

Parameter	1 $\sigma$ value	BANFF -3 $\sigma$		BANFF tuned -1 $\sigma$		BANFF tuned +1 $\sigma$		BANFF tuned +3 $\sigma$	
All syst		−0.038 87	−102.923 00(%)	0.484 42	−63.563 00(%)	2.926 50	120.130 00(%)	10.358 10	679.112 00(%)
BANFF 0, SK numu flux, 0.0 - 0.4 GeV	0.098 73	1.329 47	0	1.329 47	0	1.329 47	0	1.329 47	0
BANFF 1, SK numu flux, 0.4 - 0.5 GeV	0.103 49	1.320 88	−0.645 65	1.326 61	−0.215 22	1.332 33	0.215 22	1.338 05	0.645 65
BANFF 2, SK numu flux, 0.5 - 0.6 GeV	0.096 44	1.297 03	−2.439 68	1.318 66	−0.813 23	1.340 28	0.813 23	1.361 90	2.439 68
BANFF 3, SK numu flux, 0.6 - 0.7 GeV	0.086 70	1.288 72	−3.065 35	1.315 88	−1.021 80	1.343 05	1.021 80	1.370 22	3.065 35
BANFF 4, SK numu flux, 0.7 - 1.0 GeV	0.113 05	1.256 98	−5.452 24	1.305 31	−1.817 40	1.353 63	1.817 40	1.401 95	5.452 24
BANFF 5, SK numu flux, 1.0 - 1.5 GeV	0.091 75	1.307 35	−1.663 34	1.322 10	−0.554 45	1.336 84	0.554 45	1.351 58	1.663 34
BANFF 6, SK numu flux, 1.5 - 2.5 GeV	0.070 17	1.318 68	−0.811 54	1.325 87	−0.270 51	1.333 06	0.270 51	1.340 26	0.811 54
BANFF 7, SK numu flux, 2.5 - 3.5 GeV	0.073 68	1.322 31	−0.538 71	1.327 08	−0.179 57	1.331 86	0.179 57	1.336 63	0.538 71
BANFF 8, SK numu flux, 3.5 - 5.0 GeV	0.087 37	1.315 81	−1.027 18	1.324 92	−0.342 39	1.334 02	0.342 39	1.343 12	1.027 18
BANFF 9, SK numu flux, 5.0 - 7.0 GeV	0.097 94	1.323 61	−0.440 75	1.327 52	−0.146 92	1.331 42	0.146 92	1.335 33	0.440 75
BANFF 10, SK numu flux, 7.0 - 30.0 GeV	0.114 36	1.328 75	−0.053 82	1.329 23	−0.017 94	1.329 71	0.017 94	1.330 18	0.053 82
BANFF 11, SK numubar flux, 0.0 - 0.7 GeV	0.102 58	1.328 72	−0.056 39	1.329 22	−0.018 80	1.329 72	0.018 80	1.330 22	0.056 39
BANFF 12, SK numubar flux, 0.7 - 1.0 GeV	0.078 53	1.328 71	−0.056 93	1.329 22	−0.018 98	1.329 72	0.018 98	1.330 23	0.056 93
BANFF 13, SK numubar flux, 1.0 - 1.5 GeV	0.084 45	1.328 72	−0.056 33	1.329 22	−0.018 78	1.329 72	0.018 78	1.330 22	0.056 33
BANFF 14, SK numubar flux, 1.5 - 2.5 GeV	0.085 57	1.328 35	−0.083 76	1.329 10	−0.027 92	1.329 84	0.027 92	1.330 58	0.083 76
BANFF 15, SK numubar flux, 2.5 - 30.0 GeV	0.086 43	1.328 14	−0.099 59	1.329 03	−0.033 20	1.329 91	0.033 20	1.330 79	0.099 59
BANFF 16, SK nue flux, 0.0 - 0.5 GeV	0.089 70	1.323 87	−0.420 83	1.327 60	−0.140 28	1.331 33	0.140 28	1.335 06	0.420 83
BANFF 17, SK nue flux, 0.5 - 0.7 GeV	0.089 95	1.297 84	−2.379 14	1.318 92	−0.793 05	1.340 01	0.793 05	1.361 10	2.379 14
BANFF 18, SK nue flux, 0.7 - 0.8 GeV	0.085 96	1.307 89	−1.623 11	1.322 28	−0.541 04	1.336 66	0.541 04	1.351 05	1.623 11
BANFF 19, SK nue flux, 0.8 - 1.5 GeV	0.080 92	1.254 53	−5.636 40	1.304 49	−1.878 80	1.354 45	1.878 80	1.404 40	5.636 40
BANFF 20, SK nue flux, 1.5 - 2.5 GeV	0.078 97	1.323 81	−0.425 79	1.327 58	−0.141 93	1.331 36	0.141 93	1.335 13	0.425 79
BANFF 21, SK nue flux, 2.5 - 4.0 GeV	0.083 85	1.328 72	−0.056 11	1.329 22	−0.018 70	1.329 72	0.018 70	1.330 21	0.056 11
BANFF 22, SK nue flux, 4.0 - 30.0 GeV	0.093 89	1.329 17	−0.022 44	1.329 37	−0.007 48	1.329 57	0.007 48	1.329 77	0.022 44
BANFF 23, SK nuebar flux, 0.0 - 2.5 GeV	0.074 03	1.328 51	−0.071 87	1.329 15	−0.023 96	1.329 79	0.023 96	1.330 42	0.071 87
