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## A PTDR symbol definitions

If absolutely necessary, symbol definitions may be over-ridden using the `\renewcommand` command. If you don’t want to over-ride the default version of a command but provide it for use outside the normal tdr system, please use the `\providecommand` command.

etal:	et al.	ISAPYTHIA:	ISAPYTHIA
ie:	i.e.	ISASUGRA:	ISASUGRA
eg:	e.g.	ISASUSY:	ISASUSY
etc:	etc.	ISAWIG:	ISAWIG
vs:	vs.	MADGRAPH:	MADGRAPH
mdash:	—	MCATNLO:	MC@NLO
Lone:	Level-1	MCFM:	MCFM
Ltwo:	Level-2	MILLEPEDE:	MILLEPEDE
Lthree:	Level-3	ORCA:	ORCA
ACERMC:	ACERMC	OSCAR:	OSCAR
ALPGEN:	ALPGEN	PHOTOS:	PHOTOS
BLACKHAT:	BLACKHAT	PROSPINO:	PROSPINO
CALCHEP:	CALCHEP	PYTHIA:	PYTHIA
CHARYBDIS:	CHARYBDIS	SHERPA:	SHERPA
CMKIN:	CMKIN	TAUOLA:	TAUOLA
CMSIM:	CMSIM	TOPREX:	TOPREX
CMSSW:	CMSSW	XDAQ:	XDAQ
COBRA:	COBRA	MGvATNLO:	MADGRAPH5_aMC@NLO
COCOA:	COCOA	DZERO:	D0
COMPHEP:	COMPHEP	de:	°
EVTGEN:	EVTGEN	ten{x}:	$\times 10^x$
FAMOS:	FAMOS	unit{x}:	x
FASTJET:	FASTJET	mum:	$\mu\text{m}$ [Most units include leading thinspace]
FEWZ:	FEWZ	micron:	$\mu\text{m}$
GARCON:	GARCON	cm:	cm
GARFIELD:	GARFIELD	mm:	mm
GEANE:	GEANE	mus:	$\mu\text{s}$
GEANTfour:	GEANT4	keV:	keV
GEANTthree:	GEANT3	MeV:	MeV
GEANT:	GEANT	MeVns:	MeV [no leading thinspace with ns suffix]
HDECAY:	HDECAY	GeV:	GeV
HERWIG:	HERWIG	GeVns:	GeV
HERWIGpp:	HERWIG++	gev:	GeV
POWHEG:	POWHEG	TeV:	TeV
HIGLU:	HIGLU	TeVns:	TeV
HIJING:	HIJING	PeV:	PeV
HYDJET:	HYDJET	keVc:	keV/c
IGUANA:	IGUANA	MeVc:	MeV/c
ISAJET:	ISAJET	GeVc:	GeV/c

