

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

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

OMITTED FROM SUMMARY TABLE
was $X_0(2900)$

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

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

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

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

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

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

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

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

$\Gamma(D^- K^+)/\Gamma_{\text{total}}$	Γ_1/Γ		
VALUE	DOCUMENT ID	TECN	COMMENT
seen	AAIJ	20AI LHCB	$B^+ \rightarrow D^+ D^- K^+$

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