BANFF 24, SK nuebar flux, 2.5 - 30.0 GeV	0.128 42	1.329 25	−0.016 18	1.329 40	−0.005 39	1.329 54	0.005 39	1.329 68	0.016 18
BANFF; Norm; 2p2h	1	1.292 52	−2.779 39	1.292 52	−2.779 40	1.366 42	2.779 40	1.440 32	8.338 16
BANFF; CA5 RES	0.148 52	0.993 08	−25.302 70	1.202 82	−9.526 40	1.470 64	10.619 00	1.796 54	35.132 60
BANFF; Norm; BgRES Isospin 1/2	0.307 69	1.270 57	−4.430 52	1.288 02	−3.117 80	1.392 73	4.758 80	1.584 71	19.199 20
BANFF, Ma QE	0.025 00	1.319 33	−0.762 54	1.326 18	−0.247 62	1.332 67	0.241 03	1.338 82	0.703 44
BANFF, Ma RES	0.157 90	1.037 13	−21.989 00	1.241 26	−6.634 60	1.409 17	5.995 10	1.548 52	16.476 60
BANFF; Fermi Momentum	0.057 78	1.334 23	0.358 02	1.332 06	0.194 99	1.326 74	−0.205 11	1.320 74	−0.656 17
BANFF; Shape; CC Oth	0.400 00	1.229 52	−7.517 85	1.282 91	−3.502 00	1.376 03	3.502 00	1.469 14	10.505 90
BANFF; Norm, CC Coh	0.300 00	1.317 42	−0.906 38	1.325 45	−0.302 13	1.333 48	0.302 13	1.341 52	0.906 38
BANFF; Norm, NC Oth	0.300 00	1.226 87	−7.717 50	1.295 27	−2.572 50	1.363 67	2.572 50	1.432 07	7.717 50
BANFF; Norm, $\nu_e$ To $\nu_\mu$	0.028 28	1.282 59	−3.526 11	1.313 84	−1.175 40	1.345 09	1.175 40	1.376 35	3.526 11
BANFF; Norm; NC 1 $\gamma$	1	1.299 73	−2.236 80	1.299 73	−2.236 80	1.359 21	2.236 80	1.418 68	6.710 40
BANFF; Norm, $\bar{\nu}_e$ To $\bar{\nu}_\mu$	0.028 28	1.329 12	−0.026 45	1.329 35	−0.008 82	1.329 59	0.008 82	1.329 82	0.026 45
BANFF; Norm; 2p2hBar	1	1.328 53	−0.070 91	1.328 53	−0.070 91	1.330 41	0.070 91	1.332 30	0.212 72
BANFF; BeRPA A	0.118 00	1.297 90	−2.374 27	1.318 95	−0.791 42	1.339 99	0.791 42	1.361 03	2.374 27
BANFF; BeRPA B	0.210 00	1.289 41	−3.013 34	1.316 11	−1.004 40	1.342 82	1.004 40	1.369 53	3.013 34
BANFF; BeRPA D	0.169 50	1.304 33	−1.891 11	1.321 09	−0.630 37	1.337 85	0.630 37	1.354 61	1.891 11
BANFF; BeRPA E	0.352 00	1.328 08	−0.104 35	1.328 91	−0.041 74	1.330 02	0.041 74	1.331 13	0.125 22
BANFF; Shape; 2p2h	3	1.324 25	−0.392 29	1.326 86	−0.196 15	1.330 28	0.061 10	1.331 09	0.122 21
BANFF; Norm; 2p2h C to O	0.200 00	1.306 73	−1.710 18	1.321 89	−0.570 06	1.337 05	0.570 06	1.352 20	1.710 18
SKDet + FSI/SI 2; $E_{reco}$ ( 0.30 - 0.80 )GeV; $\nu_\mu/\bar{\nu}_\mu$ CC ( $MultiR_e$ ); MultiRing	0.512 06	0.675 75	−49.171 10	1.111 56	−16.390 00	1.547 37	16.390 00	1.983 18	49.171 10
SKDet + FSI/SI 3; $E_{reco}$ ( 0.80 - 1.25 )GeV; $\nu_\mu/\bar{\nu}_\mu$ CC ( $MultiR_e$ ); MultiRing	0.251 60	1.225 24	−7.840 06	1.294 72	−2.613 40	1.364 21	2.613 40	1.433 70	7.840 06
SKDet + FSI/SI 4; $E_{reco}$ ( 0.30 - 0.80 )GeV; $\nu_e/\bar{\nu}_e$ CC ( $MultiR_e$ ); MultiRing	0.246 06	1.163 60	−12.476 10	1.274 18	−4.158 70	1.384 76	4.158 70	1.495 33	12.476 10
SKDet + FSI/SI 5; $E_{reco}$ ( 0.80 - 1.25 )GeV; $\nu_e/\bar{\nu}_e$ CC ( $MultiR_e$ ); MultiRing	0.236 39	1.094 08	−17.705 30	1.251 01	−5.901 80	1.407 93	5.901 80	1.564 85	17.705 30
SKDet + FSI/SI 6; $E_{reco}$ ( 0.30 - 0.80 )GeV; all NC ( $MultiR_e$ ); MultiRing	0.982 95	0.883 57	−33.539 70	1.180 84	−11.180 00	1.478 10	11.180 00	1.775 37	33.539 70
SKDet + FSI/SI 7; $E_{reco}$ ( 0.80 - 1.25 )GeV; all NC ( $MultiR_e$ ); MultiRing	0.484 69	1.245 12	−6.344 32	1.301 35	−2.114 80	1.357 58	2.114 80	1.413 81	6.344 32