311	GeVcns:	$\text{GeV}/c$
312	TeVc:	$\text{TeV}/c$
313	keVcc:	$\text{keV}/c^2$
314	MeVcc:	$\text{MeV}/c^2$
315	GeVcc:	$\text{GeV}/c^2$
316	GeVcns:	$\text{GeV}/c^2$
317	TeVcc:	$\text{TeV}/c^2$
318	pbinv:	$\text{pb}^{-1}$
319	fbinv:	$\text{fb}^{-1}$
320	nbinv:	$\text{nb}^{-1}$
321	mubinv:	$\mu\text{b}^{-1}$
322	mbinv:	$\text{mb}^{-1}$
323	percms:	$\text{cm}^{-2} \text{s}^{-1}$
324	lumi:	$\mathcal{L}$
325	Lumi:	$\mathcal{L}$
326	LvLow:	$\mathcal{L} = 10^{32} \text{cm}^{-2} \text{s}^{-1}$
327	LLow:	$\mathcal{L} = 10^{33} \text{cm}^{-2} \text{s}^{-1}$
328	lowlumi:	$\mathcal{L} = 2 \times 10^{33} \text{cm}^{-2} \text{s}^{-1}$
329	LMed:	$\mathcal{L} = 2 \times 10^{33} \text{cm}^{-2} \text{s}^{-1}$
330	LHigh:	$\mathcal{L} = 10^{34} \text{cm}^{-2} \text{s}^{-1}$
331	hilumi:	$\mathcal{L} = 10^{34} \text{cm}^{-2} \text{s}^{-1}$
332	PT:	$p_T$
333	pt:	$p_T$
334	ET:	$E_T$
335	HT:	$H_T$
336	et:	$E_T$
337	Em:	$E$
338	Pm:	$\not{p}$
339	PTm:	$\not{p}_T$
340	PTslash:	$\not{p}_T$
341	ETm:	$E_T^{\text{miss}}$
342	MET:	$E_T^{\text{miss}}$
343	ETmiss:	$E_T^{\text{miss}}$
344	ptmiss:	$p_T^{\text{miss}}$
345	ETslash:	$\not{E}_T$
346	VEtmiss:	$\vec{E}_T^{\text{miss}}$
347	ptvec:	$\vec{p}_T$
348	ptvecmiss:	$\vec{p}_T^{\text{miss}}$
349	tauh:	$\tau_h$
350	sqrtsNN:	$\sqrt{s_{\text{NN}}}$
351	dd{y}{x}:	$\frac{dy}{dx}$
352	ddinline{y}{x}:	$dy/dx$
353	rd:	$d$
354	re:	$e$
355	abs{x}:	$ x $
356	zp:	$Z'$
357	JPsi:	$J/\psi$
358	Z:	$Z$
359	ttbar:	$t\bar{t}$
360	Extensions to PENNAMES	
361	cPgn:	$\nu$
362	Pgn:	$\nu$
363	cPagn:	$\bar{\nu}$
364	Pagn:	$\bar{\nu}$

366	cPgg:	$\gamma$
367	cPJgy:	$J/\psi$
368	cPZ:	$Z$
369	cPZpr:	$Z'$
370	cPqt:	$t$
371	cPqb:	$b$
372	cPqc:	$c$
373	cPqs:	$s$
374	cPqu:	$u$
375	cPqd:	$d$
376	cPq:	$q$
377	cPg:	$g$
378	cPG:	$G$
379	cPaqt:	$\bar{t}$
380	cPaqb:	$\bar{b}$
381	cPaqc:	$\bar{c}$
382	cPaqs:	$\bar{s}$
383	cPaqu:	$\bar{u}$
384	cPaqd:	$\bar{d}$
385	cPaq:	$\bar{q}$
386	cPKstz:	$K^{*0}$
387	Future PENNAMES2	
388	include \xspace	
389	PGp:	$\pi$
390	PGpp:	$\pi^+$
391	PGpm:	$\pi^-$
392	PGpz:	$\pi^0$
393	PGr:	$\rho$
394	PDast:	$D^*$
395	PH:	$H$
396	Ph:	$h$
397	Pa:	$a$
398	PSA:	$A$
399	PJGy:	$J/\psi$
400	PBzs:	$B_s^0$
401	Pg:	$g$
402	PSg:	$\tilde{g}$
403	PSQ:	$\tilde{q}$
404	PSGm:	$\tilde{\mu}$
405	PSe:	$\tilde{e}$
406	PASQ:	$\tilde{q}$
407	PXXA:	$A$
408	PXXG:	$G$
409	PXXSG:	$\tilde{G}$
410	PSGcp:	$\tilde{\chi}^+$
411	PSGcm:	$\tilde{\chi}^-$
412	PSGc:	$\tilde{\chi}$
413	PSGcz:	$\tilde{\chi}^0$
414	PSGczDo:	$\tilde{\chi}_1^0$
415	PSGcmDo:	$\tilde{\chi}_1^0$
416	PSGczDt:	$\tilde{\chi}_2^0$
417	PSGcpm:	$\tilde{\chi}^\pm$
418	PSGcpmDo:	$\tilde{\chi}_1^\pm$
419	PSGcpDo:	$\tilde{\chi}_1^\pm$
420	Pl:	$l$
421	PAI:	$\bar{l}$

