TESTS OF DISCRETE SPACE-TIME SYMMETRIES

CHARGE CONJUGATION (C) INVARIANCE

CONLAW=C

$\Gamma(\pi^0 \to 3\gamma)/\Gamma_{\text{total}}$		$<3.1 \times 10^{-8}$, CL = 90%	PAR=S009;DESIG=4
η C-nonconserving decay parameters			NODE=S014230
$\pi^+\pi^-\pi^0$ left-right asymmetry		$(0.09^{+0.11}_{-0.12}) \times 10^{-2}$	NODE=S014A1
$\pi^+\pi^-\pi^0$ sextant asymmetry		$(0.12^{+0.10}_{-0.11}) \times 10^{-2}$	NODE=S014AS
$\pi^+\pi^-\pi^0$ quadrant asymmetry		$(-0.09 \pm 0.09) \times 10^{-2}$	NODE=S014AQ
$\pi^+\pi^-\gamma$ left-right asymmetry		$(0.9 \pm 0.4) \times 10^{-2}$	NODE=S014A2
$\pi^+\pi^-\gamma$ parameter β (D-wave)		-0.02 ± 0.07 (S = 1.3)	NODE=S014BET
$\Gamma(\eta \to \pi^0\gamma)/\Gamma_{\text{total}}$		$<9 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=104
$\Gamma(\eta \to 2\pi^0\gamma)/\Gamma_{\text{total}}$		$<5 \times 10^{-4}$, CL = 90%	PAR=S014;DESIG=103
$\Gamma(\eta \to 3\pi^0\gamma)/\Gamma_{\text{total}}$		$<6 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=106
$\Gamma(\eta \to 3\gamma)/\Gamma_{\text{total}}$		$<1.6 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=18
$\Gamma(\eta \to \pi^0 e^+ e^-)/\Gamma_{\text{total}}$	[a]	$<4 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=5
$\Gamma(\eta \to \pi^0 \mu^+ \mu^-)/\Gamma_{\text{total}}$	[a]	$<5 \times 10^{-6}$, CL = 90%	PAR=S014;DESIG=14
$\Gamma(\omega(782) \to \eta\pi^0)/\Gamma_{\text{total}}$		$<2.1 \times 10^{-4}$, CL = 90%	PAR=M001;DESIG=9
$\Gamma(\omega(782) \to 2\pi^0)/\Gamma_{\text{total}}$		$<2.1 \times 10^{-4}$, CL = 90%	PAR=M001;DESIG=193
$\Gamma(\omega(782) \to 3\pi^0)/\Gamma_{\text{total}}$		$<2.3 \times 10^{-4}$, CL = 90%	PAR=M001;DESIG=16
asymmetry parameter for $\eta'(958) \to \pi^+\pi^-\gamma$ decay		-0.03 ± 0.04	NODE=M002A
$\Gamma(\eta'(958) \to \pi^0 e^+ e^-)/\Gamma_{\text{total}}$	[a]	$<1.4 \times 10^{-3}$, CL = 90%	PAR=M002;DESIG=16
$\Gamma(\eta'(958) \to \eta e^+ e^-)/\Gamma_{\text{total}}$	[a]	$<2.4 \times 10^{-3}$, CL = 90%	PAR=M002;DESIG=17
$\Gamma(\eta'(958) \to 3\gamma)/\Gamma_{\text{total}}$		$<1.0 \times 10^{-4}$, CL = 90%	PAR=M002;DESIG=23
$\Gamma(\eta'(958) \to \mu^+\mu^-\pi^0)/\Gamma_{\text{total}}$	[a]	$<6.0 \times 10^{-5}$, CL = 90%	PAR=M002;DESIG=22
$\Gamma(\eta'(958) \to \mu^+\mu^-\eta)/\Gamma_{\text{total}}$	[a]	$<1.5 \times 10^{-5}$, CL = 90%	PAR=M002;DESIG=21
$\Gamma(J/\psi(1S) \to \gamma\gamma)/\Gamma_{\text{total}}$		$<5 \times 10^{-6}$, CL = 90%	PAR=M070;DESIG=80

PARITY (P) INVARIANCE

CONLAW=P

e electric dipole moment	$<10.5 \times 10^{-28}$ e cm, CL = 90%	NODE=S003EDM
μ electric dipole moment	$(-0.1 \pm 0.9) \times 10^{-19}$ e cm	NODE=S004EDM
Re(d_τ = τ electric dipole moment)	-0.220 to 0.45×10^{-16} e cm, CL = 95%	NODE=S035EDM
$\Gamma(\eta \to \pi^+\pi^-)/\Gamma_{\text{total}}$	$<1.3 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=15
$\Gamma(\eta \to 2\pi^0)/\Gamma_{\text{total}}$	$<3.5 \times 10^{-4}$, CL = 90%	PAR=S014;DESIG=21
$\Gamma(\eta \to 4\pi^0)/\Gamma_{\text{total}}$	$<6.9 \times 10^{-7}$, CL = 90%	PAR=S014;DESIG=24
$\Gamma(\eta'(958) \to \pi^+\pi^-)/\Gamma_{\text{total}}$	$<6 \times 10^{-5}$, CL = 90%	PAR=M002;DESIG=111
$\Gamma(\eta'(958) \to \pi^0\pi^0)/\Gamma_{\text{total}}$	$<4 \times 10^{-4}$, CL = 90%	PAR=M002;DESIG=25
$\Gamma(\eta_c(1S) \to \pi^+\pi^-)/\Gamma_{\text{total}}$	$<1.1 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=51
$\Gamma(\eta_c(1S) \to \pi^0\pi^0)/\Gamma_{\text{total}}$	$<3.5 \times 10^{-5}$, CL = 90%	PAR=M026;DESIG=52
$\Gamma(\eta_c(1S) \to K^+K^-)/\Gamma_{\text{total}}$	$<6 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=53
$\Gamma(\eta_c(1S) \to K^0_S K^0_S)/\Gamma_{\text{total}}$	$<3.1 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=54
p electric dipole moment	$<0.54 \times 10^{-23}$ e cm	NODE=S016EDM
n electric dipole moment	$<0.29 \times 10^{-25}$ e cm, CL = 90%	NODE=S017EDM
Λ electric dipole moment	$<1.5 \times 10^{-16}$ e cm, CL = 95%	NODE=S018EDM

TIME REVERSAL (T) INVARIANCE

CONLAW=T

e electric dipole moment		$<10.5 \times 10^{-28}$ e cm, CL = 90%	NODE=S003EDM
μ electric dipole moment		$(-0.1 \pm 0.9) \times 10^{-19}$ e cm	NODE=S004EDM
μ decay parameters			NODE=S004260
transverse e^+ polarization normal to plane of μ spin, e^+ momentum		$(-2 \pm 8) \times 10^{-3}$	NODE=S004PT2
α'/A		$(-10 \pm 20) \times 10^{-3}$	NODE=S004ALP
β'/A		$(2 \pm 7) \times 10^{-3}$	NODE=S004BTP
Re(d_τ = τ electric dipole moment)		-0.220 to 0.45×10^{-16} e cm, CL = 95%	NODE=S035EDM
P_T in $K^+ \rightarrow \pi^0 \mu^+ \nu_\mu$		$(-1.7 \pm 2.5) \times 10^{-3}$	NODE=S010PTM
P_T in $K^+ \rightarrow \mu^+ \nu_\mu \gamma$		$(-0.6 \pm 1.9) \times 10^{-2}$	NODE=S010PT
Im(ξ) in $K^+ \rightarrow \pi^0 \mu^+ \nu_\mu$ decay (from transverse μ pol.)		-0.006 ± 0.008	NODE=S010IXI
asymmetry A_T in K^0-$\overline{K}^0$ mixing		$(6.6 \pm 1.6) \times 10^{-3}$	NODE=S011AT
Im(ξ) in $K^0_{\mu 3}$ decay (from transverse μ pol.)		-0.007 ± 0.026	NODE=S013IXI
$A_T(D^\pm \rightarrow K^0_S K^\pm \pi^+ \pi^-)$	[b]	$(-12 \pm 11) \times 10^{-3}$	NODE=S031TV0
$A_T(D^0 \rightarrow K^+ K^- \pi^+ \pi^-)$	[b]	$(1 \pm 7) \times 10^{-3}$	NODE=S032TV0
$A_T(D_s^\pm \rightarrow K^0_S K^\pm \pi^+ \pi^-)$	[b]	$(-14 \pm 8) \times 10^{-3}$	NODE=S034TV0
$\Delta S_T^+ \ (S^-_{\ell^-,K^0_S} - S^+_{\ell^+,K^0_S})$		-1.37 ± 0.15	NODE=S042TVA
$\Delta S_T^- \ (S^+_{\ell^-,K^0_S} - S^-_{\ell^+,K^0_S})$		1.17 ± 0.21	NODE=S042TVB
$\Delta C_T^+ \ (C^-_{\ell^-,K^0_S} - C^+_{\ell^+,K^0_S})$		0.10 ± 0.16	NODE=S042TVC
$\Delta C_T^- \ (C^+_{\ell^-,K^0_S} - C^-_{\ell^+,K^0_S})$		0.04 ± 0.16	NODE=S042TVD
p electric dipole moment		$<0.54 \times 10^{-23}$ e cm	NODE=S016EDM
n electric dipole moment		$<0.29 \times 10^{-25}$ e cm, CL = 90%	NODE=S017EDM
$n \rightarrow p e^- \overline{\nu}_e$ decay parameters			NODE=S017255
ϕ_{AV}, phase of g_A relative to g_V	[c]	$(180.017 \pm 0.026)^\circ$	NODE=S017F
triple correlation coefficient D	[d]	$(-1.2 \pm 2.0) \times 10^{-4}$	NODE=S017D1
triple correlation coefficient R	[d]	0.004 ± 0.013	NODE=S017TCC
Λ electric dipole moment		$<1.5 \times 10^{-16}$ e cm, CL = 95%	NODE=S018EDM
triple correlation coefficient D for $\Sigma^- \rightarrow n e^- \overline{\nu}_e$		0.11 ± 0.10	NODE=S020TC

CP INVARIANCE

CONLAW=CP

Re(d^W_τ)	$<0.50 \times 10^{-17}$ e cm, CL = 95%	NODE=S035WDM
Im(d^W_τ)	$<1.1 \times 10^{-17}$ e cm, CL = 95%	NODE=S035WDI
$\eta \rightarrow \pi^+ \pi^- e^+ e^-$ decay-plane asymmetry	$(-0.6 \pm 3.1) \times 10^{-2}$	NODE=S014AET
$\Gamma(\eta \rightarrow \pi^+ \pi^-)/\Gamma_{\rm total}$	$<1.3 \times 10^{-5}$, CL = 90%	PAR=S014;DESIG=15
$\Gamma(\eta \rightarrow 2\pi^0)/\Gamma_{\rm total}$	$<3.5 \times 10^{-4}$, CL = 90%	PAR=S014;DESIG=21
$\Gamma(\eta \rightarrow 4\pi^0)/\Gamma_{\rm total}$	$<6.9 \times 10^{-7}$, CL = 90%	PAR=S014;DESIG=24
$\Gamma(\eta'(958) \rightarrow \pi^+ \pi^-)/\Gamma_{\rm total}$	$<6 \times 10^{-5}$, CL = 90%	PAR=M002;DESIG=111
$\Gamma(\eta'(958) \rightarrow \pi^0 \pi^0)/\Gamma_{\rm total}$	$<4 \times 10^{-4}$, CL = 90%	PAR=M002;DESIG=25
$K^\pm \rightarrow \pi^\pm \pi^+ \pi^-$ rate difference/average	(0.08 ± 0.12)%	NODE=S010D2
$K^\pm \rightarrow \pi^\pm \pi^0 \pi^0$ rate difference/average	(0.0 ± 0.6)%	NODE=S010D3
$K^\pm \rightarrow \pi^\pm \pi^0 \gamma$ rate difference/average	(0.9 ± 3.3)%	NODE=S010D5
$K^\pm \rightarrow \pi^\pm \pi^+ \pi^- \ (g_+ - g_-) \ / \ (g_+ + g_-)$	$(-1.5 \pm 2.2) \times 10^{-4}$	NODE=S010DG
$K^\pm \rightarrow \pi^\pm \pi^0 \pi^0 \ (g_+ - g_-) \ / \ (g_+ + g_-)$	$(1.8 \pm 1.8) \times 10^{-4}$	NODE=S010DG0
$\Delta(K^\pm_{\pi e e}) = \frac{\Gamma(K^+_{\pi e e}) - \Gamma(K^-_{\pi e e})}{\Gamma(K^+_{\pi e e}) + \Gamma(K^-_{\pi e e})}$	$(-2.2 \pm 1.6) \times 10^{-2}$	NODE=S010CPE
$\Delta(K^\pm_{\pi \mu \mu}) = \frac{\Gamma(K^+_{\pi \mu \mu}) - \Gamma(K^-_{\pi \mu \mu})}{\Gamma(K^+_{\pi \mu \mu}) + \Gamma(K^-_{\pi \mu \mu})}$	0.010 ± 0.023	NODE=S010CP
$\Delta(K^\pm_{\pi \pi \gamma}) = \frac{\Gamma(K^+_{\pi \pi \gamma}) - \Gamma(K^-_{\pi \pi \gamma})}{\Gamma(K^+_{\pi \pi \gamma}) + \Gamma(K^-_{\pi \pi \gamma})}$	$(0.0 \pm 1.2) \times 10^{-3}$	NODE=S010CPG

A_S = [$\Gamma(K^0_S \to \pi^- e^+ \nu_e)$ - $\Gamma(K^0_S \to \pi^+ e^- \overline{\nu}_e)$] / SUM		$(2 \pm 10) \times 10^{-3}$	NODE=S012AS
$\mathrm{Im}(\eta_{+-0})$ = Im(A($K^0_S \to \pi^+\pi^-\pi^0$, *CP*-violating) / A($K^0_L \to \pi^+\pi^-\pi^0$))		-0.002 ± 0.009	NODE=S012E+
$\mathrm{Im}(\eta_{000})$ = Im($A(K^0_S \to \pi^0\pi^0\pi^0)/A(K^0_L \to \pi^0\pi^0\pi^0)$)		$(-0.1 \pm 1.6) \times 10^{-2}$	NODE=S012E0
$\lvert\eta_{000}\rvert = \lvert A(K^0_S \to 3\pi^0)/A(K^0_L \to 3\pi^0)\rvert$		<0.018, CL = 90%	NODE=S012AE0
CP asymmetry A in $K^0_S \to \pi^+\pi^- e^+ e^-$		(-0.4 ± 0.8)%	NODE=S012DPA
$\Gamma(K^0_S \to 3\pi^0)/\Gamma_{\rm total}$		$<1.2 \times 10^{-7}$, CL = 90%	PAR=S012;DESIG=7
linear coefficient j for $K^0_L \to \pi^+\pi^-\pi^0$		0.0012 ± 0.0008	NODE=S013JT0
quadratic coefficient f for $K^0_L \to \pi^+\pi^-\pi^0$		0.004 ± 0.006	NODE=S013FT0
$\lvert\epsilon'_{+-\gamma}\rvert/\epsilon$ for $K^0_L \to \pi^+\pi^-\gamma$		<0.3, CL = 90%	NODE=S013EPG
$\lvert g_{E1}\rvert$ for $K^0_L \to \pi^+\pi^-\gamma$		<0.21, CL = 90%	NODE=S013GE1
$\Gamma(K^0_L \to \pi^0\mu^+\mu^-)/\Gamma_{\rm total}$	[e]	$<3.8 \times 10^{-10}$, CL = 90%	PAR=S013;DESIG=16
$\Gamma(K^0_L \to \pi^0 e^+ e^-)/\Gamma_{\rm total}$	[e]	$<2.8 \times 10^{-10}$, CL = 90%	PAR=S013;DESIG=20
$\Gamma(K^0_L \to \pi^0\nu\overline{\nu})/\Gamma_{\rm total}$	[f]	$<2.6 \times 10^{-8}$, CL = 90%	PAR=S013;DESIG=43
$A_{CP}(D^\pm \to \mu^\pm\nu)$		(8 ± 8)%	NODE=S031A05
$A_{CP}(D^\pm \to K^0_S\pi^\pm)$		(-0.41 ± 0.09)%	NODE=S031A5
$A_{CP}(D^\pm \to K^\mp 2\pi^\pm)$		(-0.1 ± 1.0)%	NODE=S031A01
$A_{CP}(D^\pm \to K^\mp\pi^\pm\pi^\pm\pi^0)$		(1.0 ± 1.3)%	NODE=S031A02
$A_{CP}(D^\pm \to K^0_S\pi^\pm\pi^0)$		(0.3 ± 0.9)%	NODE=S031A03
$A_{CP}(D^\pm \to K^0_S\pi^\pm\pi^+\pi^-)$		(0.1 ± 1.3)%	NODE=S031A04
$A_{CP}(D^\pm \to \pi^\pm\pi^0)$		(2.9 ± 2.9)%	NODE=S031A11
$A_{CP}(D^\pm \to \pi^\pm\eta)$		(1.0 ± 1.5)% (S = 1.4)	NODE=S031A12
$A_{CP}(D^\pm \to \pi^\pm\eta'(958))$		(-0.5 ± 1.2)% (S = 1.1)	NODE=S031A13
$A_{CP}(D^\pm \to K^0_S K^\pm)$		(-0.23 ± 0.31)%	NODE=S031A6
$A_{CP}(D^\pm \to K^+K^-\pi^\pm)$		(0.3 ± 0.6)%	NODE=S031A1
$A_{CP}(D^\pm \to K^\pm K^{*0})$		(0.1 ± 1.3)%	NODE=S031A2
$A_{CP}(D^\pm \to \phi\pi^\pm)$		(0.42 ± 0.28)%	NODE=S031A3
$A_{CP}(D^\pm \to K^\pm K^*_0(1430)^0)$		(8^{+7}_{-6})%	NODE=S031A06
$A_{CP}(D^\pm \to K^\pm K^*_2(1430)^0)$		(43^{+20}_{-26})%	NODE=S031A07
$A_{CP}(D^\pm \to K^\pm K^*_0(800))$		(-12^{+18}_{-13})%	NODE=S031A08
$A_{CP}(D^\pm \to a_0(1450)^0\pi^\pm)$		(-19^{+14}_{-16})%	NODE=S031A09
$A_{CP}(D^\pm \to \phi(1680)\pi^\pm)$		(-9 ± 26)%	NODE=S031A10
$A_{CP}(D^\pm \to \pi^+\pi^-\pi^\pm)$		(-2 ± 4)%	NODE=S031A4
$A_{CP}(D^\pm \to K^0_S K^\pm\pi^+\pi^-)$		(-4 ± 7)%	NODE=S031CPK
$A_{CP}(D^\pm \to K^\pm\pi^0)$		(-4 ± 11)%	NODE=S031A14
$\lvert q/p\rvert$ of D^0–$\overline{D}^0$ mixing		$0.67^{+0.18}_{-0.14}$	NODE=S032QP;OUR EVAL
A_Γ of D^0–$\overline{D}^0$ mixing		$(-0.22 \pm 1.61) \times 10^{-3}$	NODE=S032AG;OUR EVAL NODE=S032A1

Where there is ambiguity, the *CP* test is labelled by the D^0 decay mode.

