$\Delta m_{B_s^0} = m_{B_{sH}^0} - m_{B_{sL}^0}$

$\Delta m_{B_s^0}$ is a measure of the B_s^0-$\overline{B}_s^0$ oscillation frequency in time-dependent mixing experiments.

VALUE (10^{12} $\hbar$ s^{-1})	CL%	DOCUMENT ID		TECN	COMMENT
>1.8	95	[27] BUSKULIC	94B	ALEP	$e^+e^- \rightarrow Z$

[27] BUSKULIC 94B determines $\Delta m_{B_s^0}$ from the time dependence of B mixing using dileptons.

$x_s = \Delta m_{B_s^0}/\Gamma_{B_s^0}$

This section combines the results from the previous two sections.

Time integrated mixing measurement of χ determine this quantity directly via

$$\frac{\Delta m_{B_s^0}}{\Gamma_{B_s^0}} = \left(\frac{\chi}{0.5-\chi}\right)^{1/2}$$

while time-dependent mixing measurements determine $\Delta m_{B_s^0} = m_{B_{sH}^0} - m_{B_{sL}^0}$ which are combined with $\tau_{B_s^0}$ to give

$$\frac{\Delta m_{B_s^0}}{\Gamma_{B_s^0}} = \frac{(m_{B_{sH}^0} - m_{B_{sL}^0})\ \tau_{B_s^0}}{\hbar}\ .$$

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
>2.0	95	[28] BUSKULIC	94B	ALEP	$e^+e^- \rightarrow Z$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
>1.5		[29] PDG	94	RVUE	

[28] BUSKULIC 94B is their $\Delta m_{B_s^0}$ measurement combined with $\tau_{B_s^0} = (1.26^{+0.22}_{-0.17})$ ps.

[29] From PDG 94 χ_s value.

B_s^0 REFERENCES

ABREU	94D	PL B324 500	+Adam, Adye, Agasi, Aleksan+	(DELPHI Collab.)
ABREU	94E	ZPHY C61 407	+Adam, Adye, Agasi, Aleksan+	(DELPHI Collab.)
Also	92M	PL B289 199	Abreu, Adam, Adye, Agasi, Alekseev+	(DELPHI Collab.)
ABREU	94F	PL B322 459	+Adam, Adye, Agasi, Ajinenko+	(DELPHI Collab.)
BUSKULIC	94B	PL B322 441	+De Bonis, Decamp, Ghez, Goy, Lees+	(ALEPH Collab.)
BUSKULIC	94C	PL B322 275	+De Bonis, Decamp, Ghez, Goy, Lees+	(ALEPH Collab.)
PDG	94	PR D50 1173	Montanet+	(CERN, LBL, BOST, IFIC+)
ABE	93F	PRL 71 1685	+Albrow, Amidei, Anway-Wiese+	(CDF Collab.)
ABREU	93C	PL B301 145	+Adam, Adye, Agasi, Aleksan+	(DELPHI Collab.)
ACTON	93H	PL B312 501	+Akers, Alexander, Allison, Anderson+	(OPAL Collab.)
AKERS	93B	ZPHY C60 199	+Alexander, Allison, Anderson, Arcelli+	(OPAL Collab.)
BUSKULIC	93G	PL B311 425	+De Bonis, Decamp, Ghez, Goy, Lees+	(ALEPH Collab.)
ABREU	92M	PL B289 199	+Adam, Adye, Agasi, Alekseev+	(DELPHI Collab.)
ACTON	92C	PL B276 379	+Alexander, Allison, Allport, Anderson+	(OPAL Collab.)
ACTON	92N	PL B295 357	+Alexander, Allison, Allport, Anderson+	(OPAL Collab.)
ADEVA	92C	PL B288 395	+Adriani, Aguilar-Benitez, Ahlen+	(L3 Collab.)
ALBRECHT	92L	ZPHY C55 357	+Ehrlichmann, Hamacher, Krueger, Nau+	(ARGUS Collab.)
BUSKULIC	92B	PL B284 177	+Decamp, Goy, Lees, Minard+	(ALEPH Collab.)
BUSKULIC	92E	PL B294 145	+Decamp, Goy, Lees, Minard+	(ALEPH Collab.)
ABE	91G	PRL 67 3351	+Amidei, Apollinari, Atac, Auchincloss+	(CDF Collab.)
ALBAJAR	91D	PL B262 171	+Albrow, Allkofer, Ankoviak, Apsimon+	(UA1 Collab.)
DECAMP	91	PL B258 236	+Deschizeaux, Goy, Lees, Minard+	(ALEPH Collab.)
ADEVA	90P	PL B252 703	+Adriani, Aguilar-Benitez, Akbari, Alcaraz+	(L3 Collab.)
LEE-FRANZINI	90	PRL 65 2947	+Heintz, Lovelock, Narain, Schamberger+	(CUSB II Collab.)
WEIR	90	PL B240 289	+Abrams, Adolphsen, Alexander, Alvarez+	(Mark II Collab.)
ARTUSO	89	PRL 62 2233	+Bebek, Berkelman, Blucher+	(CLEO Collab.)
BAND	88	PL B200 221	+Camporesi, Chadwick+	(MAC Collab.)
ALBAJAR	87C	PL B186 247	+Albrow, Allkofer, Arnison+	(UA1 Collab.)
ALBRECHT	87I	PL B192 245	+Andam, Binder, Boeckmann+	(ARGUS Collab.)
BEAN	87B	PRL 58 183	+Bobbink, Brock, Engler+	(CLEO Collab.)
SCHAAD	85	PL 160B 188	+Nelson, Abrams, Amidei+	(Mark II Collab.)

OTHER RELATED PAPERS

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"Prospects for measuring the B_s^0-$\overline{B}_s^0$ mixing ratio x_s"

B_s^*

$I(J^P) = ?(?^?)$
I, J, P need confirmation.

OMITTED FROM SUMMARY TABLE

B_s^* MASS

From mass difference below and the B_s^0 mass.

VALUE (MeV)	DOCUMENT ID
5422±6 OUR FIT	Error includes scale factor of 1.2.

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

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
47.0±2.6 OUR FIT				
47.0±2.6	[1] LEE-FRANZINI	90	CSB2	$e^+e^- \rightarrow \Upsilon(5S)$

[1] 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.

B_s^* REFERENCES

LEE-FRANZINI	90	PRL 65 2947	+Heintz, Lovelock, Narain, Schamberger+	(CUSB II Collab.)

HEAVY QUARK SEARCHES

Searches for Top and Fourth Generation Hadrons

See the sections "Searches for t Quark" and "Searches for b' (4^{th} Generation) Quark" at the end of the QUARKS section.