$T_{c\overline{c}}(4100)^+$

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

OMITTED FROM SUMMARY TABLE
was $X(4100)^{\pm}$

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.

$T_{c\overline{c}}(4100)^+$ MASS

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

$T_{c\overline{c}}(4100)^+$ WIDTH

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

$T_{c\overline{c}}(4100)^+$ DECAY MODES

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

$T_{c\overline{c}}(4100)^+$ 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 $B^0 \to T_{c\overline{c}}(4100)^- K^+ \to \eta_c(1S)\pi^- K^+$ 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.

$T_{c\overline{c}}(4100)^+$ REFERENCES

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