CHARMED MESONS ($C = \pm 1$)

$D^+ = c\overline{d}$, $D^0 = c\overline{u}$, $\overline{D}^0 = \overline{c}\,u$, $D^- = \overline{c}\,d$, similarly for D^*'s

$D^\pm$

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

Mass $m = 1869.61 \pm 0.09$ MeV
Mean life $\tau = (1040 \pm 7) \times 10^{-15}$ s
$c\tau = 311.8\ \mu$m

c-quark decays

$\Gamma(c \to \ell^+ \text{anything})/\Gamma(c \to \text{anything}) = 0.096 \pm 0.004$ [a]
$\Gamma(c \to D^*(2010)^+ \text{anything})/\Gamma(c \to \text{anything}) = 0.255 \pm 0.017$

CP-violation decay-rate asymmetries

$A_{CP}(\mu^\pm \nu) = (8 \pm 8)\%$
$A_{CP}(K^0_S \pi^\pm) = (-0.41 \pm 0.09)\%$
$A_{CP}(K^\mp 2\pi^\pm) = (-0.18 \pm 0.16)\%$
$A_{CP}(K^\mp \pi^\pm \pi^\pm \pi^0) = (-0.3 \pm 0.7)\%$
$A_{CP}(K^0_S \pi^\pm \pi^0) = (-0.1 \pm 0.7)\%$
$A_{CP}(K^0_S \pi^\pm \pi^+ \pi^-) = (0.0 \pm 1.2)\%$
$A_{CP}(\pi^\pm \pi^0) = (2.9 \pm 2.9)\%$
$A_{CP}(\pi^\pm \eta) = (1.0 \pm 1.5)\%$ (S = 1.4)
$A_{CP}(\pi^\pm \eta'(958)) = (-0.5 \pm 1.2)\%$ (S = 1.1)
$A_{CP}(\overline{K}^0 / K^0 K^\pm) = (0.11 \pm 0.17)\%$
$A_{CP}(K^0_S K^\pm) = (-0.11 \pm 0.25)\%$
$A_{CP}(K^+ K^- \pi^\pm) = (0.37 \pm 0.29)\%$
$A_{CP}(K^\pm K^{*0}) = (-0.3 \pm 0.4)\%$
$A_{CP}(\phi \pi^\pm) = (0.09 \pm 0.19)\%$ (S = 1.2)
$A_{CP}(K^\pm K^*_0(1430)^0) = (8^{+7}_{-6})\%$
$A_{CP}(K^\pm K^*_2(1430)^0) = (43^{+20}_{-26})\%$
$A_{CP}(K^\pm K^*_0(800)) = (-12^{+18}_{-13})\%$
$A_{CP}(a_0(1450)^0 \pi^\pm) = (-19^{+14}_{-16})\%$
$A_{CP}(\phi(1680) \pi^\pm) = (-9 \pm 26)\%$
$A_{CP}(\pi^+ \pi^- \pi^\pm) = (-2 \pm 4)\%$
$A_{CP}(K^0_S K^\pm \pi^+ \pi^-) = (-4 \pm 7)\%$
$A_{CP}(K^\pm \pi^0) = (-4 \pm 11)\%$

χ^2 TESTS OF *CP*-VIOLATION (*CPV*)

Local *CPV* in $D^\pm \to \pi^+ \pi^- \pi^\pm = 78.1\%$
Local *CPV* in $D^\pm \to K^+ K^- \pi^\pm = 31\%$

T-violation decay-rate asymmetry

$A_T(K^0_S K^\pm \pi^+ \pi^-) = (-12 \pm 11) \times 10^{-3}$ [b]

D^+ form factors

$f_+(0)\left|V_{cs}\right|$ in $\overline{K}^0 \ell^+ \nu_\ell = 0.707 \pm 0.013$
$r_1 \equiv a_1/a_0$ in $\overline{K}^0 \ell^+ \nu_\ell = -1.7 \pm 0.5$
$r_2 \equiv a_2/a_0$ in $\overline{K}^0 \ell^+ \nu_\ell = -14 \pm 11$
$f_+(0)\left|V_{cd}\right|$ in $\pi^0 \ell^+ \nu_\ell = 0.146 \pm 0.007$
$r_1 \equiv a_1/a_0$ in $\pi^0 \ell^+ \nu_\ell = -1.4 \pm 0.9$
$r_2 \equiv a_2/a_0$ in $\pi^0 \ell^+ \nu_\ell = -4 \pm 5$
$f_+(0)\left|V_{cd}\right|$ in $D^+ \rightarrow \eta e^+ \nu_e = 0.086 \pm 0.006$
$r_1 \equiv a_1/a_0$ in $D^+ \rightarrow \eta e^+ \nu_e = -1.8 \pm 2.2$
$r_v \equiv V(0)/A_1(0)$ in $D^+,D^0 \rightarrow \rho e^+ \nu_e = 1.48 \pm 0.16$
$r_2 \equiv A_2(0)/A_1(0)$ in $D^+,D^0 \rightarrow \rho e^+ \nu_e = 0.83 \pm 0.12$
$r_v \equiv V(0)/A_1(0)$ in $\overline{K}^*(892)^0 \ell^+ \nu_\ell = 1.51 \pm 0.07$ (S = 2.2)
$r_2 \equiv A_2(0)/A_1(0)$ in $\overline{K}^*(892)^0 \ell^+ \nu_\ell = 0.807 \pm 0.025$
$r_3 \equiv A_3(0)/A_1(0)$ in $\overline{K}^*(892)^0 \ell^+ \nu_\ell = 0.0 \pm 0.4$
Γ_L/Γ_T in $\overline{K}^*(892)^0 \ell^+ \nu_\ell = 1.13 \pm 0.08$
Γ_+/Γ_- in $\overline{K}^*(892)^0 \ell^+ \nu_\ell = 0.22 \pm 0.06$ (S = 1.6)

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 $2\,\Gamma(K^0_S) = \Gamma(\overline{K}^0)$.

D^+ DECAY MODES	Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
Inclusive modes			
e^+ semileptonic	(16.07 ± 0.30) %		–
μ^+ anything	(17.6 ± 3.2) %		–
K^- anything	(25.7 ± 1.4) %		–
$\overline{K}^0$ anything + K^0 anything	(61 ± 5) %		–
K^+ anything	(5.9 ± 0.8) %		–
$K^*(892)^-$ anything	(6 ± 5) %		–
$\overline{K}^*(892)^0$ anything	(23 ± 5) %		–
$K^*(892)^0$ anything	< 6.6 %	CL=90%	–
η anything	(6.3 ± 0.7) %		–
η' anything	(1.04 ± 0.18) %		–
ϕ anything	(1.03 ± 0.12) %		–

Leptonic and semileptonic modes

$e^+ \nu_e$	< 8.8 $\times 10^{-6}$	CL=90%	935
$\mu^+ \nu_\mu$	(3.74± 0.17) $\times 10^{-4}$		932
$\tau^+ \nu_\tau$	< 1.2 $\times 10^{-3}$	CL=90%	90
$\overline{K}^0 e^+ \nu_e$	(8.83± 0.22) %		869
$\overline{K}^0 \mu^+ \nu_\mu$	(9.3 ± 0.7) %		865
$K^- \pi^+ e^+ \nu_e$	(3.91± 0.11) %		864
$\overline{K}^*(892)^0 e^+ \nu_e$, $\overline{K}^*(892)^0 \to K^- \pi^+$	(3.68± 0.10) %		722
$(K^- \pi^+)_{S-wave} e^+ \nu_e$	(2.26± 0.11) $\times 10^{-3}$		–
$\overline{K}^*(1410)^0 e^+ \nu_e$, $\overline{K}^*(1410)^0 \to K^- \pi^+$	< 6 $\times 10^{-3}$	CL=90%	–
$\overline{K}_2^*(1430)^0 e^+ \nu_e$, $\overline{K}_2^*(1430)^0 \to K^- \pi^+$	< 5 $\times 10^{-4}$	CL=90%	–
$K^- \pi^+ e^+ \nu_e$ nonresonant	< 7 $\times 10^{-3}$	CL=90%	864
$K^- \pi^+ \mu^+ \nu_\mu$	(3.9 ± 0.4) %		851
$\overline{K}^*(892)^0 \mu^+ \nu_\mu$, $\overline{K}^*(892)^0 \to K^- \pi^+$	(3.52± 0.10) %		717
$K^- \pi^+ \mu^+ \nu_\mu$ nonresonant	(2.1 ± 0.5) $\times 10^{-3}$		851
$K^- \pi^+ \pi^0 \mu^+ \nu_\mu$	< 1.6 $\times 10^{-3}$	CL=90%	825
$\pi^0 e^+ \nu_e$	(4.05± 0.18) $\times 10^{-3}$		930
$\eta e^+ \nu_e$	(1.14± 0.10) $\times 10^{-3}$		855
$\rho^0 e^+ \nu_e$	($2.18^{+0.17}_{-0.25}$) $\times 10^{-3}$		774
$\rho^0 \mu^+ \nu_\mu$	(2.4 ± 0.4) $\times 10^{-3}$		770
$\omega e^+ \nu_e$	(1.82± 0.19) $\times 10^{-3}$		771
$\eta'(958) e^+ \nu_e$	(2.2 ± 0.5) $\times 10^{-4}$		689
$\phi e^+ \nu_e$	< 9 $\times 10^{-5}$	CL=90%	657