$A_{CP}(D^0 \to K^+K^-)$		(-0.21 ± 0.17)%	NODE=S032A1
$A_{CP}(D^0 \to K^0_S K^0_S)$		(-23 ± 19)%	NODE=S032A8
$A_{CP}(D^0 \to \pi^+\pi^-)$		(0.22 ± 0.21)%	NODE=S032A4
$A_{CP}(D^0 \to \pi^0\pi^0)$		(0 ± 5)%	NODE=S032A7
$A_{CP}(D^0 \to \pi^+\pi^-\pi^0)$		(0.3 ± 0.4)%	NODE=S032A12
$A_{CP}(D^0 \to \rho(770)^+\pi^- \to \pi^+\pi^-\pi^0)$	[g]	(1.2 ± 0.9)%	NODE=S032A25
$A_{CP}(D^0 \to \rho(770)^0\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	(-3.1 ± 3.0)%	NODE=S032A26
$A_{CP}(D^0 \to \rho(770)^-\pi^+ \to \pi^+\pi^-\pi^0)$	[g]	(-1.0 ± 1.7)%	NODE=S032A27
$A_{CP}(D^0 \to \rho(1450)^+\pi^- \to \pi^+\pi^-\pi^0)$	[g]	(0 ± 70)%	NODE=S032A28
$A_{CP}(D^0 \to \rho(1450)^0\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	(-20 ± 40)%	NODE=S032A29
$A_{CP}(D^0 \to \rho(1450)^-\pi^+ \to \pi^+\pi^-\pi^0)$	[g]	(6 ± 9)%	NODE=S032A30
$A_{CP}(D^0 \to \rho(1700)^+\pi^- \to \pi^+\pi^-\pi^0)$	[g]	(-5 ± 14)%	NODE=S032A31
$A_{CP}(D^0 \to \rho(1700)^0\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	(13 ± 9)%	NODE=S032A32

$A_{CP}(D^0 \to \rho(1700)^- \pi^+ \to \pi^+\pi^-\pi^0)$	[g]	$(8 \pm 11)\%$	NODE=S032A33
$A_{CP}(D^0 \to f_0(980)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(0 \pm 35)\%$	NODE=S032A34
$A_{CP}(D^0 \to f_0(1370)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(25 \pm 18)\%$	NODE=S032A35
$A_{CP}(D^0 \to f_0(1500)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(0 \pm 18)\%$	NODE=S032A36
$A_{CP}(D^0 \to f_0(1710)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(0 \pm 24)\%$	NODE=S032A37
$A_{CP}(D^0 \to f_2(1270)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(-4 \pm 6)\%$	NODE=S032A38
$A_{CP}(D^0 \to \sigma(400)\pi^0 \to \pi^+\pi^-\pi^0)$	[g]	$(6 \pm 8)\%$	NODE=S032A39
$A_{CP}(\text{nonresonant } D^0 \to \pi^+\pi^-\pi^0)$	[g]	$(-13 \pm 23)\%$	NODE=S032A40
$A_{CP}(D^0 \to K^+K^-\pi^0)$		$(-1.0 \pm 1.7)\%$	NODE=S032A41
$A_{CP}(D^0 \to K^*(892)^+K^- \to K^+K^-\pi^0)$	[g]	$(-0.9 \pm 1.3)\%$	NODE=S032A42
$A_{CP}(D^0 \to K^*(1410)^+K^- \to K^+K^-\pi^0)$	[g]	$(-21 \pm 24)\%$	NODE=S032A43
$A_{CP}(D^0 \to (K^+\pi^0)_S K^- \to K^+K^-\pi^0)$	[g]	$(7 \pm 15)\%$	NODE=S032A44
$A_{CP}(D^0 \to \phi(1020)\pi^0 \to K^+K^-\pi^0)$	[g]	$(1.1 \pm 2.2)\%$	NODE=S032A45
$A_{CP}(D^0 \to f_0(980)\pi^0 \to K^+K^-\pi^0)$	[g]	$(-3 \pm 19)\%$	NODE=S032A46
$A_{CP}(D^0 \to a_0(980)^0\pi^0 \to K^+K^-\pi^0)$	[g]	$(-5 \pm 16)\%$	NODE=S032A47
$A_{CP}(D^0 \to f_2'(1525)\pi^0 \to K^+K^-\pi^0)$	[g]	$(0 \pm 160)\%$	NODE=S032A48
$A_{CP}(D^0 \to K^*(892)^-K^+ \to K^+K^-\pi^0)$	[g]	$(-5 \pm 4)\%$	NODE=S032A49
$A_{CP}(D^0 \to K^*(1410)^-K^+ \to K^+K^-\pi^0)$	[g]	$(-17 \pm 29)\%$	NODE=S032A50
$A_{CP}(D^0 \to (K^-\pi^0)_{S-wave} K^+ \to K^+K^-\pi^0)$	[g]	$(-10 \pm 40)\%$	NODE=S032A51
$A_{CP}(D^0 \to K_S^0\pi^0)$		$(-0.27 \pm 0.21)\%$	NODE=S032A3
$A_{CP}(D^0 \to K_S^0\eta)$		$(0.5 \pm 0.5)\%$	NODE=S032A52
$A_{CP}(D^0 \to K_S^0\eta')$		$(1.0 \pm 0.7)\%$	NODE=S032A53
$A_{CP}(D^0 \to K_S^0\phi)$		$(-3 \pm 9)\%$	NODE=S032A2
$A_{CP}(D^0 \to K^-\pi^+)$		$(0.1 \pm 0.7)\%$	NODE=S032A23
$A_{CP}(D^0 \to K^+\pi^-)$		$(2.2 \pm 3.2)\%$	NODE=S032A5
$A_{CP}(D^0 \to K^-\pi^+\pi^0)$		$(0.2 \pm 0.9)\%$	NODE=S032A6
$A_{CP}(D^0 \to K^+\pi^-\pi^0)$		$(0 \pm 5)\%$	NODE=S032A9
$A_{CP}(D^0 \to K_S^0\pi^+\pi^-)$		$(-0.1 \pm 0.8)\%$	NODE=S032A10
$A_{CP}(D^0 \to K^*(892)^-\pi^+ \to K_S^0\pi^+\pi^-)$		$(0.4 \pm 0.5)\%$	NODE=S032A13
$A_{CP}(D^0 \to K^*(892)^+\pi^- \to K_S^0\pi^+\pi^-)$		$(1 \pm 6)\%$	NODE=S032A14
$A_{CP}(D^0 \to K_S^0\rho^0 \to K_S^0\pi^+\pi^-)$		$(-0.1 \pm 0.5)\%$	NODE=S032A15
$A_{CP}(D^0 \to K_S^0\omega \to K_S^0\pi^+\pi^-)$		$(-13 \pm 7)\%$	NODE=S032A16
$A_{CP}(D^0 \to K_S^0 f_0(980) \to K_S^0\pi^+\pi^-)$		$(-0.4 \pm 2.7)\%$	NODE=S032A17
$A_{CP}(D^0 \to K_S^0 f_2(1270) \to K_S^0\pi^+\pi^-)$		$(-4 \pm 5)\%$	NODE=S032A18
$A_{CP}(D^0 \to K_S^0 f_0(1370) \to K_S^0\pi^+\pi^-)$		$(-1 \pm 9)\%$	NODE=S032A19
$A_{CP}(D^0 \to \overline{K}^0\rho^0(1450) \to K_S^0\pi^+\pi^-)$		$(-4 \pm 10)\%$	NODE=S032A55
$A_{CP}(D^0 \to \overline{K}^0 f_0(600) \to K_S^0\pi^+\pi^-)$		$(-3 \pm 5)\%$	NODE=S032A56
$A_{CP}(D^0 \to \overline{K}^0 f_2(1270) \to K_S^0\pi^+\pi^-)$		$(-7 \pm 8)\%$	NODE=S032A57
$A_{CP}(D^0 \to K^*(1410)^-\pi^+ \to K_S^0\pi^+\pi^-)$		$(-2 \pm 9)\%$	NODE=S032A54
$A_{CP}(D^0 \to K_0^*(1430)^-\pi^+ \to K_S^0\pi^+\pi^-)$		$(4 \pm 4)\%$	NODE=S032A20
$A_{CP}(D^0 \to K_0^*(1430)^-\pi^+ \to K_S^0\pi^+\pi^-)$		$(12 \pm 15)\%$	NODE=S032A58
$A_{CP}(D^0 \to K_2^*(1430)^-\pi^+ \to K_S^0\pi^+\pi^-)$		$(3 \pm 6)\%$	NODE=S032A21
$A_{CP}(D^0 \to K_2^*(1430)^+\pi^- \to K_S^0\pi^+\pi^-)$		$(-10 \pm 32)\%$	NODE=S032A59

$A_{CP}(D^0 \to K^*(1680)^- \pi^+ \to K^0_S \pi^+ \pi^-)$	—	NODE=S032A22
$A_{CP}(D^0 \to K^- \pi^+ \pi^+ \pi^-)$	$(0.7 \pm 1.0)\%$	NODE=S032A24
$A_{CP}(D^0 \to K^+ \pi^- \pi^+ \pi^-)$	$(-2 \pm 4)\%$	NODE=S032A11
$A_{CP}(D^0 \to K^+ K^- \pi^+ \pi^-)$	$(-8 \pm 7)\%$	NODE=S032CPK
$A_{CP}(D^0 \to K^*_1(1270)^+ K^- \to K^{*0} \pi^+ K^-)$	$(-1 \pm 10)\%$	NODE=S032A60
$A_{CP}(D^0 \to K^*_1(1270)^- K^+ \to \overline{K}^{*0} \pi^- K^+)$	$(-10 \pm 32)\%$	NODE=S032A61
$A_{CP}(D^0 \to K^*_1(1270)^+ K^- \to \rho^0 K^+ K^-)$	$(-7 \pm 17)\%$	NODE=S032A62
$A_{CP}(D^0 \to K^*_1(1270)^- K^+ \to \rho^0 K^- K^+)$	$(10 \pm 13)\%$	NODE=S032A63
$A_{CP}(D^0 \to K^*(1410)^+ K^- \to K^{*0} \pi^+ K^-)$	$(-20 \pm 17)\%$	NODE=S032A64
$A_{CP}(D^0 \to K^*(1410)^- K^+ \to \overline{K}^{*0} \pi^- K^+)$	$(-1 \pm 14)\%$	NODE=S032A65
$A_{CP}(D^0 \to K^{*0} \overline{K}^{*0}$ S-wave)	$(10 \pm 14)\%$	NODE=S032A66
$A_{CP}(D^0 \to \phi \rho^0$ S-wave)	$(-3 \pm 5)\%$	NODE=S032A67
$A_{CP}(D^0 \to \phi \rho^0$ D-wave)	$(-37 \pm 19)\%$	NODE=S032A68
$A_{CP}(D^0 \to \phi(\pi^+ \pi^-)_{S-wave})$	$(-9 \pm 10)\%$	NODE=S032A69
$\Delta A^{D^0}_{CP} = A_{CP}(K^+ K^-) - A_{CP}(\pi^+ \pi^-)$	$(-0.68 \pm 0.16)\%$	NODE=S032DCP
$A_{CP}(D^\pm_s \to \mu^\pm \nu)$	$(5 \pm 6)\%$	NODE=S034A13
$A_{CP}(D^\pm_s \to K^\pm K^0_S)$	$(0.3 \pm 0.4)\%$	NODE=S034A05
$A_{CP}(D^\pm_s \to K^+ K^- \pi^\pm)$	$(0.3 \pm 1.4)\%$	NODE=S034A06
$A_{CP}(D^\pm_s \to K^+ K^- \pi^\pm \pi^0)$	$(-6 \pm 4)\%$	NODE=S034A07
$A_{CP}(D^\pm_s \to K^0_S K^\mp 2\pi^\pm)$	$(-1 \pm 4)\%$	NODE=S034A08
$A_{CP}(D^\pm_s \to \pi^+ \pi^- \pi^\pm)$	$(2 \pm 5)\%$	NODE=S034A09
$A_{CP}(D^\pm_s \to \pi^\pm \eta)$	$(-4.6 \pm 2.9)\%$	NODE=S034A10
$A_{CP}(D^\pm_s \to \pi^\pm \eta')$	$(-6.1 \pm 3.0)\%$	NODE=S034A11
$A_{CP}(D^\pm_s \to K^\pm \pi^0)$	$(-27 \pm 24)\%$	NODE=S034A01
$A_{CP}(D^\pm_s \to K^0_S \pi^\pm)$	$(6.6 \pm 3.3)\%$ (S = 1.4)	NODE=S034A02
$A_{CP}(D^\pm_s \to K^\pm \pi^+ \pi^-)$	$(11 \pm 7)\%$	NODE=S034A12
$A_{CP}(D^\pm_s \to K^\pm \eta)$	$(9 \pm 15)\%$	NODE=S034A03
$A_{CP}(D^\pm_s \to K^\pm \eta'(958))$	$(6 \pm 19)\%$	NODE=S034A04
$A_{CP}(B^+ \to J/\psi(1S) K^+)$	$(1 \pm 7) \times 10^{-3}$ (S = 1.8)	NODE=S041AX1
$A_{CP}(B^+ \to J/\psi(1S) \pi^+)$	0.007 ± 0.033 (S = 1.3)	NODE=S041AX9
$A_{CP}(B^+ \to J/\psi \rho^+)$	-0.11 ± 0.14	NODE=S041AC5
$A_{CP}(B^+ \to J/\psi K^*(892)^+)$	-0.048 ± 0.033	NODE=S041AW1
$A_{CP}(B^+ \to \eta_c K^+)$	-0.16 ± 0.08	NODE=S041ABE
$A_{CP}(B^+ \to \psi(2S) \pi^+)$	0.03 ± 0.06	NODE=S041AZ2
$A_{CP}(B^+ \to \psi(2S) K^+)$	0.008 ± 0.021 (S = 1.6)	NODE=S041AX2
$A_{CP}(B^+ \to \psi(2S) K^*(892)^+)$	0.08 ± 0.21	NODE=S041AW2
$A_{CP}(B^+ \to \chi_{c1}(1P) \pi^+)$	0.07 ± 0.18	NODE=S041AW5
$A_{CP}(B^+ \to \chi_{c0} K^+)$	-0.20 ± 0.18 (S = 1.5)	NODE=S041CQ9
$A_{CP}(B^+ \to \chi_{c1} K^+)$	-0.009 ± 0.033	NODE=S041AW3
$A_{CP}(B^+ \to \chi_{c1} K^*(892)^+)$	0.5 ± 0.5	NODE=S041AW4
$A_{CP}(B^+ \to \overline{D}^0 \pi^+)$	-0.008 ± 0.008	NODE=S041AD2
$A_{CP}(B^+ \to D_{CP(+1)} \pi^+)$	0.035 ± 0.024	NODE=S041AD3
$A_{CP}(B^+ \to D_{CP(-1)} \pi^+)$	0.017 ± 0.026	NODE=S041AD4
$A_{CP}(B^+ \to \overline{D}^0 K^+)$	0.07 ± 0.04	NODE=S041AY2
$r_B(B^+ \to D^0 K^+)$	0.096 ± 0.014 (S = 1.2)	NODE=S041ARX
$\delta_B(B^+ \to D^0 K^+)$	$(115 \pm 13)^\circ$	NODE=S041DRX
$r_B(B^+ \to \overline{D}^0 K^{*+})$	0.17 ± 0.11 (S = 2.3)	NODE=S041ARZ
$\delta_B(B^+ \to D^0 K^{*+})$	$(155 \pm 70)^\circ$ (S = 2.0)	NODE=S041DRZ

$A_{CP}(B^+ \to [K^-\pi^+]_D K^+)$	-0.58 ± 0.21	NODE=S041AC0
$A_{CP}(B^+ \to [K^-\pi^+]_{\overline{D}} K^*(892)^+)$	-0.3 ± 0.5	NODE=S041AC4
$A_{CP}(B^+ \to [K^-\pi^+]_D \pi^+)$	0.00 ± 0.09	NODE=S041AC1
$A_{CP}(B^+ \to [K^-\pi^+]_{(D\pi)} \pi^+)$	-0.09 ± 0.27	NODE=S041AC6
$A_{CP}(B^+ \to [K^-\pi^+]_{(D\gamma)} \pi^+)$	-0.7 ± 0.6	NODE=S041AC7
$A_{CP}(B^+ \to [K^-\pi^+]_{(D\pi)} K^+)$	0.8 ± 0.4	NODE=S041AC8
$A_{CP}(B^+ \to [K^-\pi^+]_{(D\gamma)} K^+)$	0.4 ± 1.0	NODE=S041AC9
$A_{CP}(B^+ \to [\pi^+\pi^-\pi^0]_D K^+)$	-0.02 ± 0.15	NODE=S041AC2
$A_{ADS}(B^+ \to D\pi^+)$	0.14 ± 0.06	NODE=S041AA2
$A_{CP}(B^+ \to D_{CP(-1)} K^+)$	-0.10 ± 0.07	NODE=S041AY4
$A_{CP}(B^+ \to \overline{D}^{*0}\pi^+)$	-0.014 ± 0.015	NODE=S041AD5
$A_{CP}(B^+ \to (D^*_{CP(+1)})^0 \pi^+)$	-0.02 ± 0.05	NODE=S041AD6
$A_{CP}(B^+ \to (D^*_{CP(-1)})^0 \pi^+)$	-0.09 ± 0.05	NODE=S041AD7
$A_{CP}(B^+ \to D^{*0} K^+)$	-0.07 ± 0.04	NODE=S041AD8
$r^*_B(B^+ \to D^{*0} K^+)$	$0.114^{+0.023}_{-0.040}$ (S = 1.2)	NODE=S041ARY
$\delta^*_B(B^+ \to D^{*0} K^+)$	$(310^{+22}_{-28})^\circ$ (S = 1.3)	NODE=S041DRY
$A_{CP}(B^+ \to D^{*0}_{CP(+1)} K^+)$	-0.12 ± 0.08	NODE=S041AC+
$A_{CP}(B^+ \to D^*_{CP(-1)} K^+)$	0.07 ± 0.10	NODE=S041AD1
$A_{CP}(B^+ \to D_{CP(+1)} K^*(892)^+)$	0.09 ± 0.14	NODE=S041AD+
$A_{CP}(B^+ \to D_{CP(-1)} K^*(892)^+)$	-0.23 ± 0.22	NODE=S041AD-
$A_{CP}(B^+ \to D_s^+ \phi)$	0.0 ± 0.4	NODE=S041ADP
$A_{CP}(B^+ \to D^{*+}\overline{D}^{*0})$	-0.15 ± 0.11	NODE=S041AS1
$A_{CP}(B^+ \to D^{*+}\overline{D}^0)$	-0.06 ± 0.13	NODE=S041AS2
$A_{CP}(B^+ \to D^+\overline{D}^{*0})$	0.13 ± 0.18	NODE=S041AS3
$A_{CP}(B^+ \to D^+\overline{D}^0)$	-0.03 ± 0.07	NODE=S041AS4
$A_{CP}(B^+ \to K^0_S \pi^+)$	-0.014 ± 0.019	NODE=S041AX4
$A_{CP}(B^+ \to K^+\pi^0)$	0.037 ± 0.021	NODE=S041AX3
$A_{CP}(B^+ \to \eta' K^+)$	0.013 ± 0.017	NODE=S041AX5
$A_{CP}(B^+ \to \eta' K^*(892)^+)$	-0.26 ± 0.27	NODE=S041CR7
$A_{CP}(B^+ \to \eta' K^*_0(1430)^+)$	0.06 ± 0.20	NODE=S041CT7
$A_{CP}(B^+ \to \eta' K^*_2(1430)^+)$	0.15 ± 0.13	NODE=S041CT8
$A_{CP}(B^+ \to \eta K^*(892)^+)$	0.02 ± 0.06	NODE=S041CP1
$A_{CP}(B^+ \to \eta K^*_0(1430)^+)$	0.05 ± 0.13	NODE=S041CR5
$A_{CP}(B^+ \to \eta K^*_2(1430)^+)$	-0.45 ± 0.30	NODE=S041CR6
$A_{CP}(B^+ \to \omega K^+)$	0.02 ± 0.05	NODE=S041AY1
$A_{CP}(B^+ \to \omega K^{*+})$	0.29 ± 0.35	NODE=S041CT0
$A_{CP}(B^+ \to \omega (K\pi)^{*+}_0)$	-0.10 ± 0.09	NODE=S041CT2
$A_{CP}(B^+ \to \omega K^*_2(1430)^+)$	0.14 ± 0.15	NODE=S041CT3
$A_{CP}(B^+ \to K^{*0}\pi^+)$	-0.04 ± 0.09 (S = 2.1)	NODE=S041CQ4
$A_{CP}(B^+ \to K^*(892)^+\pi^0)$	-0.06 ± 0.24	NODE=S041CP8
$A_{CP}(B^+ \to K^+\pi^-\pi^+)$	0.038 ± 0.022	NODE=S041AY6
$A_{CP}(B^+ \to K^+K^-K^+ \text{nonresonant})$	0.06 ± 0.05	NODE=S041CU6
$A_{CP}(B^+ \to f(980)^0 K^+)$	-0.08 ± 0.09	NODE=S041CU7
$A_{CP}(B^+ \to f_0(1500) K^+)$	0.28 ± 0.30	NODE=S041CS5
$A_{CP}(B^+ \to f'_2(1525)^0 K^+)$	$-0.08^{+0.05}_{-0.04}$	NODE=S041CQ5
$A_{CP}(B^+ \to K^*_0(1430)^0 \pi^+)$	0.055 ± 0.033	NODE=S041CQ7
$A_{CP}(B^+ \to K^*_2(1430)^0 \pi^+)$	$0.05^{+0.29}_{-0.24}$	NODE=S041CS4
$A_{CP}(B^+ \to K^+\pi^0\pi^0)$	-0.06 ± 0.07	NODE=S041CU4
$A_{CP}(B^+ \to K^0\rho^+)$	-0.12 ± 0.17	NODE=S041CR9
$A_{CP}(B^+ \to K^{*+}\pi^+\pi^-)$	0.07 ± 0.08	NODE=S041AKP
$A_{CP}(B^+ \to \rho^0 K^*(892)^+)$	0.31 ± 0.13	NODE=S041AZ1
$A_{CP}(B^+ \to K^*(892)^+ f_0(980))$	-0.15 ± 0.12	NODE=S041CR3