422	PGnl:	$\nu_l$	477	PDz:	$D^0$
423	PAGnl:	$\bar{\nu}_l$	478	PADz:	$\bar{D}^0$
424	PQtpr:	$t'$	479	PAD:	$\bar{D}$
425	PAQtpr:	$\bar{t}'$	480	PAK:	$\bar{K}^0$
426	PQbpr:	$b'$	481	PAKz:	$\bar{K}^0$
427	PAQbpr:	$\bar{b}'$	482	PABz:	$\bar{B}^0$
428	PGg:	$\gamma$	483	Pepm:	$e^\pm$
429	PKzS:	$K_S^0$	484	Pemp:	$e^\mp$
430	PBs:	$B_s$	485		
431	PSQu:	$\tilde{u}$	486	AFB:	$A_{FB}$
432	PSQd:	$\tilde{d}$	487	wangle:	$\sin^2 \theta_{\text{eff}}^{\text{lept}} (M_Z^2)$
433	PSQc:	$\tilde{c}$	488	stat:	(stat) [Includes leading thinspace]
434	PSQs:	$\tilde{s}$	489	syst:	(syst) [Includes leading thinspace]
435	PSQt:	$\tilde{t}$	490	thy:	(theo) [Includes leading thinspace]
436	PSQb:	$\tilde{b}$	491	lum:	(lumi) [Includes leading thinspace]
437	PASQt:	$\tilde{t}$	492	kt:	$k_T$
438	PASQb:	$\tilde{b}$	493	BC:	$B_c$
439	PSGt:	$\tilde{\tau}$	494	bbarc:	$b\bar{c}$
440	PZ:	$Z$	495	bbbar:	$b\bar{b}$
441	PZpr:	$Z'$	496	ccbar:	$c\bar{c}$
442	PWpr:	$W'$	497	qqbar:	$q\bar{q}$
443	PGn:	$\nu$	498	bspsiphi:	$B_s \rightarrow J/\psi \phi$
444	PAGn:	$\bar{\nu}$	499	EE:	$e^+e^-$
445	PSQtDo:	$\tilde{t}_1$	500	MM:	$\mu^+\mu^-$
446	PSQtDt:	$\tilde{t}_2$	501	TT:	$\tau^+\tau^-$
447	PQt:	$t$	502	HGG:	$H \rightarrow \gamma\gamma$
448	PAQt:	$\bar{t}$	503	GAMJET:	$\gamma + \text{jet}$
449	PQb:	$b$	504	PPTOJETS:	$pp \rightarrow \text{jets}$
450	PAQb:	$\bar{b}$	505	PPTOGG:	$pp \rightarrow \gamma\gamma$
451	PGm:	$\mu$	506	PPTOGAMJET:	$pp \rightarrow \gamma + \text{jet}$
452	PGmm:	$\mu^-$	507	MH:	$M_H$
453	PGmp:	$\mu^+$	508	RNINE:	$R_9$
454	PGmpm:	$\mu^\pm$	509	DR:	$\Delta R$
455	PGt:	$\tau$	510	ga:	$\gtrless$
456	PAGt:	$\bar{\tau}$	511	la:	$\gtrless$
457	PGpz:	$\pi^0$	512	swsq:	$\sin^2 \theta_W$
458	PQq:	$q$	513	cwsq:	$\cos^2 \theta_W$
459	PQd:	$d$	514	tanb:	$\tan \beta$
460	PQu:	$u$	515	tanbsq:	$\tan^2 \beta$
461	PQs:	$s$	516	sidb:	$\sin 2\beta$
462	PQc:	$c$	517	alpS:	$\alpha_S$
463	PAQq:	$\bar{q}$	518	alpt:	$\tilde{\alpha}$
464	PAQd:	$\bar{d}$	519	QL:	$Q_L$
465	PAQu:	$\bar{u}$	520	sQ:	$\tilde{Q}$
466	PAQs:	$\bar{s}$	521	sQL:	$Q_L^c$
467	PAQc:	$\bar{c}$	522	ULC:	$U_{\text{LC}}^c$
468	PGne:	$\nu_e$	523	sUC:	$\tilde{U}_{\text{LC}}^c$
469	PAGne:	$\bar{\nu}_e$	524	sULC:	$\tilde{U}_{\text{LC}}^c$
470	PGnGm:	$\nu_\mu$	525	DLC:	$D_{\text{LC}}^c$
471	PAGnGm:	$\bar{\nu}_\mu$	526	sDC:	$\tilde{D}_{\text{LC}}^c$
472	PGnGt:	$\nu_\tau$	527	sDLC:	$\tilde{D}_{\text{LC}}^c$
473	PAGnGt:	$\bar{\nu}_\tau$	528	LL:	$L_L$
474	PAp:	$\bar{p}$	529	sL:	$\tilde{L}_L$
475	PAn:	$\bar{n}$	530	sLL:	$\tilde{L}_L^c$
476	PGc:	$\chi$	531	ELC:	$E_{\text{LC}}^c$
			532	sEC:	$\tilde{E}_{\text{LC}}^c$

