$B^{\pm}$

$I(J^P) = \frac{1}{2}(0^-)$

Quantum numbers not measured. Values shown are quark-model predictions.

NODE=S041

See also the $B^{\pm}/B^0$ ADMIXTURE and $B^{\pm}/B^0/B^0_s/b$-baryon ADMIXTURE sections.

$B^{\pm}$ MASS

NODE=S041205

The fit uses m_{B^+}, $(m_{B^0} - m_{B^+})$, $m_{B^0_s}$, and $(m_{B^0_s} - (m_{B^+} + m_{B^0})/2)$ to determine m_{B^+}, m_{B^0}, $m_{B^0_s}$, and the mass differences.

NODE=S041205

NODE=S041M

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT	
5278.9±1.8 OUR FIT						
5278.9±1.5 OUR AVERAGE						
5279.1±1.7 ±1.4	147	[1] ABE	96B	CDF	$p\overline{p}$ at 1.8 TeV	NOTFITTED
5278.8±0.54±2.0	362	[2] ALAM	94	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$	SYCLP1=A
5278.3±0.4 ±2.0		[2] BORTOLETTO	92	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$	SYCLP1=A
5280.5±1.0 ±2.0		[2,3] ALBRECHT	90J	ARG	$e^+e^- \rightarrow \Upsilon(4S)$	SYCLP1=A
5278.6±0.8 ±2.0		[2] BEBEK	87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$	SYCLP1=A
• • • We do not use the following data for averages, fits, limits, etc. • • •						
5275.8±1.3 ±3.0	32	ALBRECHT	87C	ARG	$e^+e^- \rightarrow \Upsilon(4S)$	
5278.2±1.8 ±3.0	12	[4] ALBRECHT	87D	ARG	$e^+e^- \rightarrow \Upsilon(4S)$	

[1] Excluded from fit because it is not independent of ABE 96B B^0_s mass and B^0_s-B mass difference. NODE=S041M;LINKAGE=EE

[2] These experiments all report a common systematic error 2.0 MeV. We have artificially increased the systematic error to allow the experiments to be treated as independent measurements in our average. See "Treatment of Errors" section of the Introductory Text. These experiments actually measure the difference between half of E_{cm} and the B mass. NODE=S041M;LINKAGE=A

[3] ALBRECHT 90J assumes 10580 for $\Upsilon(4S)$ mass. Supersedes ALBRECHT 87C and ALBRECHT 87D. NODE=S041M;LINKAGE=BQ

[4] Found using fully reconstructed decays with $J/\psi(1S)$. ALBRECHT 87D assume $m_{\Upsilon(4S)}$ = 10577 MeV. NODE=S041M;LINKAGE=D

$B^{\pm}$ MEAN LIFE

NODE=S041207

See $B^{\pm}/B^0/B^0_s/b$-baryon ADMIXTURE section for data on B-hadron mean life averaged over species of bottom particles.

NODE=S041207

"OUR EVALUATION" is an average of the data listed below performed by the LEP B Lifetimes Working Group as described in our review "Production and Decay of b-flavored Hadrons" in the $B^{\pm}$ Section of the Listings. The averaging procedure takes into account correlations between the measurements and asymmetric lifetime errors.

NODE=S041T

NODE=S041T

VALUE (10^{-12} s)	EVTS	DOCUMENT ID		TECN	COMMENT	
1.65 ±0.03 OUR EVALUATION						→ NOT CHECKED ←
1.643±0.037±0.025		[5] ABBIENDI	99J	OPAL	$e^+e^- \rightarrow Z$	
1.68 ±0.07 ±0.02		[6] ABE	98B	CDF	$p\overline{p}$ at 1.8 TeV	
1.637±0.058$^{+0.045}_{-0.043}$		[7] ABE	98Q	CDF	$p\overline{p}$ at 1.8 TeV	
1.66 ±0.06 ±0.03		[5] ACCIARRI	98S	L3	$e^+e^- \rightarrow Z$	
1.66 ±0.06 ±0.05		[5] ABE	97J	SLD	$e^+e^- \rightarrow Z$	
1.58 ±0.09 ±0.04		[7] BUSKULIC	96J	ALEP	$e^+e^- \rightarrow Z$	OCCUR=2
1.58 $^{+0.21}_{-0.18}$ $^{+0.04}_{-0.03}$	94	[6] BUSKULIC	96J	ALEP	$e^+e^- \rightarrow Z$	OCCUR=3
1.61 ±0.16 ±0.12		[7,8] ABREU	95Q	DLPH	$e^+e^- \rightarrow Z$	
1.72 ±0.08 ±0.06		[9] ADAM	95	DLPH	$e^+e^- \rightarrow Z$	
1.52 ±0.14 ±0.09		[7] AKERS	95T	OPAL	$e^+e^- \rightarrow Z$	
• • • We do not use the following data for averages, fits, limits, etc. • • •						
1.56 ±0.13 ±0.06		[7] ABE	96C	CDF	Repl. by ABE 98Q	
1.58 ±0.09 ±0.03		[10] BUSKULIC	96J	ALEP	$e^+e^- \rightarrow Z$	
1.70 ±0.09		[11] ADAM	95	DLPH	$e^+e^- \rightarrow Z$	OCCUR=2
1.61 ±0.16 ±0.05	148	[6] ABE	94D	CDF	Repl. by ABE 98B	
1.30 $^{+0.33}_{-0.29}$ ±0.16	92	[7] ABREU	93D	DLPH	Sup. by ABREU 95Q	
1.56 ±0.19 ±0.13	134	[9] ABREU	93G	DLPH	Sup. by ADAM 95	
1.51 $^{+0.30}_{-0.28}$ $^{+0.12}_{-0.14}$	59	[7] ACTON	93C	OPAL	Sup. by AKERS 95T	
1.47 $^{+0.22}_{-0.19}$ $^{+0.15}_{-0.14}$	77	[7] BUSKULIC	93D	ALEP	Sup. by BUSKULIC 96J	

[5] Data analyzed using charge of secondary vertex. NODE=S041T;LINKAGE=M

[6] Measured mean life using fully reconstructed decays. NODE=S041T;LINKAGE=CD

[7] Data analyzed using $D\,/\,D^{*}\,\ell$X event vertices. NODE=S041T;LINKAGE=C

[8] ABREU 95Q assumes B($B^0 \rightarrow D^{**-}\,\ell^+\,\nu_\ell$) = 3.2 ± 1.7%. NODE=S041T;LINKAGE=CQ

[9] Data analyzed using vertex-charge technique to tag B charge. NODE=S041T;LINKAGE=F

[10] Combined result of $D/D^{*}\,\ell$X analysis and fully reconstructed B analysis. NODE=S041T;LINKAGE=GC

[11] Combined ABREU 95Q and ADAM 95 result. NODE=S041T;LINKAGE=K

B^+ DECAY MODES

B^- modes are charge conjugates of the modes below. Modes which do not identify the charge state of the B are listed in the $B^\pm/B^0$ ADMIXTURE section.

NODE=S041

The branching fractions listed below assume 50% $B^0\overline{B}^0$ and 50% B^+B^- production at the $\Upsilon(4S)$. We have attempted to bring older measurements up to date by rescaling their assumed $\Upsilon(4S)$ production ratio to 50:50 and their assumed D, D_s, D^*, and ψ branching ratios to current values whenever this would affect our averages and best limits significantly.

Indentation is used to indicate a subchannel of a previous reaction. All resonant subchannels have been corrected for resonance branching fractions to the final state so the sum of the subchannel branching fractions can exceed that of the final state.

	Mode		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	
	Semileptonic and leptonic modes				NODE=S041;CLUMP=A
Γ_1	$\ell^+\nu_\ell$ anything	[a]	$(10.3\ \pm0.9\ )$ %		DESIG=220
Γ_2	$\overline{D}^0\ell^+\nu_\ell$	[a]	$(\ 1.86\pm0.33)$ %		DESIG=145
Γ_3	$\overline{D}^*(2007)^0\ell^+\nu_\ell$	[a]	$(\ 5.3\ \pm0.8\ )$ %		DESIG=146
Γ_4	$\overline{D}_1(2420)^0\ell^+\nu_\ell$		$(\ 5.6\ \pm1.6\ )\times10^{-3}$		DESIG=257
Γ_5	$\overline{D}_2^*(2460)^0\ell^+\nu_\ell$		$<\ 8\ \times10^{-3}$	CL=90%	DESIG=258
Γ_6	$\pi^0e^+\nu_e$		$<\ 2.2\ \times10^{-3}$	CL=90%	DESIG=138
Γ_7	$\omega\ell^+\nu_\ell$	[a]	$<\ 2.1\ \times10^{-4}$	CL=90%	DESIG=173
Γ_8	$\omega\mu^+\nu_\mu$				DESIG=150
Γ_9	$\rho^0\ell^+\nu_\ell$	[a]	$<\ 2.1\ \times10^{-4}$	CL=90%	DESIG=174
Γ_{10}	$e^+\nu_e$		$<\ 1.5\ \times10^{-5}$	CL=90%	DESIG=182
Γ_{11}	$\mu^+\nu_\mu$		$<\ 2.1\ \times10^{-5}$	CL=90%	DESIG=183
Γ_{12}	$\tau^+\nu_\tau$		$<\ 5.7\ \times10^{-4}$	CL=90%	DESIG=184
Γ_{13}	$e^+\nu_e\gamma$		$<\ 2.0\ \times10^{-4}$	CL=90%	DESIG=234
Γ_{14}	$\mu^+\nu_\mu\gamma$		$<\ 5.2\ \times10^{-5}$	CL=90%	DESIG=235
	D, D^*, or D_s modes				NODE=S041;CLUMP=B
Γ_{15}	$\overline{D}^0\pi^+$		$(\ 5.3\ \pm0.5\ )\times10^{-3}$		DESIG=1
Γ_{16}	$\overline{D}^0\rho^+$		$(\ 1.34\pm0.18)$ %		DESIG=25
Γ_{17}	$\overline{D}^0K^+$		$(\ 2.9\ \pm0.8\ )\times10^{-4}$		DESIG=256
Γ_{18}	$\overline{D}^0\pi^+\pi^+\pi^-$		$(\ 1.1\ \pm0.4\ )$ %		DESIG=165
Γ_{19}	$\overline{D}^0\pi^+\pi^+\pi^-$ nonresonant		$(\ 5\ \pm4\ )\times10^{-3}$		DESIG=166
Γ_{20}	$\overline{D}^0\pi^+\rho^0$		$(\ 4.2\ \pm3.0\ )\times10^{-3}$		DESIG=167
Γ_{21}	$\overline{D}^0a_1(1260)^+$		$(\ 5\ \pm4\ )\times10^{-3}$		DESIG=168
Γ_{22}	$D^*(2010)^-\pi^+\pi^+$		$(\ 2.1\ \pm0.6\ )\times10^{-3}$		DESIG=2
Γ_{23}	$D^-\pi^+\pi^+$		$<\ 1.4\ \times10^{-3}$	CL=90%	DESIG=14
Γ_{24}	$\overline{D}^*(2007)^0\pi^+$		$(\ 4.6\ \pm0.4\ )\times10^{-3}$		DESIG=15
Γ_{25}	$D^*(2010)^+\pi^0$		$<\ 1.7\ \times10^{-4}$	CL=90%	DESIG=240
Γ_{26}	$\overline{D}^*(2007)^0\rho^+$		$(\ 1.55\pm0.31)$ %		DESIG=169
Γ_{27}	$\overline{D}^*(2007)^0\pi^+\pi^+\pi^-$		$(\ 9.4\ \pm2.6\ )\times10^{-3}$		DESIG=211
Γ_{28}	$\overline{D}^*(2007)^0a_1(1260)^+$		$(\ 1.9\ \pm0.5\ )$ %		DESIG=221
Γ_{29}	$D^*(2010)^-\pi^+\pi^+\pi^0$		$(\ 1.5\ \pm0.7\ )$ %		DESIG=12
Γ_{30}	$D^*(2010)^-\pi^+\pi^+\pi^+\pi^-$		$<\ 1$ %	CL=90%	DESIG=141
Γ_{31}	$\overline{D}_1^*(2420)^0\pi^+$		$(\ 1.5\ \pm0.6\ )\times10^{-3}$	S=1.3	DESIG=214
Γ_{32}	$\overline{D}_1^*(2420)^0\rho^+$		$<\ 1.4\ \times10^{-3}$	CL=90%	DESIG=215
Γ_{33}	$\overline{D}_2^*(2460)^0\pi^+$		$<\ 1.3\ \times10^{-3}$	CL=90%	DESIG=212
Γ_{34}	$\overline{D}_2^*(2460)^0\rho^+$		$<\ 4.7\ \times10^{-3}$	CL=90%	DESIG=213
Γ_{35}	$\overline{D}^0D_s^+$		$(\ 1.3\ \pm0.4\ )$ %		DESIG=72
Γ_{36}	$\overline{D}^0D_s^{*+}$		$(\ 9\ \pm4\ )\times10^{-3}$		DESIG=175
Γ_{37}	$\overline{D}^*(2007)^0D_s^+$		$(\ 1.2\ \pm0.5\ )$ %		DESIG=176