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

$\overline{K}^*(892)^0 e^+ \nu_e$	(5.52± 0.15) %		722
$\overline{K}^*(892)^0 \mu^+ \nu_\mu$	(5.30± 0.15) %		717
$\overline{K}_0^*(1430)^0 \mu^+ \nu_\mu$	< 2.5 $\times 10^{-4}$	CL=90%	380
$\overline{K}^*(1680)^0 \mu^+ \nu_\mu$	< 1.6 $\times 10^{-3}$	CL=90%	105

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

$K_S^0 \pi^+$		(1.53± 0.06) %	S=2.8	863
$K_L^0 \pi^+$		(1.46± 0.05) %		863
$K^- 2\pi^+$	[c]	(9.46± 0.24) %	S=2.0	846
$(K^- \pi^+)_{S-\text{wave}} \pi^+$		(7.58± 0.22) %		846
$\overline{K}_0^*(1430)^0 \pi^+$, $\overline{K}_0^*(1430)^0 \to K^- \pi^+$	[d]	(1.26± 0.07) %		382

$\overline{K}^*(892)^0\pi^+$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.05 ± 0.12) %		714
$\overline{K}^*(1410)^0\pi^+$, $\overline{K}^{*0} \to K^-\pi^+$		not seen		381
$\overline{K}^*_2(1430)^0\pi^+$, $\overline{K}^*_2(1430)^0 \to K^-\pi^+$	[d]	$(2.3 \pm 0.8) \times 10^{-4}$		371
$\overline{K}^*(1680)^0\pi^+$, $\overline{K}^*(1680)^0 \to K^-\pi^+$	[d]	$(2.2 \pm 1.1) \times 10^{-4}$		58
$K^-(2\pi^+)_{I=2}$		(1.47 ± 0.27) %		–
$K^0_S\pi^+\pi^0$	[c]	(7.24 ± 0.17) %		845
$K^0_S\rho^+$		$(6.04^{+0.60}_{-0.34})$ %		677
$K^0_S\rho(1450)^+$, $\rho^+ \to \pi^+\pi^0$		$(1.5^{+1.2}_{-1.4}) \times 10^{-3}$		–
$\overline{K}^*(892)^0\pi^+$, $\overline{K}^*(892)^0 \to K^0_S\pi^0$		$(2.59\pm 0.31) \times 10^{-3}$		714
$\overline{K}^*_0(1430)^0\pi^+$, $\overline{K}^{*0}_0 \to K^0_S\pi^0$		$(2.7 \pm 0.9) \times 10^{-3}$		–
$\overline{K}^*_0(1680)^0\pi^+$, $\overline{K}^{*0}_0 \to K^0_S\pi^0$		$(9^{+7}_{-10}) \times 10^{-4}$		–
$\overline{\kappa}^0\pi^+$, $\overline{\kappa}^0 \to K^0_S\pi^0$		$(6^{+5}_{-4}) \times 10^{-3}$		–
$K^0_S\pi^+\pi^0$ nonresonant		$(3 \pm 4) \times 10^{-3}$		845
$K^0_S\pi^+\pi^0$ nonresonant and $\overline{\kappa}^0\pi^+$		$(1.35^{+0.21}_{-0.40})$ %		–
$(K^0_S\pi^0)_{S-\text{wave}}\pi^+$		$(1.25^{+0.27}_{-0.33})$ %		845
$K^-2\pi^+\pi^0$	[e]	(6.14 ± 0.16) %		816
$K^0_S 2\pi^+\pi^-$	[e]	(3.05 ± 0.09) %		814
$K^-3\pi^+\pi^-$	[c]	$(5.8 \pm 0.5) \times 10^{-3}$	S=1.1	772
$\overline{K}^*(892)^0 2\pi^+\pi^-$, $\overline{K}^*(892)^0 \to K^-\pi^+$		$(1.2 \pm 0.4) \times 10^{-3}$		645
$\overline{K}^*(892)^0\rho^0\pi^+$, $\overline{K}^*(892)^0 \to K^-\pi^+$		$(2.3 \pm 0.4) \times 10^{-3}$		239
$\overline{K}^*(892)^0 a_1(1260)^+$	[f]	$(9.4 \pm 1.9) \times 10^{-3}$		†
$K^-\rho^0 2\pi^+$		$(1.74\pm 0.28) \times 10^{-3}$		524
$K^-3\pi^+\pi^-$ nonresonant		$(4.1 \pm 3.0) \times 10^{-4}$		772
$K^+2K^0_S$		$(4.6 \pm 2.1) \times 10^{-3}$		545
$K^+K^-K^0_S\pi^+$		$(2.3 \pm 0.5) \times 10^{-4}$		436

Pionic modes

$\pi^+\pi^0$		$(1.24\pm 0.06) \times 10^{-3}$		925
$2\pi^+\pi^-$		$(3.29\pm 0.20) \times 10^{-3}$		909
$\rho^0\pi^+$		$(8.4 \pm 1.5) \times 10^{-4}$		767
$\pi^+(\pi^+\pi^-)_{S-\text{wave}}$		$(1.85\pm 0.17) \times 10^{-3}$		909

$\sigma\pi^+$, $\sigma \to \pi^+\pi^-$		$(1.39\pm 0.12)\times 10^{-3}$		–
$f_0(980)\pi^+$, $f_0(980) \to \pi^+\pi^-$		$(1.58\pm 0.34)\times 10^{-4}$		669
$f_0(1370)\pi^+$, $f_0(1370) \to \pi^+\pi^-$		$(8 \pm 4)\times 10^{-5}$		–
$f_2(1270)\pi^+$, $f_2(1270) \to \pi^+\pi^-$		$(5.1\pm 0.9)\times 10^{-4}$		485
$\rho(1450)^0\pi^+$, $\rho(1450)^0 \to \pi^+\pi^-$		$< 8 \times 10^{-5}$	CL=95%	338
$f_0(1500)\pi^+$, $f_0(1500) \to \pi^+\pi^-$		$(1.1\pm 0.4)\times 10^{-4}$		–
$f_0(1710)\pi^+$, $f_0(1710) \to \pi^+\pi^-$		$< 5 \times 10^{-5}$	CL=95%	–
$f_0(1790)\pi^+$, $f_0(1790) \to \pi^+\pi^-$		$< 7 \times 10^{-5}$	CL=95%	–
$(\pi^+\pi^+)_{S\text{-wave}}\pi^-$		$< 1.2 \times 10^{-4}$	CL=95%	909
$2\pi^+\pi^-$ nonresonant		$< 1.2 \times 10^{-4}$	CL=95%	909
$\pi^+ 2\pi^0$		$(4.7\pm 0.4)\times 10^{-3}$		910
$2\pi^+\pi^-\pi^0$		(1.17 ± 0.08) %		883
$\eta\pi^+$, $\eta \to \pi^+\pi^-\pi^0$		$(8.0\pm 0.5)\times 10^{-4}$		848
$\omega\pi^+$, $\omega \to \pi^+\pi^-\pi^0$		$< 3 \times 10^{-4}$	CL=90%	763
$3\pi^+ 2\pi^-$		$(1.67\pm 0.16)\times 10^{-3}$		845

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

$\eta\pi^+$		$(3.66\pm 0.22)\times 10^{-3}$		848
$\eta\pi^+\pi^0$		$(1.38\pm 0.35)\times 10^{-3}$		830
$\omega\pi^+$		$< 3.4 \times 10^{-4}$	CL=90%	764
$\eta'(958)\pi^+$		$(4.84\pm 0.31)\times 10^{-3}$		681
$\eta'(958)\pi^+\pi^0$		$(1.6\pm 0.5)\times 10^{-3}$		654

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

$K^+ K^0_S$		$(2.95\pm 0.15)\times 10^{-3}$	S=2.8	793
$K^+ K^-\pi^+$	[c]	$(9.96\pm 0.26)\times 10^{-3}$	S=1.3	744
$\phi\pi^+$, $\phi \to K^+K^-$		$(2.77^{+0.09}_{-0.10})\times 10^{-3}$		647
$K^+\overline{K}^*(892)^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		$(2.56^{+0.09}_{-0.15})\times 10^{-3}$		613
$K^+\overline{K}^*_0(1430)^0$, $\overline{K}^*_0(1430)^0 \to K^-\pi^+$		$(1.9\pm 0.4)\times 10^{-3}$		–
$K^+\overline{K}^*_2(1430)^0$, $\overline{K}^*_2 \to K^-\pi^+$		$(1.7^{+1.3}_{-0.8})\times 10^{-4}$		–
$K^+\overline{K}^*_0(800)$, $\overline{K}^*_0 \to K^-\pi^+$		$(7.0^{+4.0}_{-2.2})\times 10^{-4}$		–

$a_0(1450)^0\pi^+$, $a_0^0 \to K^+K^-$		$(4.6 \ {}^{+}_{-}\ {}^{7.0}_{1.9}) \times 10^{-4}$		–
$\phi(1680)\pi^+$, $\phi \to K^+K^-$		$(5.1 \ {}^{+}_{-}\ {}^{4.0}_{1.9}) \times 10^{-5}$		–
$K^+K^-\pi^+$ nonresonant		not seen		744
$K^+K^0_S\pi^+\pi^-$		$(1.71 \pm 0.18) \times 10^{-3}$		678
$K^0_S K^- 2\pi^+$		$(2.34 \pm 0.17) \times 10^{-3}$		678
$K^+K^-2\pi^+\pi^-$		$(2.3 \pm 1.2) \times 10^{-4}$		600
A few poorly measured branching fractions:				
$\phi\pi^+\pi^0$		(2.3 ± 1.0) %		619
$\phi\rho^+$		< 1.5 %	CL=90%	260
$K^+K^-\pi^+\pi^0$ non-ϕ		$(1.5 \ {}^{+}_{-}\ {}^{0.7}_{0.6})$ %		682
$K^*(892)^+K^0_S$		(1.7 ± 0.8) %		612

