A Elementary Particle Identification Code Listing

Numbers which have changed since PDG 1998 are in bold text.

Quarks and Leptons							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
d	2	1	1	-2,-8	1	1	1
u	1	2	2	-1,-7	2	2	2
s	3	3	3	-3,-9	3	3	3
c	4	4	4	-4,-10	4	4	4
b	5	5	5	-5,-11	5	5	5
t	6	6	6	-6,-12	6	6	6
b'	7 (y)	7	7 (v & h)		7	7	7
t'	8 (x)	8	8 (a & h')		8	8	8
e^-	12	11	11	7,8	11	11	11
ν_e	11	12	12	9,10	12	12	12
μ^-	14	13	13	11,12	13	13	13
ν_μ	13	14	14	13,14	14	14	14
τ^-	16	15	15	15,16	15	15	15
ν_τ	15	16	16	17,18	16	16	16
τ'^-		17			17 (L^-)	17	17
$\nu_{\tau'}$		18			18 (ν_L)	18	18

Gauge and Higgs Bosons							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
g	9	21	21	-13	21	21 (9)	21 (9)
γ	10	22	22	1	22	22	22
$\gamma_{virtual}$					10022		10022
$Cerenkov$					20022		20022
Z^0	90	23	23	2	23	23	23
W^+	80	24	24	3,4	24	24	24
h^0/H_1^0	81	25	25		25	25	25
Z'/Z_2^0		32	32		32	32	32
Z''/Z_3^0		33			33	33	33
W'/W_2^+		34			34	34	34
H^0/H_2^0	83 (H_H^0)	35	35		35 (H')	35	35
A^0/H_3^0	84 (H_A^0)	36	36		36	36	36
H^+	86	37	37		37	37	37
H_1^{++}	88						52
H_2^+	87						53
H_2^{++}	89						54
H_4^0	85						55
H_5^0							
$H_L^{0\,NOTE}$	82		26				51

Special Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
G (graviton)	92		**39**			39	39
R^0		40			40	41	41
LQ^c		39				42	42
$reggeon$		28			28	110	110
$pomeron$		29			29	990	990
$odderon$						9990	9990
X_u^0					41		61
X_u^+					42		62
internal code		81-99	91	82-93		81-100	81-100

NOTE: H_L^0 is redundant with h^0/H_1^0, but is given a different number in Isajet and Herwig.

Supersymmetric Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$\tilde{d}_L$	22	1000001	1000001			1000001	1000001
$\tilde{u}_L$	21	1000002	1000002			1000002	1000002
$\tilde{s}_L$	23	1000003	1000003			1000003	1000003
$\tilde{c}_L$	24	1000004	1000004			1000004	1000004
$\tilde{b}_1/\tilde{b}_L$	25	1000005	1000005			1000005	1000005
$\tilde{t}_1/\tilde{t}_L$	26	1000006	1000006			1000006	1000006
$\tilde{e}_L^-$	32	1000011	1000011			1000011	1000011
$\tilde{\nu}_{eL}$	31	1000012	1000012			1000012	1000012
$\tilde{\mu}_L^-$	34	1000013	1000013			1000013	1000013
$\tilde{\nu}_{\mu L}$	33	1000014	1000014			1000014	1000014
$\tilde{\tau}_1^-/\tilde{\tau}_L^-$	36	1000015	1000015			1000015	1000015
$\tilde{\nu}_{\tau L}$	35	1000016	1000016			1000016	1000016
$\tilde{d}_R$	42	2000001	2000001			2000001	2000001
$\tilde{u}_R$	41	2000002	2000002			2000002	2000002
$\tilde{s}_R$	43	2000003	2000003			2000003	2000003
$\tilde{c}_R$	44	2000004	2000004			2000004	2000004
$\tilde{b}_2/\tilde{b}_R$	45	2000005	2000005			2000005	2000005
$\tilde{t}_2/\tilde{t}_R$	46	2000006	2000006			2000006	2000006
$\tilde{e}_R^-$	52	2000011	2000011			2000011	2000011
$\tilde{\nu}_{eR}$	51	2000012	2000012				2000012
$\tilde{\mu}_R^-$	54	2000013	2000013			2000013	2000013
$\tilde{\nu}_{\mu R}$	53	2000014	2000014				2000014
$\tilde{\tau}_2^-/\tilde{\tau}_R^-$	56	2000015	2000015			2000015	2000015
$\tilde{\nu}_{\tau R}$	55	2000016	2000016				2000016

