NODE=S032

D^0

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

D^0 MASS

NODE=S032205

The fit includes $D^\pm$, D^0, $D_s^\pm$, $D^{*\pm}$, D^{*0}, and $D_s^{*\pm}$ mass and mass difference measurements.

NODE=S032205

NODE=S032M

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
1864.84 ± 0.17 OUR FIT Error includes scale factor of 1.1.					
1864.84 ± 0.18 OUR AVERAGE					
1864.847 ± 0.150 ± 0.095	319 ± 18	CAWLFIELD	07	CLEO	$D^0 \rightarrow K_S^0 \phi$
1864.6 ± 0.3 ± 1.0	641	BARLAG	90C	ACCM	π^- Cu 230 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1852 ± 7	16	ADAMOVICH	87	EMUL	Photoproduction
1856 ± 36	22	ADAMOVICH	84B	EMUL	Photoproduction
1861 ± 4		DERRICK	84	HRS	e^+e^- 29 GeV
1847 ± 7	1	FIORINO	81	EMUL	$\gamma N \rightarrow \overline{D}^0 +$
1863.8 ± 0.5		[1] SCHINDLER	81	MRK2	e^+e^- 3.77 GeV
1864.7 ± 0.6		[1] TRILLING	81	RVUE	e^+e^- 3.77 GeV
1863.0 ± 2.5	238	ASTON	80E	OMEG	$\gamma p \rightarrow \overline{D}^0$
1860 ± 2	143	[2] AVERY	80	SPEC	$\gamma N \rightarrow D^{*+}$
1869 ± 4	35	[2] AVERY	80	SPEC	$\gamma N \rightarrow D^{*+}$
1854 ± 6	94	[2] ATIYA	79	SPEC	$\gamma N \rightarrow D^0 \overline{D}^0$
1850 ± 15	64	BALTAY	78C	HBC	$\nu N \rightarrow K^0 \pi \pi$
1863 ± 3		GOLDHABER	77	MRK1	D^0, D^+ recoil spectra
1863.3 ± 0.9		[1] PERUZZI	77	LGW	e^+e^- 3.77 GeV
1868 ± 11		PICCOLO	77	MRK1	e^+e^- 4.03, 4.41 GeV
1865 ± 15	234	GOLDHABER	76	MRK1	$K\pi$ and $K3\pi$

OCCUR=2

[1] PERUZZI 77 and SCHINDLER 81 errors do not include the 0.13% uncertainty in the absolute SPEAR energy calibration. TRILLING 81 uses the high precision $J/\psi(1S)$ and $\psi(2S)$ measurements of ZHOLENTZ 80 to determine this uncertainty and combines the PERUZZI 77 and SCHINDLER 81 results to obtain the value quoted. TRILLING 81 enters the fit in the $D^\pm$ mass, and PERUZZI 77 and SCHINDLER 81 enter in the $m_{D^\pm} - m_{D^0}$, below.

NODE=S032M;LINKAGE=P

[2] Error does not include possible systematic mass scale shift, estimated to be less than 5 MeV.

NODE=S032M;LINKAGE=A

$m_{D^\pm} - m_{D^0}$

NODE=S032215

The fit includes $D^\pm$, D^0, $D_s^\pm$, $D^{*\pm}$, D^{*0}, and $D_s^{*\pm}$ mass and mass difference measurements.

NODE=S032215

NODE=S032DM

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
4.78±0.10 OUR FIT Error includes scale factor of 1.1.				
4.74±0.28 OUR AVERAGE				
4.7 ±0.3	[3] SCHINDLER	81	MRK2	e^+e^- 3.77 GeV
5.0 ±0.8	[3] PERUZZI	77	LGW	e^+e^- 3.77 GeV

[3] See the footnote on TRILLING 81 in the D^0 and $D^\pm$ sections on the mass.

NODE=S032DM;LINKAGE=A

D^0 MEAN LIFE

NODE=S032220

Measurements with an error $> 10 \times 10^{-15}$ s have been omitted from the average.

NODE=S032220

NODE=S032T

VALUE (10^{-15} s)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
410.1± 1.5 OUR AVERAGE					
409.6 ± 1.1 ± 1.5	210k	LINK	02F	FOCS	γ nucleus, $\approx$ 180 GeV
407.9 ± 6.0 ± 4.3	10k	KUSHNIR...	01	SELX	$K^-\pi^+$, $K^-\pi^+\pi^+\pi^-$
413 ± 3 ± 4	35k	AITALA	99E	E791	$K^-\pi^+$
408.5 ± 4.1 $^{+3.5}_{-3.4}$	25k	BONVICINI	99	CLE2	$e^+e^- \approx \Upsilon(4S)$
413 ± 4 ± 3	16k	FRABETTI	94D	E687	$K^-\pi^+$, $K^-\pi^+\pi^+\pi^-$

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

424	$\pm 11 \pm 7$	5118	FRABETTI	91	E687	$K^-\pi^+$, $K^-\pi^+\pi^+\pi^-$
417	$\pm 18 \pm 15$	890	ALVAREZ	90	NA14	$K^-\pi^+$, $K^-\pi^+\pi^+\pi^-$
388	$^{+23}_{-21}$	641	[4] BARLAG	90C	ACCM	π^- Cu 230 GeV
480	$\pm 40 \pm 30$	776	ALBRECHT	88I	ARG	e^+e^- 10 GeV
422	$\pm 8 \pm 10$	4212	RAAB	88	E691	Photoproduction
420	± 50	90	BARLAG	87B	ACCM	K^- and π^- 200 GeV

[4] BARLAG 90C estimate systematic error to be negligible. NODE=S032T;LINKAGE=BL

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NODE=S032209

$$\left| m_{D_1^0} - m_{D_2^0} \right| = x\,\Gamma$$

NODE=S032210

The D_1^0 and D_2^0 are the mass eigenstates of the D^0 meson, as described in the note on "D^0-$\overline{D}^0$ Mixing," above. The experiments usually present $x \equiv \Delta m/\Gamma$. Then $\Delta m = x\,\Gamma = x\,\hbar/\tau$.

NODE=S032210

NODE=S032D

VALUE (10^{10} $\hbar$ s^{-1})	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
$2.37^{+0.66}_{-0.71}$ OUR EVALUATION		HFAG fit; see the note on "D^0-$\overline{D}^0$ Mixing."			
$1.98 \pm 0.73^{+0.32}_{-0.41}$		[5] ZHANG	07B	BELL	$\Delta m < 3.9$, 95% CL

→ NOT CHECKED ←

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

$<$ 7	95	[6] ZHANG	06	BELL	e^+e^-
-11 to $+22$		[5] ASNER	05	CLEO	$e^+e^- \approx$ 10 GeV
$<$ 11	90	BITENC	05	BELL	
$<$ 30	90	CAWLFIELD	05	CLEO	
$<$ 7	95	[6] LI	05A	BELL	See ZHANG 06
$<$ 22	95	[7] LINK	05H	FOCS	γ nucleus
$<$ 23	95	AUBERT	04Q	BABR	
$<$ 11	95	[6] AUBERT	03Z	BABR	e^+e^-, 10.6 GeV
$<$ 7	95	[8] GODANG	00	CLE2	e^+e^-
$<$ 32	90	[9,10] AITALA	98	E791	π^- nucleus, 500 GeV
$<$ 24	90	[11] AITALA	96C	E791	π^- nucleus, 500 GeV
$<$ 21	90	[10,12] ANJOS	88C	E691	Photoproduction

[5] The ASNER 05 and ZHANG 07B values are from the time-dependent Dalitz-plot analysis of $D^0 \to K_S^0\pi^+\pi^-$. Decay-time information and interference on the Dalitz plot are used to distinguish doubly Cabibbo-suppressed decays from mixing and to measure the relative phase between $D^0 \to K^{*+}\pi^-$ and $\overline{D}^0 \to K^{*+}\pi^-$. This value allows *CP* violation and is sensitive to the sign of Δm. NODE=S032D;LINKAGE=AS

[6] The AUBERT 03Z, LI 05A, and ZHANG 06 limits are inferred from the D^0-$\overline{D}^0$ mixing ratio $\Gamma(K^+\pi^-$ (via $\overline{D}^0))/\Gamma(K^-\pi^+)$ given near the end of this D^0 Listings. Decay-time information is used to distinguish DCS decays from D^0-$\overline{D}^0$ mixing. The limit allows interference between the DCS and mixing ratios, and also allows *CP* violation. AUBERT 03Z assumes the strong phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ amplitudes is small; if an arbitrary phase is allowed, the limit degrades by 20%. The LI 05A and ZHANG 06 limits are valid for an arbitrary strong phase. NODE=S032D;LINKAGE=AU

[7] This LINK 05H limit is inferred from the D^0-$\overline{D}^0$ mixing ratio $\Gamma(K^+\pi^-$ (via $\overline{D}^0))/\Gamma(K^-\pi^+)$ given near the end of this D^0 Listings. Decay-time information is used to distinguish DCS decays from D^0-$\overline{D}^0$ mixing. The limit allows interference between the DCS and mixing ratios, and also allows *CP* violation. The strong phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ is assumed to be small. If an arbitrary relative strong phase is allowed, the limit degrades by 25%. NODE=S032D;LINKAGE=LI

[8] This GODANG 00 limit is inferred from the D^0-$\overline{D}^0$ mixing ratio $\Gamma(K^+\pi^-$ (via $\overline{D}^0))/\Gamma(K^-\pi^+)$ given near the end of this D^0 Listings. Decay-time information is used to distinguish DCS decays from D^0-$\overline{D}^0$ mixing. The limit allows interference between the DCS and mixing ratios, and also allows *CP* violation. The strong phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ is assumed to be small. If an arbitrary relative strong phase is allowed, the limit degrades by a factor of two. NODE=S032D;LINKAGE=GD

[9] AITALA 98 allows interference between the doubly Cabibbo-suppressed and mixing amplitudes, and also allows *CP* violation in this term, but assumes that A_D=A_R=0. See the note on "D^0-$\overline{D}^0$ Mixing," above. NODE=S032D;LINKAGE=AT

[10] This limit is inferred from R_M for $f = K^+\pi^-$ and $f = K^+\pi^-\pi^+\pi^-$. See the note on "D^0-$\overline{D}^0$ Mixing," above. Decay-time information is used to distinguish doubly Cabibbo-suppressed decays from D^0-$\overline{D}^0$ mixing. NODE=S032D;LINKAGE=C

[11] This limit is inferred from R_M for $f = K^+ \ell^- \overline{\nu}_\ell$. See the note on "$D^0$-$\overline{D}^0$ Mixing," above.

NODE=S032D;LINKAGE=FG

[12] ANJOS 88C assumes that $y = 0$. See the note on "D^0-$\overline{D}^0$ Mixing," above. Without this assumption, the limit degrades by about a factor of two.

NODE=S032D;LINKAGE=DC

$(\Gamma_{D_1^0} - \Gamma_{D_2^0})/\Gamma = 2y$

NODE=S032225

The D_1^0 and D_2^0 are the mass eigenstates of the D^0 meson, as described in the note on "D^0-$\overline{D}^0$ Mixing," above.

NODE=S032225

Due to the strong phase difference between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$, we exclude from the average those measurements of y' that are inferred from the D^0-$\overline{D}^0$ mixing ratio $\Gamma(K^+\pi^-$ via $\overline{D}^0)$ / $\Gamma(K^+\pi^-)$ given near the end of this D^0 Listings.

Some early results have been omitted. See our 2006 *Review* (Journal of Physics, G **33** 1 (2006)).

NODE=S032DT

VALUE (units 10^{-2})	*EVTS*	*DOCUMENT ID*	*TECN*	*COMMENT*
$\mathbf{1.56^{+0.36}_{-0.38}}$ **OUR EVALUATION**				HFAG fit; see the note on "D^0-$\overline{D}^0$ Mixing."
1.5 ± 0.5 OUR AVERAGE				Error includes scale factor of 1.4. See the ideogram below.
$2.06 \pm 0.66 \pm 0.38$		[13] AUBERT 08U	BABR	$e^+e^- \approx \Upsilon(4S)$
$2.62 \pm 0.64 \pm 0.50$	160k	[14] STARIC 07	BELL	$e^+e^- \approx \Upsilon(4S)$
$0.74 \pm 0.50^{+0.20}_{-0.31}$	534k	[15] ZHANG 07B	BELL	$e^+e^- \approx \Upsilon(4S)$
$-1.0 \pm 2.0^{+1.4}_{-1.6}$	18k	[16] ABE 02I	BELL	$e^+e^- \approx \Upsilon(4S)$
$-2.4 \pm 5.0 \pm 2.8$	3393	[17] CSORNA 02	CLE2	$e^+e^- \approx \Upsilon(4S)$
$6.84 \pm 2.78 \pm 1.48$	10k	[16] LINK 00	FOCS	γ nucleus
$+1.6 \pm 5.8 \pm 2.1$		[16] AITALA 99E	E791	$K^-\pi^+$, K^+K^-
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.70 ± 1.52	12.7 ± 0.3k	[18] AALTONEN 08E	CDF	$p\overline{p}$, $\sqrt{s} = 1.96$ TeV
$1.94 \pm 0.88 \pm 0.62$	4030 ± 90	[18] AUBERT 07W	BABR	$e^+e^- \approx 10.6$ GeV
-0.7 ± 4.9	$4\text{k} \pm 88$	[18,19] ZHANG 06	BELL	e^+e^-
$-3.0^{+5.0}_{-4.8}{}^{+1.6}_{-0.8}$		[15] ASNER 05	CLEO	$e^+e^- \approx 10$ GeV
-0.3 ± 5.7		[18,19] LI 05A	BELL	See ZHANG 06
$-5.2^{+18.4}_{-16.8}$		[18,19] LINK 05H	FOCS	γ nucleus
$1.6 \pm 0.8^{+1.0}_{-0.8}$	450k	[20] AUBERT 03P	BABR	See AUBERT 08U
$1.6^{+6.2}_{-12.8}$		[18,19] AUBERT 03Z	BABR	e^+e^-, 10.6 GeV
$-5.0^{+2.8}_{-3.2} \pm 0.6$		[18] GODANG 00	CLE2	e^+e^-

→ NOT CHECKED ←

[13] This value combines the results of AUBERT 08U and AUBERT 03P.

NODE=S032DT;LINKAGE=BE

[14] STARIC 07 compares the lifetimes of D^0 decay to the CP eigenstates K^+K^- and $\pi^+\pi^-$ with D^0 decay to $K^-\pi^+$.

NODE=S032DT;LINKAGE=ST

[15] The ASNER 05 and ZHANG 07B values are from the time-dependent Dalitz-plot analysis of $D^0 \to K_S^0\pi^+\pi^-$. Decay-time information and interference on the Dalitz plot are used to distinguish doubly Cabibbo-suppressed decays from mixing and to measure the relative phase between $D^0 \to K^{*+}\pi^-$ and $\overline{D}^0 \to K^{*+}\pi^-$. This limit allows CP violation.

NODE=S032DT;LINKAGE=AS

[16] LINK 00, AITALA 99E, and ABE 02I measure the lifetime difference between $D^0 \to K^-K^+$ (CP even) decays and $D^0 \to K^-\pi^+$ (CP mixed) decays, or y_{CP}= $[\Gamma(CP+)-\Gamma(CP-)]/[\Gamma(CP+)+\Gamma(CP-)]$. We list $2y_{CP}$=$\Delta\Gamma/\Gamma$.

NODE=S032DT;LINKAGE=LK

[17] CSORNA 02 measures the lifetime difference between $D^0 \to K^-K^+$ and $\pi^-\pi^+$ (CP even) decays and $D^0 \to K^-\pi^+$ (CP mixed) decays, or y_{CP}= $[\Gamma(CP+)-\Gamma(CP-)]/[\Gamma(CP+)+\Gamma(CP-)]$. We list $2y_{CP}$=$\Delta\Gamma/\Gamma$.

NODE=S032DT;LINKAGE=CK

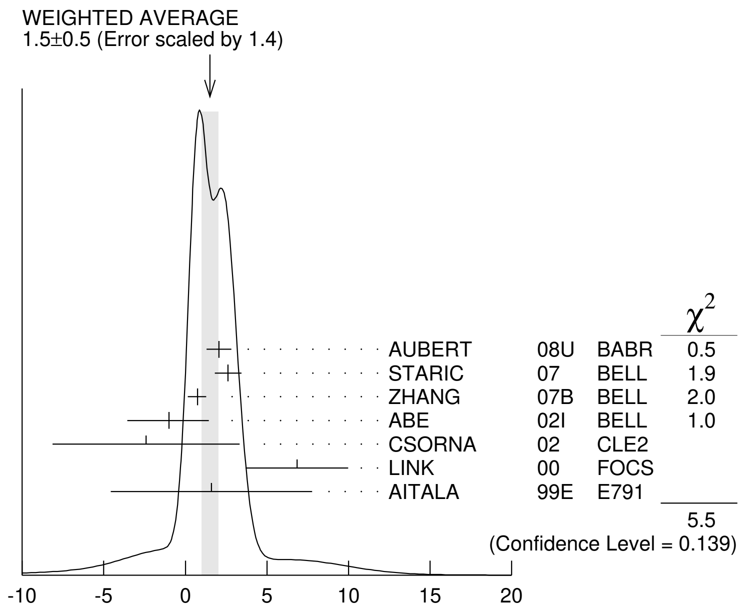
[18] The GODANG 00, AUBERT 03Z, LINK 05H, LI 05A, ZHANG 06, AUBERT 07W, and AALTONEN 08E limits are inferred from the D^0-$\overline{D}^0$ mixing ratio $\Gamma(K^+\pi^-$ (via $\overline{D}^0))/\Gamma(K^-\pi^+)$ given near the end of this D^0 Listings. Decay-time information is used to distinguish DCS decays from D^0-$\overline{D}^0$ mixing. The limits allow interference between the DCS and mixing ratios, and all except AUBERT 07W and AALTONEN 08E also allow CP violation. The phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ is assumed to be small. This is a measurement of y' and is not the same as the y_{CP} of our note above on "D^0-$\overline{D}^0$ Mixing."

NODE=S032DT;LINKAGE=GD

[19] The ranges of AUBERT 03Z, LINK 05H, LI 05A, and ZHANG 06 measurements are for 95% confidence level.

NODE=S032DT;LINKAGE=AB

[20] AUBERT 03P measures $Y \equiv 2\,\tau^0 / (\tau^+ + \tau^-) - 1$, where τ^0 is the $D^0 \rightarrow K^-\pi^+$ (and $\overline{D}^0 \rightarrow K^+\pi^-$) lifetime, and τ^+ and τ^- are the D^0 and $\overline{D}^0$ lifetimes to *CP*-even states (here K^-K^+ and $\pi^-\pi^+$). In the limit of *CP* conservation, $Y = y \equiv \Delta\Gamma / 2\,\Gamma$ (we list $2y = \Delta\Gamma/\Gamma$). AUBERT 03P also uses $\tau^+ - \tau^-$ to get $\Delta Y = -0.008 \pm 0.006 \pm 0.002$. NODE=S032DT;LINKAGE=AU



$(\Gamma_1 - \Gamma_2)/\Gamma = 2y$

|q/p|

NODE=S032QP

The mass eigenstates D^0_1 and D^0_2 are related to the $C = \pm1$ states by $|D_{1,2}> = p\,|D^0> + q\,|\overline{D}^0>$. See the note on "$D^0$–$\overline{D}^0$ Mixing" above. NODE=S032QP

NODE=S032QP

VALUE	DOCUMENT ID		TECN	COMMENT
$\mathbf{0.86^{+0.30}_{-0.29}{}^{+0.10}_{-0.08}}$	[21] ZHANG	07B	BELL	$e^+e^- \approx \Upsilon(4S)$

[21] The phase of p/q is $(-14^{+16}_{-18} \pm 5)^\circ$. The ZHANG 07B value is from the time-dependent Dalitz-plot analysis of $D^0 \rightarrow K^0_S\pi^+\pi^-$. Decay-time information and interference on the Dalitz plot are used to distinguish doubly Cabibbo-suppressed decays from mixing and to measure the relative phase between $D^0 \rightarrow K^{*+}\pi^-$ and $\overline{D}^0 \rightarrow K^{*+}\pi^-$. This value allows *CP* violation. NODE=S032QP;LINKAGE=ZH

A_Γ

NODE=S032AG

A_Γ is the decay-rate asymmetry for *CP*-even final states $A_\Gamma = (\overline{\tau}_+ - \tau_+) / (\overline{\tau}_+ + \tau_+)$. See the note on "$D^0$–$\overline{D}^0$ Mixing" above. NODE=S032AG

NODE=S032AG

VALUE (units 10^{-3})	DOCUMENT ID		TECN	COMMENT
1.4±2.7 OUR AVERAGE				
+2.6±3.6±0.8	AUBERT	08U	BABR	$e^+e^- \approx \Upsilon(4S)$
+0.1±3.0±2.5	STARIC	07	BELL	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
+8 ±6 ±2	AUBERT	03P	BABR	$e^+e^- \approx \Upsilon(4S)$

D^0 DECAY MODES

NODE=S032235;NODE=S032

Most decay modes (other than the semileptonic modes) that involve a neutral *K* meson are now given as K^0_S modes, not as $\overline{K}^0$ modes. Nearly always it is a K^0_S that is measured, and interference between Cabibbo-allowed and doubly Cabibbo-suppressed modes can invalidate the assumption that $2\,\Gamma(K^0_S) = \Gamma(\overline{K}^0)$. NODE=S032

	Mode		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	
	Topological modes				NODE=S032;CLUMP=P
Γ_1	0-prongs	[a]	(15 ±6) %		DESIG=332
Γ_2	2-prongs		(71 ±6) %		DESIG=333
Γ_3	4-prongs	[b]	(14.6 ±0.5) %		DESIG=334
Γ_4	6-prongs		(6.4 ±1.3) $\times 10^{-4}$		DESIG=335

Inclusive modes

NODE=S032;CLUMP=A

Γ_{5}	e^{+} anything	[c]	(6.53 ± 0.17) %		DESIG=10
Γ_{6}	μ^{+} anything		(6.7 ± 0.6) %		DESIG=27
Γ_{7}	K^{-} anything		(54.7 ± 2.8) %	S=1.3	DESIG=11
Γ_{8}	$\overline{K}^{0}$ anything + K^{0} anything		(47 ± 4) %		DESIG=13
Γ_{9}	K^{+} anything		(3.4 ± 0.4) %		DESIG=12
Γ_{10}	$K^{*}(892)^{-}$ anything		(15 ± 9) %		DESIG=340
Γ_{11}	$\overline{K}^{*}(892)^{0}$ anything		(9 ± 4) %		DESIG=312
Γ_{12}	$K^{*}(892)^{+}$ anything		< 3.6 %	CL=90%	DESIG=341
Γ_{13}	$K^{*}(892)^{0}$ anything		(2.8 ± 1.3) %		DESIG=313
Γ_{14}	η anything		(9.5 ± 0.9) %		DESIG=21
Γ_{15}	η' anything		(2.48 ± 0.27) %		DESIG=342
Γ_{16}	ϕ anything		(1.05 ± 0.11) %		DESIG=249

Semileptonic modes

NODE=S032;CLUMP=B

Γ_{17}	$K^{-}\ell^{+}\nu_{\ell}$				DESIG=196
Γ_{18}	$K^{-}e^{+}\nu_{e}$		(3.61 ± 0.05) %	S=1.1	DESIG=46
Γ_{19}	$K^{-}\mu^{+}\nu_{\mu}$		(3.32 ± 0.13) %		DESIG=77
Γ_{20}	$K^{*}(892)^{-}e^{+}\nu_{e}$		(2.17 ± 0.16) %		DESIG=129
Γ_{21}	$K^{*}(892)^{-}\mu^{+}\nu_{\mu}$		(1.97 ± 0.24) %		DESIG=307
Γ_{22}	$K^{-}\pi^{0}e^{+}\nu_{e}$		$(1.6 {}^{+1.3}_{-0.5})$ %		DESIG=127
Γ_{23}	$\overline{K}^{0}\pi^{-}e^{+}\nu_{e}$		$(2.7 {}^{+0.9}_{-0.7})$ %		DESIG=128
Γ_{24}	$K^{*}(892)^{-}\ell^{+}\nu_{\ell}$				DESIG=102
Γ_{25}	$K^{-}\pi^{+}\pi^{-}e^{+}\nu_{e}$		$(2.8 {}^{+1.4}_{-1.1}) \times 10^{-4}$		DESIG=360
Γ_{26}	$K_{1}(1270)^{-}e^{+}\nu_{e}$		$(7.6 {}^{+4.0}_{-3.1}) \times 10^{-4}$		DESIG=361
Γ_{27}	$K^{-}\pi^{+}\pi^{-}\mu^{+}\nu_{\mu}$		$< 1.2 \times 10^{-3}$	CL=90%	DESIG=183
Γ_{28}	$(\overline{K}^{*}(892)\pi)^{-}\mu^{+}\nu_{\mu}$		$< 1.4 \times 10^{-3}$	CL=90%	DESIG=184
Γ_{29}	$\pi^{-}e^{+}\nu_{e}$		$(2.98 \pm 0.12) \times 10^{-3}$		DESIG=49
Γ_{30}	$\pi^{-}\mu^{+}\nu_{\mu}$		$(2.38 \pm 0.24) \times 10^{-3}$		DESIG=308
Γ_{31}	$\rho^{-}e^{+}\nu_{e}$		$(1.9 \pm 0.4) \times 10^{-3}$		DESIG=320

Hadronic modes with one $\overline{K}$

NODE=S032;CLUMP=C

Γ_{32}	$K^{-}\pi^{+}$		(3.91 ± 0.05) %	S=1.1	DESIG=1
Γ_{33}	$K^{0}_{S}\pi^{0}$		(1.21 ± 0.07) %	S=1.4	DESIG=9
Γ_{34}	$K^{0}_{L}\pi^{0}$		$(10.0 \pm 0.7) \times 10^{-3}$		DESIG=363
Γ_{35}	$K^{0}_{S}\pi^{+}\pi^{-}$	[d]	(2.92 ± 0.17) %	S=1.1	DESIG=3
Γ_{36}	$K^{0}_{S}\rho^{0}$		$(6.6 \pm 0.6) \times 10^{-3}$		DESIG=17
Γ_{37}	$K^{0}_{S}\omega$, $\omega \rightarrow \pi^{+}\pi^{-}$		$(2.1 \pm 0.6) \times 10^{-4}$		DESIG=285
Γ_{38}	$K^{0}_{S}f_{0}(980)$, $f_{0}(980) \rightarrow \pi^{+}\pi^{-}$		$(1.37 {}^{+0.30}_{-0.22}) \times 10^{-3}$		DESIG=199
Γ_{39}	$K^{0}_{S}f_{2}(1270)$, $f_{2}(1270) \rightarrow \pi^{+}\pi^{-}$		$(1.4 {}^{+1.0}_{-0.6}) \times 10^{-4}$		DESIG=200
Γ_{40}	$K^{0}_{S}f_{0}(1370)$, $f_{0}(1370) \rightarrow \pi^{+}\pi^{-}$		$(2.5 \pm 0.6) \times 10^{-3}$		DESIG=201
Γ_{41}	$K^{0}_{S}(\pi^{+}\pi^{-})_{S-\text{wave}}$		$(3.5 \pm 0.8) \times 10^{-3}$		DESIG=384
Γ_{42}	$K^{*}(892)^{-}\pi^{+}$, $K^{*}(892)^{-} \rightarrow K^{0}_{S}\pi^{-}$		(1.79 ± 0.14) %		DESIG=81
Γ_{43}	$K^{*}_{0}(1430)^{-}\pi^{+}$, $K^{*}_{0}(1430)^{-} \rightarrow K^{0}_{S}\pi^{-}$		$(2.93 {}^{+0.40}_{-0.32}) \times 10^{-3}$		DESIG=203
Γ_{44}	$K^{*}_{2}(1430)^{-}\pi^{+}$, $K^{*}_{2}(1430)^{-} \rightarrow K^{0}_{S}\pi^{-}$		$(3.5 {}^{+1.9}_{-1.0}) \times 10^{-4}$		DESIG=286
Γ_{45}	$K^{*}(1680)^{-}\pi^{+}$, $K^{*}(1680)^{-} \rightarrow K^{0}_{S}\pi^{-}$		$(5 \pm 4) \times 10^{-4}$		DESIG=279
Γ_{46}	$K^{*}(892)^{+}\pi^{-}$, $K^{*}(892)^{+} \rightarrow K^{0}_{S}\pi^{+}$	[e]			DESIG=287

Γ_{47}	$K_0^*(1430)^+\pi^-$, $K_0^*(1430)^+ \to K_S^0\pi^+$	[e]	$< 1.5 \times 10^{-5}$	CL=95%	DESIG=382
Γ_{48}	$K_2^*(1430)^+\pi^-$, $K_2^*(1430)^+ \to K_S^0\pi^+$	[e]	$< 3.5 \times 10^{-5}$	CL=95%	DESIG=383
Γ_{49}	$K_S^0\pi^+\pi^-$ nonresonant		$(2.6 {}^{+6.0}_{-1.7}) \times 10^{-4}$		DESIG=33
Γ_{50}	$K^-\pi^+\pi^0$	[d]	(14.0 ± 0.5) %	S=1.6	DESIG=8
Γ_{51}	$K^-\rho^+$		(10.9 ± 0.7) %		DESIG=16
Γ_{52}	$K^-\rho(1700)^+$, $\rho(1700)^+ \to \pi^+\pi^0$		$(8.0 \pm 1.7) \times 10^{-3}$		DESIG=271
Γ_{53}	$K^*(892)^-\pi^+$, $K^*(892)^- \to K^-\pi^0$		$(2.23 {}^{+0.40}_{-0.19})$ %		DESIG=83
Γ_{54}	$\overline{K}^*(892)^0\pi^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.89 ± 0.23) %		DESIG=82
Γ_{55}	$K_0^*(1430)^-\pi^+$, $K_0^*(1430)^- \to K^-\pi^0$		$(4.6 \pm 2.1) \times 10^{-3}$		DESIG=272
Γ_{56}	$\overline{K}_0^*(1430)^0\pi^0$, $\overline{K}_0^*(1430)^0 \to K^-\pi^+$		$(5.7 {}^{+5.0}_{-1.5}) \times 10^{-3}$		DESIG=273
Γ_{57}	$K^*(1680)^-\pi^+$, $K^*(1680)^- \to K^-\pi^0$		$(1.8 \pm 0.7) \times 10^{-3}$		DESIG=274
Γ_{58}	$K^-\pi^+\pi^0$ nonresonant		$(1.12 {}^{+0.50}_{-0.19})$ %		DESIG=32
Γ_{59}	$K_S^0\pi^0\pi^0$		—		DESIG=185;OUR EVAL; → NOT CHECKED ←
Γ_{60}	$\overline{K}^*(892)^0\pi^0$, $\overline{K}^*(892)^0 \to K_S^0\pi^0$		$(6.7 {}^{+1.8}_{-1.5}) \times 10^{-3}$		DESIG=202
Γ_{61}	$K_S^0\pi^0\pi^0$ nonresonant		$(4.5 \pm 1.1) \times 10^{-3}$		DESIG=186
Γ_{62}	$K^-\pi^+\pi^+\pi^-$	[d]	$(8.14 {}^{+0.20}_{-0.18})$ %	S=1.3	DESIG=2
Γ_{63}	$K^-\pi^+\rho^0$ total		(6.79 ± 0.33) %		DESIG=116
Γ_{64}	$K^-\pi^+\rho^0$ 3-body		$(5.1 \pm 2.3) \times 10^{-3}$		DESIG=23
Γ_{65}	$\overline{K}^*(892)^0\rho^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.00 ± 0.22) %		DESIG=86;OUR EVAL; → NOT CHECKED ←
Γ_{66}	$K^-a_1(1260)^+$, $a_1(1260)^+ \to \pi^+\pi^+\pi^-$		(3.6 ± 0.6) %		DESIG=181;OUR EVAL; → NOT CHECKED ←
Γ_{67}	$\overline{K}^*(892)^0\pi^+\pi^-$ total, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.5 ± 0.4) %		DESIG=168;OUR EVAL; → NOT CHECKED ←
Γ_{68}	$\overline{K}^*(892)^0\pi^+\pi^-$ 3-body, $\overline{K}^*(892)^0 \to K^-\pi^+$		$(9.7 \pm 2.1) \times 10^{-3}$		DESIG=85;OUR EVAL; → NOT CHECKED ←
Γ_{69}	$K_1(1270)^-\pi^+$, $K_1(1270)^- \to K^-\pi^+\pi^-$	[f]	$(2.9 \pm 0.3) \times 10^{-3}$		DESIG=182;OUR EVAL; → NOT CHECKED ←
Γ_{70}	$K^-\pi^+\pi^+\pi^-$ nonresonant		(1.89 ± 0.26) %		DESIG=68
Γ_{71}	$K_S^0\pi^+\pi^-\pi^0$	[d]	(5.3 ± 0.6) %		DESIG=143
Γ_{72}	$K_S^0\eta$, $\eta \to \pi^+\pi^-\pi^0$		$(8.6 \pm 1.4) \times 10^{-4}$		DESIG=135;OUR EVAL; → NOT CHECKED ←
Γ_{73}	$K_S^0\omega$, $\omega \to \pi^+\pi^-\pi^0$		$(9.8 \pm 1.8) \times 10^{-3}$		DESIG=110;OUR EVAL; → NOT CHECKED ←
Γ_{74}	$K^*(892)^-\rho^+$, $K^*(892)^- \to K_S^0\pi^-$		(2.1 ± 0.8) %		DESIG=159;OUR EVAL; → NOT CHECKED ←
Γ_{75}	$K_1(1270)^-\pi^+$, $K_1(1270)^- \to K_S^0\pi^-\pi^0$	[f]	$(2.2 \pm 0.6) \times 10^{-3}$		DESIG=161;OUR EVAL; → NOT CHECKED ←
Γ_{76}	$\overline{K}^*(892)^0\pi^+\pi^-$ 3-body, $\overline{K}^*(892)^0 \to K_S^0\pi^0$		$(2.4 \pm 0.5) \times 10^{-3}$		DESIG=162;OUR EVAL; → NOT CHECKED ←
Γ_{77}	$K_S^0\pi^+\pi^-\pi^0$ nonresonant		(1.1 ± 1.1) %		DESIG=150
Γ_{78}	$K^-\pi^+\pi^0\pi^0$				DESIG=20
Γ_{79}	$K^-\pi^+\pi^+\pi^-\pi^0$		(4.3 ± 0.4) %		DESIG=41
Γ_{80}	$\overline{K}^*(892)^0\pi^+\pi^-\pi^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.2 ± 0.6) %		DESIG=55;OUR EVAL; → NOT CHECKED ←
Γ_{81}	$K^-\pi^+\omega$, $\omega \to \pi^+\pi^-\pi^0$		(2.7 ± 0.5) %		DESIG=206;OUR EVAL; → NOT CHECKED ←

Γ_{82}	$\overline{K}^*(892)^0\omega$, $\overline{K}^*(892)^0 \to K^-\pi^+$, $\omega \to \pi^+\pi^-\pi^0$		$(6.5 \pm 2.4) \times 10^{-3}$		DESIG=207;OUR EVAL; → NOT CHECKED ←
Γ_{83}	$K^0_S\eta\pi^0$		$(5.6 \pm 1.2) \times 10^{-3}$		DESIG=292
Γ_{84}	$K^0_S a_0(980)$, $a_0(980) \to \eta\pi^0$		$(6.6 \pm 2.1) \times 10^{-3}$		DESIG=293
Γ_{85}	$\overline{K}^*(892)^0\eta$, $\overline{K}^*(892)^0 \to K^0_S\pi^0$		$(1.6 \pm 0.5) \times 10^{-3}$		DESIG=294
Γ_{86}	$K^0_S 2\pi^+2\pi^-$		$(2.77 \pm 0.30) \times 10^{-3}$		DESIG=97
Γ_{87}	$K^0_S\rho^0\pi^+\pi^-$, no $K^*(892)^-$		$(1.1 \pm 0.7) \times 10^{-3}$		DESIG=174
Γ_{88}	$K^*(892)^-\pi^+\pi^+\pi^-$, $K^*(892)^- \to K^0_S\pi^-$, no ρ^0		$(5 \pm 8) \times 10^{-4}$		DESIG=175
Γ_{89}	$K^*(892)^-\rho^0\pi^+$, $K^*(892)^- \to K^0_S\pi^-$		$(1.7 \pm 0.7) \times 10^{-3}$		DESIG=176
Γ_{90}	$K^0_S 2\pi^+2\pi^-$ nonresonant		$< 1.3 \times 10^{-3}$	CL=90%	DESIG=177
Γ_{91}	$\overline{K}^0\pi^+\pi^-\pi^0\pi^0(\pi^0)$				DESIG=43
Γ_{92}	$K^-3\pi^+2\pi^-$		$(2.2 \pm 0.6) \times 10^{-4}$		DESIG=288

