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

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

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 $B^+ \to D^+ D^- K^+$ decays.

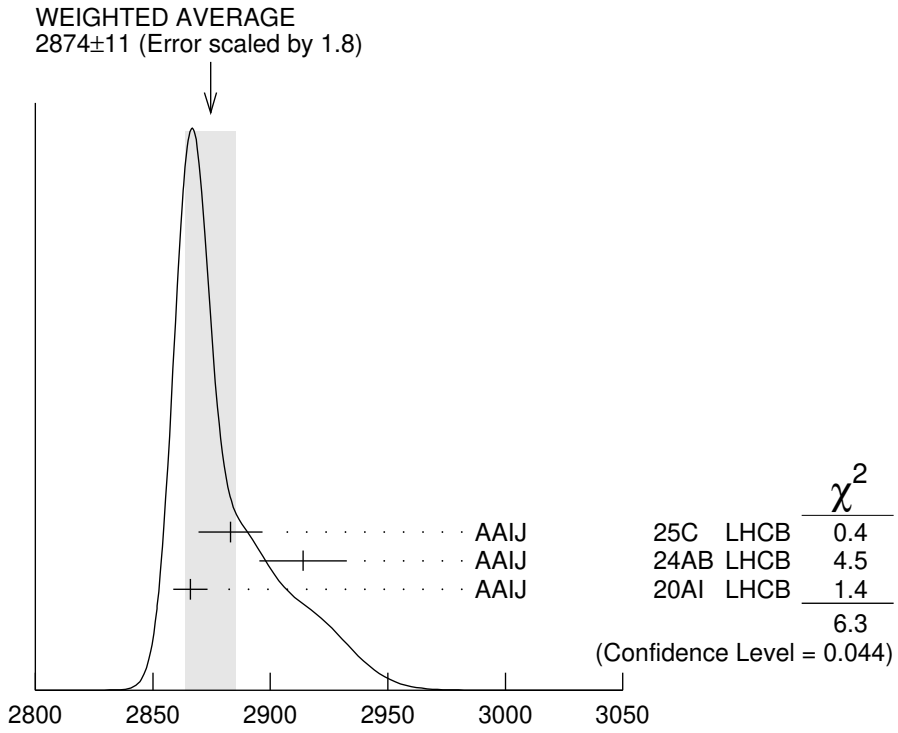
$T^*_{\overline{c}s0}(2870)^0$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2874±11 OUR AVERAGE Error includes scale factor of 1.8. See the ideogram below.					
2883±11± 8	1.5k	[1] AAIJ	25C	LHCB	$B^+ \to D^+ \overline{D}^0 K^0_S$
2914±11±15	1.6k	[2] AAIJ	24AB	LHCB	$B^+ \to D^{*+} D^- K^+$
2866± 7± 2	1.2k	[3] AAIJ	20AI	LHCB	$B^+ \to D^+ D^- K^+$

[1] Obtained from the amplitude analysis. Parameterized with the relativistic Breit-Wigner line shape.

[2] From a simultaneous amplitude analysis of $B^+ \to D^{*+} D^- K^+$, $B^+ \to D^{*-} D^+ K^+$ and their c.c.

[3] Obtained from the full amplitude analysis. Parameterized with the relativistic Breit-Wigner line shape. Also confirmed by the model-independent analysis of AAIJ 20AF.