Supersymmetric Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$\tilde{g}$	29	1000021	1000021			1000021	1000021
$\tilde{\chi}_1^0/\tilde{\gamma}$	30 (Z_1^{ss})	1000022	1000022			1000022	1000022
$\tilde{\chi}_2^0/\tilde{Z}^0$	40 (Z_2^{ss})	1000023	1000023			1000023	1000023
$\tilde{\chi}_1^+/\tilde{W}^+$	39 (W_1^{+ss})	1000024	1000024			1000024	1000024
$\tilde{\chi}_3^0/\tilde{H}_1^0$	50 (Z_3^{ss})	1000025	1000025			1000025	1000025
$\tilde{\chi}_4^0/\tilde{H}_2^0$	60 (Z_4^{ss})	1000035	1000035			1000035	1000035
$\tilde{\chi}_2^+/\tilde{H}^+$	49 (W_2^{+ss})	1000037	1000037			1000037	1000037
$\tilde{G}$	91	1000039	1000039			1000039	1000039

Technicolor Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
π^0_{tech}		51				3000111	3000111
π^+_{tech}		52				3000211	3000211
π'^0_{tech}		53					3100111
η^0_{tech}		38				3000221	3000221
ρ^0_{tech}		54				3000113	3000113
ρ^+_{tech}		55				3000213	3000213
ω^0_{tech}		56				3000223	3000223

Excited Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
d^*		4000001				4000001	4000001
u^*		4000002				4000002	4000002
e^*		4000011				4000011	4000011
ν_e^*		4000012				4000012	4000012

Other Exotics							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
H_L^{++}		61					5100061
H_R^{++}		62					5100062
W_R^+		63					5100024
ν_{Re}		64					5100012
$\nu_{R\mu}$		65					5100014
$\nu_{R\tau}$		66					5100016

Diquarks							
Diquark	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$(dd)_0$					1101		
$(ud)_0$	1200	2101	2101		2101	2101	2101
$(uu)_0$					2201		
$(sd)_0$	2300	3101	3101		3101	3101	3101
$(su)_0$	1300	3201	3201		3201	3201	3201
$(ss)_0$					3301		
$(cd)_0$	-2400	4101			4101	4101	4101
$(cu)_0$	-1400	4201			4201	4201	4201
$(cs)_0$	-3400	4301			4301	4301	4301
$(cc)_0$					4401		
$(bd)_0$	2500	5101			5101	5101	5101
$(bu)_0$	1500	5201			5201	5201	5201
$(bs)_0$	3500	5301			5301	5301	5301
$(bc)_0$	4500	5401			5401	5401	5401
$(vv)_0$					5501		
$(dd)_1$	2200	1103	1103		1103	1103	1103
$(ud)_1$		2103			2103	2103	2103
$(uu)_1$	1100	2203	2203		2203	2203	2203
$(sd)_1$		3103			3103	3103	3103
$(su)_1$		3203			3203	3203	3203
$(ss)_1$	3300	3303	3303		3303	3303	3303
$(cd)_1$		4103			4103	4103	4103
$(cu)_1$		4203			4203	4203	4203
$(cs)_1$		4303			4303	4303	4303
$(cc)_1$	4400	4403			4403	4403	4403
$(bd)_1$		5103			5103	5103	5103
$(bu)_1$		5203			5203	5203	5203
$(bs)_1$		5303			5303	5303	5303
$(bc)_1$		5403			5403	5403	5403
$(bb)_1$	5500	5503			5503	5503	5503

Miscellaneous Particles							
Particle	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
ρ^0_{diffr}		110			110		9910113
π^+_{diffr}		210			210		9910211
ω^0_{diffr}		220			220		9910223
ϕ^0_{diffr}		330			330		9910333
J/ψ^0_{diffr}		440			440		9910443
n^0_{diffr}		2110			2110		9912112
p^+_{diffr}		2210			2210		9912212
remnant photon			98				9920022
remnant nucleon			99				9922212
deuterium					1011		
tritium					1021		
He^3					1012		
α					1022		
geantino					100		

B Complete Meson Particle Identification Code Listing

Numbers which have changed since StdHep 4.09 are in bold text.