$A_{CP}(B^+ \to a_1^+ K^0)$	0.12 ± 0.11	NODE=S041CS1
$A_{CP}(B^+ \to b_1^+ K^0)$	-0.03 ± 0.15	NODE=S041CS6
$A_{CP}(B^+ \to K^*(892)^0 \rho^+)$	-0.01 ± 0.16	NODE=S041CR4
$A_{CP}(B^+ \to b_1^0 K^+)$	-0.46 ± 0.20	NODE=S041CS2
$A_{CP}(B^+ \to K^0 K^+)$	0.04 ± 0.14	NODE=S041CQ8
$A_{CP}(B^+ \to K^+ K_S^0 K_S^0)$	$0.04^{+0.04}_{-0.05}$	NODE=S041AY8
$A_{CP}(B^+ \to K^+ K^- \pi^+)$	0.00 ± 0.10	NODE=S041CKK
$A_{CP}(B^+ \to K^+ K^- K^+)$	$-0.017^{+0.024}_{-0.020}$	NODE=S041AY7
$A_{CP}(B^+ \to \phi K^+)$	0.10 ± 0.04	NODE=S041AX7
$A_{CP}(B^+ \to X_0(1550) K^+)$	-0.04 ± 0.07	NODE=S041CXK
$A_{CP}(B^+ \to K^{*+} K^+ K^-)$	0.11 ± 0.09	NODE=S041AKK
$A_{CP}(B^+ \to \phi K^*(892)^+)$	-0.01 ± 0.08	NODE=S041AX8
$A_{CP}(B^+ \to \phi (K\pi)_0^{*+})$	0.04 ± 0.16	NODE=S041CT1
$A_{CP}(B^+ \to \phi K_1(1270)^+)$	0.15 ± 0.20	NODE=S041CS8
$A_{CP}(B^+ \to \phi K_2^*(1430)^+)$	-0.23 ± 0.20	NODE=S041CS9
$A_{CP}(B^+ \to K^+ \phi \phi)$	-0.10 ± 0.08	NODE=S041CT9
$A_{CP}(B^+ \to K^+ [\phi\phi]_{\eta_c})$	0.09 ± 0.10	NODE=S041CTB
$A_{CP}(B^+ \to K^*(892)^+ \gamma)$	0.018 ± 0.029	NODE=S041AKG
$A_{CP}(B^+ \to \eta K^+ \gamma)$	-0.12 ± 0.07	NODE=S041CQ3
$A_{CP}(B^+ \to \phi K^+ \gamma)$	-0.13 ± 0.11 (S = 1.1)	NODE=S041APK
$A_{CP}(B^+ \to \rho^+ \gamma)$	-0.11 ± 0.33	NODE=S041CS7
$A_{CP}(B^+ \to \pi^+ \pi^0)$	0.03 ± 0.04	NODE=S041AX0
$A_{CP}(B^+ \to \pi^+ \pi^- \pi^+)$	0.03 ± 0.06	NODE=S041AY5
$A_{CP}(B^+ \to \rho^0 \pi^+)$	$0.18^{+0.09}_{-0.17}$	NODE=S041CP4
$A_{CP}(B^+ \to f_2(1270) \pi^+)$	0.41 ± 0.30	NODE=S041CQ0
$A_{CP}(B^+ \to \rho^0(1450) \pi^+)$	$-0.1^{+0.4}_{-0.5}$	NODE=S041CT4
$A_{CP}(B^+ \to \pi^+ \pi^- \pi^+$ nonresonant)	$-0.14^{+0.23}_{-0.16}$	NODE=S041CT6
$A_{CP}(B^+ \to \rho^+ \pi^0)$	0.02 ± 0.11	NODE=S041CP5
$A_{CP}(B^+ \to \rho^+ \rho^0)$	-0.05 ± 0.05	NODE=S041AY9
$A_{CP}(B^+ \to \omega \pi^+)$	-0.04 ± 0.06	NODE=S041AX6
$A_{CP}(B^+ \to \omega \rho^+)$	-0.20 ± 0.09	NODE=S041CP9
$A_{CP}(B^+ \to \eta \pi^+)$	-0.14 ± 0.07 (S = 1.4)	NODE=S041CP2
$A_{CP}(B^+ \to \eta \rho^+)$	0.11 ± 0.11	NODE=S041CQ2
$A_{CP}(B^+ \to \eta' \pi^+)$	0.06 ± 0.16	NODE=S041CQ1
$A_{CP}(B^+ \to \eta' \rho^+)$	0.26 ± 0.17	NODE=S041CR8
$A_{CP}(B^+ \to b_1^0 \pi^+)$	0.05 ± 0.16	NODE=S041CS3
$A_{CP}(B^+ \to p \overline{p} \pi^+)$	0.00 ± 0.04	NODE=S041CP6
$A_{CP}(B^+ \to p \overline{p} K^+)$	-0.16 ± 0.07	NODE=S041CP7
$A_{CP}(B^+ \to p \overline{p} K^*(892)^+)$	0.21 ± 0.16 (S = 1.4)	NODE=S041AW6
$A_{CP}(B^+ \to p \overline{\Lambda} \gamma)$	0.17 ± 0.17	NODE=S041CLG
$A_{CP}(B^+ \to p \overline{\Lambda} \pi^0)$	0.01 ± 0.17	NODE=S041CS0
$A_{CP}(B^+ \to K^+ \ell^+ \ell^-)$	-0.02 ± 0.08	NODE=S041CR1
$A_{CP}(B^+ \to K^+ e^+ e^-)$	0.14 ± 0.14	NODE=S041CU0
$A_{CP}(B^+ \to K^+ \mu^+ \mu^-)$	-0.05 ± 0.13	NODE=S041CU1
$A_{CP}(B^+ \to K^{*+} \ell^+ \ell^-)$	-0.09 ± 0.14	NODE=S041CR2
$A_{CP}(B^+ \to K^* e^+ e^-)$	-0.14 ± 0.23	NODE=S041CU2
$A_{CP}(B^+ \to K^* \mu^+ \mu^-)$	-0.12 ± 0.24	NODE=S041CU3
$\mathrm{Re}(\epsilon_{B^0})/(1+\lvert\epsilon_{B^0}\rvert^2)$	$(-0.2 \pm 0.7) \times 10^{-3}$	NODE=S042EPS;→ UNCHECKED ←;OUR EVAL
$A_{T/CP}$	0.005 ± 0.018	NODE=S042Y3
$A_{CP}(B^0 \to D^*(2010)^+ D^-)$	0.037 ± 0.034	NODE=S042AC4
$A_{CP}(B^0 \to [K^+ K^-]_D K^*(892)^0)$	-0.45 ± 0.23	NODE=S042AD3
$A_{CP}(B^0 \to [K^+ \pi^-]_D K^*(892)^0)$	-0.08 ± 0.08	NODE=S042AD4
$A_{CP}(B^0 \to \eta' K^*(892)^0)$	0.02 ± 0.23	NODE=S042CP4
$A_{CP}(B^0 \to \eta' K_0^*(1430)^0)$	-0.19 ± 0.17	NODE=S042CT2
$A_{CP}(B^0 \to \eta' K_2^*(1430)^0)$	0.14 ± 0.18	NODE=S042CT3

$A_{CP}(B^0 \to \eta K_0^*(1430)^0)$	0.06 ± 0.13	NODE=S042AD1
$A_{CP}(B^0 \to \eta K_2^*(1430)^0)$	-0.07 ± 0.19	NODE=S042AD2
$A_{CP}(B^0 \to b_1 K^+)$	-0.07 ± 0.12	NODE=S042CQ2
$A_{CP}(B^0 \to \omega K^{*0})$	0.45 ± 0.25	NODE=S042CQ8
$A_{CP}(B^0 \to \omega (K\pi)_0^{*0})$	-0.07 ± 0.09	NODE=S042CR0
$A_{CP}(B^0 \to \omega K_2^*(1430)^0)$	-0.37 ± 0.17	NODE=S042CR1
$A_{CP}(B^0 \to K^+ \pi^- \pi^0)$	$(0 \pm 6) \times 10^{-2}$	NODE=S042AC7
$A_{CP}(B^0 \to \rho^- K^+)$	0.20 ± 0.11	NODE=S042AC6
$A_{CP}(B^0 \to \rho(1450)^- K^+)$	-0.10 ± 0.33	NODE=S042CT4
$A_{CP}(B^0 \to \rho(1700)^- K^+)$	-0.4 ± 0.6	NODE=S042CT5
$A_{CP}(B^0 \to K^+ \pi^- \pi^0 \text{nonresonant})$	0.10 ± 0.18	NODE=S042CQ5
$A_{CP}(B^0 \to K^0 \pi^+ \pi^-)$	-0.01 ± 0.05	NODE=S042CQ9
$A_{CP}(B^0 \to K^*(892)^+ \pi^-)$	-0.22 ± 0.06	NODE=S042AC3
$A_{CP}(B^0 \to (K\pi)_0^{*+} \pi^-)$	0.09 ± 0.07	NODE=S042CQ6
$A_{CP}(B^0 \to (K\pi)_0^{*0} \pi^0)$	-0.15 ± 0.11	NODE=S042CQ7
$A_{CP}(B^0 \to K^{*0} \pi^0)$	-0.15 ± 0.13	NODE=S042CQ4
$A_{CP}(B^0 \to K^*(892)^0 \pi^+ \pi^-)$	0.07 ± 0.05	NODE=S042CP6
$A_{CP}(B^0 \to K^*(892)^0 \rho^0)$	-0.06 ± 0.09	NODE=S042AC9
$A_{CP}(B^0 \to K^{*0} f_0(980))$	0.07 ± 0.10	NODE=S042AD0
$A_{CP}(B^0 \to K^{*+} \rho^-)$	0.21 ± 0.15	NODE=S042CT6
$A_{CP}(B^0 \to K^*(892)^0 K^+ K^-)$	0.01 ± 0.05	NODE=S042CP7
$A_{CP}(B^0 \to a_1^- K^+)$	-0.16 ± 0.12	NODE=S042CQ1
$A_{CP}(B^0 \to K^0 K^0)$	-0.6 ± 0.7	NODE=S042CP5
$A_{CP}(B^0 \to K^*(892)^0 \phi)$	0.01 ± 0.05	NODE=S042AC1
$A_{CP}(B^0 \to K^*(892)^0 K^- \pi^+)$	0.2 ± 0.4	NODE=S042CP8
$A_{CP}(B^0 \to \phi (K\pi)_0^{*0})$	0.20 ± 0.15	NODE=S042CP2
$A_{CP}(B^0 \to \phi K_2^*(1430)^0)$	-0.08 ± 0.13	NODE=S042CP3
$A_{CP}(B^0 \to K^*(892)^0 \gamma)$	-0.002 ± 0.015	NODE=S042AKG
$A_{CP}(B^0 \to K_2^*(1430)^0 \gamma)$	-0.08 ± 0.15	NODE=S042AC8
$A_{CP}(B^0 \to \rho^+ \pi^-)$	0.08 ± 0.12 (S = 2.0)	NODE=S042AC5
$A_{CP}(B^0 \to \rho^- \pi^+)$	-0.16 ± 0.23 (S = 1.7)	NODE=S042AC0
$A_{CP}(B^0 \to a_1(1260)^\pm \pi^\mp)$	-0.07 ± 0.06	NODE=S042AAP
$A_{CP}(B^0 \to b_1^- \pi^+)$	-0.05 ± 0.10	NODE=S042CQ3
$A_{CP}(B^0 \to p\overline{p} K^*(892)^0)$	0.05 ± 0.12	NODE=S042CQ0
$A_{CP}(B^0 \to p\overline{\Lambda} \pi^-)$	0.04 ± 0.07	NODE=S042CLP
$A_{CP}(B^0 \to K^{*0} \ell^+ \ell^-)$	-0.05 ± 0.10	NODE=S042CT1
$A_{CP}(B^0 \to K^{*0} e^+ e^-)$	-0.21 ± 0.19	NODE=S042CU0
$A_{CP}(B^0 \to K^{*0} \mu^+ \mu^-)$	-0.07 ± 0.04	NODE=S042CU1
$C_{D^*(2010)^- D^+}$ $(B^0 \to D^*(2010)^- D^+)$	-0.01 ± 0.11	NODE=S042CPJ
$C_{D^*(2010)^+ D^-}$ $(B^0 \to D^*(2010)^+ D^-)$	0.00 ± 0.13 (S = 1.3)	NODE=S042CPK
$C_{D^{*+} D^{*-}}$ $(B^0 \to D^{*+} D^{*-})$	0.01 ± 0.09 (S = 1.6)	NODE=S042LD1
C_+ $(B^0 \to D^{*+} D^{*-})$	0.00 ± 0.10 (S = 1.6)	NODE=S042CD+
C_- $(B^0 \to D^{*+} D^{*-})$	0.19 ± 0.31	NODE=S042CD-
S_- $(B^0 \to D^{*+} D^{*-})$	0.1 ± 1.6 (S = 3.5)	NODE=S042SD-
C $(B^0 \to D^*(2010)^+ D^*(2010)^- K_S^0)$	0.01 ± 0.29	NODE=S042CDS
S $(B^0 \to D^*(2010)^+ D^*(2010)^- K_S^0)$	0.1 ± 0.4	NODE=S042SDS
$C_{D^+ D^-}$ $(B^0 \to D^+ D^-)$	-0.46 ± 0.21 (S = 1.8)	NODE=S042CPD
$C_{J/\psi(1S)\pi^0}$ $(B^0 \to J/\psi(1S)\pi^0)$	-0.13 ± 0.13	NODE=S042CPL
$C_{D_{CP}^{(*)} h^0}$ $(B^0 \to D_{CP}^{(*)} h^0)$	-0.23 ± 0.16	NODE=S042CDH
$S_{D_{CP}^{(*)} h^0}$ $(B^0 \to D_{CP}^{(*)} h^0)$	-0.56 ± 0.24	NODE=S042SDH
$C_{K^0 \pi^0}$ $(B^0 \to K^0 \pi^0)$	0.00 ± 0.13 (S = 1.4)	NODE=S042CKP
$C_{\eta'(958) K_S^0}$ $(B^0 \to \eta'(958) K_S^0)$	-0.04 ± 0.20 (S = 2.5)	NODE=S042Y1

