$D_{s1}(2536)^{\pm}$

$I(J^P) = 0(1^+)$
J, P need confirmation.

Seen in $D^*(2010)^+ K^0$. Not seen in $D^+ K^0$ or $D^0 K^+$. $J^P = 1^+$ assignment strongly favored.

$D_{s1}(2536)^{\pm}$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
2535.35± 0.34±0.5 OUR EVALUATION					
2535.35± 0.34 OUR AVERAGE					
2534.2 ± 1.2	9	ASRATYAN	94	BEBC	$\nu N \rightarrow D^* K^0 X, D^{*0} K^{\pm} X$
2535 ± 0.6 ±1	75	FRABETTI	94B	E687	γ Be $\rightarrow D^{*+} K^0 X, D^{*0} K^+ X$
2535.3 ± 0.2 ±0.5	134	ALEXANDER	93	CLE2	$e^+ e^- \rightarrow D^{*0} K^+ X$
2534.8 ± 0.6 ±0.6	44	ALEXANDER	93	CLE2	$e^+ e^- \rightarrow D^{*+} K^0 X$
2535.2 ± 0.5 ±1.5	28	ALBRECHT	92R	ARG	10.4 $e^+ e^- \rightarrow D^{*0} K^+ X$
2536.6 ± 0.7 ±0.4		AVERY	90	CLEO	$e^+ e^- \rightarrow D^{*+} K^0 X$
2535.9 ± 0.6 ±2.0		ALBRECHT	89E	ARG	$D^*_{s1} \rightarrow D^*(2010) K^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2535 ±28		[1] ASRATYAN	88	HLBC	$\nu N \rightarrow D_s \gamma \gamma X$

[1] Not seen in $D^* K$.

$m_{D_{s1}(2536)^{\pm}} - m_{D^*_s(2111)}$

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
424±28	ASRATYAN	88	HLBC	$D^{*\pm}_s \gamma$

$D_{s1}(2536)^{\pm}$ WIDTH

VALUE (MeV)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<2.3	90		ALEXANDER	93	CLEO	$e^+ e^- \rightarrow D^{*0} K^+ X$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<3.2	90	75	FRABETTI	94B	E687	γ Be $\rightarrow D^{*+} K^0 X, D^{*0} K^+ X$
<3.9	90		ALBRECHT	92R	ARG	10.4 $e^+ e^- \rightarrow D^{*0} K^+ X$
<5.44	90		AVERY	90	CLEO	$e^+ e^- \rightarrow D^{*+} K^0 X$
<4.6	90		ALBRECHT	89E	ARG	$D^*_{s1} \rightarrow D^*(2010) K^0$

$D_{s1}(2536)^+$ DECAY MODES

$D_{s1}(2536)^-$ modes are charge conjugates of the modes below.

	Mode	Fraction (Γ_i/Γ)
Γ_1	$D^*(2010)^+ K^0$	seen
Γ_2	$D^*(2007)^0 K^+$	seen
Γ_3	$D^+ K^0$	not seen
Γ_4	$D^0 K^+$	not seen
Γ_5	$D_s^{*+} \gamma$	possibly seen

$D_{s1}(2536)^+$ BRANCHING RATIOS

$\Gamma(D^+ K^0)/\Gamma(D^*(2010)^+ K^0)$ Γ_3/Γ_1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.40	90	ALEXANDER	93	CLEO	$e^+ e^- \rightarrow D^{*+} K^0 X$
<0.43	90	ALBRECHT	89E	ARG	$D_{s1}^* \rightarrow D^*(2010) K^0$

$\Gamma(D_s^{*+} \gamma)/\Gamma_{total}$ Γ_5/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
possibly seen	ASRATYAN	88	HLBC	$\nu N \rightarrow D_s \gamma \gamma X$

$\Gamma(D^0 K^+)/\Gamma(D^*(2007)^0 K^+)$ Γ_4/Γ_2

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.12	90	ALEXANDER	93	CLEO	$e^+ e^- \rightarrow D^{*0} K^+ X$

$\Gamma(D_s^{*+} \gamma)/\Gamma(D^*(2007)^0 K^+)$ Γ_5/Γ_2

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.42	90	ALEXANDER	93	CLEO	$e^+ e^- \rightarrow D^{*0} K^+ X$

$\Gamma(D^*(2007)^0 K^+)/\Gamma(D^*(2010)^+ K^0)$ Γ_2/Γ_1

VALUE	DOCUMENT ID		TECN	COMMENT
1.22±0.23 OUR AVERAGE				
1.1 ±0.3	ALEXANDER	93	CLEO	$e^+ e^- \rightarrow D^{*0} K^+ X, D^{*+} K^0 X$
1.4 ±0.3 ±0.2	[2] ALBRECHT	92R	ARG	10.4 $e^+ e^- \rightarrow D^{*0} K^+ X, D^{*+} K^0 X$

[2] Evaluated by us from published inclusive cross-sections.

$D_{s1}(2536)^\pm$ REFERENCES

ASRATYAN	94	ZPHY C 61 563	+Aderholz+	(BIRM, BELG, CERN, SERP, ITEP, RAL)
FRABETTI	94B	PRL 72 324	+Cheung, Cumalat+	(FNAL E687 Collab.)
ALEXANDER	93	PL B303 377	+Bebek+	(CLEO Collab.)
ALBRECHT	92R	PL B297 425	+Ehrlichmann+	(ARGUS Collab.)
AVERY	90	PR D41 774	+Besson	(CLEO Collab.)
ALBRECHT	89E	PL B230 162	+Glaser, Harder+	(ARGUS Collab.)
ASRATYAN	88	ZPHY C40 483	+Fedotov+	(ITEP, SERP)