$\Gamma(K^+K^-\pi^+\pi^-\text{ non-}\phi)/\Gamma_{\text{total}}$ — Γ_{137}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.0017±0.0005	[76] BARLAG	92C	ACCM	π^- Cu 230 GeV

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

$\Gamma(K^+K^-\pi^+\pi^-\text{ nonresonant})/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{138}/Γ_{38}

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.011	90	FRABETTI	95C	E687	γBe, $\overline{E}_\gamma \approx 200$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$0.001^{+0.011}_{-0.001}$		ANJOS	91	E691	γBe 80–240 GeV

$\Gamma(K^0\overline{K}^0\pi^+\pi^-)/\Gamma(\overline{K}^0\pi^+\pi^-)$ — Γ_{139}/Γ_{22}

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.126±0.038±0.030	25	ALBRECHT	94I	ARG	$e^+e^- \approx 10$ GeV

$\Gamma(K^+K^-\pi^+\pi^-\pi^0)/\Gamma_{\text{total}}$ — Γ_{140}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.0031±0.0020	[77] BARLAG	92C	ACCM	π^- Cu 230 GeV

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

Rare or forbidden modes

$\Gamma(K^+\ell^-\overline{\nu}_\ell(\text{via }\overline{D}^0))/\Gamma(K^-\ell^+\nu_\ell)$ — Γ_{155}/Γ_7

This is a D^0-$\overline{D}^0$ mixing limit without the complications of possible doubly-Cabibbo-suppressed decays that occur when using hadronic modes. For the corresponding limits on $|m_{D^0_1} - m_{D^0_2}|$ and $|\Gamma_{D^0_1} - \Gamma_{D^0_2}|/\Gamma_{D^0}$, see near the beginning of these D^0 Listings.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.005	90	[78] AITALA	96C	E791	π^- nucleus, 500 GeV

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

$\Gamma(K^+\pi^-)/\Gamma(K^-\pi^+)$ — Γ_{156}/Γ_{20}

The $D^0 \to K^+\pi^-$ mode is doubly Cabibbo suppressed.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.0077±0.0025±0.0025		19	[79] CINABRO	94	CLEO	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.011	90		[79] AMMAR	91	CLEO	$e^+e^- \approx 10.5$ GeV
<0.015	90	1 ± 6	[80] ANJOS	88C	E691	Photoproduction
<0.014	90		[81] ALBRECHT	87K	ARG	e^+e^- 10 GeV
<0.04	90		[81] ABACHI	86D	HRS	e^+e^- 29 GeV
<0.07	90	0	[82] BAILEY	86	ACCM	π^- Be fixed target
<0.11	90	2	[81] ALBRECHT	85F	ARG	e^+e^- 10 GeV

<0.081	90	[81,83] YAMAMOTO	85	DLCO	e^+e^- 29 GeV
<0.23	90	[81,83] ALTHOFF	84B	TASS	e^+e^- 34.4 GeV
<0.11	90	[81,83] AVERY	80	SPEC	$\gamma N \rightarrow D^{*+}$
<0.16	90	[81,83] FELDMAN	77B	MRK1	e^+e^- 4 GeV
<0.18	90	[81,83] GOLDHABER	77	MRK1	e^+e^- 4 GeV

[79] These experiments cannot distinguish between doubly Cabibbo-suppressed decay and D^0-$\overline{D}^0$ mixing.

[80] 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. When interference is allowed, the limit degrades to 0.049.

[81] In these measurements, the charge of the pion in $D^{*\pm} \rightarrow (D^0 \text{ or } \overline{D}^0)\pi^\pm$ is used to tell whether a D^0 or a $\overline{D}^0$ was born. None of the measurements can distinguish between double Cabibbo suppression and mixing for the decay.

[82] BAILEY 86 searches for events with an oppositely charged eK pair. The limit is actually for $\Gamma(D^0 \rightarrow K^+\pi^- \text{ or } K^+\pi^-\pi^+\pi^-)/\Gamma(D^0 \rightarrow K^-\pi^+ \text{or } K^-\pi^+\pi^+\pi^-)$.