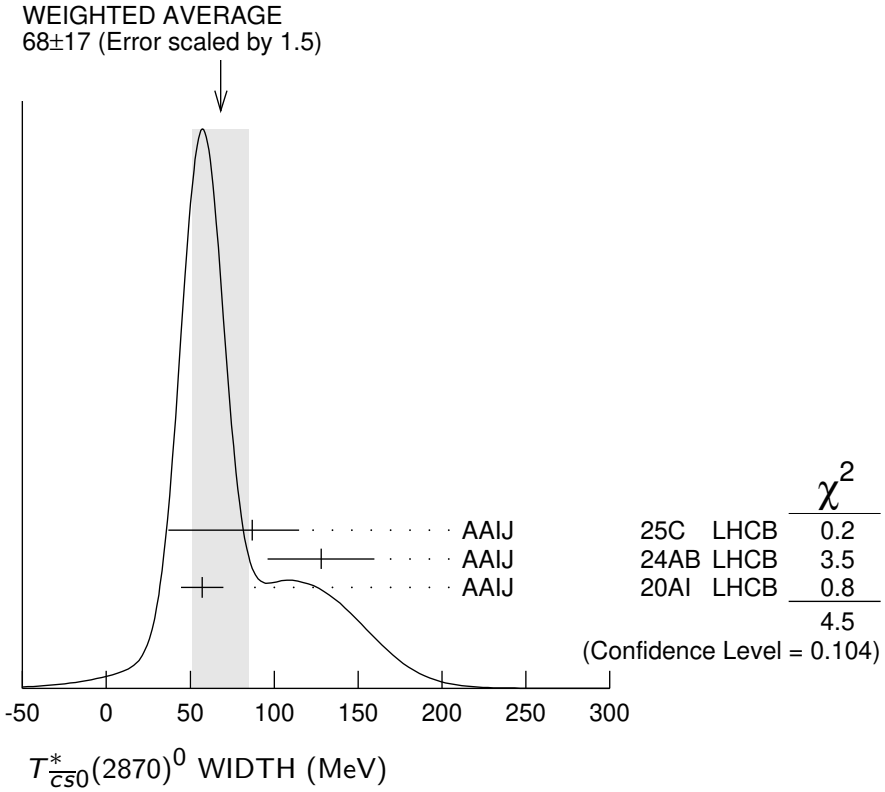
$T^*_{\overline{c}s0}(2870)^0$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
68±17 OUR AVERAGE	Error includes scale factor of 1.5. See the ideogram below.				
$87^{+22}_{-47}\pm17$	1.5k	[1] AAIJ	25C	LHCB	$B^+ \to D^+ \overline{D}^0 K^0_S$
$128\pm22\pm23$	1.6k	[2] AAIJ	24AB	LHCB	$B^+ \to D^{*+} D^- K^+$
$57\pm12\pm4$	1.2k	[3] AAIJ	20AI	LHCB	$B^+ \to D^+ D^- K^+$

[1] Obtained from the amplitude analysis. Parameterized with the relativistic Breit-Wigner line shape.

[2] From a simultaneous amplitude analysis of $B^+ \to D^{*+} D^- K^+$, $B^+ \to D^{*-} D^+ K^+$ and their c.c.

[3] 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)
Γ_1	$D^- K^+$	seen
Γ_2	$\overline{D}^0 K^0_S$	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	$B^+ \to D^+ D^- K^+$

$\Gamma(\overline{D}^0 K^0_S)/\Gamma(D^- K^+)$ Γ_2/Γ_1

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
3.3±1.1±1.6	1.5k	[1] AAIJ	25C	LHCB	$B^+ \to D^+ \overline{D}^0 K^0_S$, $D^+ D^- K^+$

[1] Obtained from fit fractions based an amplitude analyses. Parameterized with the relativistic Breit-Wigner line shape. The last error includes uncertainties from B($B^+ \to D^+ \overline{D}^0 K^0_S$) and B($B^+ \to D^+ D^- K^+$) values.

$T^{*}_{\overline{c}s0}(2870)^0$ REFERENCES

AAIJ	25C	PRL 134 101901	R. Aaij *et al.*	(LHCb Collab.)
AAIJ	24AB	PRL 133 131902	R. Aaij *et al.*	(LHCb Collab.)
AAIJ	20AF	PRL 125 242001	R. Aaij *et al.*	(LHCb Collab.)
AAIJ	20AI	PR D102 112003	R. Aaij *et al.*	(LHCb Collab.)