$X(4100)^{\pm}$

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

OMITTED FROM SUMMARY TABLE

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

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

$X(4100)^{\pm}$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
$\mathbf{4096 \pm 20^{+18}_{-22}}$	AAIJ	18AN	LHCB	$B^0 \to \eta_c(1S)K^+\pi^-$

$X(4100)^{\pm}$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
$\mathbf{152 \pm 58^{+60}_{-35}}$	AAIJ	18AN	LHCB	$B^0 \to \eta_c(1S)K^+\pi^-$

$X(4100)^{\pm}$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\eta_c(1S)\pi^-$	seen
Γ_2	$\pi^{\pm}\psi(3770)$	not seen

$X(4100)^{\pm}$ BRANCHING RATIOS

$\Gamma(\eta_c(1S)\pi^-)/\Gamma_{\text{total}}$ Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	[1] AAIJ	18AN	LHCB	$B^0 \to \eta_c(1S)K^+\pi^-$

[1] AAIJ 18AN quotes a fit fraction for $B^0 \to X(4100)^- K^+ \to \eta_c(1S)\pi^- K^+$ of $(3.3 \pm 1.1^{+1.2}_{-1.1})\%$ from an amplitude analysis.

$\Gamma(\pi^{\pm}\psi(3770))/\Gamma_{\text{total}}$ Γ_2/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
not seen	[1] ABLIKIM	19AR	BES3	$e^+e^- \to \pi^+\pi^- D\overline{D}$

[1] From a measurement of $\sigma(e^+e^- \to \pi^+\pi^- D\overline{D})$ between $\sqrt{s} = 4.08$ and 4.6 GeV.

$X(4100)^{\pm}$ REFERENCES

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