



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

J, P need confirmation.

J^P is natural, low mass and decay angular distribution consistent with 0^+ .

$D_{sJ}^*(2317)^\pm$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2317.3±0.6 OUR FIT				
2317.3±0.4±0.8	1022	¹ AUBERT	04E BABR	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2317.2±1.3	88	² AUBERT,B	04S BABR	$B \rightarrow D_{sJ}^{(*)}(2317)^+ \bar{D}^{(*)}$
2317.2±0.5±0.9	761	³ MIKAMI	04 BELL	10.6 $e^+ e^-$
2316.8±0.4±3.0	1267±53	^{3,4} AUBERT	03G BABR	10.6 $e^+ e^-$
2317.6±1.3	273±33	^{3,5} AUBERT	03G BABR	10.6 $e^+ e^-$
2319.8±2.1±2.0	24	³ KROKOVNY	03B BELL	10.6 $e^+ e^-$

¹ Supersedes AUBERT 03G.

² Systematic errors not evaluated.

³ Not independent of the corresponding $m_{D_{sJ}^*(2317)} - m_{D_s}$.

⁴ From $D_s^+ \rightarrow K^+ K^- \pi^+$ decay.

⁵ From $D_s^+ \rightarrow K^+ K^- \pi^+ \pi^0$ decay.

$m_{D_{sJ}^*(2317)^\pm} - m_{D_s^\pm}$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
349.1±0.6 OUR FIT				
349.2±0.7 OUR AVERAGE				
348.7±0.5±0.7	761	MIKAMI	04 BELL	10.6 $e^+ e^-$
350.0±1.2±1.0	135	BESSION	03 CLE2	10.6 $e^+ e^-$
351.3±2.1±1.9	24	⁶ KROKOVNY	03B BELL	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
349.6±0.4±3.0	1267	^{7,8} AUBERT	03G BABR	10.6 $e^+ e^-$
350.2±1.3	273	^{9,10} AUBERT	03G BABR	10.6 $e^+ e^-$

⁶ Recalculated by us using $m_{D_s^+} = 1968.5 \pm 0.6$ MeV.

⁷ From $D_s^+ \rightarrow K^+ K^- \pi^+$ decay.

⁸ Recalculated by us using $m_{D_s^+} = 1967.20 \pm 0.03$ MeV.

⁹ From $D_s^+ \rightarrow K^+ K^- \pi^+ \pi^0$ decay.

¹⁰ Recalculated by us using $m_{D_s^+} = 1967.4 \pm 0.2$ MeV. Systematic errors not estimated.

$D_{sJ}^*(2317)^\pm$ WIDTH

VALUE (MeV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
< 4.6	90	761	MIKAMI	04 BELL	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
<10			AUBERT	03G BABR	10.6 $e^+ e^-$
< 7	90	135	BESSION	03 CLE2	10.6 $e^+ e^-$

$D_{sJ}^*(2317)^\pm$ DECAY MODES

$D_{sJ}^*(2317)^-$ modes are charge conjugates of modes below.

Mode
Γ_1 $D_s^+ \pi^0$
Γ_2 $D_s^+ \gamma$
Γ_3 $D_s^*(2112)^+ \gamma$
Γ_4 $D_s^+ \gamma \gamma$
Γ_5 $D_s^*(2112)^+ \pi^0$
Γ_6 $D_s^+ \pi^+ \pi^-$

$D_{sJ}^*(2317)^\pm$ BRANCHING RATIOS

$\Gamma(D_s^+ \pi^0) / \Gamma_{\text{total}}$	Γ_1 / Γ			
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
seen	1540 ± 62	AUBERT	03G BABR	10.6 $e^+ e^-$

$\Gamma(D_s^+ \gamma) / \Gamma(D_s^+ \pi^0)$	Γ_2 / Γ_1			
VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.05	90	MIKAMI	04 BELL	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<0.052	90	BESSION	03 CLE2	10.6 $e^+ e^-$

$\Gamma(D_s^*(2112)^+ \gamma) / \Gamma(D_s^+ \pi^0)$	Γ_3 / Γ_1			
VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.059	90	BESSION	03 CLE2	10.6 $e^+ e^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
<0.18	90	MIKAMI	04 BELL	10.6 $e^+ e^-$

$\Gamma(D_s^+ \gamma \gamma) / \Gamma(D_s^+ \pi^0)$	Γ_4 / Γ_1		
VALUE	DOCUMENT ID	TECN	COMMENT
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
not seen	AUBERT	03G BABR	10.6 $e^+ e^-$

$\Gamma(D_s^*(2112)^+ \pi^0) / \Gamma(D_s^+ \pi^0)$					Γ_5 / Γ_1
<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<0.11	90	BESSON	03	CLE2	10.6 $e^+ e^-$

$\Gamma(D_s^+ \pi^+ \pi^-) / \Gamma(D_s^+ \pi^0)$					Γ_6 / Γ_1
<u>VALUE</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>	
<0.004	90	MIKAMI	04	BELL	10.6 $e^+ e^-$

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

<0.019	90	BESSON	03	CLE2	10.6 $e^+ e^-$
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$D_{sJ}^*(2317)^\pm$ REFERENCES

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