533	sELC:	$\tilde{E}_L^C$	570	sWino:	$\tilde{W}$
534	sEL:	$\tilde{E}_L$	571	Bz:	$B^0$
535	sER:	$\tilde{E}_R$	572	sBz:	$\tilde{B}^0$
536	sFer:	$\tilde{f}$	573	sBino:	$\tilde{B}$
537	sQua:	$\tilde{q}$	574	Zz:	$Z^0$
538	sUp:	$\tilde{u}$	575	sZino:	$\tilde{Z}^0$
539	suL:	$\tilde{u}_L$	576	sGam:	$\tilde{\gamma}$
540	suR:	$\tilde{u}_R$	577	chiz:	$\tilde{\chi}^0$
541	sDw:	$\tilde{d}$	578	chip:	$\tilde{\chi}^+$
542	sdL:	$\tilde{d}_L$	579	chim:	$\tilde{\chi}^-$
543	sdR:	$\tilde{d}_R$	580	chipm:	$\tilde{\chi}^\pm$
544	sTop:	$\tilde{t}$	581	Hone:	$\tilde{H}_d$
545	stL:	$\tilde{t}_L$	582	sHone:	$\tilde{H}_d$
546	stR:	$\tilde{t}_R$	583	Htwo:	$\tilde{H}_u$
547	stone:	$\tilde{t}_1$	584	sHtwo:	$\tilde{H}_u$
548	sttwo:	$\tilde{t}_2$	585	sHig:	$\tilde{H}$
549	sBot:	$\tilde{b}$	586	sHa:	$\tilde{H}_a$
550	sbL:	$\tilde{b}_L$	587	sHb:	$\tilde{H}_b$
551	sbR:	$\tilde{b}_R$	588	sHpm:	$\tilde{H}^\pm$
552	sbone:	$\tilde{b}_1$	589	hz:	$h^0$
553	sbtwo:	$\tilde{b}_2$	590	Hz:	$H^0$
554	sLep:	$\tilde{l}$	591	Az:	$A^0$
555	sLepC:	$\tilde{l}^C$	592	Hpm:	$H^\pm$
556	sEl:	$\tilde{e}$	593	sGra:	$\tilde{G}$
557	sELC:	$\tilde{e}^C$	594	mtil:	$\tilde{m}$
558	seL:	$\tilde{e}_L$	595	rpv:	$\tilde{R}$
559	seR:	$\tilde{e}_R$	596	LLE:	$LL\bar{E}$
560	snL:	$\tilde{\nu}_L$	597	LQD:	$LQ\bar{D}$
561	sMu:	$\tilde{\mu}$	598	UDD:	$U\bar{D}\bar{D}$
562	sNu:	$\tilde{\nu}$	599	Lam:	$\lambda$
563	sTau:	$\tilde{\tau}$	600	Lamp:	$\lambda'$
564	Glu:	$g$	601	Lampp:	$\lambda''$
565	sGlu:	$\tilde{g}$	602	MD:	$M_D$
566	Wpm:	$W^\pm$	603	Mpl:	$M_{Pl}$
567	sWpm:	$\tilde{W}^\pm$	604	Rinv:	$R^{-1}$
568	Wz:	$W^0$	605		
569	sWz:	$\tilde{W}^0$	606		

