

enum	name in code	name in manual	description	enabled
0	Null	-	-	×
1	MaNCEL	$x_{M_A^{NCEL}}$	tweak Ma NCEL, affects dsigma(NCEL)/dQ2 both in shape and normalization	✓
2	EtaNCEL	$x_{\eta^{NCEL}}$	tweak NCEL strange axial form factor eta, affects dsigma(NCEL)/dQ2 both in shape and normalization	✓
3	NormCCQE	$x_{CCQE-Norm}$	tweak CCQE normalization (energy independent)	×
4	NormCCQEenu		tweak CCQE normalization (maintains dependence on neutrino energy)	×
5	MaCCQEshape		tweak Ma CCQE, affects dsigma(CCQE)/dQ2 in shape only (normalized to constant integral)	×
6	MaCCQE	$x_{M_A^{CCQE}}$	tweak Ma CCQE, affects dsigma(CCQE)/dQ2 both in shape and normalization	✓

7	VecCCQEshape	$x_{CCQE-VecFF}$	tweak elastic nucleon form factors (BBA/default -> dipole) - shape only effect of dsigma(CCQE)/dQ2	✓
8	NormCCRES	$x_{CCRES-Norm}$	tweak CCRES normalization	×
9	MaCCRESshape		tweak Ma CCRES, affects d2sigma(CCRES)/dWdQ2 in shape only (normalized to constant integral)	×
10	MvCCRESshape		tweak Mv CCRES, affects d2sigma(CCRES)/dWdQ2 in shape only (normalized to constant integral)	×
11	MaCCRES	$x_{M_A^{CCRES}}$	tweak Ma CCRES, affects d2sigma(CCRES)/dWdQ2 both in shape and normalization	✓
12	MvCCRES	$x_{M_V^{CCRES}}$	tweak Mv CCRES, affects d2sigma(CCRES)/dWdQ2 both in shape and normalization	✓
13	NormNCRES	$x_{NCRES-Norm}$	tweak NCRES normalization	×

14	MaNCRESshape		tweak Ma NCRES, affects $d^2\sigma(\text{NCRES})/dWdQ^2$ in shape only (normalized to constant integral)	×
15	MvNCRESshape		tweak Mv NCRES, affects $d^2\sigma(\text{NCRES})/dWdQ^2$ in shape only (normalized to constant integral)	×
16	MaNCRES	$x_{M_A^{\text{NCRES}}}$	tweak Ma NCRES, affects $d^2\sigma(\text{NCRES})/dWdQ^2$ both in shape and normalization	✓
17	MvNCRES	$x_{M_V^{\text{NCRES}}}$	tweak Mv NCRES, affects $d^2\sigma(\text{NCRES})/dWdQ^2$ both in shape and normalization	✓
18	MaCOHpi	$x_{M_A^{\text{COHpi}}}$	tweak Ma for COH pion production	✓
19	R0COHpi	$x_{R_0^{\text{COHpi}}}$	tweak R0 for COH pion production	✓
20	RvpCC1pi	$x_{R_{bkg}^{\nu p, CC1\pi}}$	tweak the 1pi non-RES bkg in the RES region, for v+p CC	✓
21	RvpCC2pi	$x_{R_{bkg}^{\nu p, CC2\pi}}$	tweak the 2pi non-RES bkg in the RES region, for v+p CC	✓
22	RvpNC1pi	$x_{R_{bkg}^{\nu p, NC1\pi}}$	tweak the 1pi non-RES bkg in the RES region, for v+p NC	✓

23	RvpNC2pi	$x_{R_{bkg}^{\nu p, NC 2\pi}}$	tweak the 2pi non-RES bkg in the RES region, for v+p NC	✓
24	RvnCC1pi	$x_{R_{bkg}^{\nu n, CC 1\pi}}$	tweak the 1pi non-RES bkg in the RES region, for v+n CC	✓
25	RvnCC2pi	$x_{R_{bkg}^{\nu n, CC 2\pi}}$	tweak the 2pi non-RES bkg in the RES region, for v+n CC	✓
26	RvnNC1pi	$x_{R_{bkg}^{\nu n, NC 1\pi}}$	tweak the 1pi non-RES bkg in the RES region, for v+n NC	✓
27	RvnNC2pi	$x_{R_{bkg}^{\nu n, NC 2\pi}}$	tweak the 2pi non-RES bkg in the RES region, for v+n NC	✓
28	RvbarpCC1pi		tweak the 1pi non-RES bkg in the RES region, for vbar+p CC	✓
29	RvbarpCC2pi		tweak the 2pi non-RES bkg in the RES region, for vbar+p CC	✓
30	RvbarpNC1pi		tweak the 1pi non-RES bkg in the RES region, for vbar+p NC	✓
31	RvbarpNC2pi		tweak the 2pi non-RES bkg in the RES region, for vbar+p NC	✓
32	RvbarnCC1pi		tweak the 1pi non-RES bkg in the RES region, for vbar+n CC	✓
33	RvbarnCC2pi		tweak the 2pi non-RES bkg in the RES region, for vbar+n CC	✓
34	RvbarnNC1pi		tweak the 1pi non-RES bkg in the RES region, for vbar+n NC	✓