Fractions of many of the following modes with resonances have already appeared above as submodes of particular charged-particle modes. (Modes for which there are only upper limits and $\overline{K}^*(892)\rho$ submodes only appear below.) CLUMP=D;NODE=S032

Γ_{93}	$K^0_S\eta$		$(3.9 \pm 0.5) \times 10^{-3}$		DESIG=65
Γ_{94}	$K^0_S\omega$		(1.11 ± 0.20) %		DESIG=64
Γ_{95}	$K^0_S\eta'(958)$		$(9.2 \pm 1.4) \times 10^{-3}$		DESIG=187
Γ_{96}	$K^-a_1(1260)^+$		(7.9 ± 1.1) %		DESIG=69
Γ_{97}	$\overline{K}^0a_1(1260)^0$		< 1.9 %	CL=90%	DESIG=149
Γ_{98}	$K^-a_2(1320)^+$		$< 2 \times 10^{-3}$	CL=90%	DESIG=25
Γ_{99}	$\overline{K}^*(892)^0\pi^+\pi^-$ total		(2.4 ± 0.5) %		DESIG=163
Γ_{100}	$\overline{K}^*(892)^0\pi^+\pi^-$ 3-body		(1.54 ± 0.34) %		DESIG=24
Γ_{101}	$\overline{K}^*(892)^0\rho^0$		(1.59 ± 0.35) %		DESIG=22
Γ_{102}	$\overline{K}^*(892)^0\rho^0$ transverse		(1.6 ± 0.6) %		DESIG=73
Γ_{103}	$\overline{K}^*(892)^0\rho^0$ S-wave		(3.1 ± 0.6) %		DESIG=164
Γ_{104}	$\overline{K}^*(892)^0\rho^0$ S-wave long.		$< 3 \times 10^{-3}$	CL=90%	DESIG=74
Γ_{105}	$\overline{K}^*(892)^0\rho^0$ P-wave		$< 3 \times 10^{-3}$	CL=90%	DESIG=75
Γ_{106}	$\overline{K}^*(892)^0\rho^0$ D-wave		(2.1 ± 0.6) %		DESIG=165
Γ_{107}	$K^*(892)^-\rho^+$		(6.5 ± 2.5) %		DESIG=144
Γ_{108}	$K^*(892)^-\rho^+$ longitudinal		(3.1 ± 1.2) %		DESIG=145
Γ_{109}	$K^*(892)^-\rho^+$ transverse		(3.4 ± 2.0) %		DESIG=146
Γ_{110}	$K^*(892)^-\rho^+$ P-wave		< 1.5 %	CL=90%	DESIG=147
Γ_{111}	$K^-\pi^+f_0(980)$				DESIG=167
Γ_{112}	$\overline{K}^*(892)^0f_0(980)$				DESIG=166
Γ_{113}	$K_1(1270)^-\pi^+$	[f]	(1.13 ± 0.32) %		DESIG=70
Γ_{114}	$K_1(1400)^-\pi^+$		< 1.2 %	CL=90%	DESIG=72
Γ_{115}	$\overline{K}_1(1400)^0\pi^0$		< 3.7 %	CL=90%	DESIG=148
Γ_{116}	$K^*(1410)^-\pi^+$				DESIG=71
Γ_{117}	$\overline{K}^*(892)^0\pi^+\pi^-\pi^0$		(1.9 ± 0.9) %		DESIG=56
Γ_{118}	$\overline{K}^*(892)^0\eta$				DESIG=66
Γ_{119}	$K^-\pi^+\omega$		(3.0 ± 0.6) %		DESIG=197
Γ_{120}	$\overline{K}^*(892)^0\omega$		(1.1 ± 0.5) %		DESIG=57
Γ_{121}	$K^-\pi^+\eta'(958)$		$(7.6 \pm 1.9) \times 10^{-3}$		DESIG=189
Γ_{122}	$\overline{K}^*(892)^0\eta'(958)$		$< 1.1 \times 10^{-3}$	CL=90%	DESIG=190

Hadronic modes with three K's

NODE=S032;CLUMP=S

Γ_{123}	$K_S^0 K^+ K^-$	$(4.61 \pm 0.31) \times 10^{-3}$		DESIG=31
Γ_{124}	$K_S^0 a_0(980)^0$, $a_0^0 \to K^+ K^-$	$(3.1 \pm 0.4) \times 10^{-3}$		DESIG=321
Γ_{125}	$K^- a_0(980)^+$, $a_0^+ \to K^+ K_S^0$	$(6.2 \pm 1.8) \times 10^{-4}$		DESIG=322
Γ_{126}	$K^+ a_0(980)^-$, $a_0^- \to K^- K_S^0$	$< 1.2 \times 10^{-4}$	CL=95%	DESIG=323
Γ_{127}	$K_S^0 f_0(980)$, $f_0 \to K^+ K^-$	$< 1.0 \times 10^{-4}$	CL=95%	DESIG=324
Γ_{128}	$K_S^0 \phi$, $\phi \to K^+ K^-$	$(2.12 \pm 0.15) \times 10^{-3}$		DESIG=114
Γ_{129}	$K_S^0 f_0(1370)$, $f_0 \to K^+ K^-$	$(1.8 \pm 1.1) \times 10^{-4}$		DESIG=325
Γ_{130}	$3K_S^0$	$(9.4 \pm 1.3) \times 10^{-4}$		DESIG=58
Γ_{131}	$K^+ K^- K^- \pi^+$	$(2.23 \pm 0.32) \times 10^{-4}$		DESIG=219
Γ_{132}	$K^+ K^- \overline{K}^*(892)^0$, $\overline{K}^*(892)^0 \to K^- \pi^+$	$(4.5 \pm 1.7) \times 10^{-5}$		DESIG=283
Γ_{133}	$K^- \pi^+ \phi$, $\phi \to K^+ K^-$	$(4.0 \pm 1.7) \times 10^{-5}$		DESIG=275
Γ_{134}	$\phi \overline{K}^*(892)^0$, $\phi \to K^+ K^-$, $\overline{K}^*(892)^0 \to K^- \pi^+$	$(1.07 \pm 0.20) \times 10^{-4}$		DESIG=284
Γ_{135}	$K^+ K^- K^- \pi^+$ nonresonant	$(3.3 \pm 1.5) \times 10^{-5}$		DESIG=282
Γ_{136}	$K_S^0 K_S^0 K^\pm \pi^\mp$	$(6.2 \pm 1.3) \times 10^{-4}$		DESIG=309

Pionic modes

NODE=S032;CLUMP=E

Γ_{137}	$\pi^+ \pi^-$	$(1.405 \pm 0.026) \times 10^{-3}$		DESIG=5
Γ_{138}	$\pi^0 \pi^0$	$(8.1 \pm 0.8) \times 10^{-4}$		DESIG=173
Γ_{139}	$\pi^+ \pi^- \pi^0$	(1.44 ± 0.06) %	S=1.8	DESIG=29
Γ_{140}	$\rho^+ \pi^-$	$(9.8 \pm 0.4) \times 10^{-3}$		DESIG=326
Γ_{141}	$\rho^0 \pi^0$	$(3.74 \pm 0.22) \times 10^{-3}$		DESIG=327
Γ_{142}	$\rho^- \pi^+$	$(4.99 \pm 0.23) \times 10^{-3}$		DESIG=328
Γ_{143}	$\rho(1450)^+ \pi^-$, $\rho(1450)^+ \to \pi^+ \pi^0$	$(1.6 \pm 2.0) \times 10^{-5}$		DESIG=367
Γ_{144}	$\rho(1450)^0 \pi^0$, $\rho(1450)^0 \to \pi^+ \pi^-$	$(4.3 \pm 1.9) \times 10^{-5}$		DESIG=368
Γ_{145}	$\rho(1450)^- \pi^+$, $\rho(1450)^- \to \pi^- \pi^0$	$(2.6 \pm 0.4) \times 10^{-4}$		DESIG=369
Γ_{146}	$\rho(1700)^+ \pi^-$, $\rho(1700)^+ \to \pi^+ \pi^0$	$(5.9 \pm 1.4) \times 10^{-4}$		DESIG=370
Γ_{147}	$\rho(1700)^0 \pi^0$, $\rho(1700)^0 \to \pi^+ \pi^-$	$(7.2 \pm 1.7) \times 10^{-4}$		DESIG=371
Γ_{148}	$\rho(1700)^- \pi^+$, $\rho(1700)^- \to \pi^- \pi^0$	$(4.6 \pm 1.1) \times 10^{-4}$		DESIG=372
Γ_{149}	$f_0(980) \pi^0$, $f_0(980) \to \pi^+ \pi^-$	$(3.6 \pm 0.8) \times 10^{-5}$		DESIG=330
Γ_{150}	$f_0(600) \pi^0$, $f_0(600) \to \pi^+ \pi^-$	$(1.18 \pm 0.21) \times 10^{-4}$		DESIG=329
Γ_{151}	$(\pi^+ \pi^-)_{S-\text{wave}} \pi^0$			DESIG=331
Γ_{152}	$f_0(1370) \pi^0$, $f_0(1370) \to \pi^+ \pi^-$	$(5.3 \pm 2.1) \times 10^{-5}$		DESIG=373
Γ_{153}	$f_0(1500) \pi^0$, $f_0(1500) \to \pi^+ \pi^-$	$(5.6 \pm 1.6) \times 10^{-5}$		DESIG=374
Γ_{154}	$f_0(1710) \pi^0$, $f_0(1710) \to \pi^+ \pi^-$	$(4.5 \pm 1.5) \times 10^{-5}$		DESIG=375
Γ_{155}	$f_2(1270) \pi^0$, $f_2(1270) \to \pi^+ \pi^-$	$(1.91 \pm 0.20) \times 10^{-4}$		DESIG=376
Γ_{156}	$\pi^+ \pi^- \pi^0$ nonresonant	$(1.21 \pm 0.35) \times 10^{-4}$		DESIG=377
Γ_{157}	$3\pi^0$	$< 3.5 \times 10^{-4}$	CL=90%	DESIG=314
Γ_{158}	$2\pi^+ 2\pi^-$	$(7.48 \pm 0.21) \times 10^{-3}$	S=1.1	DESIG=18
Γ_{159}	$a_1(1260)^+ \pi^-$, $a_1^+ \to \pi^+ \pi^- \pi^+$ total	$(4.49 \pm 0.31) \times 10^{-3}$		DESIG=348
Γ_{160}	$a_1(1260)^+ \pi^-$, $a_1^+ \to \rho^0 \pi^+$ S-wave	$(3.24 \pm 0.25) \times 10^{-3}$		DESIG=349
Γ_{161}	$a_1(1260)^+ \pi^-$, $a_1^+ \to \rho^0 \pi^+$ D-wave	$(1.9 \pm 0.5) \times 10^{-4}$		DESIG=350
Γ_{162}	$a_1(1260)^+ \pi^-$, $a_1^+ \to \sigma \pi^+$	$(6.2 \pm 0.7) \times 10^{-4}$		DESIG=351
Γ_{163}	$2\rho^0$ total	$(1.83 \pm 0.13) \times 10^{-3}$		DESIG=352

Γ_{164}	$2\rho^0$, parallel helicities		$(8.2 \pm 3.2) \times 10^{-5}$		DESIG=353
Γ_{165}	$2\rho^0$, perpendicular helicities		$(4.8 \pm 0.6) \times 10^{-4}$		DESIG=354
Γ_{166}	$2\rho^0$, longitudinal helicities		$(1.26 \pm 0.10) \times 10^{-3}$		DESIG=355
Γ_{167}	Resonant $(\pi^+\pi^-)\pi^+\pi^-$ 3-body total		$(1.50 \pm 0.12) \times 10^{-3}$		DESIG=356
Γ_{168}	$\sigma\pi^+\pi^-$		$(6.1 \pm 0.9) \times 10^{-4}$		DESIG=357
Γ_{169}	$f_0(980)\pi^+\pi^-$, $f_0 \to \pi^+\pi^-$		$(1.8 \pm 0.5) \times 10^{-4}$		DESIG=358
Γ_{170}	$f_2(1270)\pi^+\pi^-$, $f_2 \to \pi^+\pi^-$		$(3.7 \pm 0.6) \times 10^{-4}$		DESIG=359
Γ_{171}	$\pi^+\pi^- 2\pi^0$		(1.01 ± 0.09) %		DESIG=315
Γ_{172}	$\eta\pi^0$	[g]	$(6.4 \pm 1.1) \times 10^{-4}$		DESIG=316
Γ_{173}	$\omega\pi^0$	[g]	$< 2.6 \times 10^{-4}$	CL=90%	DESIG=317
Γ_{174}	$2\pi^+ 2\pi^- \pi^0$		$(4.2 \pm 0.5) \times 10^{-3}$		DESIG=95
Γ_{175}	$\eta\pi^+\pi^-$	[g]	$(1.09 \pm 0.16) \times 10^{-3}$		DESIG=318
Γ_{176}	$\omega\pi^+\pi^-$	[g]	$(1.6 \pm 0.5) \times 10^{-3}$		DESIG=319
Γ_{177}	$3\pi^+ 3\pi^-$		$(4.3 \pm 1.2) \times 10^{-4}$		DESIG=96
Γ_{178}	$\eta'(958)\pi^0$		$(8.1 \pm 1.6) \times 10^{-4}$		DESIG=378
Γ_{179}	$\eta'(958)\pi^+\pi^-$		$(4.5 \pm 1.7) \times 10^{-4}$		DESIG=379
Γ_{180}	2η		$(1.67 \pm 0.19) \times 10^{-3}$		DESIG=380
Γ_{181}	$\eta\eta'(958)$		$(1.26 \pm 0.27) \times 10^{-3}$		DESIG=381

Hadronic modes with a $K\overline{K}$ pair

NODE=S032;CLUMP=F

Γ_{182}	K^+K^-		$(3.97 \pm 0.07) \times 10^{-3}$	S=1.2	DESIG=7
Γ_{183}	$2K^0_S$		$(2.0 \pm 0.7) \times 10^{-4}$	S=2.5	DESIG=35
Γ_{184}	$K^0_S K^-\pi^+$		$(3.4 \pm 0.5) \times 10^{-3}$	S=1.1	DESIG=93
Γ_{185}	$\overline{K}^*(892)^0 K^0_S$, $\overline{K}^*(892)^0 \to K^-\pi^+$		$< 6 \times 10^{-4}$	CL=90%	DESIG=91
Γ_{186}	$K^0_S K^+\pi^-$		$(2.6 \pm 0.5) \times 10^{-3}$		DESIG=123
Γ_{187}	$K^*(892)^0 K^0_S$, $K^*(892)^0 \to K^+\pi^-$		$< 2.9 \times 10^{-4}$	CL=90%	DESIG=124
Γ_{188}	$K^+K^-\pi^0$		$(3.31 \pm 0.13) \times 10^{-3}$		DESIG=243
Γ_{189}	$K^*(892)^+ K^-$, $K^*(892)^+ \to K^+\pi^0$		$(1.47 \pm 0.07) \times 10^{-3}$		DESIG=344
Γ_{190}	$K^*(892)^- K^+$, $K^*(892)^- \to K^-\pi^0$		$(5.1 \pm 0.5) \times 10^{-4}$		DESIG=345
Γ_{191}	$(K^+\pi^0)_{S-wave} K^-$		$(2.35 \pm 0.17) \times 10^{-3}$		DESIG=364
Γ_{192}	$(K^-\pi^0)_{S-wave} K^+$		$(1.3 \pm 0.4) \times 10^{-4}$		DESIG=365
Γ_{193}	$f_0(980)\pi^0$, $f_0 \to K^+K^-$		$(3.5 \pm 0.6) \times 10^{-4}$		DESIG=366
Γ_{194}	$\phi\pi^0$, $\phi \to K^+K^-$		$(6.1 \pm 0.6) \times 10^{-4}$		DESIG=346
Γ_{195}	$K^+K^-\pi^0$ nonresonant				DESIG=347
Γ_{196}	$K^0_S K^0_S \pi^0$		$< 5.9 \times 10^{-4}$		DESIG=242
Γ_{197}	$K^+K^-\pi^+\pi^-$	[h]	$(2.44 \pm 0.12) \times 10^{-3}$		DESIG=63
Γ_{198}	$\phi\pi^+\pi^-$ 3-body, $\phi \to K^+K^-$		$(2.4 \pm 2.4) \times 10^{-5}$		DESIG=115
Γ_{199}	$\phi\rho^0$, $\phi \to K^+K^-$		$(7.1 \pm 0.6) \times 10^{-4}$		DESIG=134
Γ_{200}	$K^+K^-\rho^0$ 3-body		$(5 \pm 7) \times 10^{-5}$		DESIG=220
Γ_{201}	$f_0(980)\pi^+\pi^-$, $f_0 \to K^+K^-$		$(3.7 \pm 0.9) \times 10^{-4}$		DESIG=338
Γ_{202}	$K^*(892)^0 K^\mp\pi^\pm$ 3-body, $K^{*0} \to K^\pm\pi^\mp$	[i]	$(2.7 \pm 0.6) \times 10^{-4}$		DESIG=208
Γ_{203}	$K^*(892)^0 \overline{K}^*(892)^0$, $K^{*0} \to K^\pm\pi^\mp$		$(7 \pm 5) \times 10^{-5}$		DESIG=137
Γ_{204}	$K_1(1270)^\pm K^\mp$, $K_1(1270)^\pm \to K^\pm\pi^+\pi^-$		$(8.1 \pm 1.8) \times 10^{-4}$		DESIG=336
Γ_{205}	$K_1(1400)^\pm K^\mp$, $K_1(1400)^\pm \to K^\pm\pi^+\pi^-$		$(5.4 \pm 1.2) \times 10^{-4}$		DESIG=337
Γ_{206}	$K^+K^-\pi^+\pi^-$ non-ϕ				DESIG=198
Γ_{207}	$K^+K^-\pi^+\pi^-$ nonresonant				DESIG=99
Γ_{208}	$K^0_S K^0_S \pi^+\pi^-$		$(1.27 \pm 0.24) \times 10^{-3}$		DESIG=215
Γ_{209}	$K^0_S K^-\pi^+\pi^+\pi^-$		$< 1.5 \times 10^{-4}$	CL=90%	DESIG=178
Γ_{210}	$K^+K^-\pi^+\pi^-\pi^0$		$(3.1 \pm 2.0) \times 10^{-3}$		DESIG=131

Fractions of most of the following modes with resonances have already appeared above as submodes of particular charged-particle modes.

CLUMP=G;NODE=S032

Γ_{211}	$\phi\pi^0$		$(7.7 \pm 0.4) \times 10^{-4}$		DESIG=212
Γ_{212}	$\phi\eta$		$(1.4 \pm 0.5) \times 10^{-4}$		DESIG=213
Γ_{213}	$\phi\omega$		$< 2.1 \times 10^{-3}$	CL=90%	DESIG=214

	Radiative modes						NODE=S032;CLUMP=I
Γ_{214}	$\rho^0\gamma$			< 2.4	$\times 10^{-4}$	CL=90%	DESIG=245
Γ_{215}	$\omega\gamma$			< 2.4	$\times 10^{-4}$	CL=90%	DESIG=246
Γ_{216}	$\phi\gamma$			(2.71 ± 0.35)	$\times 10^{-5}$		DESIG=247
Γ_{217}	$\overline{K}^*(892)^0\gamma$			(3.30 ± 0.34)	$\times 10^{-4}$		DESIG=248
	Doubly Cabibbo suppressed (*DC*) modes or $\Delta C = 2$ forbidden via mixing (*C2M*) modes						NODE=S032;CLUMP=T
Γ_{218}	$K^+\ell^-\overline{\nu}_\ell$ via $\overline{D}^0$			< 1.8	$\times 10^{-4}$	CL=90%	DESIG=241;OUR EVAL; → NOT CHECKED ←
Γ_{219}	K^+ or $K^*(892)^+ e^-\overline{\nu}_e$ via $\overline{D}^0$			< 6	$\times 10^{-5}$	CL=90%	DESIG=311;OUR EVAL; → NOT CHECKED ←
Γ_{220}	$K^+\pi^-$	*DC*		(1.48 ± 0.07)	$\times 10^{-4}$		DESIG=50
Γ_{221}	$K^+\pi^-$ via DCS			(1.32 ± 0.09)	$\times 10^{-4}$		DESIG=362
Γ_{222}	$K^+\pi^-$ via $\overline{D}^0$			< 1.6	$\times 10^{-5}$	CL=95%	DESIG=6
Γ_{223}	$K^0_S\pi^+\pi^-$ in $D^0 \to \overline{D}^0$			< 1.8	$\times 10^{-4}$	CL=95%	DESIG=339
Γ_{224}	$K^*(892)^+\pi^-$, $K^*(892)^+ \to K^0_S\pi^+$	*DC*		$(1.17\ ^{+0.60}_{-0.35})$	$\times 10^{-4}$		DESIG=179
Γ_{225}	$K^+\pi^-\pi^0$	*DC*		(3.06 ± 0.17)	$\times 10^{-4}$		DESIG=277
Γ_{226}	$K^+\pi^-\pi^0$ via $\overline{D}^0$			< 8	$\times 10^{-5}$	CL=95%	DESIG=343
Γ_{227}	$K^+\pi^-\pi^+\pi^-$	*DC*		$(2.63\ ^{+0.21}_{-0.19})$	$\times 10^{-4}$		DESIG=51
Γ_{228}	$K^+\pi^-\pi^+\pi^-$ via $\overline{D}^0$			< 4	$\times 10^{-4}$	CL=90%	DESIG=222
Γ_{229}	$K^+\pi^-$ or $K^+\pi^-\pi^+\pi^-$ via $\overline{D}^0$						DESIG=244
Γ_{230}	μ^- anything via $\overline{D}^0$			< 4	$\times 10^{-4}$	CL=90%	DESIG=26
	$\Delta C = 1$ weak neutral current (*C1*) modes, Lepton Family number (*LF*) violating modes, or Lepton number (*L*) violating modes						NODE=S032;CLUMP=H
Γ_{231}	$\gamma\gamma$	*C1*		< 2.7	$\times 10^{-5}$	CL=90%	DESIG=45
Γ_{232}	e^+e^-	*C1*		< 1.2	$\times 10^{-6}$	CL=90%	DESIG=39
Γ_{233}	$\mu^+\mu^-$	*C1*		< 1.3	$\times 10^{-6}$	CL=90%	DESIG=28
Γ_{234}	$\pi^0 e^+e^-$	*C1*		< 4.5	$\times 10^{-5}$	CL=90%	DESIG=225
Γ_{235}	$\pi^0\mu^+\mu^-$	*C1*		< 1.8	$\times 10^{-4}$	CL=90%	DESIG=216
Γ_{236}	ηe^+e^-	*C1*		< 1.1	$\times 10^{-4}$	CL=90%	DESIG=226
Γ_{237}	$\eta\mu^+\mu^-$	*C1*		< 5.3	$\times 10^{-4}$	CL=90%	DESIG=227
Γ_{238}	$\pi^+\pi^-e^+e^-$	*C1*		< 3.73	$\times 10^{-4}$	CL=90%	DESIG=262
Γ_{239}	$\rho^0 e^+e^-$	*C1*		< 1.0	$\times 10^{-4}$	CL=90%	DESIG=52
Γ_{240}	$\pi^+\pi^-\mu^+\mu^-$	*C1*		< 3.0	$\times 10^{-5}$	CL=90%	DESIG=263
Γ_{241}	$\rho^0\mu^+\mu^-$	*C1*		< 2.2	$\times 10^{-5}$	CL=90%	DESIG=53
Γ_{242}	ωe^+e^-	*C1*		< 1.8	$\times 10^{-4}$	CL=90%	DESIG=228
Γ_{243}	$\omega\mu^+\mu^-$	*C1*		< 8.3	$\times 10^{-4}$	CL=90%	DESIG=229
Γ_{244}	$K^-K^+e^+e^-$	*C1*		< 3.15	$\times 10^{-4}$	CL=90%	DESIG=266
Γ_{245}	ϕe^+e^-	*C1*		< 5.2	$\times 10^{-5}$	CL=90%	DESIG=230
Γ_{246}	$K^-K^+\mu^+\mu^-$	*C1*		< 3.3	$\times 10^{-5}$	CL=90%	DESIG=267
Γ_{247}	$\phi\mu^+\mu^-$	*C1*		< 3.1	$\times 10^{-5}$	CL=90%	DESIG=231
Γ_{248}	$\overline{K}^0 e^+e^-$		[j]	< 1.1	$\times 10^{-4}$	CL=90%	DESIG=67
Γ_{249}	$\overline{K}^0\mu^+\mu^-$		[j]	< 2.6	$\times 10^{-4}$	CL=90%	DESIG=217
Γ_{250}	$K^-\pi^+e^+e^-$	*C1*		< 3.85	$\times 10^{-4}$	CL=90%	DESIG=264
Γ_{251}	$\overline{K}^*(892)^0 e^+e^-$		[j]	< 4.7	$\times 10^{-5}$	CL=90%	DESIG=232
Γ_{252}	$K^-\pi^+\mu^+\mu^-$	*C1*		< 3.59	$\times 10^{-4}$	CL=90%	DESIG=265
Γ_{253}	$\overline{K}^*(892)^0\mu^+\mu^-$		[j]	< 2.4	$\times 10^{-5}$	CL=90%	DESIG=233
Γ_{254}	$\pi^+\pi^-\pi^0\mu^+\mu^-$	*C1*		< 8.1	$\times 10^{-4}$	CL=90%	DESIG=218
Γ_{255}	$\mu^\pm e^\mp$	*LF*	[k]	< 8.1	$\times 10^{-7}$	CL=90%	DESIG=40
Γ_{256}	$\pi^0 e^\pm\mu^\mp$	*LF*	[k]	< 8.6	$\times 10^{-5}$	CL=90%	DESIG=234
Γ_{257}	$\eta e^\pm\mu^\mp$	*LF*	[k]	< 1.0	$\times 10^{-4}$	CL=90%	DESIG=235
Γ_{258}	$\pi^+\pi^-e^\pm\mu^\mp$	*LF*	[k]	< 1.5	$\times 10^{-5}$	CL=90%	DESIG=268
Γ_{259}	$\rho^0 e^\pm\mu^\mp$	*LF*	[k]	< 4.9	$\times 10^{-5}$	CL=90%	DESIG=236
Γ_{260}	$\omega e^\pm\mu^\mp$	*LF*	[k]	< 1.2	$\times 10^{-4}$	CL=90%	DESIG=237

Γ_{261}	$K^- K^+ e^\pm \mu^\mp$	*LF*	[*k*] $<$	1.8	$\times 10^{-4}$	CL=90%	DESIG=270
Γ_{262}	$\phi e^\pm \mu^\mp$	*LF*	[*k*] $<$	3.4	$\times 10^{-5}$	CL=90%	DESIG=238
Γ_{263}	$\overline{K}^0 e^\pm \mu^\mp$	*LF*	[*k*] $<$	1.0	$\times 10^{-4}$	CL=90%	DESIG=239
Γ_{264}	$K^- \pi^+ e^\pm \mu^\mp$	*LF*	[*k*] $<$	5.53	$\times 10^{-4}$	CL=90%	DESIG=269
Γ_{265}	$\overline{K}^*(892)^0 e^\pm \mu^\mp$	*LF*	[*k*] $<$	8.3	$\times 10^{-5}$	CL=90%	DESIG=240
Γ_{266}	$\pi^- \pi^- e^+ e^+ +$ c.c.	*L*	$<$	1.12	$\times 10^{-4}$	CL=90%	DESIG=253
Γ_{267}	$\pi^- \pi^- \mu^+ \mu^+ +$ c.c.	*L*	$<$	2.9	$\times 10^{-5}$	CL=90%	DESIG=254
Γ_{268}	$K^- \pi^- e^+ e^+ +$ c.c.	*L*	$<$	2.06	$\times 10^{-4}$	CL=90%	DESIG=255
Γ_{269}	$K^- \pi^- \mu^+ \mu^+ +$ c.c.	*L*	$<$	3.9	$\times 10^{-4}$	CL=90%	DESIG=256
Γ_{270}	$K^- K^- e^+ e^+ +$ c.c.	*L*	$<$	1.52	$\times 10^{-4}$	CL=90%	DESIG=257
Γ_{271}	$K^- K^- \mu^+ \mu^+ +$ c.c.	*L*	$<$	9.4	$\times 10^{-5}$	CL=90%	DESIG=258
Γ_{272}	$\pi^- \pi^- e^+ \mu^+ +$ c.c.	*L*	$<$	7.9	$\times 10^{-5}$	CL=90%	DESIG=259
Γ_{273}	$K^- \pi^- e^+ \mu^+ +$ c.c.	*L*	$<$	2.18	$\times 10^{-4}$	CL=90%	DESIG=260
Γ_{274}	$K^- K^- e^+ \mu^+ +$ c.c.	*L*	$<$	5.7	$\times 10^{-5}$	CL=90%	DESIG=261

NODE=S032;CLUMP=Z

Γ_{275}	A dummy mode used by the fit.	(34.9 ± 1.7) %	S=1.1	DESIG=19

[*a*] This value is obtained by subtracting the branching fractions for 2-, 4- and 6-prongs from unity. LINKAGE=TP0

[*b*] This is the sum of our $K^- \pi^+ \pi^+ \pi^-$, $K^- \pi^+ \pi^+ \pi^- \pi^0$, $\overline{K}^0 2\pi^+ 2\pi^-$, $2\pi^+ 2\pi^-$, $2\pi^+ 2\pi^- \pi^0$, $K^+ K^- \pi^+ \pi^-$, and $K^+ K^- \pi^+ \pi^- \pi^0$, branching fractions. LINKAGE=TP4

[*c*] The branching fractions for the $K^- e^+ \nu_e$, $K^*(892)^- e^+ \nu_e$, $\pi^- e^+ \nu_e$, and $\rho^- e^+ \nu_e$ modes add up to 6.24 ± 0.18 %. LINKAGE=EAN

[*d*] The branching fraction for this mode may differ from the sum of the submodes that contribute to it, due to interference effects. See the relevant papers. LINKAGE=SDQ

[*e*] This is a doubly Cabibbo-suppressed mode. LINKAGE=DCS

[*f*] The two experiments measuring this fraction are in serious disagreement. See the Particle Listings. LINKAGE=NF

[*g*] This branching fraction includes all the decay modes of the resonance in the final state. LINKAGE=ADC

[*h*] The experiments on the division of this charge mode amongst its submodes disagree, and the submode branching fractions here add up to considerably more than the charged-mode fraction. LINKAGE=DKK

[*i*] However, these upper limits are in serious disagreement with values obtained in another experiment. LINKAGE=UL

[*j*] This mode is not a useful test for a ΔC=1 weak neutral current because both quarks must change flavor in this decay. LINKAGE=FIX

[*k*] The value is for the sum of the charge states or particle/antiparticle states indicated. LINKAGE=SG

CONSTRAINED FIT INFORMATION

An overall fit to 51 branching ratios uses 102 measurements and one constraint to determine 26 parameters. The overall fit has a $\chi^2 = 86.1$ for 77 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\left\langle \delta x_i \delta x_j \right\rangle / (\delta x_i \cdot \delta x_j)$, in percent, from the fit to the branching fractions, $x_i \equiv \Gamma_i/\Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

	x_{6}	x_{18}	x_{19}	x_{20}	x_{29}	x_{30}	x_{32}	x_{33}	x_{35}	x_{50}
x_{18}	2									
x_{19}	20	10								
x_{20}	0	0	0							
x_{29}	0	7	1	0						
x_{30}	3	2	17	0	0					
x_{32}	4	54	18	1	4	3				
x_{33}	0	1	0	5	0	0	2			
x_{35}	0	3	1	13	0	0	5	38		
x_{50}	0	−1	0	0	0	0	−3	0	0	
x_{62}	1	12	4	0	1	1	22	1	1	49
x_{71}	0	1	0	5	0	0	2	16	40	0
x_{79}	0	4	1	0	0	0	8	0	0	7
x_{93}	0	1	0	3	0	0	1	35	26	0
x_{94}	0	1	0	4	0	0	2	11	29	0
x_{100}	0	1	0	0	0	0	2	0	0	5
x_{102}	0	1	0	0	0	0	1	1	3	3
x_{113}	0	1	0	2	0	0	1	6	15	1
x_{139}	0	0	0	0	0	0	0	0	0	80
x_{158}	1	14	5	0	1	1	26	1	2	25
x_{182}	2	31	10	0	2	2	57	1	3	−1
x_{183}	0	0	0	1	0	0	0	2	6	0
x_{184}	0	2	1	4	0	0	3	12	32	0
x_{186}	0	1	0	3	0	0	3	9	22	0
x_{216}	0	5	2	0	0	0	9	0	0	0
x_{275}	−38	−10	−17	−14	−1	−4	−15	−19	−39	−40

	x_{62}	x_{71}	x_{79}	x_{93}	x_{94}	x_{100}	x_{102}	x_{113}	x_{139}	x_{158}
x_{71}	1									
x_{79}	15	0								
x_{93}	0	11	0							
x_{94}	1	38	0	8						
x_{100}	10	0	1	0	0					
x_{102}	5	8	1	1	3	1				
x_{113}	1	37	0	4	14	0	3			
x_{139}	39	0	5	0	0	4	2	1		
x_{158}	56	1	9	0	1	6	3	1	21	
x_{182}	12	1	5	1	1	1	1	1	0	15
x_{183}	0	2	0	2	2	0	0	1	0	0
x_{184}	1	13	0	8	9	0	1	5	0	1
x_{186}	1	9	0	6	6	0	1	3	0	1
x_{216}	2	0	1	0	0	0	0	0	0	2
x_{275}	−37	−60	−30	−14	−35	−24	−40	−39	−33	−22

x_{183}	0				
x_{184}	2	2			
x_{186}	2	1	7		
x_{216}	7	0	0	0	
x_{275}	−9	−3	−16	−12	−1
	x_{182}	x_{183}	x_{184}	x_{186}	x_{216}

CONSTRAINED FIT INFORMATION

An overall fit to 3 branching ratios uses 3 measurements and one constraint to determine 4 parameters. The overall fit has a $\chi^2 =$ 0.0 for 0 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\left\langle\delta x_i \delta x_j\right\rangle/(\delta x_i{\cdot}\delta x_j)$, in percent, from the fit to the branching fractions, $x_i \equiv \Gamma_i/\Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_2	−100		
x_3	−46	39	
x_4	0	0	0
	x_1	x_2	x_3

D^0 BRANCHING RATIOS NODE=S032240

Some older now obsolete results have been omitted from these Listings. NODE=S032240

—— Topological modes —— NODE=S032305

$\Gamma(\text{0-prongs})/\Gamma_{\text{total}}$ Γ_1/Γ NODE=S032S37

This value is obtained by subtracting the branching fractions for 2-, 4-, and 6-prongs from unity. NODE=S032S37

VALUE	*DOCUMENT ID*	NODE=S032S37
0.15±0.06 OUR FIT		

$\Gamma(\text{4-prongs})/\Gamma_{\text{total}}$ Γ_3/Γ NODE=S032S34

This is the sum of our $K^- \pi^+ \pi^+ \pi^-$, $K^- \pi^+ \pi^+ \pi^- \pi^0$, $\overline{K}^0 2\pi^+ 2\pi^-$, $K^+ 2K^- \pi^+$, $2\pi^+ 2\pi^-$, $2\pi^+ 2\pi^- \pi^0$, $K^+ K^- \pi^+ \pi^-$, and $K^+ K^- \pi^+ \pi^- \pi^0$ branching fractions. NODE=S032S34