Light Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
π^0	110	111	111	51	111	111	111
π^+	120	211	211	21,22	211	211	211
$a_0^0(980)$		10111	9000111	251	10111	9000111	9000111
$a_0^+(980)$		10211	9000211	252,253	10211	9000211	9000211
$\pi^0(1300)$					20111 ($\pi(2S)$)	100111	100111
$\pi^+(1300)$					20211 ($\pi(2S)$)	100211	100211
$a_0^0(1450)$			10111			10111	10111
$a_0^+(1450)$			10211			10211	10211
$\pi^0(1800)$						200111	200111
$\pi^+(1800)$						200211	200211
$\rho^0(770)$	111	113	113	91	113	113	113
$\rho^+(770)$	121	213	213	61,62	213	213	213
$b_1^0(1235)$		10113	10113	265	10113	10113	10113
$b_1^+(1235)$		10213	10213	266,267	10213	10213	10213
$a_1^0(1260)$	10111	20113	20113	108	20113	20113	20113
$a_1^+(1260)$	10121	20213	20213	107,109	20213	20213	20213
$\pi_1^0(1400)^{NOTE}$						9000113	9000113
$\pi_1^+(1400)^{NOTE}$						9000213	9000213
$\rho^0(1450)$					30113 ($\rho(2S)$)	100113	100113
$\rho^+(1450)$					30213 ($\rho(2S)$)	100213	100213
$\pi_1^0(1600)$						**9010113**	**9010113**
$\pi_1^+(1600)$						**9010213**	**9010213**
$a_1^0(1640)$						**9020113**	**9020113**
$a_1^+(1640)$						**9020213**	**9020213**
$\rho^0(1700)/\rho^0(D)$			30113	106	40113 ($\rho(4S)$)	30113	30113
$\rho^+(1700)/\rho^+(D)$			30213	205,206	40213 ($\rho(4S)$)	30213	30213
$\rho^0(2150)$						**9030113**	**9030113**
$\rho^+(2150)$						**9030213**	**9030213**
NOTE: $\pi_1^0(1400)$ was $\hat{\rho}(1405)$ in PDG 1998.							

Light Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$a_2^0(1320)$		115	115	254	115	115	115
$a_2^+(1320)$		215	215	255,256	215	215	215
$a_2^0(1660)$						**9000115**	**9000115**
$a_2^+(1660)$						**9000215**	**9000215**
$\pi_2^0(1670)$			10115			10115	10115
$\pi_2^+(1670)$			10215			10215	10215
$a_2^0(1750)$						**9010115**	**9010115**
$a_2^+(1750)$						**9010215**	**9010215**
$\pi_2^0(2100)$						**9020115**	**9020115**
$\pi_2^+(2100)$						**9020215**	**9020215**
$\rho_3^0(1690)$			117			117	117
$\rho_3^+(1690)$			217			217	217
$\rho_3^0(2250)$						9000117	9000117
$\rho_3^+(2250)$						9000217	9000217
$a_4^0(2040)$						119	119
$a_4^+(2040)$						219	219

$u\bar{u}$, $d\bar{d}$, and $s\bar{s}$ Meson admixtures							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
η	220	221	221	52	221	221	221
η'	330	331	331	53	331	331	331
$f_0(400-1200)$						9000221	9000221
$f_0(980)$	10110	10221	9010221 f_0'	257	10221	9010221	9010221
$\eta(1295)$					20221 ($\eta(2S)$	100221	100221
$f_0(1370)/f_0'$		10331	10221 $f_0^0(H)$	258	10331	10221	10221
$\eta(1440)$						100331	100331
$f_0(1500)$					50221	9020221	9020221
$f_0(1710)^{NOTE}$						**10331**	**10331**
$\eta(1760)$						200221	200221
$f_0(2020)$						**9030221**	**9030221**
$f_0(2060)$						**9040221**	**9040221**
$f_0(2200)$						**9050221**	**9050221**
$\eta(2225)$						**9060221**	**9060221**
X^0_{ss}					30363		9000331
$\omega(782)$	221	223	223	92	223	223	223
$\phi(1020)$	331	333	333	93	333	333	333
$h_1(1170)$		10223	10223	263	10223	10223	10223
$f_1(1285)$		20223	20223	259	20223	20223	20223
$h_1(1380)/h_1'$		10333	10333	264	10333	10333	10333
$f_1(1420)/f_1'$		20333	20333 $f_1(H)$	260	20333	20333	20333
$\omega(1420)$					30223	100223	100223
$f_1(1510)$						9000223	9000223
$\omega(1650)$			30223			30223	30223
$\phi(1680)$						100333	100333
NOTE: $f_0(1710)$ was $f_J(1710)$ in PDG 1998. Also, Herwig's $f_1(H)$ had a mass of 1512 in Herwig 5.9 and a mass of 1426 as of Herwig 6.1.							