$S_{\eta'(958)K^0_S}$ $(B^0 \to \eta'(958)K^0_S)$	0.43 ± 0.17 (S = 1.5)	NODE=S042Y2
$C_{\eta' K^0}$ $(B^0 \to \eta' K^0)$	-0.05 ± 0.05	NODE=S042CEK
$C_{\omega K^0_S}$ $(B^0 \to \omega K^0_S)$	-0.30 ± 0.28 (S = 1.6)	NODE=S042CW1
$S_{\omega K^0_S}$ $(B^0 \to \omega K^0_S)$	0.43 ± 0.24	NODE=S042SW1
C $(B^0 \to K^0_S \pi^0 \pi^0)$	0.2 ± 0.5	NODE=S042CK2
S $(B^0 \to K^0_S \pi^0 \pi^0)$	0.7 ± 0.7	NODE=S042SK2
$C_{\rho^0 K^0_S}$ $(B^0 \to \rho^0 K^0_S)$	-0.04 ± 0.20	NODE=S042CX7
$S_{\rho^0 K^0_S}$ $(B^0 \to \rho^0 K^0_S)$	$0.50^{+0.17}_{-0.21}$	NODE=S042SX7
$C_{f_0(980)K^0_S}$ $(B^0 \to f_0(980)K^0_S)$	0.29 ± 0.20	NODE=S042CF1
$S_{f_0(980)K^0_S}$ $(B^0 \to f_0(980)K^0_S)$	-0.50 ± 0.16	NODE=S042SF1
$S_{f_2(1270)K^0_S}$ $(B^0 \to f_2(1270)K^0_S)$	-0.5 ± 0.5	NODE=S042SF2
$C_{f_2(1270)K^0_S}$ $(B^0 \to f_2(1270)K^0_S)$	0.3 ± 0.4	NODE=S042CF2
$S_{f_x(1300)K^0_S}$ $(B^0 \to f_x(1300)K^0_S)$	-0.2 ± 0.5	NODE=S042SF3
$C_{f_x(1300)K^0_S}$ $(B^0 \to f_x(1300)K^0_S)$	0.13 ± 0.35	NODE=S042CF3
$S_{K^0\pi^+\pi^-}$ $(B^0 \to K^0\pi^+\pi^-$ nonresonant)	-0.01 ± 0.33	NODE=S042SF4
$C_{K^0\pi^+\pi^-}$ $(B^0 \to K^0\pi^+\pi^-$ nonresonant)	0.01 ± 0.26	NODE=S042CF4
$C_{K^0_S K^0_S}$ $(B^0 \to K^0_S K^0_S)$	0.0 ± 0.4 (S = 1.4)	NODE=S042CKS
$S_{K^0_S K^0_S}$ $(B^0 \to K^0_S K^0_S)$	-0.8 ± 0.5	NODE=S042SKS
$C_{K^+K^-K^0_S}$ $(B^0 \to K^+K^-K^0_S$ nonresonant)	0.06 ± 0.08	NODE=S042CX2
$C_{K^+K^-K^0_S}$ $(B^0 \to K^+K^-K^0_S$ inclusive)	0.01 ± 0.09	NODE=S042CKK
$C_{\phi K^0_S}$ $(B^0 \to \phi K^0_S)$	0.01 ± 0.14	NODE=S042CX1
$S_{\phi K^0_S}$ $(B^0 \to \phi K^0_S)$	0.59 ± 0.14	NODE=S042SX1
$C_{K_S K_S K_S}(B^0 \to K_S K_S K_S)$	-0.23 ± 0.14	NODE=S042CX5
$S_{K_S K_S K_S}(B^0 \to K_S K_S K_S)$	-0.5 ± 0.6 (S = 3.0)	NODE=S042SX5
$C_{K^0_S\pi^0\gamma}(B^0 \to K^0_S\pi^0\gamma)$	0.36 ± 0.33	NODE=S042CKG
$S_{K^0_S\pi^0\gamma}(B^0 \to K^0_S\pi^0\gamma)$	-0.8 ± 0.6	NODE=S042SKG
$C_{K^*(892)^0\gamma}$ $(B^0 \to K^*(892)^0\gamma)$	-0.04 ± 0.16 (S = 1.2)	NODE=S042CX4
$S_{K^*(892)^0\gamma}$ $(B^0 \to K^*(892)^0\gamma)$	-0.15 ± 0.22	NODE=S042SX4
$C_{\eta K^0\gamma}$ $(B^0 \to \eta K^0\gamma)$	-0.3 ± 0.4	NODE=S042CEG
$S_{\eta K^0\gamma}$ $(B^0 \to \eta K^0\gamma)$	-0.2 ± 0.5	NODE=S042SEG
$C_{K^0\phi\gamma}$ $(B^0 \to K^0\phi\gamma)$	-0.3 ± 0.6	NODE=S042CPG
$S_{K^0\phi\gamma}$ $(B^0 \to K^0\phi\gamma)$	$0.7^{+0.7}_{-1.1}$	NODE=S042SPG
$C(B^0 \to K^0_S\rho^0\gamma)$	-0.05 ± 0.19	NODE=S042CKR
$S(B^0 \to K^0_S\rho^0\gamma)$	0.11 ± 0.34	NODE=S042SKR
C $(B^0 \to \rho^0\gamma)$	0.4 ± 0.5	NODE=S042CX8
S $(B^0 \to \rho^0\gamma)$	-0.8 ± 0.7	NODE=S042SX8
$C_{\pi\pi}$ $(B^0 \to \pi^+\pi^-)$	-0.38 ± 0.15 (S = 2.4)	NODE=S042CPI
$C_{\pi^0\pi^0}(B^0 \to \pi^0\pi^0)$	-0.43 ± 0.24	NODE=S042CX6
$C_{\rho\pi}$ $(B^0 \to \rho^+\pi^-)$	0.01 ± 0.14 (S = 1.9)	NODE=S042CRP
$S_{\rho\pi}$ $(B^0 \to \rho^+\pi^-)$	0.01 ± 0.09	NODE=S042SRP
$\Delta S_{\rho\pi}$ $(B^0 \to \rho^+\pi^-)$	-0.05 ± 0.10	NODE=S042SDT
$C_{\rho^0\pi^0}$ $(B^0 \to \rho^0\pi^0)$	0.3 ± 0.4	NODE=S042CRH
$S_{\rho^0\pi^0}$ $(B^0 \to \rho^0\pi^0)$	0.1 ± 0.4	NODE=S042SRH
$C_{a_1\pi}$ $(B^0 \to a_1(1260)^+\pi^-)$	-0.05 ± 0.11	NODE=S042CAP

$S_{a_1\pi}$ ($B^0 \to a_1(1260)^+\pi^-$)	-0.2 ± 0.4 (S = 3.2)	NODE=S042SAP
$\Delta C_{a_1\pi}$ ($B^0 \to a_1(1260)^+\pi^-$)	0.43 ± 0.14 (S = 1.3)	NODE=S042CDA
$\Delta S_{a_1\pi}$ ($B^0 \to a_1(1260)^+\pi^-$)	-0.11 ± 0.12	NODE=S042SDA
C ($B^0 \to b_1^- K^+$)	-0.22 ± 0.24	NODE=S042CAQ
ΔC ($B^0 \to b_1^- \pi^+$)	-1.04 ± 0.24	NODE=S042SDB
$C_{\rho^0\rho^0}$ ($B^0 \to \rho^0\rho^0$)	0.2 ± 0.9	NODE=S042CX9
$S_{\rho^0\rho^0}$ ($B^0 \to \rho^0\rho^0$)	0.3 ± 0.7	NODE=S042SX9
$C_{\rho\rho}$ ($B^0 \to \rho^+\rho^-$)	-0.05 ± 0.13	NODE=S042CRR
$S_{\rho\rho}$ ($B^0 \to \rho^+\rho^-$)	-0.06 ± 0.17	NODE=S042SRR
$\lvert\lambda\rvert$ ($B^0 \to J/\psi K^*(892)^0$)	<0.25, CL = 95%	NODE=S042LD9
$\cos 2\beta$ ($B^0 \to J/\psi K^*(892)^0$)	$1.7^{+0.7}_{-0.9}$ (S = 1.6)	NODE=S042CJ1
$\cos 2\beta$ ($B^0 \to [K^0_S\pi^+\pi^-]_{D^{(*)}}\ h^0$)	$1.0^{+0.6}_{-0.7}$ (S = 1.8)	NODE=S042CJ2
$(S_+ + S_-)/2$ ($B^0 \to D^{*-}\pi^+$)	-0.039 ± 0.011	NODE=S042LD3
$(S_- - S_+)/2$ ($B^0 \to D^{*-}\pi^+$)	-0.009 ± 0.015	NODE=S042LD4
$(S_+ + S_-)/2$ ($B^0 \to D^-\pi^+$)	-0.046 ± 0.023	NODE=S042LD5
$(S_- - S_+)/2$ ($B^0 \to D^-\pi^+$)	-0.022 ± 0.021	NODE=S042LD6
$(S_+ + S_-)/2$ ($B^0 \to D^-\rho^+$)	-0.024 ± 0.032	NODE=S042DR+
$(S_- - S_+)/2$ ($B^0 \to D^-\rho^+$)	-0.10 ± 0.06	NODE=S042DR-
$C_{\eta_c K^0_S}$ ($B^0 \to \eta_c K^0_S$)	0.08 ± 0.13	NODE=S042CEC
$C_{c\overline{c}K^{(*)0}}$ ($B^0 \to c\overline{c}K^{(*)0}$)	$(0.5 \pm 1.7) \times 10^{-2}$	NODE=S042CCC;→ UNCHECKED ←;OUR EVAL
$C_{J/\psi(nS)K^0}$ ($B^0 \to J/\psi(nS)K^0$)	$(0.5 \pm 2.0) \times 10^{-2}$	NODE=S042CJK;→ UNCHECKED ←;OUR EVAL
$C_{J/\psi K^{*0}}$ ($B^0 \to J/\psi K^{*0}$)	0.03 ± 0.10	NODE=S042CJS
$S_{J/\psi K^{*0}}$ ($B^0 \to J/\psi K^{*0}$)	0.60 ± 0.25	NODE=S042SJS
$C_{\chi_{c0}K^0_S}$ ($B^0 \to \chi_{c0}K^0_S$)	$-0.3^{+0.5}_{-0.4}$	NODE=S042CC2
$S_{\chi_{c0}K^0_S}$ ($B^0 \to \chi_{c0}K^0_S$)	-0.7 ± 0.5	NODE=S042SC2
$C_{\chi_{c1}K^0_S}$ ($B^0 \to \chi_{c1}K^0_S$)	0.06 ± 0.07	NODE=S042CC1
$\sin(2\beta_{eff})$($B^0 \to \phi K^0$)	0.22 ± 0.30	NODE=S042BTF
$\sin(2\beta_{eff})$($B^0 \to \phi K^*_0(1430)^0$)	$0.97^{+0.03}_{-0.52}$	NODE=S042BFK
$\sin(2\beta_{eff})$($B^0 \to [K^0_S\pi^+\pi^-]_{D^{(*)}}\ h^0$)	0.45 ± 0.28	NODE=S042BTM
$\lvert\lambda\rvert$ ($B^0 \to [K^0_S\pi^+\pi^-]_{D^{(*)}}\ h^0$)	1.01 ± 0.08	NODE=S042LDH
$\lvert\sin(2\beta+\gamma)\rvert$	>0.40, CL = 90%	NODE=S042BGA
$2\beta+\gamma$	$(83 \pm 60)^\circ$	NODE=S042BG0
γ($B^0 \to D^0K^{*0}$)	$(162 \pm 60)^\circ$	NODE=S042GAM
A_{CP}($B \to K^*(892)\gamma$)	-0.003 ± 0.017	NODE=S049CP1
A_{CP}($b \to s\gamma$)	-0.008 ± 0.029	NODE=S049CP2
A_{CP}($b \to (s+d)\gamma$)	-0.01 ± 0.05	NODE=S049CP4
A_{CP}($B \to X_s\ell^+\ell^-$)	-0.22 ± 0.26	NODE=S049CP3
A_{CP}($B \to K^*e^+e^-$)	-0.18 ± 0.15	NODE=S049CP6
A_{CP}($B \to K^*\mu^+\mu^-$)	-0.03 ± 0.13	NODE=S049CP7
A_{CP}($B \to K^*\ell^+\ell^-$)	-0.04 ± 0.07	NODE=S049CP5
A_{CP}($B \to \eta$anything)	$-0.13^{+0.04}_{-0.05}$	NODE=S049CP8
Re($\epsilon_{B^0_s}$) / ($1 + \lvert\epsilon_{B^0_s}\rvert^2$)	$(-4.3 \pm 1.4) \times 10^{-3}$	NODE=S086EPS;→ UNCHECKED ←;OUR EVAL
CP Violation phase β_s	$(4^{+10}_{-13}) \times 10^{-2}$	NODE=S086PHS;→ UNCHECKED ←;OUR EVAL
A_{CP}($B_s \to \pi^+K^-$)	0.29 ± 0.07	NODE=S086CP1
A_{CP}($B^0_s \to [K^+K^-]_D\overline{K}^*(892)^0$)	0.04 ± 0.16	NODE=S086CP2
$\Gamma(\eta_c(1S) \to \pi^+\pi^-)/\Gamma_{total}$	$<1.1 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=51
$\Gamma(\eta_c(1S) \to \pi^0\pi^0)/\Gamma_{total}$	$<3.5 \times 10^{-5}$, CL = 90%	PAR=M026;DESIG=52
$\Gamma(\eta_c(1S) \to K^+K^-)/\Gamma_{total}$	$<6 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=53
$\Gamma(\eta_c(1S) \to K^0_SK^0_S)/\Gamma_{total}$	$<3.1 \times 10^{-4}$, CL = 90%	PAR=M026;DESIG=54
$(\alpha+\overline{\alpha})/(\alpha-\overline{\alpha})$ in $\Lambda \to p\pi^-$, $\overline{\Lambda} \to \overline{p}\pi^+$	0.006 ± 0.021	NODE=S018AL

$\frac{[\alpha(\Xi^-)\alpha_-(\Lambda)-\alpha(\overline{\Xi}^+)\alpha_+(\overline{\Lambda})]}{[\alpha(\Xi^-)\alpha_-(\Lambda)+\alpha(\overline{\Xi}^+)\alpha_+(\overline{\Lambda})]}$	$(0 \pm 7) \times 10^{-4}$	NODE=S022ACP
$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Omega^- \rightarrow \Lambda K^-$, $\overline{\Omega}^+ \rightarrow \overline{\Lambda} K^+$	-0.02 ± 0.13	NODE=S024ALD
$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \rightarrow \Lambda \pi^+$, $\overline{\Lambda}_c^- \rightarrow \overline{\Lambda} \pi^-$	-0.07 ± 0.31	NODE=S033AC1
$(\alpha + \overline{\alpha})/(\alpha - \overline{\alpha})$ in $\Lambda_c^+ \rightarrow \Lambda e^+ \nu_e$, $\overline{\Lambda}_c^- \rightarrow \overline{\Lambda} e^- \overline{\nu}_e$	0.00 ± 0.04	NODE=S033ACP
$A_{CP}(\Lambda_b \rightarrow p \pi^-)$	0.03 ± 0.18	NODE=S040CP1
$A_{CP}(\Lambda_b \rightarrow p K^-)$	0.37 ± 0.17	NODE=S040CP2

CP VIOLATION OBSERVED

CONLAW=CPV

Re(ϵ)	$(1.596 \pm 0.013) \times 10^{-3}$	NODE=S011REP
charge asymmetry in $K^0_{\ell 3}$ decays		NODE=S013310
A_L = weighted average of $A_L(\mu)$ and $A_L(e)$	$(0.332 \pm 0.006)\%$	NODE=S013AL
$A_L(\mu) = [\Gamma(\pi^- \mu^+ \nu_\mu) - \Gamma(\pi^+ \mu^- \overline{\nu}_\mu)]/\text{sum}$	$(0.304 \pm 0.025)\%$	NODE=S013A1
$A_L(e) = [\Gamma(\pi^- e^+ \nu_e) - \Gamma(\pi^+ e^- \overline{\nu}_e)]/\text{sum}$	$(0.334 \pm 0.007)\%$	NODE=S013A2
parameters for $K^0_L \rightarrow 2\pi$ decay		NODE=S013315
$\lvert\eta_{00}\rvert = \lvert A(K^0_L \rightarrow 2\pi^0) / A(K^0_S \rightarrow 2\pi^0)\rvert$	$(2.220 \pm 0.011) \times 10^{-3}$ (S = 1.8)	NODE=S013E00
$\lvert\eta_{+-}\rvert = \lvert A(K^0_L \rightarrow \pi^+ \pi^-) / A(K^0_S \rightarrow \pi^+ \pi^-)\rvert$	$(2.232 \pm 0.011) \times 10^{-3}$ (S = 1.8)	NODE=S013E+-
$\lvert\epsilon\rvert = (2\lvert\eta_{+-}\rvert + \lvert\eta_{00}\rvert)/3$	$(2.228 \pm 0.011) \times 10^{-3}$ (S = 1.8)	NODE=S013EP
$\lvert\eta_{00}/\eta_{+-}\rvert$ [h]	0.9950 ± 0.0007 (S = 1.6)	NODE=S013ER
$\text{Re}(\epsilon'/\epsilon) = (1-\lvert\eta_{00}/\eta_{+-}\rvert)/3$ [h]	$(1.66 \pm 0.23) \times 10^{-3}$ (S = 1.6)	NODE=S013EPS NODE=S013F+-
Assuming *CPT*		
ϕ_{+-}, phase of η_{+-}	$(43.51 \pm 0.05)^\circ$ (S = 1.2)	NODE=S013F+-
ϕ_{00}, phase of η_{00}	$(43.52 \pm 0.05)^\circ$ (S = 1.3)	NODE=S013FOO
$\phi_\epsilon = (2\phi_{+-} + \phi_{00})/3$	$(43.52 \pm 0.05)^\circ$ (S = 1.2)	NODE=S013EPH NODE=S013F+2
Not assuming *CPT*		
ϕ_{+-}, phase of η_{+-}	$(43.4 \pm 0.5)^\circ$ (S = 1.2)	NODE=S013F+2;→ UNCHECKED ←;OUR EVAL
ϕ_{00}, phase of η_{00}	$(43.7 \pm 0.6)^\circ$ (S = 1.2)	NODE=S013FO2;→ UNCHECKED ←;OUR EVAL
$\phi_\epsilon = (2\phi_{+-} + \phi_{00})/3$	$(43.5 \pm 0.5)^\circ$ (S = 1.3)	NODE=S013EP1;→ UNCHECKED ←;OUR EVAL
CP asymmetry A in $K^0_L \rightarrow \pi^+ \pi^- e^+ e^-$	$(13.7 \pm 1.5)\%$	NODE=S013DPA
β_{CP} from $K^0_L \rightarrow e^+ e^- e^+ e^-$	-0.19 ± 0.07	NODE=S013BCP
γ_{CP} from $K^0_L \rightarrow e^+ e^- e^+ e^-$	0.01 ± 0.11 (S = 1.6)	NODE=S013GCP
parameters for $K^0_L \rightarrow \pi^+ \pi^- \gamma$ decay		NODE=S013307
$\lvert\eta_{+-\gamma}\rvert = \lvert A(K^0_L \rightarrow \pi^+ \pi^- \gamma$, *CP* violating$)/A(K^0_S \rightarrow \pi^+ \pi^- \gamma)\rvert$	$(2.35 \pm 0.07) \times 10^{-3}$	NODE=S013E+G
$\phi_{+-\gamma}$ = phase of $\eta_{+-\gamma}$	$(44 \pm 4)^\circ$	NODE=S013P+G
$\Gamma(K^0_L \rightarrow \pi^+ \pi^-)/\Gamma_{\text{total}}$ [i]	$(1.967 \pm 0.010) \times 10^{-3}$ (S = 1.5)	PAR=S013;DESIG=5
$\Gamma(K^0_L \rightarrow \pi^0 \pi^0)/\Gamma_{\text{total}}$	$(8.64 \pm 0.06) \times 10^{-4}$ (S = 1.8)	PAR=S013;DESIG=11
$A_{CP}(B^+ \rightarrow D_{CP(+1)} K^+)$	0.170 ± 0.033 (S = 1.2)	NODE=S041AY3
$A_{ADS}(B^+ \rightarrow D K^+)$	-0.52 ± 0.15	NODE=S041AA1
$A_{CP}(B^+ \rightarrow \eta K^+)$	-0.37 ± 0.08	NODE=S041CP3
$A_{CP}(B^+ \rightarrow f_2(1270) K^+)$	$-0.68^{+0.19}_{-0.17}$	NODE=S041CR0
$A_{CP}(B^+ \rightarrow \rho^0 K^+)$	0.37 ± 0.10	NODE=S041CQ6
$A_{CP}(B^+ \rightarrow f_0(1370) \pi^+)$	0.72 ± 0.22	NODE=S041CT5
$\gamma(B^+ \rightarrow D^{(*)0} K^{(*)+})$	$(72 \pm 11)^\circ$	NODE=S041GAM