[83] The results are given as $\Gamma(K^+\pi^-)/\left[\Gamma(K^-\pi^+)+\Gamma(K^+\pi^-)\right]$ but do not change significantly for our denominator.

$\Gamma(K^+\pi^-(\text{via } \overline{D}^0))/\Gamma(K^-\pi^+)$ — Γ_{157}/Γ_{20}

This is a D^0-$\overline{D}^0$ mixing limit.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.005	90	1 ± 4	[84] ANJOS	88C	E691	Photoproduction

[84] 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. When interference is allowed, the limit degrades to 0.019. Combined with results on $K^\pm\pi^\mp\pi^+\pi^-$, the limit is, assuming no interference, 0.0037. See also the data on $\left|m_{D_1^0} - m_{D_2^0}\right|$ and on $\left|\Gamma_{D_1^0} - \Gamma_{D_2^0}\right|/\Gamma$ near the beginning of the D^0 Listings.

$\Gamma(K^+\pi^-\pi^+\pi^-)/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{158}/Γ_{38}

Doubly Cabibbo suppressed.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.018	90		[85] AMMAR	91	CLEO	$e^+e^- \approx$ 10.5 GeV
<0.018	90	5 ± 12	[86] ANJOS	88C	E691	Photoproduction

[85] AMMAR 91 cannot distinguish between doubly Cabibbo-suppressed decay and D^0-$\overline{D}^0$ mixing.

[86] 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. When interference is allowed, the limit degrades to 0.033.

$\Gamma(K^+\pi^-\pi^+\pi^-(\text{via } \overline{D}^0))/\Gamma(K^-\pi^+\pi^+\pi^-)$ — Γ_{159}/Γ_{38}

This is a D^0-$\overline{D}^0$ mixing limit.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.005	90	0 ± 4	[87] ANJOS	88C	E691	Photoproduction

[87] 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. When interference is allowed, the limit degrades to 0.007. Combined with results on $K^\pm\pi^\mp$, the limit is, assuming no interference, 0.0037. See also the data on $\left|m_{D_1^0} - m_{D_2^0}\right|$ and on $\left|\Gamma_{D_1^0} - \Gamma_{D_2^0}\right|/\Gamma$ near the beginning of the D^0 Listings.

$\Gamma(\mu^-\ \text{anything (via}\ \overline{D}^0))/\Gamma(\mu^+\ \text{anything})$ Γ_{160}/Γ_2

This is a D^0-$\overline{D}^0$ mixing limit. See the somewhat better limits above from $D^0 \to K^+\pi^-$ and $D^0 \to K^+\pi^-\pi^+\pi^-$ (via $\overline{D}^0$).

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

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

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

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{<1.3 \times 10^{-5}}$	90	0	FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<1.3 \times 10^{-4}$	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_{162}/Γ

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

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{<4.2 \times 10^{-6}}$	90		ALEXOPOU...	96	E771	p Si, 800 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<3.4 \times 10^{-5}$	90	1	FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$
$<7.6 \times 10^{-6}$	90	0	ADAMOVICH	95	BEAT	π^- Cu, W 350 GeV
$<4.4 \times 10^{-5}$	90	0	KODAMA	95	E653	π^- emulsion 600 GeV
$<3.1 \times 10^{-5}$	90		[88] 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. $\mu^- N$

[88] 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.

$\Gamma(\pi^0 e^+e^-)/\Gamma_{\text{total}}$ Γ_{163}/Γ

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

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

$\Gamma(\pi^0 \mu^+\mu^-)/\Gamma_{\text{total}}$ Γ_{164}/Γ

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

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{<1.8 \times 10^{-4}}$	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	CLEO	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\eta e^+ e^-)/\Gamma_{total}$ — Γ_{165}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.1 \times 10^{-4}$	90	0	FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\eta \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{166}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<5.3 \times 10^{-4}$	90	0	FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\rho^0 e^+ e^-)/\Gamma_{total}$ — Γ_{167}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.0 \times 10^{-4}$	90	2	[89] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<4.5 \times 10^{-4}$	90	2	HAAS	88	CLEO	$e^+ e^-$ 10 GeV

[89] 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.