Γ_{38}	$\overline{D}^*(2007)^0 D_s^{*+}$	(2.7 ±1.0) %			DESIG=177
Γ_{39}	$\overline{D}^*(2007)^0 D^*(2010)^+$	< 1.1	%	CL=90%	DESIG=259
Γ_{40}	$\overline{D}^0 D^*(2010)^+ + \overline{D}^*(2007)^0 D^+$	< 1.3	%	CL=90%	DESIG=260
Γ_{41}	$\overline{D}^0 D^+$	< 6.7	$\times 10^{-3}$	CL=90%	DESIG=261
Γ_{42}	$D_s^+ \pi^0$	< 2.0	$\times 10^{-4}$	CL=90%	DESIG=192
Γ_{43}	$D_s^{*+} \pi^0$	< 3.3	$\times 10^{-4}$	CL=90%	DESIG=193
Γ_{44}	$D_s^+ \eta$	< 5	$\times 10^{-4}$	CL=90%	DESIG=206
Γ_{45}	$D_s^{*+} \eta$	< 8	$\times 10^{-4}$	CL=90%	DESIG=207
Γ_{46}	$D_s^+ \rho^0$	< 4	$\times 10^{-4}$	CL=90%	DESIG=186
Γ_{47}	$D_s^{*+} \rho^0$	< 5	$\times 10^{-4}$	CL=90%	DESIG=188
Γ_{48}	$D_s^+ \omega$	< 5	$\times 10^{-4}$	CL=90%	DESIG=194
Γ_{49}	$D_s^{*+} \omega$	< 7	$\times 10^{-4}$	CL=90%	DESIG=195
Γ_{50}	$D_s^+ a_1(1260)^0$	< 2.2	$\times 10^{-3}$	CL=90%	DESIG=196
Γ_{51}	$D_s^{*+} a_1(1260)^0$	< 1.6	$\times 10^{-3}$	CL=90%	DESIG=197
Γ_{52}	$D_s^+ \phi$	< 3.2	$\times 10^{-4}$	CL=90%	DESIG=198
Γ_{53}	$D_s^{*+} \phi$	< 4	$\times 10^{-4}$	CL=90%	DESIG=199
Γ_{54}	$D_s^+ \overline{K}^0$	< 1.1	$\times 10^{-3}$	CL=90%	DESIG=200
Γ_{55}	$D_s^{*+} \overline{K}^0$	< 1.1	$\times 10^{-3}$	CL=90%	DESIG=31
Γ_{56}	$D_s^+ \overline{K}^*(892)^0$	< 5	$\times 10^{-4}$	CL=90%	DESIG=187
Γ_{57}	$D_s^{*+} \overline{K}^*(892)^0$	< 4	$\times 10^{-4}$	CL=90%	DESIG=190
Γ_{58}	$D_s^- \pi^+ K^+$	< 8	$\times 10^{-4}$	CL=90%	DESIG=32
Γ_{59}	$D_s^{*-} \pi^+ K^+$	< 1.2	$\times 10^{-3}$	CL=90%	DESIG=33
Γ_{60}	$D_s^- \pi^+ K^*(892)^+$	< 6	$\times 10^{-3}$	CL=90%	DESIG=34
Γ_{61}	$D_s^{*-} \pi^+ K^*(892)^+$	< 8	$\times 10^{-3}$	CL=90%	DESIG=35
	Charmonium modes				NODE=S041;CLUMP=C
Γ_{62}	$J/\psi(1S) K^+$	(10.0 ±1.0)	$\times 10^{-4}$		DESIG=3
Γ_{63}	$J/\psi(1S) K^+ \pi^+ \pi^-$	(1.4 ±0.6)	$\times 10^{-3}$		DESIG=19
Γ_{64}	$J/\psi(1S) K^*(892)^+$	(1.48±0.27)	$\times 10^{-3}$		DESIG=142
Γ_{65}	$J/\psi(1S) \pi^+$	(5.1 ±1.5)	$\times 10^{-5}$		DESIG=222
Γ_{66}	$J/\psi(1S) \rho^+$	< 7.7	$\times 10^{-4}$	CL=90%	DESIG=226
Γ_{67}	$J/\psi(1S) a_1(1260)^+$	< 1.2	$\times 10^{-3}$	CL=90%	DESIG=227
Γ_{68}	$\psi(2S) K^+$	(5.8 ±1.0)	$\times 10^{-4}$		DESIG=20
Γ_{69}	$\psi(2S) K^*(892)^+$	< 3.0	$\times 10^{-3}$	CL=90%	DESIG=143
Γ_{70}	$\psi(2S) K^+ \pi^+ \pi^-$	(1.9 ±1.2)	$\times 10^{-3}$		DESIG=144
Γ_{71}	$\chi_{c1}(1P) K^+$	(1.0 ±0.4)	$\times 10^{-3}$		DESIG=171
Γ_{72}	$\chi_{c1}(1P) K^*(892)^+$	< 2.1	$\times 10^{-3}$	CL=90%	DESIG=216
	***K* or *K** modes**				NODE=S041;CLUMP=D
Γ_{73}	$K^0 \pi^+$	(2.3 ±1.1)	$\times 10^{-5}$		DESIG=5
Γ_{74}	$K^+ \pi^0$	< 1.6	$\times 10^{-5}$	CL=90%	DESIG=223
Γ_{75}	$\eta' K^+$	(6.5 ±1.7)	$\times 10^{-5}$		DESIG=248
Γ_{76}	$\eta' K^*(892)^+$	< 1.3	$\times 10^{-4}$	CL=90%	DESIG=244
Γ_{77}	ηK^+	< 1.4	$\times 10^{-5}$	CL=90%	DESIG=245
Γ_{78}	$\eta K^*(892)^+$	< 3.0	$\times 10^{-5}$	CL=90%	DESIG=246
Γ_{79}	ωK^+	(1.5 $^{+0.7}_{-0.6}$)	$\times 10^{-5}$		DESIG=251
Γ_{80}	$\omega K^*(892)^+$	< 8.7	$\times 10^{-5}$	CL=90%	DESIG=252
Γ_{81}	$K^*(892)^0 \pi^+$	< 4.1	$\times 10^{-5}$	CL=90%	DESIG=6
Γ_{82}	$K^*(892)^+ \pi^0$	< 9.9	$\times 10^{-5}$	CL=90%	DESIG=225
Γ_{83}	$K^+ \pi^- \pi^+$ nonresonant	< 2.8	$\times 10^{-5}$	CL=90%	DESIG=59
Γ_{84}	$K^- \pi^+ \pi^+$ nonresonant	< 5.6	$\times 10^{-5}$	CL=90%	DESIG=229
Γ_{85}	$K_1(1400)^0 \pi^+$	< 2.6	$\times 10^{-3}$	CL=90%	DESIG=151
Γ_{86}	$K_2^*(1430)^0 \pi^+$	< 6.8	$\times 10^{-4}$	CL=90%	DESIG=152
Γ_{87}	$K^+ \rho^0$	< 1.9	$\times 10^{-5}$	CL=90%	DESIG=7
Γ_{88}	$K^0 \rho^+$	< 4.8	$\times 10^{-5}$	CL=90%	DESIG=224
Γ_{89}	$K^*(892)^+ \pi^+ \pi^-$	< 1.1	$\times 10^{-3}$	CL=90%	DESIG=163
Γ_{90}	$K^*(892)^+ \rho^0$	< 9.0	$\times 10^{-4}$	CL=90%	DESIG=153

Γ_{91}	$K_1(1400)^+ \rho^0$	$<$ 7.8	$\times 10^{-4}$	CL=90%	DESIG=154
Γ_{92}	$K_2^*(1430)^+ \rho^0$	$<$ 1.5	$\times 10^{-3}$	CL=90%	DESIG=155
Γ_{93}	$K^+ \overline{K}^0$	$<$ 2.1	$\times 10^{-5}$	CL=90%	DESIG=241
Γ_{94}	$K^+ K^- \pi^+$ nonresonant	$<$ 7.5	$\times 10^{-5}$	CL=90%	DESIG=230
Γ_{95}	$K^+ K^- K^+$	$<$ 2.0	$\times 10^{-4}$	CL=90%	DESIG=160
Γ_{96}	$K^+ \phi$	$<$ 5	$\times 10^{-6}$	CL=90%	DESIG=8
Γ_{97}	$K^+ K^- K^+$ nonresonant	$<$ 3.8	$\times 10^{-5}$	CL=90%	DESIG=231
Γ_{98}	$K^*(892)^+ K^+ K^-$	$<$ 1.6	$\times 10^{-3}$	CL=90%	DESIG=164
Γ_{99}	$K^*(892)^+ \phi$	$<$ 4.1	$\times 10^{-5}$	CL=90%	DESIG=156
Γ_{100}	$K_1(1400)^+ \phi$	$<$ 1.1	$\times 10^{-3}$	CL=90%	DESIG=157
Γ_{101}	$K_2^*(1430)^+ \phi$	$<$ 3.4	$\times 10^{-3}$	CL=90%	DESIG=158
Γ_{102}	$K^+ f_0(980)$	$<$ 8	$\times 10^{-5}$	CL=90%	DESIG=60
Γ_{103}	$K^*(892)^+ \gamma$	(5.7 $\pm$3.3)	$\times 10^{-5}$		DESIG=9
Γ_{104}	$K_1(1270)^+ \gamma$	$<$ 7.3	$\times 10^{-3}$	CL=90%	DESIG=53
Γ_{105}	$K_1(1400)^+ \gamma$	$<$ 2.2	$\times 10^{-3}$	CL=90%	DESIG=54
Γ_{106}	$K_2^*(1430)^+ \gamma$	$<$ 1.4	$\times 10^{-3}$	CL=90%	DESIG=55
Γ_{107}	$K^*(1680)^+ \gamma$	$<$ 1.9	$\times 10^{-3}$	CL=90%	DESIG=56
Γ_{108}	$K_3^*(1780)^+ \gamma$	$<$ 5.5	$\times 10^{-3}$	CL=90%	DESIG=57
Γ_{109}	$K_4^*(2045)^+ \gamma$	$<$ 9.9	$\times 10^{-3}$	CL=90%	DESIG=58

Light unflavored meson modes

NODE=S041;CLUMP=E

Γ_{110}	$\pi^+ \pi^0$	$<$ 2.0	$\times 10^{-5}$	CL=90%	DESIG=16
Γ_{111}	$\pi^+ \pi^+ \pi^-$	$<$ 1.3	$\times 10^{-4}$	CL=90%	DESIG=63
Γ_{112}	$\rho^0 \pi^+$	$<$ 4.3	$\times 10^{-5}$	CL=90%	DESIG=4
Γ_{113}	$\pi^+ f_0(980)$	$<$ 1.4	$\times 10^{-4}$	CL=90%	DESIG=61
Γ_{114}	$\pi^+ f_2(1270)$	$<$ 2.4	$\times 10^{-4}$	CL=90%	DESIG=62
Γ_{115}	$\pi^+ \pi^- \pi^+$ nonresonant	$<$ 4.1	$\times 10^{-5}$	CL=90%	DESIG=228
Γ_{116}	$\pi^+ \pi^0 \pi^0$	$<$ 8.9	$\times 10^{-4}$	CL=90%	DESIG=73
Γ_{117}	$\rho^+ \pi^0$	$<$ 7.7	$\times 10^{-5}$	CL=90%	DESIG=74
Γ_{118}	$\pi^+ \pi^- \pi^+ \pi^0$	$<$ 4.0	$\times 10^{-3}$	CL=90%	DESIG=75
Γ_{119}	$\rho^+ \rho^0$	$<$ 1.0	$\times 10^{-3}$	CL=90%	DESIG=76
Γ_{120}	$a_1(1260)^+ \pi^0$	$<$ 1.7	$\times 10^{-3}$	CL=90%	DESIG=77
Γ_{121}	$a_1(1260)^0 \pi^+$	$<$ 9.0	$\times 10^{-4}$	CL=90%	DESIG=78
Γ_{122}	$\omega \pi^+$	$<$ 2.3	$\times 10^{-5}$	CL=90%	DESIG=79
Γ_{123}	$\omega \rho^+$	$<$ 6.1	$\times 10^{-5}$	CL=90%	DESIG=253
Γ_{124}	$\eta \pi^+$	$<$ 1.5	$\times 10^{-5}$	CL=90%	DESIG=80
Γ_{125}	$\eta' \pi^+$	$<$ 3.1	$\times 10^{-5}$	CL=90%	DESIG=242
Γ_{126}	$\eta' \rho^+$	$<$ 4.7	$\times 10^{-5}$	CL=90%	DESIG=243
Γ_{127}	$\eta \rho^+$	$<$ 3.2	$\times 10^{-5}$	CL=90%	DESIG=247
Γ_{128}	$\phi \pi^+$	$<$ 5	$\times 10^{-6}$	CL=90%	DESIG=254
Γ_{129}	$\phi \rho^+$	$<$ 1.6	$\times 10^{-5}$		DESIG=255
Γ_{130}	$\pi^+ \pi^+ \pi^+ \pi^- \pi^-$	$<$ 8.6	$\times 10^{-4}$	CL=90%	DESIG=81
Γ_{131}	$\rho^0 a_1(1260)^+$	$<$ 6.2	$\times 10^{-4}$	CL=90%	DESIG=17
Γ_{132}	$\rho^0 a_2(1320)^+$	$<$ 7.2	$\times 10^{-4}$	CL=90%	DESIG=18
Γ_{133}	$\pi^+ \pi^+ \pi^+ \pi^- \pi^- \pi^0$	$<$ 6.3	$\times 10^{-3}$	CL=90%	DESIG=83
Γ_{134}	$a_1(1260)^+ a_1(1260)^0$	$<$ 1.3	%	CL=90%	DESIG=84

Charged particle ($h^\pm$) modes

NODE=S041;CLUMP=I

$h^\pm = K^\pm$ or $\pi^\pm$

NODE=S041

Γ_{135}	$h^+ \pi^0$	(1.6 $^{+0.7}_{-0.6}$)	$\times 10^{-5}$		DESIG=249
Γ_{136}	ωh^+	2.50	$\times 10^{-5}$		DESIG=250

Baryon modes

NODE=S041;CLUMP=F

Γ_{137}	$p\overline{p}\pi^+$		$<$ 1.6	$\times 10^{-4}$	CL=90%	DESIG=21
Γ_{138}	$p\overline{p}\pi^+$ nonresonant		$<$ 5.3	$\times 10^{-5}$	CL=90%	DESIG=232
Γ_{139}	$p\overline{p}\pi^+\pi^+\pi^-$		$<$ 5.2	$\times 10^{-4}$	CL=90%	DESIG=22
Γ_{140}	$p\overline{p}K^+$ nonresonant		$<$ 8.9	$\times 10^{-5}$	CL=90%	DESIG=233
Γ_{141}	$p\overline{\Lambda}$		$<$ 6	$\times 10^{-5}$	CL=90%	DESIG=23
Γ_{142}	$p\overline{\Lambda}\pi^+\pi^-$		$<$ 2.0	$\times 10^{-4}$	CL=90%	DESIG=24
Γ_{143}	$\overline{\Delta}^0 p$		$<$ 3.8	$\times 10^{-4}$	CL=90%	DESIG=64
Γ_{144}	$\Delta^{++}\overline{p}$		$<$ 1.5	$\times 10^{-4}$	CL=90%	DESIG=65
Γ_{145}	$\Lambda_c^- p\pi^+$		(6.2 $\pm$2.7)	$\times 10^{-4}$		DESIG=239
Γ_{146}	$\Lambda_c^- p\pi^+\pi^0$		$<$ 3.12	$\times 10^{-3}$	CL=90%	DESIG=236
Γ_{147}	$\Lambda_c^- p\pi^+\pi^+\pi^-$		$<$ 1.46	$\times 10^{-3}$	CL=90%	DESIG=237
Γ_{148}	$\Lambda_c^- p\pi^+\pi^+\pi^-\pi^0$		$<$ 1.34	%	CL=90%	DESIG=238

Lepton Family number (*LF*) or Lepton number (*L*) violating modes, or $\Delta B = 1$ weak neutral current (*B1*) modes

NODE=S041;CLUMP=G

Γ_{149}	$\pi^+e^+e^-$	*B1*	$<$ 3.9	$\times 10^{-3}$	CL=90%	DESIG=85
Γ_{150}	$\pi^+\mu^+\mu^-$	*B1*	$<$ 9.1	$\times 10^{-3}$	CL=90%	DESIG=88
Γ_{151}	$K^+e^+e^-$	*B1*	$<$ 6	$\times 10^{-5}$	CL=90%	DESIG=11
Γ_{152}	$K^+\mu^+\mu^-$	*B1*	$<$ 1.0	$\times 10^{-5}$	CL=90%	DESIG=10
Γ_{153}	$K^*(892)^+e^+e^-$	*B1*	$<$ 6.9	$\times 10^{-4}$	CL=90%	DESIG=161
Γ_{154}	$K^*(892)^+\mu^+\mu^-$	*B1*	$<$ 1.2	$\times 10^{-3}$	CL=90%	DESIG=162
Γ_{155}	$\pi^+e^+\mu^-$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=86
Γ_{156}	$\pi^+e^-\mu^+$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=87
Γ_{157}	$K^+e^+\mu^-$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=89
Γ_{158}	$K^+e^-\mu^+$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=90
Γ_{159}	$\pi^-e^+e^+$	*L*	$<$ 3.9	$\times 10^{-3}$	CL=90%	DESIG=91
Γ_{160}	$\pi^-\mu^+\mu^+$	*L*	$<$ 9.1	$\times 10^{-3}$	CL=90%	DESIG=93
Γ_{161}	$\pi^-e^+\mu^+$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=92
Γ_{162}	$K^-e^+e^+$	*L*	$<$ 3.9	$\times 10^{-3}$	CL=90%	DESIG=94
Γ_{163}	$K^-\mu^+\mu^+$	*L*	$<$ 9.1	$\times 10^{-3}$	CL=90%	DESIG=96
Γ_{164}	$K^-e^+\mu^+$	*LF*	$<$ 6.4	$\times 10^{-3}$	CL=90%	DESIG=95

[*a*] An ℓ indicates an e or a μ mode, not a sum over these modes. LINKAGE=DX

B^+ BRANCHING RATIOS

NODE=S041215

$\Gamma(\ell^+\nu_\ell\,\text{anything})/\Gamma_{\text{total}}$ — Γ_1/Γ

NODE=S041S95

NODE=S041S95

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.1025±0.0057±0.0065	[12] ARTUSO	97	CLE2	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.101 ±0.018 ±0.015	ATHANAS	94	CLE2	Sup. by ARTUSO 97

[12] ARTUSO 97 uses partial reconstruction of $B \to D^*\ell\nu_\ell$ and inclusive semileptonic branching ratio from BARISH 96B ($0.1049 \pm 0.0017 \pm 0.0043$). NODE=S041S95;LINKAGE=B

$\Gamma(\overline{D}^0\ell^+\nu_\ell)/\Gamma_{\text{total}}$ — Γ_2/Γ

NODE=S041R68

$\ell = e$ or μ, not sum over e and μ modes.

