



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

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
5412.8±1.3 OUR FIT	Error includes scale factor of 1.2.		
5413.1±2.6 OUR AVERAGE	Error includes scale factor of 1.8.		
5418 ±1 ±3	DRUTSKOY 07A	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. ●●●			
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
46.5±1.2 OUR FIT	Error includes scale factor of 1.1.		
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 $E_{cm}^{ee} = 88-94$ GeV

B_s^* DECAY MODES

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

B_s^* REFERENCES

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.)