Doubly Cabibbo-suppressed modes

$K^+\pi^0$		$(1.89 \pm 0.25) \times 10^{-4}$	S=1.2	864
$K^+\eta$		$(1.12 \pm 0.18) \times 10^{-4}$		776
$K^+\eta'(958)$		$(1.83 \pm 0.23) \times 10^{-4}$		571
$K^+\pi^+\pi^-$		$(5.46 \pm 0.25) \times 10^{-4}$		846
$K^+\rho^0$		$(2.1 \pm 0.5) \times 10^{-4}$		679
$K^*(892)^0\pi^+$, $K^*(892)^0 \to K^+\pi^-$		$(2.6 \pm 0.4) \times 10^{-4}$		714
$K^+f_0(980)$, $f_0(980) \to \pi^+\pi^-$		$(4.9 \pm 2.9) \times 10^{-5}$		–
$K_2^*(1430)^0\pi^+$, $K_2^*(1430)^0 \to K^+\pi^-$		$(4.4 \pm 3.0) \times 10^{-5}$		–
$K^+\pi^+\pi^-$ nonresonant		not seen		846
$2K^+K^-$		$(9.0 \pm 2.1) \times 10^{-5}$		550

$\Delta C = 1$ weak neutral current (*C1*) modes, or Lepton Family number (*LF*) or Lepton number (*L*) violating modes

$\pi^+e^+e^-$	C1		$< 1.1 \times 10^{-6}$	CL=90%	930
$\pi^+\phi$, $\phi \to e^+e^-$		[g]	$(1.7 \ {}^{+}_{-}\ {}^{1.4}_{0.9}) \times 10^{-6}$		–
$\pi^+\mu^+\mu^-$	C1		$< 7.3 \times 10^{-8}$	CL=90%	918
$\pi^+\phi$, $\phi \to \mu^+\mu^-$		[g]	$(1.8 \pm 0.8) \times 10^{-6}$		–
$\rho^+\mu^+\mu^-$	C1		$< 5.6 \times 10^{-4}$	CL=90%	757
$K^+e^+e^-$		[h]	$< 1.0 \times 10^{-6}$	CL=90%	870
$K^+\mu^+\mu^-$		[h]	$< 4.3 \times 10^{-6}$	CL=90%	856
$\pi^+e^+\mu^-$	LF		$< 2.9 \times 10^{-6}$	CL=90%	927
$\pi^+e^-\mu^+$	LF		$< 3.6 \times 10^{-6}$	CL=90%	927
$K^+e^+\mu^-$	LF		$< 1.2 \times 10^{-6}$	CL=90%	866
$K^+e^-\mu^+$	LF		$< 2.8 \times 10^{-6}$	CL=90%	866

$\pi^- 2e^+$	L	<	1.1	$\times 10^{-6}$	CL=90%	930
$\pi^- 2\mu^+$	L	<	2.2	$\times 10^{-8}$	CL=90%	918
$\pi^- e^+ \mu^+$	L	<	2.0	$\times 10^{-6}$	CL=90%	927
$\rho^- 2\mu^+$	L	<	5.6	$\times 10^{-4}$	CL=90%	757
$K^- 2e^+$	L	<	9	$\times 10^{-7}$	CL=90%	870
$K^- 2\mu^+$	L	<	1.0	$\times 10^{-5}$	CL=90%	856
$K^- e^+ \mu^+$	L	<	1.9	$\times 10^{-6}$	CL=90%	866
$K^*(892)^- 2\mu^+$	L	<	8.5	$\times 10^{-4}$	CL=90%	703

D^0

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

Mass $m = 1864.84 \pm 0.05$ MeV
$m_{D^\pm} - m_{D^0} = 4.77 \pm 0.08$ MeV
Mean life $\tau = (410.1 \pm 1.5) \times 10^{-15}$ s
$c\tau = 122.9\ \mu$m
$\left|m_{D_1^0} - m_{D_2^0}\right| = (0.95^{+0.41}_{-0.44}) \times 10^{10}\ \hbar\ \text{s}^{-1}$
$(\Gamma_{D_1^0} - \Gamma_{D_2^0})/\Gamma = 2y = (1.29^{+0.14}_{-0.18}) \times 10^{-2}$
$\left|q/p\right| = 0.92^{+0.12}_{-0.09}$
$A_\Gamma = (-0.125 \pm 0.526) \times 10^{-3}$
$K^+\pi^-$ relative strong phase: $\cos\delta = 0.97 \pm 0.11$
$K^-\pi^+\pi^0$ coherence factor $R_{K\pi\pi^0} = 0.82 \pm 0.07$
$K^-\pi^+\pi^0$ average relative strong phase $\delta^{K\pi\pi^0} = (164^{+20}_{-14})^\circ$
$K^-\pi^-2\pi^+$ coherence factor $R_{K3\pi} = 0.32^{+0.20}_{-0.28}$
$K^-\pi^-2\pi^+$ average relative strong phase $\delta^{K3\pi} = (225^{+21}_{-80})^\circ$
$K_S^0 K^+\pi^-$ coherence factor $R_{K_S^0 K\pi} = 0.73 \pm 0.08$
$K_S^0 K^+\pi^-$ average relative strong phase $\delta^{K_S^0 K\pi} = (8 \pm 15)^\circ$
$K^* K$ coherence factor $R_{K^* K} = 1.00 \pm 0.16$
$K^* K$ average relative strong phase $\delta^{K^* K} = (26 \pm 16)^\circ$
CP-EVEN FRACTION in $D^0 \to \pi^+\pi^-\pi^0$ DECAYS = $(96.8 \pm 1.8)\%$
CP-EVEN FRACTION in $D^0 \to K^+K^-\pi^0$ DECAYS = $(73 \pm 6)\%$

CP-violation decay-rate asymmetries (labeled by the D^0 decay)

$A_{CP}(K^+K^-) = (-0.14 \pm 0.12)\%$
$A_{CP}(2K_S^0) = (-23 \pm 19)\%$
$A_{CP}(\pi^+\pi^-) = (0.01 \pm 0.15)\%$
$A_{CP}(2\pi^0) = (0.0 \pm 0.6)\%$
$A_{CP}(\pi^+\pi^-\pi^0) = (0.3 \pm 0.4)\%$

$A_{CP}(\rho(770)^+\pi^- \to \pi^+\pi^-\pi^0) = (1.2 \pm 0.9)\%$ [i]
$A_{CP}(\rho(770)^0\pi^0 \to \pi^+\pi^-\pi^0) = (-3.1 \pm 3.0)\%$ [i]
$A_{CP}(\rho(770)^-\pi^+ \to \pi^+\pi^-\pi^0) = (-1.0 \pm 1.7)\%$ [i]
$A_{CP}(\rho(1450)^+\pi^- \to \pi^+\pi^-\pi^0) = (0 \pm 70)\%$ [i]
$A_{CP}(\rho(1450)^0\pi^0 \to \pi^+\pi^-\pi^0) = (-20 \pm 40)\%$ [i]
$A_{CP}(\rho(1450)^-\pi^+ \to \pi^+\pi^-\pi^0) = (6 \pm 9)\%$ [i]
$A_{CP}(\rho(1700)^+\pi^- \to \pi^+\pi^-\pi^0) = (-5 \pm 14)\%$ [i]
$A_{CP}(\rho(1700)^0\pi^0 \to \pi^+\pi^-\pi^0) = (13 \pm 9)\%$ [i]
$A_{CP}(\rho(1700)^-\pi^+ \to \pi^+\pi^-\pi^0) = (8 \pm 11)\%$ [i]
$A_{CP}(f_0(980)\pi^0 \to \pi^+\pi^-\pi^0) = (0 \pm 35)\%$ [i]
$A_{CP}(f_0(1370)\pi^0 \to \pi^+\pi^-\pi^0) = (25 \pm 18)\%$ [i]
$A_{CP}(f_0(1500)\pi^0 \to \pi^+\pi^-\pi^0) = (0 \pm 18)\%$ [i]
$A_{CP}(f_0(1710)\pi^0 \to \pi^+\pi^-\pi^0) = (0 \pm 24)\%$ [i]
$A_{CP}(f_2(1270)\pi^0 \to \pi^+\pi^-\pi^0) = (-4 \pm 6)\%$ [i]
$A_{CP}(\sigma(400)\pi^0 \to \pi^+\pi^-\pi^0) = (6 \pm 8)\%$ [i]
$A_{CP}(\text{nonresonant } \pi^+\pi^-\pi^0) = (-13 \pm 23)\%$ [i]
$A_{CP}(2\pi^+2\pi^-)$
$A_{CP}(K^+K^-\pi^0) = (-1.0 \pm 1.7)\%$
$A_{CP}(K^*(892)^+K^- \to K^+K^-\pi^0) = (-0.9 \pm 1.3)\%$ [i]
$A_{CP}(K^*(1410)^+K^- \to K^+K^-\pi^0) = (-21 \pm 24)\%$ [i]
$A_{CP}((K^+\pi^0)_{S-wave}K^- \to K^+K^-\pi^0) = (7 \pm 15)\%$ [i]
$A_{CP}(\phi(1020)\pi^0 \to K^+K^-\pi^0) = (1.1 \pm 2.2)\%$ [i]
$A_{CP}(f_0(980)\pi^0 \to K^+K^-\pi^0) = (-3 \pm 19)\%$ [i]
$A_{CP}(a_0(980)^0\pi^0 \to K^+K^-\pi^0) = (-5 \pm 16)\%$ [i]
$A_{CP}(f'_2(1525)\pi^0 \to K^+K^-\pi^0) = (0 \pm 160)\%$ [i]
$A_{CP}(K^*(892)^-K^+ \to K^+K^-\pi^0) = (-5 \pm 4)\%$ [i]
$A_{CP}(K^*(1410)^-K^+ \to K^+K^-\pi^0) = (-17 \pm 29)\%$ [i]
$A_{CP}((K^-\pi^0)_{S-wave}K^+ \to K^+K^-\pi^0) = (-10 \pm 40)\%$ [i]
$A_{CP}(K^0_S\pi^0) = (-0.20 \pm 0.17)\%$
$A_{CP}(K^0_S\eta) = (0.5 \pm 0.5)\%$
$A_{CP}(K^0_S\eta') = (1.0 \pm 0.7)\%$
$A_{CP}(K^0_S\phi) = (-3 \pm 9)\%$
$A_{CP}(K^-\pi^+) = (0.3 \pm 0.7)\%$
$A_{CP}(K^+\pi^-) = (0.0 \pm 1.6)\%$
$A_{CP}(D_{CP(\pm1)} \to K^\mp\pi^\pm) = (12.7 \pm 1.5)\%$
$A_{CP}(K^-\pi^+\pi^0) = (0.1 \pm 0.5)\%$
$A_{CP}(K^+\pi^-\pi^0) = (0 \pm 5)\%$
$A_{CP}(K^0_S\pi^+\pi^-) = (-0.1 \pm 0.8)\%$
$A_{CP}(K^*(892)^-\pi^+ \to K^0_S\pi^+\pi^-) = (0.4 \pm 0.5)\%$
$A_{CP}(K^*(892)^+\pi^- \to K^0_S\pi^+\pi^-) = (1 \pm 6)\%$
$A_{CP}(\overline{K}^0\rho^0 \to K^0_S\pi^+\pi^-) = (-0.1 \pm 0.5)\%$
$A_{CP}(\overline{K}^0\omega \to K^0_S\pi^+\pi^-) = (-13 \pm 7)\%$

