

$D_{s1}(2460)^\pm$ 

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

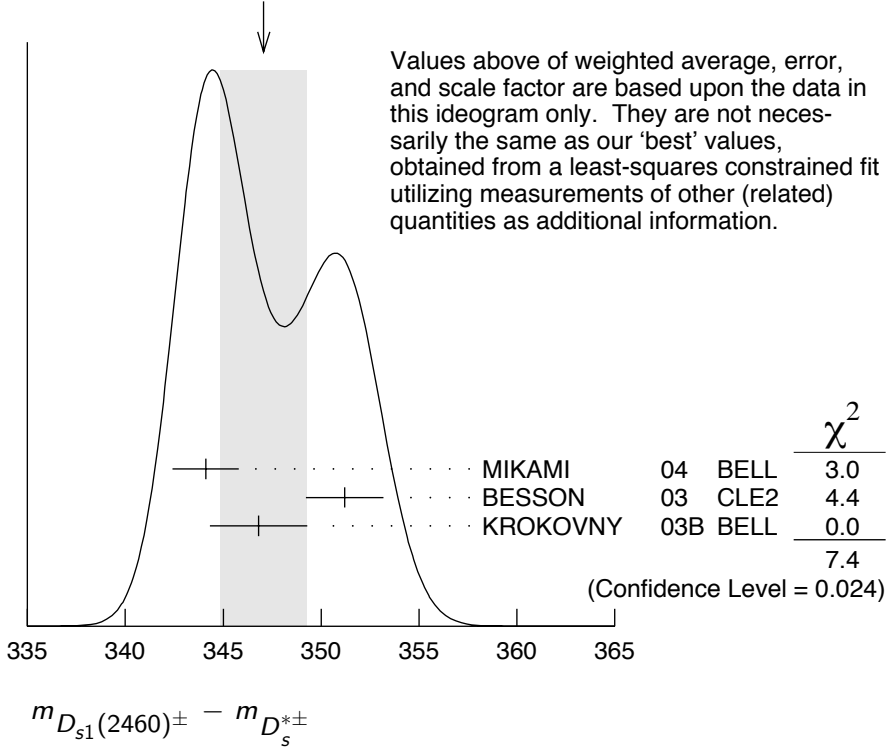
 $D_{s1}(2460)^\pm$  MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>2458.9±0.9 OUR FIT</b>	Error includes scale factor of 1.1.			
<b>2458.0±1.0±1.0</b>	195	AUBERT	04E BABR	10.6 $e^+e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2458.9±1.5	112	<sup>1</sup> AUBERT,B	04S BABR	$B \rightarrow D_{s1}(2460)^+ \bar{D}^{(*)}$
2461.1±1.6	139	<sup>2</sup> AUBERT,B	04S BABR	$B \rightarrow D_{s1}(2460)^+ \bar{D}^{(*)}$
2456.5±1.3±1.3	126	<sup>3,4</sup> MIKAMI	04 BELL	10.6 $e^+e^-$
2459.5±1.3±2.0	152	<sup>5,6</sup> MIKAMI	04 BELL	10.6 $e^+e^-$
2459.9±0.9±1.6	60	<sup>5,6</sup> MIKAMI	04 BELL	10.6 $e^+e^-$
2459.2±1.6±2.0	57	KROKOVNY	03B BELL	10.6 $e^+e^-$

<sup>1</sup> Systematic errors not evaluated. From the decay to  $D_s^{*+} \pi^0$ .<sup>2</sup> Systematic errors not evaluated. From the decay to  $D_s^+ \gamma$ .<sup>3</sup> Not independent of the corresponding  $m_{D_{s1}(2460)^\pm} - m_{D_s^{*\pm}}$ .<sup>4</sup> Using  $m_{D_s^{*+}} = 2112.4 \pm 0.7$  MeV.<sup>5</sup> Not independent of the corresponding  $m_{D_{s1}(2460)^\pm} - m_{D_s^\pm}$ .<sup>6</sup> Using  $m_{D_s^+} = 1968.5 \pm 0.6$  MeV. $m_{D_{s1}(2460)^\pm} - m_{D_s^{*\pm}}$ 

