^-$  decays with a significance of  $3.4\sigma$ .  $J^P = 0^+$  or  $1^-$  assignment consistent with data.

**X(4100)<sup>±</sup> MASS**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>4096 ± 20<sup>+18</sup><sub>-22</sub></b>	AAIJ	18AN LHCb	$B^0 \rightarrow \eta_c(1S)K^+\pi^-$

**X(4100)<sup>±</sup> WIDTH**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
<b>152 ± 58<sup>+60</sup><sub>-35</sub></b>	AAIJ	18AN LHCb	$B^0 \rightarrow \eta_c(1S)K^+\pi^-$

**X(4100)<sup>±</sup> DECAY MODES**

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\eta_c(1S)\pi^-$	seen
$\Gamma_2$ $\pi^\pm\psi(3770)$	not seen

**X(4100)<sup>±</sup> BRANCHING RATIOS**

$\Gamma(\eta_c(1S)\pi^-)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
<b>seen</b>	<sup>1</sup> AAIJ	18AN LHCb	$B^0 \rightarrow \eta_c(1S)K^+\pi^-$
<sup>1</sup> AAIJ 18AN quotes a fit fraction for $B^0 \rightarrow X(4100)^- K^+ \rightarrow \eta_c(1S)\pi^- K^+$ of $(3.3 \pm 1.1^{+1.2}_{-1.1})\%$ from an amplitude analysis.			

$\Gamma(\pi^\pm\psi(3770))/\Gamma_{\text{total}}$	$\Gamma_2/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
<b>not seen</b>	<sup>1</sup> ABLIKIM	19AR BES3	$e^+e^- \rightarrow \pi^+\pi^- D\bar{D}$
<sup>1</sup> From a measurement of $\sigma(e^+e^- \rightarrow \pi^+\pi^- D\bar{D})$ between $\sqrt{s} = 4.08$ and $4.6$ GeV.			

**X(4100)<sup>±</sup> REFERENCES**

ABLIKIM	19AR PR D100 032005	M. Ablikim <i>et al.</i>	(BESIII Collab.)
AAIJ	18AN EPJ C78 1019	R. Aaij <i>et al.</i>	(LHCb Collab.)