$\Gamma(\rho^0 \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{168}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<2.3 \times 10^{-4}$	90	0	KODAMA	95	E653	π^- emulsion 600 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$<4.9 \times 10^{-4}$	90	1	[90] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$
$<8.1 \times 10^{-4}$	90	5	HAAS	88	CLEO	$e^+ e^-$ 10 GeV

[90] 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.

$\Gamma(\omega e^+ e^-)/\Gamma_{total}$ — Γ_{169}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.8 \times 10^{-4}$	90	1	[91] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[91] 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.

$\Gamma(\omega \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{170}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<8.3 \times 10^{-4}$	90	0	[92] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[92] 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.

$\Gamma(\phi e^+ e^-)/\Gamma_{total}$ — Γ_{171}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<5.2 \times 10^{-5}$	90	2	[93] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[93] 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.

$\Gamma(\phi \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{172}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<4.1 \times 10^{-4}$	90	0	[94] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[94] 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.

$\Gamma(\overline{K}^0 e^+ e^-)/\Gamma_{total}$ — Γ_{173}/Γ

Allowed by first-order weak interaction combined with electromagnetic interaction.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.1 \times 10^{-4}$	90	0	FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$
• • • 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_{174}/Γ

Allowed by first-order weak interaction combined with electromagnetic interaction.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<2.6 \times 10^{-4}$	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	CLEO	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\overline{K}^*(892)^0 e^+ e^-)/\Gamma_{total}$ — Γ_{175}/Γ

Allowed by first-order weak interaction combined with electromagnetic interaction.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.4 \times 10^{-4}$	90	1	[95] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[95] 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.

$\Gamma(\overline{K}^*(892)^0 \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{176}/Γ

Allowed by first-order weak interaction combined with electromagnetic interaction.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<1.18 \times 10^{-3}$	90	1	[96] FREYBERGER	96	CLEO	$e^+ e^- \approx \Upsilon(4S)$

[96] 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.

$\Gamma(\pi^+ \pi^- \pi^0 \mu^+ \mu^-)/\Gamma_{total}$ — Γ_{177}/Γ

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

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$<8.1 \times 10^{-4}$	90	1	KODAMA	95	E653	π^- emulsion 600 GeV

$\Gamma(\mu^{\pm} e^{\mp})/\Gamma_{\text{total}}$ — Γ_{178}/Γ

A test of lepton family number conservation.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 1.9 \times 10^{-5}$	90	2	[97] FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$< 1.0 \times 10^{-4}$	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	[98] RILES	87	MRK2	e^+e^- 29 GeV

[97] This is the corrected result given in the erratum to FREYBERGER 96.
[98] RILES 87 assumes B($D \to K\pi$) = 3.0% and has production model dependency.

$\Gamma(\pi^0 e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{179}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 8.6 \times 10^{-5}$	90	2	FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\eta e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{180}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 1.0 \times 10^{-4}$	90	0	FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\rho^0 e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{181}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 4.9 \times 10^{-5}$	90	0	[99] FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$

[99] 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.

$\Gamma(\omega e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{182}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 1.2 \times 10^{-4}$	90	0	[100] FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$

[100] This FREYBERGER 96 limit is obtained using a phase-space model. The same limit is obtained using a photon pole amplitude model.

$\Gamma(\phi e^{\pm} \mu^{\mp})/\Gamma_{\text{total}}$ — Γ_{183}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$< 3.4 \times 10^{-5}$	90	0	[101] FREYBERGER	96	CLEO	$e^+e^- \approx \Upsilon(4S)$

[101] 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.

$\Gamma(\overline{K}^0 e^{\pm}\mu^{\mp})/\Gamma_{total}$ — Γ_{184}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<1.0 \times 10^{-4}$	90	0	FREYBERGER 96	CLEO	$e^+e^- \approx \Upsilon(4S)$

$\Gamma(\overline{K}^*(892)^0 e^{\pm}\mu^{\mp})/\Gamma_{total}$ — Γ_{185}/Γ

A test of lepton family number conservation. The value is for the sum of the two charge states.