$A_{CP}(\overline{K}^0 f_0(980) \to K^0_S \pi^+\pi^-) = (-0.4 \pm 2.7)\%$
$A_{CP}(\overline{K}^0 f_2(1270) \to K^0_S \pi^+\pi^-) = (-4 \pm 5)\%$
$A_{CP}(\overline{K}^0 f_0(1370) \to K^0_S \pi^+\pi^-) = (-1 \pm 9)\%$
$A_{CP}(\overline{K}^0 \rho^0(1450) \to K^0_S \pi^+\pi^-) = (-4 \pm 10)\%$
$A_{CP}(\overline{K}^0 f_0(600) \to K^0_S \pi^+\pi^-) = (-3 \pm 5)\%$
$A_{CP}(K^*(1410)^- \pi^+ \to K^0_S \pi^+\pi^-) = (-2 \pm 9)\%$
$A_{CP}(K^*_0(1430)^- \pi^+ \to K^0_S \pi^+\pi^-) = (4 \pm 4)\%$
$A_{CP}(K^*_0(1430)^+ \pi^- \to K^0_S \pi^+\pi^-) = (12 \pm 15)\%$
$A_{CP}(K^*_2(1430)^- \pi^+ \to K^0_S \pi^+\pi^-) = (3 \pm 6)\%$
$A_{CP}(K^*_2(1430)^+ \pi^- \to K^0_S \pi^+\pi^-) = (-10 \pm 32)\%$
$A_{CP}(K^*(1680)^- \pi^+ \to K^0_S \pi^+\pi^-)$
$A_{CP}(K^- \pi^+\pi^+\pi^-) = (0.2 \pm 0.5)\%$
$A_{CP}(K^+ \pi^-\pi^+\pi^-) = (-2 \pm 4)\%$
$A_{CP}(K^+ K^- \pi^+\pi^-) = (-8 \pm 7)\%$
$A_{CP}(K^*_1(1270)^+ K^- \to K^{*0} \pi^+ K^-) = (-1 \pm 10)\%$
$A_{CP}(K^*_1(1270)^- K^+ \to \overline{K}^{*0} \pi^- K^+) = (-10 \pm 32)\%$
$A_{CP}(K^*_1(1270)^+ K^- \to \rho^0 K^+ K^-) = (-7 \pm 17)\%$
$A_{CP}(K^*_1(1270)^- K^+ \to \rho^0 K^- K^+) = (10 \pm 13)\%$
$A_{CP}(K^*(1410)^+ K^- \to K^{*0} \pi^+ K^-) = (-20 \pm 17)\%$
$A_{CP}(K^*(1410)^- K^+ \to \overline{K}^{*0} \pi^- K^+) = (-1 \pm 14)\%$
$A_{CP}(K^{*0} \overline{K}^{*0}$ S-wave$) = (10 \pm 14)\%$
$A_{CP}(\phi \rho^0$ S-wave$) = (-3 \pm 5)\%$
$A_{CP}(\phi \rho^0$ D-wave$) = (-37 \pm 19)\%$
$A_{CP}(\phi (\pi^+\pi^-)_{S-wave}) = (-9 \pm 10)\%$
$A_{CP}((K^-\pi^+)_{P-wave} (K^+\pi^-)_{S-wave}) = (3 \pm 11)\%$

CP-violation asymmetry difference

$\Delta A_{CP} = A_{CP}(K^+K^-) - A_{CP}(\pi^+\pi^-) = (-0.32 \pm 0.22)\%$ (S = 1.9)

χ^2 TESTS OF *CP*-VIOLATION (*CPV*)

Local *CPV* in D^0, $\overline{D}^0 \to \pi^+\pi^-\pi^0 = 4.9\%$
Local *CPV* in D^0, $\overline{D}^0 \to \pi^+\pi^-\pi^+\pi^- = 41\%$
Local *CPV* in D^0, $\overline{D}^0 \to K^0_S \pi^+\pi^- = 96\%$
Local *CPV* in D^0, $\overline{D}^0 \to K^+K^-\pi^0 = 16.6\%$
Local *CPV* in D^0, $\overline{D}^0 \to K^+K^-\pi^+\pi^- = 9.1\%$

T-violation decay-rate asymmetry

$A_T(K^+K^-\pi^+\pi^-) = (1.7 \pm 2.7) \times 10^{-3}$ [b]

CPT-violation decay-rate asymmetry

$A_{CPT}(K^\mp \pi^\pm) = 0.008 \pm 0.008$

Form factors

$r_V \equiv V(0)/A_1(0)$ in $D^0 \to K^*(892)^- \ell^+ \nu_\ell = 1.7 \pm 0.8$
$r_2 \equiv A_2(0)/A_1(0)$ in $D^0 \to K^*(892)^- \ell^+ \nu_\ell = 0.9 \pm 0.4$
$f_+(0)$ in $D^0 \to K^- \ell^+ \nu_\ell = 0.727 \pm 0.011$
$f_+(0)|V_{cs}|$ in $D^0 \to K^- \ell^+ \nu_\ell = 0.726 \pm 0.009$
$r_1 \equiv a_1/a_0$ in $D^0 \to K^- \ell^+ \nu_\ell = -2.65 \pm 0.35$
$r_2 \equiv a_1/a_0$ in $D^0 \to K^- \ell^+ \nu_\ell = 13 \pm 9$
$f_+(0)|V_{cd}|$ in $D^0 \to \pi^- \ell^+ \nu_\ell = 0.152 \pm 0.005$
$r_1 \equiv a_1/a_0$ in $D^0 \to \pi^- \ell^+ \nu_\ell = -2.8 \pm 0.5$
$r_2 \equiv a_1/a_0$ in $D^0 \to \pi^- \ell^+ \nu_\ell = 6 \pm 3.0$

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 $2\,\Gamma(K^0_S) = \Gamma(\overline{K}^0)$.

D^0 DECAY MODES		Fraction (Γ_i/Γ)	Scale factor/ Confidence level	p (MeV/c)
Topological modes				
0-prongs	[j]	(15 ± 6) %		–
2-prongs		(70 ± 6) %		–
4-prongs	[k]	(14.5 ± 0.5) %		–
6-prongs	[l]	$(6.4 \pm 1.3) \times 10^{-4}$		–
Inclusive modes				
e^+ anything	[n]	(6.49 ± 0.11) %		–
μ^+ anything		(6.7 ± 0.6) %		–
K^- anything		(54.7 ± 2.8) %	S=1.3	–
$\overline{K}^0$ anything + K^0 anything		(47 ± 4) %		–
K^+ anything		(3.4 ± 0.4) %		–
$K^*(892)^-$ anything		(15 ± 9) %		–
$\overline{K}^*(892)^0$ anything		(9 ± 4) %		–
$K^*(892)^+$ anything		< 3.6 %	CL=90%	–
$K^*(892)^0$ anything		(2.8 ± 1.3) %		–
η anything		(9.5 ± 0.9) %		–
η' anything		(2.48 ± 0.27) %		–
ϕ anything		(1.05 ± 0.11) %		–

