

Parameter	1 σ value	BANFF -3 σ		BANFF tuned -1 σ		BANFF tuned +1 σ		BANFF tuned +3 σ	
All syst		66.761 70	−63.846 60(%)	125.827 00	−31.861 00(%)	267.100 00	44.644 00(%)	543.225 00	194.172 00(%)
BANFF 0, SK numu flux, 0.0 - 0.7 GeV; RHC	0.093 68	182.259 00	−1.301 47	183.861 00	−0.433 82	185.464 00	0.433 82	187.066 00	1.301 47
BANFF 1, SK numu flux, 0.7 - 1.0 GeV; RHC	0.079 34	182.233 00	−1.315 69	183.853 00	−0.438 56	185.472 00	0.438 56	187.092 00	1.315 69
BANFF 2, SK numu flux, 1.0 - 1.5 GeV; RHC	0.076 73	181.907 00	−1.491 94	183.744 00	−0.497 31	185.581 00	0.497 31	187.418 00	1.491 94
BANFF 3, SK numu flux, 1.5 - 2.5 GeV; RHC	0.080 56	182.284 00	−1.288 07	183.870 00	−0.429 36	185.455 00	0.429 36	187.041 00	1.288 07
BANFF 4, SK numu flux, 2.5 - 30.0 GeV; RHC	0.080 29	183.231 00	−0.775 36	184.185 00	−0.258 45	185.140 00	0.258 45	186.094 00	0.775 36
BANFF 5, SK numubar flux, 0.0 - 0.4 GeV; RHC	0.104 48	182.750 00	−1.035 51	184.025 00	−0.345 17	185.300 00	0.345 17	186.575 00	1.035 51
BANFF 6, SK numubar flux, 0.4 - 0.5 GeV; RHC	0.101 53	180.900 00	−2.037 58	183.408 00	−0.679 19	185.917 00	0.679 19	188.425 00	2.037 58
BANFF 7, SK numubar flux, 0.5 - 0.6 GeV; RHC	0.096 17	178.028 00	−3.592 49	182.451 00	−1.197 50	186.874 00	1.197 50	191.296 00	3.592 49
BANFF 8, SK numubar flux, 0.6 - 0.7 GeV; RHC	0.084 64	177.324 00	−3.973 73	182.216 00	−1.324 60	187.108 00	1.324 60	192	3.973 73
BANFF 9, SK numubar flux, 0.7 - 1.0 GeV; RHC	0.125 09	169.903 00	−7.992 81	179.743 00	−2.664 30	189.582 00	2.664 30	199.422 00	7.992 81
BANFF 10, SK numubar flux, 1.0 - 1.5 GeV; RHC	0.105 29	180.386 00	−2.316 07	183.237 00	−0.772 02	186.088 00	0.772 02	188.939 00	2.316 07
BANFF 11, SK numubar flux, 1.5 - 2.5 GeV; RHC	0.079 99	182.584 00	−1.125 48	183.970 00	−0.375 16	185.355 00	0.375 16	186.741 00	1.125 48
BANFF 12, SK numubar flux, 2.5 - 3.5 GeV; RHC	0.073 94	183.903 00	−0.411 29	184.409 00	−0.137 10	184.916 00	0.137 10	185.422 00	0.411 29
BANFF 13, SK numubar flux, 3.5 - 5.0 GeV; RHC	0.093 99	184.013 00	−0.351 90	184.446 00	−0.117 30	184.879 00	0.117 30	185.312 00	0.351 90
BANFF 14, SK numubar flux, 5.0 - 7.0 GeV; RHC	0.092 51	184.539 00	−0.067 08	184.621 00	−0.022 36	184.704 00	0.022 36	184.786 00	0.067 08
BANFF 15, SK numubar flux, 7.0 - 30.0 GeV; RHC	0.130 31	184.651 00	−0.006 19	184.659 00	−0.002 06	184.666 00	0.002 06	184.674 00	0.006 19
