

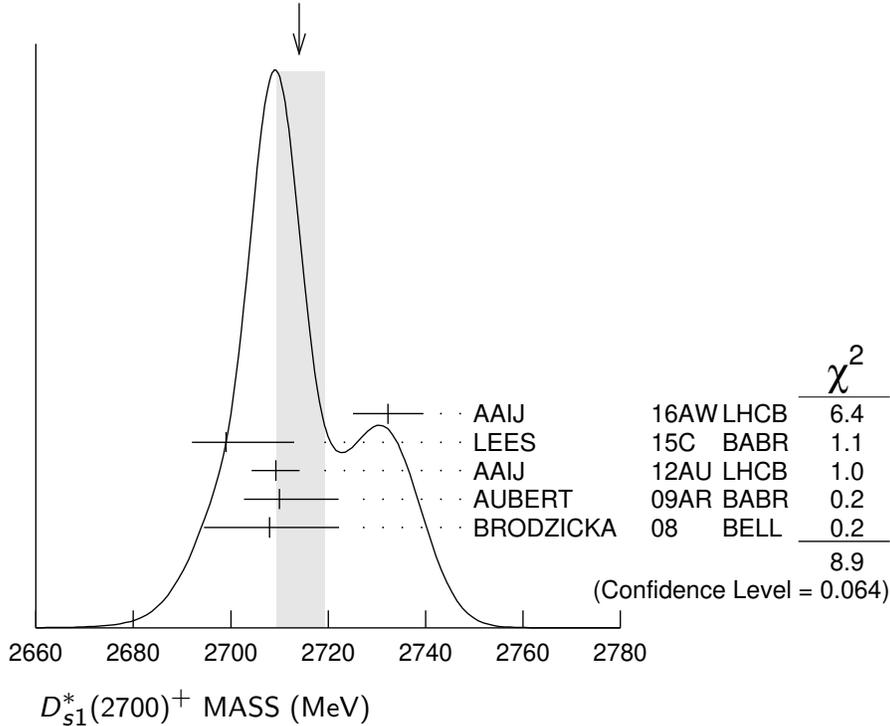
# $D_{s1}^*(2700)^\pm$

$$I(J^P) = 0(1^-)$$

## $D_{s1}^*(2700)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>2714 ± 5</b>	<b>OUR AVERAGE</b>	Error includes scale factor of 1.5. See the ideogram below.		
2732.3 ± 4.3 ± 5.8	15.7k	AAIJ	16AW LHCB	$pp \rightarrow D^{*+} K_S^0 X$ at 7, 8 TeV
2699 $^{+14}_{-7}$		<sup>1</sup> LEES	15C BABR	$B \rightarrow D D^0 K^+$
2709.2 ± 1.9 ± 4.5	52k	<sup>2</sup> AAIJ	12AU LHCB	$pp \rightarrow (DK)^+ X$ at 7 TeV
2710 ± 2 $^{+12}_{-7}$	10.4k	<sup>3</sup> AUBERT	09AR BABR	$e^+ e^- \rightarrow D^{(*)} K X$
2708 ± 9 $^{+11}_{-10}$	182	BRODZICKA	08 BELL	$B^+ \rightarrow D^0 \bar{D}^0 K^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2694 ± 8 $^{+13}_{-3}$		LEES	15C BABR	$B^0 \rightarrow D^- D^0 K^+$
2707 ± 8 ± 8		LEES	15C BABR	$B^+ \rightarrow \bar{D}^0 D^0 K^+$
2688 ± 4 ± 3		<sup>4</sup> AUBERT, BE	06E BABR	10.6 $e^+ e^- \rightarrow DKX$

WEIGHTED AVERAGE  
2714±5 (Error scaled by 1.5)



<sup>1</sup> From a combined analysis of  $B^0 \rightarrow D^- D^0 K^+$  and  $B^+ \rightarrow \bar{D}^0 D^0 K^+$ .

<sup>2</sup> From the combined fit of the  $D^+ K_S^0$  and  $D^0 K^+$  modes in the model including the  $D_{s2}^*(2573)^+$ ,  $D_{s1}^*(2700)^+$  and spin-0  $D_{sJ}^*(2860)^+$ .

<sup>3</sup> From simultaneous fits to the two  $DK$  mass spectra and to the total  $D^*K$  mass spectrum.

<sup>4</sup> Superseded by AUBERT 09AR.