Semileptonic modes

$K^- e^+ \nu_e$		(3.57 ± 0.06) %	S=1.5	867
$K^- \mu^+ \nu_\mu$		(3.33 ± 0.13) %		864
$K^*(892)^- e^+ \nu_e$		(2.16 ± 0.16) %		719
$K^*(892)^- \mu^+ \nu_\mu$		(1.92 ± 0.25) %		714
$K^- \pi^0 e^+ \nu_e$		$(1.6 {}^{+1.3}_{-0.5})$ %		861
$\overline{K}^0 \pi^- e^+ \nu_e$		$(2.7 {}^{+0.9}_{-0.7})$ %		860
$K^- \pi^+ \pi^- e^+ \nu_e$		$(2.8 {}^{+1.4}_{-1.1}) \times 10^{-4}$		843
$K_1(1270)^- e^+ \nu_e$		$(7.6 {}^{+4.0}_{-3.1}) \times 10^{-4}$		498
$K^- \pi^+ \pi^- \mu^+ \nu_\mu$		$< 1.2 \times 10^{-3}$	CL=90%	821
$(\overline{K}^*(892)\pi)^- \mu^+ \nu_\mu$		$< 1.4 \times 10^{-3}$	CL=90%	692
$\pi^- e^+ \nu_e$		$(2.89 \pm 0.08) \times 10^{-3}$		927
$\pi^- \mu^+ \nu_\mu$		$(2.38 \pm 0.24) \times 10^{-3}$		924
$\rho^- e^+ \nu_e$		$(1.77 \pm 0.16) \times 10^{-3}$		771

Hadronic modes with one $\overline{K}$

$K^- \pi^+$		(3.93 ± 0.04) %	S=1.1	861
$K^+ \pi^-$		$(1.399 \pm 0.027) \times 10^{-4}$		861
$K^0_S \pi^0$		(1.20 ± 0.04) %		860
$K^0_L \pi^0$		$(10.0 \pm 0.7) \times 10^{-3}$		860
$K^0_S \pi^+ \pi^-$	[c]	(2.85 ± 0.20) %	S=1.1	842
$K^0_S \rho^0$		$(6.4 {}^{+0.7}_{-0.8}) \times 10^{-3}$		674
$K^0_S \omega$, $\omega \to \pi^+ \pi^-$		$(2.1 \pm 0.6) \times 10^{-4}$		670
$K^0_S (\pi^+ \pi^-)_{S-\text{wave}}$		$(3.4 \pm 0.8) \times 10^{-3}$		842
$K^0_S f_0(980)$, $f_0(980) \to \pi^+ \pi^-$		$(1.23 {}^{+0.40}_{-0.24}) \times 10^{-3}$		549
$K^0_S f_0(1370)$, $f_0(1370) \to \pi^+ \pi^-$		$(2.8 {}^{+0.9}_{-1.3}) \times 10^{-3}$		†
$K^0_S f_2(1270)$, $f_2(1270) \to \pi^+ \pi^-$		$(9 {}^{+10}_{-6}) \times 10^{-5}$		262
$K^*(892)^- \pi^+$, $K^*(892)^- \to K^0_S \pi^-$		$(1.68 {}^{+0.15}_{-0.18})$ %		711
$K^*_0(1430)^- \pi^+$, $K^*_0(1430)^- \to K^0_S \pi^-$		$(2.73 {}^{+0.40}_{-0.34}) \times 10^{-3}$		378
$K^*_2(1430)^- \pi^+$, $K^*_2(1430)^- \to K^0_S \pi^-$		$(3.4 {}^{+1.9}_{-1.0}) \times 10^{-4}$		367
$K^*(1680)^- \pi^+$, $K^*(1680)^- \to K^0_S \pi^-$		$(4 \pm 4) \times 10^{-4}$		46

$K^*(892)^+\pi^-$, $K^*(892)^+ \to K^0_S\pi^+$	[o]	$(1.15\ ^{+0.60}_{-0.34})\times10^{-4}$			711
$K^*_0(1430)^+\pi^-$, $K^*_0(1430)^+ \to K^0_S\pi^+$	[o]	$< 1.4 \times10^{-5}$	CL=95%		–
$K^*_2(1430)^+\pi^-$, $K^*_2(1430)^+ \to K^0_S\pi^+$	[o]	$< 3.4 \times10^{-5}$	CL=95%		–
$K^0_S\pi^+\pi^-$ nonresonant		$(2.6\ ^{+6.0}_{-1.6})\times10^{-4}$			842
$K^-\pi^+\pi^0$	[c]	(14.3 ± 0.8) %		S=3.1	844
$K^-\rho^+$		(11.1 ± 0.9) %			675
$K^-\rho(1700)^+$, $\rho(1700)^+ \to \pi^+\pi^0$		$(8.1 \pm 1.8)\times10^{-3}$			†
$K^*(892)^-\pi^+$, $K^*(892)^- \to K^-\pi^0$		$(2.28\ ^{+0.40}_{-0.23})$ %			711
$\overline{K}^*(892)^0\pi^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.93 ± 0.26) %			711
$K^*_0(1430)^-\pi^+$, $K^*_0(1430)^- \to K^-\pi^0$		$(4.7 \pm 2.2)\times10^{-3}$			378
$\overline{K}^*_0(1430)^0\pi^0$, $\overline{K}^*_0(1430)^0 \to K^-\pi^+$		$(5.8\ ^{+5.0}_{-1.6})\times10^{-3}$			379
$K^*(1680)^-\pi^+$, $K^*(1680)^- \to K^-\pi^0$		$(1.9 \pm 0.7)\times10^{-3}$			46
$K^-\pi^+\pi^0$ nonresonant		$(1.14\ ^{+0.50}_{-0.21})$ %			844
$K^0_S 2\pi^0$		$(9.1 \pm 1.1)\times10^{-3}$		S=2.2	843
$K^0_S(2\pi^0)$-S-wave		$(2.6 \pm 0.7)\times10^{-3}$			–
$\overline{K}^*(892)^0\pi^0$, $\overline{K}^*(892)^0 \to K^0_S\pi^0$		$(7.9 \pm 0.7)\times10^{-3}$			711
$\overline{K}^*(1430)^0\pi^0$, $\overline{K}^{*0} \to K^0_S\pi^0$		$(4 \pm 23)\times10^{-5}$			–
$\overline{K}^*(1680)^0\pi^0$, $\overline{K}^{*0} \to K^0_S\pi^0$		$(1.0 \pm 0.4)\times10^{-3}$			–
$K^0_S f_2(1270)$, $f_2 \to 2\pi^0$		$(2.3 \pm 1.1)\times10^{-4}$			–
$2K^0_S$, one $K^0_S \to 2\pi^0$		$(3.2 \pm 1.1)\times10^{-4}$			–
$K^- 2\pi^+\pi^-$	[c]	(8.07 ± 0.23) %		S=1.5	813
$K^-\pi^+\rho^0$ total		(6.74 ± 0.34) %			609
$K^-\pi^+\rho^0$ 3-body		$(5.1 \pm 2.3)\times10^{-3}$			609
$\overline{K}^*(892)^0\rho^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.05 ± 0.23) %			416
$K^- a_1(1260)^+$, $a_1(1260)^+ \to 2\pi^+\pi^-$		(3.6 ± 0.6) %			327
$\overline{K}^*(892)^0\pi^+\pi^-$ total, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.6 ± 0.4) %			685

$\overline{K}^*(892)^0\pi^+\pi^-$ 3-body, $\overline{K}^*(892)^0 \to K^-\pi^+$		$(9.9 \pm 2.3) \times 10^{-3}$		685
$K_1(1270)^-\pi^+$, $K_1(1270)^- \to K^-\pi^+\pi^-$	[p]	$(2.9 \pm 0.3) \times 10^{-3}$		484
$K^-2\pi^+\pi^-$ nonresonant		(1.88 ± 0.26) %		813
$K^0_S\pi^+\pi^-\pi^0$	[q]	(5.2 ± 0.6) %		813
$K^0_S\eta$, $\eta \to \pi^+\pi^-\pi^0$		$(1.02 \pm 0.09) \times 10^{-3}$		772
$K^0_S\omega$, $\omega \to \pi^+\pi^-\pi^0$		$(9.9 \pm 0.5) \times 10^{-3}$		670
$K^-2\pi^+\pi^-\pi^0$		(4.2 ± 0.4) %		771
$\overline{K}^*(892)^0\pi^+\pi^-\pi^0$, $\overline{K}^*(892)^0 \to K^-\pi^+$		(1.3 ± 0.6) %		643
$K^-\pi^+\omega$, $\omega \to \pi^+\pi^-\pi^0$		(2.7 ± 0.5) %		605
$\overline{K}^*(892)^0\omega$, $\overline{K}^*(892)^0 \to K^-\pi^+$, $\omega \to \pi^+\pi^-\pi^0$		$(6.5 \pm 3.0) \times 10^{-3}$		410
$K^0_S\eta\pi^0$		$(5.5 \pm 1.1) \times 10^{-3}$		721
$K^0_S a_0(980)$, $a_0(980) \to \eta\pi^0$		$(6.6 \pm 2.0) \times 10^{-3}$		–
$\overline{K}^*(892)^0\eta$, $\overline{K}^*(892)^0 \to K^0_S\pi^0$		$(1.6 \pm 0.5) \times 10^{-3}$		–
$K^0_S 2\pi^+2\pi^-$		$(2.71 \pm 0.31) \times 10^{-3}$		768
$K^0_S\rho^0\pi^+\pi^-$, no $K^*(892)^-$		$(1.1 \pm 0.7) \times 10^{-3}$		–
$K^*(892)^-2\pi^+\pi^-$, $K^*(892)^- \to K^0_S\pi^-$, no ρ^0		$(5 \pm 8) \times 10^{-4}$		642
$K^*(892)^-\rho^0\pi^+$, $K^*(892)^- \to K^0_S\pi^-$		$(1.6 \pm 0.6) \times 10^{-3}$		230
$K^0_S 2\pi^+2\pi^-$ nonresonant		$< 1.2 \times 10^{-3}$	CL=90%	768
$K^-3\pi^+2\pi^-$		$(2.2 \pm 0.6) \times 10^{-4}$		713

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.)