VALUE	*DOCUMENT ID*		NODE=S032S34
0.146±0.005 OUR FIT			
0.146±0.005	PDG	08	

$\Gamma(\text{4-prongs})/\Gamma(\text{2-prongs})$ Γ_3/Γ_2 NODE=S032S35

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.207±0.016 OUR FIT					
0.207±0.016±0.004	226	ONENGUT	05	CHRS	ν_μ emulsion, $\overline{E}_\nu \approx$ 27 GeV

NODE=S032S35

$\Gamma(\text{6-prongs})/\Gamma_{\text{total}}$ Γ_4/Γ NODE=S032S36

This is the sum of our $K^- 3\pi^+ 2\pi^-$ and $3\pi^+ 3\pi^-$ branching fractions. NODE=S032S36

VALUE (units 10^{-4})	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
6.4± 1.3 OUR FIT					
6.4± 1.3		PDG	09		
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$12\ ^{+13}_{-\ 9}\ \pm 2$	3	ONENGUT	05	CHRS	ν_μ emulsion, $\overline{E}_\nu \approx 27$ GeV

NODE=S032S36

—— Inclusive modes —— NODE=S032310

$\Gamma(e^+\,\text{anything})/\Gamma_{\text{total}}$ Γ_5/Γ NODE=S032R5

The branching fractions for the $K^- e^+ \nu_e$, $K^*(892)^- e^+ \nu_e$, $\pi^- e^+ \nu_e$, and $\rho^- e^+ \nu_e$ modes add up to 6.24 ± 0.18 %. NODE=S032R5

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.0653±0.0017 OUR AVERAGE					
0.063 ±0.007 ±0.004	290 ± 32	ABLIKIM	07G	BES2	$e^+e^- \approx \psi(3770)$
0.0646±0.0017±0.0013	2246 ± 57	[22] ADAM	06A	CLEO	e^+e^- at $\psi(3770)$
0.069 ±0.003 ±0.005	1670	ALBRECHT	96C	ARG	$e^+e^- \approx$ 10 GeV
0.0664±0.0018±0.0029	4609	KUBOTA	96B	CLE2	$e^+e^- \approx \Upsilon(4S)$

NODE=S032R5

[22] Using the D^+ and D^0 lifetimes, ADAM 06A finds that the ratio of the D^+ and D^0 inclusive e^+ widths is 0.985 ± 0.028 ± 0.015, consistent with the isospin-invariance prediction of 1. NODE=S032R5;LINKAGE=AD

$\Gamma(\mu^+ \text{anything})/\Gamma_{\text{total}}$ Γ_6/Γ

NODE=S032S60
NODE=S032S60

VALUE (%)	EVTS	DOCUMENT ID	TECN	COMMENT
6.7±0.6 OUR FIT				
6.4±0.8 OUR AVERAGE				
6.8±1.5±0.8	79 ± 10	[23] ABLIKIM 08L	BES2	$e^+e^- \approx \psi(3772)$
6.5±1.2±0.3	36	KAYIS-TOPAK..05	CHRS	ν_μ emulsion
6.0±0.7±1.2	310	ALBRECHT 96C	ARG	$e^+e^- \approx$ 10 GeV

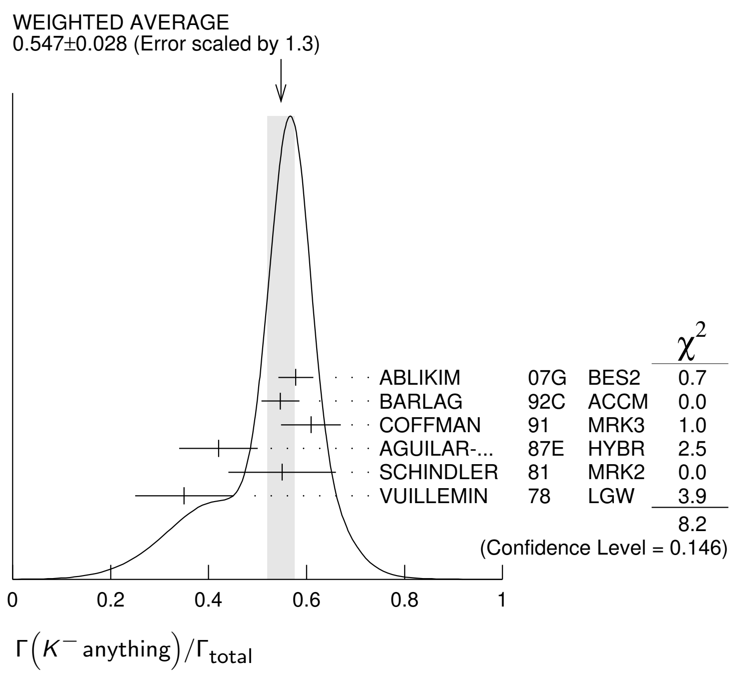
[23] ABLIKIM 08L finds the ratio of $D^+ \to \mu^+ X$ and $D^0 \to \mu^+ X$ branching fractions to be 2.59 ± 0.70 ± 0.25, in accord with the ratio of D^+ and D^0 lifetimes, 2.54 ± 0.02. NODE=S032S60;LINKAGE=AB

$\Gamma(K^- \text{anything})/\Gamma_{\text{total}}$ Γ_7/Γ

NODE=S032R1
NODE=S032R1

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.547±0.028 OUR AVERAGE Error includes scale factor of 1.3. See the ideogram below.				
0.578±0.016±0.032	2098 ± 59	ABLIKIM 07G	BES2	$e^+e^- \approx \psi(3770)$
$0.546^{+0.039}_{-0.038}$		[24] BARLAG 92C	ACCM	π^- Cu 230 GeV
0.609±0.032±0.052		COFFMAN 91	MRK3	e^+e^- 3.77 GeV
0.42 ±0.08		AGUILAR-... 87E	HYBR	πp, pp 360, 400 GeV
0.55 ±0.11	121	SCHINDLER 81	MRK2	e^+e^- 3.771 GeV
0.35 ±0.10	19	VUILLEMIN 78	LGW	e^+e^- 3.772 GeV

[24] BARLAG 92C computes the branching fraction using topological normalization. NODE=S032R1;LINKAGE=BD



$[\Gamma(\overline{K}^0 \text{anything}) + \Gamma(K^0 \text{anything})]/\Gamma_{\text{total}}$ Γ_8/Γ

NODE=S032R3
NODE=S032R3

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.47 ±0.04 OUR AVERAGE				
0.476±0.048±0.030	250 ± 25	ABLIKIM 06U	BES2	e^+e^- at 3773 MeV
0.455±0.050±0.032		COFFMAN 91	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^+ \text{anything})/\Gamma_{\text{total}}$ Γ_9/Γ

NODE=S032R2
NODE=S032R2

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.034±0.004 OUR AVERAGE				
0.035±0.007±0.003	119 ± 23	ABLIKIM 07G	BES2	$e^+e^- \approx \psi(3770)$
$0.034^{+0.007}_{-0.005}$		[25] BARLAG 92C	ACCM	π^- Cu 230 GeV
0.028±0.009±0.004		COFFMAN 91	MRK3	e^+e^- 3.77 GeV
$0.03^{+0.05}_{-0.02}$		AGUILAR-... 87E	HYBR	πp, pp 360, 400 GeV
0.08 ±0.03	25	SCHINDLER 81	MRK2	e^+e^- 3.771 GeV

[25] BARLAG 92C computes the branching fraction using topological normalization. NODE=S032R2;LINKAGE=BD

$\Gamma(K^*(892)^-\text{ anything})/\Gamma_{total}$ Γ_{10}/Γ

NODE=S032R4

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.153±0.083±0.019	28 ± 15	ABLIKIM	06U	BES2	e^+e^- at 3773 MeV

$\Gamma(\overline{K}^*(892)^0\text{ anything})/\Gamma_{total}$ Γ_{11}/Γ

NODE=S032C27

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.087±0.040±0.012	96 ± 44	ABLIKIM	05P	BES	$e^+e^- \approx$ 3773 MeV

$\Gamma(K^*(892)^+\text{ anything})/\Gamma_{total}$ Γ_{12}/Γ

NODE=S032R52

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.036	90	ABLIKIM	06U	BES2	e^+e^- at 3773 MeV

$\Gamma(K^*(892)^0\text{ anything})/\Gamma_{total}$ Γ_{13}/Γ

NODE=S032C28

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.028±0.012±0.004	31 ± 12	ABLIKIM	05P	BES	$e^+e^- \approx$ 3773 MeV

$\Gamma(\eta\text{ anything})/\Gamma_{total}$ Γ_{14}/Γ

NODE=S032R6

This ratio includes η particles from η' decays.

NODE=S032R6

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
9.5±0.4±0.8	4463 ± 197	HUANG	06B	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\eta'\text{ anything})/\Gamma_{total}$ Γ_{15}/Γ

NODE=S032R01

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.48±0.17±0.21	299 ± 21	HUANG	06B	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\phi\text{ anything})/\Gamma_{total}$ Γ_{16}/Γ

NODE=S032S65

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
1.05±0.08±0.07	368 ± 24	HUANG	06B	CLEO	e^+e^- at $\psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$1.71^{+0.76}_{-0.71}\pm0.17$	9	BAI	00C	BES	$e^+e^- \rightarrow D\overline{D}^*, D^*\overline{D}^*$

Semileptonic modes

NODE=S032315

$\Gamma(K^-e^+\nu_e)/\Gamma_{total}$ Γ_{18}/Γ

NODE=S032R57

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.61±0.05 OUR FIT Error includes scale factor of 1.1.					
3.55±0.08 OUR AVERAGE					
3.56±0.03±0.09		DOBBS	08	CLEO	e^+e^- at $\psi(3770)$
3.45±0.10±0.19	1318 ± 38	WIDHALM	06	BELL	$e^+e^- \approx \Upsilon(4S)$
3.82±0.40±0.27	104 ± 11	ABLIKIM	04C	BES	e^+e^-, 3.773 GeV
3.4 ±0.5 ±0.4	55	ADLER	89	MRK3	e^+e^- 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3.44±0.10±0.10	1311 ± 37	COAN	05	CLEO	See DOBBS 08

$\Gamma(K^-e^+\nu_e)/\Gamma(K^-\pi^+)$ Γ_{18}/Γ_{32}

NODE=S032R66

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.923±0.012 OUR FIT Error includes scale factor of 1.1.					
0.930±0.013 OUR AVERAGE					
0.927±0.007±0.012	76k±323	[26] AUBERT	07BG	BABR	$e^+e^- \approx \Upsilon(4S)$
0.978±0.027±0.044	2510	[27] BEAN	93C	CLE2	$e^+e^- \approx \Upsilon(4S)$
0.90 ±0.06 ±0.06	584	[28] CRAWFORD	91B	CLEO	$e^+e^- \approx$ 10.5 GeV
0.91 ±0.07 ±0.11	250	[29] ANJOS	89F	E691	Photoproduction

[26] The event samples in this AUBERT 07BG result include radiative photons. The $D^0 \rightarrow K^-e^+\nu_e$ form factor at $q^2 = 0$ is $f_+(0) = 0.727 \pm 0.007 \pm 0.005 \pm 0.007$. NODE=S032R66;LINKAGE=AU

[27] BEAN 93C uses $K^-\mu^+\nu_\mu$ as well as $K^-e^+\nu_e$ events and makes a small phase-space adjustment to the number of the μ^+ events to use them as e^+ events. A pole mass of $2.00 \pm 0.12 \pm 0.18$ GeV/c^2 is obtained from the q^2 dependence of the decay rate. NODE=S032R66;LINKAGE=A

[28] CRAWFORD 91B uses $K^-e^+\nu_e$ and $K^-\mu^+\nu_\mu$ candidates to measure a pole mass of $2.1^{+0.4}_{-0.2}{}^{+0.3}_{-0.2}$ GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032R66;LINKAGE=B

[29] ANJOS 89F measures a pole mass of $2.1^{+0.4}_{-0.2} \pm 0.2$ GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032R66;LINKAGE=C

$\Gamma(K^-\mu^+\nu_\mu)/\Gamma_{total}$ Γ_{19}/Γ

NODE=S032R30

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.32±0.13 OUR FIT					
3.45±0.10±0.21	1249 ± 43	WIDHALM	06	BELL	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(K^-\mu^+\nu_\mu)/\Gamma(K^-\pi^+)$ Γ_{19}/Γ_{32}

NODE=S032B29

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.850±0.033 OUR FIT					
0.84 ±0.04 OUR AVERAGE					
0.852±0.034±0.028	1897	[30] FRABETTI	95G	E687	γ Be $\overline{E}_\gamma$= 220 GeV
0.82 ±0.13 ±0.13	338	[31] FRABETTI	93I	E687	γ Be $\overline{E}_\gamma$= 221 GeV
0.79 ±0.08 ±0.09	231	[32] CRAWFORD	91B	CLEO	$e^+e^- \approx$ 10.5 GeV

[30] FRABETTI 95G extracts the ratio of form factors $f_-(0)/f_+(0) = -1.3^{+3.6}_{-3.4} \pm 0.6$, and measures a pole mass of $1.87^{+0.11}_{-0.08}{}^{+0.07}_{-0.06}$ GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032B29;LINKAGE=A

[31] FRABETTI 93I measures a pole mass of $2.1^{+0.7}_{-0.3}{}^{+0.7}_{-0.3}$ GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032B29;LINKAGE=B

[32] CRAWFORD 91B measures a pole mass of 2.00 ± 0.12 ± 0.18 GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032B29;LINKAGE=C

$\Gamma(K^-\mu^+\nu_\mu)/\Gamma(\mu^+ \text{anything})$ Γ_{19}/Γ_6

NODE=S032B17

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.50 ±0.05 OUR FIT					
0.472±0.051±0.040	232	KODAMA	94	E653	π^- emulsion 600 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.32 ±0.05 ±0.05	124	KODAMA	91	EMUL	pA 800 GeV

$\Gamma(K^-\pi^0e^+\nu_e)/\Gamma_{total}$ Γ_{22}/Γ

NODE=S032B27

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
$0.016^{+0.013}_{-0.005}$±0.002	4	[33] BAI	91	MRK3	$e^+e^- \approx$ 3.77 GeV

[33] BAI 91 finds that a fraction $0.79^{+0.15}_{-0.17}{}^{+0.09}_{-0.03}$ of combined D^+ and D^0 decays to $\overline{K}\pi e^+\nu_e$ (24 events) are $\overline{K}^*(892)e^+\nu_e$. BAI 91 uses 56 $K^-e^+\nu_e$ events to measure a pole mass of 1.8 ± 0.3 ± 0.2 GeV/c^2 from the q^2 dependence of the decay rate. NODE=S032B27;LINKAGE=A

$\Gamma(\overline{K}^0\pi^-e^+\nu_e)/\Gamma_{total}$ Γ_{23}/Γ

NODE=S032B28

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.7 $^{+0.9}_{-0.7}$ OUR AVERAGE					
2.61±1.04±0.28	9 ± 3	ABLIKIM	06O	BES2	e^+e^- at 3773 MeV
2.8 $^{+1.7}_{-0.8}$ ±0.3	6	[34] BAI	91	MRK3	$e^+e^- \approx$ 3.77 GeV

[34] BAI 91 finds that a fraction $0.79^{+0.15}_{-0.17}{}^{+0.09}_{-0.03}$ of combined D^+ and D^0 decays to $\overline{K}\pi e^+\nu_e$ (24 events) are $\overline{K}^*(892)e^+\nu_e$. NODE=S032B28;LINKAGE=A

$\Gamma(K^*(892)^-e^+\nu_e)/\Gamma_{total}$ Γ_{20}/Γ

NODE=S032C38

Both decay modes of the $K^*(892)^-$ are included.

NODE=S032C38

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.17±0.16 OUR FIT					
2.16±0.15±0.08	219 ± 16	[35] COAN	05	CLEO	e^+e^- at $\psi(3770)$

[35] COAN 05 uses both $K^-\pi^0$ and $K^0_S\pi^-$ events. NODE=S032C38;LINKAGE=CO

$\Gamma(K^*(892)^-e^+\nu_e)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{20}/Γ_{35}

NODE=S032B81

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B81

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.74±0.06 OUR FIT					
0.76±0.12±0.06	152	[36] BEAN	93C	CLE2	$e^+e^- \approx \Upsilon(4S)$

[36] BEAN 93C uses $K^{*-}\mu^+\nu_\mu$ as well as $K^{*-}e^+\nu_e$ events and makes a small phase-space adjustment to the number of the μ^+ events to use them as e^+ events. NODE=S032B81;LINKAGE=A

$\Gamma(K^*(892)^-e^+\nu_e)/\Gamma(K^-e^+\nu_e)$ Γ_{20}/Γ_{18}

NODE=S032B30

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B30

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.51±0.18±0.06	CRAWFORD	91B	CLEO	$e^+e^- \approx$ 10.5 GeV

$\Gamma(K^*(892)^- \mu^+ \nu_\mu)/\Gamma(K^0_S \pi^+ \pi^-)$ Γ_{21}/Γ_{35}

NODE=S032Q01

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032Q01
NODE=S032Q01

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.674±0.068±0.026	175 ± 17	[37] LINK	05B	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

[37] LINK 05B finds that in $D^0 \rightarrow \overline{K}^0 \pi^- \mu^+ \nu_\mu$ the $\overline{K}^0 \pi^-$ system is 6% in S-wave.

NODE=S032Q01;LINKAGE=LI

$\Gamma(K^*(892)^- \ell^+ \nu_\ell)/\Gamma(K^0_S \pi^+ \pi^-)$ Γ_{24}/Γ_{35}

NODE=S032R93

This an average of the $K^*(892)^- e^+ \nu_e$ and $K^*(892)^- \mu^+ \nu_\mu$ ratios. Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032R93
NODE=S032R93

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.48±0.14±0.12	137	[38] ALEXANDER	90B	CLEO	$e^+ e^-$ 10.5–11 GeV

[38] ALEXANDER 90B cannot exclude extra π^0's in the final state.

NODE=S032R93;LINKAGE=A

$\Gamma(K^- \pi^+ \pi^- e^+ \nu_e)/\Gamma_{\text{total}}$ Γ_{25}/Γ

NODE=S032R06
NODE=S032R06

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{2.8^{+1.4}_{-1.1}\pm0.3}$	8	ARTUSO	07A	CLEO	$e^+ e^-$ at $\Upsilon(3770)$

$\Gamma(K_1(1270)^- e^+ \nu_e)/\Gamma_{\text{total}}$ Γ_{26}/Γ

NODE=S032R07
NODE=S032R07

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{7.6^{+4.1}_{-3.0}\pm0.9}$	8	[39] ARTUSO	07A	CLEO	$e^+ e^-$ at $\Upsilon(3770)$

[39] This ARTUSO 07A result is corrected for all decay modes of the $K_1(1270)^-$.

NODE=S032R07;LINKAGE=AR

$\Gamma(K^- \pi^+ \pi^- \mu^+ \nu_\mu)/\Gamma(K^- \mu^+ \nu_\mu)$ Γ_{27}/Γ_{19}

NODE=S032B74
NODE=S032B74

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.037	90	KODAMA	93B	E653	π^- emulsion 600 GeV

$\Gamma((\overline{K}^*(892)\pi)^- \mu^+ \nu_\mu)/\Gamma(K^- \mu^+ \nu_\mu)$ Γ_{28}/Γ_{19}

NODE=S032B75
NODE=S032B75

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.043	90	[40] KODAMA	93B	E653	π^- emulsion 600 GeV

[40] KODAMA 93B searched in $K^- \pi^+ \pi^- \mu^+ \nu_\mu$, but the limit includes other $(\overline{K}^*(892)\pi)^-$ charge states.

NODE=S032B75;LINKAGE=A

$\Gamma(\pi^- e^+ \nu_e)/\Gamma_{\text{total}}$ Γ_{29}/Γ

NODE=S032R60
NODE=S032R60

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
0.298±0.012 OUR FIT					
0.296±0.013 OUR AVERAGE					
0.299±0.011±0.009		DOBBS	08	CLEO	$e^+ e^-$ at $\psi(3770)$
0.279±0.027±0.016	126 ± 12	[41] WIDHALM	06	BELL	$e^+ e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.262±0.025±0.008	117 ± 11	COAN	05	CLEO	See DOBBS 08

[41] This result of WIDHALM 06 gives $|\frac{V_{cd}}{V_{cs}} \cdot \frac{f_+^\pi(0)}{f_+^K(0)}|^2 = 0.042 \pm 0.003 \pm 0.003$.

NODE=S032R60;LINKAGE=WI

$\Gamma(\pi^- e^+ \nu_e)/\Gamma(K^- e^+ \nu_e)$ Γ_{29}/Γ_{18}

NODE=S032S25
NODE=S032S25

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0825±0.0034 OUR FIT					
0.085 ±0.007 OUR AVERAGE					
0.082 ±0.006 ±0.005		[42] HUANG	05	CLEO	$e^+ e^- \approx \Upsilon(4S)$
0.101 ±0.020 ±0.003	91	[43] FRABETTI	96B	E687	γ Be, $\overline{E}_\gamma \approx$ 200 GeV
0.103 ±0.039 ±0.013	87	[44] BUTLER	95	CLE2	< 0.156 (90% CL)

[42] HUANG 05 uses both e and μ events, and makes a small correction to the μ events to make them effectively e events. This result gives $|\frac{V_{cd}}{V_{cs}} \cdot \frac{f_+^\pi(0)}{f_+^K(0)}|^2 = 0.038^{+0.006}_{-0.007}{}^{+0.005}_{-0.003}$.

NODE=S032S25;LINKAGE=HU

[43] FRABETTI 96B uses both e and μ events, and makes a small correction to the μ events to make them effectively e events. This result gives $|\frac{V_{cd}}{V_{cs}} \cdot \frac{f_+^\pi(0)}{f_+^K(0)}|^2 = 0.050 \pm 0.011 \pm 0.002$.

NODE=S032S25;LINKAGE=B

[44] BUTLER 95 has 87 ± 33 $\pi^- e^+ \nu_e$ events. The result gives $|\frac{V_{cd}}{V_{cs}} \cdot \frac{f_+^\pi(0)}{f_+^K(0)}|^2 = 0.052 \pm 0.020 \pm 0.007$.

NODE=S032S25;LINKAGE=A

$\Gamma(\pi^- \mu^+ \nu_\mu)/\Gamma_{total}$ — Γ_{30}/Γ

NODE=S032R45

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
0.238±0.024 OUR FIT					
0.231±0.026±0.019	106 ± 13	WIDHALM	06	BELL	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\pi^- \mu^+ \nu_\mu)/\Gamma(K^- \mu^+ \nu_\mu)$ — Γ_{30}/Γ_{19}

NODE=S032S96

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.072±0.007 OUR FIT					
0.074±0.008±0.007	288 ± 29	[45] LINK	05	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

[45] LINK 05 finds the form-factor ratio $|f_0^\pi(0)/f_0^K(0)|$ to be 0.85 ± 0.04 ± 0.04 ± 0.01. NODE=S032S96;LINKAGE=LI

$\Gamma(\rho^- e^+ \nu_e)/\Gamma_{total}$ — Γ_{31}/Γ

NODE=S032C39

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
0.194±0.039±0.013	31 ± 6	COAN	05	CLEO	$e^+ e^-$ at $\psi(3770)$

Hadronic modes with a single $\overline{K}$

NODE=S032320

$\Gamma(K^- \pi^+)/\Gamma_{total}$ — Γ_{32}/Γ

NODE=S032R12

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.91 ±0.05 OUR FIT Error includes scale factor of 1.1.					
3.91 ±0.05 OUR AVERAGE Error includes scale factor of 1.1.					
4.007±0.037±0.072	33.8 ± 0.3k	AUBERT	08L	BABR	$e^+ e^-$ at $\Upsilon(4S)$
3.891±0.035±0.069		[46] DOBBS	07	CLEO	$e^+ e^-$ at $\psi(3770)$
3.82 ±0.07 ±0.12		[47] ARTUSO	98	CLE2	CLEO average (OCCUR=3)
3.90 ±0.09 ±0.12	5392	[48] BARATE	97C	ALEP	From Z decays
3.41 ±0.12 ±0.28	1173 ± 37	[48] ALBRECHT	94F	ARG	$e^+ e^- \approx \Upsilon(4S)$
3.62 ±0.34 ±0.44		[48] DECAMP	91J	ALEP	From Z decays
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3.91 ±0.08 ±0.09	10.3k ±100	[46] HE	05	CLEO	See DOBBS 07
3.81 ±0.15 ±0.16	1165	[49] ARTUSO	98	CLE2	$e^+ e^-$ at $\Upsilon(4S)$ (OCCUR=2)
3.69 ±0.11 ±0.16		[50] COAN	98	CLE2	See ARTUSO 98
4.5 ±0.6 ±0.4		[51] ALBRECHT	94	ARG	$e^+ e^- \approx \Upsilon(4S)$
3.95 ±0.08 ±0.17	4208	[48,52] AKERIB	93	CLE2	See ARTUSO 98
4.5 ±0.8 ±0.5	56	[48] ABACHI	88	HRS	$e^+ e^-$ 29 GeV
4.2 ±0.4 ±0.4	930	ADLER	88C	MRK3	$e^+ e^-$ 3.77 GeV
4.1 ±0.6	263 ± 17	[53] SCHINDLER	81	MRK2	$e^+ e^-$ 3.771 GeV
4.3 ±1.0	130	[54] PERUZZI	77	LGW	$e^+ e^-$ 3.77 GeV

[46] DOBBS 07 and HE 05 use single- and double-tagged events in an overall fit. DOBBS 07 supersedes HE 05. NODE=S032R12;LINKAGE=HE

[47] This combines the CLEO results of ARTUSO 98, COAN 98, and AKERIB 93. NODE=S032R12;LINKAGE=KL

[48] ABACHI 88, DECAMP 91J, AKERIB 93, ALBRECHT 94F, and BARATE 97C use $D^*(2010)^+ \rightarrow D^0 \pi^+$ decays. The π^+ is both slow and of low p_T with respect to the event thrust axis or nearest jet ($\approx D^{*+}$ direction). The excess number of such π^+'s over background gives the number of $D^*(2010)^+ \rightarrow D^0 \pi^+$ events, and the fraction with $D^0 \rightarrow K^- \pi^+$ gives the $D^0 \rightarrow K^- \pi^+$ branching fraction. NODE=S032R12;LINKAGE=C

[49] ARTUSO 98, following ALBRECHT 94, uses D^0 mesons from $\overline{B}^0 \rightarrow D^*(2010)^+ X \ell^- \overline{\nu}_\ell$ decays. Our average uses the CLEO average of this value with the values of COAN 98 and AKERIB 93. NODE=S032R12;LINKAGE=KA

[50] COAN 98 assumes that $\Gamma(B \rightarrow \overline{D} X \ell^+ \nu)/\Gamma(B \rightarrow X \ell^+ \nu) = 1.0 - 3|V_{ub}/V_{cb}|^2 -$ 0.010 ± 0.005, the last term accounting for $\overline{B} \rightarrow D_s^+ K X \ell^- \overline{\nu}$. COAN 98 is included in the CLEO average in ARTUSO 98. NODE=S032R12;LINKAGE=KC

[51] ALBRECHT 94 uses D^0 mesons from $\overline{B}^0 \rightarrow D^{*+} \ell^- \overline{\nu}_\ell$ decays. This is a different set of events than used by ALBRECHT 94F. NODE=S032R12;LINKAGE=D

[52] This AKERIB 93 value includes radiative corrections; without them, the value is 0.0391 ± 0.0008 ± 0.0017. AKERIB 93 is included in the CLEO average in ARTUSO 98. NODE=S032R12;LINKAGE=B

[53] SCHINDLER 81 (MARK-2) measures $\sigma(e^+ e^- \rightarrow \psi(3770)) \times$ branching fraction to be 0.24 ± 0.02 nb. We use the MARK-3 (ADLER 88C) value of σ = 5.8 ± 0.5 ± 0.6 nb. NODE=S032R12;LINKAGE=SP

[54] PERUZZI 77 (MARK-1) measures $\sigma(e^+ e^- \rightarrow \psi(3770)) \times$ branching fraction to be 0.25 ± 0.05 nb. We use the MARK-3 (ADLER 88C) value of σ = 5.8 ± 0.5 ± 0.6 nb. NODE=S032R12;LINKAGE=PS

$\Gamma(K_S^0 \pi^0)/\Gamma_{total}$ — Γ_{33}/Γ

NODE=S032S06

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
1.21 ±0.07 OUR FIT Error includes scale factor of 1.4.					
1.240±0.017±0.056	614	HE	08	CLEO	$e^+ e^-$ at $\psi(3770)$

$\Gamma(K^0_S\pi^0)/\Gamma(K^-\pi^+)$ Γ_{33}/Γ_{32}

NODE=S032B55

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.310±0.018 OUR FIT	Error includes scale factor of 1.3.				
0.68 ±0.12 ±0.11	119	ANJOS	92B	E691	γ Be 80–240 GeV

$\Gamma(K^0_S\pi^0)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{33}/Γ_{35}

NODE=S032B14

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.416±0.027 OUR FIT	Error includes scale factor of 1.2.				
0.378±0.033 OUR AVERAGE					
0.44 ±0.02 ±0.05	1942 ± 64	PROCARIO	93B	CLE2	e^+e^- 10.36–10.7 GeV
0.34 ±0.04 ±0.02	92	[55] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV
0.36 ±0.04 ±0.08	104	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV

[55] This value is calculated from numbers in Table 1 of ALBRECHT 92P. NODE=S032B14;LINKAGE=AP

$\Gamma(K^0_L\pi^0)/\Gamma_{total}$ Γ_{34}/Γ

NODE=S032S07

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
0.998±0.049±0.048	1116	[56] HE	08	CLEO	e^+e^- at $\psi(3770)$

[56] The difference of HE 08 $D^0 \to K^0_S\pi^0$ and $K^0_L\pi^0$ branching fractions over the sum is $0.108 \pm 0.025 \pm 0.024$. This is consistent with U-spin symmetry and the Cabibbo angle. NODE=S032S07;LINKAGE=HE

$\Gamma(K^0_S\pi^+\pi^-)/\Gamma_{total}$ Γ_{35}/Γ

NODE=S032R21

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.92±0.17 OUR FIT	Error includes scale factor of 1.1.				
2.68±0.29 OUR AVERAGE					
2.52±0.20±0.25	284 ± 22	[57] ALBRECHT	94F	ARG	$e^+e^- \approx \Upsilon(4S)$
3.2 ±0.3 ±0.5		ADLER	87	MRK3	e^+e^- 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2.6 ±0.8	32 ± 8	[58] SCHINDLER	81	MRK2	e^+e^- 3.771 GeV
4.0 ±1.2	28	[59] PERUZZI	77	LGW	e^+e^- 3.77 GeV

[57] See the footnote on the ALBRECHT 94F measurement of $\Gamma(K^-\pi^+)/\Gamma_{total}$ for the method used. NODE=S032R21;LINKAGE=E

[58] SCHINDLER 81 (MARK-2) measures $\sigma(e^+e^- \to \psi(3770)) \times$ branching fraction to be 0.30 ± 0.08 nb. We use the MARK-3 (ADLER 88C) value of $\sigma = 5.8 \pm 0.5 \pm 0.6$ nb. NODE=S032R21;LINKAGE=SP

[59] PERUZZI 77 (MARK-1) measures $\sigma(e^+e^- \to \psi(3770)) \times$ branching fraction to be 0.46 ± 0.12 nb. We use the MARK-3 (ADLER 88C) value of $\sigma = 5.8 \pm 0.5 \pm 0.6$ nb. NODE=S032R21;LINKAGE=PS

$\Gamma(K^0_S\pi^+\pi^-)/\Gamma(K^-\pi^+)$ Γ_{35}/Γ_{32}

NODE=S032R28

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.75±0.04 OUR FIT	Error includes scale factor of 1.1.				
0.81±0.05±0.08	856 ± 35	FRABETTI	94J	E687	γ Be $\overline{E}_\gamma$=220 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.85±0.40	35	AVERY	80	SPEC	$\gamma N \to D^{*+}$
1.4 ±0.5	116	PICCOLO	77	MRK1	e^+e^- 4.03, 4.41 GeV

$\Gamma(K^0_S\rho^0)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{36}/Γ_{35}

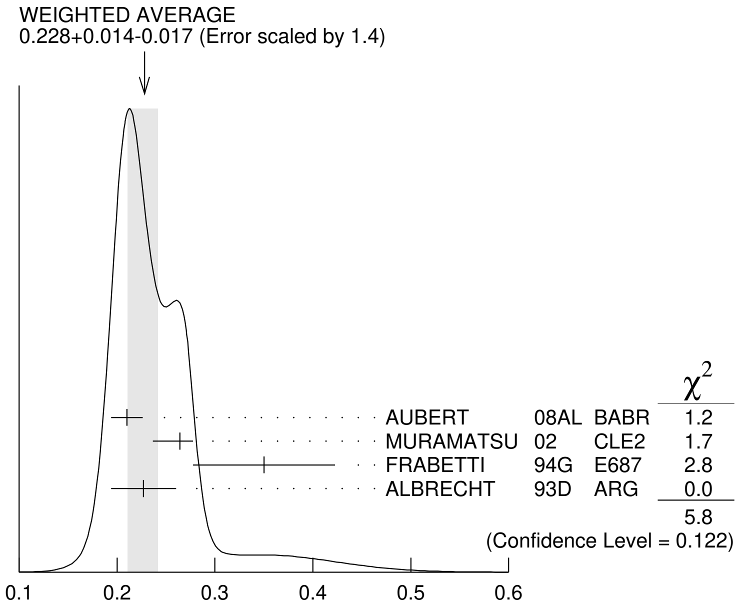
NODE=S032B59

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032B59

VALUE	DOCUMENT ID		TECN	COMMENT
$0.228^{+0.014}_{-0.017}$ OUR AVERAGE	Error includes scale factor of 1.4. See the ideogram below.			
0.210±0.016	[60] AUBERT	08AL	BABR	Dalitz fit, ≈ 487 k evts
$0.264\pm0.009^{+0.010}_{-0.026}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
0.350±0.028±0.067	FRABETTI	94G	E687	γ Be, $\overline{E}_\gamma \approx$ 220 GeV
0.227±0.032±0.009	ALBRECHT	93D	ARG	$e^+e^- \approx$ 10 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.267\pm0.011^{+0.009}_{-0.028}$	ASNER	04A	CLEO	See MURAMATSU 02
0.215±0.051±0.037	ANJOS	93	E691	γ Be 90–260 GeV
0.20 ±0.06 ±0.03	FRABETTI	92B	E687	γ Be, $\overline{E}_\gamma$= 221 GeV
0.12 ±0.01 ±0.07	ADLER	87	MRK3	e^+e^- 3.77 GeV

[60] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates. NODE=S032B59;LINKAGE=AU



$\Gamma(K^0_S\rho^0)/\Gamma(K^0_S\pi^+\pi^-)$

$\Gamma(K^0_S\omega, \omega\to\pi^+\pi^-)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{37}/Γ_{35}

NODE=S032S95

This is the "fit fraction" from the Dalitz-plot analysis. NODE=S032S95

NODE=S032S95

VALUE	DOCUMENT ID	TECN	COMMENT
0.0073±0.0020 OUR AVERAGE			
0.009 ±0.010	[61] AUBERT	08AL BABR	Dalitz fit, ≈ 487 k evts
$0.0072\pm0.0018^{+0.0010}_{-0.0009}$	MURAMATSU	02 CLE2	Dalitz fit, 5299 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$0.0081\pm0.0019^{+0.0018}_{-0.0010}$	ASNER	04A CLEO	See MURAMATSU 02

[61] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates. NODE=S032S95;LINKAGE=AU

$\Gamma(K^0_S f_0(980), f_0(980)\to\pi^+\pi^-)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{38}/Γ_{35}