A_{CP} ($B^0 \to K^+\pi^-$)	-0.087 ± 0.008	NODE=S042ACP
$A_{CP}(B^0 \to \eta K^*(892)^0)$	0.19 ± 0.05	NODE=S042CP1
$S_{D^*(2010)^- D^+}$ ($B^0 \to D^*(2010)^- D^+$)	-0.72 ± 0.15	NODE=S042SPJ
$S_{D^*(2010)^+ D^-}$ ($B^0 \to D^*(2010)^+ D^-$)	-0.73 ± 0.14	NODE=S042SPK
$S_{D^{*+} D^{*-}}$ ($B^0 \to D^{*+} D^{*-}$)	-0.59 ± 0.14 (S = 1.8)	NODE=S042LD2
S_+ ($B^0 \to D^{*+} D^{*-}$)	-0.73 ± 0.09	NODE=S042SD+
$S_{D^+ D^-}$ ($B^0 \to D^+ D^-$)	$-0.99^{+0.17}_{-0.14}$	NODE=S042SPD
$S_{J/\psi(1S)\pi^0}$ ($B^0 \to J/\psi(1S)\pi^0$)	-0.94 ± 0.29 (S = 1.9)	NODE=S042SPL
$S_{K^0\pi^0}$ ($B^0 \to K^0\pi^0$)	0.58 ± 0.17	NODE=S042SKP
$S_{\eta' K^0}$ ($B^0 \to \eta' K^0$)	0.60 ± 0.07	NODE=S042SEK
$S_{K^+K^-K^0_S}$ ($B^0 \to K^+K^-K^0_S$ nonresonant)	-0.66 ± 0.11	NODE=S042SX2
$S_{K^+K^-K^0_S}$ ($B^0 \to K^+K^-K^0_S$ inclusive)	-0.65 ± 0.12	NODE=S042SKK
$S_{\pi\pi}$ ($B^0 \to \pi^+\pi^-$)	-0.65 ± 0.07	NODE=S042SPI
$\Delta C_{\rho\pi}$ ($B^0 \to \rho^+\pi^-$)	0.37 ± 0.08	NODE=S042CDT
$S_{\eta_c K^0_S}$ ($B^0 \to \eta_c K^0_S$)	0.93 ± 0.17	NODE=S042SEC
$\sin(2\beta)$ ($B^0 \to J/\psi K^0_S$)	0.682 ± 0.019	NODE=S042BET;→ UNCHECKED ←;OUR EVAL
$S_{J/\psi(\mathrm{nS})K^0}$ ($B^0 \to J/\psi(\mathrm{nS})K^0$)	0.676 ± 0.021	NODE=S042SJK;→ UNCHECKED ←;OUR EVAL
$S_{\chi_{c1}K^0_S}$ ($B^0 \to \chi_{c1}K^0_S$)	0.63 ± 0.10	NODE=S042SC1
$\sin(2\beta_{\mathrm{eff}})(B^0 \to K^+K^-K^0_S)$	$0.77^{+0.13}_{-0.12}$	NODE=S042BTK
α	$(90 \pm 5)^\circ$	NODE=S042ALP
$\mathrm{Re}(\epsilon_b) / (1 + \lvert\epsilon_b\rvert^2)$	$(-2.0 \pm 0.5) \times 10^{-3}$	NODE=S051EPS

CPT INVARIANCE

CONLAW=CPT

$(m_{W^+} - m_{W^-}) / m_{\mathrm{average}}$	-0.002 ± 0.007	NODE=S043MDA;OUR EVAL
$(m_{e^+} - m_{e^-}) / m_{\mathrm{average}}$	$<8 \times 10^{-9}$, CL = 90%	NODE=S003DM
$\lvert q_{e^+} + q_{e^-}\rvert / e$	$<4 \times 10^{-8}$	NODE=S003DQ
$(g_{e^+} - g_{e^-}) / g_{\mathrm{average}}$	$(-0.5 \pm 2.1) \times 10^{-12}$	NODE=S003MMR
$(\tau_{\mu^+} - \tau_{\mu^-}) / \tau_{\mathrm{average}}$	$(2 \pm 8) \times 10^{-5}$	NODE=S004DTT;OUR EVAL
$(g_{\mu^+} - g_{\mu^-}) / g_{\mathrm{average}}$	$(-0.11 \pm 0.12) \times 10^{-8}$	NODE=S004MMR
$(m_{\tau^+} - m_{\tau^-})/m_{\mathrm{average}}$	$<2.8 \times 10^{-4}$, CL = 90%	NODE=S035MDF
$m_t - m_{\overline{t}}$	-0.6 ± 0.6 GeV (S = 1.2)	NODE=Q007CPT
$(m_{\pi^+} - m_{\pi^-}) / m_{\mathrm{average}}$	$(2 \pm 5) \times 10^{-4}$	NODE=S008DM
$(\tau_{\pi^+} - \tau_{\pi^-}) / \tau_{\mathrm{average}}$	$(6 \pm 7) \times 10^{-4}$	NODE=S008DT
$(m_{K^+} - m_{K^-}) / m_{\mathrm{average}}$	$(-0.6 \pm 1.8) \times 10^{-4}$	NODE=S010DMA;OUR EVAL
$(\tau_{K^+} - \tau_{K^-}) / \tau_{\mathrm{average}}$	$(0.10 \pm 0.09)\%$ (S = 1.2)	NODE=S010DT
$K^\pm \to \mu^\pm\nu_\mu$ rate difference/average	$(-0.5 \pm 0.4)\%$	NODE=S010D1
$K^\pm \to \pi^\pm\pi^0$ rate difference/average [j]	$(0.8 \pm 1.2)\%$	NODE=S010D4
		NODE=S011DRE
δ in $K^0 - \overline{K}^0$ mixing		
real part of δ	$(2.5 \pm 2.3) \times 10^{-4}$	NODE=S011DRE
imaginary part of δ	$(-1.5 \pm 1.6) \times 10^{-5}$	NODE=S011DIM
Re(y), K_{e3} parameter	$(0.4 \pm 2.5) \times 10^{-3}$	NODE=S011YRE
Re(x_-), K_{e3} parameter	$(-2.9 \pm 2.0) \times 10^{-3}$	NODE=S011XRM
$\lvert m_{K^0} - m_{\overline{K}^0}\rvert / m_{\mathrm{average}}$ [k]	$<6 \times 10^{-19}$, CL = 90%	NODE=S011DMM
$(\Gamma_{K^0} - \Gamma_{\overline{K}^0})/m_{\mathrm{average}}$	$(8 \pm 8) \times 10^{-18}$	NODE=S011DGM
phase difference $\phi_{00} - \phi_{+-}$	$(0.34 \pm 0.32)^\circ$	NODE=S013DF1;→ UNCHECKED ←;OUR EVAL
$\mathrm{Re}(\frac{2}{3}\eta_{+-} + \frac{1}{3}\eta_{00}) - \frac{A_L}{2}$	$(-3 \pm 35) \times 10^{-6}$	NODE=S013CPT
$A_{CPT}(D^0 \to K^-\pi^+)$	0.008 ± 0.008	NODE=S032CPT

ΔS^+_{CPT} $(S^-_{\ell^+,K^0_S} - S^+_{\ell^+,K^0_S})$		0.16 ± 0.23	NODE=S042TVI
ΔS^-_{CPT} $(S^+_{\ell^+,K^0_S} - S^-_{\ell^+,K^0_S})$		-0.03 ± 0.14	NODE=S042TVJ
ΔC^+_{CPT} $(C^-_{\ell^+,K^0_S} - C^+_{\ell^+,K^0_S})$		0.14 ± 0.17	NODE=S042TVK
ΔC^-_{CPT} $(C^+_{\ell^+,K^0_S} - C^-_{\ell^+,K^0_S})$		0.03 ± 0.14	NODE=S042TVL
$\lvert m_p - m_{\overline{p}}\rvert / m_p$	[l]	$<2 \times 10^{-9}$, CL = 90%	NODE=S016DM
$(\lvert \frac{q_{\overline{p}}}{m_{\overline{p}}} \rvert - \frac{q_p}{m_p}) / \frac{q_p}{m_p}$		$(-9 \pm 9) \times 10^{-11}$	NODE=S016DMM;OUR EVAL
$\lvert q_p + q_{\overline{p}}\rvert / e$	[l]	$<2 \times 10^{-9}$, CL = 90%	NODE=S016DQ2
$(\mu_p + \mu_{\overline{p}}) / \mu_p$		$(0 \pm 5) \times 10^{-6}$	NODE=S016MMD
$(m_n - m_{\overline{n}}) / m_n$		$(9 \pm 6) \times 10^{-5}$	NODE=S017DMM;OUR EVAL
$(m_\Lambda - m_{\overline{\Lambda}}) / m_\Lambda$		$(-0.1 \pm 1.1) \times 10^{-5}$ (S = 1.6)	NODE=S018DM
$(\tau_\Lambda - \tau_{\overline{\Lambda}}) / \tau_\Lambda$		-0.001 ± 0.009	NODE=S018DT
$(\tau_{\Sigma^+} - \tau_{\overline{\Sigma}^-}) / \tau_{\Sigma^+}$		$(-0.6 \pm 1.2) \times 10^{-3}$	NODE=S019DT
$(\mu_{\Sigma^+} + \mu_{\overline{\Sigma}^-}) / \mu_{\Sigma^+}$		0.014 ± 0.015	NODE=S019MMD
$(m_{\Xi^-} - m_{\overline{\Xi}^+}) / m_{\Xi^-}$		$(-3 \pm 9) \times 10^{-5}$	NODE=S022DMM
$(\tau_{\Xi^-} - \tau_{\overline{\Xi}^+}) / \tau_{\Xi^-}$		-0.01 ± 0.07	NODE=S022DT
$(\mu_{\Xi^-} + \mu_{\overline{\Xi}^+}) / \lvert\mu_{\Xi^-}\rvert$		$+0.01 \pm 0.05$	NODE=S022MMD;→ UNCHECKED ←;OUR EVAL
$(m_{\Omega^-} - m_{\overline{\Omega}^+}) / m_{\Omega^-}$		$(-1 \pm 8) \times 10^{-5}$	NODE=S024DMM
$(\tau_{\Omega^-} - \tau_{\overline{\Omega}^+}) / \tau_{\Omega^-}$		0.00 ± 0.05	NODE=S024TD;→ UNCHECKED ←;OUR EST

TESTS OF NUMBER CONSERVATION LAWS

LEPTON FAMILY NUMBER

CONLAW=LF

Lepton family number conservation means separate conservation of each of L_e, L_μ, L_τ.

$\Gamma(Z \to e^\pm \mu^\mp)/\Gamma_{\rm total}$	[n]	$<1.7 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=5
$\Gamma(Z \to e^\pm \tau^\mp)/\Gamma_{\rm total}$	[n]	$<9.8 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=25
$\Gamma(Z \to \mu^\pm \tau^\mp)/\Gamma_{\rm total}$	[n]	$<1.2 \times 10^{-5}$, CL = 95%	PAR=S044;DESIG=26
$\sigma(e^+e^- \to e^\pm\tau^\mp) / \sigma(e^+e^- \to \mu^+\mu^-)$		$<8.9 \times 10^{-6}$, CL = 95%	NODE=S003RET
$\sigma(e^+e^- \to \mu^\pm\tau^\mp) / \sigma(e^+e^- \to \mu^+\mu^-)$		$<4.0 \times 10^{-6}$, CL = 95%	NODE=S003RMT
limit on $\mu^- \to e^-$ conversion			NODE=S004245
$\sigma(\mu^- {}^{32}\mathrm{S} \to e^- {}^{32}\mathrm{S}) / \sigma(\mu^- {}^{32}\mathrm{S} \to \nu_\mu {}^{32}\mathrm{P}^*)$		$<7 \times 10^{-11}$, CL = 90%	NODE=S004RE
$\sigma(\mu^- \mathrm{Ti} \to e^- \mathrm{Ti}) / \sigma(\mu^- \mathrm{Ti} \to \text{capture})$		$<4.3 \times 10^{-12}$, CL = 90%	NODE=S004RG
$\sigma(\mu^- \mathrm{Pb} \to e^- \mathrm{Pb}) / \sigma(\mu^- \mathrm{Pb} \to \text{capture})$		$<4.6 \times 10^{-11}$, CL = 90%	NODE=S004RH
limit on muonium → antimuonium conversion $R_g = G_C / G_F$		<0.0030, CL = 90%	NODE=S004MC
$\Gamma(\mu^- \to e^- \nu_e \overline{\nu}_\mu)/\Gamma_{\rm total}$	[o]	$<1.2 \times 10^{-2}$, CL = 90%	PAR=S004;DESIG=3
$\Gamma(\mu^- \to e^- \gamma)/\Gamma_{\rm total}$		$<2.4 \times 10^{-12}$, CL = 90%	PAR=S004;DESIG=4
$\Gamma(\mu^- \to e^- e^+ e^-)/\Gamma_{\rm total}$		$<1.0 \times 10^{-12}$, CL = 90%	PAR=S004;DESIG=5
$\Gamma(\mu^- \to e^- 2\gamma)/\Gamma_{\rm total}$		$<7.2 \times 10^{-11}$, CL = 90%	PAR=S004;DESIG=6
$\Gamma(\tau^- \to e^- \gamma)/\Gamma_{\rm total}$		$<3.3 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=32
$\Gamma(\tau^- \to \mu^- \gamma)/\Gamma_{\rm total}$		$<4.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=31
$\Gamma(\tau^- \to e^- \pi^0)/\Gamma_{\rm total}$		$<8.0 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=40
$\Gamma(\tau^- \to \mu^- \pi^0)/\Gamma_{\rm total}$		$<1.1 \times 10^{-7}$, CL = 90%	PAR=S035;DESIG=39

$\Gamma(\tau^- \to e^- K^0_S)/\Gamma_{total}$		$<2.6 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=42
$\Gamma(\tau^- \to \mu^- K^0_S)/\Gamma_{total}$		$<2.3 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=41
$\Gamma(\tau^- \to e^- \eta)/\Gamma_{total}$		$<9.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=67
$\Gamma(\tau^- \to \mu^- \eta)/\Gamma_{total}$		$<6.5 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=114
$\Gamma(\tau^- \to e^- \rho^0)/\Gamma_{total}$		$<1.8 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=44
$\Gamma(\tau^- \to \mu^- \rho^0)/\Gamma_{total}$		$<1.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=43
$\Gamma(\tau^- \to e^- \omega)/\Gamma_{total}$		$<4.8 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=305
$\Gamma(\tau^- \to \mu^- \omega)/\Gamma_{total}$		$<4.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=306
$\Gamma(\tau^- \to e^- K^*(892)^0)/\Gamma_{total}$		$<3.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=53
$\Gamma(\tau^- \to \mu^- K^*(892)^0)/\Gamma_{total}$		$<5.9 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=54
$\Gamma(\tau^- \to e^- \overline{K}^*(892)^0)/\Gamma_{total}$		$<3.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=131
$\Gamma(\tau^- \to \mu^- \overline{K}^*(892)^0)/\Gamma_{total}$		$<7.0 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=132
$\Gamma(\tau^- \to e^- \eta'(958))/\Gamma_{total}$		$<1.6 \times 10^{-7}$, CL = 90%	PAR=S035;DESIG=292
$\Gamma(\tau^- \to \mu^- \eta'(958))/\Gamma_{total}$		$<1.3 \times 10^{-7}$, CL = 90%	PAR=S035;DESIG=293
$\Gamma(\tau^- \to e^- f_0(980) \to e^- \pi^+ \pi^-)/\Gamma_{total}$		$<3.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=307
$\Gamma(\tau^- \to \mu^- f_0(980) \to \mu^- \pi^+ \pi^-)/\Gamma_{total}$		$<3.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=308
$\Gamma(\tau^- \to e^- \phi)/\Gamma_{total}$		$<3.1 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=255
$\Gamma(\tau^- \to \mu^- \phi)/\Gamma_{total}$		$<8.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=256
$\Gamma(\tau^- \to e^- e^+ e^-)/\Gamma_{total}$		$<2.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=38
$\Gamma(\tau^- \to e^- \mu^+ \mu^-)/\Gamma_{total}$		$<2.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=36
$\Gamma(\tau^- \to e^+ \mu^- \mu^-)/\Gamma_{total}$		$<1.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=55
$\Gamma(\tau^- \to \mu^- e^+ e^-)/\Gamma_{total}$		$<1.8 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=37
$\Gamma(\tau^- \to \mu^+ e^- e^-)/\Gamma_{total}$		$<1.5 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=56
$\Gamma(\tau^- \to \mu^- \mu^+ \mu^-)/\Gamma_{total}$		$<2.1 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=35
$\Gamma(\tau^- \to e^- \pi^+ \pi^-)/\Gamma_{total}$		$<2.3 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=45
$\Gamma(\tau^- \to \mu^- \pi^+ \pi^-)/\Gamma_{total}$		$<2.1 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=47
$\Gamma(\tau^- \to e^- \pi^+ K^-)/\Gamma_{total}$		$<3.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=49
$\Gamma(\tau^- \to e^- \pi^- K^+)/\Gamma_{total}$		$<3.1 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=77
$\Gamma(\tau^- \to e^- K^0_S K^0_S)/\Gamma_{total}$		$<7.1 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=288
$\Gamma(\tau^- \to e^- K^+ K^-)/\Gamma_{total}$		$<3.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=251
$\Gamma(\tau^- \to \mu^- \pi^+ K^-)/\Gamma_{total}$		$<8.6 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=51
$\Gamma(\tau^- \to \mu^- \pi^- K^+)/\Gamma_{total}$		$<4.5 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=78
$\Gamma(\tau^- \to \mu^- K^0_S K^0_S)/\Gamma_{total}$		$<8.0 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=289
$\Gamma(\tau^- \to \mu^- K^+ K^-)/\Gamma_{total}$		$<4.4 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=253
$\Gamma(\tau^- \to e^- \pi^0 \pi^0)/\Gamma_{total}$		$<6.5 \times 10^{-6}$, CL = 90%	PAR=S035;DESIG=224
$\Gamma(\tau^- \to \mu^- \pi^0 \pi^0)/\Gamma_{total}$		$<1.4 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=225
$\Gamma(\tau^- \to e^- \eta\eta)/\Gamma_{total}$		$<3.5 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=226
$\Gamma(\tau^- \to \mu^- \eta\eta)/\Gamma_{total}$		$<6.0 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=227
$\Gamma(\tau^- \to e^- \pi^0 \eta)/\Gamma_{total}$		$<2.4 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=228
$\Gamma(\tau^- \to \mu^- \pi^0 \eta)/\Gamma_{total}$		$<2.2 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=229
$\Gamma(\tau^- \to e^-$ light boson$)/\Gamma_{total}$		$<2.7 \times 10^{-3}$, CL = 95%	PAR=S035;DESIG=102
$\Gamma(\tau^- \to \mu^-$ light boson$)/\Gamma_{total}$		$<5 \times 10^{-3}$, CL = 95%	PAR=S035;DESIG=103 NODE=S067T12

LEPTON FAMILY NUMBER VIOLATION IN NEUTRINOS

Solar Neutrinos			
$\sin^2(2\theta_{12})$		0.857 ± 0.024	NODE=S067T12
Δm^2_{21}		$(7.50 \pm 0.20) \times 10^{-5}$ eV^2	NODE=S067DM3 NODE=S067T23
Atmospheric Neutrinos			
$\sin^2(2\theta_{23})$	[p]	>0.95	NODE=S067T23
Δm^2_{32}	[q]	$(2.32^{+0.12}_{-0.08}) \times 10^{-3}$ eV^2	NODE=S067DM1 NODE=S067T13
Reactor Neutrinos			
$\sin^2(2\theta_{13})$		0.095 ± 0.010	NODE=S067T13
$\Gamma(\pi^+ \to \mu^+ \nu_e)/\Gamma_{total}$	[r]	$<8.0 \times 10^{-3}$, CL = 90%	PAR=S008;DESIG=8
$\Gamma(\pi^+ \to \mu^- e^+ e^+ \nu)/\Gamma_{total}$		$<1.6 \times 10^{-6}$, CL = 90%	PAR=S008;DESIG=9
$\Gamma(\pi^0 \to \mu^+ e^-)/\Gamma_{total}$		$<3.8 \times 10^{-10}$, CL = 90%	PAR=S009;DESIG=14
$\Gamma(\pi^0 \to \mu^- e^+)/\Gamma_{total}$		$<3.4 \times 10^{-9}$, CL = 90%	PAR=S009;DESIG=22
$\Gamma(\pi^0 \to \mu^+ e^- + \mu^- e^+)/\Gamma_{total}$		$<3.6 \times 10^{-10}$, CL = 90%	PAR=S009;DESIG=8