BANFF 16, SK nue flux, 0.0 - 2.5 GeV; RHC	0.068 88	184.659 00	−0.002 09	184.661 00	−0.000 70	184.664 00	0.000 70	184.666 00	0.002 09
BANFF 17, SK nue flux, 2.5 - 30.0 GeV; RHC	0.084 94	184.657 00	−0.002 78	184.661 00	−0.000 93	184.664 00	0.000 93	184.668 00	0.002 78
BANFF 18, SK nuebar flux, 0.0 - 0.5 GeV; RHC	0.094 70	184.662 00	$−5.425\,57 \times 10^{-5}$	184.662 00	$−1.808\,50 \times 10^{-5}$	184.662 00	$1.808\,50 \times 10^{-5}$	184.663 00	$5.425\,57 \times 10^{-5}$
BANFF 19, SK nuebar flux, 0.5 - 0.7 GeV; RHC	0.091 04	184.662 00	−0.000 18	184.662 00	$−6.042\,00 \times 10^{-5}$	184.663 00	$6.042\,00 \times 10^{-5}$	184.663 00	0.000 18
BANFF 20, SK nuebar flux, 0.7 - 0.8 GeV; RHC	0.091 01	184.662 00	$−9.000\,38 \times 10^{-5}$	184.662 00	$−3.000\,10 \times 10^{-5}$	184.663 00	$3.000\,10 \times 10^{-5}$	184.663 00	$9.000\,38 \times 10^{-5}$
BANFF 21, SK nuebar flux, 0.8 - 1.5 GeV; RHC	0.083 86	184.661 00	−0.000 87	184.662 00	−0.000 29	184.663 00	0.000 29	184.664 00	0.000 87
BANFF 22, SK nuebar flux, 1.5 - 2.5 GeV; RHC	0.079 58	184.661 00	−0.000 81	184.662 00	−0.000 27	184.663 00	0.000 27	184.664 00	0.000 81
BANFF 23, SK nuebar flux, 2.5 - 4.0 GeV; RHC	0.089 01	184.660 00	−0.001 06	184.662 00	−0.000 35	184.663 00	0.000 35	184.664 00	0.001 06
BANFF 24, SK nuebar flux, 4.0 - 30.0 GeV; RHC	0.155 81	184.661 00	−0.000 91	184.662 00	−0.000 30	184.663 00	0.000 30	184.664 00	0.000 91
BANFF; Norm; 2p2h	1	178.818 00	−3.164 90	178.818 00	−3.164 90	190.507 00	3.164 90	202.196 00	9.494 71
BANFF; CA5 RES	0.148 52	177.729 00	−3.754 87	181.309 00	−1.816 00	189.058 00	2.380 30	200.975 00	8.833 96
BANFF; Norm; BgRES Isospin 1/2	0.307 69	182.979 00	−0.911 58	183.478 00	−0.641 40	186.470 00	0.978 98	191.956 00	3.949 69
BANFF, Ma QE	0.025 00	179.232 00	−2.940 99	182.859 00	−0.976 85	186.455 00	0.970 50	189.992 00	2.886 05
BANFF, Ma RES	0.157 90	178.769 00	−3.191 68	182.314 00	−1.271 50	187.112 00	1.326 30	191.845 00	3.889 29
BANFF; Fermi Momentum	0.057 78	189.650 00	2.701 10	187.293 00	1.424 70	182.018 00	−1.431 80	176.663 00	−4.331 88
BANFF; Shape; CC Oth	0.400 00	183.802 00	−0.465 85	184.371 00	−0.157 85	184.954 00	0.157 85	185.537 00	0.473 55
BANFF; Norm, CC Coh	0.300 00	183.812 00	−0.460 39	184.379 00	−0.153 46	184.946 00	0.153 46	185.513 00	0.460 39
BANFF; Norm, NC Coh	0.300 00	184.661 00	−0.001 06	184.662 00	−0.000 35	184.663 00	0.000 35	184.664 00	0.001 06