## B Particle symbols

608	PAz:	$A^0$	662	PNl:	$N(2250)G_{19}$
609	PBm:	$B^-$	663	PNm:	$N(2600)I_{1,11}$
610	PBpm:	$B^\pm$	664	PSHpm:	$\tilde{H}^\pm$
611	PBp:	$B^+$	665	PSHz:	$\tilde{H}_j^0$
612	PBz:	$B^0$	666	PSWpm:	$\tilde{W}^\pm$
613	PB:	$B$	667	PSZz:	$\tilde{Z}^0$
614	PDiz:	$D_1(2420)^0$	668	PSe:	$\tilde{e}$
615	PDm:	$D^-$	669	PSgg:	$\tilde{\gamma}$
616	PDpm:	$D^\pm$	670	PSgm:	$\tilde{\mu}$
617	PDp:	$D^+$	671	PSgn:	$\tilde{\nu}$
618	PDstiiz:	$D_2^*(2460)^0$	672	PSgt:	$\tilde{\tau}$
619	PDstpm:	$D^*(2010)^\pm$	673	PSgxpm:	$\tilde{\chi}_i^\pm$
620	PDstz:	$D^*(2010)^0$	674	PSgxz:	$\tilde{\chi}_i^0$
621	PDz:	$D^0$	675	PSg:	$\tilde{g}$
622	PD:	$D$	676	PSq:	$\tilde{q}$
623	PEz:	$E^0$	677	PWR:	$W_R$
624	PHpm:	$H^\pm$	678	PWm:	$W^-$
625	PHz:	$H^0$	679	PWpr:	$W'$
626	PJgy:	$J/\psi(1S)$	680	PWp:	$W^+$
627	PKeiii:	$K_{e3}$	681	PW:	$W$
628	PKgmiii:	$K_{\mu 3}$	682	PZLR:	$Z_{LR}$
629	PKia:	$K_1(1400)$	683	PZgc:	$Z_\chi$
630	PKii:	$K_2(1770)$	684	PZge:	$Z_\eta$
631	PKi:	$K_1(1270)$	685	PZgy:	$Z_\psi$
632	PKm:	$K^-$	686	PZi:	$Z_1^0$
633	PKpm:	$K^\pm$	687	PZz:	$Z^0$
634	PKp:	$K^+$	688	PaBz:	$\bar{B}^0$
635	PKsta:	$K^*(1370)$	689	PaB:	$\bar{B}$
636	PKstb:	$K^*(1680)$	690	PaDz:	$\bar{D}^0$
637	PKstiii:	$K_3^*(1780)$	691	PaD:	$\bar{D}$
638	PKstii:	$K_2^*(1430)$	692	PaKz:	$\bar{K}^0$
639	PKstiv:	$K_4^*(2045)$	693	PaSq:	$\bar{q}$
640	PKstz:	$K_0^*(1430)$	694	PagL:	$\Lambda$
641	PKst:	$K^*(892)$	695	PagOp:	$\bar{\Omega}^+$
642	PKzL:	$K_L^0$	696	PagSm:	$\bar{\Sigma}^-$
643	PKzS:	$K_S^0$	697	PagSp:	$\bar{\Sigma}^+$
644	PKzeiii:	$K_{e3}^0$	698	PagSz:	$\bar{\Sigma}^0$
645	PKzgmiii:	$K_{e3}^0$	699	PagXp:	$\bar{\Xi}^+$
646	PKz:	$K^0$	700	PagXz:	$\bar{\Xi}^0$
647	PK:	$K$	701	Pagne:	$\bar{\nu}_e$
648	PLpm:	$L^\pm$	702	Pagngm:	$\bar{\nu}_\mu$
649	PLz:	$L^0$	703	Pagngt:	$\bar{\nu}_\tau$
650	PN:	$N$	704	Paii:	$a_2(1320)$
651	PNa:	$N(1440)P_{11}$	705	Pai:	$a_1(1260)$
652	PNb:	$N(1520)D_{13}$	706	Pap:	$\bar{p}$
653	PNc:	$N(1535)S_{11}$	707	Paqb:	$\bar{q}_b$
654	PNd:	$N(1650)S_{11}$	708	Paqc:	$\bar{q}_c$
655	PNe:	$N(1675)D_{15}$	709	Paqd:	$\bar{q}_d$
656	PNf:	$N(1680)F_{15}$	710	Paqs:	$\bar{q}_s$
657	PNg:	$N(1700)D_{13}$	711	Paqt:	$\bar{q}_t$
658	PNh:	$N(1710)P_{11}$	712	Paqu:	$\bar{q}_u$
659	PNi:	$N(1720)P_{13}$	713	Paq:	$\bar{q}$
660	PNj:	$N(2190)G_{17}$	714	Paz:	$a_0(980)$
661	PNk:	$N(2220)H_{19}$			