$\Gamma(\eta \to \mu^+ e^- + \mu^- e^+)/\Gamma_{total}$		$<6 \times 10^{-6}$, CL = 90%	PAR=S014;DESIG=20
$\Gamma(\eta'(958) \to e\mu)/\Gamma_{total}$		$<4.7 \times 10^{-4}$, CL = 90%	PAR=M002;DESIG=27
$\Gamma(\phi(1020) \to e^\pm \mu^\mp)/\Gamma_{total}$		$<2 \times 10^{-6}$, CL = 90%	PAR=M004;DESIG=258
$\Gamma(K^+ \to \mu^- \nu e^+ e^+)/\Gamma_{total}$		$<2.1 \times 10^{-8}$, CL = 90%	PAR=S010;DESIG=31
$\Gamma(K^+ \to \mu^+ \nu_e)/\Gamma_{total}$	[r]	$<4 \times 10^{-3}$, CL = 90%	PAR=S010;DESIG=34
$\Gamma(K^+ \to \pi^+ \mu^+ e^-)/\Gamma_{total}$		$<1.3 \times 10^{-11}$, CL = 90%	PAR=S010;DESIG=29
$\Gamma(K^+ \to \pi^+ \mu^- e^+)/\Gamma_{total}$		$<5.2 \times 10^{-10}$, CL = 90%	PAR=S010;DESIG=25
$\Gamma(K^0_L \to e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<4.7 \times 10^{-12}$, CL = 90%	PAR=S013;DESIG=8
$\Gamma(K^0_L \to e^\pm e^\pm \mu^\mp \mu^\mp)/\Gamma_{total}$	[n]	$<4.12 \times 10^{-11}$, CL = 90%	PAR=S013;DESIG=24
$\Gamma(K^0_L \to \pi^0 \mu^\pm e^\mp)/\Gamma_{total}$	[n]	$<7.6 \times 10^{-11}$, CL = 90%	PAR=S013;DESIG=36
$\Gamma(K^0_L \to \pi^0 \pi^0 \mu^\pm e^\mp)/\Gamma_{total}$		$<1.7 \times 10^{-10}$, CL = 90%	PAR=S013;DESIG=53
$\Gamma(D^+ \to \pi^+ e^+ \mu^-)/\Gamma_{total}$		$<2.9 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=110
$\Gamma(D^+ \to \pi^+ e^- \mu^+)/\Gamma_{total}$		$<3.6 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=111
$\Gamma(D^+ \to K^+ e^+ \mu^-)/\Gamma_{total}$		$<1.2 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=115
$\Gamma(D^+ \to K^+ e^- \mu^+)/\Gamma_{total}$		$<2.8 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=116
$\Gamma(D^0 \to \mu^\pm e^\mp)/\Gamma_{total}$	[n]	$<2.6 \times 10^{-7}$, CL = 90%	PAR=S032;DESIG=40
$\Gamma(D^0 \to \pi^0 e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<8.6 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=234
$\Gamma(D^0 \to \eta e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<1.0 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=235
$\Gamma(D^0 \to \pi^+ \pi^- e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<1.5 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=268
$\Gamma(D^0 \to \rho^0 e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<4.9 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=236
$\Gamma(D^0 \to \omega e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<1.2 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=237
$\Gamma(D^0 \to K^- K^+ e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<1.8 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=270
$\Gamma(D^0 \to \phi e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<3.4 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=238
$\Gamma(D^0 \to \overline{K}^0 e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<1.0 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=239
$\Gamma(D^0 \to K^- \pi^+ e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<5.53 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=269
$\Gamma(D^0 \to \overline{K}^*(892)^0 e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<8.3 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=240
$\Gamma(D^+_s \to \pi^+ e^+ \mu^-)/\Gamma_{total}$		$<1.2 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=156
$\Gamma(D^+_s \to \pi^+ e^- \mu^+)/\Gamma_{total}$		$<2.0 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=157
$\Gamma(D^+_s \to K^+ e^+ \mu^-)/\Gamma_{total}$		$<1.4 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=158
$\Gamma(D^+_s \to K^+ e^- \mu^+)/\Gamma_{total}$		$<9.7 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=159
$\Gamma(B^+ \to \pi^+ e^+ \mu^-)/\Gamma_{total}$		$<6.4 \times 10^{-3}$, CL = 90%	PAR=S041;DESIG=86
$\Gamma(B^+ \to \pi^+ e^- \mu^+)/\Gamma_{total}$		$<6.4 \times 10^{-3}$, CL = 90%	PAR=S041;DESIG=87
$\Gamma(B^+ \to \pi^+ e^\pm \mu^\mp)/\Gamma_{total}$		$<1.7 \times 10^{-7}$, CL = 90%	PAR=S041;DESIG=476
$\Gamma(B^+ \to \pi^+ e^+ \tau^-)/\Gamma_{total}$		$<7.4 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=586
$\Gamma(B^+ \to \pi^+ e^- \tau^+)/\Gamma_{total}$		$<2.0 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=587
$\Gamma(B^+ \to \pi^+ e^\pm \tau^\mp)/\Gamma_{total}$		$<7.5 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=588
$\Gamma(B^+ \to \pi^+ \mu^+ \tau^-)/\Gamma_{total}$		$<6.2 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=589
$\Gamma(B^+ \to \pi^+ \mu^- \tau^+)/\Gamma_{total}$		$<4.5 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=590
$\Gamma(B^+ \to \pi^+ \mu^\pm \tau^\mp)/\Gamma_{total}$		$<7.2 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=591
$\Gamma(B^+ \to K^+ e^+ \mu^-)/\Gamma_{total}$		$<9.1 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=89
$\Gamma(B^+ \to K^+ e^- \mu^+)/\Gamma_{total}$		$<1.3 \times 10^{-7}$, CL = 90%	PAR=S041;DESIG=90
$\Gamma(B^+ \to K^+ e^\pm \mu^\mp)/\Gamma_{total}$		$<9.1 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=446
$\Gamma(B^+ \to K^+ e^+ \tau^-)/\Gamma_{total}$		$<4.3 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=592
$\Gamma(B^+ \to K^+ e^- \tau^+)/\Gamma_{total}$		$<1.5 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=593
$\Gamma(B^+ \to K^+ e^\pm \tau^\mp)/\Gamma_{total}$		$<3.0 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=594
$\Gamma(B^+ \to K^+ \mu^+ \tau^-)/\Gamma_{total}$		$<4.5 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=595
$\Gamma(B^+ \to K^+ \mu^- \tau^+)/\Gamma_{total}$		$<2.8 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=596
$\Gamma(B^+ \to K^+ \mu^\pm \tau^\mp)/\Gamma_{total}$		$<4.8 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=486
$\Gamma(B^+ \to K^*(892)^+ e^+ \mu^-)/\Gamma_{total}$		$<1.3 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=447
$\Gamma(B^+ \to K^*(892)^+ e^- \mu^+)/\Gamma_{total}$		$<9.9 \times 10^{-7}$, CL = 90%	PAR=S041;DESIG=448
$\Gamma(B^+ \to K^*(892)^+ e^\pm \mu^\mp)/\Gamma_{total}$		$<1.4 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=296
$\Gamma(B^0 \to e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<6.4 \times 10^{-8}$, CL = 90%	PAR=S042;DESIG=8
$\Gamma(B^0 \to \pi^0 e^\pm \mu^\mp)/\Gamma_{total}$		$<1.4 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=383
$\Gamma(B^0 \to K^0 e^\pm \mu^\mp)/\Gamma_{total}$		$<2.7 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=221
$\Gamma(B^0 \to K^*(892)^0 e^+ \mu^-)/\Gamma_{total}$		$<5.3 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=334
$\Gamma(B^0 \to K^*(892)^0 e^- \mu^+)/\Gamma_{total}$		$<3.4 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=335

$\Gamma(B^0 \to K^*(892)^0 e^\pm \mu^\mp)/\Gamma_{total}$		$<5.8 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=222
$\Gamma(B^0 \to e^\pm \tau^\mp)/\Gamma_{total}$	[n]	$<2.8 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=121
$\Gamma(B^0 \to \mu^\pm \tau^\mp)/\Gamma_{total}$	[n]	$<2.2 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=122
$\Gamma(B \to s e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<2.2 \times 10^{-5}$, CL = 90%	PAR=S049;DESIG=33
$\Gamma(B \to \pi e^\pm \mu^\mp)/\Gamma_{total}$		$<9.2 \times 10^{-8}$, CL = 90%	PAR=S049;DESIG=243
$\Gamma(B \to \rho e^\pm \mu^\mp)/\Gamma_{total}$		$<3.2 \times 10^{-6}$, CL = 90%	PAR=S049;DESIG=244
$\Gamma(B \to K e^\pm \mu^\mp)/\Gamma_{total}$		$<3.8 \times 10^{-8}$, CL = 90%	PAR=S049;DESIG=241
$\Gamma(B \to K^*(892) e^\pm \mu^\mp)/\Gamma_{total}$		$<5.1 \times 10^{-7}$, CL = 90%	PAR=S049;DESIG=242
$\Gamma(B_s^0 \to e^\pm \mu^\mp)/\Gamma_{total}$	[n]	$<2.0 \times 10^{-7}$, CL = 90%	PAR=S086;DESIG=23
$\Gamma(J/\psi(1S) \to e^\pm \mu^\mp)/\Gamma_{total}$		$<1.1 \times 10^{-6}$, CL = 90%	PAR=M070;DESIG=177
$\Gamma(J/\psi(1S) \to e^\pm \tau^\mp)/\Gamma_{total}$		$<8.3 \times 10^{-6}$, CL = 90%	PAR=M070;DESIG=178
$\Gamma(J/\psi(1S) \to \mu^\pm \tau^\mp)/\Gamma_{total}$		$<2.0 \times 10^{-6}$, CL = 90%	PAR=M070;DESIG=179
$\Gamma(\Upsilon(1S) \to \mu^\pm \tau^\mp)/\Gamma_{total}$		$<6.0 \times 10^{-6}$, CL = 95%	PAR=M049;DESIG=116
$\Gamma(\Upsilon(2S) \to e^\pm \tau^\mp)/\Gamma_{total}$		$<3.2 \times 10^{-6}$, CL = 90%	PAR=M052;DESIG=107
$\Gamma(\Upsilon(2S) \to \mu^\pm \tau^\mp)/\Gamma_{total}$		$<3.3 \times 10^{-6}$, CL = 90%	PAR=M052;DESIG=104
$\Gamma(\Upsilon(3S) \to e^\pm \tau^\mp)/\Gamma_{total}$		$<4.2 \times 10^{-6}$, CL = 90%	PAR=M048;DESIG=111
$\Gamma(\Upsilon(3S) \to \mu^\pm \tau^\mp)/\Gamma_{total}$		$<3.1 \times 10^{-6}$, CL = 90%	PAR=M048;DESIG=105
$\Gamma(\Lambda_c^+ \to p e^+ \mu^-)/\Gamma_{total}$		$<9.9 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=109
$\Gamma(\Lambda_c^+ \to p e^- \mu^+)/\Gamma_{total}$		$<1.9 \times 10^{-5}$, CL = 90%	PAR=S033;DESIG=110

TOTAL LEPTON NUMBER

CONLAW=L

Violation of total lepton number conservation also implies violation of lepton family number conservation.

$\Gamma(Z \to pe)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=71
$\Gamma(Z \to p\mu)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=72
limit on $\mu^- \to e^+$ conversion			NODE=S004250
$\sigma(\mu^- {}^{32}S \to e^+ {}^{32}Si^*)$ / $\sigma(\mu^- {}^{32}S \to \nu_\mu {}^{32}P^*)$		$<9 \times 10^{-10}$, CL = 90%	NODE=S004RP1
$\sigma(\mu^- {}^{127}I \to e^+ {}^{127}Sb^*)$ / $\sigma(\mu^- {}^{127}I \to$ anything)		$<3 \times 10^{-10}$, CL = 90%	NODE=S004RP2
$\sigma(\mu^- Ti \to e^+ Ca)$ / $\sigma(\mu^- Ti \to$ capture)		$<3.6 \times 10^{-11}$, CL = 90%	NODE=S004RP4
$\Gamma(\tau^- \to e^+ \pi^- \pi^-)/\Gamma_{total}$		$<2.0 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=46
$\Gamma(\tau^- \to \mu^+ \pi^- \pi^-)/\Gamma_{total}$		$<3.9 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=48
$\Gamma(\tau^- \to e^+ \pi^- K^-)/\Gamma_{total}$		$<3.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=50
$\Gamma(\tau^- \to e^+ K^- K^-)/\Gamma_{total}$		$<3.3 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=252
$\Gamma(\tau^- \to \mu^+ \pi^- K^-)/\Gamma_{total}$		$<4.8 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=52
$\Gamma(\tau^- \to \mu^+ K^- K^-)/\Gamma_{total}$		$<4.7 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=254
$\Gamma(\tau^- \to \overline{p}\gamma)/\Gamma_{total}$		$<3.5 \times 10^{-6}$, CL = 90%	PAR=S035;DESIG=104
$\Gamma(\tau^- \to \overline{p}\pi^0)/\Gamma_{total}$		$<1.5 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=105
$\Gamma(\tau^- \to \overline{p}2\pi^0)/\Gamma_{total}$		$<3.3 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=268
$\Gamma(\tau^- \to \overline{p}\eta)/\Gamma_{total}$		$<8.9 \times 10^{-6}$, CL = 90%	PAR=S035;DESIG=106
$\Gamma(\tau^- \to \overline{p}\pi^0\eta)/\Gamma_{total}$		$<2.7 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=269
$\Gamma(\tau^- \to \Lambda\pi^-)/\Gamma_{total}$		$<7.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=297
$\Gamma(\tau^- \to \overline{\Lambda}\pi^-)/\Gamma_{total}$		$<1.4 \times 10^{-7}$, CL = 90%	PAR=S035;DESIG=298
$t_{1/2}({}^{76}Ge \to {}^{76}Se + 2e^-)$		$>1.9 \times 10^{25}$ yr, CL = 90%	NODE=S076HCL;→ UNCHECKED ←;OUR EVAL
$\Gamma(\pi^+ \to \mu^+ \overline{\nu}_e)/\Gamma_{total}$	[r]	$<1.5 \times 10^{-3}$, CL = 90%	PAR=S008;DESIG=7
$\Gamma(K^+ \to \pi^- \mu^+ e^+)/\Gamma_{total}$		$<5.0 \times 10^{-10}$, CL = 90%	PAR=S010;DESIG=45
$\Gamma(K^+ \to \pi^- e^+ e^+)/\Gamma_{total}$		$<6.4 \times 10^{-10}$, CL = 90%	PAR=S010;DESIG=19
$\Gamma(K^+ \to \pi^- \mu^+ \mu^+)/\Gamma_{total}$	[r]	$<1.1 \times 10^{-9}$, CL = 90%	PAR=S010;DESIG=46
$\Gamma(K^+ \to \mu^+ \overline{\nu}_e)/\Gamma_{total}$	[r]	$<3.3 \times 10^{-3}$, CL = 90%	PAR=S010;DESIG=35
$\Gamma(K^+ \to \pi^0 e^+ \overline{\nu}_e)/\Gamma_{total}$		$<3 \times 10^{-3}$, CL = 90%	PAR=S010;DESIG=36
$\Gamma(D^+ \to \pi^- 2e^+)/\Gamma_{total}$		$<1.1 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=117
$\Gamma(D^+ \to \pi^- 2\mu^+)/\Gamma_{total}$		$<2.0 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=118