VALUE	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
$<1.0 \times 10^{-4}$	90	0	[102] FREYBERGER 96	CLEO	$e^+e^- \approx \Upsilon(4S)$

[102] This FREYBERGER 96 limit is obtained using a phase-space model. The same limit is obtained using a photon pole amplitude model.

D^0 *CP*-VIOLATING DECAY-RATE ASYMMETRIES

$A_{CP}(K^+K^-)$ in $D^0, \overline{D}^0 \to K^+K^-$

This is the difference between D^0 and $\overline{D}^0$ partial widths for these modes divided by the sum of the widths.

VALUE	DOCUMENT ID	TECN	COMMENT
0.06 ±0.05 OUR AVERAGE			
+0.080±0.061	BARTELT 95	CLEO	$-0.022 < A_{CP} < +0.18$ (90%CL)
+0.024±0.084	[103] FRABETTI 94I	E687	$-0.11 < A_{CP} < +0.16$ (90% CL)

[103] FRABETTI 94I measures $N(D^0 \to K^+K^-)/N(D^0 \to K^-\pi^+)$, the ratio of (efficiency-corrected) numbers of events observed, and similarly for the $\overline{D}^0$.

$A_{CP}(K^0_S\phi)$ in $D^0, \overline{D}^0 \to K^0_S\phi$

This is the difference between D^0 and $\overline{D}^0$ partial widths for these modes divided by the sum of the widths.

VALUE	DOCUMENT ID	TECN	COMMENT
−0.028±0.094	BARTELT 95	CLEO	$-0.182 < A_{CP} < +0.126$ (90%CL)

$A_{CP}(K^0_S\pi^0)$ in $D^0, \overline{D}^0 \to K^0_S\pi^0$

This is the difference between D^0 and $\overline{D}^0$ partial widths for these modes divided by the sum of the widths.

VALUE	DOCUMENT ID	TECN	COMMENT
−0.018±0.030	BARTELT 95	CLEO	$-0.067 < A_{CP} < +0.031$ (90%CL)

D^0 PRODUCTION CROSS SECTION AT $\psi(3770)$

A compilation of the cross sections for the direct production of D^0 mesons at or near the $\psi(3770)$ peak in e^+e^- production.

VALUE (nanobarns)	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •			
5.8 ±0.5 ±0.6	[104] ADLER 88C	MRK3	e^+e^- 3.768 GeV
7.3 ±1.3	[105] PARTRIDGE 84	CBAL	e^+e^- 3.771 GeV
8.00±0.95±1.21	[106] SCHINDLER 80	MRK2	e^+e^- 3.771 GeV
11.5 ±2.5	[107] PERUZZI 77	MRK1	e^+e^- 3.774 GeV

[104] This measurement compares events with one detected D to those with two detected D mesons, to determine the the absolute cross section. ADLER 88C find the ratio of cross sections (neutral to charged) to be $1.36 \pm 0.23 \pm 0.14$.

[105] This measurement comes from a scan of the $\psi(3770)$ resonance and a fit to the cross section. PARTRIDGE 84 measures 6.4 ± 1.15 nb for the cross section. We take the phase space division of neutral and charged D mesons in $\psi(3770)$ decay to be 1.33, and we assume that the $\psi(3770)$ is an isosinglet to evaluate the cross sections. The noncharm decays (e.g. radiative) of the $\psi(3770)$ are included in this measurement and may amount to a few percent correction.

[106] This measurement comes from a scan of the $\psi(3770)$ resonance and a fit to the cross section. SCHINDLER 80 assume the phase space division of neutral and charged D mesons in $\psi(3770)$ decay to be 1.33, and that the $\psi(3770)$ is an isosinglet. The noncharm decays (e.g. radiative) of the $\psi(3770)$ are included in this measurement and may amount to a few percent correction.