NODE=S032B76

This is the "fit fraction" from the Dalitz-plot analysis. NODE=S032B76

NODE=S032B76

VALUE	DOCUMENT ID	TECN	COMMENT
$0.047^{+0.010}_{-0.007}$ OUR AVERAGE			
$0.043\pm0.005^{+0.012}_{-0.006}$	MURAMATSU	02 CLE2	Dalitz fit, 5299 evts
0.068±0.016±0.018	FRABETTI	94G E687	γBe, $\overline{E}_\gamma\approx$ 220 GeV
0.046±0.018±0.006	ALBRECHT	93D ARG	$e^+e^-\approx$ 10 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$0.042\pm0.005^{+0.011}_{-0.005}$	ASNER	04A CLEO	See MURAMATSU 02

$\Gamma(K^0_S f_2(1270), f_2(1270)\to\pi^+\pi^-)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{39}/Γ_{35}

NODE=S032B77

This is the "fit fraction" from the Dalitz-plot analysis. Note the large difference between the CLEO results and earlier measurements. NODE=S032B77

NODE=S032B77

VALUE	DOCUMENT ID	TECN	COMMENT
$0.0049^{+0.0034}_{-0.0021}$ OUR AVERAGE			
0.006 ±0.007	[62] AUBERT	08AL BABR	Dalitz fit, ≈ 487 k evts
$0.0027\pm0.0015^{+0.0037}_{-0.0017}$	MURAMATSU	02 CLE2	Dalitz fit, 5299 evts
0.037 ±0.014 ±0.017	FRABETTI	94G E687	γBe, $\overline{E}_\gamma\approx$ 220 GeV
0.050 ±0.021 ±0.008	ALBRECHT	93D ARG	$e^+e^-\approx$ 10 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •			
$0.0036\pm0.0022^{+0.0032}_{-0.0019}$	ASNER	04A CLEO	See MURAMATSU 02

[62] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates. NODE=S032B77;LINKAGE=AU

$\Gamma\big(K^0_S f_0(1370),\, f_0(1370) \to \pi^+\pi^-\big)/\Gamma\big(K^0_S \pi^+\pi^-\big)$ Γ_{40}/Γ_{35}

NODE=S032B78

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032B78
NODE=S032B78

VALUE	DOCUMENT ID		TECN	COMMENT
$0.085^{+0.019}_{-0.021}$ OUR AVERAGE				
$0.099\pm0.011^{+0.028}_{-0.044}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
$0.077\pm0.022\pm0.031$	FRABETTI	94G	E687	γ Be, $\overline{E}_\gamma \approx 220$ GeV
$0.082\pm0.028\pm0.013$	ALBRECHT	93D	ARG	$e^+e^- \approx 10$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.098\pm0.014^{+0.026}_{-0.036}$	ASNER	04A	CLEO	See MURAMATSU 02

$\Gamma\big(K^0_S (\pi^+\pi^-)_{S-\text{wave}}\big)/\Gamma\big(K^0_S \pi^+\pi^-\big)$ Γ_{41}/Γ_{35}

NODE=S032C74

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C74
NODE=S032C74

VALUE	DOCUMENT ID		TECN	COMMENT
0.119 ± 0.026	AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts

$\Gamma\big(K^*(892)^-\pi^+,\, K^*(892)^- \to K^0_S\pi^-\big)/\Gamma\big(K^0_S \pi^+\pi^-\big)$ Γ_{42}/Γ_{35}

NODE=S032B58

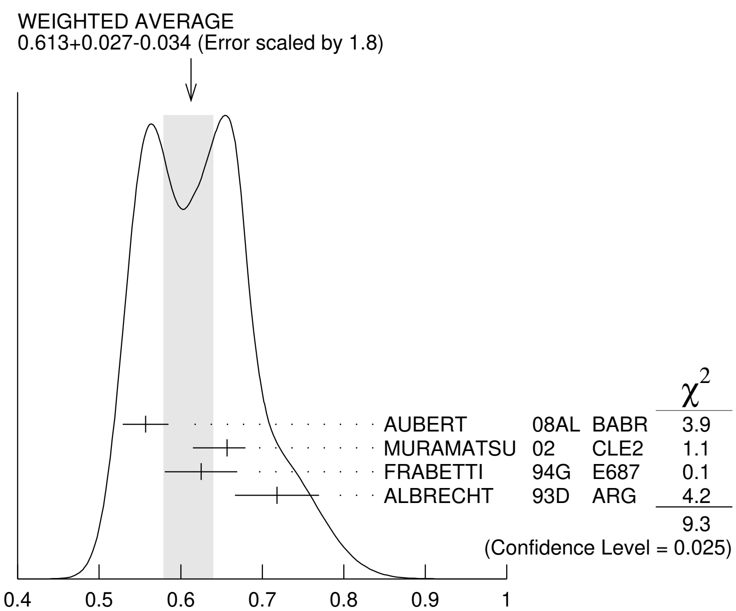
This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032B58
NODE=S032B58

VALUE	DOCUMENT ID		TECN	COMMENT
$0.613^{+0.027}_{-0.034}$ OUR AVERAGE Error includes scale factor of 1.8. See the ideogram below.				
0.557 ± 0.028	[63] AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts
$0.657\pm0.013^{+0.018}_{-0.040}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
$0.625\pm0.036\pm0.026$	FRABETTI	94G	E687	γ Be, $\overline{E}_\gamma \approx 220$ GeV
$0.718\pm0.042\pm0.030$	ALBRECHT	93D	ARG	$e^+e^- \approx 10$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.663\pm0.013^{+0.024}_{-0.043}$	ASNER	04A	CLEO	See MURAMATSU 02
0.480 ± 0.097	ANJOS	93	E691	γ Be 90–260 GeV
$0.56\ \pm0.04\ \pm0.05$	ADLER	87	MRK3	e^+e^- 3.77 GeV

[63] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates.

NODE=S032B58;LINKAGE=AU



$\Gamma\big(K^*(892)^-\pi^+,\, K^*(892)^- \to K^0_S\pi^-\big)/\Gamma\big(K^0_S \pi^+\pi^-\big)$ Γ_{42}/Γ_{35}

$\Gamma\big(K_0^*(1430)^-\pi^+,\ K_0^*(1430)^- \to K_S^0\pi^-\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{43}/Γ_{35}

NODE=S032B79

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032B79
NODE=S032B79

VALUE	DOCUMENT ID		TECN	COMMENT
$0.100^{+0.012}_{-0.009}$ OUR AVERAGE				
0.102 ± 0.015	[64] AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts
$0.073\pm0.007^{+0.031}_{-0.011}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
$0.109\pm0.027\pm0.029$	FRABETTI	94G	E687	γ Be, $\overline{E}_\gamma \approx$ 220 GeV
$0.129\pm0.034\pm0.021$	ALBRECHT	93D	ARG	$e^+e^- \approx$ 10 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.072\pm0.007^{+0.014}_{-0.013}$	ASNER	04A	CLEO	See MURAMATSU 02

[64] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates.

NODE=S032B79;LINKAGE=AU

$\Gamma\big(K_2^*(1430)^-\pi^+,\ K_2^*(1430)^- \to K_S^0\pi^-\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{44}/Γ_{35}

NODE=S032B80

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032B80
NODE=S032B80

VALUE	DOCUMENT ID		TECN	COMMENT
$0.0120^{+0.0070}_{-0.0035}$ OUR AVERAGE				
0.022 ± 0.016	[65] AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts
$0.011\pm0.002\ ^{+0.007}_{-0.003}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.011\pm0.002\ ^{+0.005}_{-0.003}$	ASNER	04A	CLEO	See MURAMATSU 02

[65] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates.

NODE=S032B80;LINKAGE=AU

$\Gamma\big(K^*(1680)^-\pi^+,\ K^*(1680)^- \to K_S^0\pi^-\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{45}/Γ_{35}

NODE=S032C26

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C26
NODE=S032C26

VALUE	DOCUMENT ID		TECN	COMMENT
0.016 ± 0.013 OUR AVERAGE				
0.007 ± 0.019	[66] AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts
$0.022\pm0.004^{+0.018}_{-0.015}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.023\pm0.005^{+0.007}_{-0.014}$	ASNER	04A	CLEO	See MURAMATSU 02

[66] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates.

NODE=S032C26;LINKAGE=AU

$\Gamma\big(K^*(892)^+\pi^-,\ K^*(892)^+ \to K_S^0\pi^+\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{224}/Γ_{35}

NODE=S032S94

This is the "fit fraction" from the Dalitz-plot analysis. This is a doubly Cabibbo-suppressed mode.

NODE=S032S94

NODE=S032S94

VALUE (units 10^{-3})	DOCUMENT ID		TECN	COMMENT
$4.0^{+2.0}_{-1.2}$ OUR AVERAGE				
4.6 ± 2.3	[67] AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts
$3.4\pm1.3^{+4.1}_{-0.4}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$3.4\pm1.3^{+3.6}_{-0.5}$	ASNER	04A	CLEO	See MURAMATSU 02

[67] The error on this AUBERT 08AL value includes both statistical and systematic uncertaities; the latter dominates.

NODE=S032S94;LINKAGE=AU

$\Gamma\big(K_0^*(1430)^+\pi^-,\ K_0^*(1430)^+ \to K_S^0\pi^+\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{47}/Γ_{35}

NODE=S032C72

This is the "fit fraction" from the Dalitz-plot analysis. This is a doubly Cabibbo-suppressed mode.

NODE=S032C72

NODE=S032C72

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<5\times10^{-4}$	95	AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts

$\Gamma\big(K_2^*(1430)^+\pi^-,\ K_2^*(1430)^+ \to K_S^0\pi^+\big)/\Gamma\big(K_S^0\pi^+\pi^-\big)$ Γ_{48}/Γ_{35}

NODE=S032C73

This is the "fit fraction" from the Dalitz-plot analysis. This is a doubly Cabibbo-suppressed mode.

NODE=S032C73

NODE=S032C73

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<1.2\times10^{-3}$	95	AUBERT	08AL	BABR	Dalitz fit, $\approx$ 487 k evts

$\Gamma(K^0_S\pi^+\pi^-$ nonresonant$)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{49}/Γ_{35}

NODE=S032B57

This is the "fit fraction" from the Dalitz-plot analysis. Neither FRABETTI 94G nor ALBRECHT 93D (quoted in many of the earlier submodes of $K^0_S\pi^+\pi^-$) sees evidence for a nonresonant component.

NODE=S032B57

VALUE	DOCUMENT ID		TECN	COMMENT
$0.009\pm0.004^{+0.020}_{-0.004}$	MURAMATSU	02	CLE2	Dalitz fit, 5299 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$0.007\pm0.007^{+0.021}_{-0.006}$	ASNER	04A	CLEO	See MURAMATSU 02
$0.263\pm0.024\pm0.041$	ANJOS	93	E691	γBe 90–260 GeV
$0.26\pm0.08\pm0.05$	FRABETTI	92B	E687	γ Be, $\overline{E}_\gamma = 221$ GeV
$0.33\pm0.05\pm0.10$	ADLER	87	MRK3	e^+e^- 3.77 GeV

NODE=S032B57

$\Gamma(K^-\pi^+\pi^0)/\Gamma_{total}$ Γ_{50}/Γ

NODE=S032R19
NODE=S032R19

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
14.0 ±0.5 OUR FIT Error includes scale factor of 1.6.					
14.57±0.12±0.38		[68] DOBBS	07	CLEO	e^+e^- at $\psi(3770)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
14.9 ±0.3 ±0.5	19k ±150	[68] HE	05	CLEO	See DOBBS 07
13.3 ±1.2 ±1.3	931	ADLER	88C	MRK3	e^+e^- 3.77 GeV
11.7 ±4.3	37	[69] SCHINDLER	81	MRK2	e^+e^- 3.771 GeV

[68] DOBBS 07 and HE 05 use single- and double-tagged events in an overall fit. DOBBS 07 supersedes HE 05.

NODE=S032R19;LINKAGE=HE

[69] SCHINDLER 81 (MARK-2) measures $\sigma(e^+e^- \rightarrow \psi(3770)) \times$ branching fraction to be 0.68 ± 0.23 nb. We use the MARK-3 (ADLER 88C) value of $\sigma = 5.8 \pm 0.5 \pm 0.6$ nb.

NODE=S032R19;LINKAGE=SP

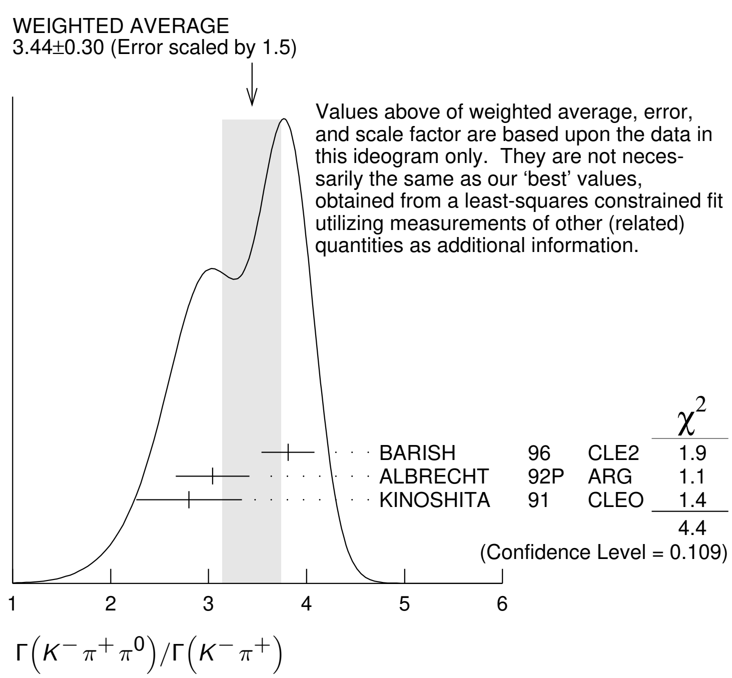
$\Gamma(K^-\pi^+\pi^0)/\Gamma(K^-\pi^+)$ Γ_{50}/Γ_{32}

NODE=S032R47
NODE=S032R47

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
3.57±0.13 OUR FIT Error includes scale factor of 1.8.					
3.44±0.30 OUR AVERAGE Error includes scale factor of 1.5. See the ideogram below.					
3.81±0.07±0.26	10k	BARISH	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
3.04±0.16±0.34	931	[70] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV
2.8 ±0.14±0.52	1050	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
4.0 ±0.9 ±1.0	69	ALVAREZ	91B	NA14	Photoproduction
4.2 ±1.4	41	SUMMERS	84	E691	Photoproduction

[70] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032R47;LINKAGE=AP



$\Gamma(K^-\rho^+)/\Gamma(K^-\pi^+\pi^0)$ Γ_{51}/Γ_{50}

NODE=S032R48

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032R48
NODE=S032R48

VALUE	DOCUMENT ID		TECN	COMMENT
0.78 ±0.04 OUR AVERAGE				
0.788±0.019±0.048	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV
0.765±0.041±0.054	FRABETTI	94G	E687	γBe, $\overline{E}_\gamma \approx$ 220 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.647±0.039±0.150	ANJOS	93	E691	γBe 90–260 GeV
0.81 ±0.03 ±0.06	ADLER	87	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^-\rho(1700)^+, \rho(1700)^+ \to \pi^+\pi^0)/\Gamma(K^-\pi^+\pi^0)$ Γ_{52}/Γ_{50}

NODE=S032C1

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C1
NODE=S032C1

VALUE	DOCUMENT ID		TECN	COMMENT
0.057±0.008±0.009	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$\Gamma(K^*(892)^-\pi^+, K^*(892)^- \to K^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ Γ_{53}/Γ_{50}

NODE=S032S16

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032S16
NODE=S032S16

VALUE	DOCUMENT ID		TECN	COMMENT
$0.160^{+0.025}_{-0.013}$ OUR AVERAGE				
$0.161\pm0.007^{+0.027}_{-0.011}$	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV
0.148±0.028±0.049	FRABETTI	94G	E687	γBe, $\overline{E}_\gamma \approx$ 220 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.084±0.011±0.012	ANJOS	93	E691	γBe 90–260 GeV
0.12 ±0.02 ±0.03	ADLER	87	MRK3	e^+e^- 3.77 GeV

$\Gamma(\overline{K}^*(892)^0\pi^0, \overline{K}^*(892)^0 \to K^-\pi^+)/\Gamma(K^-\pi^+\pi^0)$ Γ_{54}/Γ_{50}

NODE=S032S17

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032S17
NODE=S032S17

VALUE	DOCUMENT ID		TECN	COMMENT
0.135±0.016 OUR AVERAGE				
0.127±0.009±0.016	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV
0.165±0.031±0.015	FRABETTI	94G	E687	γBe, $\overline{E}_\gamma \approx$ 220 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.142±0.018±0.024	ANJOS	93	E691	γBe 90–260 GeV
0.13 ±0.02 ±0.03	ADLER	87	MRK3	e^+e^- 3.77 GeV

$\Gamma(K_0^*(1430)^-\pi^+, K_0^*(1430)^- \to K^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ Γ_{55}/Γ_{50}

NODE=S032C2

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C2
NODE=S032C2

VALUE	DOCUMENT ID		TECN	COMMENT
0.033±0.006±0.014	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$\Gamma(\overline{K}_0^*(1430)^0\pi^0, \overline{K}_0^*(1430)^0 \to K^-\pi^+)/\Gamma(K^-\pi^+\pi^0)$ Γ_{56}/Γ_{50}

NODE=S032C3

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C3
NODE=S032C3

VALUE	DOCUMENT ID		TECN	COMMENT
$0.041\pm0.006^{+0.032}_{-0.009}$	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$\Gamma(K^*(1680)^-\pi^+, K^*(1680)^- \to K^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ Γ_{57}/Γ_{50}

NODE=S032C4

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032C4
NODE=S032C4

VALUE	DOCUMENT ID		TECN	COMMENT
0.013±0.003±0.004	KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$\Gamma(K^-\pi^+\pi^0 \text{ nonresonant})/\Gamma(K^-\pi^+\pi^0)$ Γ_{58}/Γ_{50}

NODE=S032R51

This is the "fit fraction" from the Dalitz-plot analysis.

NODE=S032R51
NODE=S032R51

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
$0.080^{+0.040}_{-0.014}$ OUR AVERAGE					
$0.075\pm0.009^{+0.056}_{-0.011}$		KOPP	01	CLE2	$e^+e^- \approx$ 10.6 GeV
0.101±0.033±0.040		FRABETTI	94G	E687	γBe, $\overline{E}_\gamma \approx$ 220 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.036±0.004±0.018		ANJOS	93	E691	γBe 90–260 GeV
0.09 ±0.02 ±0.04		ADLER	87	MRK3	e^+e^- 3.77 GeV
0.51 ±0.22	21	SUMMERS	84	E691	Photoproduction

$\Gamma(\overline{K}^*(892)^0\pi^0, \overline{K}^*(892)^0 \to K^0_S\pi^0)/\Gamma(K^0_S\pi^0)$ Γ_{60}/Γ_{33}

NODE=S032B68
NODE=S032B68

VALUE	DOCUMENT ID		TECN	COMMENT
$0.55^{+0.13}_{-0.10}\pm0.07$	PROCARIO	93B	CLE2	Dalitz plot fit, 122 evts

$\Gamma(K^0_S\pi^0\pi^0$ nonresonant$)/\Gamma(K^0_S\pi^0)$ Γ_{61}/Γ_{33}

NODE=S032B70
NODE=S032B70

VALUE	DOCUMENT ID		TECN	COMMENT
$0.37\pm0.08\pm0.04$	PROCARIO	93B	CLE2	Dalitz plot fit, 122 evts

$\Gamma(K^-\pi^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{62}/Γ

NODE=S032R24
NODE=S032R24

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
$8.14^{+0.20}_{-0.18}$ OUR FIT Error includes scale factor of 1.3.					
8.17 ± 0.33 OUR AVERAGE Error includes scale factor of 1.7. See the ideogram below.					
$8.30\pm0.07\pm0.20$		[71] DOBBS	07	CLEO	e^+e^- at $\psi(3770)$
$7.9\pm1.5\pm0.9$		[72] ALBRECHT	94	ARG	$e^+e^- \approx \Upsilon(4S)$
$6.80\pm0.27\pm0.57$	1430 ± 52	[73] ALBRECHT	94F	ARG	$e^+e^- \approx \Upsilon(4S)$
$9.1\pm0.8\pm0.8$	992	ADLER	88C	MRK3	e^+e^- 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$8.3\pm0.2\pm0.3$	$15k\pm130$	[71] HE	05	CLEO	See DOBBS 07
11.7 ± 2.5	185	[74] SCHINDLER	81	MRK2	e^+e^- 3.771 GeV
6.2 ± 1.9	44	[75] PERUZZI	77	LGW	e^+e^- 3.77 GeV

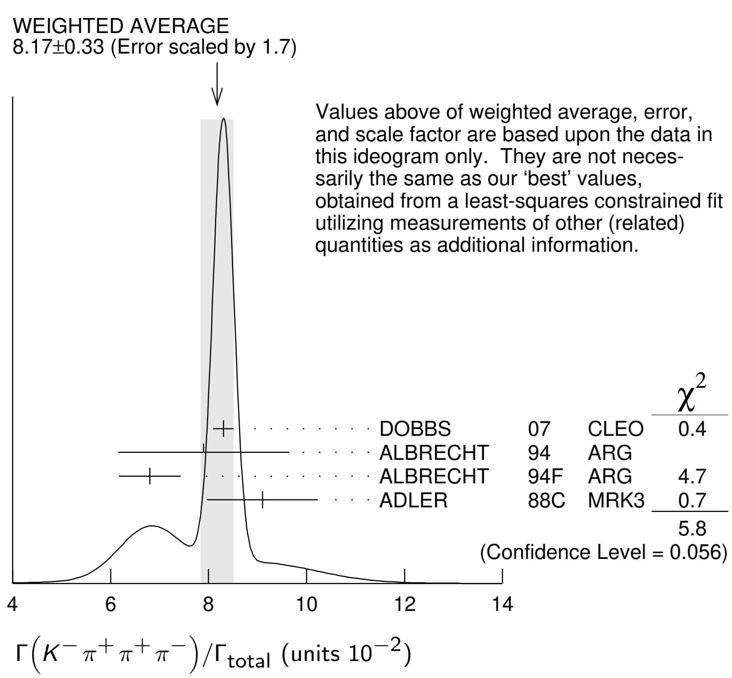
[71] DOBBS 07 and HE 05 use single- and double-tagged events in an overall fit. DOBBS 07 supersedes HE 05. NODE=S032R24;LINKAGE=HE

[72] ALBRECHT 94 uses D^0 mesons from $\overline{B}^0 \to D^{*+}\ell^-\overline{\nu}_\ell$ decays. This is a different set of events than used by ALBRECHT 94F. NODE=S032R24;LINKAGE=D

[73] See the footnote on the ALBRECHT 94F measurement of $\Gamma(K^-\pi^+)/\Gamma_{total}$ for the method used. NODE=S032R24;LINKAGE=E

[74] SCHINDLER 81 (MARK-2) measures $\sigma(e^+e^- \to \psi(3770)) \times$ branching fraction to be 0.68 ± 0.11 nb. We use the MARK-3 (ADLER 88C) value of $\sigma = 5.8\pm0.5\pm0.6$ nb. NODE=S032R24;LINKAGE=SP

[75] PERUZZI 77 (MARK-1) measures $\sigma(e^+e^- \to \psi(3770)) \times$ branching fraction to be 0.36 ± 0.10 nb. We use the MARK-3 (ADLER 88C) value of $\sigma = 5.8\pm0.5\pm0.6$ nb. NODE=S032R24;LINKAGE=PS



$\Gamma(K^-\pi^+\pi^+\pi^-)/\Gamma(K^-\pi^+)$ Γ_{62}/Γ_{32}

NODE=S032R29
NODE=S032R29

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
2.08 ± 0.05 OUR FIT Error includes scale factor of 1.5.					
1.97 ± 0.09 OUR AVERAGE					
$1.94\pm0.07^{+0.09}_{-0.11}$		JUN	00	SELX	Σ^- nucleus, 600 GeV
$1.7\pm0.2\pm0.2$	1745	ANJOS	92C	E691	γ Be 90–260 GeV
$1.90\pm0.25\pm0.20$	337	ALVAREZ	91B	NA14	Photoproduction
$2.12\pm0.16\pm0.09$		BORTOLETTO	88	CLEO	e^+e^- 10.55 GeV
$2.17\pm0.28\pm0.23$		ALBRECHT	85F	ARG	e^+e^- 10 GeV

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

2.0 ±0.9	48	BAILEY	86	ACCM	π^- Be fixed target
2.0 ±1.0	10	BAILEY	83B	SPEC	π^- Be → D^0
2.2 ±0.8	214	PICCOLO	77	MRK1	$e^+ e^-$ 4.03, 4.41 GeV

$\Gamma(K^- \pi^+ \rho^0 \text{total})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{63}/Γ_{62}

NODE=S032B18

This includes $K^- a_1(1260)^+$, $\overline{K}^*(892)^0 \rho^0$, etc. The next entry gives the specifically 3-body fraction. We rely on the MARK III and E691 full amplitude analyses of the $K^- \pi^+ \pi^+ \pi^-$ channel for values of the resonant substructure.

NODE=S032B18

VALUE	DOCUMENT ID		TECN	COMMENT
0.835±0.035 OUR AVERAGE				
0.80 ±0.03 ±0.05	ANJOS	92C	E691	γ Be 90–260 GeV
0.855±0.032±0.030	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.98 ±0.12 ±0.10	ALVAREZ	91B	NA14	Photoproduction

NODE=S032B18

$\Gamma(K^- \pi^+ \rho^0 \text{3-body})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{64}/Γ_{62}

NODE=S032R32

We rely on the MARK III and E691 full amplitude analyses of the $K^- \pi^+ \pi^+ \pi^-$ channel for values of the resonant substructure.

NODE=S032R32

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.063±0.028 OUR AVERAGE					
0.05 ±0.03 ±0.02		ANJOS	92C	E691	γ Be 90–260 GeV
0.084±0.022±0.04		COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.77 ±0.06 ±0.06		[76] ALVAREZ	91B	NA14	Photoproduction
0.85 $^{+0.11}_{-0.22}$	180	PICCOLO	77	MRK1	$e^+ e^-$ 4.03, 4.41 GeV

NODE=S032R32

OCCUR=2

[76] This value is for ρ^0 $(K^- \pi^+)$-nonresonant. ALVAREZ 91B cannot determine what fraction of this is $K^- a_1(1260)^+$.

NODE=S032R32;LINKAGE=A

$\Gamma(\overline{K}^*(892)^0 \rho^0)/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{101}/Γ_{62}

NODE=S032R36

Unseen decay modes of the $\overline{K}^*(892)^0$ are included. We rely on the MARK III and E691 full amplitude analyses of the $K^- \pi^+ \pi^+ \pi^-$ channel for values of the resonant substructure.

NODE=S032R36

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.195±0.03±0.03		ANJOS	92C	E691	γ Be 90–260 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.34 ±0.09±0.09		ALVAREZ	91B	NA14	Photoproduction
0.75 ±0.3	5	BAILEY	83B	SPEC	π Be → D^0
0.15 $^{+0.16}_{-0.15}$	20	PICCOLO	77	MRK1	$e^+ e^-$ 4.03, 4.41 GeV

NODE=S032R36

$\Gamma(\overline{K}^*(892)^0 \rho^0 \text{transverse})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{102}/Γ_{62}

NODE=S032B35

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B35

VALUE	DOCUMENT ID		TECN	COMMENT
0.20 ±0.07 OUR FIT				
0.213±0.024±0.075	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

NODE=S032B35

$\Gamma(\overline{K}^*(892)^0 \rho^0 \text{ S-wave})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{103}/Γ_{62}

NODE=S032B62

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B62

VALUE	DOCUMENT ID		TECN	COMMENT
0.375±0.045±0.06	ANJOS	92C	E691	γ Be 90–260 GeV

NODE=S032B62

$\Gamma(\overline{K}^*(892)^0 \rho^0 \text{ S-wave long.})/\Gamma_{\text{total}}$ Γ_{104}/Γ

NODE=S032B36

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B36

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.003	90	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

NODE=S032B36

$\Gamma(\overline{K}^*(892)^0 \rho^0 \text{ P-wave})/\Gamma_{\text{total}}$ Γ_{105}/Γ

NODE=S032B37

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B37

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.003	90	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.009	90	ANJOS	92C	E691	γ Be 90–260 GeV

NODE=S032B37

$\Gamma(\overline{K}^*(892)^0 \rho^0\ D\text{-wave})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{106}/Γ_{62}

NODE=S032B63

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B63
NODE=S032B63

VALUE	DOCUMENT ID		TECN	COMMENT
0.255±0.045±0.06	ANJOS	92C	E691	γ Be 90–260 GeV

$\Gamma(K^- \pi^+ f_0(980))/\Gamma_{total}$ — Γ_{111}/Γ

NODE=S032B61
NODE=S032B61

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.011	90	ANJOS	92C	E691	γ Be 90–260 GeV

$\Gamma(\overline{K}^*(892)^0 f_0(980))/\Gamma_{total}$ — Γ_{112}/Γ

NODE=S032B60
NODE=S032B60

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.007	90	ANJOS	92C	E691	γ Be 90–260 GeV

$\Gamma(K^- a_1(1260)^+)/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{96}/Γ_{62}

NODE=S032B38

Unseen decay modes of the $a_1(1260)^+$ are included, assuming that the $a_1(1260)^+$ decays entirely to $\rho\pi$ [or at least to $(\pi\pi)_{I=1}\ \pi$].

NODE=S032B38
NODE=S032B38

VALUE	DOCUMENT ID		TECN	COMMENT
0.97 ±0.14 OUR AVERAGE				
0.94 ±0.13 ±0.20	ANJOS	92C	E691	γ Be 90–260 GeV
0.984±0.048±0.16	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

$\Gamma(K^- a_2(1320)^+)/\Gamma_{total}$ — Γ_{98}/Γ

NODE=S032B39

Unseen decay modes of the $a_2(1320)^+$ are included.

NODE=S032B39
NODE=S032B39

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.002	90	ANJOS	92C	E691	γ Be 90–260 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.006	90	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

$\Gamma(K_1(1270)^- \pi^+)/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{113}/Γ_{62}

NODE=S032B40

Unseen decay modes of the $K_1(1270)^-$ are included. The MARK3 and E691 experiments disagree considerably here.

NODE=S032B40
NODE=S032B40

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
0.14 ±0.04 OUR FIT					
0.194±0.056±0.088		COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.013	90	ANJOS	92C	E691	γ Be 90–260 GeV

$\Gamma(K_1(1400)^- \pi^+)/\Gamma_{total}$ — Γ_{114}/Γ

NODE=S032B41
NODE=S032B41

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.012	90	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

$\Gamma(K^*(1410)^- \pi^+)/\Gamma_{total}$ — Γ_{116}/Γ

NODE=S032B42
NODE=S032B42

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.012	90	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

$\Gamma(\overline{K}^*(892)^0 \pi^+ \pi^-\ \text{total})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{99}/Γ_{62}

NODE=S032B64

This includes $\overline{K}^*(892)^0 \rho^0$, *etc.* The next entry gives the specifically 3-body fraction. Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B64
NODE=S032B64

VALUE	DOCUMENT ID		TECN	COMMENT
0.30±0.06±0.03	ANJOS	92C	E691	γ Be 90–260 GeV

$\Gamma(\overline{K}^*(892)^0 \pi^+ \pi^-\ \text{3-body})/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{100}/Γ_{62}

NODE=S032R33

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032R33
NODE=S032R33

VALUE	DOCUMENT ID		TECN	COMMENT
0.19 ±0.04 OUR FIT				
0.18 ±0.04 OUR AVERAGE				
0.165±0.03 ±0.045	ANJOS	92C	E691	γ Be 90–260 GeV
0.210±0.027±0.06	COFFMAN	92B	MRK3	$e^+ e^-$ 3.77 GeV

$\Gamma(K^-\pi^+\pi^+\pi^-\ \text{nonresonant})/\Gamma(K^-\pi^+\pi^+\pi^-)$ Γ_{70}/Γ_{62}

NODE=S032B43
NODE=S032B43

VALUE	DOCUMENT ID		TECN	COMMENT
0.233±0.032 OUR AVERAGE				
0.23 ±0.02 ±0.03	ANJOS	92C	E691	γBe 90–260 GeV
0.242±0.025±0.06	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^0_S\pi^+\pi^-\pi^0)/\Gamma_{total}$ Γ_{71}/Γ

NODE=S032S23
NODE=S032S23

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
5.3±0.6 OUR FIT					
5.2±1.1±1.2	140	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$6.7^{+1.6}_{-1.7}$		[77] BARLAG	92C	ACCM	π^- Cu 230 GeV

[77] BARLAG 92C computes the branching fraction using topological normalization.

NODE=S032S23;LINKAGE=A

$\Gamma(K^0_S\pi^+\pi^-\pi^0)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{71}/Γ_{35}

NODE=S032B16
NODE=S032B16

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.83±0.20 OUR FIT					
1.86±0.23 OUR AVERAGE					
1.80±0.20±0.21	190	[78] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV
2.8 ±0.8 ±0.8	46	ANJOS	92C	E691	γBe 90–260 GeV
1.85±0.26±0.30	158	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV

[78] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B16;LINKAGE=AP

$\Gamma(K^0_S\eta)/\Gamma(K^0_S\pi^0)$ Γ_{93}/Γ_{33}

NODE=S032B65

Unseen decay modes of the η are included.

NODE=S032B65
NODE=S032B65

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.33±0.04 OUR FIT					
0.32±0.04±0.03	225 ± 30	PROCARIO	93B	CLE2	$\eta \to \gamma\gamma$

$\Gamma(K^0_S\eta)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{93}/Γ_{35}

NODE=S032B66

Unseen decay modes of the η are included.

NODE=S032B66
NODE=S032B66

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.135±0.018 OUR FIT					
0.14 ±0.02 ±0.02	80 ± 12	PROCARIO	93B	CLE2	$\eta \to \pi^+\pi^-\pi^0$

$\Gamma(K^0_S\omega)/\Gamma(K^-\pi^+)$ Γ_{94}/Γ_{32}

NODE=S032R67

Unseen decay modes of the ω are included.

NODE=S032R67
NODE=S032R67

VALUE	DOCUMENT ID		TECN	COMMENT
0.28±0.05 OUR FIT				
0.50±0.18±0.10	ALBRECHT	89D	ARG	e^+e^- 10 GeV

$\Gamma(K^0_S\omega)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{94}/Γ_{35}

NODE=S032B15

Unseen decay modes of the ω are included.

NODE=S032B15
NODE=S032B15

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.38±0.06 OUR FIT					
0.33±0.09 OUR AVERAGE Error includes scale factor of 1.1.					
0.29±0.08±0.05	16	[79] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV
0.54±0.14±0.16	40	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV

[79] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B15;LINKAGE=AP

$\Gamma(K^0_S\omega)/\Gamma(K^0_S\pi^+\pi^-\pi^0)$ Γ_{94}/Γ_{71}

NODE=S032B49

Unseen decay modes of the ω are included.

NODE=S032B49
NODE=S032B49

VALUE	DOCUMENT ID		TECN	COMMENT
0.21 ±0.04 OUR FIT				
0.220±0.048±0.0116	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^0_S\eta'(958))/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{95}/Γ_{35}

NODE=S032B67

Unseen decay modes of the $\eta'(958)$ are included.

NODE=S032B67
NODE=S032B67

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.32±0.04 OUR AVERAGE					
0.31±0.02±0.04	594	PROCARIO	93B	CLE2	$\eta' \to \eta\pi^+\pi^-$, $\rho^0\gamma$
0.37±0.13±0.06	18	[80] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV

[80] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B67;LINKAGE=AP

$\Gamma(K^*(892)^- \rho^+)/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{107}/Γ_{71}

NODE=S032B44

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B44
NODE=S032B44

VALUE	DOCUMENT ID		TECN	COMMENT
1.212±0.376±0.252	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^*(892)^- \rho^+ \text{ longitudinal})/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{108}/Γ_{71}

NODE=S032B45

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B45
NODE=S032B45

VALUE	DOCUMENT ID		TECN	COMMENT
0.580±0.222	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^*(892)^- \rho^+ \text{ transverse})/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{109}/Γ_{71}

NODE=S032B46

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B46
NODE=S032B46

VALUE	DOCUMENT ID		TECN	COMMENT
0.634±0.360	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^*(892)^- \rho^+ \, P\text{-wave})/\Gamma_{total}$ — Γ_{110}/Γ

NODE=S032B47

Unseen decay modes of the $K^*(892)^-$ are included.