$K^0_S\eta$	$(4.85 \pm 0.30) \times 10^{-3}$		772
$K^0_S\omega$	(1.11 ± 0.06) %		670
$K^0_S\eta'(958)$	$(9.5 \pm 0.5) \times 10^{-3}$		565
$K^-a_1(1260)^+$	(7.8 ± 1.1) %		327
$K^-a_2(1320)^+$	$< 2 \times 10^{-3}$	CL=90%	198
$\overline{K}^*(892)^0\pi^+\pi^-$ total	(2.4 ± 0.5) %		685
$\overline{K}^*(892)^0\pi^+\pi^-$ 3-body	(1.48 ± 0.34) %		685
$\overline{K}^*(892)^0\rho^0$	(1.57 ± 0.35) %		417
$\overline{K}^*(892)^0\rho^0$ transverse	(1.7 ± 0.6) %		417
$\overline{K}^*(892)^0\rho^0$ S-wave	(3.0 ± 0.6) %		417

$\overline{K}^*(892)^0 \rho^0$ S-wave long.		$<$ 3	$\times 10^{-3}$	CL=90%	417
$\overline{K}^*(892)^0 \rho^0$ P-wave		$<$ 3	$\times 10^{-3}$	CL=90%	417
$\overline{K}^*(892)^0 \rho^0$ D-wave		(2.1 $\pm$ 0.6) %			417
$K_1(1270)^- \pi^+$	[p]	(1.6 $\pm$ 0.8) %			484
$K_1(1400)^- \pi^+$		$<$ 1.2	%	CL=90%	386
$\overline{K}^*(892)^0 \pi^+ \pi^- \pi^0$		(1.9 $\pm$ 0.9) %			643
$K^- \pi^+ \omega$		(3.1 $\pm$ 0.6) %			605
$\overline{K}^*(892)^0 \omega$		(1.1 $\pm$ 0.5) %			410
$K^- \pi^+ \eta'(958)$		(7.5 $\pm$ 1.9)	$\times 10^{-3}$		479
$\overline{K}^*(892)^0 \eta'(958)$		$<$ 1.1	$\times 10^{-3}$	CL=90%	119

Hadronic modes with three K's

$K^0_S K^+ K^-$	(4.51 $\pm$ 0.34)	$\times 10^{-3}$		544
$K^0_S a_0(980)^0$, $a^0_0 \to K^+ K^-$	(3.0 $\pm$ 0.4)	$\times 10^{-3}$		–
$K^- a_0(980)^+$, $a^+_0 \to K^+ K^0_S$	(6.0 $\pm$ 1.8)	$\times 10^{-4}$		–
$K^+ a_0(980)^-$, $a^-_0 \to K^- K^0_S$	$<$ 1.1	$\times 10^{-4}$	CL=95%	–
$K^0_S f_0(980)$, $f_0 \to K^+ K^-$	$<$ 9	$\times 10^{-5}$	CL=95%	–
$K^0_S \phi$, $\phi \to K^+ K^-$	(2.07 $\pm$ 0.16)	$\times 10^{-3}$		520
$K^0_S f_0(1370)$, $f_0 \to K^+ K^-$	(1.7 $\pm$ 1.1)	$\times 10^{-4}$		–
$3K^0_S$	(9.2 $\pm$ 1.3)	$\times 10^{-4}$		539
$K^+ 2K^- \pi^+$	(2.21 $\pm$ 0.32)	$\times 10^{-4}$		434
$K^+ K^- \overline{K}^*(892)^0$, $\overline{K}^*(892)^0 \to K^- \pi^+$	(4.4 $\pm$ 1.7)	$\times 10^{-5}$		†
$K^- \pi^+ \phi$, $\phi \to K^+ K^-$	(4.0 $\pm$ 1.7)	$\times 10^{-5}$		422
$\phi \overline{K}^*(892)^0$, $\phi \to K^+ K^-$, $\overline{K}^*(892)^0 \to K^- \pi^+$	(1.06 $\pm$ 0.20)	$\times 10^{-4}$		†
$K^+ 2K^- \pi^+$ nonresonant	(3.3 $\pm$ 1.5)	$\times 10^{-5}$		434
$2K^0_S K^\pm \pi^\mp$	(6.1 $\pm$ 1.3)	$\times 10^{-4}$		427

Pionic modes

$\pi^+ \pi^-$	(1.421 $\pm$ 0.025)	$\times 10^{-3}$	S=1.1	922
$2\pi^0$	(8.26 $\pm$ 0.35)	$\times 10^{-4}$		923
$\pi^+ \pi^- \pi^0$	(1.47 $\pm$ 0.09) %		S=3.0	907
$\rho^+ \pi^-$	(1.00 $\pm$ 0.06) %			764
$\rho^0 \pi^0$	(3.82 $\pm$ 0.29)	$\times 10^{-3}$		764
$\rho^- \pi^+$	(5.09 $\pm$ 0.34)	$\times 10^{-3}$		764
$\rho(1450)^+ \pi^-$, $\rho(1450)^+ \to \pi^+ \pi^0$	(1.6 $\pm$ 2.0)	$\times 10^{-5}$		–
$\rho(1450)^0 \pi^0$, $\rho(1450)^0 \to \pi^+ \pi^-$	(4.4 $\pm$ 1.9)	$\times 10^{-5}$		–
$\rho(1450)^- \pi^+$, $\rho(1450)^- \to \pi^- \pi^0$	(2.6 $\pm$ 0.4)	$\times 10^{-4}$		–
$\rho(1700)^+ \pi^-$, $\rho(1700)^+ \to \pi^+ \pi^0$	(6.0 $\pm$ 1.5)	$\times 10^{-4}$		–

$\rho(1700)^0\pi^0$, $\rho(1700)^0 \to \pi^+\pi^-$	$(7.4 \pm 1.8) \times 10^{-4}$		–
$\rho(1700)^-\pi^+$, $\rho(1700)^- \to \pi^-\pi^0$	$(4.7 \pm 1.1) \times 10^{-4}$		–
$f_0(980)\pi^0$, $f_0(980) \to \pi^+\pi^-$	$(3.7 \pm 0.9) \times 10^{-5}$		–
$f_0(500)\pi^0$, $f_0(500) \to \pi^+\pi^-$	$(1.21 \pm 0.22) \times 10^{-4}$		–
$f_0(1370)\pi^0$, $f_0(1370) \to \pi^+\pi^-$	$(5.4 \pm 2.1) \times 10^{-5}$		–
$f_0(1500)\pi^0$, $f_0(1500) \to \pi^+\pi^-$	$(5.7 \pm 1.6) \times 10^{-5}$		–
$f_0(1710)\pi^0$, $f_0(1710) \to \pi^+\pi^-$	$(4.6 \pm 1.6) \times 10^{-5}$		–
$f_2(1270)\pi^0$, $f_2(1270) \to \pi^+\pi^-$	$(1.94 \pm 0.22) \times 10^{-4}$		–
$\pi^+\pi^-\pi^0$ nonresonant	$(1.2 \pm 0.4) \times 10^{-4}$		907
$3\pi^0$	$< 3.5 \times 10^{-4}$	CL=90%	908
$2\pi^+2\pi^-$	$(7.45 \pm 0.22) \times 10^{-3}$	S=1.2	880
$a_1(1260)^+\pi^-$, $a_1^+ \to 2\pi^+\pi^-$ total	$(4.47 \pm 0.32) \times 10^{-3}$		–
$a_1(1260)^+\pi^-$, $a_1^+ \to \rho^0\pi^+$ *S*-wave	$(3.23 \pm 0.25) \times 10^{-3}$		–
$a_1(1260)^+\pi^-$, $a_1^+ \to \rho^0\pi^+$ *D*-wave	$(1.9 \pm 0.5) \times 10^{-4}$		–
$a_1(1260)^+\pi^-$, $a_1^+ \to \sigma\pi^+$	$(6.2 \pm 0.7) \times 10^{-4}$		–
$2\rho^0$ total	$(1.83 \pm 0.13) \times 10^{-3}$		518
$2\rho^0$, parallel helicities	$(8.2 \pm 3.2) \times 10^{-5}$		–
$2\rho^0$, perpendicular helicities	$(4.8 \pm 0.6) \times 10^{-4}$		–
$2\rho^0$, longitudinal helicities	$(1.25 \pm 0.10) \times 10^{-3}$		–
Resonant $(\pi^+\pi^-)\pi^+\pi^-$ 3-body total	$(1.49 \pm 0.12) \times 10^{-3}$		–
$\sigma\pi^+\pi^-$	$(6.1 \pm 0.9) \times 10^{-4}$		–
$f_0(980)\pi^+\pi^-$, $f_0 \to \pi^+\pi^-$	$(1.8 \pm 0.5) \times 10^{-4}$		–
$f_2(1270)\pi^+\pi^-$, $f_2 \to \pi^+\pi^-$	$(3.7 \pm 0.6) \times 10^{-4}$		–
$\pi^+\pi^-2\pi^0$	(1.01 ± 0.09) %		882
$\eta\pi^0$	[r] $(6.9 \pm 0.7) \times 10^{-4}$		846
$\omega\pi^0$	[r] $< 2.6 \times 10^{-4}$	CL=90%	761
$2\pi^+2\pi^-\pi^0$	$(4.2 \pm 0.5) \times 10^{-3}$		844
$\eta\pi^+\pi^-$	[r] $(1.09 \pm 0.16) \times 10^{-3}$		827
$\omega\pi^+\pi^-$	[r] $(1.6 \pm 0.5) \times 10^{-3}$		738
$3\pi^+3\pi^-$	$(4.2 \pm 1.2) \times 10^{-4}$		795