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>346.9±1.0 OUR FIT</b>	Error includes scale factor of 1.2.			
<b>347.1±2.2 OUR AVERAGE</b>	Error includes scale factor of 1.9. See the ideogram below.			
344.1±1.3±1.1	126	MIKAMI	04 BELL	10.6 $e^+e^-$
351.2±1.7±1.0	41	BESSION	03 CLE2	10.6 $e^+e^-$
346.8±1.6±1.9	57	<sup>7</sup> KROKOVNY	03B BELL	10.6 $e^+e^-$
<sup>7</sup> Recalculated by us using $m_{D_s^{*+}} = 2112.4 \pm 0.7$ MeV.				

WEIGHTED AVERAGE  
 $347.1 \pm 2.2$  (Error scaled by 1.9)



**$m_{D_{s1}(2460)^{\pm}} - m_{D_s^{\pm}}$**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b><math>490.7 \pm 0.9</math> OUR FIT</b>	Error includes scale factor of 1.2.			
<b><math>491.3 \pm 1.4</math> OUR AVERAGE</b>				
$491.0 \pm 1.3 \pm 1.9$	152	<sup>8</sup> MIKAMI	04 BELL	10.6 $e^+ e^-$
$491.4 \pm 0.9 \pm 1.5$	60	<sup>9</sup> MIKAMI	04 BELL	10.6 $e^+ e^-$

<sup>8</sup> From the decay to  $D_s^{\pm} \gamma$ .  
<sup>9</sup> From the decay to  $D_s^{\pm} \pi^+ \pi^-$ .

**$D_{s1}(2460)^{\pm}$  WIDTH**

VALUE (MeV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<b>&lt; 5.5</b>	90	126	MIKAMI	04 BELL	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
<10		195	AUBERT	04E BABR	10.6 $e^+ e^-$
< 7	90	41	BESSON	03 CLE2	10.6 $e^+ e^-$

## $D_{s1}(2460)^+$ DECAY MODES

$D_{s1}(2460)^-$  modes are charge conjugates of the modes below.

Mode
$\Gamma_1$ $D_s^{*+} \pi^0$
$\Gamma_2$ $D_s^+ \gamma$
$\Gamma_3$ $D_s^+ \pi^+ \pi^-$
$\Gamma_4$ $D_s^{*+} \gamma$
$\Gamma_5$ $D_{s0}^*(2317)^+ \gamma$

## $D_{s1}(2460)^\pm$ BRANCHING RATIOS

$\Gamma(D_s^{*+} \pi^0)/\Gamma_{\text{total}}$	$\Gamma_1/\Gamma$
<u>VALUE</u>	<u>EVTS</u> <u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

• • • We do not use the following data for averages, fits, limits, etc. • • •

seen	41	BESSON	03	CLE2	10.6 $e^+ e^-$
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$\Gamma(D_s^+ \gamma)/\Gamma(D_s^{*+} \pi^0)$	$\Gamma_2/\Gamma_1$
<u>VALUE</u>	<u>CL%</u> <u>EVTS</u> <u>DOCUMENT ID</u> <u>TECN</u> <u>COMMENT</u>