NODE=S032B47
NODE=S032B47

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.015	90	[81] COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

[81] Obtained using other $\overline{K}^*(892)\rho \, P$-wave limits and isospin relations.

NODE=S032B47;LINKAGE=A

$\Gamma(\overline{K}^*(892)^0 \rho^0 \text{ transverse})/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{102}/Γ_{71}

NODE=S032B48

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B48
NODE=S032B48

VALUE	DOCUMENT ID		TECN	COMMENT
0.31 ±0.11 OUR FIT				
0.252±0.222	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(\overline{K}^0 a_1(1260)^0)/\Gamma_{total}$ — Γ_{97}/Γ

NODE=S032B50

Unseen decay modes of the $a_1(1260)^+$ are included, assuming that the $a_1(1260)^+$ decays entirely to $\rho\pi$ [or at least to $(\pi\pi)_{I=1}\,\pi$].

NODE=S032B50

NODE=S032B50

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.019	90	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K_1(1270)^- \pi^+)/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{113}/Γ_{71}

NODE=S032B51

Unseen decay modes of the $K_1(1270)^-$ are included.

NODE=S032B51
NODE=S032B51

VALUE	DOCUMENT ID		TECN	COMMENT
0.21±0.06 OUR FIT				
0.20±0.06	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(\overline{K}_1(1400)^0 \pi^0)/\Gamma_{total}$ — Γ_{115}/Γ

NODE=S032B52
NODE=S032B52

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.037	90	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(\overline{K}^*(892)^0 \pi^+\pi^- \text{ 3-body})/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{100}/Γ_{71}

NODE=S032B53

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

NODE=S032B53
NODE=S032B53

VALUE	DOCUMENT ID		TECN	COMMENT
0.29 ±0.07 OUR FIT Error includes scale factor of 1.1.				
0.382±0.210	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^0_S \pi^+\pi^-\pi^0 \text{ nonresonant})/\Gamma(K^0_S \pi^+\pi^-\pi^0)$ — Γ_{77}/Γ_{71}

NODE=S032B54
NODE=S032B54

VALUE	DOCUMENT ID		TECN	COMMENT
0.210±0.147±0.150	COFFMAN	92B	MRK3	e^+e^- 3.77 GeV

$\Gamma(K^- \pi^+\pi^0\pi^0)/\Gamma_{total}$ — Γ_{78}/Γ

NODE=S032R25
NODE=S032R25

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.177±0.029		[82] BARLAG	92C	ACCM	π^- Cu 230 GeV
0.149±0.037±0.030	24	[83] ADLER	88C	MRK3	e^+e^- 3.77 GeV
$0.209^{+0.074}_{-0.043}\pm0.012$	9	[82] AGUILAR-...	87F	HYBR	πp, pp 360, 400 GeV

[82] AGUILAR-BENITEZ 87F and BARLAG 92C compute the branching fraction using topological normalization. They do not distinguish the presence of a third π^0, and thus are not included in the average.

NODE=S032R25;LINKAGE=K

[83] ADLER 88C uses an absolute normalization method finding this decay channel opposite a detected $\overline{D}^0 \to K^+\pi^-$ in pure $D\overline{D}$ events.

NODE=S032R25;LINKAGE=A

$\Gamma(K^-\pi^+\pi^+\pi^-\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{79}/Γ_{32}

NODE=S032B85

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
1.09±0.10 OUR FIT					
0.98±0.11±0.11	225	[84] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV

[84] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B85;LINKAGE=AP

$\Gamma(K^-\pi^+\pi^+\pi^-\pi^0)/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{79}/Γ_{62}

NODE=S032R95

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.52±0.05 OUR FIT					
0.56±0.07 OUR AVERAGE					
$0.55\pm0.07^{+0.12}_{-0.09}$	167	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV
0.57±0.06±0.05	180	ANJOS	90D	E691	Photoproduction

$\Gamma(\overline{K}^*(892)^0\pi^+\pi^-\pi^0)/\Gamma(K^-\pi^+\pi^+\pi^-\pi^0)$ — Γ_{117}/Γ_{79}

NODE=S032R96

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

VALUE	DOCUMENT ID		TECN	COMMENT
0.45±0.15±0.15	ANJOS	90D	E691	Photoproduction

$\Gamma(\overline{K}^*(892)^0\eta)/\Gamma(K^-\pi^+)$ — Γ_{118}/Γ_{32}

NODE=S032R69

Unseen decay modes of the $\overline{K}^*(892)^0$ and η are included.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$0.58\pm0.19^{+0.24}_{-0.28}$	46	KINOSHITA	91	CLEO	$e^+e^- \sim$ 10.7 GeV

$\Gamma(\overline{K}^*(892)^0\eta)/\Gamma(K^-\pi^+\pi^0)$ — Γ_{118}/Γ_{50}

NODE=S032B71

Unseen decay modes of the $\overline{K}^*(892)^0$ and η are included.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.13±0.02±0.03	214	PROCARIO	93B	CLE2	$\overline{K}^{*0}\eta \to K^-\pi^+/\gamma\gamma$

$\Gamma(K^0_S\eta\pi^0)/\Gamma(K^0_S\pi^0)$ — Γ_{83}/Γ_{33}

NODE=S032S03

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.46±0.07±0.06	155 ± 22	[85] RUBIN	04	CLEO	$e^+e^- \approx$ 10 GeV

[85] The η here is detected in its $\gamma\gamma$ mode, but other η modes are included in the value given.

NODE=S032S03;LINKAGE=RU

$\Gamma(K^0_S a_0(980), a_0(980) \to \eta\pi^0)/\Gamma(K^0_S\eta\pi^0)$ — Γ_{84}/Γ_{83}

NODE=S032S04

This is the "fit fraction" from the Dalitz-plot analysis, with interference.

VALUE	DOCUMENT ID		TECN	COMMENT
1.19±0.09±0.26	[86] RUBIN	04	CLEO	Dalitz fit, 155 evts

[86] In addition to $K^0_S a_0(980)$ and $\overline{K}^*(892)^0\eta$ modes, RUBIN 04 finds a fit fraction of 0.246 ± 0.092 ± 0.091 for other, undetermined modes.

NODE=S032S04;LINKAGE=RU

$\Gamma(\overline{K}^*(892)^0\eta, \overline{K}^*(892)^0 \to K^0_S\pi^0)/\Gamma(K^0_S\eta\pi^0)$ — Γ_{85}/Γ_{83}

NODE=S032S05

This is the "fit fraction" from the Dalitz-plot analysis, with interference.

VALUE	DOCUMENT ID		TECN	COMMENT
0.293±0.062±0.035	[87] RUBIN	04	CLEO	Dalitz fit, 155 evts

[87] See the note on RUBIN 04 in the preceding data block.

NODE=S032S05;LINKAGE=RU

$\Gamma(K^-\pi^+\omega)/\Gamma(K^-\pi^+)$ — Γ_{119}/Γ_{32}

NODE=S032B87

Unseen decay modes of the ω are included.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.78±0.12±0.10	99	[88] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV

[88] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B87;LINKAGE=AP

$\Gamma(\overline{K}^*(892)^0\omega)/\Gamma(K^-\pi^+)$ — Γ_{120}/Γ_{32}

NODE=S032B86

Unseen decay modes of the $\overline{K}^*(892)^0$ and ω are included.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.28±0.11±0.04	17	[89] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV

[89] This value is calculated from numbers in Table 1 of ALBRECHT 92P.

NODE=S032B86;LINKAGE=AP

$\Gamma(K^-\pi^+\eta'(958))/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{121}/Γ_{62}

NODE=S032B72

Unseen decay modes of the $\eta'(958)$ are included.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.093±0.014±0.019	286	PROCARIO	93B	CLE2	$\eta' \to \eta\pi^+\pi^-$, $\rho^0\gamma$

$\Gamma(\overline{K}^*(892)^0 \eta'(958))/\Gamma(K^- \pi^+ \eta'(958))$ $\Gamma_{122}/\Gamma_{121}$ NODE=S032B73

Unseen decay modes of the $\overline{K}^*(892)^0$ are included. NODE=S032B73

VALUE	CL%	DOCUMENT ID		TECN
<0.15	90	PROCARIO	93B	CLE2

NODE=S032B73

$\Gamma(K^0_S 2\pi^+ 2\pi^-)/\Gamma(K^0_S \pi^+ \pi^-)$ Γ_{86}/Γ_{35} NODE=S032R94

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.095±0.005±0.007	1283 ± 57	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.07 ±0.02 ±0.01	11	[90] ALBRECHT	92P	ARG	$e^+e^- \approx$ 10 GeV
0.149±0.026	56	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
0.18 ±0.07 ±0.04	6	ANJOS	90D	E691	Photoproduction

NODE=S032R94

[90] This value is calculated from numbers in Table 1 of ALBRECHT 92P. NODE=S032R94;LINKAGE=AP

$\Gamma(K^0_S \rho^0 \pi^+ \pi^-$, no $K^*(892)^-)/\Gamma(K^0_S 2\pi^+ 2\pi^-)$ Γ_{87}/Γ_{86} NODE=S032S89

VALUE	DOCUMENT ID		TECN	COMMENT
0.40±0.24±0.07	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032S89

$\Gamma(K^*(892)^- \pi^+ \pi^+ \pi^-$, $K^*(892)^- \to K^0_S \pi^-$, no $\rho^0)/\Gamma(K^0_S 2\pi^+ 2\pi^-)$ Γ_{88}/Γ_{86} NODE=S032S90

VALUE	DOCUMENT ID		TECN	COMMENT
0.17±0.28±0.02	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032S90

$\Gamma(K^*(892)^- \rho^0 \pi^+$, $K^*(892)^- \to K^0_S \pi^-)/\Gamma(K^0_S 2\pi^+ 2\pi^-)$ Γ_{89}/Γ_{86} NODE=S032S91

VALUE	DOCUMENT ID		TECN	COMMENT
0.60±0.21±0.09	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032S91

$\Gamma(K^0_S 2\pi^+ 2\pi^-$ nonresonant$)/\Gamma(K^0_S 2\pi^+ 2\pi^-)$ Γ_{90}/Γ_{86} NODE=S032S92

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.46	90	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032S92

$\Gamma(K^- 3\pi^+ 2\pi^-)/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ Γ_{92}/Γ_{62} NODE=S032S1

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
2.70±0.58±0.38	48 ± 10	LINK	04B	FOCS	γA, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032S1

Hadronic modes with three K's NODE=S032322

$\Gamma(K^0_S K^+ K^-)/\Gamma(K^0_S \pi^+ \pi^-)$ Γ_{123}/Γ_{35} NODE=S032R35

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.158±0.001±0.005	14k±116	AUBERT,B	05J	BABR	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.20 ±0.05 ±0.04	47	FRABETTI	92B	E687	γ Be, $\overline{E}_\gamma$= 221 GeV
0.170±0.022	136	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
0.24 ±0.08		BEBEK	86	CLEO	e^+e^- near $\Upsilon(4S)$
0.185±0.055	52	ALBRECHT	85B	ARG	e^+e^- 10 GeV

NODE=S032R35

$\Gamma(K^0_S a_0(980)^0$, $a^0_0 \to K^+ K^-)/\Gamma(K^0_S K^+ K^-)$ $\Gamma_{124}/\Gamma_{123}$ NODE=S032C40

This is the "fit fraction" from the Dalitz-plot analysis, with interference. NODE=S032C40

VALUE	DOCUMENT ID		TECN	COMMENT
0.664±0.016±0.070	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

NODE=S032C40

$\Gamma(K^- a_0(980)^+$, $a^+_0 \to K^+ K^0_S)/\Gamma(K^0_S K^+ K^-)$ $\Gamma_{125}/\Gamma_{123}$ NODE=S032C41

This is the "fit fraction" from the Dalitz-plot analysis, with interference. NODE=S032C41

VALUE	DOCUMENT ID		TECN	COMMENT
0.134±0.011±0.037	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

NODE=S032C41

$\Gamma(K^+ a_0(980)^-$, $a^-_0 \to K^- K^0_S)/\Gamma(K^0_S K^+ K^-)$ $\Gamma_{126}/\Gamma_{123}$ NODE=S032C42

This is a doubly Cabibbo-suppressed mode. NODE=S032C42

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.025	95	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

NODE=S032C42

$\Gamma(K^0_S f_0(980)$, $f_0 \to K^+ K^-)/\Gamma(K^0_S K^+ K^-)$ $\Gamma_{127}/\Gamma_{123}$ NODE=S032C43

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.021	95	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

NODE=S032C43

$\Gamma(K^0_S \phi, \phi \to K^+ K^-)/\Gamma(K^0_S K^+ K^-)$ — $\Gamma_{128}/\Gamma_{123}$ NODE=S032C44

This is the "fit fraction" from the Dalitz-plot analysis, with interference. NODE=S032C44 NODE=S032C44

VALUE	DOCUMENT ID		TECN	COMMENT
0.459±0.007±0.007	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

$\Gamma(K^0_S f_0(1370), f_0 \to K^+ K^-)/\Gamma(K^0_S K^+ K^-)$ — $\Gamma_{129}/\Gamma_{123}$ NODE=S032C45

This is the "fit fraction" from the Dalitz-plot analysis, with interference. NODE=S032C45 NODE=S032C45

VALUE	DOCUMENT ID		TECN	COMMENT
0.038±0.007±0.023	AUBERT,B	05J	BABR	Dalitz fit, 12540 ± 112 evts

$\Gamma(3K^0_S)/\Gamma(K^0_S \pi^+ \pi^-)$ — Γ_{130}/Γ_{35} NODE=S032B26 NODE=S032B26

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.2 ±0.4 OUR AVERAGE					
3.58±0.54±0.52	170 ± 26	LINK	05A	FOCS	γBe, $\overline{E}_\gamma \approx$ 180 GeV
2.78±0.38±0.48	61	ASNER	96B	CLE2	$e^+e^- \approx \Upsilon(4S)$
7.0 ±2.4 ±1.2	10 ± 3	FRABETTI	94J	E687	γBe, $\overline{E}_\gamma$=220 GeV
3.2 ±1.0	22	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
3.4 ±1.4 ±1.0	5	ALBRECHT	90C	ARG	$e^+e^- \approx$ 10 GeV

$\Gamma(K^+ K^- K^- \pi^+)/\Gamma(K^- \pi^+ \pi^+ \pi^-)$ — Γ_{131}/Γ_{62} NODE=S032B98 NODE=S032B98

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0027 ±0.0004 OUR AVERAGE		Error includes scale factor of 1.1.			
0.00257±0.00034±0.00024	143	LINK	03G	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV
0.0054 ±0.0016 ±0.0008	18	AITALA	01D	E791	π^- A, 500 GeV
0.0028 ±0.0007 ±0.0001	20	FRABETTI	95C	E687	γ Be, $\overline{E}_\gamma \approx$ 200 GeV

$\Gamma(\phi \overline{K}^*(892)^0, \phi \to K^+ K^-, \overline{K}^*(892)^0 \to K^- \pi^+)/\Gamma(K^+ K^- K^- \pi^+)$ — $\Gamma_{134}/\Gamma_{131}$ NODE=S032S85 NODE=S032S85

VALUE	DOCUMENT ID		TECN	COMMENT
0.48±0.06±0.01	LINK	03G	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(K^- \pi^+ \phi, \phi \to K^+ K^-)/\Gamma(K^+ K^- K^- \pi^+)$ — $\Gamma_{133}/\Gamma_{131}$ NODE=S032C23 NODE=S032C23

VALUE	DOCUMENT ID		TECN	COMMENT
0.18±0.06±0.04	LINK	03G	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(K^+ K^- \overline{K}^*(892)^0, \overline{K}^*(892)^0 \to K^- \pi^+)/\Gamma(K^+ K^- K^- \pi^+)$ — $\Gamma_{132}/\Gamma_{131}$ NODE=S032S86 NODE=S032S86

VALUE	DOCUMENT ID		TECN	COMMENT
0.20±0.07±0.02	LINK	03G	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(K^+ K^- K^- \pi^+ \text{ nonresonant})/\Gamma(K^+ K^- K^- \pi^+)$ — $\Gamma_{135}/\Gamma_{131}$ NODE=S032S87 NODE=S032S87

VALUE	DOCUMENT ID		TECN	COMMENT
0.15±0.06±0.02	LINK	03G	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(K^0_S K^0_S K^\pm \pi^\mp)/\Gamma(K^0_S \pi^+ \pi^-)$ — Γ_{136}/Γ_{35} NODE=S032S97 NODE=S032S97

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.12±0.38±0.20	57 ± 10	LINK	05A	FOCS	γ Be, $\overline{E}_\gamma \approx$ 180 GeV

Pionic modes NODE=S032325

$\Gamma(\pi^+ \pi^-)/\Gamma(K^- \pi^+)$ — Γ_{137}/Γ_{32} NODE=S032R26 NODE=S032R26

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.59 ±0.05 OUR AVERAGE					
3.62 ±0.10 ±0.08	2085 ± 54	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$
3.594±0.054±0.040	7334 ± 97	ACOSTA	05C	CDF	$p\overline{p}$, $\sqrt{s}$ = 1.96 TeV
3.53 ±0.12 ±0.06	3453	LINK	03	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV
3.51 ±0.16 ±0.17	710	CSORNA	02	CLE2	$e^+e^- \approx \Upsilon(4S)$
4.0 ±0.2 ±0.3	2043	AITALA	98C	E791	π^- A, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
3.4 ±0.7 ±0.1	76 ± 15	ABLIKIM	05F	BES	$e^+e^- \approx \psi(3770)$
4.3 ±0.7 ±0.3	177	FRABETTI	94C	E687	γBe $\overline{E}_\gamma$= 220 GeV
3.48 ±0.30 ±0.23	227	SELEN	93	CLE2	$e^+e^- \approx \Upsilon(4S)$
5.5 ±0.8 ±0.5	120	ANJOS	91D	E691	Photoproduction
5.0 ±0.7 ±0.5	110	ALEXANDER	90	CLEO	e^+e^- 10.5–11 GeV

$\Gamma(\pi^0\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{138}/Γ_{32}

NODE=S032B83
NODE=S032B83

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.07±0.19 OUR AVERAGE					
2.05±0.13±0.16	499 ± 32	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$
2.2 ±0.4 ±0.4	40	SELEN	93	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\pi^+\pi^-\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{139}/Γ_{32}

NODE=S032C29
NODE=S032C29

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
36.9±1.5 OUR FIT Error includes scale factor of 1.9.					
34.4±0.5±1.2	11k±164	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\pi^+\pi^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ — Γ_{139}/Γ_{50}

NODE=S032C52
NODE=S032C52

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
10.34±0.24 OUR FIT Error includes scale factor of 2.2.					
10.41±0.23 OUR AVERAGE Error includes scale factor of 2.0.					
10.12±0.04±0.18	123k±490	ARINSTEIN	08	BELL	$e^+e^- \approx \Upsilon(4S)$
10.59±0.06±0.13	60k±343	AUBERT,B	06X	BABR	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\rho^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{140}/\Gamma_{139}$

NODE=S032C46

This is the "fit fraction" from the Dalitz-plot analysis, with interference.

NODE=S032C46
NODE=S032C46

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
68.1±0.6 OUR AVERAGE				
67.8±0.0±0.6	AUBERT	07BJ	BABR	Dalitz fit, 45k events
76.3±1.9±2.5	CRONIN-HEN...	05	CLEO	$e^+e^- \approx$ 10 GeV

$\Gamma(\rho^0\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{141}/\Gamma_{139}$

NODE=S032C47

This is the "fit fraction" from the Dalitz-plot analysis, with interference.

NODE=S032C47
NODE=S032C47

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
25.9±1.1 OUR AVERAGE				
26.2±0.5±1.1	AUBERT	07BJ	BABR	Dalitz fit, 45k events
24.4±2.0±2.1	CRONIN-HEN...	05	CLEO	$e^+e^- \approx$ 10 GeV

$\Gamma(\rho^-\pi^+)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{142}/\Gamma_{139}$

NODE=S032C48

This is the "fit fraction" from the Dalitz-plot analysis, with interference.

NODE=S032C48
NODE=S032C48

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
34.6±0.8 OUR AVERAGE				
34.6±0.8±0.3	AUBERT	07BJ	BABR	Dalitz fit, 45k events
34.5±2.4±1.3	CRONIN-HEN...	05	CLEO	$e^+e^- \approx$ 10 GeV

$\Gamma(\rho(1450)^+\pi^-, \rho(1450)^+ \to \pi^+\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{143}/\Gamma_{139}$

NODE=S032S02
NODE=S032S02

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.11±0.07±0.12	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\rho(1450)^0\pi^0, \rho(1450)^0 \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{144}/\Gamma_{139}$

NODE=S032S10
NODE=S032S10

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.30±0.11±0.07	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\rho(1450)^-\pi^+, \rho(1450)^- \to \pi^-\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{145}/\Gamma_{139}$

NODE=S032S29
NODE=S032S29

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
1.79±0.22±0.12	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\rho(1700)^+\pi^-, \rho(1700)^+ \to \pi^+\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{146}/\Gamma_{139}$

NODE=S032S30
NODE=S032S30

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
4.1±0.7±0.7	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\rho(1700)^0\pi^0, \rho(1700)^0 \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{147}/\Gamma_{139}$

NODE=S032S32
NODE=S032S32

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
5.0±0.6±1.0	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\rho(1700)^-\pi^+, \rho(1700)^- \to \pi^-\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{148}/\Gamma_{139}$

NODE=S032S66
NODE=S032S66

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
3.2±0.4±0.6	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(f_0(980)\pi^0, f_0(980) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{149}/\Gamma_{139}$

NODE=S032C50
NODE=S032C50

VALUE (units 10^{-2})	CL%	DOCUMENT ID		TECN	COMMENT
0.25 ±0.04±0.04		AUBERT	07BJ	BABR	Dalitz fit, 45k events
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.026	95	[91] CRONIN-HEN..05		CLEO	$e^+e^- \approx$ 10 GeV

[91] The CRONIN-HENNESSY 05 fit here includes, in addition to the three $\rho\pi$ charged states, only the $f_0(980)\pi^0$ mode. See also the next entries for limits obtained in the same way for the $f_0(600)\pi^0$ mode and for an S-wave $\pi^+\pi^-$ parametrized using a K-matrix. Our $\rho\pi$ branching ratios, given above, use the fit with the K-matrix S wave.

NODE=S032C50;LINKAGE=CR

$\Gamma(f_0(600)\pi^0, f_0(600) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{150}/\Gamma_{139}$

NODE=S032C49

The $f_0(600)$ is the σ.

NODE=S032C49
NODE=S032C49

VALUE (units 10^{-2})	CL%	DOCUMENT ID		TECN	COMMENT
0.82±0.10±0.10		AUBERT	07BJ	BABR	Dalitz fit, 45k events
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.21	95	[92] CRONIN-HEN..05		CLEO	$e^+e^- \approx$ 10 GeV

[92] See the note on CRONIN-HENNESSY 05 in the proceeding data block.

NODE=S032C49;LINKAGE=CR

$\Gamma((\pi^+\pi^-)_{S-\text{wave}}\pi^0)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{151}/\Gamma_{139}$

NODE=S032C51
NODE=S032C51

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.019	95	[93] CRONIN-HEN..05		CLEO	$e^+e^- \approx$ 10 GeV

[93] See the note on CRONIN-HENNESSY 05 two data blocks up.

NODE=S032C51;LINKAGE=CR

$\Gamma(f_0(1370)\pi^0, f_0(1370) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{152}/\Gamma_{139}$

NODE=S032S67
NODE=S032S67

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.37±0.11±0.09	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(f_0(1500)\pi^0, f_0(1500) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{153}/\Gamma_{139}$

NODE=S032S68
NODE=S032S68

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.39±0.08±0.07	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(f_0(1710)\pi^0, f_0(1710) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{154}/\Gamma_{139}$

NODE=S032S69
NODE=S032S69

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.31±0.07±0.08	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(f_2(1270)\pi^0, f_2(1270) \to \pi^+\pi^-)/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{155}/\Gamma_{139}$

NODE=S032S70
NODE=S032S70

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
1.32±0.08±0.10	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(\pi^+\pi^-\pi^0\ \text{nonresonant})/\Gamma(\pi^+\pi^-\pi^0)$ — $\Gamma_{156}/\Gamma_{139}$

NODE=S032S75
NODE=S032S75

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
0.84±0.21±0.12	AUBERT	07BJ	BABR	Dalitz fit, 45k events

$\Gamma(3\pi^0)/\Gamma_{\text{total}}$ — Γ_{157}/Γ

NODE=S032C32
NODE=S032C32

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<3.5 × 10^{-4}	90	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(2\pi^+2\pi^-)/\Gamma(K^-\pi^+)$ — Γ_{158}/Γ_{32}

NODE=S032C30
NODE=S032C30

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
19.1±0.5 OUR FIT Error includes scale factor of 1.1.					
19.1±0.4±0.6	7331 ± 130	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(2\pi^+2\pi^-)/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{158}/Γ_{62}

NODE=S032R37
NODE=S032R37

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
9.19±0.23 OUR FIT Error includes scale factor of 1.1.					
9.20±0.26 OUR AVERAGE					
9.14±0.18±0.22	6360±115	LINK	07A	FOCS	γ Be, $\overline{E}_\gamma \approx$ 180 GeV
7.9 ±1.8 ±0.5	162	ABLIKIM	05F	BES	$e^+e^- \approx \psi(3770)$
9.5 ±0.7 ±0.2	814	FRABETTI	95C	E687	γ Be, $\overline{E}_\gamma \approx$ 200 GeV
10.2 ±1.3	345	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
11.5 ±2.3 ±1.6	64	ADAMOVICH	92	OMEG	π^- 340 GeV
10.8 ±2.4 ±0.8	79	FRABETTI	92	E687	γ Be
9.6 ±1.8 ±0.7	66	ANJOS	91	E691	γ Be 80–240 GeV

$\Gamma(a_1(1260)^+\pi^-, a_1^+ \to \pi^+\pi^-\pi^+ \text{ total})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{159}/\Gamma_{158}$

NODE=S032C53

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C53
NODE=S032C53

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
60.0±3.0±2.4	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(a_1(1260)^+\pi^-, a_1^+ \to \rho^0\pi^+ \text{ S-wave})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{160}/\Gamma_{158}$

NODE=S032C54

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C54
NODE=S032C54

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
43.3±2.5±1.9	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(a_1(1260)^+\pi^-, a_1^+ \to \rho^0\pi^+ \text{ D-wave})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{161}/\Gamma_{158}$

NODE=S032C55

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C55
NODE=S032C55

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
2.5±0.5±0.4	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(a_1(1260)^+\pi^-, a_1^+ \to \sigma\pi^+)/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{162}/\Gamma_{158}$

NODE=S032C56

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C56
NODE=S032C56

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
8.3±0.7±0.6	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(2\rho^0 \text{ total})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{163}/\Gamma_{158}$

NODE=S032C57

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C57
NODE=S032C57

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
24.5±1.3±1.0	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(2\rho^0, \text{ parallel helicities})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{164}/\Gamma_{158}$

NODE=S032C58

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C58
NODE=S032C58

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
1.1±0.3±0.3	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(2\rho^0, \text{ perpendicular helicities})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{165}/\Gamma_{158}$

NODE=S032C59

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C59
NODE=S032C59

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
6.4±0.6±0.5	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(2\rho^0, \text{ longitudinal helicities})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{166}/\Gamma_{158}$

NODE=S032C60

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C60
NODE=S032C60

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
16.8±1.0±0.8	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(\text{Resonant } (\pi^+\pi^-)\pi^+\pi^- \text{ 3-body total})/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{167}/\Gamma_{158}$

NODE=S032C61

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C61
NODE=S032C61

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
20.0±1.2±1.0	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(\sigma\pi^+\pi^-)/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{168}/\Gamma_{158}$

NODE=S032C62

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C62
NODE=S032C62

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
8.2±0.9±0.7	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(f_0(980)\pi^+\pi^-, f_0 \to \pi^+\pi^-)/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{169}/\Gamma_{158}$

NODE=S032C63

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C63
NODE=S032C63

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
2.4±0.5±0.4	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(f_2(1270)\pi^+\pi^-, f_2 \to \pi^+\pi^-)/\Gamma(2\pi^+2\pi^-)$ — $\Gamma_{170}/\Gamma_{158}$

NODE=S032C64

This is the fit fraction from the coherent amplitude analysis.

NODE=S032C64
NODE=S032C64

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
4.9±0.6±0.5	LINK	07A	FOCS	4-body fit, ≈ 5.7k evts

$\Gamma(\pi^+\pi^-2\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{171}/Γ_{32}

NODE=S032C33
NODE=S032C33

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
25.8±1.5±1.8	2724 ± 166	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\eta\pi^0)/\Gamma_{\rm total}$ — Γ_{172}/Γ

NODE=S032C65
NODE=S032C65

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN
6.4±1.0±0.4	156 ± 24	ARTUSO	08	CLEO

$\Gamma(\eta\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{172}/Γ_{32}

NODE=S032C34

Unseen decay modes of the η are included.

NODE=S032C34
NODE=S032C34

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
1.47±0.34±0.11	62 ± 14	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\omega\pi^0)/\Gamma_{\rm total}$ — Γ_{173}/Γ

NODE=S032C35

Unseen decay modes of the ω are included.

NODE=S032C35
NODE=S032C35

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<2.6 × 10^{-4}	90	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(2\pi^+2\pi^-\pi^0)/\Gamma(K^-\pi^+)$ — Γ_{174}/Γ_{32}

NODE=S032C31
NODE=S032C31

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
10.7±1.2±0.5	1614 ± 171	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\eta\pi^+\pi^-)/\Gamma_{\rm total}$ — Γ_{175}/Γ

NODE=S032C36

Unseen decay modes of the η are included.

NODE=S032C36
NODE=S032C36

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
10.9±1.3±0.9		257 ± 32	ARTUSO	08	CLEO	
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<19	90		RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(\omega\pi^+\pi^-)/\Gamma(K^-\pi^+)$ — Γ_{176}/Γ_{32}

NODE=S032C37

Unseen decay modes of the ω are included.

NODE=S032C37
NODE=S032C37

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
4.1±1.2±0.4	472 ± 132	RUBIN	06	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(3\pi^+3\pi^-)/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{177}/Γ_{62}

NODE=S032S2
NODE=S032S2

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
5.23±0.59±1.35	149 ± 17	LINK	04B	FOCS	γA, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(3\pi^+3\pi^-)/\Gamma(K^-3\pi^+2\pi^-)$ — Γ_{177}/Γ_{92}

NODE=S032R79
NODE=S032R79

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.93±047±0.48	[94] LINK	04B	FOCS	γA, $\overline{E}_\gamma \approx$ 180 GeV

[94] This LINK 04B result is not independent of other results in these Listings.

NODE=S032R79;LINKAGE=LI

$\Gamma(\eta'(958)\pi^0)/\Gamma_{\rm total}$ — Γ_{178}/Γ

NODE=S032C66
NODE=S032C66

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN
8.1±1.5±0.6	50 ± 9	ARTUSO	08	CLEO

$\Gamma(\eta'(958)\pi^+\pi^-)/\Gamma_{\rm total}$ — Γ_{179}/Γ

NODE=S032C67
NODE=S032C67

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN
4.5±1.6±0.5	21 ± 8	ARTUSO	08	CLEO

$\Gamma(2\eta)/\Gamma_{\rm total}$ — Γ_{180}/Γ

NODE=S032C68
NODE=S032C68

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN
16.7±1.4±1.3	255 ± 22	ARTUSO	08	CLEO

$\Gamma(\eta\eta'(958))/\Gamma_{\rm total}$ — Γ_{181}/Γ

NODE=S032C69
NODE=S032C69

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN
12.6±2.5±1.1	46 ± 9	ARTUSO	08	CLEO

Hadronic modes with a $K\overline{K}$ pair

NODE=S032330

$\Gamma(K^+K^-)/\Gamma_{\rm total}$ — Γ_{182}/Γ

NODE=S032C70
NODE=S032C70

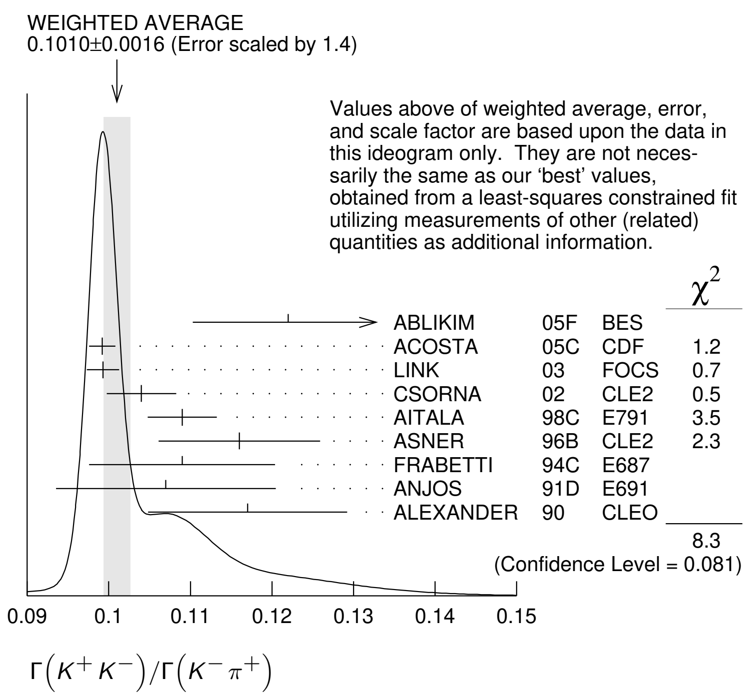
VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
3.97±0.07 OUR FIT	Error includes scale factor of 1.2.				
4.08±0.08±0.09	4746 ± 74	BONVICINI	08	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(K^+K^-)/\Gamma(K^-\pi^+)$ Γ_{182}/Γ_{32}

NODE=S032R27

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.1014±0.0014 OUR FIT Error includes scale factor of 1.3.				
0.1010±0.0016 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below.				
0.122 ±0.011 ±0.004	242 ± 20	ABLIKIM 05F	BES	$e^+e^- \approx \psi(3770)$
0.0992±0.0011±0.0012	16k±200	ACOSTA 05C	CDF	$p\overline{p}$, $\sqrt{s}$=1.96 TeV
0.0993±0.0014±0.0014	11k	LINK 03	FOCS	γ nucleus, $\overline{E}_\gamma \approx$ 180 GeV
0.1040±0.0033±0.0027	1900	CSORNA 02	CLE2	$e^+e^- \approx \Upsilon(4S)$
0.109 ±0.003 ±0.003	3317	AITALA 98C	E791	π^- nucleus, 500 GeV
0.116 ±0.007 ±0.007	1102	ASNER 96B	CLE2	$e^+e^- \approx \Upsilon(4S)$
0.109 ±0.007 ±0.009	581	FRABETTI 94C	E687	γBe $\overline{E}_\gamma$= 220 GeV
0.107 ±0.010 ±0.009	193	ANJOS 91D	E691	Photoproduction
0.117 ±0.010 ±0.007	249	ALEXANDER 90	CLEO	e^+e^- 10.5–11 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.107 ±0.029 ±0.015	103	ADAMOVICH 92	OMEG	π^- 340 GeV
0.138 ±0.027 ±0.010	155	FRABETTI 92	E687	γBe
0.16 ±0.05	34	ALVAREZ 91B	NA14	Photoproduction
0.10 ±0.02 ±0.01	131	ALBRECHT 90C	ARG	$e^+e^- \approx$ 10 GeV
0.122 ±0.018 ±0.012	118	BALTRUSAIT...85E	MRK3	e^+e^- 3.77 GeV
0.113 ±0.030		ABRAMS 79D	MRK2	e^+e^- 3.77 GeV

NODE=S032R27



$\Gamma(K^+K^-)/\Gamma(\pi^+\pi^-)$ $\Gamma_{182}/\Gamma_{137}$

NODE=S032R91

The unused results here are redundant with $\Gamma(K^+K^-)/\Gamma(K^-\pi^+)$ and $\Gamma(\pi^+\pi^-)/\Gamma(K^-\pi^+)$ measurements by the same experiments.