[107] This measurement comes from a scan of the $\psi(3770)$ resonance and a fit to the cross section. The phase space division of neutral and charged D mesons in $\psi(3770)$ decay is taken to be 1.33, and $\psi(3770)$ is assumed to be an isosinglet. The noncharm decays (e.g. radiative) of the $\psi(3770)$ are included in this measurement and may amount to a few percent correction. We exclude this measurement from the average because of uncertainties in the contamination from τ lepton pairs. Also see RAPIDIS 77.

D^0 REFERENCES

PDG	97	Unofficial 1997 WWW edition		
AITALA	96C	PRL 77 2384	+Amato, Anjos, Appel+	(FNAL E791 Collab.)
ALBRECHT	96C	PL B374 249	+Hamacher, Hofmann+	(ARGUS Collab.)
ALEXOPOU...	96	PRL 77 2380	Alexopoulos, Antoniazzi+	(FNAL E771 Collab.)
ASNER	96B	PR D54 4211	+Athanas, Bliss, Brower+	(CLEO Collab.)
BARISH	96	PL B373 334	+Chadha, Chan, Eigen+	(CLEO Collab.)
FRABETTI	96B	PL B382 312	+Cheung, Cumalat+	(FNAL E687 Collab.)
FREYBERGER	96	PRL 76 3065	+Gibaut, Kinoshita+	(CLEO Collab.)
Also	96B	PRL 77 2147 (errata)		
KUBOTA	96B	PR D54 2994	+Lattery, Nelson, Patton+	(CLEO Collab.)
ADAMOVICH	95	PL B353 563	+Adinolfi, Alexandrov+	(CERN BEATRICE Collab.)
BARTELT	95	PR D52 4860	+Csorna, Egyed, Jain+	(CLEO Collab.)
BUTLER	95	PR D52 2656	+Fu, Nemati, Ross, Skubic+	(CLEO Collab.)
FRABETTI	95C	PL B354 486	+Cheung, Cumalat+	(FNAL E687 Collab.)
FRABETTI	95G	PL B364 127	+Cheung, Cumalat+	(FNAL E687 Collab.)
KODAMA	95	PL B345 85	+Ushida, Mokhtarani+	(FNAL E653 Collab.)
ALBRECHT	94	PL B324 249	+Ehrlichmann, Hamacher+	(ARGUS Collab.)
ALBRECHT	94F	PL B340 125	+Hamacher, Hofmann+	(ARGUS Collab.)
ALBRECHT	94I	ZPHY C64 375	+Hamacher, Hofmann+	(ARGUS Collab.)
CINABRO	94	PRL 72 1406	+Henderson, Liu, Saulnier+	(CLEO Collab.)
FRABETTI	94C	PL B321 295	+Cheung, Cumalat+	(FNAL E687 Collab.)
FRABETTI	94D	PL B323 459	+Cheung, Cumalat+	(FNAL E687 Collab.)
FRABETTI	94G	PL B331 217	+Cheung, Cumalat+	(FNAL E687 Collab.)
FRABETTI	94I	PR D50 R2953	+Cheung, Cumalat+	(FNAL E687 Collab.)
FRABETTI	94J	PL B340 254	+Cheung, Cumalat+	(FNAL E687 Collab.)
KODAMA	94	PL B336 605	+Ushida, Mokhtarani+	(FNAL E653 Collab.)
MISHRA	94	PR D50 R9	+Brown, Cooper+	(FNAL E789 Collab.)
AKERIB	93	PRL 71 3070	+Barish, Chadha, Chan+	(CLEO Collab.)
ALBRECHT	93D	PL B308 435	+Ehrlichmann, Hamacher+	(ARGUS Collab.)
ANJOS	93	PR D48 56	+Appel, Bean, Bracker+	(FNAL E691 Collab.)
BEAN	93C	PL B317 647	+Gronberg, Kutschke, Menary+	(CLEO Collab.)
FRABETTI	93I	PL B315 203	+Bogart, Cheung, Culy+	(FNAL E687 Collab.)
KODAMA	93B	PL B313 260	+Ushida, Mokhtarani+	(FNAL E653 Collab.)
PROCARIO	93B	PR D48 4007	+Yang, Akerib, Barish+	(CLEO Collab.)
SELEN	93	PRL 71 1973	+Sadoff, Ammar, Ball+	(CLEO Collab.)
ADAMOVICH	92	PL B280 163	+Alexandrov, Antinori+	(CERN WA82 Collab.)
ALBRECHT	92P	ZPHY C56 7	+Cronstroem, Ehrlichmann+	(ARGUS Collab.)
ANJOS	92B	PR D46 R1	+Appel, Bean, Bracker+	(FNAL E691 Collab.)
ANJOS	92C	PR D46 1941	+Appel, Bean, Bracker+	(FNAL E691 Collab.)
BARLAG	92C	ZPHY C55 383	+Becker, Bozek, Boehringer+	(ACCMOR Collab.)
Also	90D	ZPHY C48 29	Barlag, Becker, Boehringer, Bosman+	(ACCMOR Collab.)