NODE=S041R68
NODE=S041R68

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.0186±0.0033 OUR AVERAGE				
0.0194±0.0015±0.0034	[13] ATHANAS	97	CLE2	$e^+e^- \to \Upsilon(4S)$
0.016 ±0.006 ±0.003	[14] FULTON	91	CLEO	$e^+e^- \to \Upsilon(4S)$

[13] ATHANAS 97 uses missing energy and missing momentum to reconstruct neutrino. NODE=S041R68;LINKAGE=C

[14] FULTON 91 assumes equal production of $B^0\overline{B}^0$ and B^+B^- at the $\Upsilon(4S)$. NODE=S041R68;LINKAGE=B

$\Gamma(\overline{D}^*(2007)^0\ell^+\nu_\ell)/\Gamma_{\text{total}}$ — Γ_3/Γ

NODE=S041R69

$\ell = e$ or μ, not sum over e and μ modes.

NODE=S041R69
NODE=S041R69

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.053 ±0.008 OUR AVERAGE					
0.0513±0.0054±0.0064	302	[15] BARISH	95	CLE2	$e^+e^- \to \Upsilon(4S)$
0.066 ±0.016 ±0.015		[16] ALBRECHT	92C	ARG	$e^+e^- \to \Upsilon(4S)$

• • • We do not use the following data for averages, fits, limits, etc. • • •

seen	398	[17] SANGHERA	93	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
$0.041 \pm 0.008 {}^{+0.008}_{-0.009}$		[18] FULTON	91	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
$0.070 \pm 0.018 \pm 0.014$		[19] ANTREASYAN	90B	CBAL	$e^+e^- \rightarrow \Upsilon(4S)$

[15] BARISH 95 use $B(D^0 \rightarrow K^-\pi^+) = (3.91 \pm 0.08 \pm 0.17)\%$ and $B(D^{*0} \rightarrow D^0\pi^0) = (63.6 \pm 2.3 \pm 3.3)\%$. NODE=S041R69;LINKAGE=B1

[16] ALBRECHT 92C reports $0.058 \pm 0.014 \pm 0.013$. We rescale using the method described in STONE 94 but with the updated PDG 94 $B(D^0 \rightarrow K^-\pi^+)$. Assumes equal production of $B^0\overline{B}^0$ and B^+B^- at the $\Upsilon(4S)$. NODE=S041R69;LINKAGE=C

[17] Combining $\overline{D}^{*0}\ell^+\nu_\ell$ and $\overline{D}^{*-}\ell^+\nu_\ell$ SANGHERA 93 test $V-A$ structure and fit the decay angular distributions to obtain $A_{FB} = 3/4*(\Gamma^- - \Gamma^+)/\Gamma = 0.14 \pm 0.06 \pm 0.03$. Assuming a value of V_{cb}, they measure V, A_1, and A_2, the three form factors for the $D^*\ell\nu_\ell$ decay, where results are slightly dependent on model assumptions. NODE=S041R69;LINKAGE=A

[18] Assumes equal production of $B^0\overline{B}^0$ and B^+B^- at the $\Upsilon(4S)$. Uncorrected for D and D^* branching ratio assumptions. NODE=S041R69;LINKAGE=B

[19] ANTREASYAN 90B is average over B and $\overline{D}^*(2010)$ charge states. NODE=S041R69;LINKAGE=62

$\Gamma(\overline{D}_1(2420)^0\ell^+\nu_\ell)/\Gamma_{total}$ Γ_4/Γ

NODE=S041B32
NODE=S041B32

VALUE	DOCUMENT ID	TECN	COMMENT
0.0056±0.0013±0.0009	[20] ANASTASSOV 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

[20] ANASTASSOV 98 result is derived from the measurement of $B(B^+ \rightarrow \overline{D}^0_1\ell^+\nu_\ell) \times B(\overline{D}^0_1 \rightarrow D^{*+}\pi^-) = (0.373 \pm 0.085 \pm 0.052 \pm 0.024)\%$ by assuming $B(\overline{D}^0_1 \rightarrow D^{*+}\pi^-) = 67\%$, where the third error includes theoretical uncertainties. NODE=S041B32;LINKAGE=A

$\Gamma(\overline{D}^*_2(2460)^0\ell^+\nu_\ell)/\Gamma_{total}$ Γ_5/Γ

NODE=S041B33
NODE=S041B33

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<8 × 10⁻³	90	[21] ANASTASSOV 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

[21] ANASTASSOV 98 result is derived from the meausrement of $B(B^+ \rightarrow \overline{D}^{*0}_2\ell^+\nu_\ell) \times B(\overline{D}^{*0}_2 \rightarrow D^{*+}\pi^-) < 0.16\%$ at 90% CL by assuming $B(\overline{D}^{*0}_2 \rightarrow D^{*+}\pi^-) = 20\%$. NODE=S041B33;LINKAGE=A

$\Gamma(\pi^0 e^+\nu_e)/\Gamma_{total}$ Γ_6/Γ

NODE=S041R70
NODE=S041R70

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0022	90	ANTREASYAN 90B	CBAL	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\omega\ell^+\nu_\ell)/\Gamma_{total}$ Γ_7/Γ

NODE=S041S47

$\ell = e$ or μ, not sum over e and μ modes.

NODE=S041S47
NODE=S041S47

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.1 \times 10^{-4}$	90	[22] BEAN 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

[22] BEAN 93B limit set using ISGW Model. Using isospin and the quark model to combine $\Gamma(\rho^0\ell^+\nu_\ell)$ and $\Gamma(\rho^-\ell^+\nu_\ell)$ with this result, they obtain a limit $<(1.6\text{–}2.7) \times 10^{-4}$ at 90% CL for $B^+ \rightarrow \omega\ell^+\nu_\ell$. The range corresponds to the ISGW, WSB, and KS models. An upper limit on $|V_{ub}/V_{cb}| < 0.8\text{–}0.13$ at 90% CL is derived as well. NODE=S041S47;LINKAGE=A

$\Gamma(\omega\mu^+\nu_\mu)/\Gamma_{total}$ Γ_8/Γ

NODE=S041R79
NODE=S041R79

VALUE	DOCUMENT ID	TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •		
seen	[23] ALBRECHT 91C	ARG

[23] In ALBRECHT 91C, one event is fully reconstructed providing evidence for the $b \rightarrow u$ transition. NODE=S041R79;LINKAGE=A

$\Gamma(\rho^0\ell^+\nu_\ell)/\Gamma_{total}$ Γ_9/Γ

NODE=S041S48

$\ell = e$ or μ, not sum over e and μ modes.

NODE=S041S48
NODE=S041S48

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<2.1 \times 10^{-4}$	90	[24] BEAN 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

[24] BEAN 93B limit set using ISGW Model. Using isospin and the quark model to combine $\Gamma(\omega^0\ell^+\nu_\ell)$ and $\Gamma(\rho^-\ell^+\nu_\ell)$ with this result, they obtain a limit $<(1.6\text{–}2.7) \times 10^{-4}$ at 90% CL for $B^+ \rightarrow \rho^0\ell^+\nu_\ell$. The range corresponds to the ISGW, WSB, and KS models. An upper limit on $|V_{ub}/V_{cb}| < 0.8\text{–}0.13$ at 90% CL is derived as well. NODE=S041S48;LINKAGE=A

$\Gamma(e^+\nu_e)/\Gamma_{total}$ Γ_{10}/Γ

NODE=S041S55
NODE=S041S55

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<1.5 \times 10^{-5}$	90	ARTUSO 95	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\mu^+\nu_\mu)/\Gamma_{\text{total}}$ Γ_{11}/Γ

NODE=S041S56
NODE=S041S56

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.1 × 10^{-5}	90	ARTUSO	95	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(\tau^+\nu_\tau)/\Gamma_{\text{total}}$ Γ_{12}/Γ

NODE=S041S57
NODE=S041S57

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<5.7 × 10^{-4}	90	[25] ACCIARRI	97F	L3	$e^+e^- \to Z$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<1.04 × 10^{-2}	90	[26] ALBRECHT	95D	ARG	$e^+e^- \to \Upsilon(4S)$
<2.2 × 10^{-3}	90	ARTUSO	95	CLE2	$e^+e^- \to \Upsilon(4S)$
<1.8 × 10^{-3}	90	[27] BUSKULIC	95	ALEP	$e^+e^- \to Z$

[25] ACCIARRI 97F uses missing-energy technique and $f(b \to B^-) = (38.2 \pm 2.5)\%$. NODE=S041S57;LINKAGE=C

[26] ALBRECHT 95D use full reconstruction of one B decay as tag. NODE=S041S57;LINKAGE=A

[27] BUSKULIC 95 uses same missing-energy technique as in $\overline{b} \to \tau^+\nu_\tau X$, but analysis is restricted to endpoint region of missing-energy distribution. NODE=S041S57;LINKAGE=B

$\Gamma(e^+\nu_e\gamma)/\Gamma_{\text{total}}$ Γ_{13}/Γ

NODE=S041B9
NODE=S041B9

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.0 × 10^{-4}	90	[28] BROWDER	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[28] BROWDER 97 uses the hermiticity of the CLEO II detector to reconstruct the neutrino energy and momentum. NODE=S041B9;LINKAGE=A

$\Gamma(\mu^+\nu_\mu\gamma)/\Gamma_{\text{total}}$ Γ_{14}/Γ

NODE=S041B10
NODE=S041B10

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<5.2 × 10^{-5}	90	[29] BROWDER	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[29] BROWDER 97 uses the hermiticity of the CLEO II detector to reconstruct the neutrino energy and momentum. NODE=S041B10;LINKAGE=A

$\Gamma(\overline{D}^0\pi^+)/\Gamma_{\text{total}}$ Γ_{15}/Γ

NODE=S041R1
NODE=S041R1

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0053±0.0005 OUR AVERAGE					
0.0055±0.0004±0.0005	304	[30] ALAM	94	CLE2	$e^+e^- \to \Upsilon(4S)$
0.0050±0.0007±0.0006	54	[31] BORTOLETTO	92	CLEO	$e^+e^- \to \Upsilon(4S)$
$0.0054^{+0.0018+0.0012}_{-0.0015-0.0009}$	14	[32] BEBEK	87	CLEO	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.0020±0.0008±0.0006	12	[31] ALBRECHT	90J	ARG	$e^+e^- \to \Upsilon(4S)$
0.0019±0.0010±0.0006	7	[33] ALBRECHT	88K	ARG	$e^+e^- \to \Upsilon(4S)$

[30] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II absolute B($D^0 \to K^-\pi^+$) and the PDG 1992 B($D^0 \to K^-\pi^+\pi^0$)/B($D^0 \to K^-\pi^+$) and B($D^0 \to K^-\pi^+\pi^+\pi^-$)/B($D^0 \to K^-\pi^+$). NODE=S041R1;LINKAGE=E

[31] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses the Mark III branching fractions for the D. NODE=S041R1;LINKAGE=B9

[32] BEBEK 87 value has been updated in BERKELMAN 91 to use same assumptions as noted for BORTOLETTO 92. NODE=S041R1;LINKAGE=A

[33] ALBRECHT 88K assumes $B^0\overline{B}^0$:B^+B^- ratio is 45:55. Superseded by ALBRECHT 90J. NODE=S041R1;LINKAGE=D

$\Gamma(\overline{D}^0\rho^+)/\Gamma_{\text{total}}$ Γ_{16}/Γ

NODE=S041R25
NODE=S041R25

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0134±0.0018 OUR AVERAGE					
0.0135±0.0012±0.0015	212	[34] ALAM	94	CLE2	$e^+e^- \to \Upsilon(4S)$
0.013 ±0.004 ±0.004	19	[35] ALBRECHT	90J	ARG	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.021 ±0.008 ±0.009	10	[36] ALBRECHT	88K	ARG	$e^+e^- \to \Upsilon(4S)$

[34] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II absolute B($D^0 \to K^-\pi^+$) and the PDG 1992 B($D^0 \to K^-\pi^+\pi^0$)/B($D^0 \to K^-\pi^+$) and B($D^0 \to K^-\pi^+\pi^+\pi^-$)/B($D^0 \to K^-\pi^+$). NODE=S041R25;LINKAGE=E

[35] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses the Mark III branching fractions for the D. NODE=S041R25;LINKAGE=B9

[36] ALBRECHT 88K assumes $B^0\overline{B}^0$:B^+B^- ratio is 45:55. NODE=S041R25;LINKAGE=A

$\Gamma(\overline{D}^0K^+)/\Gamma_{\text{total}}$ Γ_{17}/Γ

NODE=S041B31
NODE=S041B31

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
2.92±0.80±0.28	[37] ATHANAS	98	CLE2	$e^+e^- \to \Upsilon(4S)$

[37] ATHANAS 98 reports [B($B^+ \to \overline{D}^0K^+$)]/[B($B^+ \to \overline{D}^0\pi^+$)] =0.055±0.014±0.005. We multiply by our best value B($B^+ \to \overline{D}^0\pi^+$)= (5.3 ± 0.5) × 10^{-3}. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041B31;LINKAGE=A

$\Gamma(\overline{D}^0 \pi^+ \pi^+ \pi^-)/\Gamma_{total}$ — Γ_{18}/Γ

NODE=S041R85
NODE=S041R85

VALUE	DOCUMENT ID	TECN	COMMENT
0.0115±0.0029±0.0021	[38] BORTOLETTO92	CLEO	$e^+ e^- \to \Upsilon(4S)$

[38] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D. NODE=S041R85;LINKAGE=B9

$\Gamma(\overline{D}^0 \pi^+ \pi^+ \pi^-$ nonresonant$)/\Gamma_{total}$ — Γ_{19}/Γ

NODE=S041R86
NODE=S041R86

VALUE	DOCUMENT ID	TECN	COMMENT
0.0051±0.0034±0.0023	[39] BORTOLETTO92	CLEO	$e^+ e^- \to \Upsilon(4S)$

[39] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D. NODE=S041R86;LINKAGE=B9

$\Gamma(\overline{D}^0 \pi^+ \rho^0)/\Gamma_{total}$ — Γ_{20}/Γ

NODE=S041R87
NODE=S041R87

VALUE	DOCUMENT ID	TECN	COMMENT
0.0042±0.0023±0.0020	[40] BORTOLETTO92	CLEO	$e^+ e^- \to \Upsilon(4S)$

[40] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D. NODE=S041R87;LINKAGE=B9

$\Gamma(\overline{D}^0 a_1(1260)^+)/\Gamma_{total}$ — Γ_{21}/Γ

NODE=S041R88
NODE=S041R88

VALUE	DOCUMENT ID	TECN	COMMENT
0.0045±0.0019±0.0031	[41] BORTOLETTO92	CLEO	$e^+ e^- \to \Upsilon(4S)$

[41] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D. NODE=S041R88;LINKAGE=B9

$\Gamma(D^*(2010)^- \pi^+ \pi^+)/\Gamma_{total}$ — Γ_{22}/Γ

NODE=S041R2
NODE=S041R2

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.0021±0.0006 OUR AVERAGE						
0.0019±0.0007±0.0003		14	[42] ALAM	94	CLE2	$e^+ e^- \to \Upsilon(4S)$
0.0026±0.0014±0.0007		11	[43] ALBRECHT	90J	ARG	$e^+ e^- \to \Upsilon(4S)$
$0.0024^{+0.0017+0.0010}_{-0.0016-0.0006}$		3	[44] BEBEK	87	CLEO	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.004	90		[45] BORTOLETTO	92	CLEO	$e^+ e^- \to \Upsilon(4S)$
0.005 ±0.002 ±0.003		7	[46] ALBRECHT	87C	ARG	$e^+ e^- \to \Upsilon(4S)$

[42] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II B($D^*(2010)^+ \to D^0 \pi^+$) and absolute B($D^0 \to K^- \pi^+$) and the PDG 1992 B($D^0 \to K^- \pi^+ \pi^0$)/B($D^0 \to K^- \pi^+$) and B($D^0 \to K^- \pi^+ \pi^+ \pi^-$)/B($D^0 \to K^- \pi^+$). NODE=S041R2;LINKAGE=EF

[43] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses the Mark III branching fractions for the D. NODE=S041R2;LINKAGE=9B

[44] BEBEK 87 value has been updated in BERKELMAN 91 to use same assumptions as noted for BORTOLETTO 92. NODE=S041R2;LINKAGE=A

[45] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D and $D^*(2010)$. The authors also find the product branching fraction into $D^{**}\pi$ followed by $D^{**} \to D^*(2010)\pi$ to be $0.0014^{+0.0008}_{-0.0006} \pm 0.0003$ where D^{**} represents all orbitally excited D mesons. NODE=S041R2;LINKAGE=B9

