



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

| VALUE (MeV)   | CL% | EVTS | DOCUMENT ID  | TECN | COMMENT   |
|---|-----|------|--------------|------|---|
| <b>&lt;2.3</b>  | 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 | $\gamma Be \rightarrow D^{*+}K^0X,$<br>$D^{*0}K^+X$ |
| <3.9  | 90  |      | ALBRECHT 92R | ARG  | $10.4 e^+e^- \rightarrow$<br>$D^{*0}K^+X$           |
| <5.44   | 90  |      | AVERY 90     | CLEO | $e^+e^- \rightarrow D^{*+}K^0X$                     |
| <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 ( $\Gamma_i/\Gamma$ ) |
|-----------------------------|--------------------------------|
| $\Gamma_1$ $D^*(2010)^+K^0$ | seen                           |
| $\Gamma_2$ $D^*(2007)^0K^+$ | seen                           |
| $\Gamma_3$ $D^+K^0$         | not seen                       |
| $\Gamma_4$ $D^0K^+$         | not seen                       |
| $\Gamma_5$ $D_s^{*+}\gamma$ | possibly seen                  |

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

| $\Gamma(D^+K^0)/\Gamma(D^*(2010)^+K^0)$ |     |              |      |                                     | $\Gamma_3/\Gamma_1$ |
|---|-----|--------------|------|-------------------------------------|---------------------|
| VALUE                                   | CL% | DOCUMENT ID  | TECN | COMMENT                             |                     |
| <b>&lt;0.40</b>                         | 90  | ALEXANDER 93 | CLEO | $e^+e^- \rightarrow D^{*+}K^0X$     |                     |
| <0.43                                   | 90  | ALBRECHT 89E | ARG  | $D_{s1}^* \rightarrow D^*(2010)K^0$ |                     |

| $\Gamma(D_s^{*+}\gamma)/\Gamma_{\text{total}}$ |     |             |      |                                       | $\Gamma_5/\Gamma$ |
|--|-----|-------------|------|---------------------------------------|-------------------|
| VALUE  | CL% | DOCUMENT ID | TECN | COMMENT                               |                   |
| <b>possibly seen</b>                           |     | ASRATYAN 88 | HLBC | $\nu N \rightarrow D_s\gamma\gamma X$ |                   |

| $\Gamma(D^0K^+)/\Gamma(D^*(2007)^0K^+)$ |     |              |      |                                 | $\Gamma_4/\Gamma_2$ |
|---|-----|--------------|------|---------------------------------|---------------------|
| VALUE                                   | CL% | DOCUMENT ID  | TECN | COMMENT                         |                     |
| <b>&lt;0.12</b>                         | 90  | ALEXANDER 93 | CLEO | $e^+e^- \rightarrow D^{*0}K^+X$ |                     |

| $\Gamma(D_s^{*+}\gamma)/\Gamma(D^*(2007)^0K^+)$ |     |              |      |                                 | $\Gamma_5/\Gamma_2$ |
|---|-----|--------------|------|---------------------------------|---------------------|
| VALUE   | CL% | DOCUMENT ID  | TECN | COMMENT                         |                     |
| <b>&lt;0.42</b>                                 | 90  | ALEXANDER 93 | CLEO | $e^+e^- \rightarrow D^{*0}K^+X$ |                     |

| $\Gamma(D^*(2007)^0 K^+)/\Gamma(D^*(2010)^+ K^0)$              |             |                         |             |  | $\Gamma_2/\Gamma_1$ |
|--|-------------|-------------------------|-------------|--|---------------------|
| <u>VALUE</u>   | <u>EVTS</u> | <u>DOCUMENT ID</u>      | <u>TECN</u> | <u>COMMENT</u>   |                     |
| <b>1.27 ± 0.21 OUR AVERAGE</b>                                 |             |                         |             |  |                     |
| 1.32 ± 0.47 ± 0.23   | 92          | <sup>3</sup> HEISTER    | 02B ALEP    | $e^+ e^- \rightarrow D^{*+} K^0 X,$<br>$D^{*0} K^+ X$      |                     |
| 1.9 $\begin{smallmatrix} +1.1 \\ -0.9 \end{smallmatrix}$ ± 0.4 | 35          | <sup>3</sup> ACKERSTAFF | 97W OPAL    | $e^+ e^- \rightarrow D^{*0} K^+ X,$<br>$D^{*+} K^0 X$      |                     |
| 1.1 ± 0.3  |             | ALEXANDER               | 93 CLEO     | $e^+ e^- \rightarrow$<br>$D^{*0} K^+ X, D^{*+} K^0 X$      |                     |
| 1.4 ± 0.3 ± 0.2  |             | <sup>4</sup> ALBRECHT   | 92R ARG     | 10.4 $e^+ e^- \rightarrow$<br>$D^{*0} K^+ X, D^{*+} K^0 X$ |                     |

<sup>3</sup> Ratio of the production rates measured in  $Z^0$  decays.

<sup>4</sup> Evaluated by us from published inclusive cross-sections.

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

|            |     |               |                             |                     |
|------------|-----|---------------|-----------------------------|---------------------|
| HEISTER    | 02B | PL B526 34    | A. Heister <i>et al.</i>    | (ALEPH Collab.)     |
| ACKERSTAFF | 97W | ZPHY C76 425  | K. Ackerstaff <i>et al.</i> | (OPAL Collab.)      |
| 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)        |

### OTHER RELATED PAPERS

|         |    |                             |              |
|---------|----|-----------------------------|--------------|
| SEMENOV | 99 | SPU 42 847                  | S.V. Semenov |
|         |    | Translated from UFN 42 937. |              |