NODE=S032R91

NODE=S032R91

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2.760±0.040±0.034	7334	ACOSTA 05C	CDF	$p\overline{p}$, $\sqrt{s}$=1.96 TeV
2.81 ±0.10 ±0.06		LINK 03	FOCS	γ nucleus, $\overline{E}_\gamma \approx$ 180 GeV
2.96 ±0.16 ±0.15	710	CSORNA 02	CLE2	$e^+e^- \approx \Upsilon(4S)$
2.75 ±0.15 ±0.16		AITALA 98C	E791	π^- nucleus, 500 GeV
2.53 ±0.46 ±0.19		FRABETTI 94C	E687	γBe $\overline{E}_\gamma$= 220 GeV
2.23 ±0.81 ±0.46		ADAMOVICH 92	OMEG	π^- 340 GeV
1.95 ±0.34 ±0.22		ANJOS 91D	E691	Photoproduction
2.5 ±0.7		ALBRECHT 90C	ARG	$e^+e^- \approx$ 10 GeV
2.35 ±0.37 ±0.28		ALEXANDER 90	CLEO	e^+e^- 10.5–11 GeV

$\Gamma(2K^0_S)/\Gamma_{total}$ Γ_{183}/Γ

NODE=S032C71
NODE=S032C71

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
2.0 ±0.7 OUR FIT Error includes scale factor of 2.5.					
1.46±0.32±0.09	68 ± 15	BONVICINI	08	CLEO	e^+e^- at $\psi(3770)$

$\Gamma(2K^0_S)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{183}/Γ_{35}

NODE=S032R90

This is the same as $\Gamma(K^0\overline{K}^0)$ / $\Gamma(\overline{K}^0\pi^+\pi^-)$ because $D^0 \rightarrow K^0_S K^0_L$ is forbidden by *CP* conservation.

NODE=S032R90
NODE=S032R90

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0068±0.0025 OUR FIT Error includes scale factor of 2.4.					
0.0126±0.0022 OUR AVERAGE					
0.0144±0.0032±0.0016	79 ± 17	LINK	05A	FOCS	γ Be, $\overline{E}_\gamma \approx$ 180 GeV
0.0101±0.0022±0.0016	26	ASNER	96B	CLE2	$e^+e^- \approx \Upsilon(4S)$
0.039 ±0.013 ±0.013	20 ± 7	FRABETTI	94J	E687	γ Be $\overline{E}_\gamma$=220 GeV
0.021 $^{+0.011}_{-0.008}$ ±0.002	5	ALEXANDER	90	CLEO	e^+e^- 10.5–11 GeV

$\Gamma(K^0_S K^-\pi^+)/\Gamma(K^-\pi^+)$ Γ_{184}/Γ_{32}

NODE=S032B1
NODE=S032B1

VALUE	DOCUMENT ID		TECN	COMMENT
0.088±0.013 OUR FIT Error includes scale factor of 1.1.				
0.08 ±0.03	[95] ANJOS	91	E691	γ Be 80–240 GeV

[95] The factor 100 at the top of column 2 of Table I of ANJOS 91 should be omitted.

NODE=S032B1;LINKAGE=AJ

$\Gamma(K^0_S K^-\pi^+)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{184}/Γ_{35}

NODE=S032B20
NODE=S032B20

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.118±0.017 OUR FIT Error includes scale factor of 1.1.					
0.119±0.021 OUR AVERAGE Error includes scale factor of 1.3.					
0.108±0.019	61	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
0.16 ±0.03 ±0.02	39	ALBRECHT	90C	ARG	$e^+e^- \approx$ 10 GeV

$\Gamma(\overline{K}^*(892)^0 K^0_S, \overline{K}^*(892)^0 \rightarrow K^-\pi^+)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{185}/Γ_{35}

NODE=S032B25
NODE=S032B25

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.019	90	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.02	90	ALBRECHT	90C	ARG	$e^+e^- \approx$ 10 GeV

$\Gamma(K^0_S K^+\pi^-)/\Gamma(K^-\pi^+)$ Γ_{186}/Γ_{32}

NODE=S032B5
NODE=S032B5

VALUE	DOCUMENT ID		TECN	COMMENT
0.067±0.013 OUR FIT				
0.05 ±0.025	[96] ANJOS	91	E691	γ Be 80–240 GeV

[96] The factor 100 at the top of column 2 of Table I of ANJOS 91 should be omitted.

NODE=S032B5;LINKAGE=AJ

$\Gamma(K^0_S K^+\pi^-)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{186}/Γ_{35}

NODE=S032B21
NODE=S032B21

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.090±0.017 OUR FIT					
0.098±0.020	55	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV

$\Gamma(K^*(892)^0 K^0_S, K^*(892)^0 \rightarrow K^+\pi^-)/\Gamma(K^0_S\pi^+\pi^-)$ Γ_{187}/Γ_{35}

NODE=S032B24
NODE=S032B24

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.010	90	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV

$\Gamma(K^+K^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ Γ_{188}/Γ_{50}

NODE=S032S28
NODE=S032S28

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
2.37±0.03±0.04	11k±122	AUBERT,B	06X	BABR	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.95±0.26	151	ASNER	96B	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(K^*(892)^+K^-, K^*(892)^+ \rightarrow K^+\pi^0)/\Gamma(K^+K^-\pi^0)$ $\Gamma_{189}/\Gamma_{188}$

NODE=S032R02

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032R02
NODE=S032R02

VALUE (units 10^{-2})	DOCUMENT ID		TECN	COMMENT
44.6±1.0 OUR AVERAGE				
44.4±0.8±0.6	AUBERT	07T	BABR	Dalitz fit II, 11k evts
46.1±3.1	[97] CAWLFIELD	06A	CLEO	Dalitz fit, 627 ± 30 evts

[97] The error on this CAWLFIELD 06A result is statistical only.

NODE=S032R02;LINKAGE=CA

$\Gamma(K^*(892)^- K^+,\ K^*(892)^- \to K^- \pi^0)/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{190}/\Gamma_{188}$

NODE=S032R03

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032R03
NODE=S032R03

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
15.4±1.3 OUR AVERAGE Error includes scale factor of 1.5.			
15.9±0.7±0.6	AUBERT 07T	BABR	Dalitz fit II, 11k evts
12.3±2.2	[98] CAWLFIELD 06A	CLEO	Dalitz fit, 627 ± 30 evts

[98] The error on this CAWLFIELD 06A result is statistical only.

NODE=S032R03;LINKAGE=CA

$\Gamma((K^+\pi^0)_{S-wave} K^-)/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{191}/\Gamma_{188}$

NODE=S032S08

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032S08
NODE=S032S08

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
71.1±3.7±1.9	[99] AUBERT 07T	BABR	Dalitz fit II, 11k evts

[99] The only major difference between fits I and II in the AUBERT 07T analysis is in this mode, where fit-I fraction is (16.3 ± 3.4 ± 2.1)%.

NODE=S032S08;LINKAGE=AU

$\Gamma((K^-\pi^0)_{S-wave} K^+)/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{192}/\Gamma_{188}$

NODE=S032S09

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032S09
NODE=S032S09

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
3.9±0.9±1.0	AUBERT 07T	BABR	Dalitz fit II, 11k evts

$\Gamma(f_0(980)\pi^0,\ f_0 \to K^+ K^-)/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{193}/\Gamma_{188}$

NODE=S032S11

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032S11
NODE=S032S11

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
10.5±1.1±1.2	[100] AUBERT 07T	BABR	Dalitz fit II, 11k evts

[100] When AUBERT 07T replace the $f_0(980)\pi^0$ mode with $a_0(980)\pi^0$, the fit fraction is a negligibly different (11.0 ± 1.5 ± 1.2)%.

NODE=S032S11;LINKAGE=AU

$\Gamma(\phi\pi^0,\ \phi \to K^+ K^-)/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{194}/\Gamma_{188}$

NODE=S032R04

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032R04
NODE=S032R04

VALUE (units 10^{-2})	DOCUMENT ID	TECN	COMMENT
18.5±1.8 OUR AVERAGE Error includes scale factor of 2.5.			
19.4±0.6±0.5	AUBERT 07T	BABR	Dalitz fit II, 11k evts
14.9±1.6	[101] CAWLFIELD 06A	CLEO	Dalitz fit, 627 ± 30 evts

[101] The error on this CAWLFIELD 06A result is statistical only.

NODE=S032R04;LINKAGE=CA

$\Gamma(K^+ K^- \pi^0 \text{ nonresonant})/\Gamma(K^+ K^- \pi^0)$ — $\Gamma_{195}/\Gamma_{188}$

NODE=S032R05

This is the "fit fraction" from the Dalitz-plot analysis with interference.

NODE=S032R05
NODE=S032R05

VALUE	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.360±0.037	[102] CAWLFIELD 06A	CLEO	Dalitz fit, 627 ± 30 evts

[102] The error is statistical only. CAWLFIELD 06A also fits the Dalitz plot replacing this flat nonresonant background with broad S-wave $\kappa^\pm \to K^\pm\pi^0$ resonances. There is no significant improvement in the fit, and $K^{*\pm} K^\mp$ and $\phi\pi^0$ results are not much changed.

NODE=S032R05;LINKAGE=CW

$\Gamma(K^0_S K^0_S \pi^0)/\Gamma_{total}$ — Γ_{196}/Γ

NODE=S032S27
NODE=S032S27

VALUE	DOCUMENT ID	TECN	COMMENT
<0.00059	ASNER 96B	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\phi\pi^0)/\Gamma(K^+ K^-)$ — $\Gamma_{211}/\Gamma_{182}$

NODE=S032C99
NODE=S032C99

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.194±0.006±0.009	1254	TAJIMA 04	BELL	e^+e^- at $\Upsilon(4S)$

$\Gamma(\phi\eta)/\Gamma(K^+ K^-)$ — $\Gamma_{212}/\Gamma_{182}$

NODE=S032C98
NODE=S032C98

VALUE (units 10^{-2})	EVTS	DOCUMENT ID	TECN	COMMENT
3.59±1.14±0.18	31	TAJIMA 04	BELL	e^+e^- at $\Upsilon(4S)$

$\Gamma(\phi\omega)/\Gamma_{total}$ — Γ_{213}/Γ

NODE=S032B93
NODE=S032B93

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
<0.0021	90	ALBRECHT 94I	ARG	$e^+e^- \approx 10$ GeV

$\Gamma(K^+K^-\pi^+\pi^-)/\Gamma(K^-\pi^+\pi^+\pi^-)$ Γ_{197}/Γ_{62}

NODE=S032B9
NODE=S032B9

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
3.00±0.13 OUR AVERAGE					
2.95±0.11±0.08	2669 ± 101	[103] LINK	05G	FOCS	γBe, $\overline{E}_\gamma \approx$ 180 GeV
3.13±0.37±0.36	136 ± 15	AITALA	98D	E791	π^- nucleus, 500 GeV
3.5 ±0.4 ±0.2	244 ± 26	FRABETTI	95C	E687	γBe, $\overline{E}_\gamma \approx$ 200 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
4.4 ±1.8 ±0.5	19 ± 8	ABLIKIM	05F	BES	$e^+e^- \approx \psi(3770)$
4.1 ±0.7 ±0.5	114 ± 20	ALBRECHT	94I	ARG	$e^+e^- \approx$ 10 GeV
3.14±1.0	89 ± 29	AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
2.8 $^{+0.8}_{-0.7}$		ANJOS	91	E691	γBe 80–240 GeV

[103] LINK 05G uses a smaller, cleaner subset of 1279 ± 48 events for the amplitude analysis that gives the results in the next data blocks.

NODE=S032B9;LINKAGE=LI

$\Gamma(\phi\pi^+\pi^-$ 3-body, $\phi \to K^+K^-)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{198}/\Gamma_{197}$

NODE=S032Q02

This is the fraction from a coherent amplitude analysis.

NODE=S032Q02
NODE=S032Q02

VALUE	DOCUMENT ID		TECN	COMMENT
0.01±0.01	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(\phi\rho^0, \phi \to K^+K^-)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{199}/\Gamma_{197}$

NODE=S032Q03

This is the fraction from a coherent amplitude analysis.

NODE=S032Q03
NODE=S032Q03

VALUE	DOCUMENT ID		TECN	COMMENT
0.29±0.02 ±0.01	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(K^+K^-\rho^0$ 3-body$)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{200}/\Gamma_{197}$

NODE=S032Q04

This is the fraction from a coherent amplitude analysis.

NODE=S032Q04
NODE=S032Q04

VALUE	DOCUMENT ID		TECN	COMMENT
0.02±0.02 ±0.02	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(f_0(980)\pi^+\pi^-, f_0 \to K^+K^-)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{201}/\Gamma_{197}$

NODE=S032Q05

This is the fraction from a coherent amplitude analysis.

NODE=S032Q05
NODE=S032Q05

VALUE	DOCUMENT ID		TECN	COMMENT
0.15±0.03±0.02	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(K^*(892)^0K^\mp\pi^\pm$ 3-body, $K^{*0} \to K^\pm\pi^\mp)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{202}/\Gamma_{197}$

NODE=S032Q06

This is the fraction from a coherent amplitude analysis.

NODE=S032Q06
NODE=S032Q06

VALUE	DOCUMENT ID		TECN	COMMENT
0.11±0.02 ±0.01	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(K^*(892)^0\overline{K}^*(892)^0, K^{*0} \to K^\pm\pi^\mp)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{203}/\Gamma_{197}$

NODE=S032Q07

This is the fraction from a coherent amplitude analysis.

NODE=S032Q07
NODE=S032Q07

VALUE	DOCUMENT ID		TECN	COMMENT
0.03±0.02 ±0.01	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(K_1(1270)^\pm K^\mp, K_1(1270)^\pm \to K^\pm\pi^+\pi^-)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{204}/\Gamma_{197}$

NODE=S032Q08

This is the fraction from a coherent amplitude analysis.

NODE=S032Q08
NODE=S032Q08

VALUE	DOCUMENT ID		TECN	COMMENT
0.33±0.06±0.04	[104] LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

[104] This LINK 05G value includes $K_1(1270)^\pm \to \rho^0K^\pm$, $\to K_0^*(1430)^0\pi^\pm$, and $K^*(892)^0\pi^\pm$.

NODE=S032Q08;LINKAGE=LI

$\Gamma(K_1(1400)^\pm K^\mp, K_1(1400)^\pm \to K^\pm\pi^+\pi^-)/\Gamma(K^+K^-\pi^+\pi^-)$ $\Gamma_{205}/\Gamma_{197}$

NODE=S032Q09

This is the fraction from a coherent amplitude analysis.

NODE=S032Q09
NODE=S032Q09

VALUE	DOCUMENT ID		TECN	COMMENT
0.22±0.03±0.04	LINK	05G	FOCS	1279 ± 48 $K^+K^-\pi^+\pi^-$ evts.

$\Gamma(K_S^0K_S^0\pi^+\pi^-)/\Gamma(K_S^0\pi^+\pi^-)$ Γ_{208}/Γ_{35}

NODE=S032B94
NODE=S032B94

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
4.3 ±0.8 OUR AVERAGE					
4.16±0.70±0.42	113 ± 21	LINK	05A	FOCS	γ Be, $\overline{E}_\gamma \approx$ 180 GeV
6.2 ±2.0 ±1.6	25	ALBRECHT	94I	ARG	$e^+e^- \approx$ 10 GeV

$\Gamma(K^0_S K^- \pi^+ \pi^+ \pi^-)/\Gamma(K^0_S 2\pi^+ 2\pi^-)$ — Γ_{209}/Γ_{86}

NODE=S032S93

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.054	90	LINK	04D	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

$\Gamma(K^+ K^- \pi^+ \pi^- \pi^0)/\Gamma_{total}$ — Γ_{210}/Γ

NODE=S032B32

VALUE	DOCUMENT ID		TECN	COMMENT
0.0031±0.0020	[105] BARLAG	92C	ACCM	π^- Cu 230 GeV

[105] BARLAG 92C computes the branching fraction using topological normalization.

NODE=S032B32;LINKAGE=BD

Radiative modes

NODE=S032333

$\Gamma(\rho^0 \gamma)/\Gamma_{total}$ — Γ_{214}/Γ

NODE=S032S61

VALUE	CL%	DOCUMENT ID		TECN
<2.4 × 10^{-4}	90	ASNER	98	CLE2

$\Gamma(\omega \gamma)/\Gamma_{total}$ — Γ_{215}/Γ

NODE=S032S62

VALUE	CL%	DOCUMENT ID		TECN
<2.4 × 10^{-4}	90	ASNER	98	CLE2

$\Gamma(\phi \gamma)/\Gamma_{total}$ — Γ_{216}/Γ

NODE=S032S63

VALUE	CL%	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$<1.9 \times 10^{-4}$	90	ASNER	98	CLE2

$\Gamma(\phi \gamma)/\Gamma(K^+ K^-)$ — $\Gamma_{216}/\Gamma_{182}$

NODE=S032S88

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
6.8 ±0.9 OUR FIT					
$6.31^{+1.70+0.30}_{-1.48-0.36}$	28	TAJIMA	04	BELL	$e^+ e^-$ at $\Upsilon(4S)$

$\Gamma(\phi \gamma)/\Gamma(K^- \pi^+)$ — Γ_{216}/Γ_{32}

NODE=S032S98

VALUE (units 10^{-4})	EVTS	DOCUMENT ID		TECN	COMMENT
6.9 ±0.9 OUR FIT					
7.15±0.78±0.69	243 ± 25	AUBERT	08AZ	BABR	$e^+ e^- \approx$ 10.6 GeV

$\Gamma(\overline{K}^*(892)^0 \gamma)/\Gamma(K^- \pi^+)$ — Γ_{217}/Γ_{32}

NODE=S032S99

VALUE (units 10^{-3})	EVTS	DOCUMENT ID		TECN	COMMENT
8.43±0.51±0.70	2286 ± 113	AUBERT	08AZ	BABR	$e^+ e^- \approx$ 10.6 GeV

$\Gamma(\overline{K}^*(892)^0 \gamma)/\Gamma_{total}$ — Γ_{217}/Γ

NODE=S032S64

VALUE	CL%	DOCUMENT ID		TECN
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$<7.6 \times 10^{-4}$	90	ASNER	98	CLE2

Doubly Cabibbo-suppressed / Mixing modes

NODE=S032335

$\Gamma(K^+ \ell^- \overline{\nu}_\ell \text{ via } \overline{D}^0)/\Gamma(K^- \ell^+ \nu_\ell)$ — Γ_{218}/Γ_{17}

NODE=S032S26

This is a limit on R_M without the complications of possible doubly Cabibbo-suppressed decays that occur when using hadronic modes. For the limits on $|m_1 - m_2|$ and $(\Gamma_1 - \Gamma_2)/\Gamma$ that come from the best mixing limit, see near the beginning of these D^0 Listings.

NODE=S032S26

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.005	90	[106] AITALA	96C	E791	π^- nucleus, 500 GeV

NODE=S032S26

[106] AITALA 96C uses $D^{*+} \rightarrow D^0 \pi^+$ (and charge conjugate) decays to identify the charm at production and $D^0 \rightarrow K^- \ell^+ \nu_\ell$ (and charge conjugate) decays to identify the charm at decay.

NODE=S032S26;LINKAGE=A

$\Gamma(K^+ \text{ or } K^*(892)^+ e^- \overline{\nu}_e \text{ via } \overline{D}^0)/[\Gamma(K^- e^+ \nu_e) + \Gamma(K^*(892)^- e^+ \nu_e)]$ — $\Gamma_{219}/(\Gamma_{18}+\Gamma_{20})$

NODE=S032S01

This is a limit on R_M without the complications of possible doubly Cabibbo-suppressed decays that occur when using hadronic modes. The experiments use $D^{*+} \rightarrow D^0 \pi^+$ (and charge conjugate) decays to identify the charm at production and the charge of the e to identify the charm at decay. These limits do not allow CP violation. For the limits on $|m_1 - m_2|$ and $(\Gamma_1 - \Gamma_2)/\Gamma$ that come from the best mixing limit, see near the beginning of these D^0 Listings.

NODE=S032S01

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.001	90	BITENC	05	BELL	$e^+ e^- \approx$ 10.6 GeV

NODE=S032S01

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

$-0.0013 < R < +0.0012$	90	AUBERT	07AB	BABR	$e^+e^- \approx$ 10.58 GeV
<0.0078	90	CAWLFIELD	05	CLEO	$e^+e^- \approx$ 10.6 GeV
<0.0042	90	AUBERT,B	04Q	BABR	See AUBERT 07AB

$\Gamma(K^+\pi^-)/\Gamma(K^-\pi^+)$ Γ_{220}/Γ_{32}

NODE=S032R61

This is R, the time-integrated wrong-sign rate compared to the right-sign rate. See the note on "D^0-$\overline{D}^0$ Mixing," near the start of the D^0 Listings. NODE=S032R61

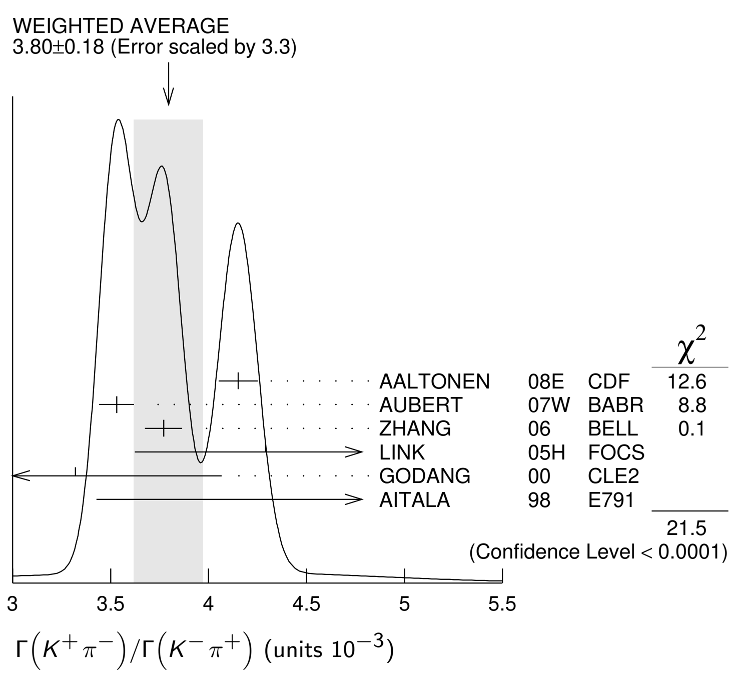
The experiments here use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born. The $D^0 \to K^+\pi^-$ decay can occur directly by doubly Cabibbo-suppressed (DCS) decay, or indirectly by $D^0 \to \overline{D}^0$ mixing followed by $\overline{D}^0 \to K^+\pi^-$ decay. Some of the experiments can use the decay-time information to disentangle the two mechanisms. Here, we list the experimental branching ratio, which if there is no mixing is the DCS ratio. See the next data block for values of the DCS ratio R_D, and the following data block for limits on the mixing ratio R_M. See the section on CP-violating asymmetries near the end of this D^0 Listing for values of A_D, and the note on "D^0-$\overline{D}^0$ Mixing" for limits on x' and y'.

Some early limits have been omitted from this Listing; see our 1998 edition (The European Physical Journal **C3** 1 (1998)) and our 2006 edition (Journal of Physics, G **33** 1 (2006)).

NODE=S032R61

VALUE (units 10^{-3})	*EVTS*	*DOCUMENT ID*	*TECN*	*COMMENT*
3.80±0.18 OUR AVERAGE	Error includes scale factor of 3.3. See the ideogram below.			
4.15 ± 0.10	12.7±0.3k	[107] AALTONEN 08E	CDF	$p\overline{p}$, $\sqrt{s} = 1.96$ TeV
$3.53 \pm 0.08 \pm 0.04$	4030 ± 90	[108] AUBERT 07W	BABR	$e^+e^- \approx$ 10.6 GeV
$3.77 \pm 0.08 \pm 0.05$	4024 ± 88	[107] ZHANG 06	BELL	e^+e^-
$4.29^{+0.63}_{-0.61} \pm 0.27$	234	[109] LINK 05H	FOCS	γ nucleus
$3.32^{+0.63}_{-0.65} \pm 0.40$	45	[107] GODANG 00	CLE2	e^+e^-
$6.8\ ^{+3.4}_{-3.3} \pm 0.7$	34	[108] AITALA 98	E791	π^- nucl., 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$4.05 \pm 0.21 \pm 0.11$	2.0 ± 0.1k	[110] ABULENCIA 06X	CDF	See AALTONEN 08E
$3.81 \pm 0.17^{+0.08}_{-0.16}$	845 ± 40	[108] LI 05A	BELL	See ZHANG 06
$3.57 \pm 0.22 \pm 0.27$		[111] AUBERT 03Z	BABR	See AUBERT 07W
$4.04 \pm 0.85 \pm 0.25$	149	[112] LINK 01	FOCS	γ nucleus

[107] GODANG 00, ZHANG 06, and AALTONEN 08E allow CP violation. NODE=S032R61;LINKAGE=ZH
[108] AITALA 98, LI 05A, and AUBERT 07W assume no CP violation. NODE=S032R61;LINKAGE=AT
[109] This LINK 05H result assumes no mixing but allows CP violation. If neither mixing nor CP violation is allowed, $R = (4.29 \pm 0.63 \pm 0.28) \times 10^{-3}$. NODE=S032R61;LINKAGE=LI
[110] This ABULENCIA 06X result assumes no mixing. NODE=S032R61;LINKAGE=AB
[111] This AUBERT 03Z result allows CP violation. If CP violation is not allowed, $R = 0.00359 \pm 0.00020 \pm 0.00027$. NODE=S032R61;LINKAGE=AU
[112] This LINK 01 result assumes no mixing or CP violation. NODE=S032R61;LINKAGE=KL



$\Gamma(K^+\pi^-$ via DCS$)/\Gamma(K^-\pi^+)$ $\qquad\Gamma_{221}/\Gamma_{32}$

NODE=S032R08

This is R_D, the doubly Cabibbo-suppressed ratio when mixing is allowed.

NODE=S032R08
NODE=S032R08

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
3.37± 0.21 OUR AVERAGE			Error includes scale factor of 1.8. See the ideogram below.			
3.04 ± 0.55		12.7 ± 0.3k	AALTONEN	08E	CDF	$p\overline{p}$, $\sqrt{s}=1.96$ TeV
$3.03\pm 0.16\pm0.10$		4030 ± 90	[113] AUBERT	07W	BABR	$e^+e^-\approx 10.6$ GeV
3.64 ± 0.17		4024 ± 88	[114] ZHANG	06	BELL	e^+e^-
$5.17^{+1.47}_{-1.58}\pm0.76$		234	[115] LINK	05H	FOCS	γ nucleus
$4.8\pm 1.2\pm0.4$		45	[116] GODANG	00	CLE2	e^+e^-
$9.0\ ^{+12.0}_{-10.9}\pm4.4$		34	[117] AITALA	98	E791	π^- nucl., 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
2.87 ± 0.37		845 ± 40	LI	05A	BELL	See ZHANG 06
$2.3 < R_D < 5.2$	95		[118] AUBERT	03Z	BABR	See AUBERT 07W

[113] This AUBERT 07W result is the same whether or not CP violation is allowed. NODE=S032R08;LINKAGE=UB

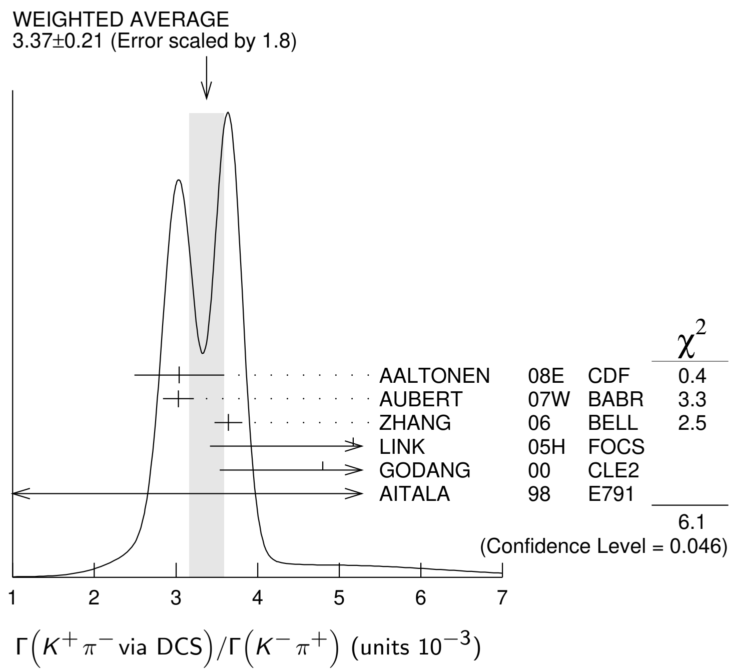
[114] This ZHANG 06 assumes no CP violation. NODE=S032R08;LINKAGE=ZH

[115] This LINK 05H result allows CP violation. Allowing mixing but not CP violation, $R_D = (3.81^{+1.67}_{-1.63}\pm 0.92)\times 10^{-3}$. NODE=S032R08;LINKAGE=LI

[116] This GODANG 00 result allows CP violation. NODE=S032R08;LINKAGE=GO

[117] This AITALA 98 result assumes no CP violation. NODE=S032R08;LINKAGE=AT

[118] This AUBERT 03Z result allows CP violation. If only mixing is allowed, the 95% confidence level interval is $(2.4 < R_D < 4.9)\times 10^{-3}$. NODE=S032R08;LINKAGE=AU



$\Gamma(K^+\pi^-$ via $\overline{D}^0)/\Gamma(K^-\pi^+)$ $\qquad\Gamma_{222}/\Gamma_{32}$

NODE=S032R9

This is R_M in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings. The experiments here (1) use the charge of the pion in $D^*(2010)^\pm\to(D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born; and (2) use the decay-time distribution to disentangle doubly Cabibbo-suppressed decay and mixing. For the limits on $|m_1 - m_2|$ and $(\Gamma_1-\Gamma_2)/\Gamma$ that come from the best mixing limit, see near the beginning of these D^0 Listings.

NODE=S032R9

NODE=S032R9

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<0.00040	95		[119] ZHANG	06	BELL	e^+e^-
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.00046	95		[120] LI	05A	BELL	See ZHANG 06
<0.0063	95		[121] LINK	05H	FOCS	γ nucleus
<0.0013	95		[122] AUBERT	03Z	BABR	e^+e^-, 10.6 GeV
<0.00041	95		[123] GODANG	00	CLE2	e^+e^-
<0.0092	95		[124] BARATE	98W	ALEP	e^+e^- at Z^0
<0.005	90	1 ± 4	[125] ANJOS	88C	E691	Photoproduction

[119] This ZHANG 06 result allows *CP* violation, but the result does not change if *CP* violation is not allowed. NODE=S032R9;LINKAGE=ZH

[120] This LI 05A result allows *CP* violation. The limit becomes $<$ 0.00042 (95% CL) if *CP* violation is not allowed. NODE=S032R9;LINKAGE=LA

[121] LINK 05H obtains the same result whether or not *CP* violation is allowed. NODE=S032R9;LINKAGE=LI

[122] This AUBERT 03Z result allows *CP* violation and assumes that the strong phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ is small, and limits only $D^0 \to \overline{D}^0$ transitions via off-shell intermediate states. The limit on transitions via on-shell intermediate states is 0.0016. NODE=S032R9;LINKAGE=AU

[123] This GODANG 00 result allows *CP* violation and assumes that the strong phase between $D^0 \to K^+\pi^-$ and $\overline{D}^0 \to K^+\pi^-$ is small, and limits only $D^0 \to \overline{D}^0$ transitions via off-shell intermediate states. The limit on transitions via on-shell intermediate states is 0.0017. NODE=S032R9;LINKAGE=GD

[124] This BARATE 98W result assumes no interference between the DCS and mixing amplitudes ($y' = 0$ in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings). When interference is allowed, the limit degrades to 0.036 (95%CL). NODE=S032R9;LINKAGE=F

[125] This ANJOS 88C result assumes no interference between the DCS and mixing amplitudes ($y' = 0$ in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings). When interference is allowed, the limit degrades to 0.019. NODE=S032R9;LINKAGE=AA

$\Gamma(K^0_S\pi^+\pi^-$ in $D^0 \to \overline{D}^0)/\Gamma(K^0_S\pi^+\pi^-)$ — Γ_{223}/Γ_{35}

NODE=S032R75

This is R_M in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings. The experiments here (1) use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born; and (2) use the decay-time distribution to disentangle doubly Cabibbo-suppressed decay and mixing. For the limits on $|m_1 - m_2|$ and $(\Gamma_1 - \Gamma_2)/\Gamma$ that come from the best mixing limit, see near the beginning of these D^0 Listings. NODE=S032R75

NODE=S032R75

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.0063	95	[126] ASNER	05	CLEO	$e^+e^- \approx$ 10 GeV

[126] This ASNER 05 limit allows *CP* violation. If *CP* violation is not allowed, the limit is 0.0042 at 95% CL. NODE=S032R75;LINKAGE=AS

$\Gamma(K^+\pi^-\pi^0)/\Gamma(K^-\pi^+\pi^0)$ — Γ_{225}/Γ_{50}

NODE=S032C24

The experiments here use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born. The $D^0 \to K^+\pi^-\pi^0$ decay can occur directly by doubly Cabibbo-suppressed (DCS) decay, or indirectly by $D^0 \to \overline{D}^0$ mixing followed by $\overline{D}^0 \to K^+\pi^-\pi^0$ decay. NODE=S032C24

NODE=S032C24

VALUE (units 10^{-3})	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2.20±0.10 OUR AVERAGE					
$2.14 \pm 0.08 \pm 0.08$	763 ± 51	[127] AUBERT,B	06N	BABR	$e^+e^- \approx \Upsilon(4S)$
$2.29 \pm 0.15 {}^{+0.13}_{-0.09}$	1978 ± 104	TIAN	05	BELL	$e^+e^- \approx \Upsilon(4S)$
$4.3\ {}^{+1.1}_{-1.0} \pm 0.7$	38	BRANDENB...	01	CLE2	$e^+e^- \approx \Upsilon(4S)$

[127] This AUBERT,B 06N result assumes no mixing. NODE=S032C24;LINKAGE=UA

$\Gamma(K^+\pi^-\pi^0$ via $\overline{D}^0)/\Gamma(K^-\pi^+\pi^0)$ — Γ_{226}/Γ_{50}

NODE=S032R00

This is R_M in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings. The experiments here (1) use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born; and (2) use the decay-time distribution to disentangle doubly Cabibbo-suppressed decay and mixing. For the limits on $|m_1 - m_2|$ and $(\Gamma_1 - \Gamma_2)/\Gamma$ that come from the best mixing limit, see near the beginning of these D^0 Listings. NODE=S032R00

NODE=S032R00

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<5.4 \times 10^{-4}$	95	[128] AUBERT,B	06N	BABR	$e^+e^- \approx \Upsilon(4S)$

[128] This AUBERT,B 06N limit assumes no *CP* violation. The measured value corresponding to the limit is $(2.3^{+1.8}_{-1.4} \pm 0.4) \times 10^{-4}$. If *CP* violation is allowed, this becomes $(1.0^{+2.2}_{-0.7} \pm 0.3) \times 10^{-4}$. NODE=S032R00;LINKAGE=AU

$\Gamma(K^+\pi^-\pi^+\pi^-)/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{227}/Γ_{62}

NODE=S032R62

The experiments here use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born. The $D^0 \to K^+\pi^-\pi^+\pi^-$ decay can occur directly by doubly Cabibbo-suppressed (DCS) decay, or indirectly by $D^0 \to \overline{D}^0$ mixing followed by $\overline{D}^0 \to K^+\pi^-\pi^+\pi^-$ decay. Some of the experiments can use the decay-time information to disentangle the two mechanisms. Here, we list the experimental branching ratio, which if there is no mixing is the DCS ratio; in the next data block we give the limits on the mixing ratio. NODE=S032R62

Some early limits have been omitted from this Listing; see our 1998 edition (EPJ **C3** 1).

