



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

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.

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
5415.4±1.4 OUR FIT	Error includes scale factor of 2.6.		
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 $D_s^{(*)-}$.			

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

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
48.5±1.4 OUR FIT	Error includes scale factor of 2.6.		
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 $D_s^{(*)-}$.			

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

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

B_s^* DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad B_s \gamma$	seen

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.)