715	Pbgcia:	$\chi_{b1}(2P)$	771	PgO:	$\Omega$
716	Pbgcia:	$\chi_{b2}(2P)$	772	PgOm:	$\Omega^-$
717	Pbgcii:	$\chi_{b2}(1P)$	773	PgOma:	$\Omega(2250)^-$
718	Pbgci:	$\chi_{b1}(1P)$	774	PgS:	$\Sigma$
719	Pbgcza:	$\chi_{b0}(2P)$	775	PgSa:	$\Sigma(1385)P_{13}$
720	Pbgcz:	$\chi_{b0}(1P)$	776	PgSb:	$\Sigma(1660)P_{11}$
721	Pbi:	$b_1(1235)$	777	PgSc:	$\Sigma(1670)D_{13}$
722	PcgLp:	$\Lambda_c^+$	778	PgSd:	$\Sigma(1750)S_{11}$
723	PcgS:	$\Sigma_c(2455)$	779	PgSe:	$\Sigma(1775)D_{15}$
724	PcgXp:	$\Xi_c^+$	780	PgSf:	$\Sigma(1915)F_{15}$
725	PcgXz:	$\Xi_c^0$	781	PgSg:	$\Sigma(1940)D_{13}$
726	Pcgcii:	$\chi_{c2}(1P)$	782	PgSh:	$\Sigma(2030)F_{17}$
727	Pcgci:	$\chi_{c1}(1P)$	783	PgSi:	$\Sigma(2050)$
728	Pcgcz:	$\chi_{c0}(1P)$	784	PgSm:	$\Sigma^-$
729	Pcgh:	$\eta_c(1S)$	785	PgSp:	$\Sigma^+$
730	Pem:	$e^-$	786	PgSz:	$\Sigma^0$
731	Pep:	$e^+$	787	PgU:	$Y$
732	Pe:	$e$	788	PgUa:	$Y(1S)$
733	Pfia:	$f_1(1390)$	789	PgUb:	$Y(2S)$
734	Pfib:	$f_1(1510)$	790	PgUc:	$Y(3S)$
735	Pfiia:	$f_2(1720)$	791	PgUd:	$Y(3S)$
736	Pfiib:	$f_2(2010)$	792	PgUe:	$Y(10860)$
737	Pfiic:	$f_2(2300)$	793	PgUf:	$Y(11020)$
738	Pfiid:	$f_2'(2340)$	794	PgX:	$\Xi$
739	Pfiipr:	$f_2'(1525)$	795	PgXa:	$\Xi(1530)P_{13}$
740	Pfii:	$f_2'(1270)$	796	PgXb:	$\Xi(1690)$
741	Pfiv:	$f_4(2050)$	797	PgXc:	$\Xi(1820)D_{13}$
742	Pfi:	$f_1(1285)$	798	PgXd:	$\Xi(1950)$
743	Pfza:	$f_0(1400)$	799	PgXe:	$\Xi(2030)$
744	Pfzb:	$f_0(1590)$	800	PgXm:	$\Xi^-$
745	Pfz:	$f_0(975)$	801	PgXz:	$\Xi^0$
746	PgD:	$\Delta$	802	Pgfa:	$\phi(1680)$
747	PgDa:	$\Delta(1232)P_{33}$	803	Pgfiii:	$\phi_3(1850)$
748	PgDb:	$\Delta(1620)S_{31}$	804	Pgff:	$\phi(1020)$
749	PgDc:	$\Delta(1700)D_{33}$	805	Pgg:	$\gamma$
750	PgDd:	$\Delta(1900)S_{31}$	806	Pgha:	$\eta(1295)$
751	PgDe:	$\Delta(1905)F_{35}$	807	Pghb:	$\eta(1440)$
752	PgDf:	$\Delta(1910)P_{31}$	808	Pghpr:	$\eta'(958)$
753	PgDh:	$\Delta(1920)P_{33}$	809	Pgh:	$\eta$
754	PgDi:	$\Delta(1930)D_{35}$	810	Pgmm:	$\mu^-$
755	PgDj:	$\Delta(1950)F_{37}$	811	Pgmp:	$\mu^+$
756	PgDk:	$\Delta(2420)H_{3,11}$	812	Pgm:	$\mu$
757	PgL:	$\Lambda$	813	Pgne:	$\nu_e$
758	PgLa:	$\Lambda(1405)S_{01}$	814	Pgngm:	$\nu_\mu$
759	PgLb:	$\Lambda(1520)D_{03}$	815	Pgngt:	$\nu_\tau$
760	PgLc:	$\Lambda(1600)P_{01}$	816	Pgoa:	$\omega(1390)$
761	PgLd:	$\Lambda(1670)S_{01}$	817	Pgob:	$\omega(1600)$
762	PgLe:	$\Lambda(1690)D_{03}$	818	Pgoiii:	$\omega_3(1670)$
763	PgLf:	$\Lambda(1800)S_{01}$	819	Pgo:	$\omega(783)$
764	PgLg:	$\Lambda(1810)P_{01}$	820	Pgpa:	$\pi(1300)$
765	PgLh:	$\Lambda(1820)F_{05}$	821	Pgpai:	$\pi_2(1670)$
766	PgLi:	$\Lambda(1830)D_{05}$	822	Pgpm:	$\pi^-$
767	PgLj:	$\Lambda(1890)P_{03}$	823	Pgppm:	$\pi^\pm$
768	PgLk:	$\Lambda(2100)G_{07}$	824	Pgpp:	$\pi^+$
769	PgLi:	$\Lambda(2110)F_{05}$	825	Pgpz:	$\pi^0$
770	PgLm:	$\Lambda(2350)H_{09}$			