$u\bar{u}$, $d\bar{d}$, and $s\bar{s}$ Meson admixtures							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$f_2(1270)$	112	225	225	261	225	225	225
$f_2(1430)$						9000225	9000225
$f_2'(1525)$		335	335	262	335	335	335
$f_2(1565)$						9010225	9010225
$f_2(1640)$						9020225	9020225
$\eta_2(1645)$			10225			10225	10225
$f_2(1810)$						100225	100225
$\eta_2(1870)$			10335			10335	10335
$f_2(1950)$						9030225	9030225
$f_2(2010)$						100335	100335
$f_2(2150)$						9040225	9040225
$f_2(2300)$						9050225	9050225
$f_2(2340)$						9060225	9060225
$\omega_3(1670)$			227			227	227
$\phi_3(1850)$			337			337	337
$f_4(2050)$						229	229
$f_J(2220)$						9000339	9000339
$f_4(2300)$						9000229	9000229

Strange Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
K_S^0	20	310	310	57	310	310	310
K_L^0	-20	130	130	58	130	130	130
K^0	230	311	311	25,26	311	311	311
K^+	130	321	321	23,24	321	321	321
$K_0^{*0}(1430)$		10311	10311	268,269	10311	10311	10311
$K_0^{*+}(1430)$		10321	10321	270,271	10321	10321	10321
$K^0(1460)$						100311	100311
$K^+(1460)$						100321	100321
$K^0(1830)$						200311	200311
$K^+(1830)$						200321	200321
$K_0^{*0}(1950)$						9000311	9000311
$K_0^{*+}(1950)$						9000321	9000321
X_{sd}^0					30343		9010311
X_{su}^+					30353		9020321
$K^{*0}(892)$	231	313	313	65,66	313	313	313
$K^{*+}(892)$	131	323	323	63,64	323	323	323
$K_1^0(1270)$	10231	10313	10313 $(K_1^0(L))$	59,60	10313	10313	10313
$K_1^+(1270)$	10131	10323	10323 $(K_1^+(L))$	201,202	10323	10323	10323
$K_1^0(1400)$		20313 (K_1^{*0})	20313 $(K_1^0(H))$	19,20	20313 $(K_1^{\prime 0})$	20313	20313
$K_1^+(1400)$		20323 (K_1^{*+})	20323 $(K_1^+(H))$	203,204	20323 $(K_1^{\prime +})$	20323	20323
$K^{*0}(1410)$	30231				100313 $(K^{\prime *0})$	100313	100313
$K^{*+}(1410)$	30131				100323 $(K^{\prime *+})$	100323	100323
$K_1^0(1650)$						9000313	9000313
$K_1^+(1650)$						9000323	9000323
$K^{*0}(1680)$			30313		30313$(K^{\prime\prime *0})$	30313	30313
$K^{*+}(1680)$			30323		30323$(K^{\prime\prime *+})$	30323	30323
In Herwig 6.2, $K_1^0(L)$ has mass 1570 and $K_1^0(H)$ has mass 1850.							

Strange Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$K_2^{*0}(1430)$	232	315	315	272,273	315	315	315
$K_2^{*+}(1430)$	132	325	325	274,275	325	325	325
$K_2^0(1580)$						9000315	9000315
$K_2^+(1580)$						9000325	9000325
$K_2^0(1770)$			10315			10315	10315
$K_2^+(1770)$			10325			10325	10325
$K_2^0(1820)$			20315			20315	20315
$K_2^+(1820)$			20325			20325	20325
$K_2^{*0}(1980)$						100315	100315
$K_2^{*+}(1980)$						100325	100325
$K_2^0(2250)$						9010315	9010315
$K_2^+(2250)$						9010325	9010325
$K_3^{*0}(1780)$			317	278,279	317	317	317
$K_3^{*+}(1780)$			327	280,281	327	327	327
$K_3^0(2320)$						9010317	9010317
$K_3^+(2320)$						9010327	9010327
$K_4^{*0}(2045)$					319	319	319
$K_4^{*+}(2045)$					329	329	329
$K_4^0(2500)$						9000319	9000319
$K_4^+(2500)$						9000329	9000329