COFFMAN	92B	PR D45 2196	+DeJongh, Dubois, Eigen+	(Mark III Collab.)
Also	90	PRL 64 2615	Adler, Blaylock, Bolton+	(Mark III Collab.)
FRABETTI	92	PL B281 167	+Bogart, Cheung, Culy+	(FNAL E687 Collab.)
FRABETTI	92B	PL B286 195	+Bogart, Cheung, Culy+	(FNAL E687 Collab.)
ALVAREZ	91B	ZPHY C50 11	+Barate, Bloch, Bonamy+	(CERN NA14/2 Collab.)
AMMAR	91	PR D44 3383	+Baringer, Coppage, Davis+	(CLEO Collab.)
ANJOS	91	PR D43 R635	+Appel, Bean, Bracker+	(FNAL-TPS Collab.)
ANJOS	91D	PR D44 R3371	+Appel, Bean, Bracker+	(FNAL-TPS Collab.)
BAI	91	PRL 66 1011	+Bolton, Brown, Bunnell+	(Mark III Collab.)
COFFMAN	91	PL B263 135	+DeJongh, Dubois, Eigen, Hitlin+	(Mark III Collab.)
CRAWFORD	91B	PR D44 3394	+Fulton, Gan, Jensen+	(CLEO Collab.)
DECAMP	91J	PL B266 218	+Deschizeaux, Goy, Lees+	(ALEPH Collab.)
FRABETTI	91	PL B263 584	+Bogart, Cheung, Culy+	(FNAL E687 Collab.)
KINOSHITA	91	PR D43 2836	+Pipkin, Procario, Wilson+	(CLEO Collab.)
KODAMA	91	PRL 66 1819	+Ushida, Mokhtarani, Paolone+	(FNAL E653 Collab.)
ALBRECHT	90C	ZPHY C46 9	+Glaeser, Harder, Krueger+	(ARGUS Collab.)
ALEXANDER	90	PRL 65 1184	+Artuso, Bebek, Berkelman+	(CLEO Collab.)
ALEXANDER	90B	PRL 65 1531	+Artuso, Bebek, Berkelman+	(CLEO Collab.)
ALVAREZ	90	ZPHY C47 539	+Barate, Bloch, Bonamy+	(CERN NA14/2 Collab.)
ANJOS	90D	PR D42 2414	+Appel, Bean, Bracker+	(FNAL E691 Collab.)
BARLAG	90C	ZPHY C46 563	+Becker, Boehringer, Bosman+	(ACCMOR Collab.)
ADLER	89	PRL 62 1821	+Becker, Blaylock, Bolton+	(Mark III Collab.)
ADLER	89C	PR D40 906	+Bai, Becker, Blaylock, Bolton+	(Mark III Collab.)
ALBRECHT	89D	ZPHY C43 181	+Boeckmann, Glaeser, Harder+	(ARGUS Collab.)
ANJOS	89F	PRL 62 1587	+Appel, Bean, Bracker, Browder+	(FNAL E691 Collab.)
ABACHI	88	PL B205 411	+Akerlof, Baringer+	(HRS Collab.)
ADLER	88	PR D37 2023	+Becker, Blaylock+	(Mark III Collab.)
ADLER	88C	PRL 60 89	+Becker, Blaylock+	(Mark III Collab.)
ALBRECHT	88G	PL B209 380	+Boeckmann, Glaeser+	(ARGUS Collab.)
ALBRECHT	88I	PL B210 267	+Boeckmann, Glaeser+	(ARGUS Collab.)
AMENDOLIA	88	EPL 5 407	+Bagliesi, Batignani+	(NA1 Collab.)
ANJOS	88C	PRL 60 1239	+Appel+	(FNAL E691 Collab.)
BORTOLETTO	88	PR D37 1719	+Goldberg, Horwitz, Mestayer, Moneti+	(CLEO Collab.)
Also	89D	PR D39 1471 erratum		
CUMALAT	88	PL B210 253	+Shipbaugh, Binkley+	(E-400 Collab.)