$\Gamma(D^+ \to \pi^- e^+ \mu^+)/\Gamma_{total}$		$<2.0 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=119
$\Gamma(D^+ \to \rho^- 2\mu^+)/\Gamma_{total}$		$<5.6 \times 10^{-4}$, CL = 90%	PAR=S031;DESIG=199
$\Gamma(D^+ \to K^- 2e^+)/\Gamma_{total}$		$<9 \times 10^{-7}$, CL = 90%	PAR=S031;DESIG=120
$\Gamma(D^+ \to K^- 2\mu^+)/\Gamma_{total}$		$<1.0 \times 10^{-5}$, CL = 90%	PAR=S031;DESIG=121
$\Gamma(D^+ \to K^- e^+ \mu^+)/\Gamma_{total}$		$<1.9 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=122
$\Gamma(D^+ \to K^*(892)^- 2\mu^+)/\Gamma_{total}$		$<8.5 \times 10^{-4}$, CL = 90%	PAR=S031;DESIG=200
$\Gamma(D^0 \to 2\pi^- 2e^+ + \text{c.c.})/\Gamma_{total}$		$<1.12 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=253
$\Gamma(D^0 \to 2\pi^- 2\mu^+ + \text{c.c.})/\Gamma_{total}$		$<2.9 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=254
$\Gamma(D^0 \to K^- \pi^- 2e^+ + \text{c.c.})/\Gamma_{total}$		$<2.06 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=255
$\Gamma(D^0 \to K^- \pi^- 2\mu^+ + \text{c.c.})/\Gamma_{total}$		$<3.9 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=256
$\Gamma(D^0 \to 2K^- 2e^+ + \text{c.c.})/\Gamma_{total}$		$<1.52 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=257
$\Gamma(D^0 \to 2K^- 2\mu^+ + \text{c.c.})/\Gamma_{total}$		$<9.4 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=258
$\Gamma(D^0 \to \pi^- \pi^- e^+ \mu^+ + \text{c.c.})/\Gamma_{total}$		$<7.9 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=259
$\Gamma(D^0 \to K^- \pi^- e^+ \mu^+ + \text{c.c.})/\Gamma_{total}$		$<2.18 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=260
$\Gamma(D^0 \to 2K^- e^+ \mu^+ + \text{c.c.})/\Gamma_{total}$		$<5.7 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=261
$\Gamma(D^0 \to p e^-)/\Gamma_{total}$	[s]	$<1.0 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=387
$\Gamma(D^0 \to \overline{p} e^+)/\Gamma_{total}$	[t]	$<1.1 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=388
$\Gamma(D_s^+ \to \pi^- 2e^+)/\Gamma_{total}$		$<4.1 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=97
$\Gamma(D_s^+ \to \pi^- 2\mu^+)/\Gamma_{total}$		$<1.4 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=76
$\Gamma(D_s^+ \to \pi^- e^+ \mu^+)/\Gamma_{total}$		$<8.4 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=98
$\Gamma(D_s^+ \to K^- 2e^+)/\Gamma_{total}$		$<5.2 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=99
$\Gamma(D_s^+ \to K^- 2\mu^+)/\Gamma_{total}$		$<1.3 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=77
$\Gamma(D_s^+ \to K^- e^+ \mu^+)/\Gamma_{total}$		$<6.1 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=100
$\Gamma(D_s^+ \to K^*(892)^- 2\mu^+)/\Gamma_{total}$		$<1.4 \times 10^{-3}$, CL = 90%	PAR=S034;DESIG=78
$\Gamma(B^+ \to \pi^- e^+ e^+)/\Gamma_{total}$		$<2.3 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=91
$\Gamma(B^+ \to \pi^- \mu^+ \mu^+)/\Gamma_{total}$		$<1.3 \times 10^{-8}$, CL = 95%	PAR=S041;DESIG=93
$\Gamma(B^+ \to \pi^- e^+ \mu^+)/\Gamma_{total}$		$<1.3 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=92
$\Gamma(B^+ \to \rho^- e^+ e^+)/\Gamma_{total}$		$<2.6 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=291
$\Gamma(B^+ \to \rho^- \mu^+ \mu^+)/\Gamma_{total}$		$<5.0 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=295
$\Gamma(B^+ \to \rho^- e^+ \mu^+)/\Gamma_{total}$		$<3.3 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=294
$\Gamma(B^+ \to K^- e^+ e^+)/\Gamma_{total}$		$<3.0 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=94
$\Gamma(B^+ \to K^- \mu^+ \mu^+)/\Gamma_{total}$		$<4.1 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=96
$\Gamma(B^+ \to K^- e^+ \mu^+)/\Gamma_{total}$		$<2.0 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=95
$\Gamma(B^+ \to K^*(892)^- e^+ e^+)/\Gamma_{total}$		$<2.8 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=290
$\Gamma(B^+ \to K^*(892)^- \mu^+ \mu^+)/\Gamma_{total}$		$<8.3 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=292
$\Gamma(B^+ \to K^*(892)^- e^+ \mu^+)/\Gamma_{total}$		$<4.4 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=293
$\Gamma(B^+ \to D^- e^+ e^+)/\Gamma_{total}$		$<2.6 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=572
$\Gamma(B^+ \to D^- e^+ \mu^+)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 90%	PAR=S041;DESIG=573
$\Gamma(B^+ \to D^- \mu^+ \mu^+)/\Gamma_{total}$		$<6.9 \times 10^{-7}$, CL = 95%	PAR=S041;DESIG=574
$\Gamma(B^+ \to D^{*-} \mu^+ \mu^+)/\Gamma_{total}$		$<2.4 \times 10^{-6}$, CL = 95%	PAR=S041;DESIG=604
$\Gamma(B^+ \to D_s^- \mu^+ \mu^+)/\Gamma_{total}$		$<5.8 \times 10^{-7}$, CL = 95%	PAR=S041;DESIG=605
$\Gamma(B^+ \to \overline{D}^0 \pi^- \mu^+ \mu^+)/\Gamma_{total}$		$<1.5 \times 10^{-6}$, CL = 95%	PAR=S041;DESIG=606
$\Gamma(B^+ \to \Lambda^0 \mu^+)/\Gamma_{total}$		$<6 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=567
$\Gamma(B^+ \to \Lambda^0 e^+)/\Gamma_{total}$		$<3.2 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=568
$\Gamma(B^+ \to \overline{\Lambda}^0 \mu^+)/\Gamma_{total}$		$<6 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=569
$\Gamma(B^+ \to \overline{\Lambda}^0 e^+)/\Gamma_{total}$		$<8 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=570
$\Gamma(B^0 \to \Lambda_c^+ \mu^-)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 90%	PAR=S042;DESIG=491
$\Gamma(B^0 \to \Lambda_c^+ e^-)/\Gamma_{total}$		$<5 \times 10^{-6}$, CL = 90%	PAR=S042;DESIG=492
$\Gamma(\Xi^- \to p \mu^- \mu^-)/\Gamma_{total}$		$<4 \times 10^{-8}$, CL = 90%	PAR=S022;DESIG=14
$\Gamma(\Lambda_c^+ \to \overline{p} 2e^+)/\Gamma_{total}$		$<2.7 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=111
$\Gamma(\Lambda_c^+ \to \overline{p} 2\mu^+)/\Gamma_{total}$		$<9.4 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=112
$\Gamma(\Lambda_c^+ \to \overline{p} e^+ \mu^+)/\Gamma_{total}$		$<1.6 \times 10^{-5}$, CL = 90%	PAR=S033;DESIG=113
$\Gamma(\Lambda_c^+ \to \Sigma^- \mu^+ \mu^+)/\Gamma_{total}$		$<7.0 \times 10^{-4}$, CL = 90%	PAR=S033;DESIG=61

BARYON NUMBER

CONLAW=B

$\Gamma(Z \rightarrow pe)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=71
$\Gamma(Z \rightarrow p\mu)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 95%	PAR=S044;DESIG=72
$\Gamma(\tau^- \rightarrow \overline{p}\gamma)/\Gamma_{total}$		$<3.5 \times 10^{-6}$, CL = 90%	PAR=S035;DESIG=104
$\Gamma(\tau^- \rightarrow \overline{p}\pi^0)/\Gamma_{total}$		$<1.5 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=105
$\Gamma(\tau^- \rightarrow \overline{p}2\pi^0)/\Gamma_{total}$		$<3.3 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=268
$\Gamma(\tau^- \rightarrow \overline{p}\eta)/\Gamma_{total}$		$<8.9 \times 10^{-6}$, CL = 90%	PAR=S035;DESIG=106
$\Gamma(\tau^- \rightarrow \overline{p}\pi^0\eta)/\Gamma_{total}$		$<2.7 \times 10^{-5}$, CL = 90%	PAR=S035;DESIG=269
$\Gamma(\tau^- \rightarrow \Lambda\pi^-)/\Gamma_{total}$		$<7.2 \times 10^{-8}$, CL = 90%	PAR=S035;DESIG=297
$\Gamma(\tau^- \rightarrow \overline{\Lambda}\pi^-)/\Gamma_{total}$		$<1.4 \times 10^{-7}$, CL = 90%	PAR=S035;DESIG=298
$\Gamma(D^0 \rightarrow pe^-)/\Gamma_{total}$	[s]	$<1.0 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=387
$\Gamma(D^0 \rightarrow \overline{p}e^+)/\Gamma_{total}$	[t]	$<1.1 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=388
$\Gamma(B^+ \rightarrow \Lambda^0\mu^+)/\Gamma_{total}$		$<6 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=567
$\Gamma(B^+ \rightarrow \Lambda^0 e^+)/\Gamma_{total}$		$<3.2 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=568
$\Gamma(B^+ \rightarrow \overline{\Lambda}^0\mu^+)/\Gamma_{total}$		$<6 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=569
$\Gamma(B^+ \rightarrow \overline{\Lambda}^0 e^+)/\Gamma_{total}$		$<8 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=570
$\Gamma(B^0 \rightarrow \Lambda_c^+\mu^-)/\Gamma_{total}$		$<1.8 \times 10^{-6}$, CL = 90%	PAR=S042;DESIG=491
$\Gamma(B^0 \rightarrow \Lambda_c^+ e^-)/\Gamma_{total}$		$<5 \times 10^{-6}$, CL = 90%	PAR=S042;DESIG=492
p mean life	[u]	$>2.1 \times 10^{29}$ years, CL = 90%	NODE=S016T
A few examples of proton or bound neutron decay follow. For limits on many other nucleon decay channels, see the Baryon Summary Table.			PAR=S016;DESIG=6
$\tau(N \rightarrow e^+\pi)$		$>$ 2000 (n), $>$ 8200 (p) $\times 10^{30}$ years, CL = 90%	PAR=S016;DESIG=6;OUR LIM
$\tau(N \rightarrow \mu^+\pi)$		$>$ 1000 (n), $>$ 6600 (p) $\times 10^{30}$ years, CL = 90%	PAR=S016;DESIG=7;OUR LIM
$\tau(N \rightarrow e^+K)$		$>$ 17 (n), $>$ 1000 (p) $\times 10^{30}$ years, CL = 90%	PAR=S016;DESIG=8;OUR LIM
$\tau(N \rightarrow \mu^+K)$		$>$ 26 (n), $>$ 1600 (p) $\times 10^{30}$ years, CL = 90%	PAR=S016;DESIG=9;OUR LIM
limit on $n\overline{n}$ oscillations (free n)		$>0.86 \times 10^8$ s, CL = 90%	NODE=S017NA2;OUR LIM
limit on $n\overline{n}$ oscillations (bound n)	[v]	$>1.3 \times 10^8$ s, CL = 90%	NODE=S017NA1;OUR LIM
$\Gamma(\Lambda_c^+ \rightarrow \overline{p}2e^+)/\Gamma_{total}$		$<2.7 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=111
$\Gamma(\Lambda_c^+ \rightarrow \overline{p}2\mu^+)/\Gamma_{total}$		$<9.4 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=112
$\Gamma(\Lambda_c^+ \rightarrow \overline{p}e^+\mu^+)/\Gamma_{total}$		$<1.6 \times 10^{-5}$, CL = 90%	PAR=S033;DESIG=113

ELECTRIC CHARGE (Q)

CONLAW=Q

$e \rightarrow \nu_e\gamma$ and astrophysical limits	[x]	$>4.6 \times 10^{26}$ yr, CL = 90%	NODE=S003T
$\Gamma(n \rightarrow p\nu_e\overline{\nu}_e)/\Gamma_{total}$		$<8 \times 10^{-27}$, CL = 68%	PAR=S017;DESIG=2

$\Delta S = \Delta Q$ RULE

CONLAW=SQ

Violations allowed in second-order weak interactions.

$\Gamma(K^+ \rightarrow \pi^+\pi^+e^-\overline{\nu}_e)/\Gamma_{total}$		$<1.3 \times 10^{-8}$, CL = 90%	PAR=S010;DESIG=8
$\Gamma(K^+ \rightarrow \pi^+\pi^+\mu^-\overline{\nu}_\mu)/\Gamma_{total}$		$<3.0 \times 10^{-6}$, CL = 95%	PAR=S010;DESIG=10
Re(x_+), K_{e3} parameter		$(-0.9 \pm 3.0) \times 10^{-3}$	NODE=S011XRP
$x = A(\overline{K}^0 \rightarrow \pi^-\ell^+\nu)/A(K^0 \rightarrow \pi^-\ell^+\nu) = A(\Delta S{=}-\Delta Q)/A(\Delta S{=}\Delta Q)$			NODE=S013250
real part of x		-0.002 ± 0.006	NODE=S013REX
imaginary part of x		0.0012 ± 0.0021	NODE=S013IMX
$\Gamma(\Sigma^+ \rightarrow n\ell^+\nu)/\Gamma(\Sigma^- \rightarrow n\ell^-\overline{\nu})$		<0.043	NODE=S019R7;→ UNCHECKED ←;OUR LIM
$\Gamma(\Sigma^+ \rightarrow ne^+\nu_e)/\Gamma_{total}$		$<5 \times 10^{-6}$, CL = 90%	PAR=S019;DESIG=7;→ UNCHECKED ←; OUR LIM
$\Gamma(\Sigma^+ \rightarrow n\mu^+\nu_\mu)/\Gamma_{total}$		$<3.0 \times 10^{-5}$, CL = 90%	PAR=S019;DESIG=6;→ UNCHECKED ←; OUR LIM
$\Gamma(\Xi^0 \rightarrow \Sigma^-e^+\nu_e)/\Gamma_{total}$		$<9 \times 10^{-4}$, CL = 90%	PAR=S023;DESIG=5
$\Gamma(\Xi^0 \rightarrow \Sigma^-\mu^+\nu_\mu)/\Gamma_{total}$		$<9 \times 10^{-4}$, CL = 90%	PAR=S023;DESIG=7

$\Delta S = 2$ FORBIDDEN

CONLAW=S2

Allowed in second-order weak interactions.

$\Gamma(\Xi^0 \rightarrow p\pi^-)/\Gamma_{total}$	$<8 \times 10^{-6}$, CL = 90%	PAR=S023;DESIG=2
$\Gamma(\Xi^0 \rightarrow pe^-\overline{\nu}_e)/\Gamma_{total}$	$<1.3 \times 10^{-3}$	PAR=S023;DESIG=3
$\Gamma(\Xi^0 \rightarrow p\mu^-\overline{\nu}_\mu)/\Gamma_{total}$	$<1.3 \times 10^{-3}$	PAR=S023;DESIG=8
$\Gamma(\Xi^- \rightarrow n\pi^-)/\Gamma_{total}$	$<1.9 \times 10^{-5}$, CL = 90%	PAR=S022;DESIG=3
$\Gamma(\Xi^- \rightarrow ne^-\overline{\nu}_e)/\Gamma_{total}$	$<3.2 \times 10^{-3}$, CL = 90%	PAR=S022;DESIG=7
$\Gamma(\Xi^- \rightarrow n\mu^-\overline{\nu}_\mu)/\Gamma_{total}$	$<1.5 \times 10^{-2}$, CL = 90%	PAR=S022;DESIG=8
$\Gamma(\Xi^- \rightarrow p\pi^-\pi^-)/\Gamma_{total}$	$<4 \times 10^{-4}$, CL = 90%	PAR=S022;DESIG=10
$\Gamma(\Xi^- \rightarrow p\pi^-e^-\overline{\nu}_e)/\Gamma_{total}$	$<4 \times 10^{-4}$, CL = 90%	PAR=S022;DESIG=11
$\Gamma(\Xi^- \rightarrow p\pi^-\mu^-\overline{\nu}_\mu)/\Gamma_{total}$	$<4 \times 10^{-4}$, CL = 90%	PAR=S022;DESIG=12
$\Gamma(\Omega^- \rightarrow \Lambda\pi^-)/\Gamma_{total}$	$<2.9 \times 10^{-6}$, CL = 90%	PAR=S024;DESIG=4

$\Delta S = 2$ VIA MIXING

CONLAW=S2M

Allowed in second-order weak interactions, e.g. mixing.

$m_{K^0_L} - m_{K^0_S}$	$(0.5293 \pm 0.0009) \times 10^{10}\ \hbar\ s^{-1}$ (S = 1.3)	NODE=S013D
$m_{K^0_L} - m_{K^0_S}$	$(3.484 \pm 0.006) \times 10^{-12}$ MeV	NODE=S013D1;OUR EVAL

$\Delta C = 2$ VIA MIXING

CONLAW=C2M

Allowed in second-order weak interactions, e.g. mixing.

$\lvert m_{D^0_1} - m_{D^0_2}\rvert = x\Gamma$	$(1.18^{+0.43}_{-0.47}) \times 10^{10}\ \hbar\ s^{-1}$	NODE=S032D;OUR EVAL
$(\Gamma_{D^0_1} - \Gamma_{D^0_2})/\Gamma = 2y$	$(1.43 \pm 0.19) \times 10^{-2}$	NODE=S032DT;OUR EVAL

$\Delta B = 2$ VIA MIXING

CONLAW=B2M

Allowed in second-order weak interactions, e.g. mixing.

χ_d	0.1875 ± 0.0020	NODE=S042CHD;→ UNCHECKED ←;OUR EVAL
$\Delta m_{B^0} = m_{B^0_H} - m_{B^0_L}$	$(0.510 \pm 0.004) \times 10^{12}\ \hbar\ s^{-1}$	NODE=S042D;→ UNCHECKED ←;OUR EVAL
$x_d = \Delta m_{B^0}/\Gamma_{B^0}$	0.775 ± 0.006	NODE=S042DG;→ UNCHECKED ←;OUR EVAL
$\Delta m_{B^0_s} = m_{B^0_{sH}} - m_{B^0_{sL}}$	$(17.69 \pm 0.08) \times 10^{12}\ \hbar\ s^{-1}$	NODE=S086D;→ UNCHECKED ←;OUR EVAL
$x_s = \Delta m_{B^0_s}/\Gamma_{B^0_s}$	26.82 ± 0.23	NODE=S086DG;→ UNCHECKED ←;OUR EVAL
χ_s	0.499309 ± 0.000012	NODE=S086CHS;→ UNCHECKED ←;OUR EVAL

$\Delta S = 1$ WEAK NEUTRAL CURRENT FORBIDDEN

CONLAW=S1

Allowed by higher-order electroweak interactions.

$\Gamma(K^+ \to \pi^+ e^+ e^-)/\Gamma_{total}$		$(3.00 \pm 0.09) \times 10^{-7}$	PAR=S010;DESIG=15
$\Gamma(K^+ \to \pi^+ \mu^+ \mu^-)/\Gamma_{total}$		$(9.4 \pm 0.6) \times 10^{-8}$ (S = 2.6)	PAR=S010;DESIG=16
$\Gamma(K^+ \to \pi^+ \nu\overline{\nu})/\Gamma_{total}$		$(1.7 \pm 1.1) \times 10^{-10}$	PAR=S010;DESIG=20
$\Gamma(K^+ \to \pi^+ \pi^0 \nu\overline{\nu})/\Gamma_{total}$		$<4.3 \times 10^{-5}$, CL = 90%	PAR=S010;DESIG=50
$\Gamma(K^0_S \to \mu^+ \mu^-)/\Gamma_{total}$		$<9 \times 10^{-9}$, CL = 90%	PAR=S012;DESIG=3
$\Gamma(K^0_S \to e^+ e^-)/\Gamma_{total}$		$<9 \times 10^{-9}$, CL = 90%	PAR=S012;DESIG=4
$\Gamma(K^0_S \to \pi^0 e^+ e^-)/\Gamma_{total}$	[y]	$(3.0^{+1.5}_{-1.2}) \times 10^{-9}$	PAR=S012;DESIG=10
$\Gamma(K^0_S \to \pi^0 \mu^+ \mu^-)/\Gamma_{total}$		$(2.9^{+1.5}_{-1.2}) \times 10^{-9}$	PAR=S012;DESIG=15
$\Gamma(K^0_L \to \mu^+ \mu^-)/\Gamma_{total}$		$(6.84 \pm 0.11) \times 10^{-9}$	PAR=S013;DESIG=6
$\Gamma(K^0_L \to e^+ e^-)/\Gamma_{total}$		$(9^{+6}_{-4}) \times 10^{-12}$	PAR=S013;DESIG=7
$\Gamma(K^0_L \to \pi^+ \pi^- e^+ e^-)/\Gamma_{total}$	[z]	$(3.11 \pm 0.19) \times 10^{-7}$	PAR=S013;DESIG=17
$\Gamma(K^0_L \to \pi^0 \pi^0 e^+ e^-)/\Gamma_{total}$		$<6.6 \times 10^{-9}$, CL = 90%	PAR=S013;DESIG=48
$\Gamma(K^0_L \to \pi^0 \pi^0 \mu^+ \mu^-)/\Gamma_{total}$		$<9.2 \times 10^{-11}$, CL = 90%	PAR=S013;DESIG=54
$\Gamma(K^0_L \to \mu^+ \mu^- e^+ e^-)/\Gamma_{total}$		$(2.69 \pm 0.27) \times 10^{-9}$	PAR=S013;DESIG=21
$\Gamma(K^0_L \to e^+ e^- e^+ e^-)/\Gamma_{total}$		$(3.56 \pm 0.21) \times 10^{-8}$	PAR=S013;DESIG=22
$\Gamma(K^0_L \to \pi^0 \mu^+ \mu^-)/\Gamma_{total}$		$<3.8 \times 10^{-10}$, CL = 90%	PAR=S013;DESIG=16
$\Gamma(K^0_L \to \pi^0 e^+ e^-)/\Gamma_{total}$		$<2.8 \times 10^{-10}$, CL = 90%	PAR=S013;DESIG=20
$\Gamma(K^0_L \to \pi^0 \nu\overline{\nu})/\Gamma_{total}$		$<2.6 \times 10^{-8}$, CL = 90%	PAR=S013;DESIG=43
$\Gamma(K^0_L \to \pi^0 \pi^0 \nu\overline{\nu})/\Gamma_{total}$		$<8.1 \times 10^{-7}$, CL = 90%	PAR=S013;DESIG=52
$\Gamma(\Sigma^+ \to p e^+ e^-)/\Gamma_{total}$		$<7 \times 10^{-6}$	PAR=S019;DESIG=8
$\Gamma(\Sigma^+ \to p \mu^+ \mu^-)/\Gamma_{total}$		$(9^{+9}_{-8}) \times 10^{-8}$	PAR=S019;DESIG=9

$\Delta C = 1$ WEAK NEUTRAL CURRENT FORBIDDEN

CONLAW=C1

Allowed by higher-order electroweak interactions.

