# $D^*_{s2}(2573)$

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

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

## $D^*_{s2}(2573)$ MASS

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **2571.9±0.8 OUR AVERAGE** | | | | | |
| 2569.4±1.6±0.5 | 82 ± 17 | AAIJ | 11A | LHCB | $B_s \to D^*_{s2}(2573)\mu\overline{\nu}X$ |
| 2572.2±0.3±1.0 | | AUBERT,BE | 06E | BABR | $e^+e^- \to DKX$ |
| 2574.5±3.3±1.6 | | ALBRECHT | 96 | ARG | $e^+e^- \to D^0K^+X$ |
| $2573.2^{+1.7}_{-1.6}\pm0.9$ | 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 | [1] EVDOKIMOV | 04 | SELX | 600 $\Sigma^- A \to D^0K^+X$ |
| 2568.6±3.2 | 64 | [2] HEISTER | 02B | ALEP | $e^+e^- \to D^0K^+X$ |

[1] Not independent of the mass difference below.
[2] Calculated using $m_{D^0}$ = 1864.5 ± 0.5 MeV and the mass difference below.

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

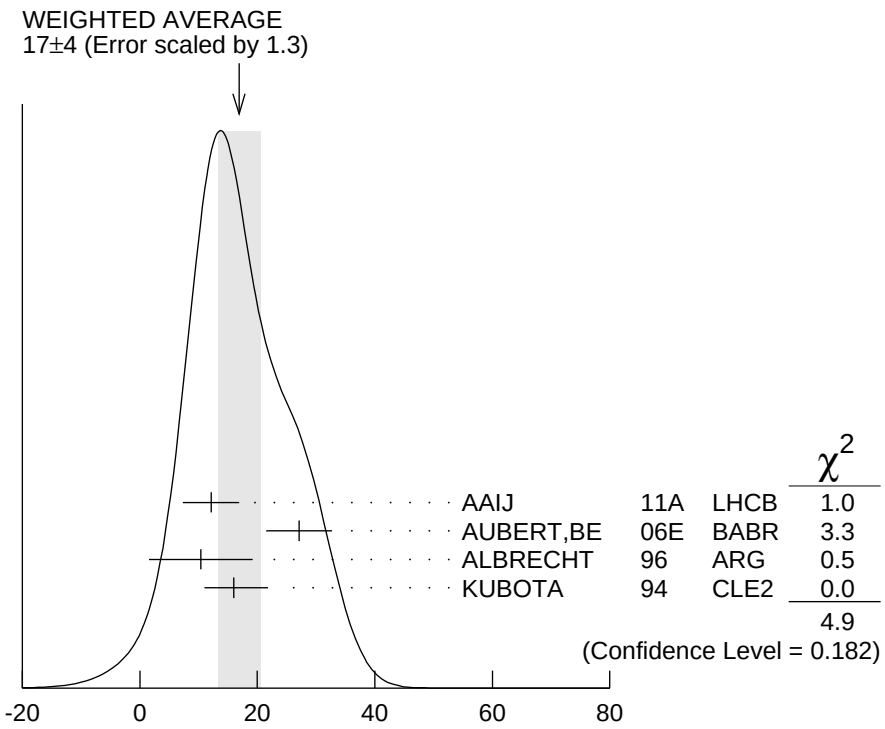
| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **704 ±3 ±1** | 64 | HEISTER | 02B | ALEP | $e^+e^- \to D^0K^+X$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 705.4±4.3 | 25 | [3] EVDOKIMOV | 04 | SELX | 600 $\Sigma^- A \to D^0K^+X$ |

[3] Systematic errors not estimated.

## $D^*_{s2}(2573)$ WIDTH

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **17 ±4 OUR AVERAGE** Error includes scale factor of 1.3. See the ideogram below. | | | | | |
| 12.1±4.5±1.6 | 82 ± 17 | AAIJ | 11A | LHCB | $B_s \to D^*_{s2}(2573)\mu\overline{\nu}X$ |
| 27.1±0.6±5.6 | | AUBERT,BE | 06E | BABR | $e^+e^- \to DKX$ |
| 10.4±8.3±3.0 | | ALBRECHT | 96 | ARG | $e^+e^- \to D^0K^+X$ |
| $16\ ^{+5}_{-4}\ \pm3$ | 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 | [4] EVDOKIMOV | 04 | SELX | 600 $\Sigma^- A \to D^0K^+X$ |

[4] 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

**$\Gamma(D^0 K^+)/\Gamma_{total}$** **$\Gamma_1/\Gamma$**

| VALUE | EVTS | DOCUMENT ID | | TECN | CHG | COMMENT |
|---|---|---|---|---|---|---|
| **seen** | 217 | KUBOTA | 94 | CLE2 | ± | $e^+ e^-$ ~ 10.5 GeV |

**$\Gamma(D^*(2007)^0 K^+)/\Gamma(D^0 K^+)$** **$\Gamma_2/\Gamma_1$**

| VALUE | CL% | DOCUMENT ID | | TECN | CHG | COMMENT |
|---|---|---|---|---|---|---|
| **<0.33** | 90 | KUBOTA | 94 | CLE2 | + | $e^+ e^-$ ~ 10.5 GeV |

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


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