### $D_{s1}^*(2700)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>122 ± 10</b>	<b>OUR AVERAGE</b>			
136 ± 19 ± 24	15.7k	AAIJ	16AW LHCB	$pp \rightarrow D^{*+} K_S^0 X$ at 7, 8 TeV
127 $^{+24}_{-19}$		<sup>1</sup> LEES	15c BABR	$B \rightarrow D D^0 K^+$
115.8 ± 7.3 ± 12.1	52k	<sup>2</sup> AAIJ	12AU LHCB	$pp \rightarrow (DK)^+ X$ at 7 TeV
149 ± 7 $^{+39}_{-52}$	10.4k	<sup>3</sup> AUBERT	09AR BABR	$e^+ e^- \rightarrow D^{(*)} K X$
108 ± 23 $^{+36}_{-31}$	182	BRODZICKA	08 BELL	$B^+ \rightarrow D^0 \bar{D}^0 K^+$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
145 ± 24 $^{+22}_{-14}$		LEES	15c BABR	$B^0 \rightarrow D^- D^0 K^+$
113 ± 21 $^{+20}_{-16}$		LEES	15c BABR	$B^+ \rightarrow \bar{D}^0 D^0 K^+$
112 ± 7 ± 36		<sup>4</sup> AUBERT, BE	06E BABR	10.6 $e^+ e^- \rightarrow DKX$

<sup>1</sup> From a combined analysis of  $B^0 \rightarrow D^- D^0 K^+$  and  $B^+ \rightarrow \bar{D}^0 D^0 K^+$ .

<sup>2</sup> From the combined fit of the  $D^+ K_S^0$  and  $D^0 K^+$  modes in the model including the  $D_{s2}^*(2573)^+$ ,  $D_{s1}^*(2700)^+$  and spin-0  $D_{sJ}^*(2860)^+$ .

<sup>3</sup> From simultaneous fits to the two  $DK$  mass spectra and to the total  $D^*K$  mass spectrum.

<sup>4</sup> Superseded by AUBERT 09AR.

### $D_{s1}^*(2700)^\pm$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $DK$	
$\Gamma_2$ $D^0 K^+$	seen
$\Gamma_3$ $D^+ K_S^0$	seen
$\Gamma_4$ $D^* K$	
$\Gamma_5$ $D^{*0} K^+$	seen
$\Gamma_6$ $D^{*+} K_S^0$	seen

### $D_{s1}^*(2700)^\pm$ BRANCHING RATIOS

$\Gamma(D^*K)/\Gamma(DK)$	EVTS	DOCUMENT ID	TECN	COMMENT	$\Gamma_4/\Gamma_1$
<b>0.91 ± 0.13 ± 0.12</b>	10.4k	<sup>1</sup> AUBERT	09AR BABR	$e^+ e^- \rightarrow D^{(*)} K X$	

<sup>1</sup> From the average of the corresponding ratios with  $D^{(*)0} K^+$  and  $D^{(*)+} K_S^0$ .

$\Gamma(D^{*0}K^+)/\Gamma(D^0K^+)$				$\Gamma_5/\Gamma_2$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>0.88 \pm 0.14 \pm 0.14</math></b>	7716	<sup>1</sup> AUBERT	09AR BABR	$e^+e^- \rightarrow D^{(*)}KX$
<sup>1</sup> From the $D^{*0}K^+$ and $D^0K^+$ , where $D^{*0} \rightarrow D^0\pi^0$ .				

$\Gamma(D^{*+}K_S^0)/\Gamma(D^+K_S^0)$				$\Gamma_6/\Gamma_3$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b><math>1.14 \pm 0.39 \pm 0.23</math></b>	2700	<sup>1</sup> AUBERT	09AR BABR	$e^+e^- \rightarrow D^{(*)}KX$
<sup>1</sup> From the $D^{*+}K_S^0$ and $D^+K_S^0$ , where $D^{*+} \rightarrow D^+\pi^0$ .				

### $D_{s1}^*(2700)^\pm$ REFERENCES

AAIJ	16AW	JHEP 1602 133	R. Aaij <i>et al.</i>	(LHCb Collab.)
LEES	15C	PR D91 052002	J.P. Lees <i>et al.</i>	(BABAR Collab.)
AAIJ	12AU	JHEP 1210 151	R. Aaij <i>et al.</i>	(LHCb Collab.)
AUBERT	09AR	PR D80 092003	B. Aubert <i>et al.</i>	(BABAR Collab.)
BRODZICKA	08	PRL 100 092001	J. Brodzicka <i>et al.</i>	(BELLE Collab.)
AUBERT,BE	06E	PRL 97 222001	B. Aubert <i>et al.</i>	(BABAR Collab.)