$\Gamma(D^+ \to \pi^+ e^+ e^-)/\Gamma_{total}$	$<1.1 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=41
$\Gamma(D^+ \to \pi^+ \mu^+ \mu^-)/\Gamma_{total}$	$<3.9 \times 10^{-6}$, CL = 90%	PAR=S031;DESIG=42
$\Gamma(D^+ \to \rho^+ \mu^+ \mu^-)/\Gamma_{total}$	$<5.6 \times 10^{-4}$, CL = 90%	PAR=S031;DESIG=198
$\Gamma(D^0 \to \gamma\gamma)/\Gamma_{total}$	$<2.2 \times 10^{-6}$, CL = 90%	PAR=S032;DESIG=45
$\Gamma(D^0 \to e^+ e^-)/\Gamma_{total}$	$<7.9 \times 10^{-8}$, CL = 90%	PAR=S032;DESIG=39
$\Gamma(D^0 \to \mu^+ \mu^-)/\Gamma_{total}$	$<1.4 \times 10^{-7}$, CL = 90%	PAR=S032;DESIG=28
$\Gamma(D^0 \to \pi^0 e^+ e^-)/\Gamma_{total}$	$<4.5 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=225
$\Gamma(D^0 \to \pi^0 \mu^+ \mu^-)/\Gamma_{total}$	$<1.8 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=216
$\Gamma(D^0 \to \eta e^+ e^-)/\Gamma_{total}$	$<1.1 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=226
$\Gamma(D^0 \to \eta \mu^+ \mu^-)/\Gamma_{total}$	$<5.3 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=227
$\Gamma(D^0 \to \pi^+ \pi^- e^+ e^-)/\Gamma_{total}$	$<3.73 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=262
$\Gamma(D^0 \to \rho^0 e^+ e^-)/\Gamma_{total}$	$<1.0 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=52
$\Gamma(D^0 \to \pi^+ \pi^- \mu^+ \mu^-)/\Gamma_{total}$	$<3.0 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=263
$\Gamma(D^0 \to \rho^0 \mu^+ \mu^-)/\Gamma_{total}$	$<2.2 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=53
$\Gamma(D^0 \to \omega e^+ e^-)/\Gamma_{total}$	$<1.8 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=228
$\Gamma(D^0 \to \omega \mu^+ \mu^-)/\Gamma_{total}$	$<8.3 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=229
$\Gamma(D^0 \to K^- K^+ e^+ e^-)/\Gamma_{total}$	$<3.15 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=266
$\Gamma(D^0 \to \phi e^+ e^-)/\Gamma_{total}$	$<5.2 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=230
$\Gamma(D^0 \to K^- K^+ \mu^+ \mu^-)/\Gamma_{total}$	$<3.3 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=267
$\Gamma(D^0 \to \phi \mu^+ \mu^-)/\Gamma_{total}$	$<3.1 \times 10^{-5}$, CL = 90%	PAR=S032;DESIG=231
$\Gamma(D^0 \to K^- \pi^+ e^+ e^-)/\Gamma_{total}$	$<3.85 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=264
$\Gamma(D^0 \to K^- \pi^+ \mu^+ \mu^-)/\Gamma_{total}$	$<3.59 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=265
$\Gamma(D^0 \to \pi^+ \pi^- \pi^0 \mu^+ \mu^-)/\Gamma_{total}$	$<8.1 \times 10^{-4}$, CL = 90%	PAR=S032;DESIG=218
$\Gamma(D^+_s \to K^+ e^+ e^-)/\Gamma_{total}$	$<3.7 \times 10^{-6}$, CL = 90%	PAR=S034;DESIG=94
$\Gamma(D^+_s \to K^+ \mu^+ \mu^-)/\Gamma_{total}$	$<2.1 \times 10^{-5}$, CL = 90%	PAR=S034;DESIG=74
$\Gamma(D^+_s \to K^*(892)^+ \mu^+ \mu^-)/\Gamma_{total}$	$<1.4 \times 10^{-3}$, CL = 90%	PAR=S034;DESIG=75
$\Gamma(\Lambda^+_c \to p e^+ e^-)/\Gamma_{total}$	$<5.5 \times 10^{-6}$, CL = 90%	PAR=S033;DESIG=108
$\Gamma(\Lambda^+_c \to p \mu^+ \mu^-)/\Gamma_{total}$	$<4.4 \times 10^{-5}$, CL = 90%	PAR=S033;DESIG=60

$\Delta B = 1$ WEAK NEUTRAL CURRENT FORBIDDEN

CONLAW=B1

Allowed by higher-order electroweak interactions.

$\Gamma(B^+ \to \pi^+ \ell^+ \ell^-)/\Gamma_{total}$		$<4.9 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=475
$\Gamma(B^+ \to \pi^+ e^+ e^-)/\Gamma_{total}$		$<8.0 \times 10^{-8}$, CL = 90%	PAR=S041;DESIG=85
$\Gamma(B^+ \to \pi^+ \mu^+ \mu^-)/\Gamma_{total}$		$(2.4 \pm 0.6) \times 10^{-8}$	PAR=S041;DESIG=88
$\Gamma(B^+ \to \pi^+ \nu\overline{\nu})/\Gamma_{total}$		$<1.0 \times 10^{-4}$, CL = 90%	PAR=S041;DESIG=404
$\Gamma(B^+ \to K^+ \ell^+ \ell^-)/\Gamma_{total}$	[aa]	$(4.51 \pm 0.23) \times 10^{-7}$ (S = 1.1)	PAR=S041;DESIG=345
$\Gamma(B^+ \to K^+ e^+ e^-)/\Gamma_{total}$		$(5.5 \pm 0.7) \times 10^{-7}$	PAR=S041;DESIG=11
$\Gamma(B^+ \to K^+ \mu^+ \mu^-)/\Gamma_{total}$		$(4.49 \pm 0.23) \times 10^{-7}$ (S = 1.1)	PAR=S041;DESIG=10
$\Gamma(B^+ \to K^+ \overline{\nu}\nu)/\Gamma_{total}$		$<1.3 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=273
$\Gamma(B^+ \to \rho^+ \nu\overline{\nu})/\Gamma_{total}$		$<1.5 \times 10^{-4}$, CL = 90%	PAR=S041;DESIG=489
$\Gamma(B^+ \to K^*(892)^+ \ell^+ \ell^-)/\Gamma_{total}$	[aa]	$(1.29 \pm 0.21) \times 10^{-6}$	PAR=S041;DESIG=346
$\Gamma(B^+ \to K^*(892)^+ e^+ e^-)/\Gamma_{total}$		$(1.55^{+0.40}_{-0.31}) \times 10^{-6}$	PAR=S041;DESIG=161
$\Gamma(B^+ \to K^*(892)^+ \mu^+ \mu^-)/\Gamma_{total}$		$(1.12 \pm 0.15) \times 10^{-6}$	PAR=S041;DESIG=162
$\Gamma(B^+ \to K^*(892)^+ \nu\overline{\nu})/\Gamma_{total}$		$<8 \times 10^{-5}$, CL = 90%	PAR=S041;DESIG=490
$\Gamma(B^0 \to \gamma\gamma)/\Gamma_{total}$		$<3.2 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=141
$\Gamma(B^0 \to e^+ e^-)/\Gamma_{total}$		$<8.3 \times 10^{-8}$, CL = 90%	PAR=S042;DESIG=6
$\Gamma(B^0 \to e^+ e^- \gamma)/\Gamma_{total}$		$<1.2 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=404
$\Gamma(B^0 \to \mu^+ \mu^-)/\Gamma_{total}$		$<8.0 \times 10^{-10}$, CL = 90%	PAR=S042;DESIG=7
$\Gamma(B^0 \to \mu^+ \mu^- \gamma)/\Gamma_{total}$		$<1.6 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=405
$\Gamma(B^0 \to \tau^+ \tau^-)/\Gamma_{total}$		$<4.1 \times 10^{-3}$, CL = 90%	PAR=S042;DESIG=336
$\Gamma(B^0 \to \pi^0 \ell^+ \ell^-)/\Gamma_{total}$		$<1.2 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=382
$\Gamma(B^0 \to \pi^0 e^+ e^-)/\Gamma_{total}$		$<1.4 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=380
$\Gamma(B^0 \to \pi^0 \mu^+ \mu^-)/\Gamma_{total}$		$<1.8 \times 10^{-7}$, CL = 90%	PAR=S042;DESIG=381
$\Gamma(B^0 \to \pi^0 \nu\overline{\nu})/\Gamma_{total}$		$<2.2 \times 10^{-4}$, CL = 90%	PAR=S042;DESIG=406
$\Gamma(B^0 \to K^0 \ell^+ \ell^-)/\Gamma_{total}$	[aa]	$(3.1^{+0.8}_{-0.7}) \times 10^{-7}$	PAR=S042;DESIG=275
$\Gamma(B^0 \to K^0 e^+ e^-)/\Gamma_{total}$		$(1.6^{+1.0}_{-0.8}) \times 10^{-7}$	PAR=S042;DESIG=18
$\Gamma(B^0 \to K^0 \mu^+ \mu^-)/\Gamma_{total}$		$(3.4 \pm 0.5) \times 10^{-7}$	PAR=S042;DESIG=17
$\Gamma(B^0 \to K^0 \nu\overline{\nu})/\Gamma_{total}$		$<5.6 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=407
$\Gamma(B^0 \to \rho^0 \nu\overline{\nu})/\Gamma_{total}$		$<4.4 \times 10^{-4}$, CL = 90%	PAR=S042;DESIG=408
$\Gamma(B^0 \to K^*(892)^0 \ell^+ \ell^-)/\Gamma_{total}$	[aa]	$(9.9^{+1.2}_{-1.1}) \times 10^{-7}$	PAR=S042;DESIG=276
$\Gamma(B^0 \to K^*(892)^0 e^+ e^-)/\Gamma_{total}$		$(1.03^{+0.19}_{-0.17}) \times 10^{-6}$	PAR=S042;DESIG=82
$\Gamma(B^0 \to K^*(892)^0 \mu^+ \mu^-)/\Gamma_{total}$		$(1.06 \pm 0.10) \times 10^{-6}$	PAR=S042;DESIG=71
$\Gamma(B^0 \to K^*(892)^0 \nu\overline{\nu})/\Gamma_{total}$		$<1.2 \times 10^{-4}$, CL = 90%	PAR=S042;DESIG=152
$\Gamma(B^0 \to \phi\nu\overline{\nu})/\Gamma_{total}$		$<5.8 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=409
$\Gamma(B^0 \to \text{invisible})/\Gamma_{total}$		$<2.4 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=284
$\Gamma(B^0 \to \nu\overline{\nu}\gamma)/\Gamma_{total}$		$<1.7 \times 10^{-5}$, CL = 90%	PAR=S042;DESIG=285
$\Gamma(B \to s e^+ e^-)/\Gamma_{total}$		$(4.7 \pm 1.3) \times 10^{-6}$	PAR=S049;DESIG=103
$\Gamma(B \to s \mu^+ \mu^-)/\Gamma_{total}$		$(4.3 \pm 1.2) \times 10^{-6}$	PAR=S049;DESIG=104
$\Gamma(B \to s \ell^+ \ell^-)/\Gamma_{total}$	[aa]	$(4.5 \pm 1.0) \times 10^{-6}$	PAR=S049;DESIG=59
$\Gamma(B \to \pi \ell^+ \ell^-)/\Gamma_{total}$		$<6.2 \times 10^{-8}$, CL = 90%	PAR=S049;DESIG=266
$\Gamma(B \to K e^+ e^-)/\Gamma_{total}$		$(4.4 \pm 0.6) \times 10^{-7}$	PAR=S049;DESIG=234
$\Gamma(B \to K^*(892) e^+ e^-)/\Gamma_{total}$		$(1.19 \pm 0.20) \times 10^{-6}$ (S = 1.2)	PAR=S049;DESIG=235
$\Gamma(B \to K \mu^+ \mu^-)/\Gamma_{total}$		$(4.4 \pm 0.4) \times 10^{-7}$	PAR=S049;DESIG=236
$\Gamma(B \to K^*(892) \mu^+ \mu^-)/\Gamma_{total}$		$(1.06 \pm 0.09) \times 10^{-6}$	PAR=S049;DESIG=237
$\Gamma(B \to K \ell^+ \ell^-)/\Gamma_{total}$		$(4.8 \pm 0.4) \times 10^{-7}$	PAR=S049;DESIG=238
$\Gamma(B \to K^*(892) \ell^+ \ell^-)/\Gamma_{total}$		$(1.05 \pm 0.10) \times 10^{-6}$	PAR=S049;DESIG=239
$\Gamma(B \to K \nu\overline{\nu})/\Gamma_{total}$		$<1.4 \times 10^{-5}$, CL = 90%	PAR=S049;DESIG=275
$\Gamma(B \to K^* \nu\overline{\nu})/\Gamma_{total}$		$<8 \times 10^{-5}$, CL = 90%	PAR=S049;DESIG=269
$\Gamma(\overline{b} \to \overline{s}\overline{\nu}\nu)/\Gamma_{total}$		$<6.4 \times 10^{-4}$, CL = 90%	PAR=S051;DESIG=65
$\Gamma(\overline{b} \to e^+ e^- \text{anything})/\Gamma_{total}$		—	PAR=S051;DESIG=103
$\Gamma(\overline{b} \to \mu^+ \mu^- \text{anything})/\Gamma_{total}$		$<3.2 \times 10^{-4}$, CL = 90%	PAR=S051;DESIG=104
$\Gamma(\overline{b} \to \nu\overline{\nu}\text{anything})/\Gamma_{total}$		—	PAR=S051;DESIG=20
$\Gamma(B^0_s \to \gamma\gamma)/\Gamma_{total}$		$<8.7 \times 10^{-6}$, CL = 90%	PAR=S086;DESIG=11
$\Gamma(B^0_s \to \mu^+ \mu^-)/\Gamma_{total}$		$(3.2^{+1.5}_{-1.2}) \times 10^{-9}$	PAR=S086;DESIG=15
$\Gamma(B^0_s \to e^+ e^-)/\Gamma_{total}$		$<2.8 \times 10^{-7}$, CL = 90%	PAR=S086;DESIG=20
$\Gamma(B^0_s \to \phi(1020) \mu^+ \mu^-)/\Gamma_{total}$		$(1.13^{+0.40}_{-0.29}) \times 10^{-6}$	PAR=S086;DESIG=31
$\Gamma(B^0_s \to \phi\nu\overline{\nu})/\Gamma_{total}$		$<5.4 \times 10^{-3}$, CL = 90%	PAR=S086;DESIG=19

$\Delta T = 1$ WEAK NEUTRAL CURRENT FORBIDDEN

CONLAW=T1

Allowed by higher-order electroweak interactions.

$\Gamma(t \rightarrow Zq(q{=}u,c))/\Gamma_{\text{total}}$	[bb] $<2.1 \times 10^{-3}$, CL = 95%	PAR=Q007;DESIG=2

NOTES

[a] C parity forbids this to occur as a single-photon process. LINKAGE=CS

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

[c] Time-reversal invariance requires this to be 0° or 180°. LINKAGE=CR

[d] This coefficient is zero if time invariance is not violated. LINKAGE=TVC

[e] Allowed by higher-order electroweak interactions. LINKAGE=CE

[f] Violates CP in leading order. Test of direct CP violation since the indirect CP-violating and CP-conserving contributions are expected to be suppressed. LINKAGE=CD

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

[h] $\text{Re}(\epsilon'/\epsilon) = \epsilon'/\epsilon$ to a very good approximation provided the phases satisfy CPT invariance. LINKAGE=SAA

[i] This mode includes gammas from inner bremsstrahlung but not the direct emission mode $K^0_L \rightarrow \pi^+\pi^-\gamma$(DE). LINKAGE=IBR

[j] Neglecting photon channels. See, *e.g.*, A. Pais and S.B. Treiman, Phys. Rev. **D12**, 2744 (1975). LINKAGE=CH

[k] Derived from measured values of ϕ_{+-}, ϕ_{00}, $|\eta|$, $|m_{K^0_L} - m_{K^0_S}|$, and $\tau_{K^0_S}$, as described in the introduction to "Tests of Conservation Laws." LINKAGE=CG

[l] The $|m_p - m_{\overline{p}}|/m_p$ and $|q_p + q_{\overline{p}}|/e$ are not independent, and both use the more precise measurement of $|q_{\overline{p}}/m_{\overline{p}}|/(q_p/m_p)$. LINKAGE=MQ

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

[o] A test of additive vs. multiplicative lepton family number conservation. LINKAGE=CK

[p] The limit quoted corresponds to the projection onto the $\sin^2(2\theta_{23})$ axis of the 90% CL contour in the $\sin^2(2\theta_{23})-\Delta m^2_{32}$ plane. LINKAGE=S2T

[q] The sign of Δm^2_{32} is not known at this time. The range quoted is for the absolute value. LINKAGE=ABV

[r] Derived from an analysis of neutrino-oscillation experiments. LINKAGE=CL

[s] This limit is for either D^0 or $\overline{D}^0$ to pe^-. LINKAGE=DPE

[t] This limit is for either D^0 or $\overline{D}^0$ to $\overline{p}e^+$. LINKAGE=PEP

[u] The first limit is for $p \rightarrow$ anything or "disappearance" modes of a bound proton. The second entry, a rough range of limits, assumes the dominant decay modes are among those investigated. For antiprotons the best limit, inferred from the observation of cosmic ray $\overline{p}$'s is $\tau_{\overline{p}} > 10^7$ yr, the cosmic-ray storage time, but this limit depends on a number of assumptions. The best direct observation of stored antiprotons gives $\tau_{\overline{p}}/\text{B}(\overline{p} \rightarrow e^-\gamma) > 7 \times 10^5$ yr. LINKAGE=SR

[v] There is some controversy about whether nuclear physics and model dependence complicate the analysis for bound neutrons (from which the best limit comes). The first limit here is from reactor experiments with free neutrons. LINKAGE=SNN

[x] This is the best limit for the mode $e^- \rightarrow \nu\gamma$. The best limit for "electron disappearance" is 6.4×10^{24} yr. LINKAGE=EML

[y] See the K^0_S Particle Listings for the energy limits used in this measurement. LINKAGE=KDS

[z] See the K^0_L Particle Listings for the energy limits used in this measurement. LINKAGE=KDL

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

[bb] This limit is for $\Gamma(t \rightarrow Z\,q)/\Gamma(t \rightarrow W\,b)$. LINKAGE=TD2