$\eta'(958)\pi^0$	$(9.1 \pm 1.4) \times 10^{-4}$		678
$\eta'(958)\pi^+\pi^-$	$(4.5 \pm 1.7) \times 10^{-4}$		650
2η	$(1.70 \pm 0.20) \times 10^{-3}$		754
$\eta\eta'(958)$	$(1.07 \pm 0.26) \times 10^{-3}$		537

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

K^+K^-	$(4.01 \pm 0.07) \times 10^{-3}$	S=1.4	791
$2K^0_S$	$(1.8 \pm 0.4) \times 10^{-4}$	S=2.5	789
$K^0_S K^-\pi^+$	$(3.6 \pm 0.5) \times 10^{-3}$	S=1.2	739
$\overline{K}^*(892)^0 K^0_S$, $\overline{K}^{*0} \to K^-\pi^+$	$< 5 \times 10^{-4}$	CL=90%	608
$K^0_S K^+\pi^-$	$(2.2 \pm 0.4) \times 10^{-3}$	S=1.3	739
$K^*(892)^0 K^0_S$, $K^{*0} \to K^+\pi^-$	$< 1.8 \times 10^{-4}$	CL=90%	608
$K^+K^-\pi^0$	$(3.38 \pm 0.21) \times 10^{-3}$		743
$K^*(892)^+ K^-$, $K^*(892)^+ \to K^+\pi^0$	$(1.50 \pm 0.10) \times 10^{-3}$		–
$K^*(892)^- K^+$, $K^*(892)^- \to K^-\pi^0$	$(5.4 \pm 0.5) \times 10^{-4}$		–
$(K^+\pi^0)_{S-wave} K^-$	$(2.40 \pm 0.21) \times 10^{-3}$		743
$(K^-\pi^0)_{S-wave} K^+$	$(1.3 \pm 0.5) \times 10^{-4}$		743
$f_0(980)\pi^0$, $f_0 \to K^+K^-$	$(3.5 \pm 0.6) \times 10^{-4}$		–
$\phi\pi^0$, $\phi \to K^+K^-$	$(6.6 \pm 0.5) \times 10^{-4}$		–
$2K^0_S\pi^0$	$< 5.9 \times 10^{-4}$		740
$K^+K^-\pi^+\pi^-$	$(2.42 \pm 0.12) \times 10^{-3}$		677
$\phi(\pi^+\pi^-)_{S-wave}$, $\phi \to K^+K^-$	$(2.50 \pm 0.34) \times 10^{-4}$		614
$(\phi\rho^0)_{S-wave}$, $\phi \to K^+K^-$	$(9.3 \pm 1.2) \times 10^{-4}$		250
$(\phi\rho^0)_{D-wave}$, $\phi \to K^+K^-$	$(8.2 \pm 2.3) \times 10^{-5}$		–
$(K^{*0}\overline{K}^{*0})_{S-wave}$, $K^{*0} \to K^\pm\pi^\mp$	$(1.48 \pm 0.30) \times 10^{-4}$		–
$(K^-\pi^+)_{P-wave}$, $(K^+\pi^-)_{S-wave}$,	$(2.6 \pm 0.5) \times 10^{-4}$		–
$K_1(1270)^+ K^-$, $K_1(1270)^+ \to K^{*0}\pi^+$	$(1.8 \pm 0.5) \times 10^{-4}$		–
$K_1(1270)^+ K^-$, $K_1(1270)^+ \to \rho^0 K^+$	$(1.14 \pm 0.26) \times 10^{-4}$		–
$K_1(1270)^- K^+$, $K_1(1270)^- \to \overline{K}^{*0}\pi^-$	$(2.2 \pm 1.2) \times 10^{-5}$		–
$K_1(1270)^- K^+$, $K_1(1270)^- \to \rho^0 K^-$	$(1.45 \pm 0.25) \times 10^{-4}$		–
$K^*(1410)^+ K^-$, $K^*(1410)^+ \to K^{*0}\pi^+$	$(1.02 \pm 0.26) \times 10^{-4}$		–
$K^*(1410)^- K^+$, $K^*(1410)^- \to \overline{K}^{*0}\pi^-$	$(1.14 \pm 0.25) \times 10^{-4}$		–

$2K^0_S \pi^+ \pi^-$		$(1.24 \pm 0.24) \times 10^{-3}$		673
$K^0_S K^- 2\pi^+ \pi^-$		$< 1.5 \times 10^{-4}$	CL=90%	595
$K^+ K^- \pi^+ \pi^- \pi^0$		$(3.1 \pm 2.0) \times 10^{-3}$		600

Other $K\overline{K}X$ modes. They include all decay modes of the ϕ, η, and ω.

$\phi\eta$		$(1.4 \pm 0.5) \times 10^{-4}$		489
$\phi\omega$		$< 2.1 \times 10^{-3}$	CL=90%	238

Radiative modes

$\rho^0 \gamma$		$< 2.4 \times 10^{-4}$	CL=90%	771
$\omega \gamma$		$< 2.4 \times 10^{-4}$	CL=90%	768
$\phi \gamma$		$(2.73 \pm 0.35) \times 10^{-5}$		654
$\overline{K}^*(892)^0 \gamma$		$(3.31 \pm 0.34) \times 10^{-4}$		719

Doubly Cabibbo suppressed (*DC*) modes or $\Delta C = 2$ forbidden via mixing (*C2M*) modes

$K^+ \ell^- \overline{\nu}_\ell$ via $\overline{D}^0$		$< 2.2 \times 10^{-5}$	CL=90%	–
K^+ or $K^*(892)^+ e^- \overline{\nu}_e$ via $\overline{D}^0$		$< 6 \times 10^{-5}$	CL=90%	–
$K^+ \pi^-$	*DC*	$(1.49 \pm 0.07) \times 10^{-4}$	S=2.8	861
$K^+ \pi^-$ via DCS		$(1.33 \pm 0.09) \times 10^{-4}$		–
$K^+ \pi^-$ via $\overline{D}^0$		$< 1.6 \times 10^{-5}$	CL=95%	861
$K^0_S \pi^+ \pi^-$ in $D^0 \to \overline{D}^0$		$< 1.8 \times 10^{-4}$	CL=95%	–
$K^*(892)^+ \pi^-$, $K^*(892)^+ \to K^0_S \pi^+$	*DC*	$(1.15 {}^{+0.60}_{-0.34}) \times 10^{-4}$		711
$K^*_0(1430)^+ \pi^-$, $K^*_0(1430)^+ \to K^0_S \pi^+$	*DC*	$< 1.4 \times 10^{-5}$		–
$K^*_2(1430)^+ \pi^-$, $K^*_2(1430)^+ \to K^0_S \pi^+$	*DC*	$< 3.4 \times 10^{-5}$		–
$K^+ \pi^- \pi^0$	*DC*	$(3.13 \pm 0.23) \times 10^{-4}$		844
$K^+ \pi^- \pi^0$ via $\overline{D}^0$		$(7.5 \pm 0.6) \times 10^{-4}$		–
$K^+ \pi^+ 2\pi^-$	*DC*	$(2.62 \pm 0.11) \times 10^{-4}$		813
$K^+ \pi^+ 2\pi^-$ via $\overline{D}^0$		$< 4 \times 10^{-4}$	CL=90%	812
μ^- anything via $\overline{D}^0$		$< 4 \times 10^{-4}$	CL=90%	–

$\Delta C = 1$ weak neutral current (*C1*) modes, Lepton Family number (*LF*) violating modes, Lepton (*L*) or Baryon (*B*) number violating modes

$\gamma\gamma$	*C1*	$< 2.2 \times 10^{-6}$	CL=90%	932
$e^+ e^-$	*C1*	$< 7.9 \times 10^{-8}$	CL=90%	932
$\mu^+ \mu^-$	*C1*	$< 6.2 \times 10^{-9}$	CL=90%	926
$\pi^0 e^+ e^-$	*C1*	$< 4.5 \times 10^{-5}$	CL=90%	928
$\pi^0 \mu^+ \mu^-$	*C1*	$< 1.8 \times 10^{-4}$	CL=90%	915
$\eta e^+ e^-$	*C1*	$< 1.1 \times 10^{-4}$	CL=90%	852
$\eta \mu^+ \mu^-$	*C1*	$< 5.3 \times 10^{-4}$	CL=90%	838