HAAS	88	PRL 60 1614	+Hempstead, Jensen+	(CLEO Collab.)
RAAB	88	PR D37 2391	+Anjos, Appel, Bracker+	(FNAL E691 Collab.)
ADAMOVICH	87	EPL 4 887	+Alexandrov, Bolta+	(Photon Emulsion Collab.)
ADLER	87	PL B196 107	+Becker, Blaylock, Bolton+	(Mark III Collab.)
AGUILAR-...	87D	PL B193 140	Aguilar-Benitez, Allison+	(LEBC-EHS Collab.)
Also	88B	ZPHY C40 321	Aguilar-Benitez, Allison, Bailly+	(LEBC-EHS Collab.)
AGUILAR-...	87E	ZPHY C36 551	Aguilar-Benitez, Allison+	(LEBC-EHS Collab.)
Also	88B	ZPHY C40 321	Aguilar-Benitez, Allison, Bailly+	(LEBC-EHS Collab.)
AGUILAR-...	87F	ZPHY C36 559	Aguilar-Benitez, Allison+	(LEBC-EHS Collab.)
Also	88	ZPHY C38 520 erratum		
ALBRECHT	87E	ZPHY C33 359	+Binder, Boeckmann, Glaser+	(ARGUS Collab.)
ALBRECHT	87K	PL B199 447	+Andam, Binder, Boeckmann+	(ARGUS Collab.)
BARLAG	87B	ZPHY C37 17	+Becker, Boehringer, Bosman+	(ACCMOR Collab.)
BECKER	87C	PL B193 147	+Blaylock, Bolton, Brown+	(Mark III Collab.)
Also	87D	PL B198 590 erratum	Becker, Blaylock, Bolton+	(Mark III Collab.)
CSORNA	87	PL B191 318	+Mestayer, Panvini, Word+	(CLEO Collab.)
PALKA	87	PL B189 238	+Bailey, Becker, Belau+	(ACCMOR Collab.)
RILES	87	PR D35 2914	+Dorfan, Abrams, Amidei+	(Mark II Collab.)
ABACHI	86D	PL B182 101	+Akerlof, Baringer, Ballam+	(HRS Collab.)
ABE	86	PR D33 1	+	(SLAC Hybrid Facility Photon Collab.)
BAILEY	86	ZPHY C30 51	+Belau, Boehringer, Bosman+	(ACCMOR Collab.)
BEBEK	86	PRL 56 1893	+Berkelman, Blucher, Cassel+	(CLEO Collab.)
GLADNEY	86	PR D34 2601	+Jaros, Ong, Barklow+	(Mark II Collab.)
LOUIS	86	PRL 56 1027	+Adolphsen, Alexander+	(PRIN, CHIC, ISU)
USHIDA	86B	PRL 56 1771	+Kondo+	(AICH, FNAL, KOBE, SEOU, MCGI+)
ALBRECHT	85B	PL 158B 525	+Binder, Harder, Philipp+	(ARGUS Collab.)
ALBRECHT	85F	PL 150B 235	+Binder, Harder, Philipp+	(ARGUS Collab.)
AUBERT	85	PL 155B 461	+Bassompierre, Becks, Benchouk+	(EMC Collab.)
BAILEY	85	ZPHY C28 357	+Belau, Boehringer, Bosman+	(ABCCMR Collab.)
BALTRUSAIT...	85B	PRL 54 1976	Baltrusaitis, Becker, Blaylock, Brown+	(Mark III Collab.)
BALTRUSAIT...	85E	PRL 55 150	Baltrusaitis, Becker, Blaylock, Brown+	(Mark III Collab.)
BENVENUTI	85	PL 158B 531	+Bollini, Bruni, Camporesi+	(BCDMS Collab.)
YAMAMOTO	85	PRL 54 522	+Yamamoto, Atwood, Baillon+	(DELCO Collab.)