**0.31 ± 0.06 OUR AVERAGE** Error includes scale factor of 1.3. See the ideogram below.

0.274 ± 0.045 ± 0.020	251	AUBERT,B	04S	BABR	$B \rightarrow$ $D_{s1}(2460)^+ \bar{D}^{(*)}$
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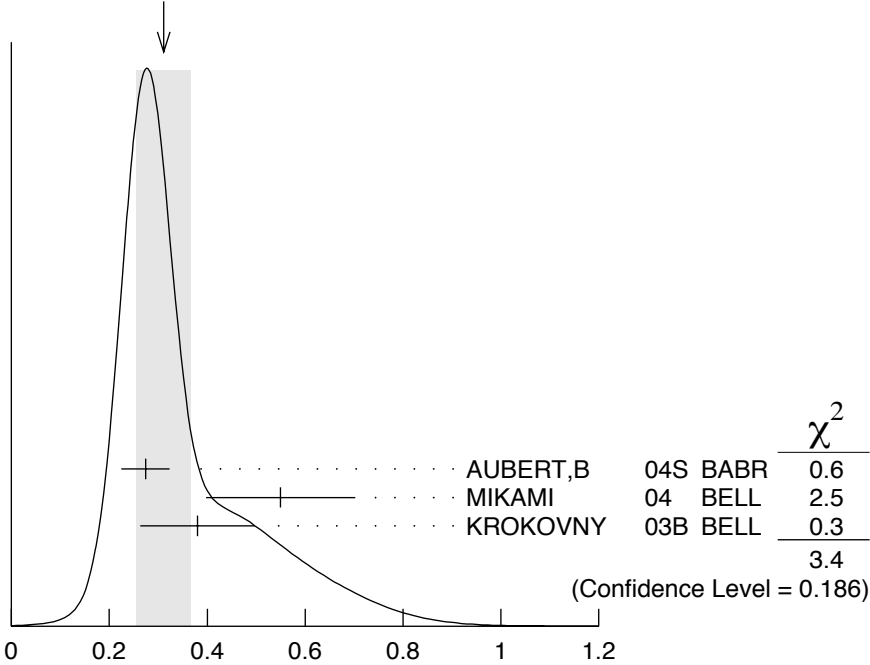
0.55 ± 0.13 ± 0.08	152	MIKAMI	04	BELL	10.6 $e^+ e^-$
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0.38 ± 0.11 ± 0.04	38	KROKOVNY	03B	BELL	10.6 $e^+ e^-$
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• • • We do not use the following data for averages, fits, limits, etc. • • •

< 0.49	90	BESSON	03	CLE2	10.6 $e^+ e^-$
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WEIGHTED AVERAGE  
 $0.31 \pm 0.06$  (Error scaled by 1.3)



$\Gamma(D_s^+ \gamma) / \Gamma(D_s^{*+} \pi^0)$   $\Gamma_2 / \Gamma_1$

$\Gamma(D_s^+ \pi^+ \pi^-) / \Gamma(D_s^{*+} \pi^0)$   $\Gamma_3 / \Gamma_1$

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$0.14 \pm 0.04 \pm 0.02$		60	MIKAMI	04 BELL	$10.6 e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
<0.08	90		BESSION	03 CLE2	$10.6 e^+ e^-$

$\Gamma(D_s^{*+} \gamma) / \Gamma(D_s^{*+} \pi^0)$   $\Gamma_4 / \Gamma_1$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.16	90	BESSION 03 CLE2		$10.6 e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<0.31	90	MIKAMI 04 BELL		$10.6 e^+ e^-$

$\Gamma(D_{s0}^{*+}(2317)^+ \gamma) / \Gamma(D_s^{*+} \pi^0)$   $\Gamma_5 / \Gamma_1$

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.22	95	AUBERT 04E BABR		$10.6 e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<0.58	90	BESSION 03 CLE2		$10.6 e^+ e^-$

### $D_{s1}(2460)^\pm$ REFERENCES

AUBERT	04E	PR D69 031101R	B. Aubert <i>et al.</i>	(BABAR Collab.)
AUBERT,B	04S	PRL 93 181801	B. Aubert <i>et al.</i>	(BABAR Collab.)
MIKAMI	04	PRL 92 012002	Y. Mikami <i>et al.</i>	(BELLE Collab.)
BESSION	03	PR D68 032002	D. Besson <i>et al.</i>	(CLEO Collab.)
KROKOVNY	03B	PRL 91 262002	P. Krokovny <i>et al.</i>	(BELLE Collab.)

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