

$$T_{\bar{c}s0}^*(2870)^0$$

$$I(J^P) = ?(0^+)$$

OMITTED FROM SUMMARY TABLE

was $X_0(2900)$

An exotic state with minimal quark content $\bar{c}d\bar{s}u$. Observed by AAIJ 20AI using full amplitude analysis of $B^+ \rightarrow D^+ D^- K^+$ decays.

$T_{\bar{c}s0}^*(2870)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2872 ± 16 OUR AVERAGE				Error includes scale factor of 2.4.
$2914 \pm 11 \pm 15$	1.6k	¹ AAIJ	24AB LHCB	$B^+ \rightarrow D^{*+} D^- K^+$
$2866 \pm 7 \pm 2$	1.2k	² AAIJ	20AI LHCB	$B^+ \rightarrow D^+ D^- K^+$

¹ From a simultaneous amplitude analysis of $B^+ \rightarrow D^{*+} D^- K^+$, $B^+ \rightarrow D^{*-} D^+ K^+$ and their c.c.
² Obtained from the full amplitude analysis. Parameterized with the relativistic Breit-Wigner line shape. Also confirmed by the model-independent analysis of AAIJ 20AF.

$T_{\bar{c}s0}^*(2870)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
67 ± 24 OUR AVERAGE				Error includes scale factor of 2.1.
$128 \pm 22 \pm 23$	1.6k	¹ AAIJ	24AB LHCB	$B^+ \rightarrow D^{*+} D^- K^+$
$57 \pm 12 \pm 4$	1.2k	² AAIJ	20AI LHCB	$B^+ \rightarrow D^+ D^- K^+$

¹ From a simultaneous amplitude analysis of $B^+ \rightarrow D^{*-} K^+$, $B^+ \rightarrow D^{*-} D^+ K^+$ and their c.c.
² Obtained from the full amplitude analysis. Parameterized with the relativistic Breit-Wigner line shape. Also confirmed by the model-independent analysis of AAIJ 20AF.

$T_{\bar{c}s0}^*(2870)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad D^- K^+$	seen

$T_{\bar{c}s0}^*(2870)^0$ BRANCHING RATIOS

$\Gamma(D^- K^+)/\Gamma_{\text{total}}$	Γ_1/Γ
seen	

VALUE	DOCUMENT ID	TECN	COMMENT
seen	AAIJ	20AI LHCB	$B^+ \rightarrow D^+ D^- K^+$

$T_{\bar{c}s0}^*(2870)^0$ REFERENCES

AAIJ	24AB PRL 133 131902	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	20AF PRL 125 242001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	20AI PR D102 112003	R. Aaij <i>et al.</i>	(LHCb Collab.)