[46] ALBRECHT 87C use PDG 86 branching ratios for D and $D^*(2010)$ and assume B($\Upsilon(4S) \to B^+ B^-$) = 55% and B($\Upsilon(4S) \to B^0 \overline{B}^0$) = 45%. Superseded by ALBRECHT 90J. NODE=S041R2;LINKAGE=B

$\Gamma(D^- \pi^+ \pi^+)/\Gamma_{total}$ — Γ_{23}/Γ

NODE=S041R14
NODE=S041R14

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<0.0014	90		[47] ALAM	94	CLE2	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.007	90		[48] BORTOLETTO	92	CLEO	$e^+ e^- \to \Upsilon(4S)$
$0.0025^{+0.0041+0.0024}_{-0.0023-0.0008}$		1	[49] BEBEK	87	CLEO	$e^+ e^- \to \Upsilon(4S)$

[47] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the Mark III B($D^+ \to K^- \pi^+ \pi^+$). NODE=S041R14;LINKAGE=CC

[48] BORTOLETTO 92 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D. The product branching fraction into $D_0^*(2340)\pi$ followed by $D_0^*(2340) \to D\pi$ is < 0.005 at 90%CL and into $D_2^*(2460)$ followed by $D_2^*(2460) \to D\pi$ is < 0.004 at 90%CL. NODE=S041R14;LINKAGE=B9

[49] BEBEK 87 assume the $\Upsilon(4S)$ decays 43% to $B^0 \overline{B}^0$. B($D^- \to K^+ \pi^- \pi^-$) = (9.1 ± 1.3 ± 0.4)% is assumed. NODE=S041R14;LINKAGE=A

$\Gamma(\overline{D}^*(2007)^0 \pi^+)/\Gamma_{total}$ Γ_{24}/Γ

NODE=S041R15

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0046 ±0.0004 OUR AVERAGE				
0.00434±0.00047±0.00018		[50] BRANDENB... 98	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$
0.0052 ±0.0007 ±0.0007	71	[51] ALAM 94	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$
0.0072 ±0.0018 ±0.0016		[52] BORTOLETTO92	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$
0.0040 ±0.0014 ±0.0012	9	[52] ALBRECHT 90J	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.0027 ±0.0044		[53] BEBEK 87	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$

SYCLP1=A

[50] BRANDENBURG 98 assume equal production of B^+ and B^0 at $\Upsilon(4S)$ and use the D^* reconstruction technique. The first error is their experiment's error and the second error is the systematic error from the PDG 96 value of B($D^* \rightarrow D\pi$). NODE=S041R15;LINKAGE=BG

[51] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II B($D^*(2007)^0 \rightarrow D^0\pi^0$) and absolute B($D^0 \rightarrow K^-\pi^+$) and the PDG 1992 B($D^0 \rightarrow K^-\pi^+\pi^0$)/B($D^0 \rightarrow K^-\pi^+$) and B($D^0 \rightarrow K^-\pi^+\pi^+\pi^-$)/B($D^0 \rightarrow K^-\pi^+$). NODE=S041R15;LINKAGE=EB

[52] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D and $D^*(2010)$. NODE=S041R15;LINKAGE=B9

[53] This is a derived branching ratio, using the inclusive pion spectrum and other two-body B decays. BEBEK 87 assume the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. NODE=S041R15;LINKAGE=A

$\Gamma(D^*(2010)^+ \pi^0)/\Gamma_{total}$ Γ_{25}/Γ

NODE=S041B15

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.00017	90	[54] BRANDENB... 98	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$

[54] BRANDENBURG 98 assume equal production of B^+ and B^0 at $\Upsilon(4S)$ and use the D^* partial reconstruction technique. The first error is their experiment's error and the second error is the systematic error from the PDG 96 value of B($D^* \rightarrow D\pi$). NODE=S041B15;LINKAGE=BG

$\Gamma(\overline{D}^*(2007)^0 \rho^+)/\Gamma_{total}$ Γ_{26}/Γ

NODE=S041S41

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0155±0.0031 OUR AVERAGE				
0.0168±0.0021±0.0028	86	[55] ALAM 94	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$
0.010 ±0.006 ±0.004	7	[56] ALBRECHT 90J	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$

[55] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II B($D^*(2007)^0 \rightarrow D^0\pi^0$) and absolute B($D^0 \rightarrow K^-\pi^+$) and the PDG 1992 B($D^0 \rightarrow K^-\pi^+\pi^0$)/B($D^0 \rightarrow K^-\pi^+$) and B($D^0 \rightarrow K^-\pi^+\pi^+\pi^-$)/B($D^0 \rightarrow K^-\pi^+$). The nonresonant $\pi^+\pi^0$ contribution under the ρ^+ is negligible. NODE=S041S41;LINKAGE=BE

[56] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D and $D^*(2010)$. NODE=S041S41;LINKAGE=B9

$\Gamma(\overline{D}^*(2007)^0 \pi^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{27}/Γ

NODE=S041S92

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0094±0.0020±0.0017	48	[57,58] ALAM 94	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$

[57] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II B($D^*(2007)^0 \rightarrow D^0\pi^0$) and absolute B($D^0 \rightarrow K^-\pi^+$) and the PDG 1992 B($D^0 \rightarrow K^-\pi^+\pi^0$)/B($D^0 \rightarrow K^-\pi^+$) and B($D^0 \rightarrow K^-\pi^+\pi^+\pi^-$)/B($D^0 \rightarrow K^-\pi^+$). NODE=S041S92;LINKAGE=EB

[58] The three pion mass is required to be between 1.0 and 1.6 GeV consistent with an a_1 meson. (If this channel is dominated by a_1^+, the branching ratio for $\overline{D}^{*0} a_1^+$ is twice that for $\overline{D}^{*0}\pi^+\pi^+\pi^-$.) NODE=S041S92;LINKAGE=EC

$\Gamma(\overline{D}^*(2007)^0 a_1(1260)^+)/\Gamma_{total}$ Γ_{28}/Γ

NODE=S041S96

VALUE	DOCUMENT ID	TECN	COMMENT
0.0188±0.0040±0.0034	[59,60] ALAM 94	CLE2	$e^+ e^- \rightarrow \Upsilon(4S)$

[59] ALAM 94 value is twice their $\Gamma(\overline{D}^*(2007)^0\pi^+\pi^+\pi^-)/\Gamma_{total}$ value based on their observation that the three pions are dominantly in the $a_1(1260)$ mass range 1.0 to 1.6 GeV. NODE=S041S96;LINKAGE=A

[60] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II B($D^*(2007)^0 \rightarrow D^0\pi^0$) and absolute B($D^0 \rightarrow K^-\pi^+$) and the PDG 1992 B($D^0 \rightarrow K^-\pi^+\pi^0$)/B($D^0 \rightarrow K^-\pi^+$) and B($D^0 \rightarrow K^-\pi^+\pi^+\pi^-$)/B($D^0 \rightarrow K^-\pi^+$). NODE=S041S96;LINKAGE=EB

$\Gamma(D^*(2010)^- \pi^+ \pi^+ \pi^0)/\Gamma_{total}$ Γ_{29}/Γ

NODE=S041R12
NODE=S041R12

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0152±0.0071±0.0001	26	[61] ALBRECHT 90J	ARG	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.043 ±0.013 ±0.026	24	[62] ALBRECHT 87C	ARG	$e^+ e^- \to \Upsilon(4S)$

[61] ALBRECHT 90J reports $0.018 \pm 0.007 \pm 0.005$ for $B(D^*(2010)^+ \to D^0 \pi^+) = 0.57 \pm 0.06$. We rescale to our best value $B(D^*(2010)^+ \to D^0 \pi^+) = (67.7 \pm 0.5) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D.

NODE=S041R12;LINKAGE=B9

[62] ALBRECHT 87C use PDG 86 branching ratios for D and $D^*(2010)$ and assume $B(\Upsilon(4S) \to B^+ B^-) = 55\%$ and $B(\Upsilon(4S) \to B^0 \overline{B}^0) = 45\%$. Superseded by ALBRECHT 90J.

NODE=S041R12;LINKAGE=A

$\Gamma(D^*(2010)^- \pi^+ \pi^+ \pi^+ \pi^-)/\Gamma_{total}$ Γ_{30}/Γ

NODE=S041R64
NODE=S041R64

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.01	90	[63] ALBRECHT 90J	ARG	$e^+ e^- \to \Upsilon(4S)$

[63] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$ and uses Mark III branching fractions for the D and $D^*(2010)$.

NODE=S041R64;LINKAGE=B9

$\Gamma(\overline{D}_1^*(2420)^0 \pi^+)/\Gamma_{total}$ Γ_{31}/Γ

NODE=S041R93
NODE=S041R93

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0015±0.0006 OUR AVERAGE Error includes scale factor of 1.3.				
0.0011±0.0005±0.0002	8	[64] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$
0.0025±0.0007±0.0006		[65] ALBRECHT 94D	ARG	$e^+ e^- \to \Upsilon(4S)$

[64] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ and absolute $B(D^0 \to K^- \pi^+)$ and the PDG 1992 $B(D^0 \to K^- \pi^+ \pi^0)/B(D^0 \to K^- \pi^+)$ and assuming $B(D_1(2420)^0 \to D^*(2010)^+ \pi^-) = 67\%$.

NODE=S041R93;LINKAGE=EG

[65] ALBRECHT 94D assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ assuming $B(D_1(2420)^0 \to D^*(2010)^+ \pi^-) = 67\%$.

NODE=S041R93;LINKAGE=A

$\Gamma(\overline{D}_1^*(2420)^0 \rho^+)/\Gamma_{total}$ Γ_{32}/Γ

NODE=S041R94
NODE=S041R94

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0014	90	[66] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$

[66] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ assuming $B(D_1(2420)^0 \to D^*(2010)^+ \pi^-) = 67\%$.

NODE=S041R94;LINKAGE=EG

$\Gamma(\overline{D}_2^*(2460)^0 \pi^+)/\Gamma_{total}$ Γ_{33}/Γ

NODE=S041R91
NODE=S041R91

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0013	90	[67] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0028	90	[68] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$
<0.0023	90	[69] ALBRECHT 94D	ARG	$e^+ e^- \to \Upsilon(4S)$

OCCUR=2

[67] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the Mark III $B(D^+ \to K^- \pi^+ \pi^+)$ and $B(D_2^*(2460)^0 \to D^+ \pi^-) = 30\%$.

NODE=S041R91;LINKAGE=CD

[68] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the Mark III $B(D^+ \to K^- \pi^+ \pi^+)$, the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ and $B(D_2^*(2460)^0 \to D^*(2010)^+ \pi^-) = 20\%$.

NODE=S041R91;LINKAGE=CE

[69] ALBRECHT 94D assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ and $B(D_2^*(2460)^0 \to D^*(2010)^+ \pi^-) = 30\%$.

NODE=S041R91;LINKAGE=A

$\Gamma(\overline{D}_2^*(2460)^0 \rho^+)/\Gamma_{total}$ Γ_{34}/Γ

NODE=S041R92
NODE=S041R92

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0047	90	[70] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$
<0.005	90	[71] ALAM 94	CLE2	$e^+ e^- \to \Upsilon(4S)$

OCCUR=2

[70] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the Mark III $B(D^+ \to K^- \pi^+ \pi^+)$ and $B(D_2^*(2460)^0 \to D^+ \pi^-) = 30\%$.

NODE=S041R92;LINKAGE=CD

[71] ALAM 94 assume equal production of B^+ and B^0 at the $\Upsilon(4S)$ and use the Mark III $B(D^+ \to K^- \pi^+ \pi^+)$, the CLEO II $B(D^*(2010)^+ \to D^0 \pi^+)$ and $B(D_2^*(2460)^0 \to D^*(2010)^+ \pi^-) = 20\%$.

NODE=S041R92;LINKAGE=CE

$\Gamma(\overline{D}^0 D_s^+)/\Gamma_{total}$ Γ_{35}/Γ

NODE=S041R39
NODE=S041R39

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.013 ±0.004 OUR AVERAGE					
$0.0122\pm0.0032^{+0.0029}_{-0.0030}$		[72] GIBAUT	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
$0.018 \pm0.009 \pm0.004$		[73] ALBRECHT	92G	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
$0.016 \pm0.007 \pm0.004$	5	[74] BORTOLETTO	90	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[72] GIBAUT 96 reports $0.0126 \pm 0.0022 \pm 0.0025$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.035$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041R39;LINKAGE=Z9

[73] ALBRECHT 92G reports $0.024 \pm 0.012 \pm 0.004$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes PDG 1990 D^0 branching ratios, e.g., $B(D^0 \rightarrow K^-\pi^+) = 3.71 \pm 0.25\%$. NODE=S041R39;LINKAGE=CA

[74] BORTOLETTO 90 reports 0.029 ± 0.013 for $B(D_s^+ \rightarrow \phi\pi^+) = 0.02$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041R39;LINKAGE=A

$\Gamma(\overline{D}^0 D_s^{*+})/\Gamma_{total}$ Γ_{36}/Γ

NODE=S041S49
NODE=S041S49

VALUE	DOCUMENT ID		TECN	COMMENT
0.009 ±0.004 OUR AVERAGE				
$0.0084\pm0.0031^{+0.0020}_{-0.0021}$	[75] GIBAUT	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
$0.012 \pm0.009 \pm0.003$	[76] ALBRECHT	92G	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[75] GIBAUT 96 reports $0.0087 \pm 0.0027 \pm 0.0017$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.035$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041S49;LINKAGE=Z9

[76] ALBRECHT 92G reports $0.016 \pm 0.012 \pm 0.003$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes PDG 1990 D^0 branching ratios, e.g., $B(D^0 \rightarrow K^-\pi^+) = 3.71 \pm 0.25\%$. NODE=S041S49;LINKAGE=CA

$\Gamma(\overline{D}^*(2007)^0 D_s^+)/\Gamma_{total}$ Γ_{37}/Γ

NODE=S041S50
NODE=S041S50

VALUE	DOCUMENT ID		TECN	COMMENT
0.012±0.005 OUR AVERAGE				
$0.014\pm0.005\pm0.003$	[77] GIBAUT	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
$0.010\pm0.007\pm0.002$	[78] ALBRECHT	92G	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[77] GIBAUT 96 reports $0.0140 \pm 0.0043 \pm 0.0035$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.035$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041S50;LINKAGE=Z9

[78] ALBRECHT 92G reports $0.013 \pm 0.009 \pm 0.002$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes PDG 1990 D^0 and $D^*(2007)^0$ branching ratios, e.g., $B(D^0 \rightarrow K^-\pi^+) = 3.71 \pm 0.25\%$ and $B(D^*(2007)^0 \rightarrow D^0\pi^0) = 55 \pm 6\%$. NODE=S041S50;LINKAGE=CA

$\Gamma(\overline{D}^*(2007)^0 D_s^{*+})/\Gamma_{total}$ Γ_{38}/Γ

NODE=S041S51
NODE=S041S51

VALUE	DOCUMENT ID		TECN	COMMENT
0.027±0.010 OUR AVERAGE				
$0.030\pm0.011\pm0.007$	[79] GIBAUT	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
$0.023\pm0.013\pm0.006$	[80] ALBRECHT	92G	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[79] GIBAUT 96 reports $0.0310 \pm 0.0088 \pm 0.0065$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.035$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041S51;LINKAGE=Z9

[80] ALBRECHT 92G reports $0.031 \pm 0.016 \pm 0.005$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = (3.6 \pm 0.9) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes PDG 1990 D^0 and $D^*(2007)^0$ branching ratios, e.g., $B(D^0 \rightarrow K^-\pi^+) = 3.71 \pm 0.25\%$ and $B(D^*(2007)^0 \rightarrow D^0\pi^0) = 55 \pm 6\%$. NODE=S041S51;LINKAGE=CA

$\Gamma(\overline{D}^*(2007)^0 D^*(2010)^+)/\Gamma_{total}$ Γ_{39}/Γ

NODE=S041B34
NODE=S041B34

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.011	90	BARATE	98Q	ALEP	$e^+e^- \rightarrow Z$

$\left[\Gamma(\overline{D}^0 D^*(2010)^+) + \Gamma(\overline{D}^*(2007)^0 D^+)\right]/\Gamma_{total}$ — Γ_{40}/Γ

NODE=S041B35
NODE=S041B35

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.013	90	BARATE	98Q	ALEP	$e^+e^- \to Z$