BANFF; Norm, NC Oth	0.300 00	184.199 00	−0.251 20	184.508 00	−0.083 73	184.817 00	0.083 73	185.126 00	0.251 20
BANFF; Norm, ν_e To ν_μ	0.028 28	184.662 00	$−5.857\,37 \times 10^{-5}$	184.662 00	$−1.952\,50 \times 10^{-5}$	184.662 00	$1.952\,50 \times 10^{-5}$	184.663 00	$5.857\,37 \times 10^{-5}$
BANFF; Norm, $\bar{\nu}_e$ To $\bar{\nu}_\mu$	0.028 28	184.662 00	$−5.631\,81 \times 10^{-5}$	184.662 00	$−1.877\,30 \times 10^{-5}$	184.662 00	$1.877\,30 \times 10^{-5}$	184.663 00	$5.631\,81 \times 10^{-5}$
BANFF; Norm; 2p2hBar	1	174.973 00	−5.247 22	174.973 00	−5.247 20	194.352 00	5.247 20	213.731 00	15.741 70
BANFF; BeRPA A	0.118 00	154.654 00	−16.250 20	174.660 00	−5.416 70	194.665 00	5.416 70	214.671 00	16.250 30
BANFF; BeRPA B	0.210 00	163.074 00	−11.690 60	177.466 00	−3.896 90	191.859 00	3.896 90	206.251 00	11.690 60
BANFF; BeRPA D	0.169 50	174.813 00	−5.333 59	181.379 00	−1.777 90	187.945 00	1.777 80	194.512 00	5.333 64
BANFF; BeRPA E	0.352 00	184.164 00	−0.270 18	184.462 00	−0.108 68	184.864 00	0.109 28	185.270 00	0.329 08
BANFF; Shape; 2p2h	3	184.900 00	0.128 74	184.781 00	0.064 37	184.112 00	−0.298 08	183.562 00	−0.596 15
BANFF; Norm; 2p2h C to O	0.200 00	175.342 00	−5.047 27	181.556 00	−1.682 40	187.769 00	1.682 40	193.983 00	5.047 27
SKDet + FSI/SI 0; E_{reco} (0.00 - 0.40)GeV; $\nu_\mu/\bar{\nu}_\mu$ CCQE ($1R_\mu$); RHC	0.008 45	184.459 00	−0.110 21	184.595 00	−0.036 74	184.730 00	0.036 74	184.866 00	0.110 21
SKDet + FSI/SI 1; E_{reco} (0.40 - 1.10)GeV; $\nu_\mu/\bar{\nu}_\mu$ CCQE ($1R_\mu$); RHC	0.007 12	182.160 00	−1.354 90	183.828 00	−0.451 63	185.496 00	0.451 63	187.164 00	1.354 90
SKDet + FSI/SI 2; E_{reco} (1.10 - 30.00)GeV; $\nu_\mu/\bar{\nu}_\mu$ CCQE ($1R_\mu$); RHC	0.006 73	183.949 00	−0.386 55	184.425 00	−0.128 85	184.900 00	0.128 85	185.376 00	0.386 55
SKDet + FSI/SI 3; E_{reco} (0.00 - 30.00)GeV; $\nu_\mu/\bar{\nu}_\mu$ CCnQE ($1R_\mu$); RHC	0.129 67	175.957 00	−4.714 08	181.761 00	−1.571 40	187.564 00	1.571 40	193.368 00	4.714 08
SKDet + FSI/SI 4; E_{reco} (0.00 - 30.00)GeV; $\nu_e/\bar{\nu}_e/\text{sig}\nu_e$ CC ($1R_\mu$); RHC	1.004 54	184.655 00	−0.004 08	184.660 00	−0.001 36	184.665 00	0.001 36	184.670 00	0.004 08
SKDet + FSI/SI 5; E_{reco} (0.00 - 30.00)GeV; all NC ($1R_\mu$); RHC	0.658 75	181.271 00	−1.836 48	183.532 00	−0.612 16	185.793 00	0.612 16	188.054 00	1.836 48