



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

I, J, P need confirmation. Quantum numbers shown are quark-model predictions.

B_s^* MASS

From mass difference below and the B_s^0 mass.

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
5415.4 ± 1.4 OUR FIT	Error includes scale factor of 2.5.		
5415.8 ± 1.5 OUR AVERAGE	Error includes scale factor of 2.6.		
5416.4 ± 0.4 ± 0.5	LOUVOT	09	BELL $e^+e^- \rightarrow \gamma(5S)$
5411.7 ± 1.6 ± 0.6	¹ AQUINES	06	CLEO $e^+e^- \rightarrow \gamma(5S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
5418 ± 1 ± 3	DRUTSKOY	07A	BELL Repl. by LOUVOT 09
5414 ± 1 ± 3	² BONVICINI	06	CLEO $e^+e^- \rightarrow \gamma(5S)$
¹ Utilized the beam constrained invariant mass peak positions for B^* and B_s^* to extract the measurement.			
² Uses 14 candidates consistent with B_s decays into final states with a J/ψ and a $D_s^{(*)-}$.			

$$m_{B_s^*} - m_{B_s}$$

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
49.0 ± 1.5 OUR FIT	Error includes scale factor of 2.0.		
46.1 ± 1.5 OUR AVERAGE			
45.7 ± 1.7 ± 0.7	³ AQUINES	06	CLEO $e^+e^- \rightarrow \gamma(5S)$
47.0 ± 2.6	⁴ LEE-FRANZINI 90	CSB2	$e^+e^- \rightarrow \gamma(5S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
48 ± 1 ± 3	⁵ BONVICINI	06	CLEO Repl. by AQUINES 06
³ Utilized the beam constrained invariant mass peak positions for B^* and B_s^* to extract the measurement.			
⁴ LEE-FRANZINI 90 measure $46.7 \pm 0.4 \pm 0.2$ MeV for an admixture of B^0 , B^+ , and B_s . They use the shape of the photon line to separate the above value for B_s .			
⁵ Uses 14 candidates consistent with B_s decays into final states with a J/ψ and a $D_s^{(*)-}$.			

$$|(m_{B_s^*} - m_{B_s}) - (m_{B^*} - m_B)|$$

<u>VALUE (MeV)</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<6	95	ABREU	95R	DLPH $E_{cm}^{ee} = 88-94$ GeV

B_s^* DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $B_s \gamma$	dominant

B_s^* REFERENCES

LOUVOT	09	PRL 102 021801	R. Louvot <i>et al.</i>	(BELLE Collab.)
DRUTSKOY	07A	PR D76 012002	A. Drutskoy <i>et al.</i>	(BELLE Collab.)
AQUINES	06	PRL 96 152001	O. Aquines <i>et al.</i>	(CLEO Collab.)
BONVICINI	06	PRL 96 022002	G. Bonvicini <i>et al.</i>	(CLEO Collab.)
ABREU	95R	ZPHY C68 353	P. Abreu <i>et al.</i>	(DELPHI Collab.)
LEE-FRANZINI	90	PRL 65 2947	J. Lee-Franzini <i>et al.</i>	(CUSB II Collab.)
