B_s^*

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

OMITTED FROM SUMMARY TABLE

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±1.7 OUR FIT Error includes scale factor of 1.2.				
5411.7±1.6±0.6	[1] AQUINES	06	CLEO	$e^+e^- \rightarrow \Upsilon(5S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
5414 ±1 ±3	[2] BONVICINI	06	CLEO	$e^+e^- \rightarrow \Upsilon(5S)$

[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
45.3±1.4 OUR FIT				
46.1±1.5 OUR AVERAGE				
45.7±1.7±0.7	[3] AQUINES	06	CLEO	$e^+e^- \rightarrow \Upsilon(5S)$
47.0±2.6	[4] LEE-FRANZINI	90	CSB2	$e^+e^- \rightarrow \Upsilon(5S)$
• • • 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 ± 0.4 ± 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

AQUINES	06	PRL 96 152001	O. Aquines *et al.*	(CLEO Collab.)
BONVICINI	06	PRL 96 022002	G. Bonvicini *et al.*	(CLEO Collab.)
ABREU	95R	ZPHY C68 353	P. Abreu *et al.*	(DELPHI Collab.)
LEE-FRANZINI	90	PRL 65 2947	J. Lee-Franzini *et al.*	(CUSB II Collab.)