$\pi^+\pi^- e^+ e^-$	*C1*		$<$ 3.73	$\times 10^{-4}$	CL=90%	922
$\rho^0 e^+ e^-$	*C1*		$<$ 1.0	$\times 10^{-4}$	CL=90%	771
$\pi^+\pi^- \mu^+ \mu^-$	*C1*		$<$ 5.5	$\times 10^{-7}$	CL=90%	894
$\rho^0 \mu^+ \mu^-$	*C1*		$<$ 2.2	$\times 10^{-5}$	CL=90%	754
$\omega e^+ e^-$	*C1*		$<$ 1.8	$\times 10^{-4}$	CL=90%	768
$\omega \mu^+ \mu^-$	*C1*		$<$ 8.3	$\times 10^{-4}$	CL=90%	751
$K^- K^+ e^+ e^-$	*C1*		$<$ 3.15	$\times 10^{-4}$	CL=90%	791
$\phi e^+ e^-$	*C1*		$<$ 5.2	$\times 10^{-5}$	CL=90%	654
$K^- K^+ \mu^+ \mu^-$	*C1*		$<$ 3.3	$\times 10^{-5}$	CL=90%	710
$\phi \mu^+ \mu^-$	*C1*		$<$ 3.1	$\times 10^{-5}$	CL=90%	631
$\overline{K}^0 e^+ e^-$		[*h*]	$<$ 1.1	$\times 10^{-4}$	CL=90%	866
$\overline{K}^0 \mu^+ \mu^-$		[*h*]	$<$ 2.6	$\times 10^{-4}$	CL=90%	852
$K^- \pi^+ e^+ e^-$	*C1*		$<$ 3.85	$\times 10^{-4}$	CL=90%	861
$\overline{K}^*(892)^0 e^+ e^-$		[*h*]	$<$ 4.7	$\times 10^{-5}$	CL=90%	719
$K^- \pi^+ \mu^+ \mu^-$	*C1*		$<$ 3.59	$\times 10^{-4}$	CL=90%	829
$\overline{K}^*(892)^0 \mu^+ \mu^-$		[*h*]	$<$ 2.4	$\times 10^{-5}$	CL=90%	700
$\pi^+\pi^-\pi^0 \mu^+ \mu^-$	*C1*		$<$ 8.1	$\times 10^{-4}$	CL=90%	863
$\mu^\pm e^\mp$	*LF*	[*s*]	$<$ 2.6	$\times 10^{-7}$	CL=90%	929
$\pi^0 e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 8.6	$\times 10^{-5}$	CL=90%	924
$\eta e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 1.0	$\times 10^{-4}$	CL=90%	848
$\pi^+\pi^- e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 1.5	$\times 10^{-5}$	CL=90%	911
$\rho^0 e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 4.9	$\times 10^{-5}$	CL=90%	767
$\omega e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 1.2	$\times 10^{-4}$	CL=90%	764
$K^- K^+ e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 1.8	$\times 10^{-4}$	CL=90%	754
$\phi e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 3.4	$\times 10^{-5}$	CL=90%	648
$\overline{K}^0 e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 1.0	$\times 10^{-4}$	CL=90%	863
$K^- \pi^+ e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 5.53	$\times 10^{-4}$	CL=90%	848
$\overline{K}^*(892)^0 e^\pm \mu^\mp$	*LF*	[*s*]	$<$ 8.3	$\times 10^{-5}$	CL=90%	714
$2\pi^- 2e^+ +$ c.c.	*L*		$<$ 1.12	$\times 10^{-4}$	CL=90%	922
$2\pi^- 2\mu^+ +$ c.c.	*L*		$<$ 2.9	$\times 10^{-5}$	CL=90%	894
$K^- \pi^- 2e^+ +$ c.c.	*L*		$<$ 2.06	$\times 10^{-4}$	CL=90%	861
$K^- \pi^- 2\mu^+ +$ c.c.	*L*		$<$ 3.9	$\times 10^{-4}$	CL=90%	829
$2K^- 2e^+ +$ c.c.	*L*		$<$ 1.52	$\times 10^{-4}$	CL=90%	791
$2K^- 2\mu^+ +$ c.c.	*L*		$<$ 9.4	$\times 10^{-5}$	CL=90%	710
$\pi^- \pi^- e^+ \mu^+ +$ c.c.	*L*		$<$ 7.9	$\times 10^{-5}$	CL=90%	911
$K^- \pi^- e^+ \mu^+ +$ c.c.	*L*		$<$ 2.18	$\times 10^{-4}$	CL=90%	848
$2K^- e^+ \mu^+ +$ c.c.	*L*		$<$ 5.7	$\times 10^{-5}$	CL=90%	754
$p e^-$	*L,B*	[*t*]	$<$ 1.0	$\times 10^{-5}$	CL=90%	696
$\overline{p} e^+$	*L,B*	[*u*]	$<$ 1.1	$\times 10^{-5}$	CL=90%	696

$D^*(2007)^0$

$I(J^P) = \frac{1}{2}(1^-)$
I, J, P need confirmation.

Mass $m = 2006.97 \pm 0.08$ MeV
$m_{D^{*0}} - m_{D^0} = 142.12 \pm 0.07$ MeV
Full width $\Gamma < 2.1$ MeV, CL = 90%

$\overline{D}^*(2007)^0$ modes are charge conjugates of modes below.

$D^*(2007)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^0\pi^0$	(61.9±2.9) %	43
$D^0\gamma$	(38.1±2.9) %	137

$D^*(2010)^{\pm}$

$I(J^P) = \frac{1}{2}(1^-)$
I, J, P need confirmation.

Mass $m = 2010.27 \pm 0.05$ MeV
$m_{D^*(2010)^+} - m_{D^+} = 140.66 \pm 0.08$ MeV
$m_{D^*(2010)^+} - m_{D^0} = 145.4257 \pm 0.0017$ MeV
Full width $\Gamma = 83.4 \pm 1.8$ keV

$D^*(2010)^-$ modes are charge conjugates of the modes below.

$D^*(2010)^{\pm}$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^0\pi^+$	(67.7±0.5) %	39
$D^+\pi^0$	(30.7±0.5) %	38
$D^+\gamma$	(1.6±0.4) %	136

$D_0^*(2400)^0$

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

Mass $m = 2318 \pm 29$ MeV (S = 1.7)
Full width $\Gamma = 267 \pm 40$ MeV

$D_0^*(2400)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^+\pi^-$	seen	385

$D_1(2420)^0$

$I(J^P) = \frac{1}{2}(1^+)$
I needs confirmation.

Mass $m = 2421.4 \pm 0.6$ MeV (S = 1.2)
$m_{D_1^0} - m_{D^{*+}} = 411.1 \pm 0.6$ (S = 1.2)
Full width $\Gamma = 27.4 \pm 2.5$ MeV (S = 2.3)

$\overline{D}_1(2420)^0$ modes are charge conjugates of modes below.

$D_1(2420)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^*(2010)^+\pi^-$	seen	354
$D^0\pi^+\pi^-$	seen	425
$D^+\pi^-$	not seen	473
$D^{*0}\pi^+\pi^-$	not seen	280

$D_2^*(2460)^0$

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

$J^P = 2^+$ assignment strongly favored.

Mass $m = 2462.6 \pm 0.6$ MeV (S = 1.2)
$m_{D_2^{*0}} - m_{D^+} = 593.0 \pm 0.6$ MeV (S = 1.2)
$m_{D_2^{*0}} - m_{D^{*+}} = 452.3 \pm 0.6$ MeV (S = 1.2)
Full width $\Gamma = 49.0 \pm 1.3$ MeV (S = 1.5)

$\overline{D}_2^*(2460)^0$ modes are charge conjugates of modes below.

$D_2^*(2460)^0$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^+\pi^-$	seen	507
$D^*(2010)^+\pi^-$	seen	391
$D^0\pi^+\pi^-$	not seen	463
$D^{*0}\pi^+\pi^-$	not seen	326

$D_2^*(2460)^\pm$

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

$J^P = 2^+$ assignment strongly favored.

Mass $m = 2464.3 \pm 1.6$ MeV (S = 1.7)
$m_{D_2^*(2460)^\pm} - m_{D_2^*(2460)^0} = 2.4 \pm 1.7$ MeV
Full width $\Gamma = 37 \pm 6$ MeV (S = 1.4)

$D_2^*(2460)^-$ modes are charge conjugates of modes below.

$D_2^*(2460)^\pm$ DECAY MODES	Fraction (Γ_i/Γ)	p (MeV/c)
$D^0\pi^+$	seen	512
$D^{*0}\pi^+$	seen	395
$D^+\pi^+\pi^-$	not seen	461
$D^{*+}\pi^+\pi^-$	not seen	324

NOTES

[*a*] This result applies to $Z^0 \to c\overline{c}$ decays only. Here ℓ^+ is an average (not a sum) of e^+ and μ^+ decays.

[*b*] See the Particle Listings for the (complicated) definition of this quantity.

[*c*] 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 in the Particle Listings.

[*d*] These subfractions of the $K^- 2\pi^+$ mode are uncertain: see the Particle Listings.

[*e*] Submodes of the $D^+ \to K^- 2\pi^+ \pi^0$ and $K^0_S 2\pi^+ \pi^-$ modes were studied by ANJOS 92C and COFFMAN 92B, but with at most 142 events for the first mode and 229 for the second – not enough for precise results. With nothing new for 18 years, we refer to our 2008 edition, Physics Letters **B667** 1 (2008), for those results.

[*f*] The unseen decay modes of the resonances are included.

[*g*] This is *not* a test for the ΔC=1 weak neutral current, but leads to the $\pi^+ \ell^+ \ell^-$ final state.

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

[*i*] In the 2010 *Review*, the values for these quantities were given using a measure of the asymmetry that was inconsistent with the usual definition.

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

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

[*l*] This is the sum of our $K^- 3\pi^+ 2\pi^-$ and $3\pi^+ 3\pi^-$ branching fractions.

[*n*] 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 6.19 ± 0.17 %.

[*o*] This is a doubly Cabibbo-suppressed mode.

[*p*] The two experiments measuring this fraction are in serious disagreement. See the Particle Listings.

[*q*] Submodes of the $D^0 \to K^0_S \pi^+ \pi^- \pi^0$ mode with a K^* and/or ρ were studied by COFFMAN 92B, but with only 140 events. With nothing new for 18 years, we refer to our 2008 edition, Physics Letters **B667** 1 (2008), for those results.

[*r*] This branching fraction includes all the decay modes of the resonance in the final state.

[*s*] The value is for the sum of the charge states or particle/antiparticle states indicated.

[*t*] This limit is for either D^0 or $\overline{D}^0$ to $p e^-$.

[*u*] This limit is for either D^0 or $\overline{D}^0$ to $\overline{p} e^+$.