$D_{s3}^{*}(2860)^{\pm}$

$I(J^P) = 0(3^-)$

J^P consistent with 3^- from angular analysis of AAIJ 14AW. Observed by AUBERT,BE 06E and AUBERT 09AR in inclusive production of DK and D^*K in e^+e^- annihilation.

$D_{s3}^{*}(2860)^{+}$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2860.5±2.6±6.5		[1] AAIJ	14AW	LHCB	$B_s^0 \to \overline{D}^0 K^- \pi^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2867.1±4.3±1.9	3.1k	AAIJ	16AW	LHCB	$pp \to D^{*+} K_S^0 X$ at 7, 8 TeV
2866.1±1.0±6.3	36k	[2,3] AAIJ	12AU	LHCB	$pp \to (DK)^+ X$ at 7 TeV
2862 ±2 $^{+5}_{-2}$	3122	[2,4] AUBERT	09AR	BABR	$e^+e^- \to D^{(*)} KX$
2856.6±1.5±5.0		[5] AUBERT,BE	06E	BABR	$e^+e^- \to DKX$

[1] Separated from the spin-1 component $D_{s1}^{*}(2860)^-$ by a fit of the helicity angle of the $\overline{D}^0 K^-$ system, with a statistical significance of the spin-3 and spin-1 components in excess of 10 σ.

[2] Possible contribution from the $D_{s1}^{*}(2860)$ state.

[3] From the combined fit of the $D^+ K_S^0$ and $D^0 K^+$ modes in the model including the $D_{s2}^{*}(2573)^+$, $D_{s1}^{*}(2700)^+$ and spin-0 $D_{sJ}^{*}(2860)^+$.

[4] From simultaneous fits to the two DK mass spectra and to the total D^*K mass spectrum.

[5] Superseded by AUBERT 09AR.

$D_{s3}^{*}(2860)^{+}$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
53 ± 7 ± 7		[1] AAIJ	14AW	LHCB	$B_s^0 \to \overline{D}^0 K^- \pi^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
50 ±11 ±13	3.1k	AAIJ	16AW	LHCB	$pp \to D^{*+} K_S^0 X$ at 7, 8 TeV
69.9± 3.2± 6.6	36k	[2,3] AAIJ	12AU	LHCB	$pp \to (DK)^+ X$ at 7 TeV
48 ± 3 ± 6	3122	[2,4] AUBERT	09AR	BABR	$e^+e^- \to D^{(*)} KX$
47 ± 7 ±10		[5] AUBERT,BE	06E	BABR	$e^+e^- \to DKX$

[1] Separated from the spin-1 component $D_{s1}^{*}(2860)^-$ by a fit of the helicity angle of the $\overline{D}^0 K^-$ system, with a statistical significance of the spin-3 and spin-1 components in excess of 10 σ.

[2] Possible contribution from the $D_{s1}^{*}(2860)$ state.

[3] From the combined fit of the $D^+ K_S^0$ and $D^0 K^+$ modes in the model including the $D_{s2}^{*}(2573)^+$, $D_{s1}^{*}(2700)^+$ and spin-0 $D_{sJ}^{*}(2860)^+$.

[4] From simultaneous fits to the two DK mass spectra and to the total D^*K mass spectrum.

[5] Superseded by AUBERT 09AR.

$D^*_{s3}(2860)^\pm$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	DK	
Γ_2	$D^0 K^+$	seen
Γ_3	$D^+ K^0_S$	seen
Γ_4	$D^* K$	
Γ_5	$D^{*0} K^+$	seen
Γ_6	$D^{*+} K^0_S$	seen

$D^*_{s3}(2860)^\pm$ BRANCHING RATIOS

$\Gamma(D^*K)/\Gamma(DK)$ Γ_4/Γ_1

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.10±0.15±0.19	3122	[1] AUBERT	09AR	BABR	$e^+e^- \to D^{(*)}KX$

[1] From the average of the corresponding ratios with $D^{(*)0}K^+$ and $D^{(*)+}K^0_S$.

$\Gamma(D^{*0}K^+)/\Gamma(D^0K^+)$ Γ_5/Γ_2

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.04±0.17±0.20	2241	[1] AUBERT	09AR	BABR	$e^+e^- \to D^{(*)}KX$

[1] From the $D^{*0}K^+$ and D^0K^+, where $D^{*0} \to D^0\pi^0$.

$\Gamma(D^{*+}K^0_S)/\Gamma(D^+K^0_S)$ Γ_6/Γ_3

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.38±0.35±0.49	881	[1] AUBERT	09AR	BABR	$e^+e^- \to D^{(*)}KX$

[1] From the $D^{*+}K^0_S$ and $D^+K^0_S$, where $D^{*+} \to D^+\pi^0$.

$D^*_{s3}(2860)^\pm$ REFERENCES

AAIJ	16AW JHEP 1602 133	R. Aaij *et al.*	(LHCb Collab.)
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AAIJ	12AU JHEP 1210 151	R. Aaij *et al.*	(LHCb Collab.)
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