$\Gamma(\overline{D}^0 D^+)/\Gamma_{total}$ — Γ_{41}/Γ

NODE=S041B36
NODE=S041B36

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0067	90	BARATE	98Q	ALEP	$e^+e^- \to Z$

$\Gamma(D_s^+ \pi^0)/\Gamma_{total}$ — Γ_{42}/Γ

NODE=S041S83
NODE=S041S83

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.00020	90	[81] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[81] ALEXANDER 93B reports $< 2.0 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S83;LINKAGE=XB

$\left[\Gamma(D_s^+ \pi^0) + \Gamma(D_s^{*+} \pi^0)\right]/\Gamma_{total}$ — $(\Gamma_{42}+\Gamma_{43})/\Gamma$

NODE=S041S62
NODE=S041S62

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0007	90	[82] ALBRECHT	93E	ARG	$e^+e^- \to \Upsilon(4S)$

[82] ALBRECHT 93E reports $< 0.9 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S62;LINKAGE=CA

$\Gamma(D_s^{*+} \pi^0)/\Gamma_{total}$ — Γ_{43}/Γ

NODE=S041S84
NODE=S041S84

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.00033	90	[83] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[83] ALEXANDER 93B reports $< 3.2 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S84;LINKAGE=XB

$\Gamma(D_s^+ \eta)/\Gamma_{total}$ — Γ_{44}/Γ

NODE=S041S85
NODE=S041S85

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0005	90	[84] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[84] ALEXANDER 93B reports $< 4.6 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S85;LINKAGE=XB

$\Gamma(D_s^{*+} \eta)/\Gamma_{total}$ — Γ_{45}/Γ

NODE=S041S86
NODE=S041S86

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0008	90	[85] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[85] ALEXANDER 93B reports $< 7.5 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S86;LINKAGE=XB

$\Gamma(D_s^+ \rho^0)/\Gamma_{total}$ — Γ_{46}/Γ

NODE=S041S87
NODE=S041S87

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0004	90	[86] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[86] ALEXANDER 93B reports $< 3.7 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S87;LINKAGE=XB

$\left[\Gamma(D_s^+ \rho^0) + \Gamma(D_s^+ \overline{K}^*(892)^0)\right]/\Gamma_{total}$ — $(\Gamma_{46}+\Gamma_{56})/\Gamma$

NODE=S041S60
NODE=S041S60

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0025	90	[87] ALBRECHT	93E	ARG	$e^+e^- \to \Upsilon(4S)$

[87] ALBRECHT 93E reports $< 3.4 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S60;LINKAGE=CA

$\Gamma(D_s^{*+} \rho^0)/\Gamma_{total}$ — Γ_{47}/Γ

NODE=S041S88
NODE=S041S88

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0005	90	[88] ALEXANDER	93B	CLE2	$e^+e^- \to \Upsilon(4S)$

[88] ALEXANDER 93B reports $< 4.8 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S88;LINKAGE=XB

$\left[\Gamma(D_s^{*+}\rho^0)+\Gamma(D_s^{*+}\overline{K}^*(892)^0)\right]/\Gamma_{total}$ $(\Gamma_{47}+\Gamma_{57})/\Gamma$

NODE=S041S61

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0015	90	[89] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[89] ALBRECHT 93E reports $< 2.0 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S61;LINKAGE=CA

$\Gamma(D_s^+\omega)/\Gamma_{total}$ Γ_{48}/Γ

NODE=S041S63

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0005	90	[90] ALEXANDER 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0025	90	[91] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[90] ALEXANDER 93B reports $< 4.8 \times 10^{-4}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S63;LINKAGE=XB

[91] ALBRECHT 93E reports $< 3.4 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S63;LINKAGE=CA

$\Gamma(D_s^{*+}\omega)/\Gamma_{total}$ Γ_{49}/Γ

NODE=S041S64

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0007	90	[92] ALEXANDER 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0014	90	[93] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[92] ALEXANDER 93B reports $< 6.8 \times 10^{-4}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S64;LINKAGE=XB

[93] ALBRECHT 93E reports $< 1.9 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S64;LINKAGE=CA

$\Gamma(D_s^+ a_1(1260)^0)/\Gamma_{total}$ Γ_{50}/Γ

NODE=S041S65

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0022	90	[94] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[94] ALBRECHT 93E reports $< 3.0 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S65;LINKAGE=CA

$\Gamma(D_s^{*+} a_1(1260)^0)/\Gamma_{total}$ Γ_{51}/Γ

NODE=S041S66

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0016	90	[95] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[95] ALBRECHT 93E reports $< 2.2 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S66;LINKAGE=CA

$\Gamma(D_s^+\phi)/\Gamma_{total}$ Γ_{52}/Γ

NODE=S041S67

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.00032	90	[96] ALEXANDER 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0013	90	[97] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[96] ALEXANDER 93B reports $< 3.1 \times 10^{-4}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S67;LINKAGE=XB

[97] ALBRECHT 93E reports $< 1.7 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S67;LINKAGE=CA

$\Gamma(D_s^{*+}\phi)/\Gamma_{total}$ Γ_{53}/Γ

NODE=S041S68

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0004	90	[98] ALEXANDER 93B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0016	90	[99] ALBRECHT 93E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[98] ALEXANDER 93B reports $< 4.2 \times 10^{-4}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S68;LINKAGE=XB

[99] ALBRECHT 93E reports $< 2.1 \times 10^{-3}$ for $B(D_s^+ \rightarrow \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \rightarrow \phi\pi^+) = 0.036$.

NODE=S041S68;LINKAGE=CA

$\Gamma(D_s^+ \overline{K}^0)/\Gamma_{total}$ Γ_{54}/Γ

NODE=S041S69
NODE=S041S69

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0011	90	[100] ALEXANDER 93B	CLE2	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0019	90	[101] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[100] ALEXANDER 93B reports $< 10.3 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S69;LINKAGE=XB

[101] ALBRECHT 93E reports $< 2.5 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S69;LINKAGE=CA

$\Gamma(D_s^{*+} \overline{K}^0)/\Gamma_{total}$ Γ_{55}/Γ

NODE=S041S70
NODE=S041S70

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0011	90	[102] ALEXANDER 93B	CLE2	$e^+ e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.0023	90	[103] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[102] ALEXANDER 93B reports $< 10.9 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S70;LINKAGE=XB

[103] ALBRECHT 93E reports $< 3.1 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S70;LINKAGE=CA

$\Gamma(D_s^+ \overline{K}^*(892)^0)/\Gamma_{total}$ Γ_{56}/Γ

NODE=S041S89
NODE=S041S89

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0005	90	[104] ALEXANDER 93B	CLE2	$e^+ e^- \to \Upsilon(4S)$

[104] ALEXANDER 93B reports $< 4.4 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S89;LINKAGE=XB

$\Gamma(D_s^{*+} \overline{K}^*(892)^0)/\Gamma_{total}$ Γ_{57}/Γ

NODE=S041S90
NODE=S041S90

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0004	90	[105] ALEXANDER 93B	CLE2	$e^+ e^- \to \Upsilon(4S)$

[105] ALEXANDER 93B reports $< 4.3 \times 10^{-4}$ for $B(D_s^+ \to \phi\pi^+) = 0.037$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S90;LINKAGE=XB

$\Gamma(D_s^- \pi^+ K^+)/\Gamma_{total}$ Γ_{58}/Γ

NODE=S041S71
NODE=S041S71

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0008	90	[106] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[106] ALBRECHT 93E reports $< 1.1 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S71;LINKAGE=CA

$\Gamma(D_s^{*-} \pi^+ K^+)/\Gamma_{total}$ Γ_{59}/Γ

NODE=S041S72
NODE=S041S72

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0012	90	[107] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[107] ALBRECHT 93E reports $< 1.6 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S72;LINKAGE=CA

$\Gamma(D_s^- \pi^+ K^*(892)^+)/\Gamma_{total}$ Γ_{60}/Γ

NODE=S041S73
NODE=S041S73

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.006	90	[108] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[108] ALBRECHT 93E reports $< 8.6 \times 10^{-3}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S73;LINKAGE=CA

$\Gamma(D_s^{*-} \pi^+ K^*(892)^+)/\Gamma_{total}$ Γ_{61}/Γ

NODE=S041S74
NODE=S041S74

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.008	90	[109] ALBRECHT 93E	ARG	$e^+ e^- \to \Upsilon(4S)$

[109] ALBRECHT 93E reports $< 1.1 \times 10^{-2}$ for $B(D_s^+ \to \phi\pi^+) = 0.027$. We rescale to our best value $B(D_s^+ \to \phi\pi^+) = 0.036$.

NODE=S041S74;LINKAGE=CA

$\Gamma(J/\psi(1S)K^+)/\Gamma_{total}$ Γ_{62}/Γ

NODE=S041R3
NODE=S041R3

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
10.0± 1.0 OUR AVERAGE					
10.2± 0.8±0.7		[110] JESSOP	97	CLE2	$e^+e^- \to \Upsilon(4S)$
9.3± 3.1±0.2		[111] BORTOLETTO	92	CLEO	$e^+e^- \to \Upsilon(4S)$
8.1± 3.5±0.1	6	[112] ALBRECHT	90J	ARG	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
11.0± 1.5±0.9	59	[113] ALAM	94	CLE2	Repl. by JESSOP 97
22 ±10 ±2		BUSKULIC	92G	ALEP	$e^+e^- \to Z$
7 ± 4	3	[114] ALBRECHT	87D	ARG	$e^+e^- \to \Upsilon(4S)$
10 ± 7 ±2	3	[115] BEBEK	87	CLEO	$e^+e^- \to \Upsilon(4S)$
9 ± 5	3	[116] ALAM	86	CLEO	$e^+e^- \to \Upsilon(4S)$

[110] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R3;LINKAGE=JJ

[111] BORTOLETTO 92 reports $8 \pm 2 \pm 2$ for B($J/\psi(1S) \to e^+e^-$) = 0.069 ± 0.009. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = $(5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R3;LINKAGE=AB

[112] ALBRECHT 90J reports $7 \pm 3 \pm 1$ for B($J/\psi(1S) \to e^+e^-$) = 0.069 ± 0.009. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = $(5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R3;LINKAGE=BA

[113] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R3;LINKAGE=B9

[114] ALBRECHT 87D assume $B^+B^-/B^0\overline{B}^0$ ratio is 55/45. Superseded by ALBRECHT 90J. NODE=S041R3;LINKAGE=C

[115] BEBEK 87 value has been updated in BERKELMAN 91 to use same assumptions as noted for BORTOLETTO 92. NODE=S041R3;LINKAGE=A

[116] ALAM 86 assumes $B^\pm/B^0$ ratio is 60/40. NODE=S041R3;LINKAGE=B

$\Gamma(J/\psi(1S)K^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{63}/Γ

NODE=S041R19
NODE=S041R19

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.0014 ±0.0006 OUR AVERAGE						
0.00140±0.00082±0.00002			[117] BORTOLETTO	92	CLEO	$e^+e^- \to \Upsilon(4S)$
0.00140±0.00091±0.00002		6	[118] ALBRECHT	87D	ARG	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.0019	90		[119] ALBRECHT	90J	ARG	$e^+e^- \to \Upsilon(4S)$

[117] BORTOLETTO 92 reports $0.0012 \pm 0.0006 \pm 0.0004$ for B($J/\psi(1S) \to e^+e^-$) = 0.069 ± 0.009. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = $(5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R19;LINKAGE=B9

[118] ALBRECHT 87D reports 0.0012 ± 0.0008 for B($J/\psi(1S) \to e^+e^-$) = 0.069 ± 0.009. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = $(5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. They actually report 0.0011 ± 0.0007 assuming $B^+B^-/B^0\overline{B}^0$ ratio is 55/45. We rescale to 50/50. Analysis explicitly removes $B^+ \to \psi(2S)K^+$. NODE=S041R19;LINKAGE=C

[119] ALBRECHT 90J reports < 0.0016 for B($J/\psi(1S) \to e^+e^-$) = 0.069. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = 0.0593. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R19;LINKAGE=9B

$\Gamma(J/\psi(1S)K^*(892)^+)/\Gamma_{total}$ Γ_{64}/Γ

NODE=S041R65

For polarization information see the Listings at the end of the "B^0 Branching Ratios" section. NODE=S041R65

NODE=S041R65

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.00148±0.00027 OUR AVERAGE					
0.00141±0.00023±0.00024		[120] JESSOP	97	CLE2	$e^+e^- \to \Upsilon(4S)$
0.00158±0.00047±0.00027		[121] ABE	96H	CDF	$p\overline{p}$ at 1.8 TeV
0.00151±0.00109±0.00002		[122] BORTOLETTO	92	CLEO	$e^+e^- \to \Upsilon(4S)$
0.00186±0.00130±0.00003	2	[123] ALBRECHT	90J	ARG	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.00178±0.00051±0.00023	13	[124] ALAM	94	CLE2	Sup. by JESSOP 97

[120] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R65;LINKAGE=JJ

[121] ABE 96H assumes that B($B^+ \to J/\psi K^+$) = $(1.02 \pm 0.14) \times 10^{-3}$. NODE=S041R65;LINKAGE=AH

[122] BORTOLETTO 92 reports $0.0013 \pm 0.0009 \pm 0.0003$ for B($J/\psi(1S) \to e^+e^-$) = 0.069 ± 0.009. We rescale to our best value B($J/\psi(1S) \to e^+e^-$) = $(5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R65;LINKAGE=H9

[123] ALBRECHT 90J reports $0.0016 \pm 0.0011 \pm 0.0003$ for $B(J/\psi(1S) \rightarrow e^+ e^-) = 0.069 \pm 0.009$. We rescale to our best value $B(J/\psi(1S) \rightarrow e^+ e^-) = (5.93 \pm 0.10) \times 10^{-2}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R65;LINKAGE=9H

[124] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R65;LINKAGE=B9

$\Gamma(J/\psi(1S)K^*(892)^+)/\Gamma(J/\psi(1S)K^+)$ Γ_{64}/Γ_{62}

NODE=S041S98
NODE=S041S98

VALUE	DOCUMENT ID		TECN	COMMENT
1.52±0.24 OUR AVERAGE				
1.45±0.20±0.17	[125] JESSOP	97	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
1.92±0.60±0.17	ABE	96Q	CDF	$p\overline{p}$

[125] JESSOP 97 assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. The measurement is actually measured as an average over kaon charged and neutral states. NODE=S041S98;LINKAGE=JJ

$\Gamma(J/\psi(1S)\pi^+)/\Gamma(J/\psi(1S)K^+)$ Γ_{65}/Γ_{62}

NODE=S041S97
NODE=S041S97

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.051±0.014 OUR AVERAGE					
$0.05\ ^{+0.019}_{-0.017} \pm 0.001$		ABE	96R	CDF	$p\overline{p}$ 1.8 TeV
0.052±0.024		BISHAI	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.043±0.023	5	[126] ALEXANDER	95	CLE2	Sup. by BISHAI 96

[126] Assumes equal production of B^+B^- and $B^0\overline{B}^0$ on $\Upsilon(4S)$. NODE=S041S97;LINKAGE=A

$\Gamma(J/\psi(1S)\rho^+)/\Gamma_{total}$ Γ_{66}/Γ

NODE=S041S99
NODE=S041S99

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<7.7 \times 10^{-4}$	90	BISHAI	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(J/\psi(1S)a_1(1260)^+)/\Gamma_{total}$ Γ_{67}/Γ

NODE=S041B1
NODE=S041B1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.2 \times 10^{-3}$	90	BISHAI	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\psi(2S)K^+)/\Gamma_{total}$ Γ_{68}/Γ

NODE=S041R20
NODE=S041R20

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
5.8± 1.0 OUR AVERAGE						
5.5± 1.0±0.6			[127] ABE	98O	CDF	$p\overline{p}$ 1.8 TeV
6.1± 2.3±0.9		7	[128] ALAM	94	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
18 ± 8 ±4		5	[128] ALBRECHT	90J	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
< 5	90		[128] BORTOLETTO	92	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
22 ±17		3	[129] ALBRECHT	87D	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[127] ABE 98O reports $[B(B^+ \rightarrow \psi(2S)K^+)]/[B(B^+ \rightarrow J/\psi(1S)K^+)] = 0.558 \pm 0.082 \pm 0.056$. We multiply by our best value $B(B^+ \rightarrow J/\psi(1S)K^+) = (9.9 \pm 1.0) \times 10^{-4}$. Our first error is their experiment's error and our second error is the systematic error from using our best value. NODE=S041R20;LINKAGE=ME