NODE=S032R62

VALUE (units 10^{-3})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{3.23^{+0.25}_{-0.22}}$ **OUR AVERAGE**						
$3.20\pm0.18^{+0.18}_{-0.13}$		1721 ± 75	[129] TIAN	05	BELL	$e^+e^- \approx \Upsilon(4S)$
$4.4\ ^{+1.3}_{-1.2}\ \pm0.6$		54	[129] DYTMAN	01	CLE2	$e^+e^- \approx \Upsilon(4S)$
$2.5\ ^{+3.6}_{-3.4}\ \pm0.3$			[130] AITALA	98	E791	π^- nucl., 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<18	90		[129] AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
<18	90	5 ± 12	[131] ANJOS	88C	E691	Photoproduction

[129] AMMAR 91 cannot and DYTMAN 01 and TIAN 05 do not distinguish between doubly Cabibbo-suppressed decay and D^0-$\overline{D}^0$ mixing. NODE=S032R62;LINKAGE=G

[130] This AITALA 98 result assumes no D^0-$\overline{D}^0$ mixing (R_M in the note on "D^0-$\overline{D}^0$ Mixing"). It becomes $-0.0020^{+0.0117}_{-0.0106}\pm0.0035$ when mixing is allowed and decay-time information is used to distinguish doubly Cabibbo-suppressed decays from mixing. NODE=S032R62;LINKAGE=AT

[131] ANJOS 88C uses decay-time information to distinguish doubly Cabibbo-suppressed (DCS) decays from D^0-$\overline{D}^0$ mixing. However, the result assumes no interference between the DCS and mixing amplitudes ($y' = 0$ in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings). When interference is allowed, the limit degrades to 0.033. NODE=S032R62;LINKAGE=F

$\Gamma(K^+\pi^-\pi^+\pi^-$ via $\overline{D}^0)/\Gamma(K^-\pi^+\pi^+\pi^-)$ Γ_{228}/Γ_{62}

NODE=S032S83
NODE=S032S83

This is a D^0-$\overline{D}^0$ mixing limit. The experiments here (1) use the charge of the pion in $D^*(2010)^\pm \to (D^0$ or $\overline{D}^0)\ \pi^\pm$ decay to tell whether a D^0 or a $\overline{D}^0$ was born; and (2) use the decay-time distribution to disentangle doubly Cabibbo-suppressed decay and mixing. For the limits on $\left|m_{D_1^0} - m_{D_2^0}\right|$ and $(\Gamma_{D_1^0} - \Gamma_{D_2^0})/\Gamma_{D^0}$ that come from the best mixing limit, see near the beginning of these D^0 Listings.

NODE=S032S83

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<0.005	90	0 ± 4	[132] ANJOS	88C	E691	Photoproduction

[132] ANJOS 88C uses decay-time information to distinguish doubly Cabibbo-suppressed (DCS) decays from D^0-$\overline{D}^0$ mixing. However, the result assumes no interference between the DCS and mixing amplitudes ($y' = 0$ in the note on "D^0-$\overline{D}^0$ Mixing" near the start of the D^0 Listings). When interference is allowed, the limit degrades to 0.007. NODE=S032S83;LINKAGE=A

$\Gamma(K^+\pi^-$ or $K^+\pi^-\pi^+\pi^-$ via $\overline{D}^0)/\Gamma(K^-\pi^+$ or $K^-\pi^+\pi^+\pi^-)$ Γ_{229}/Γ_0

NODE=S032R99

This is a D^0-$\overline{D}^0$ mixing limit. For the limits on $\left|m_{D_1^0} - m_{D_2^0}\right|$ and $(\Gamma_{D_1^0} - \Gamma_{D_2^0})/\Gamma_{D^0}$ that come from the best mixing limit, see near the beginning of these D^0 Listings.

NODE=S032R99

NODE=S032R99

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.0085	90	[133] AITALA	98	E791	π^- nucleus, 500 GeV
<0.0037	90	[134] ANJOS	88C	E691	Photoproduction

[133] AITALA 98 uses decay-time information to distinguish doubly Cabibbo-suppressed decays from D^0-$\overline{D}^0$ mixing. The fit allows interference between the two amplitudes, and also allows CP violation in this term. The central value obtained is $0.0039^{+0.0036}_{-0.0032}\pm0.0016$. When interference is disallowed, the result becomes $0.0021\pm0.0009\pm0.0002$. NODE=S032R99;LINKAGE=AT

[134] This combines results of ANJOS 88C on $K^+\pi^-$ and $K^+\pi^-\pi^+\pi^-$ (via $\overline{D}^0$) reported in the data block above (see footnotes there). It assumes no interference. NODE=S032R99;LINKAGE=AN

$\Gamma(\mu^-$ anything via $\overline{D}^0)/\Gamma(\mu^+$ anything$)$ Γ_{230}/Γ_6

NODE=S032R8

This is a D^0-$\overline{D}^0$ mixing limit. See the somewhat better limits above.

NODE=S032R8
NODE=S032R8

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.0056	90	LOUIS	86	SPEC	π^- W 225 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.012	90	BENVENUTI	85	CNTR	μC, 200 GeV
<0.044	90	BODEK	82	SPEC	π^-, pFe $\to D^0$

Rare or forbidden modes

NODE=S032336

$\Gamma(\gamma\gamma)/\Gamma(\pi^0\pi^0)$ $\Gamma_{231}/\Gamma_{138}$

NODE=S032S84

$D^0 \to \gamma\gamma$ is a flavor-changing neutral-current decay, forbidden in the Standard Model at the tree level.

NODE=S032S84

NODE=S032S84

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.033	90	COAN	03	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(e^+e^-)/\Gamma_{\text{total}}$ — Γ_{232}/Γ

NODE=S032R44

A test for the $\Delta C = 1$ weak neutral current. Allowed by first-order weak interaction combined with electromagnetic interaction.

NODE=S032R44

NODE=S032R44

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.2 \times 10^{-6}$	90	3	AUBERT,B	04Y	BABR	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<8.19 \times 10^{-6}$	90		PRIPSTEIN	00	E789	p nucleus, 800 GeV
$<6.2 \times 10^{-6}$	90		AITALA	99G	E791	$\pi^- N$ 500 GeV
$<1.3 \times 10^{-5}$	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
$<1.3 \times 10^{-4}$	90		ADLER	88	MRK3	e^+e^- 3.77 GeV
$<1.7 \times 10^{-4}$	90	7	ALBRECHT	88G	ARG	e^+e^- 10 GeV
$<2.2 \times 10^{-4}$	90	8	HAAS	88	CLEO	e^+e^- 10 GeV

$\Gamma(\mu^+\mu^-)/\Gamma_{\text{total}}$ — Γ_{233}/Γ

NODE=S032R7

A test for the $\Delta C = 1$ weak neutral current. Allowed by first-order weak interaction combined with electromagnetic interaction.

NODE=S032R7

NODE=S032R7

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.3 \times 10^{-6}$	90	1	AUBERT,B	04Y	BABR	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<2.0 \times 10^{-6}$	90		ABT	04	HERB	pA, 920 GeV
$<2.5 \times 10^{-6}$	90		ACOSTA	03F	CDF	$p\overline{p}$, $\sqrt{s} = 1.96$ TeV
$<1.56 \times 10^{-5}$	90		PRIPSTEIN	00	E789	p nucleus, 800 GeV
$<5.2 \times 10^{-6}$	90		AITALA	99G	E791	$\pi^- N$ 500 GeV
$<4.1 \times 10^{-6}$	90		ADAMOVICH	97	BEAT	π^- Cu, W 350 GeV
$<4.2 \times 10^{-6}$	90		ALEXOPOU...	96	E771	p Si, 800 GeV
$<3.4 \times 10^{-5}$	90	1	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
$<7.6 \times 10^{-6}$	90	0	ADAMOVICH	95	BEAT	See ADAMOVICH 97
$<4.4 \times 10^{-5}$	90	0	KODAMA	95	E653	π^- emulsion 600 GeV
$<3.1 \times 10^{-5}$	90		[135] MISHRA	94	E789	-4.1 ± 4.8 events
$<7.0 \times 10^{-5}$	90	3	ALBRECHT	88G	ARG	e^+e^- 10 GeV
$<1.1 \times 10^{-5}$	90		LOUIS	86	SPEC	π^- W 225 GeV
$<3.4 \times 10^{-4}$	90		AUBERT	85	EMC	Deep inelast. $\mu^- N$

[135] Here MISHRA 94 uses "the statistical approach advocated by the PDG." For an alternate approach, giving a limit of 9×10^{-6} at 90% confidence level, see the paper.

NODE=S032R7;LINKAGE=B

$\Gamma(\pi^0 e^+e^-)/\Gamma_{\text{total}}$ — Γ_{234}/Γ

NODE=S032S44

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S44

NODE=S032S44

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<4.5 \times 10^{-5}$	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\pi^0 \mu^+\mu^-)/\Gamma_{\text{total}}$ — Γ_{235}/Γ

NODE=S032B95

A test for the ΔC=1 weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032B95

NODE=S032B95

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.8 \times 10^{-4}$	90	2	KODAMA	95	E653	π^- emulsion 600 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<5.4 \times 10^{-4}$	90	3	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\eta e^+e^-)/\Gamma_{\text{total}}$ — Γ_{236}/Γ

NODE=S032S45

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S45

NODE=S032S45

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.1 \times 10^{-4}$	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\eta \mu^+\mu^-)/\Gamma_{\text{total}}$ — Γ_{237}/Γ

NODE=S032S46

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S46

NODE=S032S46

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<5.3 \times 10^{-4}$	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\pi^+\pi^- e^+e^-)/\Gamma_{\text{total}}$ — Γ_{238}/Γ

NODE=S032C14

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032C14

NODE=S032C14

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<3.73 \times 10^{-4}$	90	9	AITALA	01C	E791	π^- nucleus, 500 GeV

$\Gamma(\rho^0 e^+ e^-)/\Gamma_{total}$ Γ_{239}/Γ

NODE=S032R63

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032R63

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.0 \times 10^{-4}$	90	2	[136] FREYBERGER	96	CLE2	$e^+ e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.24 \times 10^{-4}$	90	1	AITALA	01C	E791	π^- nucleus, 500 GeV
$<4.5 \times 10^{-4}$	90	2	HAAS	88	CLEO	$e^+ e^-$ 10 GeV

NODE=S032R63

[136] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 1.8 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032R63;LINKAGE=FB

$\Gamma(\pi^+ \pi^- \mu^+ \mu^-)/\Gamma_{total}$ Γ_{240}/Γ

NODE=S032C15

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032C15

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<3.0 \times 10^{-5}$	90	2	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032C15

$\Gamma(\rho^0 \mu^+ \mu^-)/\Gamma_{total}$ Γ_{241}/Γ

NODE=S032R64

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032R64

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<2.2 \times 10^{-5}$	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<4.9 \times 10^{-4}$	90	1	[137] FREYBERGER	96	CLE2	$e^+ e^- \approx \Upsilon(4S)$
$<2.3 \times 10^{-4}$	90	0	KODAMA	95	E653	π^- emulsion 600 GeV
$<8.1 \times 10^{-4}$	90	5	HAAS	88	CLEO	$e^+ e^-$ 10 GeV

NODE=S032R64

[137] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 4.5 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032R64;LINKAGE=FB

$\Gamma(\omega e^+ e^-)/\Gamma_{total}$ Γ_{242}/Γ

NODE=S032S47

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S47

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<1.8 \times 10^{-4}$	90	1	[138] FREYBERGER	96	CLE2	$e^+ e^- \approx \Upsilon(4S)$

NODE=S032S47

[138] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 2.7 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032S47;LINKAGE=FB

$\Gamma(\omega \mu^+ \mu^-)/\Gamma_{total}$ Γ_{243}/Γ

NODE=S032S48

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S48

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<8.3 \times 10^{-4}$	90	0	[139] FREYBERGER	96	CLE2	$e^+ e^- \approx \Upsilon(4S)$

NODE=S032S48

[139] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 6.5 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032S48;LINKAGE=FB

$\Gamma(K^- K^+ e^+ e^-)/\Gamma_{total}$ Γ_{244}/Γ

NODE=S032C18

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032C18

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<3.15 \times 10^{-4}$	90	9	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032C18

$\Gamma(\phi e^+ e^-)/\Gamma_{total}$ Γ_{245}/Γ

NODE=S032S49

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032S49

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<5.2 \times 10^{-5}$	90	2	[140] FREYBERGER	96	CLE2	$e^+ e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<5.9 \times 10^{-5}$	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032S49

[140] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 7.6 \times 10^{-5}$ using a photon pole amplitude model.

NODE=S032S49;LINKAGE=FB

$\Gamma(K^- K^+ \mu^+ \mu^-)/\Gamma_{total}$ Γ_{246}/Γ

NODE=S032C19

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

NODE=S032C19

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$<3.3 \times 10^{-5}$	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032C19

$\Gamma(\phi\mu^+\mu^-)/\Gamma_{total}$ — Γ_{247}/Γ

NODE=S032S50

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<3.1 × 10^{-5}	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<4.1 \times 10^{-4}$	90	0	[141] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

[141] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 2.4 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032S50;LINKAGE=FB

$\Gamma(\overline{K}^0 e^+e^-)/\Gamma_{total}$ — Γ_{248}/Γ

NODE=S032R70

Not a useful test for $\Delta C=1$ weak neutral current because both quarks must change flavor.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.1 × 10^{-4}	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.7 \times 10^{-3}$	90		ADLER	89C	MRK3	e^+e^- 3.77 GeV

$\Gamma(\overline{K}^0 \mu^+\mu^-)/\Gamma_{total}$ — Γ_{249}/Γ

NODE=S032B96

Not a useful test for $\Delta C=1$ weak neutral current because both quarks must change flavor.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<2.6 × 10^{-4}	90	2	KODAMA	95	E653	π^- emulsion 600 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<6.7 \times 10^{-4}$	90	1	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(K^-\pi^+e^+e^-)/\Gamma_{total}$ — Γ_{250}/Γ

NODE=S032C16

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<3.85 × 10^{-4}	90	6	AITALA	01C	E791	π^- nucleus, 500 GeV

$\Gamma(\overline{K}^*(892)^0 e^+e^-)/\Gamma_{total}$ — Γ_{251}/Γ

NODE=S032S51

Not a useful test for $\Delta C=1$ weak neutral current because both quarks must change flavor.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<4.7 × 10^{-5}	90	2	AITALA	01C	E791	π^- nucleus, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.4 \times 10^{-4}$	90	1	[142] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

[142] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 2.0 \times 10^{-4}$ using a photon pole amplitude model.

NODE=S032S51;LINKAGE=FB

$\Gamma(K^-\pi^+\mu^+\mu^-)/\Gamma_{total}$ — Γ_{252}/Γ

NODE=S032C17

A test for the $\Delta C = 1$ weak neutral current. Allowed by higher-order electroweak interactions.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<3.59 × 10^{-4}	90	12	AITALA	01C	E791	π^- nucleus, 500 GeV

$\Gamma(\overline{K}^*(892)^0 \mu^+\mu^-)/\Gamma_{total}$ — Γ_{253}/Γ

NODE=S032S52

Not a useful test for $\Delta C=1$ weak neutral current because both quarks must change flavor.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<2.4 × 10^{-5}	90	3	AITALA	01C	E791	π^- nucleus, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.18 \times 10^{-3}$	90	1	[143] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

[143] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 1.0 \times 10^{-3}$ using a photon pole amplitude model.

NODE=S032S52;LINKAGE=FB

$\Gamma(\pi^+\pi^-\pi^0\mu^+\mu^-)/\Gamma_{total}$ — Γ_{254}/Γ

NODE=S032B97

A test for the ΔC=1 weak neutral current. Allowed by higher-order electroweak interactions.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<8.1 × 10^{-4}	90	1	KODAMA	95	E653	π^- emulsion 600 GeV

$\Gamma(\mu^{\pm} e^{\mp})/\Gamma_{\text{total}}$ — Γ_{255}/Γ

NODE=S032R46

A test of lepton family number conservation.

NODE=S032R46

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 8.1 × 10⁻⁷	90	0	AUBERT,B	04Y	BABR	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$< 1.72 \times 10^{-5}$	90		PRIPSTEIN	00	E789	p nucleus, 800 GeV
$< 8.1 \times 10^{-6}$	90		AITALA	99G	E791	$\pi^- N$ 500 GeV
$< 1.9 \times 10^{-5}$	90	2	[144] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
$< 1.0 \times 10^{-4}$	90	4	ALBRECHT	88G	ARG	e^+e^- 10 GeV
$< 2.7 \times 10^{-4}$	90	9	HAAS	88	CLEO	e^+e^- 10 GeV
$< 1.2 \times 10^{-4}$	90		BECKER	87C	MRK3	e^+e^- 3.77 GeV
$< 9 \times 10^{-4}$	90		PALKA	87	SILI	200 GeV πp
$<21 \times 10^{-4}$	90	0	[145] RILES	87	MRK2	e^+e^- 29 GeV

NODE=S032R46

[144] This is the corrected result given in the erratum to FREYBERGER 96. NODE=S032R46;LINKAGE=C

[145] RILES 87 assumes B($D \to K\pi$) = 3.0% and has production model dependency. NODE=S032R46;LINKAGE=A

$\Gamma(\pi^0 e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{256}/Γ

NODE=S032S53

A test of lepton family number conservation. The value is for the sum of the two charge states.

NODE=S032S53

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<8.6 × 10⁻⁵	90	2	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

NODE=S032S53

$\Gamma(\eta e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{257}/Γ

NODE=S032S54

A test of lepton family number conservation. The value is for the sum of the two charge states.

NODE=S032S54

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.0 × 10⁻⁴	90	0	FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

NODE=S032S54

$\Gamma(\pi^+\pi^- e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{258}/Γ

NODE=S032C20

A test of lepton family-number conservation. The value is for the sum of the two charge states.

NODE=S032C20

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.5 × 10⁻⁵	90	1	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032C20

$\Gamma(\rho^0 e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{259}/Γ

NODE=S032S55

A test of lepton family number conservation. The value is for the sum of the two charge states.

NODE=S032S55

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<4.9 × 10⁻⁵	90	0	[146] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<6.6 \times 10^{-5}$	90	1	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032S55

[146] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 5.0 \times 10^{-5}$ using a photon pole amplitude model. NODE=S032S55;LINKAGE=FB

$\Gamma(\omega e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{260}/Γ

NODE=S032S56

A test of lepton family number conservation. The value is for the sum of the two charge states.

NODE=S032S56

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.2 × 10⁻⁴	90	0	[147] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

NODE=S032S56

[147] This FREYBERGER 96 limit is obtained using a phase-space model. The same limit is obtained using a photon pole amplitude model. NODE=S032S56;LINKAGE=FB

$\Gamma(K^- K^+ e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{261}/Γ

NODE=S032C22

A test of lepton family-number conservation. The value is for the sum of the two charge states.

NODE=S032C22

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.8 × 10⁻⁴	90	5	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032C22

$\Gamma(\phi e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{262}/Γ

NODE=S032S57

A test of lepton family number conservation. The value is for the sum of the two charge states.

NODE=S032S57

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<3.4 × 10⁻⁵	90	0	[148] FREYBERGER	96	CLE2	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<4.7 \times 10^{-5}$	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV

NODE=S032S57

[148] This FREYBERGER 96 limit is obtained using a phase-space model. The limit changes to $< 3.3 \times 10^{-5}$ using a photon pole amplitude model. NODE=S032S57;LINKAGE=FB

$\Gamma(\overline{K}^0 e^\pm \mu^\mp)/\Gamma_{total}$ — Γ_{263}/Γ — NODE=S032S58

A test of lepton family number conservation. The value is for the sum of the two charge states. NODE=S032S58

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<1.0 \times 10^{-4}$	90	0	FREYBERGER 96	CLE2	$e^+ e^- \approx \Upsilon(4S)$

NODE=S032S58

$\Gamma(K^- \pi^+ e^\pm \mu^\mp)/\Gamma_{total}$ — Γ_{264}/Γ — NODE=S032C21

A test of lepton family-number conservation. The value is for the sum of the two charge states. NODE=S032C21

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<5.53 \times 10^{-4}$	90	15	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C21

$\Gamma(\overline{K}^*(892)^0 e^\pm \mu^\mp)/\Gamma_{total}$ — Γ_{265}/Γ — NODE=S032S59

A test of lepton family number conservation. The value is for the sum of the two charge states. NODE=S032S59

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<8.3 \times 10^{-5}$	90	9	AITALA 01C	E791	π^- nucleus, 500 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$<1.0 \times 10^{-4}$	90	0	[149] FREYBERGER 96	CLE2	$e^+ e^- \approx \Upsilon(4S)$

NODE=S032S59

[149] This FREYBERGER 96 limit is obtained using a phase-space model. The same limit is obtained using a photon pole amplitude model. NODE=S032S59;LINKAGE=FB

$\Gamma(\pi^- \pi^- e^+ e^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{266}/Γ — NODE=S032C5

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C5

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<1.12 \times 10^{-4}$	90	1	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C5

$\Gamma(\pi^- \pi^- \mu^+ \mu^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{267}/Γ — NODE=S032C6

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C6

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<2.9 \times 10^{-5}$	90	1	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C6

$\Gamma(K^- \pi^- e^+ e^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{268}/Γ — NODE=S032C7

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C7

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<2.06 \times 10^{-4}$	90	2	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C7

$\Gamma(K^- \pi^- \mu^+ \mu^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{269}/Γ — NODE=S032C8

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C8

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<3.9 \times 10^{-4}$	90	14	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C8

$\Gamma(K^- K^- e^+ e^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{270}/Γ — NODE=S032C9

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C9

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<1.52 \times 10^{-4}$	90	2	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C9

$\Gamma(K^- K^- \mu^+ \mu^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{271}/Γ — NODE=S032C10

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C10

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<9.4 \times 10^{-5}$	90	1	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C10

$\Gamma(\pi^- \pi^- e^+ \mu^+ + \text{c.c.})/\Gamma_{total}$ — Γ_{272}/Γ — NODE=S032C11

A test of lepton-number conservation. The value is for the sum of the two charge states. NODE=S032C11

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<7.9 \times 10^{-5}$	90	4	AITALA 01C	E791	π^- nucleus, 500 GeV

NODE=S032C11

$\Gamma(K^-\pi^- e^+\mu^+ + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{273}/Γ

NODE=S032C12

A test of lepton-number conservation. The value is for the sum of the two charge states.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<2.18 × 10^{-4}	90	7	AITALA	01C	E791	π^- nucleus, 500 GeV

$\Gamma(K^-K^- e^+\mu^+ + \text{c.c.})/\Gamma_{\text{total}}$ Γ_{274}/Γ

NODE=S032C13

A test of lepton-number conservation. The value is for the sum of the two charge states.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<5.7 × 10^{-5}	90	0	AITALA	01C	E791	π^- nucleus, 500 GeV

D^0 *CP*-VIOLATING DECAY-RATE ASYMMETRIES

NODE=S032243

This is the difference between D^0 and $\overline{D}^0$ partial widths for these modes divided by the sum of the widths. The D^0 and $\overline{D}^0$ are distinguished by the charge of the parent D^*: $D^{*+} \to D^0\pi^+$ and $D^{*-} \to \overline{D}^0\pi^-$.

$A_{CP}(K^+K^-)$ in D^0, $\overline{D}^0 \to K^+K^-$

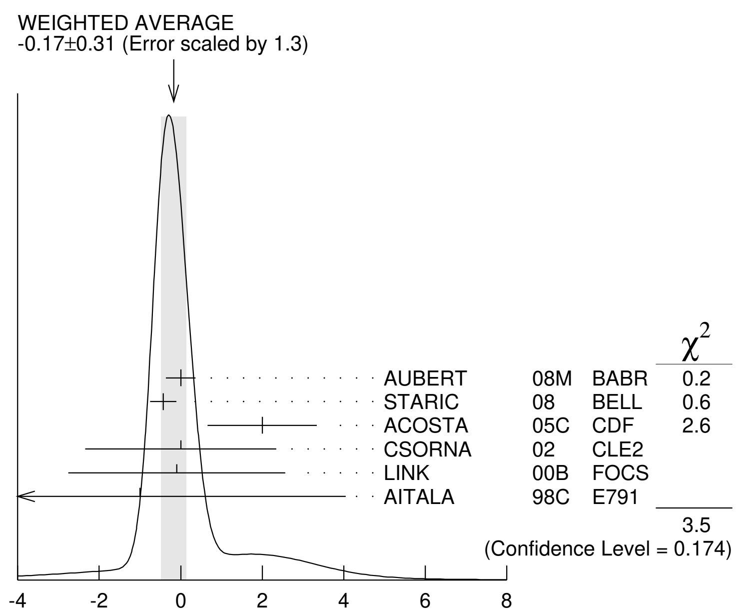
NODE=S032A1

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
−0.17±0.31 OUR AVERAGE		Error includes scale factor of 1.3. See the ideogram below.			
0.00±0.34±0.13	129k	[150] AUBERT	08M	BABR	$e^+e^- \approx$ 10.6 GeV
−0.43±0.30±0.11	≈ 116k	[151] STARIC	08	BELL	$e^+e^- \approx \Upsilon(4S)$
+2.0 ±1.2 ±0.6		[152] ACOSTA	05C	CDF	$p\overline{p}$, $\sqrt{s}$=1.96 TeV
0.0 ±2.2 ±0.8	3023	[152] CSORNA	02	CLE2	$e^+e^- \approx \Upsilon(4S)$
−0.1 ±2.2 ±1.5	3330	[152] LINK	00B	FOCS	
−1.0 ±4.9 ±1.2	609	[152] AITALA	98C	E791	$-0.093 < A_{CP} < +0.073$ (90% CL)

[150] AUBERT 08M uses corrected numbers of events directly, not ratios with $K^\mp\pi^\pm$ events. NODE=S032A1;LINKAGE=AU

[151] STARIC 08 uses $D^0 \to K^-\pi^+$ and $\overline{D}^0 \to K^+\pi^-$ decays to correct for detector-induced asymmetries. NODE=S032A1;LINKAGE=ST

[152] AITALA 98C, LINK 00B, CSORNA 02, and ACOSTA 05C measure $N(D^0 \to K^+K^-)/N(D^0 \to K^-\pi^+)$, the ratio of numbers of events observed, and similarly for the $\overline{D}^0$. NODE=S032A1;LINKAGE=A



$A_{CP}(K^+K^-)$ in D^0, $\overline{D}^0 \to K^+K^-$ (units 10^{-2})

$A_{CP}(K^0_S K^0_S)$ in D^0, $\overline{D}^0 \to K^0_S K^0_S$

NODE=S032A8

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
−0.23±0.19	65	BONVICINI	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$A_{CP}(\pi^+\pi^-)$ in D^0, $\overline{D}^0 \to \pi^+\pi^-$

NODE=S032A4
NODE=S032A4

VALUE (units 10^{-2})	EVTS	DOCUMENT ID		TECN	COMMENT
0.2 ±0.4 OUR AVERAGE					
−0.24±0.52±0.22	63.7k	[153] AUBERT	08M	BABR	$e^+e^- \approx$ 10.6 GeV
+0.43±0.52±0.12	≈ 46k	[154] STARIC	08	BELL	$e^+e^- \approx \Upsilon(4S)$
+1.0 ±1.3 ±0.6		[155] ACOSTA	05C	CDF	$p\overline{p}$, $\sqrt{s}$=1.96 TeV
+1.9 ±3.2 ±0.8	1136	[155] CSORNA	02	CLE2	$e^+e^- \approx \Upsilon(4S)$
+4.8 ±3.9 ±2.5	1177	[155] LINK	00B	FOCS	
−4.9 ±7.8 ±3.0	343	[155] AITALA	98C	E791	$-0.186 < A_{CP} < +0.088$ (90% CL)

[153] AUBERT 08M uses corrected numbers of events directly, not ratios with $K^\mp\pi^\pm$ events. NODE=S032A4;LINKAGE=AU

[154] STARIC 08 uses $D^0 \to K^-\pi^+$ and $\overline{D}^0 \to K^+\pi^-$ decays to correct for detector-induced asymmetries. NODE=S032A4;LINKAGE=ST

[155] AITALA 98C, LINK 00B, CSORNA 02, and ACOSTA 05C measure $N(D^0 \to \pi^+\pi^-)/N(D^0 \to K^-\pi^+)$, the ratio of numbers of events observed, and similarly for the $\overline{D}^0$. NODE=S032A4;LINKAGE=A

$A_{CP}(\pi^0\pi^0)$ in D^0, $\overline{D}^0 \to \pi^0\pi^0$

NODE=S032A7
NODE=S032A7

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
+0.001±0.048	810	BONVICINI	01	CLE2	$e^+e^- \approx$ 10.6 GeV

$A_{CP}(\pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to \pi^+\pi^-\pi^0$

NODE=S032A12
NODE=S032A12

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.3 ±0.4 OUR AVERAGE					
+0.43±1.30	123k±490	ARINSTEIN	08	BELL	$e^+e^- \approx \Upsilon(4S)$
+0.31±0.41±0.17	80 ± .3k	AUBERT	08AO	BABR	$e^+e^- \approx$ 10.6 GeV
$+1\ ^{+9}_{-7}\ \pm5$		CRONIN-HEN...	05	CLEO	$e^+e^- \approx$ 10 GeV

$A_{CP}(\rho(770)^+\pi^- \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho^+\pi^-$, $\overline{D}^0 \to \rho^-\pi^+$

NODE=S032A25
NODE=S032A25

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+1.6±1.1±0.4	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(770)^0\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to \rho^0\pi^0$

NODE=S032A26
NODE=S032A26

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−1.6±1.4±0.6	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(770)^-\pi^+ \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho^-\pi^+$, $\overline{D}^0 \to \rho^+\pi^-$

NODE=S032A27
NODE=S032A27

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.7±1.1±0.5	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1450)^+\pi^- \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho(1450)^+\pi^-$, $\overline{D}^0 \to \rho(1450)^-\pi^+$

NODE=S032A28
NODE=S032A28

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.0±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1450)^0\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to \rho(1450)^0\pi^0$

NODE=S032A29
NODE=S032A29

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.1±0.2 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1450)^-\pi^+ \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho(1450)^-\pi^+$, $\overline{D}^0 \to \rho(1450)^+\pi^-$

NODE=S032A30
NODE=S032A30

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+0.2±0.3 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1700)^+\pi^- \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho(1700)^+\pi^-$, $\overline{D}^0 \to \rho(1700)^-\pi^+$

NODE=S032A31
NODE=S032A31

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.4±1.0±0.4	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1700)^0\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to \rho(1700)^0\pi^0$

NODE=S032A32
NODE=S032A32

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+1.3±0.8±0.3	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\rho(1700)^-\pi^+ \to \pi^+\pi^-\pi^0)$ in $D^0 \to \rho(1700)^-\pi^+$, $\overline{D}^0 \to \rho(1700)^+\pi^-$

NODE=S032A33
NODE=S032A33

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+0.5±0.6±0.3	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_0(980)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to f_0(980)\pi^0$

NODE=S032A34
NODE=S032A34

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.0±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_0(1370)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to f_0(1370)\pi^0$

NODE=S032A35
NODE=S032A35

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+0.2±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_0(1500)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to f_0(1500)\pi^0$

NODE=S032A36
NODE=S032A36

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.0±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_0(1710)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to f_0(1710)\pi^0$

NODE=S032A37
NODE=S032A37

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.0±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_2(1270)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to f_2(1270)\pi^0$

NODE=S032A38
NODE=S032A38

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.1±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\sigma(400)\pi^0 \to \pi^+\pi^-\pi^0)$ in D^0, $\overline{D}^0 \to \sigma(400)\pi^0$

NODE=S032A39
NODE=S032A39

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+0.1±0.1 ±0.1	AUBERT	08AO	BABR	Dalitz fit-fraction difference

A_{CP}(nonresonant $\pi^+\pi^-\pi^0$) in D^0, $\overline{D}^0 \to$ nonresonant $\pi^+\pi^-\pi^0$

NODE=S032A40
NODE=S032A40

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.2±0.3±0.2	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(K^+K^-\pi^0)$ in D^0, $\overline{D}^0 \to K^+K^-\pi^0$

NODE=S032A41
NODE=S032A41

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
−1.00±1.67±0.25	11 ± 0.11k	AUBERT	08AO	BABR	$e^+e^- \approx$ 10.6 GeV

$A_{CP}(K^*(892)^+K^- \to K^+K^-\pi^0)$ in $D^0 \to K^*(892)^+K^-$, $\overline{D}^0 \to K^*(892)^-K^+$

NODE=S032A42
NODE=S032A42

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.8±1.1±0.4	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(K^*(1410)^+K^- \to K^+K^-\pi^0)$ in $D^0 \to K^*(1410)^+K^-$, $\overline{D}^0 \to K^*(1410)^-K^+$

NODE=S032A43
NODE=S032A43

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−1.7±1.8±0.6	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}((K^+\pi^0)_{S-wave}K^- \to K^+K^-\pi^0)$ in $D^0 \to (K^+\pi^0)_S K^-$, $\overline{D}^0 \to (K^-\pi^0)_S K^+$

NODE=S032A44
NODE=S032A44

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+2.3±4.7±1.0	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(\phi(1020)\pi^0 \to K^+K^-\pi^0)$ in D^0, $\overline{D}^0 \to \phi(1020)\pi^0$

NODE=S032A45
NODE=S032A45

VALUE (%)	DOCUMENT ID		TECN	COMMENT
+0.4±0.8±0.2	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f_0(980)\pi^0 \to K^+K^-\pi^0)$ in D^0, $\overline{D}^0 \to f_0(980)\pi^0$

NODE=S032A46
NODE=S032A46

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.4±2.6±0.2	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(a_0(980)^0\pi^0 \to K^+K^-\pi^0)$ in D^0, $\overline{D}^0 \to a_0(980)^0\pi^0$

NODE=S032A47
NODE=S032A47

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.6±1.9±0.2	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(f'_2(1525)\pi^0 \to K^+K^-\pi^0)$ in D^0, $\overline{D}^0 \to f'_2(1525)\pi^0$

NODE=S032A48
NODE=S032A48

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.0±0.1 ±0.3	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(K^*(892)^-K^+ \to K^+K^-\pi^0)$ in $D^0 \to K^*(892)^-K^+$, $\overline{D}^0 \to K^*(892)^+K^-$

NODE=S032A49
NODE=S032A49

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−1.7±1.3±0.4	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(K^*(1410)^- K^+ \rightarrow K^+ K^- \pi^0)$ in $D^0 \rightarrow K^*(1410)^- K^+$, $\overline{D}^0 \rightarrow K^*(1410)^+ K^-$

NODE=S032A50
NODE=S032A50

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−1.7±2.8±0.7	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}((K^- \pi^0)_{S-wave} K^+ \rightarrow K^+ K^- \pi^0)$ in $D^0 \rightarrow (K^- \pi^0)_S K^+$, $\overline{D}^0 \rightarrow (K^+ \pi^0)_S K^-$

NODE=S032A51
NODE=S032A51

VALUE (%)	DOCUMENT ID		TECN	COMMENT
−0.4±2.4±0.5	AUBERT	08AO	BABR	Dalitz fit-fraction difference

$A_{CP}(K^0_S \phi)$ in D^0, $\overline{D}^0 \rightarrow K^0_S \phi$

NODE=S032A2
NODE=S032A2

VALUE	DOCUMENT ID		TECN	COMMENT
−0.028±0.094	BARTELT	95	CLE2	$-0.182 < A_{CP} < +0.126$ (90%CL)

$A_{CP}(K^0_S \pi^0)$ in D^0, $\overline{D}^0 \rightarrow K^0_S \pi^0$

NODE=S032A3
NODE=S032A3

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
+0.001±0.013	9099	BONVICINI	01	CLE2	$e^+ e^- \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
−0.018±0.030		BARTELT	95	CLE2	See BONVICINI 01

