NODE=M226

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

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

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. NODE=M226

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

NODE=M226M

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. NODE=M226M;LINKAGE=A

[2] Possible contribution from the $D_{s1}^*(2860)$ state. NODE=M226M;LINKAGE=D

[3] From the combined fit of the $D^+K_S^0$ and D^0K^+ modes in the model including the $D_{s2}^*(2573)^+$, $D_{s1}^*(2700)^+$ and spin-0 $D_{sJ}^*(2860)^+$. NODE=M226M;LINKAGE=E

[4] From simultaneous fits to the two DK mass spectra and to the total D^*K mass spectrum. NODE=M226M;LINKAGE=C

[5] Superseded by AUBERT 09AR. NODE=M226M;LINKAGE=B

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

NODE=M226W

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. NODE=M226W;LINKAGE=A

[2] Possible contribution from the $D_{s1}^*(2860)$ state. NODE=M226W;LINKAGE=D

[3] From the combined fit of the $D^+K_S^0$ and D^0K^+ modes in the model including the $D_{s2}^*(2573)^+$, $D_{s1}^*(2700)^+$ and spin-0 $D_{sJ}^*(2860)^+$. NODE=M226W;LINKAGE=E

[4] From simultaneous fits to the two DK mass spectra and to the total D^*K mass spectrum. NODE=M226W;LINKAGE=C

[5] Superseded by AUBERT 09AR. NODE=M226W;LINKAGE=B

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

NODE=M226215;NODE=M226

	Mode	Fraction (Γ_i/Γ)	
Γ_1	DK		DESIG=1
Γ_2	D^0K^+	seen	DESIG=2;OUR EVAL;→ UNCHECKED ←
Γ_3	$D^+K_S^0$	seen	DESIG=3;OUR EVAL;→ UNCHECKED ←
Γ_4	D^*K		DESIG=4
Γ_5	$D^{*0}K^+$	seen	DESIG=5;OUR EVAL;→ UNCHECKED ←
Γ_6	$D^{*+}K_S^0$	seen	DESIG=6;OUR EVAL;→ UNCHECKED ←

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

NODE=M226225

$\Gamma(D^* K)/\Gamma(D K)$ — Γ_4/Γ_1

NODE=M226R01
NODE=M226R01

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

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

NODE=M226R01;LINKAGE=AU

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

NODE=M226R02
NODE=M226R02

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

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

NODE=M226R02;LINKAGE=AU

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

NODE=M226R03
NODE=M226R03

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

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

NODE=M226R03;LINKAGE=AU

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

NODE=M226

AAIJ	16AW JHEP 1602 133	R. Aaij *et al.*	(LHCb Collab.)	REFID=60464
AAIJ	14AW PRL 113 162001	R. Aaij *et al.*	(LHCb Collab.) JP	REFID=56105
AAIJ	12AU JHEP 1210 151	R. Aaij *et al.*	(LHCb Collab.)	REFID=54735
AUBERT	09AR PR D80 092003	B. Aubert *et al.*	(BABAR Collab.)	REFID=53135
AUBERT,BE	06E PRL 97 222001	B. Aubert *et al.*	(BABAR Collab.)	REFID=51512