[128] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R20;LINKAGE=B9

[129] ALBRECHT 87D assume $B^+B^-/B^0\overline{B}^0$ ratio is 55/45. Superseded by ALBRECHT 90J. NODE=S041R20;LINKAGE=C

$\Gamma(\psi(2S)K^*(892)^+)/\Gamma_{total}$ Γ_{69}/Γ

NODE=S041R66
NODE=S041R66

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0030	90	[130] ALAM	94	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.0035	90	[130] BORTOLETTO	92	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
<0.0049	90	[130] ALBRECHT	90J	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[130] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R66;LINKAGE=B9

$\Gamma(\psi(2S)K^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{70}/Γ

NODE=S041R67
NODE=S041R67

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0019±0.0011±0.0004	3	[131] ALBRECHT	90J	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[131] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R67;LINKAGE=B9

$\Gamma(\chi_{c1}(1P)K^+)/\Gamma_{total}$ Γ_{71}/Γ

NODE=S041R90
NODE=S041R90

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0010 ±0.0004 OUR AVERAGE				
0.00097±0.00040±0.00009	6	[132] ALAM 94	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
0.0019 ±0.0013 ±0.0006		[133] ALBRECHT 92E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[132] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R90;LINKAGE=H9

[133] ALBRECHT 92E assumes no $\chi_{c2}(1P)$ production and B($\Upsilon(4S) \rightarrow B^+B^-$) = 50%. NODE=S041R90;LINKAGE=A

$\Gamma(\chi_{c1}(1P)K^*(892)^+)/\Gamma_{total}$ Γ_{72}/Γ

NODE=S041R95
NODE=S041R95

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0021	90	[134] ALAM 94	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

[134] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R95;LINKAGE=H9

$\Gamma(K^0\pi^+)/\Gamma_{total}$ Γ_{73}/Γ

NODE=S041R5
NODE=S041R5

VALUE (units 10^{-5})	CL%	DOCUMENT ID	TECN	COMMENT
$\mathbf{2.3^{+1.1}_{-1.0}\pm0.36}$		GODANG 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
< 4.8	90	ASNER 96	CLE2	Repl. by GODANG 98
<19	90	ALBRECHT 91B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
<10	90	[135] AVERY 89B	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
<68	90	AVERY 87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[135] AVERY 89B reports $< 9 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R5;LINKAGE=A1

$\Gamma(K^+\pi^0)/\Gamma_{total}$ Γ_{74}/Γ

NODE=S041R97
NODE=S041R97

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$\mathbf{<1.6 \times 10^{-5}}$	90	GODANG 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$<1.4 \times 10^{-5}$	90	ASNER 96	CLE2	Repl. by GODANG 98

$\Gamma(\eta' K^+)/\Gamma_{total}$ Γ_{75}/Γ

NODE=S041B24
NODE=S041B24

VALUE	DOCUMENT ID	TECN	COMMENT
$\mathbf{(6.5^{+1.5}_{-1.4}\pm0.9) \times 10^{-5}}$	BEHRENS 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\eta' K^*(892)^+)/\Gamma_{total}$ Γ_{76}/Γ

NODE=S041B20
NODE=S041B20

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$\mathbf{<1.3 \times 10^{-4}}$	90	BEHRENS 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\eta K^+)/\Gamma_{total}$ Γ_{77}/Γ

NODE=S041B21
NODE=S041B21

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$\mathbf{<1.4 \times 10^{-5}}$	90	BEHRENS 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\eta K^*(892)^+)/\Gamma_{total}$ Γ_{78}/Γ

NODE=S041B22
NODE=S041B22

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$\mathbf{<3.0 \times 10^{-5}}$	90	BEHRENS 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\omega K^+)/\Gamma_{total}$ Γ_{79}/Γ

NODE=S041B25
NODE=S041B25

VALUE	DOCUMENT ID	TECN
$\mathbf{(1.5^{+0.7}_{-0.6}\pm0.2) \times 10^{-5}}$	[136] BERGFELD 98	CLE2

[136] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041B25;LINKAGE=EQ

$\Gamma(\omega K^*(892)^+)/\Gamma_{total}$ Γ_{80}/Γ

NODE=S041B26
NODE=S041B26

VALUE	CL%	DOCUMENT ID	TECN
$\mathbf{<8.7 \times 10^{-5}}$	90	[137] BERGFELD 98	CLE2

[137] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041B26;LINKAGE=EQ

$\Gamma(K^*(892)^0\pi^+)/\Gamma_{total}$ Γ_{81}/Γ

NODE=S041R6
NODE=S041R6

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<4.1 × 10^{-5}	90	ASNER 96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<3.9 × 10^{-4}	90	[138] ADAM 96D	DLPH	$e^+e^- \rightarrow Z$
<4.8 × 10^{-4}	90	[139] ABREU 95N	DLPH	Sup. by ADAM 96D
<1.7 × 10^{-4}	90	ALBRECHT 91B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
<1.5 × 10^{-4}	90	[140] AVERY 89B	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
<2.6 × 10^{-4}	90	AVERY 87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[138] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R6;LINKAGE=DQ

[139] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R6;LINKAGE=SR

[140] AVERY 89B reports $< 1.3 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R6;LINKAGE=A1

$\Gamma(K^*(892)^+\pi^0)/\Gamma_{total}$ Γ_{82}/Γ

NODE=S041R99
NODE=S041R99

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<9.9 × 10^{-5}	90	ASNER 96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K^+\pi^-\pi^+$ nonresonant$)/\Gamma_{total}$ Γ_{83}/Γ

NODE=S041R32
NODE=S041R32

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<2.8 × 10^{-5}	90	BERGFELD 96B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<3.3 × 10^{-4}	90	[141] ADAM 96D	DLPH	$e^+e^- \rightarrow Z$
<4.0 × 10^{-4}	90	[142] ABREU 95N	DLPH	Sup. by ADAM 96D
<3.3 × 10^{-4}	90	ALBRECHT 91E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
<1.9 × 10^{-4}	90	[143] AVERY 89B	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[141] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R32;LINKAGE=DQ

[142] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R32;LINKAGE=SR

[143] AVERY 89B reports $< 1.7 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R32;LINKAGE=A1

$\Gamma(K^-\pi^+\pi^+$ nonresonant$)/\Gamma_{total}$ Γ_{84}/Γ

NODE=S041B3
NODE=S041B3

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<5.6 × 10^{-5}	90	BERGFELD 96B	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K_1(1400)^0\pi^+)/\Gamma_{total}$ Γ_{85}/Γ

NODE=S041R71
NODE=S041R71

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<2.6 × 10^{-3}	90	ALBRECHT 91B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K_2^*(1430)^0\pi^+)/\Gamma_{total}$ Γ_{86}/Γ

NODE=S041R72
NODE=S041R72

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<6.8 × 10^{-4}	90	ALBRECHT 91B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K^+\rho^0)/\Gamma_{total}$ Γ_{87}/Γ

NODE=S041R7
NODE=S041R7

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<1.9 × 10^{-5}	90	ASNER 96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<1.2 × 10^{-4}	90	[144] ADAM 96D	DLPH	$e^+e^- \rightarrow Z$
<1.9 × 10^{-4}	90	[145] ABREU 95N	DLPH	Sup. by ADAM 96D
<1.8 × 10^{-4}	90	ALBRECHT 91B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
<8 × 10^{-5}	90	[146] AVERY 89B	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
<2.6 × 10^{-4}	90	AVERY 87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[144] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R7;LINKAGE=DQ

[145] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R7;LINKAGE=SR

[146] AVERY 89B reports $< 7 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R7;LINKAGE=A1

$\Gamma(K^0\rho^+)/\Gamma_{total}$ Γ_{88}/Γ

NODE=S041R98
NODE=S041R98

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<4.8 × 10^{-5}	90	ASNER 96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K^*(892)^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{89}/Γ

NODE=S041R83
NODE=S041R83

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<1.1 × 10^{-3}	90	ALBRECHT 91E	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(K^*(892)^+ \rho^0)/\Gamma_{total}$ — Γ_{90}/Γ

NODE=S041R73

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<9.0 × 10⁻⁴	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K_1(1400)^+ \rho^0)/\Gamma_{total}$ — Γ_{91}/Γ

NODE=S041R74

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<7.8 × 10⁻⁴	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K_2^*(1430)^+ \rho^0)/\Gamma_{total}$ — Γ_{92}/Γ

NODE=S041R75

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.5 × 10⁻³	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^+ \overline{K}^0)/\Gamma_{total}$ — Γ_{93}/Γ

NODE=S041B16

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.1 × 10⁻⁵	90	GODANG	98	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^+ K^- \pi^+ \text{ nonresonant})/\Gamma_{total}$ — Γ_{94}/Γ

NODE=S041B4

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<7.5 × 10⁻⁵	90	BERGFELD	96B	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^+ K^- K^+)/\Gamma_{total}$ — Γ_{95}/Γ

NODE=S041R80

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.0 × 10⁻⁴	90	[147] ADAM	96D	DLPH	$e^+e^- \to Z$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<3.1 × 10⁻⁴	90	[148] ABREU	95N	DLPH	Sup. by ADAM 96D
<3.5 × 10⁻⁴	90	ALBRECHT	91E	ARG	$e^+e^- \to \Upsilon(4S)$

[147] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R80;LINKAGE=DQ

[148] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R80;LINKAGE=SR

$\Gamma(K^+ \phi)/\Gamma_{total}$ — Γ_{96}/Γ

NODE=S041R8

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.5 × 10⁻⁵	90	[149] BERGFELD	98	CLE2	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<2.8 × 10⁻⁴	90	[150] ADAM	96D	DLPH	$e^+e^- \to Z$
<1.2 × 10⁻⁵	90	ASNER	96	CLE2	$e^+e^- \to \Upsilon(4S)$
<4.4 × 10⁻⁴	90	[151] ABREU	95N	DLPH	Sup. by ADAM 96D
<1.8 × 10⁻⁴	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$
<9 × 10⁻⁵	90	[152] AVERY	89B	CLEO	$e^+e^- \to \Upsilon(4S)$
<2.1 × 10⁻⁴	90	AVERY	87	CLEO	$e^+e^- \to \Upsilon(4S)$

[149] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R8;LINKAGE=EQ

[150] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R8;LINKAGE=DQ

[151] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R8;LINKAGE=SR

[152] AVERY 89B reports $< 8 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R8;LINKAGE=A1

$\Gamma(K^+ K^- K^+ \text{ nonresonant})/\Gamma_{total}$ — Γ_{97}/Γ

NODE=S041B5

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<3.8 × 10⁻⁵	90	BERGFELD	96B	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^*(892)^+ K^+ K^-)/\Gamma_{total}$ — Γ_{98}/Γ

NODE=S041R84

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.6 × 10⁻³	90	ALBRECHT	91E	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^*(892)^+ \phi)/\Gamma_{total}$ — Γ_{99}/Γ

NODE=S041R76

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<4.1 × 10⁻⁵	90	[153] BERGFELD	98	CLE2	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<7.0 × 10⁻⁵	90	ASNER	96	CLE2	$e^+e^- \to \Upsilon(4S)$
<1.3 × 10⁻³	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$

[153] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R76;LINKAGE=EQ

$\Gamma(K_1(1400)^+ \phi)/\Gamma_{total}$ — Γ_{100}/Γ

NODE=S041R77

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.1 × 10⁻³	90	ALBRECHT	91B	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K_2^*(1430)^+ \phi)/\Gamma_{total}$ — Γ_{101}/Γ

NODE=S041R78

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<3.4 × 10⁻³	90	ALBRECHT 91B	ARG	$e^+e^- \to \Upsilon(4S)$

$\Gamma(K^+ f_0(980))/\Gamma_{total}$ — Γ_{102}/Γ

NODE=S041R33

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
$<8 \times 10^{-5}$	90	[154] AVERY 89B	CLEO	$e^+e^- \to \Upsilon(4S)$

[154] AVERY 89B reports $< 7 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R33;LINKAGE=A1

$\Gamma(K^*(892)^+ \gamma)/\Gamma_{total}$ — Γ_{103}/Γ

NODE=S041R9

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$(5.7\pm3.1\pm1.1) \times 10^{-5}$		5	[155] AMMAR 93	CLE2	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$< 5.5 \times 10^{-4}$	90		[156] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$
$< 5.5 \times 10^{-4}$	90		[157] AVERY 89B	CLEO	$e^+e^- \to \Upsilon(4S)$
$< 1.8 \times 10^{-3}$	90		AVERY 87	CLEO	$e^+e^- \to \Upsilon(4S)$

[155] AMMAR 93 observed 4.1 ± 2.3 events above background. NODE=S041R9;LINKAGE=B

[156] Assumes the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. NODE=S041R9;LINKAGE=A2

[157] Assumes the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. NODE=S041R9;LINKAGE=A1

$\Gamma(K_1(1270)^+ \gamma)/\Gamma_{total}$ — Γ_{104}/Γ

NODE=S041R26

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0073	90	[158] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[158] ALBRECHT 89G reports < 0.0066 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R26;LINKAGE=A2

$\Gamma(K_1(1400)^+ \gamma)/\Gamma_{total}$ — Γ_{105}/Γ

NODE=S041R27

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0022	90	[159] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[159] ALBRECHT 89G reports < 0.0020 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R27;LINKAGE=A2

$\Gamma(K_2^*(1430)^+ \gamma)/\Gamma_{total}$ — Γ_{106}/Γ

NODE=S041R28

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0014	90	[160] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[160] ALBRECHT 89G reports < 0.0013 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R28;LINKAGE=A2

$\Gamma(K^*(1680)^+ \gamma)/\Gamma_{total}$ — Γ_{107}/Γ

NODE=S041R29

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0019	90	[161] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[161] ALBRECHT 89G reports < 0.0017 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R29;LINKAGE=A2

$\Gamma(K_3^*(1780)^+ \gamma)/\Gamma_{total}$ — Γ_{108}/Γ

NODE=S041R30

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0055	90	[162] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[162] ALBRECHT 89G reports < 0.005 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R30;LINKAGE=A2

$\Gamma(K_4^*(2045)^+ \gamma)/\Gamma_{total}$ — Γ_{109}/Γ

NODE=S041R31

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0099	90	[163] ALBRECHT 89G	ARG	$e^+e^- \to \Upsilon(4S)$

[163] ALBRECHT 89G reports < 0.0090 assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R31;LINKAGE=A2

$\Gamma(\pi^+\pi^0)/\Gamma_{total}$ — Γ_{110}/Γ

NODE=S041R16

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.0 × 10^−5	90	GODANG	98	CLE2	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<1.7 \times 10^{-5}$	90	ASNER	96	CLE2	Repl. by GODANG 98
$<2.4 \times 10^{-4}$	90	[164] ALBRECHT	90B	ARG	$e^+e^- \to \Upsilon(4S)$
$<2.3 \times 10^{-3}$	90	[165] BEBEK	87	CLEO	$e^+e^- \to \Upsilon(4S)$

[164] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R16;LINKAGE=Q

[165] BEBEK 87 assume the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. NODE=S041R16;LINKAGE=A

$\Gamma(\pi^+\pi^+\pi^-)/\Gamma_{total}$ — Γ_{111}/Γ

NODE=S041R36

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.3 × 10^−4	90	[166] ADAM	96D	DLPH	$e^+e^- \to Z$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<2.2 \times 10^{-4}$	90	[167] ABREU	95N	DLPH	Sup. by ADAM 96D
$<4.5 \times 10^{-4}$	90	[168] ALBRECHT	90B	ARG	$e^+e^- \to \Upsilon(4S)$
$<1.9 \times 10^{-4}$	90	[169] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$

[166] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R36;LINKAGE=DQ

[167] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R36;LINKAGE=SR

[168] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R36;LINKAGE=Q

[169] BORTOLETTO 89 reports $< 1.7 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R36;LINKAGE=A1