826	Pgp:	$\pi$	840	Pqb:	$q_b$
827	Pgra:	$\rho(1450)$	841	Pqc:	$q_c$
828	Pgrb:	$\rho(1700)$	842	Pqd:	$q_d$
829	Pgriii:	$\rho_3(1690)$	843	Pqs:	$q_s$
830	Pgr:	$\rho(770)$	844	Pqt:	$q_t$
831	Pgt:	$\tau$	845	Pqu:	$q_u$
832	Pgya:	$\psi(3770)$	846	Pq:	$q$
833	Pgyb:	$\psi(4040)$	847	PsDipm:	$D_{s1}(2536)^\pm$
834	Pgyc:	$\psi(4160)$	848	PsDm:	$D_s^-$
835	Pgyd:	$\psi(4415)$	849	PsDp:	$D_s^+$
836	Pgy:	$\psi(2S)$	850	PsDst:	$D_s^*$
837	Phia:	$h_1(1170)$	851		
838	Pn:	$n$	852	Future PENNAMES	include \xspace
839	Pp:	$p$	853	see above	

## C OS X specific instructions

These instructions are based on a clean installation of Mac OS X 10.7.3 (Lion). This release has current versions of both perl and svn.

Download the TeXLive 2017 installation, <http://mirror.ctan.org/systems/mac/mactex/MacTeX.mpkg.zip>, and install (if not already done). This is a relatively large installation.

If a simple `kinit Your_CERN_Username@CERN.CH` doesn't allow you to access the svn repository in the standard fashion, you can follow the instructions at <http://svn.web.cern.ch/svn/howto.php#accessing-sshlinux> to set up an ssh key pair. I tried using the keychain, but it isn't supported in the included version of svn. There are commercial versions available with GUIs, and maybe even free versions—I didn't look very hard—but they are not necessary.

Then follow the general instructions in [https://svnweb.cern.ch/cern/wsvn/tdr2/papers/XXX-08-000/trunk/XXX-08-000\\_temp.pdf](https://svnweb.cern.ch/cern/wsvn/tdr2/papers/XXX-08-000/trunk/XXX-08-000_temp.pdf) (this document) and [https://svnweb.cern.ch/cern/wsvn/tdr2/utis/trunk/general/notes\\_for\\_authors.pdf](https://svnweb.cern.ch/cern/wsvn/tdr2/utis/trunk/general/notes_for_authors.pdf).

Additional style files are required to generate documents in the journal formats, and many of these need to be installed individually.