Charmed Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	PDG 2000	std 3.04	StdHep 4.10
D^+	-240	411	411	29,30	411	411	411
D^0	-140	421	421	27,28	421	421	421
D_0^{*+}		10411	10411	221,225	10411	10411	10411
D_0^{*0}		10421	10421	229,233	10421	10421	10421
$D(2S)^+$					30411		100411
$D(2S)^0$					30421		100421
$D^{*+}(2010)$	-241	413	413	69,70	413	413	413
$D^{*0}(2007)$	-141	423	423	67,68	423	423	423
$D_1^+(2420)/D_1^+(L)$		10413	10413	223,227	10413	10413	10413
$D_1^0(2420)/D_1^0(L)$		10423	10423	231,235	10423	10423	10423
$D_1^+(H)/D_1^{*+}$		20413	20413	222,226	20413 ($D_1^{\prime +}$)	20413	20413
$D_1^0(H)/D_1^{*0}$		20423	20423	230,234	20423 ($D_1^{\prime 0}$)	20423	20423
$D(2S)^{*+}$					30413		100413
$D(2S)^{*0}$					30423		100423
$D_2^{*+}(2460)$		415	415	224,228	415	415	415
$D_2^{*0}(2460)$		425	425	232,236	425	425	425
D_s^+	-340 (F^+)	431	431	31,32	431	431	431
D_{s0}^{*+}		10431	10431	237,241	10431	10431	10431
D_s^{*+}	-341 (F^{*+})	433	433	71,72	433	433	433
$D_{s1}^+(2536)/D_{s1}^+(L)$		10433	10433	239,243	10433	10433	10433
$D_{s1}^+(H)/D_{s1}^{*+}$		20433	20433	238,242	20433	20433	20433
D_{s2}^{*+}		435	435	240,244	435	435	435

$c\bar{c}$ Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$\eta_c(1S)$	440	441	441	54	441	441	441
$\chi_{c0}(1P)$	20440	10441	10441 (χ_{c1})	110	10441	10441	10441
$\eta_c(2S)$					20441	100441	100441
$J/\psi(1S)$	441	443	443	94	443	443	443
$h_c(1P)$		10443	10443	215	10443	10443	10443
$\chi_{c1}(1P)$	20441	20443	20443 (χ_{c0})	111	20443	20443	20443
$\psi(2S)/\psi'$	10441	100443	100443	219	30443	100443	100443
$\psi(3770)$			30443	211	40443	30443	30443
$\psi(4040)$				212	50443	9000443	9000443
$\psi(4160)$				213	60443	9010443	9010443
$\psi(4415)$				214	70443	9020443	9020443
$\chi_{c2}(1P)$	20442	445	445	112	445	445	445
$\psi(3836)$						**9000445**	**9000445**

Bottom Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
B^0	250	511	511	36,35	511	511	511
B^+	150	521	521	34,33	521	521	521
B_0^{*0}		10511	10511	479,483	10511	10511	10511
B_0^{*+}		10521	10521	471,475	10521	10521	10521
B^{*0}	251	513	513	76,75	513	513	513
B^{*+}	151	523	523	74,73	523	523	523
$B_1^0(L)$		10513	10513	481,485	10513	10513	10513
$B_1^+(L)$		10523	10523	473,477	10523	10523	10523
$B_1^0(H)/B_1^{*0}$		20513	20513	480,484	20513 ($B_1'^0$)	20513	20513
$B_1^+(H)/B_1^{*+}$		20523	20523	472,476	20523 ($B_1'^+$)	20523	20523
B_2^{*0}		515	515	482,486	515	515	515
B_2^{*+}		525	525	474,478	525	525	525
B_s^0	350	531	531	38,37	531	531	531
B_{s0}^{*0}		10531	10531	487,491	10531	10531	10531
B_s^{*0}	351	533	533	78,77	533	533	533
$B_{s1}^0(L)$		10533	10533	489,493	10533	10533	10533
$B_{s1}^0(H)/B_{s1}^{*0}$		20533	20533	488,492	20533 ($B_{s1}'^0$)	20533	20533
B_{s2}^{*0}		535	535	490,494	535	535	535
B_c^+	450	541	541	40,39	541	541	541
B_{c0}^{*+}		10541	10541		10541	10541	10541
B_c^{*+}	451	543	543	80,79	543	543	543
$B_{c1}^+(L)$		10543	10543		10543	10543	10543
$B_{c1}^+(H)/B_{c1}^{*+}$		20543	20543		20543 ($B_{c1}'^+$)	20543	20543
B_{c2}^{*+}		545	545		545	545	545