$\Gamma(\rho^0\pi^+)/\Gamma_{total}$ — Γ_{112}/Γ

NODE=S041R4

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<4.3 × 10^−5	90		ASNER	96	CLE2	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.6 \times 10^{-4}$	90		[170] ADAM	96D	DLPH	$e^+e^- \to Z$
$<2.6 \times 10^{-4}$	90		[171] ABREU	95N	DLPH	Sup. by ADAM 96D
$<1.5 \times 10^{-4}$	90		[172] ALBRECHT	90B	ARG	$e^+e^- \to \Upsilon(4S)$
$<1.7 \times 10^{-4}$	90		[173] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$
$<2.3 \times 10^{-4}$	90		[173] BEBEK	87	CLEO	$e^+e^- \to \Upsilon(4S)$
$<6 \times 10^{-4}$	90	0	GILES	84	CLEO	Repl. by BEBEK 87

[170] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041R4;LINKAGE=DQ

[171] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12. NODE=S041R4;LINKAGE=SR

[172] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R4;LINKAGE=Q

[173] Papers assume the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R4;LINKAGE=A1

$\left[\Gamma(K^*(892)^0\pi^+) + \Gamma(\rho^0\pi^+)\right]/\Gamma_{total}$ — $(\Gamma_{81}+\Gamma_{112})/\Gamma$

NODE=S041B8

VALUE	DOCUMENT ID		TECN	COMMENT
$\mathbf{(17\ ^{+12}_{-8} \pm 2) \times 10^{-5}}$	[174] ADAM	96D	DLPH	$e^+e^- \to Z$

[174] ADAM 96D assumes $f_{B^0} = f_{B^-} = 0.39$ and $f_{B_s} = 0.12$. NODE=S041B8;LINKAGE=DQ

$\Gamma(\pi^+ f_0(980))/\Gamma_{total}$ — Γ_{113}/Γ

NODE=S041R34

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.4 × 10^−4	90	[175] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$

[175] BORTOLETTO 89 reports $< 1.2 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R34;LINKAGE=A1

$\Gamma(\pi^+ f_2(1270))/\Gamma_{total}$ — Γ_{114}/Γ

NODE=S041R35

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.4 × 10^−4	90	[176] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$

[176] BORTOLETTO 89 reports $< 2.1 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R35;LINKAGE=A1

$\Gamma(\pi^+\pi^-\pi^+ \text{ nonresonant})/\Gamma_{total}$ — Γ_{115}/Γ

NODE=S041B2

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<4.1 × 10^−5	90	BERGFELD	96B	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(\pi^+\pi^0\pi^0)/\Gamma_{total}$ — Γ_{116}/Γ

NODE=S041R40

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<8.9 × 10^−4	90	[177] ALBRECHT	90B	ARG	$e^+e^- \to \Upsilon(4S)$

[177] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R40;LINKAGE=Q

$\Gamma(\rho^+\pi^0)/\Gamma_{total}$ — Γ_{117}/Γ

NODE=S041R41
NODE=S041R41

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<7.7 × 10^{-5}	90	ASNER	96	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<5.5 \times 10^{-4}$	90	[178] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[178] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R41;LINKAGE=Q

$\Gamma(\pi^+\pi^-\pi^+\pi^0)/\Gamma_{total}$ — Γ_{118}/Γ

NODE=S041R42
NODE=S041R42

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<4.0 × 10^{-3}	90	[179] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[179] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R42;LINKAGE=Q

$\Gamma(\rho^+\rho^0)/\Gamma_{total}$ — Γ_{119}/Γ

NODE=S041R43
NODE=S041R43

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.0 × 10^{-3}	90	[180] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[180] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R43;LINKAGE=Q

$\Gamma(a_1(1260)^+\pi^0)/\Gamma_{total}$ — Γ_{120}/Γ

NODE=S041R44
NODE=S041R44

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.7 × 10^{-3}	90	[181] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[181] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R44;LINKAGE=Q

$\Gamma(a_1(1260)^0\pi^+)/\Gamma_{total}$ — Γ_{121}/Γ

NODE=S041R45
NODE=S041R45

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<9.0 × 10^{-4}	90	[182] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[182] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R45;LINKAGE=Q

$\Gamma(\omega\pi^+)/\Gamma_{total}$ — Γ_{122}/Γ

NODE=S041R46
NODE=S041R46

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.3 × 10^{-5}	90	[183] BERGFELD	98	CLE2	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<4.0 \times 10^{-4}$	90	[184] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[183] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041R46;LINKAGE=EQ
[184] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R46;LINKAGE=Q

$\Gamma(\omega\rho^+)/\Gamma_{total}$ — Γ_{123}/Γ

NODE=S041B27
NODE=S041B27

VALUE	CL%	DOCUMENT ID		TECN
<6.1 × 10^{-5}	90	[185] BERGFELD	98	CLE2

[185] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041B27;LINKAGE=EQ

$\Gamma(\eta\pi^+)/\Gamma_{total}$ — Γ_{124}/Γ

NODE=S041R47
NODE=S041R47

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.5 × 10^{-5}	90	BEHRENS	98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<7.0 \times 10^{-4}$	90	[186] ALBRECHT	90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[186] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$. NODE=S041R47;LINKAGE=Q

$\Gamma(\eta'\pi^+)/\Gamma_{total}$ — Γ_{125}/Γ

NODE=S041B18
NODE=S041B18

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<3.1 × 10^{-5}	90	BEHRENS	98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\eta'\rho^+)/\Gamma_{total}$ — Γ_{126}/Γ

NODE=S041B19
NODE=S041B19

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<4.7 × 10^{-5}	90	BEHRENS	98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\eta\rho^+)/\Gamma_{total}$ — Γ_{127}/Γ

NODE=S041B23
NODE=S041B23

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<3.2 × 10^{-5}	90	BEHRENS	98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\phi\pi^+)/\Gamma_{total}$ — Γ_{128}/Γ

NODE=S041B28
NODE=S041B28

VALUE	CL%	DOCUMENT ID		TECN
<0.5 × 10^{-5}	90	[187] BERGFELD	98	CLE2

[187] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$. NODE=S041B28;LINKAGE=EQ

$\Gamma(\phi\rho^+)/\Gamma_{total}$ Γ_{129}/Γ

NODE=S041B29

VALUE	DOCUMENT ID	TECN
<1.6 × 10^{-5}	[188] BERGFELD 98	CLE2

[188] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$.

NODE=S041B29;LINKAGE=EQ

$\Gamma(\pi^+\pi^+\pi^+\pi^-\pi^-)/\Gamma_{total}$ Γ_{130}/Γ

NODE=S041R48

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<8.6 × 10^{-4}	90	[189] ALBRECHT 90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[189] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$.

NODE=S041R48;LINKAGE=Q

$\Gamma(\rho^0 a_1(1260)^+)/\Gamma_{total}$ Γ_{131}/Γ

NODE=S041R17

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<6.2 × 10^{-4}	90	[190] BORTOLETTO 89	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$<6.0 \times 10^{-4}$	90	[191] ALBRECHT 90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$
$<3.2 \times 10^{-3}$	90	[190] BEBEK 87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[190] BORTOLETTO 89 reports $< 5.4 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%.

NODE=S041R17;LINKAGE=A1

[191] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$.

NODE=S041R17;LINKAGE=Q

$\Gamma(\rho^0 a_2(1320)^+)/\Gamma_{total}$ Γ_{132}/Γ

NODE=S041R18

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<7.2 × 10^{-4}	90	[192] BORTOLETTO 89	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$<2.6 \times 10^{-3}$	90	[193] BEBEK 87	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$

[192] BORTOLETTO 89 reports $< 6.3 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%.

NODE=S041R18;LINKAGE=A1

[193] BEBEK 87reports $< 2.3 \times 10^{-3}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%.

NODE=S041R18;LINKAGE=B

$\Gamma(\pi^+\pi^+\pi^+\pi^-\pi^-\pi^0)/\Gamma_{total}$ Γ_{133}/Γ

NODE=S041R50

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<6.3 × 10^{-3}	90	[194] ALBRECHT 90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[194] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$.

NODE=S041R50;LINKAGE=Q

$\Gamma(a_1(1260)^+ a_1(1260)^0)/\Gamma_{total}$ Γ_{134}/Γ

NODE=S041R51

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<1.3 × 10^{-2}	90	[195] ALBRECHT 90B	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[195] ALBRECHT 90B limit assumes equal production of $B^0\overline{B}^0$ and B^+B^- at $\Upsilon(4S)$.

NODE=S041R51;LINKAGE=Q

$\Gamma(h^+\pi^0)/\Gamma_{total}$ Γ_{135}/Γ

NODE=S041B17

$h^+ = K^+$ or π^+

NODE=S041B17

VALUE	DOCUMENT ID	TECN	COMMENT
$(1.6^{+0.6}_{-0.5}\pm0.36) \times 10^{-5}$	GODANG 98	CLE2	$e^+e^- \rightarrow \Upsilon(4S)$

$\Gamma(\omega h^+)/\Gamma_{total}$ Γ_{136}/Γ

NODE=S041B30

$h^+ = K^+$ or π^+

NODE=S041B30

VALUE	DOCUMENT ID	TECN
$(2.5^{+0.8}_{-0.7}\pm0.3) \times 10^{-5}$	[196] BERGFELD 98	CLE2

[196] Assumes equal production of B^+ and B^0 at the $\Upsilon(4S)$.

NODE=S041B30;LINKAGE=EQ

$\Gamma(p\overline{p}\pi^+)/\Gamma_{total}$ Γ_{137}/Γ

NODE=S041R21

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
< 1.6 × 10^{-4}	90	[197] BEBEK 89	CLEO	$e^+e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$< 5.0 \times 10^{-4}$	90	[198] ABREU 95N	DLPH	Sup. by ADAM 96D
$(5.7\pm1.5\pm2.1) \times 10^{-4}$		[199] ALBRECHT 88F	ARG	$e^+e^- \rightarrow \Upsilon(4S)$

[197] BEBEK 89 reports $< 1.4 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%.

NODE=S041R21;LINKAGE=A1

[198] Assumes a B^0, B^- production fraction of 0.39 and a B_s production fraction of 0.12.

NODE=S041R21;LINKAGE=SR

[199] ALBRECHT 88F reports $(5.2 \pm 1.4 \pm 1.9) \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%.

NODE=S041R21;LINKAGE=B

$\Gamma(p\bar{p}\pi^+ \text{nonresonant})/\Gamma_{total}$ Γ_{138}/Γ

NODE=S041B6
NODE=S041B6

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<5.3 × 10⁻⁵	90	BERGFELD	96B	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(p\bar{p}\pi^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{139}/Γ

NODE=S041R22
NODE=S041R22

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<5.2 \times 10^{-4}$	90	[200] ALBRECHT	88F	ARG	$e^+e^- \to \Upsilon(4S)$

[200] ALBRECHT 88F reports $< 4.7 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R22;LINKAGE=B

$\Gamma(p\bar{p}K^+ \text{nonresonant})/\Gamma_{total}$ Γ_{140}/Γ

NODE=S041B7
NODE=S041B7

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<8.9 \times 10^{-5}$	90	BERGFELD	96B	CLE2	$e^+e^- \to \Upsilon(4S)$

$\Gamma(p\overline{\Lambda})/\Gamma_{total}$ Γ_{141}/Γ

NODE=S041R23
NODE=S041R23

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<6 \times 10^{-5}$	90	[201] AVERY	89B	CLEO	$e^+e^- \to \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<9.3 \times 10^{-5}$	90	[202] ALBRECHT	88F	ARG	$e^+e^- \to \Upsilon(4S)$

[201] AVERY 89B reports $< 5 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R23;LINKAGE=A1

[202] ALBRECHT 88F reports $< 8.5 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R23;LINKAGE=B

$\Gamma(p\overline{\Lambda}\pi^+\pi^-)/\Gamma_{total}$ Γ_{142}/Γ

NODE=S041R24
NODE=S041R24

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<2.0 \times 10^{-4}$	90	[203] ALBRECHT	88F	ARG	$e^+e^- \to \Upsilon(4S)$

[203] ALBRECHT 88F reports $< 1.8 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R24;LINKAGE=B

$\Gamma(\overline{\Delta}^0 p)/\Gamma_{total}$ Γ_{143}/Γ

NODE=S041R37
NODE=S041R37

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<3.8 \times 10^{-4}$	90	[204] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$

[204] BORTOLETTO 89 reports $< 3.3 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R37;LINKAGE=A1

$\Gamma(\Delta^{++}\bar{p})/\Gamma_{total}$ Γ_{144}/Γ

NODE=S041R38
NODE=S041R38

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.5 \times 10^{-4}$	90	[205] BORTOLETTO	89	CLEO	$e^+e^- \to \Upsilon(4S)$

[205] BORTOLETTO 89 reports $< 1.3 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0\overline{B}^0$. We rescale to 50%. NODE=S041R38;LINKAGE=A1

$\Gamma(\Lambda_c^- p\pi^+)/\Gamma_{total}$ Γ_{145}/Γ

NODE=S041B14
NODE=S041B14

VALUE (units 10^{-4})	DOCUMENT ID		TECN	COMMENT
$6.2^{+2.3}_{-2.0} \pm 1.6$	[206] FU	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[206] FU 97 uses PDG 96 values of Λ_c branching fraction. NODE=S041B14;LINKAGE=A

$\Gamma(\Lambda_c^- p\pi^+\pi^0)/\Gamma_{total}$ Γ_{146}/Γ

NODE=S041B11
NODE=S041B11

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<3.12 \times 10^{-3}$	90	[207] FU	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[207] FU 97 uses PDG 96 values of Λ_c branching ratio. NODE=S041B11;LINKAGE=A

$\Gamma(\Lambda_c^- p\pi^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{147}/Γ

NODE=S041B12
NODE=S041B12

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.46 \times 10^{-3}$	90	[208] FU	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[208] FU 97 uses PDG 96 values of Λ_c branching ratio. NODE=S041B12;LINKAGE=A

$\Gamma(\Lambda_c^- p\pi^+\pi^+\pi^-\pi^0)/\Gamma_{total}$ Γ_{148}/Γ

NODE=S041B13
NODE=S041B13

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.34 \times 10^{-2}$	90	[209] FU	97	CLE2	$e^+e^- \to \Upsilon(4S)$

[209] FU 97 uses PDG 96 values of Λ_c branching ratio. NODE=S041B13;LINKAGE=A

NODE=S041R52

$\Gamma(\pi^+ e^+ e^-)/\Gamma_{total}$ Γ_{149}/Γ

NODE=S041R52

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R52

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0039	90	[210] WEIR	90B	MRK2	$e^+ e^-$ 29 GeV

[210] WEIR 90B assumes B^+ production cross section from LUND. NODE=S041R52;LINKAGE=A

$\Gamma(\pi^+ \mu^+ \mu^-)/\Gamma_{total}$ Γ_{150}/Γ

NODE=S041R55

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R55

NODE=S041R55

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0091	90	[211] WEIR	90B	MRK2	$e^+ e^-$ 29 GeV

[211] WEIR 90B assumes B^+ production cross section from LUND. NODE=S041R55;LINKAGE=A

$\Gamma(K^+ e^+ e^-)/\Gamma_{total}$ Γ_{151}/Γ

NODE=S041R11

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R11

NODE=S041R11

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<6 $\times 10^{-5}$	90	[212] AVERY	89B	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<9.9 \times 10^{-5}$	90	[213] ALBRECHT	91E	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$
$<6.8 \times 10^{-3}$	90	[214] WEIR	90B	MRK2	$e^+ e^-$ 29 GeV
$<2.5 \times 10^{-4}$	90	[215] AVERY	87	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$

[212] AVERY 89B reports $< 5 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R11;LINKAGE=A1

[213] ALBRECHT 91E reports $< 9.0 \times 10^{-5}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R11;LINKAGE=B2

[214] WEIR 90B assumes B^+ production cross section from LUND. NODE=S041R11;LINKAGE=A

[215] AVERY 87 reports $< 2.1 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 40% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R11;LINKAGE=B1

$\Gamma(K^+ \mu^+ \mu^-)/\Gamma_{total}$ Γ_{152}/Γ

NODE=S041R10

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R10

NODE=S041R10

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.0 $\times 10^{-5}$	90	[216] ABE	96L	CDF	$p\overline{p}$ at 1.8 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<2.4 \times 10^{-4}$	90	[217] ALBRECHT	91E	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$
$<6.4 \times 10^{-3}$	90	[218] WEIR	90B	MRK2	$e^+ e^-$ 29 GeV
$<1.7 \times 10^{-4}$	90	[219] AVERY	89B	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$
$<3.8 \times 10^{-4}$	90	[220] AVERY	87	CLEO	$e^+ e^- \rightarrow \Upsilon(4S)$

[216] ABE 96L measured relative to $B^0 \rightarrow J/\psi(1S) K^+$ using PDG 94 branching ratios. NODE=S041R10;LINKAGE=PB

[217] ALBRECHT 91E reports $< 2.2 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R10;LINKAGE=B2

[218] WEIR 90B assumes B^+ production cross section from LUND. NODE=S041R10;LINKAGE=A

[219] AVERY 89B reports $< 1.5 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 43% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R10;LINKAGE=A1

[220] AVERY 87 reports $< 3.2 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 40% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R10;LINKAGE=B1

$\Gamma(K^*(892)^+ e^+ e^-)/\Gamma_{total}$ Γ_{153}/Γ

NODE=S041R81

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R81

NODE=S041R81

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<6.9 $\times 10^{-4}$	90	[221] ALBRECHT	91E	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$

[221] ALBRECHT 91E reports $< 6.3 \times 10^{-4}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R81;LINKAGE=B2

$\Gamma(K^*(892)^+ \mu^+ \mu^-)/\Gamma_{total}$ Γ_{154}/Γ

NODE=S041R82

Test for $\Delta B = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S041R82

NODE=S041R82

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<1.2 $\times 10^{-3}$	90	[222] ALBRECHT	91E	ARG	$e^+ e^- \rightarrow \Upsilon(4S)$

[222] ALBRECHT 91E reports $< 1.1 \times 10^{-3}$ assuming the $\Upsilon(4S)$ decays 45% to $B^0 \overline{B}^0$. We rescale to 50%. NODE=S041R82;LINKAGE=B2

$\Gamma(\pi^+ e^+ \mu^-)/\Gamma_{total}$ Γ_{155}/Γ

NODE=S041R53

Test of lepton family number conservation.

