

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

$I(J^P) = 0(1^+)$
 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	$\nu N \rightarrow D^{*0} K^0 X, D^{*0} K^\pm X$
2535 ± 0.6 ± 1	75	FRABETTI	94B E687	$\gamma Be \rightarrow D^{*+} K^0 X, D^{*0} K^+ X$
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	$D_s^{*\pm} \gamma$

$D_{s1}(2536)^\pm$ 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	$\gamma Be \rightarrow D^{*+} K^0 X, D^{*0} K^+ X$
<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	$D_{s1}^* \rightarrow D^*(2010) K^0$

$\Gamma(D_s^{*+} \gamma)/\Gamma_{\text{total}}$ 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	A.E. Asratyan <i>et al.</i>	(BIRM, BELG, CERN+)
FRABETTI 94B	PRL 72 324	P.L. Frabetti <i>et al.</i>	(FNAL E687 Collab.)
ALEXANDER 93	PL B303 377	J. Alexander <i>et al.</i>	(CLEO Collab.)
ALBRECHT 92R	PL B297 425	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
AVERY 90	PR D41 774	P. Avery, D. Besson	(CLEO Collab.)
ALBRECHT 89E	PL B230 162	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
ASRATYAN 88	ZPHY C40 483	A.E. Asratyan <i>et al.</i>	(ITEP, SERP)