$b\bar{b}$ Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
$\eta_b(1S)$	550	551	551	55	551	551	551
$\chi_{b0}(1P)$		10551	10551	100	10551	10551	10551
$\eta_b(2S)$					20551	100551	100551
$\chi_{b0}(2P)$			110551	103	30551	110551	110551
$\eta_b(3S)$					40551	200551	200551
$\chi_{b0}(3P)$					50551	210551	210551
$\Upsilon(1S)$	551	553	553	95	553	553	553
$h_b(1P)$		10553	10553	218	10553	10553	10553
$\chi_{b1}(1P)$		20553	20553	101	20553	20553	20553
$\Upsilon_1(1D)$					120553	30553	30553
$\Upsilon(2S)/\Upsilon'$		100553	100553	97	30553	100553	100553
$h_b(2P)$					40553	110553	110553
$\chi_{b1}(2P)$			120553	104	50553	120553	120553
$\Upsilon_1(2D)$					130553	130553	130553
$\Upsilon(3S)$			200553	98	60553	200553	200553
$h_b(3P)$					100553	210553	210553
$\chi_{b1}(3P)$					110553	220553	220553
$\Upsilon(4S)$			300553	99	70553	300553	300553
$\Upsilon(10860)$				216	80553	9000553	9000553
$\Upsilon(11020)$				217		9010553	9010553
$\Upsilon(7S)$				220			9020553
$\chi_{b2}(1P)$		555	555	102	555	555	555
$\eta_{b2}(1D)$					40555	10555	10555
$\Upsilon_2(1D)$					30555	20555	20555
$\chi_{b2}(2P)$			100555	105	10555	100555	100555
$\eta_{b2}(2D)$					60555	110555	110555
$\Upsilon_2(2D)$					50555	120555	120555
$\chi_{b2}(3P)$					20555	200555	200555
$\Upsilon_3(1D)$					557	557	557
$\Upsilon_3(2D)$					10557	100557	100557

Top Mesons							
Meson	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
T^+	-260		611	43,44			611
T^0	-160		621	41,42			621
T^{*+}	-261			83,84			613
T^{*0}	-161			81,82			623
T_s^+	-360		631	45,46			631
T_s^{*+}	-361			85,86			633
T_c^0	460		641	47,48			641
T_c^{*0}	461			87,88			643
T_b^+	-560		651	49,50			651
T_b^{*+}	-561			89,90			653
η_t	660			56			661
θ	661		663	96 (ψ_t)			663

C List of baryon states

Light Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
p	1120	2212	2212	137,138	2212	2212	2212
n	1220	2112	2112	143,144	2112	2112	2112
Δ^{++}	1111	2224	2224	193,194	2224	2224	2224
Δ^{+}	1121	2214	2214	169,170	2214	2214	2214
Δ^{0}	1221	2114	2114	175,176	2114	2114	2114
Δ^{-}	2221	1114	1114	195,196	1114	1114	1114

Strange Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Λ	2130	3122	3122	121,122	3122	3122	3122
$\Lambda(1405)$					13122		
$\Lambda(1600)$					23122		
$\Lambda(1670)$					33122		
$\Lambda(1800)$					43122		
$\Lambda(1810)$					53122		
$\Lambda(1520)$					3124		
$\Lambda(1690)$					13124		
$\Lambda(1820)$					3126		
$\Lambda(1830)$					13126		
Σ^+	1130	3222	3222	139,140	3222	3222	3222
Σ^0	1230	3212	3212	129,130	3212	3212	3212
$\Sigma(1660)^0$					13212		
$\Sigma(1750)^0$					23212		
$\Sigma(1670)^0$					13214		
$\Sigma(1775)^0$					3216		
Σ^-	2230	3112	3112	145,146	3112	3112	3112
$\Sigma^{*+}/\Sigma(1385)^+$	1131	3224	3224	171,172	3224	3224	3224
$\Sigma^{*0}/\Sigma(1385)^0$	1231	3214	3214	161,162	3214	3214	3214
$\Sigma^{*-}/\Sigma(1385)^-$	2231	3114	3114	177,178	3114	3114	3114
Ξ^0	1330	3322	3322	149,150	3322	3322	3322
Ξ^-	2330	3312	3312	151,152	3312	3312	3312
$\Xi^{*0}/\Xi(1530)^0$	1331	3324	3324	181,182	3324	3324	3324
$\Xi^{*-}/\Xi(1530)^-$	2331	3314	3314	183,184	3314	3314	3314
Ω^-	3331	3334	3334	197,198	3334	3334	3334