NODE=S041R53
NODE=S041R53

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[223] WEIR 90B	MRK2	e^+e^- 29 GeV

[223] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R53;LINKAGE=A

$\Gamma(\pi^+ e^- \mu^+)/\Gamma_{total}$ Γ_{156}/Γ

NODE=S041R54

Test of lepton family number conservation.

NODE=S041R54
NODE=S041R54

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[224] WEIR 90B	MRK2	e^+e^- 29 GeV

[224] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R54;LINKAGE=A

$\Gamma(K^+ e^+ \mu^-)/\Gamma_{total}$ Γ_{157}/Γ

NODE=S041R56

Test of lepton family number conservation.

NODE=S041R56
NODE=S041R56

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[225] WEIR 90B	MRK2	e^+e^- 29 GeV

[225] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R56;LINKAGE=A

$\Gamma(K^+ e^- \mu^+)/\Gamma_{total}$ Γ_{158}/Γ

NODE=S041R57

Test of lepton family number conservation.

NODE=S041R57
NODE=S041R57

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[226] WEIR 90B	MRK2	e^+e^- 29 GeV

[226] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R57;LINKAGE=A

$\Gamma(\pi^- e^+ e^+)/\Gamma_{total}$ Γ_{159}/Γ

NODE=S041R58

Test of total lepton number conservation.

NODE=S041R58
NODE=S041R58

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0039	90	[227] WEIR 90B	MRK2	e^+e^- 29 GeV

[227] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R58;LINKAGE=A

$\Gamma(\pi^- \mu^+ \mu^+)/\Gamma_{total}$ Γ_{160}/Γ

NODE=S041R60

Test of total lepton number conservation.

NODE=S041R60
NODE=S041R60

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0091	90	[228] WEIR 90B	MRK2	e^+e^- 29 GeV

[228] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R60;LINKAGE=A

$\Gamma(\pi^- e^+ \mu^+)/\Gamma_{total}$ Γ_{161}/Γ

NODE=S041R59

Test of total lepton number conservation.

NODE=S041R59
NODE=S041R59

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[229] WEIR 90B	MRK2	e^+e^- 29 GeV

[229] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R59;LINKAGE=A

$\Gamma(K^- e^+ e^+)/\Gamma_{total}$ Γ_{162}/Γ

NODE=S041R61

Test of total lepton number conservation.

NODE=S041R61
NODE=S041R61

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0039	90	[230] WEIR 90B	MRK2	e^+e^- 29 GeV

[230] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R61;LINKAGE=A

$\Gamma(K^- \mu^+ \mu^+)/\Gamma_{total}$ Γ_{163}/Γ

NODE=S041R63

Test of total lepton number conservation.

NODE=S041R63
NODE=S041R63

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0091	90	[231] WEIR 90B	MRK2	e^+e^- 29 GeV

[231] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R63;LINKAGE=A

$\Gamma(K^- e^+ \mu^+)/\Gamma_{total}$ Γ_{164}/Γ

NODE=S041R62

Test of total lepton number conservation.

NODE=S041R62
NODE=S041R62

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0064	90	[232] WEIR 90B	MRK2	e^+e^- 29 GeV

[232] WEIR 90B assumes B^+ production cross section from LUND.

NODE=S041R62;LINKAGE=A

$B^{\pm}$ REFERENCES

ABBIENDI	99J	hep-ex/9901017	G. Abbiendi+	(OPAL Collab.)	REFID=46738
CERN-EP/98-195, EPJ C (to be publ.)					
ABE	98B	PR D57 5382	F. Abe+	(CDF Collab.)	REFID=45880
ABE	98O	PR D58 072001	F. Abe+	(CDF Collab.)	REFID=46156
ABE	98Q	PR D58 092002	F. Abe+	(CDF Collab.)	REFID=46475
ACCIARRI	98S	PL B438 417	M. Acciarri+	(L3 Collab.)	REFID=46503
ANASTASSOV	98	PRL 80 4127	A. Anastassov+	(CLEO Collab.)	REFID=46015
ATHANAS	98	PRL 80 5493	M. Athanas+	(CLEO Collab.)	REFID=46113
BARATE	98Q	EPJ C4 387	R. Barate+	(ALEPH Collab.)	REFID=46146
BEHRENS	98	PRL 80 3710	B.H. Behrens+	(CLEO Collab.)	REFID=45936
BERGFELD	98	PRL 81 272	T. Bergfeld+	(CLEO Collab.)	REFID=46091
BRANDENB...	98	PRL 80 2762	G. Brandenbrug+	(CLEO Collab.)	REFID=45874
GODANG	98	PRL 80 3456	R. Godang+	(CLEO Collab.)	REFID=45935
ABE	97J	PRL 79 590	+Abe, Akagi, Allen+	(SLD Collab.)	REFID=45413
ACCIARRI	97F	PL B396 327	M. Acciarri+	(L3 Collab.)	REFID=45317
ARTUSO	97	PL B399 321	M. Artuso+	(CLEO Collab.)	REFID=45327
ATHANAS	97	PRL 79 2208	M. Athanas+	(CLEO Collab.)	REFID=45598
BROWDER	97	PR D56 11	T. Browder+	(CLEO Collab.)	REFID=45431
FU	97	PRL 79 3125	X. Fu+	(CLEO Collab.)	REFID=45625
JESSOP	97	PRL 79 4533	C.P. Jessop+	(CLEO Collab.)	REFID=45744
ABE	96B	PR D53 3496	+Albrow, Amendolia, Amidei+	(CDF Collab.)	REFID=44688
ABE	96C	PRL 76 4462	+Akimoto, Akopian, Albrow+	(CDF Collab.)	REFID=44700
ABE	96H	PRL 76 2015	+Albrow, Amendolia, Amidei+	(CDF Collab.)	REFID=44798
ABE	96L	PRL 76 4675	+Akimoto, Akopian, Albrow+	(CDF Collab.)	REFID=44807
ABE	96Q	PR D54 6596	+Akimoto, Akopian, Albrow+	(CDF Collab.)	REFID=44974
ABE	96R	PRL 77 5176	+Akimoto, Akopian, Albrow+	(CDF Collab.)	REFID=45159
ADAM	96D	ZPHY C72 207	W. Adam+	(DELPHI Collab.)	REFID=45276
ASNER	96	PR D53 1039	+Athanas, Bliss, Brower+	(CLEO Collab.)	REFID=44734
BARISH	96B	PRL 76 1570	+Chadha, Chan, Eigen+	(CLEO Collab.)	REFID=44693
BERGFELD	96B	PRL 77 4503	+Eisenstein, Ernst, Gladding+	(CLEO Collab.)	REFID=44956
BISHAI	96	PL B369 186	+Fast, Gerndt, Hinson+	(CLEO Collab.)	REFID=44832
BUSKULIC	96J	ZPHY C71 31	+De Bonis, Decamp, Ghez+	(ALEPH Collab.)	REFID=44824
GIBAUT	96	PR D53 4734	+Kinoshita, Pomianowski, Barish+	(CLEO Collab.)	REFID=44784
PDG	96	PR D54 1			REFID=44495
ABREU	95N	PL B357 255	+Adam, Adye, Agasi+	(DELPHI Collab.)	REFID=44417
ABREU	95Q	ZPHY C68 13	+Adam, Adye, Agasi+	(DELPHI Collab.)	REFID=44460
ADAM	95	ZPHY C68 363	+Adye, Agasi, Ajinenko+	(DELPHI Collab.)	REFID=44465
AKERS	95T	ZPHY C67 379	+Alexander, Allison, Ametewee+	(OPAL Collab.)	REFID=44379
ALBRECHT	95D	PL B353 554	+Hamacher, Hofmann, Kirchoff+	(ARGUS Collab.)	REFID=44352
ALEXANDER	95	PL B341 435	+Bebek, Berkelman, Bloom+	(CLEO Collab.)	REFID=44113
Also	95C	PL B347 469 (erratum)	Alexander, Bebek, Berkelman, Bloom+	(CLEO Collab.)	REFID=44211
ARTUSO	95	PRL 75 785	+Gao, Goldberg, He+	(CLEO Collab.)	REFID=44347
BARISH	95	PR D51 1014	+Chadha, Chan, Cowen+	(CLEO Collab.)	REFID=44139
BUSKULIC	95	PL B343 444	+Casper, De Bonis, Decamp, Ghez, Goy+	(ALEPH Collab.)	REFID=44119
ABE	94D	PRL 72 3456	+Albrow, Amidei, Anway-Wiese, Apollinari	(CDF Collab.)	REFID=43761
ALAM	94	PR D50 43	+Kim, Nemati, O'Neill, Severini+	(CLEO Collab.)	REFID=43738
ALBRECHT	94D	PL B335 526	+Hamacher, Hofmann, Kirchhoff, Mankel+	(ARGUS Collab.)	REFID=43962
ATHANAS	94	PRL 73 3503	+Brower, Masek, Paar, Gronberg+	(CLEO Collab.)	REFID=44064
Also	95	PRL 74 3090 (erratum)	Athanas, Brower, Masek, Paar+	(CLEO Collab.)	REFID=44196
PDG	94	PR D50 1173	Montanet+	(CERN, LBL, BOST, IFIC+)	REFID=43653
STONE	94	HEPSY 93-11			REFID=43737
ABREU	93D	ZPHY C57 181	+Adam, Adye, Agasi, Alekseev+	(DELPHI Collab.)	REFID=43267
ABREU	93G	PL B312 253	+Adam, Adye, Agasi, Ajinenko+	(DELPHI Collab.)	REFID=43443
ACTON	93C	PL B307 247	+Alexander, Allison, Allport, Anderson+	(OPAL Collab.)	REFID=43352
ALBRECHT	93E	ZPHY C60 11	+Ehrlichmann, Hamacher, Hofmann+	(ARGUS Collab.)	REFID=43514
ALEXANDER	93B	PL B319 365	+Bebek, Berkelman, Bloom, Browder+	(CLEO Collab.)	REFID=43725
AMMAR	93	PRL 71 674	+Ball, Baringer, Coppage, Copty+	(CLEO Collab.)	REFID=43452
BEAN	93B	PRL 70 2681	+Gronberg, Kutschke, Menary, Morrison+	(CLEO Collab.)	REFID=43356
BUSKULIC	93D	PL B307 194	+Decamp, Goy, Lees, Minard+	(ALEPH Collab.)	REFID=43349
Also	94H	PL B325 537 (errata)			REFID=43945
SANGHERA	93	PR D47 791	+Skwarnicki, Stroynowski, Artuso, Goldberg+	(CLEO Collab.)	REFID=43098
ALBRECHT	92C	PL B275 195	+Ehrlichmann, Hamacher, Krueger, Nau+	(ARGUS Collab.)	REFID=41928
ALBRECHT	92E	PL B277 209	+Ehrlichmann, Hamacher, Krueger, Nau+	(ARGUS Collab.)	REFID=41985
ALBRECHT	92G	ZPHY C54 1	+Ehrlichmann, Hamacher, Krueger, Nau+	(ARGUS Collab.)	REFID=42037
BORTOLETTO	92	PR D45 21	+Brown, Dominick, McIlwain+	(CLEO Collab.)	REFID=41920
BUSKULIC	92G	PL B295 396	+Decamp, Goy, Lees, Minard+	(ALEPH Collab.)	REFID=43142
ALBRECHT	91B	PL B254 288	+Glaeser, Harder, Krueger, Nippe+	(ARGUS Collab.)	REFID=41451
ALBRECHT	91C	PL B255 297	+Ehrlichmann, Glaeser, Harder, Krueger+	(ARGUS Collab.)	REFID=41454
ALBRECHT	91E	PL B262 148	+Glaeser, Harder, Krueger, Nippe+	(ARGUS Collab.)	REFID=41549
BERKELMAN	91	ARNPS 41 1	+Stone	(CORN, SYRA)	REFID=41929
"Decays of *B* Mesons"					
FULTON	91	PR D43 651	+Jensen, Johnson, Kagan, Kass+	(CLEO Collab.)	REFID=41391
ALBRECHT	90B	PL B241 278	+Glaeser, Harder, Krueger, Nilsson+	(ARGUS Collab.)	REFID=41216
ALBRECHT	90J	ZPHY C48 543	+Ehrlichmann, Harder, Krueger+	(ARGUS Collab.)	REFID=41437
ANTREASYAN	90B	ZPHY C48 553	+Bartels, Bieler, Bienlein, Bizzeti+	(Crystal Ball Collab.)	REFID=41438
BORTOLETTO	90	PRL 64 2117	+Goldberg, Horwitz, Jain, Mestayer+	(CLEO Collab.)	REFID=41178
Also	92	PR D45 21	Bortoletto, Brown, Dominick, McIlwain+	(CLEO Collab.)	REFID=41920
WEIR	90B	PR D41 1384	+Klein, Abrams, Adolphsen, Akerlof+	(Mark II Collab.)	REFID=41242
ALBRECHT	89G	PL B229 304	+Glaeser, Harder, Krueger+	(ARGUS Collab.)	REFID=40942
AVERY	89B	PL B223 470	+Besson, Garren, Yelton+	(CLEO Collab.)	REFID=40820
BEBEK	89	PRL 62 8	+Berkelman, Blucher+	(CLEO Collab.)	REFID=40626
BORTOLETTO	89	PRL 62 2436	+Goldberg, Horwitz, Mestayer+	(CLEO Collab.)	REFID=40787
ALBRECHT	88F	PL B209 119	+Boeckmann, Glaeser+	(ARGUS Collab.)	REFID=40649
ALBRECHT	88K	PL B215 424	+Boeckmann, Glaeser+	(ARGUS Collab.)	REFID=40662
ALBRECHT	87C	PL B185 218	+Binder, Boeckmann, Glaser+	(ARGUS Collab.)	REFID=40323
ALBRECHT	87D	PL B199 451	+Andam, Binder, Boeckmann+	(ARGUS Collab.)	REFID=40325
AVERY	87	PL B183 429	+Besson, Bowcock, Giles+	(CLEO Collab.)	REFID=40387
BEBEK	87	PR D36 1289	+Berkelman, Blucher, Cassel+	(CLEO Collab.)	REFID=40270
ALAM	86	PR D34 3279	+Katayama, Kim, Sun+	(CLEO Collab.)	REFID=40324
PDG	86	PL 170B	Aguilar-Benitez, Porter+	(CERN, CIT+)	REFID=40122
GILES	84	PR D30 2279	+Hassard, Hempstead, Kinoshita+	(CLEO Collab.)	REFID=11570