ADAMOVICH	84B	PL 140B 123	+Alexandrov, Bravo+	(CERN WA58 Collab.)
ALTHOFF	84B	PL 138B 317	+Braunschweig, Kirschfink+	(TASSO Collab.)
DERRICK	84	PRL 53 1971	+Fernandez, Fries, Hyman+	(HRS Collab.)
PARTRIDGE	84	Thesis CALT-68-1150		(Crystal Ball Collab.)
SUMMERS	84	PRL 52 410	+	(UCSB, CARL, COLO, FNAL, TNTO, OKLA, CNRC)
BAILEY	83B	PL 132B 237	+Bardsley, Becker, Blanar+	(ACCMOR Collab.)
BODEK	82	PL 113B 82	+Breedon+	(ROCH, CIT, CHIC, FNAL, STAN)
FIORINO	81	LNC 30 166	+	(Photon-Emulsion and Omega-Photon Collab.)
SCHINDLER	81	PR D24 78	+Alam, Boyarski, Breidenbach+	(Mark II Collab.)
TRILLING	81	PRPL 75 57		(LBL, UCB) J
ASTON	80E	PL 94B 113	+	(BONN, CERN, EPOL, GLAS, LANC, MCHS+)
AVERY	80	PRL 44 1309	+Wiss, Butler, Gladding+	(ILL, FNAL, COLU)
SCHINDLER	80	PR D21 2716	+Siegrist, Alam, Boyarski+	(Mark II Collab.)
ZHOLENTZ	80	PL 96B 214	+Kurdadze, Lelchuk, Mishnev+	(NOVO)
Also	81	SJNP 34 814	Zholentz, Kurdadze, Lelchuk+	(NOVO)
		Translated from YAF 34 1471.		
ABRAMS	79D	PRL 43 481	+Alam, Blocker, Boyarski+	(Mark II Collab.)
ATIYA	79	PRL 43 414	+Holmes, Knapp, Lee+	(COLU, ILL, FNAL)
BALTAY	78C	PRL 41 73	+Caroumbalis, French, Hibbs, Hylton+	(COLU, BNL)
VUILLEMIN	78	PRL 41 1149	+Feldman, Feller+	(Mark I Collab.)
FELDMAN	77B	PRL 38 1313	+Peruzzi, Piccolo, Abrams, Alam+	(Mark I Collab.)
GOLDHABER	77	PL 69B 503	+Wiss, Abrams, Alam+	(Mark I Collab.)
PERUZZI	77	PRL 39 1301	+Piccolo, Feldman+	(Mark I Collab.)
PICCOLO	77	PL 70B 260	+Peruzzi, Luth, Nguyen, Wiss, Abrams+	(Mark I Collab.)
RAPIDIS	77	PRL 39 526	+Gobbi, Luke, Barbaro-Galtieri+	(Mark I Collab.)
GOLDHABER	76	PRL 37 255	+Pierre, Abrams, Alam+	(Mark I Collab.)

OTHER RELATED PAPERS

RICHMAN	95	RMP 67 893	+Burchat	(UCSB, STAN)
ROSNER	95	CNPP 21 369		(CHIC)