Charmed Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Λ_c^+	2140	4122	4122	123,124	4122	4122	4122
Σ_c^{++}	1140	4222	4222	141,142	4222	4222	4222
Σ_c^+	1240	4212	4212	131,132	4212	4212	4212
Σ_c^0	2240	4112	4112	147,148	4112	4112	4112
Σ_c^{*++}	1141	4224	4224	173,174	4224	4224	4224
Σ_c^{*+}	1241	4214	4214	163,164	4214	4214	4214
Σ_c^{*0}	2241	4114	4114	179,180	4114	4114	4114
Ξ_c^+	3140	4232	4232	125,126	4232	4232	4232
Ξ_c^0	3240	4132	4132	127,128	4132	4132	4132
$\Xi_c^{\prime +}$	1340	4322	4322	133,134	4322	4322	4322
$\Xi_c^{\prime 0}$	2340	4312	4312	135,136	4312	4312	4312
Ξ_c^{*+}	1341	4324	4324	165,166	4324	4324	4324
Ξ_c^{*0}	2341	4314	4314	167,168	4314	4314	4314
Ω_c^0	3340	4332	4332	153,154	4332	4332	4332
Ω_c^{*0}	3341	4334	4334	185,186	4334	4334	4334
Ξ_{cc}^+	2440	4412		157,158		4412	4412
Ξ_{cc}^{++}	1440	4422		155,156		4422	4422
Ξ_{cc}^{*+}	2441	4414		189,190		4414	4414
Ξ_{cc}^{*++}	1441	4424		187,188		4424	4424
Ω_{cc}^+	3440	4432		159,160		4432	4432
Ω_{cc}^{*+}	3441	4434		191,192		4434	4434
Ω_{ccc}^{*++}	4441	4444		199,200		4444	4444

Bottom Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Λ_b^0	2150	5122	5122	401,402	5122	5122	5122
Σ_b^-	2250	5112	5112	427,428	5112	5112	5112
Σ_b^0	1250	5212	5212	413,414	5212	5212	5212
Σ_b^+	1150	5222	5222	425,426	5222	5222	5222
Σ_b^{*-}	2251	5114	5114	455,456	5114	5114	5114
Σ_b^{*0}	1251	5214	5214	441,442	5214	5214	5214
Σ_b^{*+}	1151	5224	5224	453,454	5224	5224	5224
Ξ_b^-	3250	5132	5132	405,406	5132	5132	5132
Ξ_b^0	3150	5232	5232	403,404	5232	5232	5232
$\Xi_b^{\prime -}$	2350	5312	5312	417,418	5312	5312	5312
$\Xi_b^{\prime 0}$	1350	5322	5322	415,416	5322	5322	5322
Ξ_b^{*-}	2351	5314	5314	445,446	5314	5314	5314
Ξ_b^{*0}	1351	5324	5324	443,444	5324	5324	5324
Ω_b^-	3350	5332	5332	429,430	5332	5332	5332
Ω_b^{*-}	3351	5334	5334	457,458	5334	5334	5334
Ξ_{bc}^0	4250	5142		409,410		5142	5142
Ξ_{bc}^+	4150	5242		407,408		5242	5242
$\Xi_{bc}^{\prime 0}$	2450	5412		421,422		5412	5412
$\Xi_{bc}^{\prime +}$	1450	5422		419,420		5422	5422
Ξ_{bc}^{*0}	2451	5414		449,450		5414	5414
Ξ_{bc}^{*+}	1451	5424		447,448		5424	5424
Ω_{bc}^0	4350	5342		411,412		5342	5342
$\Omega_{bc}^{\prime 0}$	3450	5432		423,424		5432	5432
Ω_{bc}^{*0}	3451	5434		451,452		5434	5434
Ω_{bcc}^+	4450	5442		431,432		5442	5442
Ω_{bcc}^{*+}	4451	5444		459,460		5444	5444