35	RvbarnNC2pi		tweak the 2pi non-RES bkg in the RES region, for $\bar{\nu}$ +n NC	✓
36	AhtBY	$x_{A_{HT}^{BY}}$	tweak the Bodek-Yang model parameter $A_{\{ht\}}$ - incl. both shape and normalization effect	✓
37	BhtBY	$x_{B_{HT}^{BY}}$	tweak the Bodek-Yang model parameter $B_{\{ht\}}$ - incl. both shape and normalization effect	✓
38	CV1uBY	$x_{C_{V1u}^{BY}}$	tweak the Bodek-Yang model parameter CV1u - incl. both shape and normalization effect	✓
39	CV2uBY	$x_{C_{V2u}^{BY}}$	tweak the Bodek-Yang model parameter CV2u - incl. both shape and normalization effect	✓
40	AhtBYshape		tweak the Bodek-Yang model parameter $A_{\{ht\}}$ - shape only effect to $d^2\sigma(\text{DIS})/dx dy$	×
41	BhtBYshape		tweak the Bodek-Yang model parameter $B_{\{ht\}}$ - shape only effect to $d^2\sigma(\text{DIS})/dx dy$	×

42	CV1uBYshape		tweak the Bodek-Yang model parameter CV1u - shape only effect to $d^2\sigma(DIS)/dx dy$	×
43	CV2uBYshape		tweak the Bodek-Yang model parameter CV2u - shape only effect to $d^2\sigma(DIS)/dx dy$	×
44	NormDISCC	$x_{CCDIS}$	tweak the inclusive DIS CC normalization (not currently working in genie)	×
45	RnubarnuCC	$x_{CC\bar{\nu}/\nu}$	tweak the ratio of $\sigma(\bar{\nu} CC) / \sigma(\nu CC)$ (not currently working in genie)	×
46	DISNuclMod	$x_{DIS-NuclMod}$	tweak DIS nuclear modification (shadowing, anti-shadowing, EMC). Does not appear to be working in GENIE at the moment	×
47	NC		-	✓
48	AGKY_xF1pi	$x_{AGKY}^{xF1\pi}$	tweak xF distribution for low multiplicity (N + pi) DIS f/s produced by AGKY	✓
49	AGKY_pT1pi	$x_{AGKY}^{pT1\pi}$	tweak pT distribution for low multiplicity (N + pi) DIS f/s produced by AGKY	✓
50	FormZone	$x_{fz}$	tweak formation zone	✓

51	MFP_pi	$x_{mfp}^{\pi}$	tweak mean free path for pions	✓
52	MFP_N	$x_{mfp}^N$	tweak mean free path for nucleons	✓
53	FrCEX_pi	$x_{ceX}^{\pi}$	tweak charge exchange probability for pions, for given total rescattering probability	✓
54	FrElas_pi	$x_{el}^{\pi}$	tweak elastic probability for pions, for given total rescattering probability	✓
55	FrInel_pi	$x_{inel}^{\pi}$	tweak inelastic probability for pions, for given total rescattering probability	✓
56	FrAbs_pi	$x_{abs}^{\pi}$	tweak absorption probability for pions, for given total rescattering probability	✓
57	FrPiProd_pi	$x_{\pi}^{\pi}$	tweak pion production probability for pions, for given total rescattering probability	✓
58	FrCEX_N	$x_{ceX}^N$	tweak charge exchange probability for nucleons, for given total rescattering probability	✓
59	FrElas_N	$x_{el}^N$	tweak elastic probability for nucleons, for given total rescattering probability	✓

60	FrInel_N	$x_{inel}^N$	tweak inelastic probability for nucleons, for given total rescattering probability	✓
61	FrAbs_N	$x_{abs}^N$	tweak absorption probability for nucleons, for given total rescattering probability	✓
62	FrPiProd_N	$x_{\pi}^N$	tweak pion production probability for nucleons, for given total rescattering probability	✓
63	CCQEPauliSupViaKF	$x_{CCQE-PauliSup}$	-	✓
64	CCQEMomDistroFGtoSF		-	✓
65	BR1gamma	$x_{BR}^{R \rightarrow X+1\gamma}$	tweak Resonance -> X + gamma branching ratio, eg Delta+(1232) -> p gamma	✓
66	BR1eta	$x_{BR}^{R \rightarrow X+1\eta}$	tweak Resonance -> X + eta branching ratio, eg N+(1440) -> p eta	✓
67	Theta_Delta2Npi	$x_{\theta_{\pi}}^{\Delta \rightarrow \pi N}$	distort pi angular distribution in Delta -> N + pi	✓