

**$D_{s2}^*(2573)$**

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

$J^P$  is natural, width and decay modes consistent with  $2^+$ .

### $D_{s2}^*(2573)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>2571.9 ± 0.8 OUR AVERAGE</b>				
2569.4 ± 1.6 ± 0.5	82 ± 17	AAIJ	11A LHC	$B_s \rightarrow D_{s2}^*(2573) \mu \bar{\nu} X$
2572.2 ± 0.3 ± 1.0		AUBERT, BE	06E BABR	$e^+ e^- \rightarrow DKX$
2574.5 ± 3.3 ± 1.6		ALBRECHT	96 ARG	$e^+ e^- \rightarrow D^0 K^+ X$
2573.2 $^{+1.7}_{-1.6} \pm 0.9$	217	KUBOTA	94 CLE2	$e^+ e^- \sim 10.5$ GeV
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2570.0 ± 4.3	25	<sup>1</sup> EVDOKIMOV	04 SELX	600 $\Sigma^- A \rightarrow D^0 K^+ X$
2568.6 ± 3.2	64	<sup>2</sup> HEISTER	02B ALEP	$e^+ e^- \rightarrow D^0 K^+ X$

<sup>1</sup> Not independent of the mass difference below.

<sup>2</sup> Calculated using  $m_{D^0} = 1864.5 \pm 0.5$  MeV and the mass difference below.

### $m_{D_{s2}^*(2573)} - m_{D^0}$

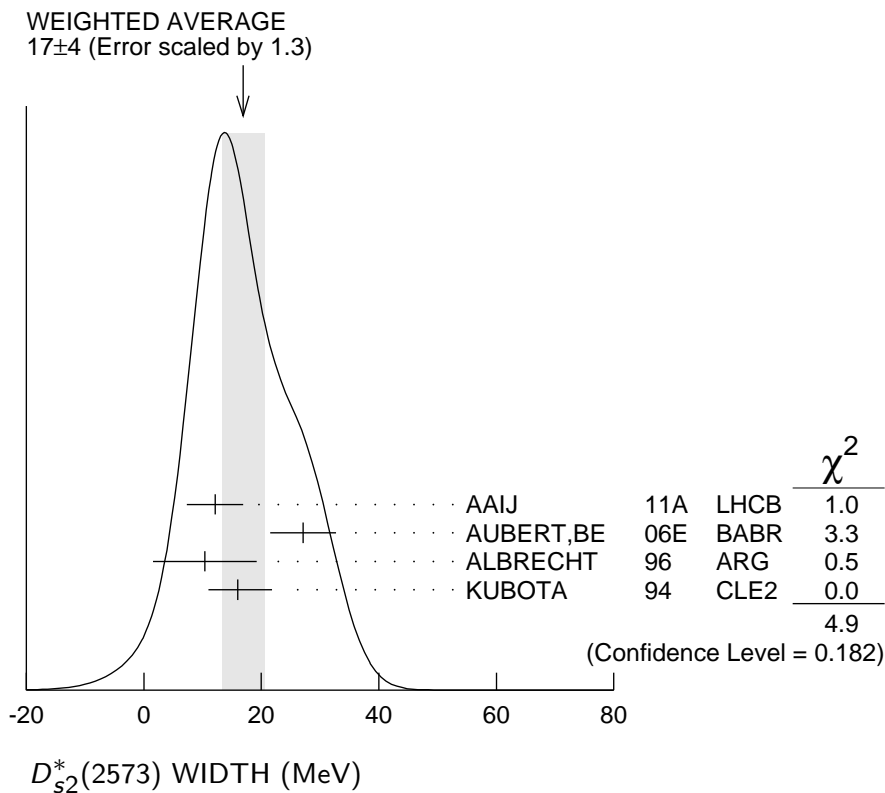
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>704 ± 3 ± 1</b>	64	HEISTER	02B ALEP	$e^+ e^- \rightarrow D^0 K^+ X$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
705.4 ± 4.3	25	<sup>3</sup> EVDOKIMOV	04 SELX	600 $\Sigma^- A \rightarrow D^0 K^+ X$

<sup>3</sup> Systematic errors not estimated.

### $D_{s2}^*(2573)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>17 ± 4 OUR AVERAGE</b>		Error includes scale factor of 1.3. See the ideogram below.		
12.1 ± 4.5 ± 1.6	82 ± 17	AAIJ	11A LHC	$B_s \rightarrow D_{s2}^*(2573) \mu \bar{\nu} X$
27.1 ± 0.6 ± 5.6		AUBERT, BE	06E BABR	$e^+ e^- \rightarrow DKX$
10.4 ± 8.3 ± 3.0		ALBRECHT	96 ARG	$e^+ e^- \rightarrow D^0 K^+ X$
16 $^{+5}_{-4} \pm 3$	217	KUBOTA	94 CLE2	$e^+ e^- \sim 10.5$ GeV
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
14 $^{+9}_{-6}$	25	<sup>4</sup> EVDOKIMOV	04 SELX	600 $\Sigma^- A \rightarrow D^0 K^+ X$

<sup>4</sup> Systematic errors not estimated.



### $D_{s2}^*(2573)^+$ DECAY MODES

$D_{s2}^*(2573)^-$  modes are charge conjugates of the modes below.

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $D^0 K^+$	seen
$\Gamma_2$ $D^*(2007)^0 K^+$	not seen

### $D_{s2}^*(2573)^+$ BRANCHING RATIOS

$\Gamma(D^0 K^+)/\Gamma_{\text{total}}$						$\Gamma_1/\Gamma$
VALUE	EVTS	DOCUMENT ID	TECN	CHG	COMMENT	
<b>seen</b>	217	KUBOTA	94	CLE2	$\pm$	$e^+ e^- \sim 10.5$ GeV

$\Gamma(D^*(2007)^0 K^+)/\Gamma(D^0 K^+)$						$\Gamma_2/\Gamma_1$
VALUE	CL%	DOCUMENT ID	TECN	CHG	COMMENT	
<b>&lt;0.33</b>	90	KUBOTA	94	CLE2	$+$	$e^+ e^- \sim 10.5$ GeV

## $D_{s2}^*$ (2573) REFERENCES

AAIJ	11A	PL B698 14	R. Aaij <i>et al.</i>	(LHCb Collab.)
AUBERT,BE	06E	PRL 97 222001	B. Aubert <i>et al.</i>	(BABAR Collab.)
EVDOKIMOV	04	PRL 93 242001	A.V. Evdokimov <i>et al.</i>	(SELEX Collab.)
HEISTER	02B	PL B526 34	A. Heister <i>et al.</i>	(ALEPH Collab.)
ALBRECHT	96	ZPHY C69 405	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
KUBOTA	94	PRL 72 1972	Y. Kubota <i>et al.</i>	(CLEO Collab.)

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