$A_{CP}(K^\mp \pi^\pm)$ in $D^0 \rightarrow K^- \pi^+$, $\overline{D}^0 \rightarrow K^+ \pi^-$

NODE=S032A23
NODE=S032A23

VALUE	DOCUMENT ID		TECN	COMMENT
−0.004±0.005±0.009	DOBBS	07	CLEO	$e^+ e^-$ at $\psi(3770)$

$A_{CP}(K^\pm \pi^\mp)$ in $D^0 \rightarrow K^+ \pi^-$, $\overline{D}^0 \rightarrow K^- \pi^+$

NODE=S032A5
NODE=S032A5

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.022±0.032 OUR AVERAGE					
−0.021±0.052±0.015	4030 ± 90	AUBERT	07W	BABR	$e^+ e^- \approx$ 10.6 GeV
+0.023±0.047	4024 ± 88	[156] ZHANG	06	BELL	$e^+ e^-$
+0.18 ±0.14 ±0.04		[157] LINK	05H	FOCS	γ nucleus
+0.095±0.061±0.083		[158] AUBERT	03Z	BABR	$e^+ e^-$, 10.6 GeV
$+0.02\ ^{+0.19}_{-0.20}$ ±0.01	45	[159] GODANG	00	CLE2	$-0.43 < A_{CP} < +0.34$ (95%CL)
• • • We do not use the following data for averages, fits, limits, etc. • • •					
−0.080±0.077	845 ± 40	[160] LI	05A	BELL	See ZHANG 06

[156] This ZHANG 06 result allows mixing. NODE=S032A5;LINKAGE=ZH

[157] This LINK 05H result assumes no mixing. If mixing is allowed, it becomes $0.13^{+0.33}_{-0.25} \pm 0.10$. NODE=S032A5;LINKAGE=LI

[158] This AUBERT 03Z limit assumes no mixing. If mixing is allowed, the 95% confidence-level interval is $(-2.8 < A_D < 4.9)\times 10^{-3}$. NODE=S032A5;LINKAGE=AU

[159] This GODANG 00 result assumes no D^0-$\overline{D}^0$ mixing; it becomes $-0.01^{+0.16}_{-0.17} \pm 0.01$ when mixing is allowed. NODE=S032A5;LINKAGE=A

[160] This LI 05A result allows mixing. NODE=S032A5;LINKAGE=LA

$A_{CP}(K^\mp \pi^\pm \pi^0)$ in $D^0 \rightarrow K^- \pi^+ \pi^0$, $\overline{D}^0 \rightarrow K^+ \pi^- \pi^0$

NODE=S032A6
NODE=S032A6

VALUE	DOCUMENT ID		TECN	COMMENT
0.002±0.009 OUR AVERAGE				
+0.002±0.004±0.008	DOBBS	07	CLEO	$e^+ e^-$ at $\psi(3770)$
−0.031±0.086	[161] KOPP	01	CLE2	$e^+ e^- \approx$ 10.6 GeV

[161] KOPP 01 fits separately the D^0 and $\overline{D}^0$ Dalitz plots and then calculates the integrated difference of normalized densities divided by the integrated sum. NODE=S032A6;LINKAGE=K

$A_{CP}(K^\pm \pi^\mp \pi^0)$ in $D^0 \rightarrow K^+ \pi^- \pi^0$, $\overline{D}^0 \rightarrow K^- \pi^+ \pi^0$

NODE=S032A9
NODE=S032A9

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.00 ±0.05 OUR AVERAGE					
−0.006±0.053	1978 ± 104	TIAN	05	BELL	$e^+ e^- \approx \Upsilon(4S)$
$+0.09\ ^{+0.25}_{-0.22}$	38	BRANDENB...	01	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$A_{CP}(K^0_S \pi^+ \pi^-)$ in D^0, $\overline{D}^0 \rightarrow K^0_S \pi^+ \pi^-$

NODE=S032A10
NODE=S032A10

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{-0.009\pm0.021^{+0.016}_{-0.057}}$	4854	[162] ASNER	04A	CLEO	$e^+ e^- \approx$ 10 GeV

[162] This is the overall result of ASNER 04A; *CP*-violating limits are also given below for each of the 10 resonant submodes found in an amplitude analysis of the D^0 and $\overline{D}^0 \rightarrow K^0_S \pi^+ \pi^-$ Dalitz plots. These limits range from $< 3.5 \times 10^{-4}$ to 28.4×10^{-4} at 95% CL. NODE=S032A10;LINKAGE=AS

$A_{CP}(K^*(892)^{\mp}\pi^{\pm} \to K^0_S\pi^+\pi^-)$ in $D^0 \to K^{*-}\pi^+$, $\overline{D}^0 \to K^{*+}\pi^-$

NODE=S032A13
NODE=S032A13

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<3.5	95	[163] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[163] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A13;LINKAGE=AS

$A_{CP}(K^*(892)^{\pm}\pi^{\mp} \to K^0_S\pi^+\pi^-)$ in $D^0 \to K^{*+}\pi^-$, $\overline{D}^0 \to K^{*-}\pi^+$

NODE=S032A14
NODE=S032A14

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<7.8	95	[164] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[164] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A14;LINKAGE=AS

$A_{CP}(K^0_S\rho^0 \to K^0_S\pi^+\pi^-)$ in $D^0 \to \overline{K}^0\rho^0$, $\overline{D}^0 \to K^0\rho^0$

NODE=S032A15
NODE=S032A15

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<4.8	95	[165] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[165] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A15;LINKAGE=AS

$A_{CP}(K^0_S\omega \to K^0_S\pi^+\pi^-)$ in $D^0 \to \overline{K}^0\omega$, $\overline{D}^0 \to K^0\omega$

NODE=S032A16
NODE=S032A16

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<9.2	95	[166] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[166] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A16;LINKAGE=AS

$A_{CP}(K^0_S f_0(980) \to K^0_S\pi^+\pi^-)$ in $D^0 \to \overline{K}^0 f_0(980)$, $\overline{D}^0 \to K^0 f_0(980)$

NODE=S032A17
NODE=S032A17

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<6.8	95	[167] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[167] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A17;LINKAGE=AS

$A_{CP}(K^0_S f_2(1270) \to K^0_S\pi^+\pi^-)$ in $D^0 \to \overline{K}^0 f_2(1270)$, $\overline{D}^0 \to K^0 f_2(1270)$

NODE=S032A18
NODE=S032A18

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<13.5	95	[168] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[168] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A18;LINKAGE=AS

$A_{CP}(K^0_S f_0(1370) \to K^0_S\pi^+\pi^-)$ in $D^0 \to \overline{K}^0 f_0(1370)$, $\overline{D}^0 \to K^0 f_0(1370)$

NODE=S032A19
NODE=S032A19

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<25.5	95	[169] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[169] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A19;LINKAGE=AS

$A_{CP}(K^*_0(1430)^{\mp}\pi^{\pm} \to K^0_S\pi^+\pi^-)$ in $D^0 \to K^*_0(1430)^-\pi^+$, $\overline{D}^0 \to K^*_0(1430)^+\pi^-$

NODE=S032A20
NODE=S032A20

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<9.0	95	[170] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[170] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A20;LINKAGE=AS

$A_{CP}(K^*_2(1430)^{\mp}\pi^{\pm} \to K^0_S\pi^+\pi^-)$ in $D^0 \to K^*_2(1430)^-\pi^+$, $\overline{D}^0 \to K^*_2(1430)^+\pi^-$

NODE=S032A21
NODE=S032A21

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<6.5	95	[171] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[171] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A21;LINKAGE=AS

$A_{CP}(K^*(1680)^{\mp}\pi^{\pm} \to K^0_S\pi^+\pi^-)$ in $D^0 \to K^*(1680)^-\pi^+$, $\overline{D}^0 \to K^*(1680)^+\pi^-$

NODE=S032A22
NODE=S032A22

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
<28.4	95	[172] ASNER	04A	CLEO	Dalitz fit, 4854 $D^0+\overline{D}^0$ evts

[172] This ASNER 04A limit comes from an amplitude analysis of the D^0 and $\overline{D}^0 \to K^0_S\pi^+\pi^-$ Dalitz plots.

NODE=S032A22;LINKAGE=AS

$A_{CP}(K^-\pi^+\pi^+\pi^-)$ in $D^0 \to K^-\pi^+\pi^+\pi^-$, $\overline{D}^0 \to K^+\pi^-\pi^-\pi^+$

NODE=S032A24
NODE=S032A24

VALUE	DOCUMENT ID		TECN	COMMENT
+0.007±0.005±0.009	DOBBS	07	CLEO	e^+e^- at $\psi(3770)$

$A_{CP}(K^{\pm}\pi^{\mp}\pi^+\pi^-)$ in $D^0 \to K^+\pi^-\pi^+\pi^-$, $\overline{D}^0 \to K^-\pi^+\pi^+\pi^-$

NODE=S032A11
NODE=S032A11

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
−0.018±0.044	1721 ± 75	TIAN	05	BELL	$e^+e^- \approx \Upsilon(4S)$

$A_{CP}(K^+K^-\pi^+\pi^-)$ in D^0, $\overline{D}^0 \to K^+K^-\pi^+\pi^-$

NODE=S032CPK
NODE=S032CPK

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
−0.082±0.056±0.047	828 ± 46	LINK	05E	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

D^0-$\overline{D}^0$ *T*-VIOLATING DECAY-RATE ASYMMETRIES

NODE=S032242

D^0 and $\overline{D}^0$ are distinguished by the charge of the parent D^*: $D^{*+} \to D^0\pi^+$ and $D^{*-} \to \overline{D}^0\pi^-$.

NODE=S032242

$A_{Tviol}(K^+K^-\pi^+\pi^-)$ in D^0, $\overline{D}^0 \to K^+K^-\pi^+\pi^-$

NODE=S032TV0

$C_T \equiv \vec{p}_{K^+} \cdot (\vec{p}_{\pi^+} \times \vec{p}_{\pi^-})$ is a *T*-odd correlation of the K^+, π^+, and π^- momenta for the D^0. $\overline{C}_T \equiv \vec{p}_{K^-} \cdot (\vec{p}_{\pi^-} \times \vec{p}_{\pi^+})$ is the corresponding quantity for the $\overline{D}^0$. $A_T \equiv [\Gamma(C_T > 0) - \Gamma(C_T < 0)] \,/\, [\Gamma(C_T > 0) + \Gamma(C_T < 0)]$ would, in the absence of strong phases, test for *T* violation in D^0 decays (the Γ's are partial widths). With $\overline{A}_T \equiv [\Gamma(-\overline{C}_T > 0) - \Gamma(-\overline{C}_T < 0)] \,/\, [\Gamma(-\overline{C}_T > 0) + \Gamma(-\overline{C}_T < 0)]$, the asymmetry $A_{Tviol} \equiv \frac{1}{2}(A_T - \overline{A}_T)$ tests for *T* violation even with nonzero strong phases.

NODE=S032TV0

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
+0.010±0.057±0.037	828 ± 46	LINK	05E	FOCS	γ A, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032TV0

D^0 *CPT*-VIOLATING DECAY-RATE ASYMMETRIES

NODE=S032244

$A_{CPT}(K^{\mp}\pi^{\pm})$ in $D^0 \to K^-\pi^+$, $\overline{D}^0 \to K^+\pi^-$

NODE=S032CPT

$A_{CPT}(t)$ is defined in terms of the time-dependent decay probabilities $P(D^0 \to K^-\pi^+)$ and $\overline{P}(\overline{D}^0 \to K^+\pi^-)$ by $A_{CPT}(t) = (\overline{P} - P)/(\overline{P} + P)$. For small mixing parameters $x \equiv \Delta m/\Gamma$ and $y \equiv \Delta\Gamma/2\Gamma$ (as is the case), and times t, $A_{CPT}(t)$ reduces to [y *Re* ξ - x *Im* ξ] Γt, where ξ is the *CPT*-violating parameter.

NODE=S032CPT

The following is actually y *Re* ξ - x *Im* ξ.

VALUE	DOCUMENT ID		TECN	COMMENT
0.0083±0.0065±0.0041	LINK	03B	FOCS	γ nucleus, $\overline{E}_\gamma \approx$ 180 GeV

NODE=S032CPT

$D^0 \to K^*(892)^-\ell^+\nu_\ell$ FORM FACTORS

NODE=S032260

$r_V \equiv V(0)/A_1(0)$ in $D^0 \to K^*(892)^-\ell^+\nu_\ell$

NODE=S032FRV
NODE=S032FRV

VALUE	DOCUMENT ID		TECN	COMMENT
1.71±0.68±0.34	LINK	05B	FOCS	$K^*(892)^-\mu^+\nu_\mu$

$r_2 \equiv A_2(0)/A_1(0)$ in $D^0 \to K^*(892)^-\ell^+\nu_\ell$

NODE=S032FR2
NODE=S032FR2

VALUE	DOCUMENT ID		TECN	COMMENT
0.91±0.37±0.10	LINK	05B	FOCS	$K^*(892)^-\mu^+\nu_\mu$

D^0 REFERENCES

NODE=S032

PDG	09	Unofficial 2009 WWW edition			REFID=52601;ERROR=1
AALTONEN	08E	PRL 100 121802	T. Aaltonen *et al.*	(CDF Collab.)	REFID=52205
ABLIKIM	08L	PL B665 16	M. Ablikim *et al.*	(BES Collab.)	REFID=52461
ARINSTEIN	08	PL B662 102	K. Arinstein *et al.*	(BELLE Collab.)	REFID=52245
ARTUSO	08	PR D77 092003	M. Artuso *et al.*	(CLEO Collab.)	REFID=52350
AUBERT	08AL	PR D78 034023	B. Aubert *et al.*	(BABAR Collab.)	REFID=52361
AUBERT	08AO	PR D78 051102R	B. Aubert *et al.*	(BABAR Collab.)	REFID=52363
AUBERT	08AZ	PR D78 071101R	B. Aubert *et al.*	(BABAR Collab.)	REFID=52510
AUBERT	08L	PRL 100 051802	B. Aubert *et al.*	(BABAR Collab.)	REFID=52213
AUBERT	08M	PRL 100 061803	B. Aubert *et al.*	(BABAR Collab.)	REFID=52216
AUBERT	08U	PR D78 011105R	B. Aubert *et al.*	(BABAR Collab.)	REFID=52244
BONVICINI	08	PR D77 091106R	G. Bonvicini *et al.*	(CLEO Collab.)	REFID=52349
DOBBS	08	PR D77 112005	S. Dobbs *et al.*	(CLEO Collab.)	REFID=52407
Also		PRL 100 251802	D. Cronin-Hennessy *et al.*	(CLEO Collab.)	REFID=52443
HE	08	PRL 100 091801	Q. He *et al.*	(CLEO Collab.)	REFID=52215
PDG	08	PL B667 1	C. Amsler *et al.*	(PDG Collab.)	REFID=52166
STARIC	08	PL B670 190	M. Staric *et al.*	(BELLE Collab.)	REFID=52527
ABLIKIM	07G	PL B658 1	M. Ablikim *et al.*	(BES Collab.)	REFID=52031
ARTUSO	07A	PRL 99 191801	M. Artuso *et al.*	(CLEO Collab.)	REFID=52017
AUBERT	07AB	PR D76 014018	B. Aubert *et al.*	(BABAR Collab.)	REFID=51856
AUBERT	07BG	PR D76 052005	B. Aubert *et al.*	(BABAR Collab.)	REFID=51938
AUBERT	07BJ	PRL 99 251801	B. Aubert *et al.*	(BABAR Collab.)	REFID=52093
AUBERT	07T	PR D76 011102R	B. Aubert *et al.*	(BABAR Collab.)	REFID=51726
AUBERT	07W	PRL 98 211802	B. Aubert *et al.*	(BABAR Collab.)	REFID=51754
CAWLFIELD	07	PRL 98 092002	C. Cawlfield *et al.*	(CLEO Collab.)	REFID=51659
DOBBS	07	PR D76 112001	S. Dobbs *et al.*	(CLEO Collab.)	REFID=52075
LINK	07A	PR D75 052003	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=51713
STARIC	07	PRL 98 211803	M. Staric *et al.*	(BELLE Collab.)	REFID=51755
ZHANG	07B	PRL 99 131803	L.M. Zhang *et al.*	(BELLE Collab.)	REFID=51926
ABLIKIM	06O	EPJ C47 31	M. Ablikim *et al.*	(BES Collab.)	REFID=51228
ABLIKIM	06U	PL B643 246	M. Ablikim *et al.*	(BES Collab.)	REFID=51495
ABULENCIA	06X	PR D74 031109R	A. Abulencia *et al.*	(CDF Collab.)	REFID=51328
ADAM	06A	PRL 97 251801	N.E. Adam *et al.*	(CLEO Collab.)	REFID=51559
AUBERT,B	06N	PRL 97 221803	B. Aubert *et al.*	(BABAR Collab.)	REFID=51491
AUBERT,B	06X	PR D74 091102R	B. Aubert *et al.*	(BABAR Collab.)	REFID=51497
CAWLFIELD	06A	PR D74 031108R	C. Cawlfield *et al.*	(CLEO Collab.)	REFID=51153
HUANG	06B	PR D74 112005	G.S. Huang *et al.*	(CLEO Collab.)	REFID=51590
PDG	06	JPG 33 1	W.-M. Yao *et al.*	(PDG Collab.)	REFID=51004
RUBIN	06	PRL 96 081802	P. Rubin *et al.*	(CLEO Collab.)	REFID=50981
WIDHALM	06	PRL 97 061804	L. Widhalm *et al.*	(BELLE Collab.)	REFID=51251
ZHANG	06	PRL 96 151801	L.M. Zhang *et al.*	(BELLE Collab.)	REFID=51105
ABLIKIM	05F	PL B622 6	M. Ablikim *et al.*	(BES Collab.)	REFID=50681
ABLIKIM	05P	PL B625 196	M. Ablikim *et al.*	(BES Collab.)	REFID=50879
ACOSTA	05C	PRL 94 122001	D. Acosta *et al.*	(FNAL CDF Collab.)	REFID=50588
ASNER	05	PR D72 012001	D.M. Asner *et al.*	(CLEO Collab.)	REFID=50704
AUBERT,B	05J	PR D72 052008	B. Aubert *et al.*	(BABAR Collab.)	REFID=50824
BITENC	05	PR D72 071101R	U. Bitenc *et al.*	(BELLE Collab.)	REFID=50909
CAWLFIELD	05	PR D71 077101	C. Cawlfield *et al.*	(CLEO Collab.)	REFID=50632
COAN	05	PRL 95 181802	T.E. Coan *et al.*	(CLEO Collab.)	REFID=50933
CRONIN-HEN...	05	PR D72 031102R	D. Cronin-Hennessy *et al.*	(CLEO Collab.)	REFID=50571
HE	05	PRL 95 121801	Q. He *et al.*	(CLEO Collab.)	REFID=50924
Also		PRL 96 199903 (errat.)	Q. He *et al.*	(CLEO Collab.)	REFID=51211
HUANG	05	PRL 94 011802	G.S. Huang *et al.*	(CLEO Collab.)	REFID=50367
KAYIS-TOPAK...	05	PL B626 24	A. Kayis-Topaksu *et al.*	(CERN CHORUS Collab.)	REFID=50880
LI	05A	PRL 94 071801	J. Li *et al.*	(BELLE Collab.)	REFID=50574
LINK	05	PL B607 51	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50468
LINK	05A	PL B607 59	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50469
LINK	05B	PL B607 67	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50470
LINK	05E	PL B622 239	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50567
LINK	05G	PL B610 225	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50599
LINK	05H	PL B618 23	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=50653
ONENGUT	05	PL B613 105	G. Onengut *et al.*	(CERN CHORUS Collab.)	REFID=50600
TIAN	05	PRL 95 231801	X.C. Tian *et al.*	(BELLE Collab.)	REFID=50952
ABLIKIM	04C	PL B597 39	M. Ablikim *et al.*	(BEPC BES Collab.)	REFID=49985
ABT	04	PL B596 173	I. Abt *et al.*	(HERA B Collab.)	REFID=49981
ASNER	04A	PR D70 091101R	D.M. Asner *et al.*	(CLEO Collab.)	REFID=50238
AUBERT	04Q	PR D69 051101R	B. Aubert *et al.*	(BABAR Collab.)	REFID=49954
AUBERT,B	04Q	PR D70 091102R	B. Aubert *et al.*	(BABAR Collab.)	REFID=50239
AUBERT,B	04Y	PRL 93 191801	B. Aubert *et al.*	(BaBar Collab)	REFID=50267
LINK	04B	PL B586 21	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=49883
LINK	04D	PL B586 191	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=49888
RUBIN	04	PRL 93 111801	P. Rubin *et al.*	(CLEO Collab.)	REFID=50076
TAJIMA	04	PRL 92 101803	O. Tajima *et al.*	(BELLE Collab.)	REFID=49723
ACOSTA	03F	PR D68 091101R	D. Acosta *et al.*	(CDF Collab.)	REFID=49839
AUBERT	03P	PRL 91 121801	B. Aubert *et al.*	(BaBar Collab.)	REFID=49541
AUBERT	03Z	PRL 91 171801	B. Aubert *et al.*	(BaBar Collab.)	REFID=49688
COAN	03	PRL 90 101801	T.E. Coan *et al.*	(CLEO Collab.)	REFID=49297
LINK	03	PL B555 167	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=49254
LINK	03B	PL B556 7	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=49256
LINK	03G	PL B575 190	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=49684
ABE	02I	PRL 88 162001	K. Abe *et al.*	(KEK BELLE Collab.)	REFID=48665
CSORNA	02	PR D65 092001	S.E. Csorna *et al.*	(CLEO Collab.)	REFID=48661
LINK	02F	PL B537 192	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=48767
MURAMATSU	02	PRL 89 251802	H. Muramatsu *et al.*	(CLEO Collab.)	REFID=49081
Also		PRL 90 059901 (erratum)	H. Muramatsu *et al.*	(CLEO Collab.)	REFID=49385
AITALA	01C	PRL 86 3969	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=48121
AITALA	01D	PR D64 112003	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=48423
BONVICINI	01	PR D63 071101R	G. Bonvicini *et al.*	(CLEO Collab.)	REFID=48101
BRANDENB...	01	PRL 87 071802	G. Brandenburg *et al.*	(CLEO Collab.)	REFID=48210
DYTMAN	01	PR D64 111101R	S.A. Dytman *et al.*	(CLEO Collab.)	REFID=48419
KOPP	01	PR D63 092001	S. Kopp *et al.*	(CLEO Collab.)	REFID=48134
KUSHNIR...	01	PRL 86 5243	A. Kushnirenko *et al.*	(FNAL SELEX Collab.)	REFID=48138
LINK	01	PRL 86 2955	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=48108
BAI	00C	PR D62 052001	J.Z. Bai *et al.*	(BEPC BES Collab.)	REFID=47694
GODANG	00	PRL 84 5038	R. Godang *et al.*	(CLEO Collab.)	REFID=47519
JUN	00	PRL 84 1857	S.Y. Jun *et al.*	(FNAL SELEX Collab.)	REFID=47502
LINK	00	PL B485 62	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=47717

LINK	00B	PL B491 232	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=47794
Also		PL B495 443 (erratum)	J.M. Link *et al.*	(FNAL FOCUS Collab.)	REFID=47918
PRIPSTEIN	00	PR D61 032005	D. Pripstein *et al.*	(FNAL E789 Collab.)	REFID=47460
AITALA	99E	PRL 83 32	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=47030
AITALA	99G	PL B462 401	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=47185
BONVICINI	99	PRL 82 4586	G. Bonvicini *et al.*	(CLEO Collab.)	REFID=47018
AITALA	98	PR D57 13	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=45779
AITALA	98C	PL B421 405	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=45931
AITALA	98D	PL B423 185	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=45930
ARTUSO	98	PRL 80 3193	M. Artuso *et al.*	(CLEO Collab.)	REFID=45972
ASNER	98	PR D58 092001	D.M. Asner *et al.*	(CLEO Collab.)	REFID=46452
BARATE	98W	PL B436 211	R. Barate *et al.*	(ALEPH Collab.)	REFID=46160
COAN	98	PRL 80 1150	T.E. Coan *et al.*	(CLEO Collab.)	REFID=45872
PDG	98	EPJ C3 1	C. Caso *et al.*		REFID=45838
ADAMOVICH	97	PL B408 469	M.I. Adamovich *et al.*	(CERN BEATRICE Collab.)	REFID=45587
BARATE	97C	PL B403 367	R. Barate *et al.*	(ALEPH Collab.)	REFID=45451
AITALA	96C	PRL 77 2384	E.M. Aitala *et al.*	(FNAL E791 Collab.)	REFID=44928
ALBRECHT	96C	PL B374 249	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=44890
ALEXOPOU...	96	PRL 77 2380	T. Alexopoulos *et al.*	(FNAL E771 Collab.)	REFID=44927
ASNER	96B	PR D54 4211	D.M. Asner *et al.*	(CLEO Collab.)	REFID=44942
BARISH	96	PL B373 334	B.C. Barish *et al.*	(CLEO Collab.)	REFID=44679
FRABETTI	96B	PL B382 312	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=44852
FREYBERGER	96	PRL 76 3065	A. Freyberger *et al.*	(CLEO Collab.)	REFID=44694
Also		PRL 77 2147 (erratum)	A. Freyberger *et al.*	(CLEO Collab.)	REFID=44808
KUBOTA	96B	PR D54 2994	Y. Kubota *et al.*	(CLEO Collab.)	REFID=44939
ADAMOVICH	95	PL B353 563	M.I. Adamovich *et al.*	(CERN BEATRICE Collab.)	REFID=44353
BARTELT	95	PR D52 4860	J.E. Bartelt *et al.*	(CLEO Collab.)	REFID=44481
BUTLER	95	PR D52 2656	F. Butler *et al.*	(CLEO Collab.)	REFID=44414
FRABETTI	95C	PL B354 486	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=44359
FRABETTI	95G	PL B364 127	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=44574
KODAMA	95	PL B345 85	K. Kodama *et al.*	(FNAL E653 Collab.)	REFID=44124
ALBRECHT	94	PL B324 249	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=43782
ALBRECHT	94F	PL B340 125	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=44043
ALBRECHT	94I	ZPHY C64 375	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=44156
FRABETTI	94C	PL B321 295	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=43713
FRABETTI	94D	PL B323 459	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=43745
FRABETTI	94G	PL B331 217	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=43895
FRABETTI	94J	PL B340 254	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=44065
KODAMA	94	PL B336 605	K. Kodama *et al.*	(FNAL E653 Collab.)	REFID=43969
MISHRA	94	PR D50 R9	C.S. Mishra *et al.*	(FNAL E789 Collab.)	REFID=43860
AKERIB	93	PRL 71 3070	D.S. Akerib *et al.*	(CLEO Collab.)	REFID=43571
ALBRECHT	93D	PL B308 435	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=43377
ANJOS	93	PR D48 56	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=43332
BEAN	93C	PL B317 647	A. Bean *et al.*	(CLEO Collab.)	REFID=43584
FRABETTI	93I	PL B315 203	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=43534
KODAMA	93B	PL B313 260	K. Kodama *et al.*	(FNAL E653 Collab.)	REFID=43469
PROCARIO	93B	PR D48 4007	M. Procario *et al.*	(CLEO Collab.)	REFID=43546
SELEN	93	PRL 71 1973	M.A. Selen *et al.*	(CLEO Collab.)	REFID=43509
ADAMOVICH	92	PL B280 163	M.I. Adamovich *et al.*	(CERN WA82 Collab.)	REFID=42024
ALBRECHT	92P	ZPHY C56 7	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=43149
ANJOS	92B	PR D46 R1	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=42039
ANJOS	92C	PR D46 1941	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=42102
BARLAG	92C	ZPHY C55 383	S. Barlag *et al.*	(ACCMOR Collab.)	REFID=42202
Also		ZPHY C48 29	S. Barlag *et al.*	(ACCMOR Collab.)	REFID=41313
COFFMAN	92B	PR D45 2196	D.M. Coffman *et al.*	(Mark III Collab.)	REFID=41921
Also		PRL 64 2615	J. Adler *et al.*	(Mark III Collab.)	REFID=41038
FRABETTI	92	PL B281 167	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=42079
FRABETTI	92B	PL B286 195	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=42124
ALVAREZ	91B	ZPHY C50 11	M.P. Alvarez *et al.*	(CERN NA14/2 Collab.)	REFID=41498
AMMAR	91	PR D44 3383	R. Ammar *et al.*	(CLEO Collab.)	REFID=41847
ANJOS	91	PR D43 R635	J.C. Anjos *et al.*	(FNAL-TPS Collab.)	REFID=41390
ANJOS	91D	PR D44 R3371	J.C. Anjos *et al.*	(FNAL-TPS Collab.)	REFID=41806
BAI	91	PRL 66 1011	Z. Bai *et al.*	(Mark III Collab.)	REFID=41470
COFFMAN	91	PL B263 135	D.M. Coffman *et al.*	(Mark III Collab.)	REFID=41541
CRAWFORD	91B	PR D44 3394	G. Crawford *et al.*	(CLEO Collab.)	REFID=41884
DECAMP	91J	PL B266 218	D. Decamp *et al.*	(ALEPH Collab.)	REFID=41614
FRABETTI	91	PL B263 584	P.L. Frabetti *et al.*	(FNAL E687 Collab.)	REFID=41570
KINOSHITA	91	PR D43 2836	K. Kinoshita *et al.*	(CLEO Collab.)	REFID=41500
KODAMA	91	PRL 66 1819	K. Kodama *et al.*	(FNAL E653 Collab.)	REFID=41477
ALBRECHT	90C	ZPHY C46 9	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=41223
ALEXANDER	90	PRL 65 1184	J. Alexander *et al.*	(CLEO Collab.)	REFID=41281
ALEXANDER	90B	PRL 65 1531	J. Alexander *et al.*	(CLEO Collab.)	REFID=41304
ALVAREZ	90	ZPHY C47 539	M.P. Alvarez *et al.*	(CERN NA14/2 Collab.)	REFID=41311
ANJOS	90D	PR D42 2414	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=41309
BARLAG	90C	ZPHY C46 563	S. Barlag *et al.*	(ACCMOR Collab.)	REFID=41097
ADLER	89	PRL 62 1821	J. Adler *et al.*	(Mark III Collab.)	REFID=40769
ADLER	89C	PR D40 906	J. Adler *et al.*	(Mark III Collab.)	REFID=40848
ALBRECHT	89D	ZPHY C43 181	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=40857
ANJOS	89F	PRL 62 1587	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=40783
ABACHI	88	PL B205 411	S. Abachi *et al.*	(HRS Collab.)	REFID=40398
ADLER	88	PR D37 2023	J. Adler *et al.*	(Mark III Collab.)	REFID=40371
ADLER	88C	PRL 60 89	J. Adler *et al.*	(Mark III Collab.)	REFID=40361
ALBRECHT	88G	PL B209 380	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=40650
ALBRECHT	88I	PL B210 267	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=40653
ANJOS	88C	PRL 60 1239	J.C. Anjos *et al.*	(FNAL E691 Collab.)	REFID=40548
BORTOLETTO	88	PR D37 1719	D. Bortoletto *et al.*	(CLEO Collab.)	REFID=40835
Also		PR D39 1471 (erratum)	D. Bortoletto *et al.*	(CLEO Collab.)	REFID=40834
HAAS	88	PRL 60 1614	P. Haas *et al.*	(CLEO Collab.)	REFID=40601
RAAB	88	PR D37 2391	J.R. Raab *et al.*	(FNAL E691 Collab.)	REFID=40355
ADAMOVICH	87	EPL 4 887	M.I. Adamovich *et al.*	(Photon Emulsion Collab.)	REFID=40292
ADLER	87	PL B196 107	J. Adler *et al.*	(Mark III Collab.)	REFID=40357
AGUILAR-...	87E	ZPHY C36 551	M. Aguilar-Benitez *et al.*	(LEBC-EHS Collab.)	REFID=40402
Also		ZPHY C40 321	M. Aguilar-Benitez *et al.*	(LEBC-EHS Collab.)	REFID=40699
AGUILAR-...	87F	ZPHY C36 559	M. Aguilar-Benitez *et al.*	(LEBC-EHS Collab.)	REFID=40403
Also		ZPHY C38 520 (erratum)	M. Aguilar-Benitez *et al.*	(LEBC-EHS Collab.)	REFID=40694

BARLAG	87B	ZPHY C37 17	S. Barlag *et al.*	(ACCMOR Collab.)	REFID=40401
BECKER	87C	PL B193 147	J.J. Becker *et al.*	(Mark III Collab.)	REFID=40365
Also		PL B198 590 (erratum)	J.J. Becker *et al.*	(Mark III Collab.)	REFID=40366
PALKA	87	PL B189 238	H. Palka *et al.*	(ACCMOR Collab.)	REFID=40364
RILES	87	PR D35 2914	K. Riles *et al.*	(Mark II Collab.)	REFID=40363
BAILEY	86	ZPHY C30 51	R. Bailey *et al.*	(ACCMOR Collab.)	REFID=11537
BEBEK	86	PRL 56 1893	C. Bebek *et al.*	(CLEO Collab.)	REFID=11540
LOUIS	86	PRL 56 1027	W.C. Louis *et al.*	(PRIN, CHIC, ISU)	REFID=11541
ALBRECHT	85B	PL 158B 525	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=11528
ALBRECHT	85F	PL 150B 235	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=11527
AUBERT	85	PL 155B 461	J.J. Aubert *et al.*	(EMC Collab.)	REFID=11529
BALTRUSAIT...	85E	PRL 55 150	R.M. Baltrusaitis *et al.*	(Mark III Collab.)	REFID=11472
BENVENUTI	85	PL 158B 531	A.C. Benvenuti *et al.*	(BCDMS Collab.)	REFID=40517
ADAMOVICH	84B	PL 140B 123	M.I. Adamovich *et al.*	(CERN WA58 Collab.)	REFID=11520
DERRICK	84	PRL 53 1971	M. Derrick *et al.*	(HRS Collab.)	REFID=11467
SUMMERS	84	PRL 52 410	D.J. Summers *et al.*	(UCSB, CARL, COLO+)	REFID=11525
BAILEY	83B	PL 132B 237	R. Bailey *et al.*	(ACCMOR Collab.)	REFID=11518
BODEK	82	PL 113B 82	A. Bodek *et al.*	(ROCH, CIT, CHIC, FNAL+)	REFID=11514
FIORINO	81	LNC 30 166	A. Fiorino *et al.*		REFID=11510
SCHINDLER	81	PR D24 78	R.H. Schindler *et al.*	(Mark II Collab.)	REFID=11453
TRILLING	81	PRPL 75 57	G.H. Trilling	(LBL, UCB) J	REFID=11483
ASTON	80E	PL 94B 113	D. Aston *et al.*	(BONN, CERN, EPOL, GLAS+)	REFID=11497
AVERY	80	PRL 44 1309	P. Avery *et al.*	(ILL, FNAL, COLU)	REFID=11498
ZHOLENTZ	80	PL 96B 214	A.A. Zholents *et al.*	(NOVO)	REFID=10320
Also		SJNP 34 814	A.A. Zholents *et al.*	(NOVO)	REFID=10321
		Translated from YAF 34 1471.			
ABRAMS	79D	PRL 43 481	G.S. Abrams *et al.*	(Mark II Collab.)	REFID=11492
ATIYA	79	PRL 43 414	M.S. Atiya *et al.*	(COLU, ILL, FNAL)	REFID=11494
BALTAY	78C	PRL 41 73	C. Baltay *et al.*	(COLU, BNL)	REFID=11489
VUILLEMIN	78	PRL 41 1149	V. Vuillemin *et al.*	(LGW Collab.)	REFID=11439
GOLDHABER	77	PL 69B 503	G. Goldhaber *et al.*	(Mark I Collab.)	REFID=11434
PERUZZI	77	PRL 39 1301	I. Peruzzi *et al.*	(LGW Collab.)	REFID=11435
PICCOLO	77	PL 70B 260	M. Piccolo *et al.*	(Mark I Collab.)	REFID=11436
GOLDHABER	76	PRL 37 255	G. Goldhaber *et al.*	(Mark I Collab.)	REFID=22872

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