Meson Full Listings

$D^{\pm}$

$\Gamma(K^0 K^- \pi^+ \pi^+)/\Gamma_{total}$ Γ_{115}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
0.01 ± 0.005 ± 0.003	ALBRECHT	92B	ARG	e^+e^- ≃ 10.4 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
< 0.003	[61] BARLAG	92C	ACCM	π^- Cu 230 GeV

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

$\Gamma(K^*(892)^+ \overline{K}^*(892)^0)/\Gamma_{total}$ Γ_{125}/Γ

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

VALUE	DOCUMENT ID		TECN	COMMENT
0.026 ± 0.008 ± 0.007	ALBRECHT	92B	ARG	e^+e^- ≃ 10.4 GeV

$\Gamma(K^0 K^- \pi^+ \pi^+ \text{non-} K^{*+} \overline{K}^{*0})/\Gamma_{total}$ Γ_{117}/Γ

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 0.0079	90	ALBRECHT	92B	ARG	e^+e^- ≃ 10.4 GeV

$\Gamma(\phi\pi^+\pi^+\pi^-)/\Gamma_{total}$ Γ_{126}/Γ

Unseen decay modes of the ϕ are included.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 0.002	90	0	ANJOS	88	E691	Photoproduction

$\Gamma(\phi\pi^+\pi^+\pi^-)/\Gamma(K^-\pi^+\pi^+)$ Γ_{126}/Γ_{35}

Unseen decay modes of the ϕ are included.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
< 0.031	90	ALVAREZ	90C	NA14	Photoproduction

$\Gamma(\phi\pi^+\pi^+\pi^-)/\Gamma(\phi\pi^+)$ $\Gamma_{126}/\Gamma_{121}$

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
< 0.6	90	FRABETTI	92	E687	γ Be

$\Gamma(K^+K^-\pi^+\pi^+\pi^-\text{ nonresonant})/\Gamma_{total}$ Γ_{120}/Γ

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 0.03	90	12	ANJOS	88	E691	Photoproduction

Rare or forbidden modes

$\Gamma(K^+\pi^+\pi^-)/\Gamma(K^-\pi^+\pi^+)$ Γ_{127}/Γ_{35}

A doubly Cabibbo-suppressed decay with no simple spectator process possible.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 0.05	90	[62] PICCOLO	77	MRK1	e^+e^- 4.03 GeV

[62] Obtained from $\sigma \times$ BR values of Table I of PICCOLO 77.

$\Gamma(K^+K^+K^-)/\Gamma(K^-\pi^+\pi^+)$ Γ_{128}/Γ_{35}

A doubly Cabibbo-suppressed decay with no simple spectator process possible.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.057 ± 0.020 ± 0.007	13	ADAMOVICH	93	WA82	π^- 340 GeV

$\Gamma(\phi K^+)/\Gamma(\phi\pi^+)$ $\Gamma_{129}/\Gamma_{121}$

A doubly Cabibbo-suppressed decay with no simple spectator process possible.

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
$0.058^{+0.032}_{-0.026} \pm 0.007$	4	[63] ANJOS	92D	E691	γ Be $\overline{E}_\gamma$ = 145 GeV

[63] The evidence of ANJOS 92D is a small excess of events $(4.5^{+2.4}_{-2.0})$.

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

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

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 2.5 × 10⁻³	90		WEIR	90B	MRK2	e^+e^- 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
< 2.6 × 10⁻³	90	39	[64] HAAS	88	CLEO	e^+e^- 10 GeV

[64] The branching ratios are normalized to $D^0 \to K^-\pi^+$, $D^+ \to K^-\pi^+\pi^+$, and $D^{*+} \to D^0\pi^+$ using ADLER 88C.

$\Gamma(\pi^+\mu^+\mu^-)/\Gamma_{total}$ Γ_{131}/Γ

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

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 2.9 × 10⁻³	90	36	[65] HAAS	88	CLEO	e^+e^- 10 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
< 5.9 × 10⁻³	90		WEIR	90B	MRK2	e^+e^- 29 GeV

[65] The branching ratios are normalized to $D^0 \to K^-\pi^+$, $D^+ \to K^-\pi^+\pi^+$, and $D^{*+} \to D^0\pi^+$ using ADLER 88C.

$\Gamma(K^+e^+e^-)/\Gamma_{total}$ Γ_{132}/Γ

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 4.8 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

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

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 9.2 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(\pi^+e^\pm\mu^\mp)/\Gamma_{total}$ Γ_{134}/Γ

A test of lepton-family-number conservation.

VALUE	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 3.8 × 10⁻³	90	58	[66] HAAS	88	CLEO	e^+e^- 10 GeV

[66] The branching ratios are normalized to $D^0 \to K^-\pi^+$, $D^+ \to K^-\pi^+\pi^+$, and $D^{*+} \to D^0\pi^+$ using ADLER 88C.

$\Gamma(\pi^+e^+\mu^-)/\Gamma_{total}$ Γ_{135}/Γ

A test of lepton-family-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 3.3 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(\pi^+e^-\mu^+)/\Gamma_{total}$ Γ_{136}/Γ

A test of lepton-family-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 3.3 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(K^+e^+\mu^-)/\Gamma_{total}$ Γ_{137}/Γ

A test of lepton-family-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 3.4 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(K^+e^-\mu^+)/\Gamma_{total}$ Γ_{138}/Γ

A test of lepton-family-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 3.4 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

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

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 4.8 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(\pi^-\mu^+\mu^+)/\Gamma_{total}$ Γ_{140}/Γ

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 6.8 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(\pi^-e^+\mu^+)/\Gamma_{total}$ Γ_{141}/Γ

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 3.7 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(K^-e^+e^+)/\Gamma_{total}$ Γ_{142}/Γ

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 9.1 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(K^-\mu^+\mu^+)/\Gamma_{total}$ Γ_{143}/Γ

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 4.3 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$\Gamma(K^-e^+\mu^+)/\Gamma_{total}$ Γ_{144}/Γ

A test of lepton-number conservation.

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
< 4.0 × 10⁻³	90	WEIR	90B	MRK2	e^+e^- 29 GeV

$D^{\pm}$ PRODUCTION CROSS SECTION AT $\psi(3770)$

A compilation of the cross sections for the direct production of $D^{\pm}$ 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. • • •				
4.2 ± 0.6 ± 0.3	[67] ADLER	88C	MRK3	e^+e^- 3.768 GeV
5.5 ± 1.0	[68] PARTRIDGE	84	CBAL	e^+e^- 3.771 GeV
6.00 ± 0.72 ± 1.02	[69] SCHINDLER	80	MRK2	e^+e^- 3.771 GeV
9.1 ± 2.0	[70] PERUZZI	77	MRK1	e^+e^- 3.774 GeV

[67] This measurement compares events with one detected D to those with two detected D mesons, to determine the the absolute cross section. ADLER 88C measure the ratio of cross sections (neutral to charged) to be 1.36 ± 0.23 ± 0.14. This measurement does not include the decays of the $\psi(3770)$ not associated with charmed particle production.

[68] 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.

[69] 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.

[70] 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.