Bottom Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Ξ_{bb}^{-}	2550	5512		435,436		5512	5512
Ξ_{bb}^{0}	1550	5522		433,434		5522	5522
Ξ_{bb}^{*-}	2551	5514		463,464		5514	5514
Ξ_{bb}^{*0}	1551	5524		461,462		5524	5524
Ω_{bb}^{-}	3550	5532		437,438		5532	5532
Ω_{bb}^{*-}	3551	5534		465,466		5534	5534
Ω_{bbc}^{0}	4550	5542		439,440		5542	5542
Ω_{bbc}^{*0}	4551	5544		467,468		5544	5544
Ω_{bbb}^{*-}	5551	5554		469,470		5554	5554

Top Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Λ_t^+	2160		6122				6122
Σ_t^0	2260		6112				6112
Σ_t^+	1260						6212
Σ_t^{++}	1160		6222				6222
Σ_t^{*0}	2261						6114
Σ_t^{*+}	1261						6214
Σ_t^{*++}	1161						6224
Ξ_t^0	3260		6132				6132
Ξ_t^+	3160		6232				6232
$\Xi_t^{\prime 0}$	2360						6312
$\Xi_t^{\prime +}$	1360						6322
Ξ_t^{*0}	2361						6314
Ξ_t^{*+}	1361						6324
Ω_t^0	3360		6332				6332
Ω_t^{*0}	3361						6334
Ξ_{tc}^+	4260						6142
Ξ_{tc}^{++}	4160						6242
$\Xi_{tc}^{\prime +}$	2460						6412
$\Xi_{tc}^{\prime ++}$	1460						6422
Ξ_{tc}^{*+}	2461						6414
Ξ_{tc}^{*++}	1461						6424
Ω_{tc}^+	4360						6342
$\Omega_{tc}^{\prime +}$	3460						6432
Ω_{tc}^{*+}	3461						6434
Ω_{tcc}^{++}	4460						6442
$\Omega_{tcc}{*}^{++}$	4461						6444

Top Baryons							
Baryon	Isajet 7.51	Pythia 6.155	Herwig 6.2	QQ 9.2b	EvtGen	PDG 2000	StdHep 4.10
Ξ_{tb}^{0}	5260						6152
Ξ_{tb}^{+}	5160						6252
$\Xi_{tb}^{\prime 0}$	2560						6512
$\Xi_{tb}^{\prime +}$	1560						6522
Ξ_{tb}^{*0}	2561						6514
Ξ_{tb}^{*+}	1561						6524
Ω_{tb}^{0}	5360						6352
$\Omega_{tb}^{\prime 0}$	3560						6532
Ω_{tb}^{*0}	3561						6534
Ω_{tbc}^{+}	5460						6452
$\Omega_{tbc}^{\prime +}$	4560						6542
Ω_{tbc}^{*+}	4561						6544
Ω_{tbb}^{0}	5560						6552
Ω_{tbb}^{*0}	5561						6554
Ξ_{tt}^{+}	2660						6612
Ξ_{tt}^{++}	1660						6622
Ξ_{tt}^{*+}	2661						6614
Ξ_{tt}^{*++}	1661						6624
Ω_{tt}^{+}	3660						6632
Ω_{tt}^{*+}	3661						6634
Ω_{ttc}^{++}	4660						6642
Ω_{ttc}^{*++}	4661						6644
Ω_{ttb}^{+}	5660						6652
Ω_{ttb}^{*+}	5661						6654
Ω_{ttt}^{*++}	6661						6664

D QQ internal codes

Internal QQ particles		
Particle	QQ 9.2	StdHep 4.09
Virtual γ	0	91
QQ	5	82
LC-PB	207	84
ALC-P	208	-84
LC-NB	209	85
ALC-N	210	-85
LC-LMB	276	86
ALC-LM	277	-86
CU2	291	87
CU2B	292	-87
CD2	293	88
CD2B	294	-88
CUX2	295	89
CUX2B	296	-89
CDX2	297	90
CDX2B	298	-90
CS2	495	92
CS2B	496	-92
CSX2	497	93
CSX2B	498	-93