Relativistic Space-Time Perspectives

Equation Validity Confirmation Table

Appendices

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1.0 Introduction

The table examines 39 velocity values, ranging from |1.000~000E-500| m/s to c-|1.000~000E-500| m/s, all calculated to 2000 decimal places .

$$\text{velocity}_{SRPD} = \text{velocity}_{noSRPD}/(1- \text{velocity}_{noSRPD}^2/ c^2)^{½}$$
$$\text{velocity}_{noSRPD} = \text{velocity}_{SRPD}/(1+ \text{velocity}_{SRPD}^2/ c^2)^{½}$$

This table is for Relativistic Velocity values only, but they are completely applicable for the Relativistic Length, Time, and Mass equations as well. Tables on those equations are available on request. The occasional tiny difference between the Velocity_{noSRPD} (the velocity with no Relativistic Distortion) and the $\text{Velocity}_{noSRPDBack}$ (the "Real||noSRPD" velocity calculated from the distorted Velocity_{SRPD}) is simply due to irrational numbers (like square roots). You can never determine a value like $2^{½}$ exactly because it is irrational - the answer always has an infinite number of decimal places in random digits. The maximum error for calculations done to 2000 decimal places was found to be 1.0E-1992. But the maximum error for calculations done to 1000 decimal places was 1.0E-992; the maximum for calculations done to 100 decimal places was 1.0E-92. Surely that makes the irrational number set argument inarguable.

The software used was Advanced Smart Math Calculator, a product available from the Software firm RUNITER COMPANY, and their site at http://calculator.runiter.com/math-calculator/. The owner, Saeid Nourian [president@runiter.com], has seen both the tables and an earlier text of the theory, so can confirm the numeric validity of the tables. Of course, he is a Systems person, not a Physicist any more than I am, so you can take it for what it's worth. But numbers don't lie to anyone.

Appendix A - Principle Relativistic Perspective Equations

The principle Relativistic Perspective equations:

$$velocity_{SRPD} = velocity_{noSRPD}/(1 - velocity_{noSRPD}^2/c^2)^{1/2} \qquad \text{Equation 1}$$
$$velocity_{noSRPD} = velocity_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 2}$$

Can be re-written as:

$$velocity_{noSRPD} / velocity_{SRPD} = (1 - velocity_{noSRPD}^2/c^2)^{1/2}$$

and

$$velocity_{SRPD} / velocity_{noSRPD} = (1 + velocity_{SRPD}^2/c^2)^{1/2}$$

So instead of the "Classic" format of the Einsteinian equations; those equations can be used to reason that:

$$time_{noSRPD} = time_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 3}$$
$$time_{SRPD} = time_{noSRPD}*(1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 4}$$
$$mass_{noSRPD} = mass_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 5}$$
$$mass_{SRPD} = mass_{noSRPD}*(1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 6}$$
$$length_{noSRPD} = length_{SRPD} * (1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 7}$$
$$length_{SRPD} = length_{noSRPD} / (1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 8}$$
$$Time' = Time / (1 - velocity_{noSRPD}^2/c^2)^{1/2} \qquad \text{Equation 9}$$
$$Time = Time' / (1 + velocity_{SRPD}^2/c^2)^{1/2} \qquad \text{Equation 10}$$

7.0 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table

The following are tables that will show the relationship between real (non-Relativistic) and Relativistic velocity. Both the SRD (Special Relativity Distorted) velocity are shown and the noSRD (velocity with no Special Relativity Distortion) are shown. They share a direct relationship with one another. The pairing of:

$$(1- \text{velocity}_{\text{noSRD}}^2/ c^2)^{½} \;||\; (1+ \text{velocity}_{\text{SRD}}^2/ c^2)^{½}$$

- exists for all the relativistic equations. The calculations are done to two thousand decimal places. Additional variables:

$\text{velocity}_{\text{noSRD}}$ -	rest velocity with no relativistic distortions
$\text{velocity}_{\text{SRD}}$ -	apparent velocity with relativistic distortions
$\text{velocity}_{\text{noSRDback}}$ -	rest velocity calculated from apparent relativistic velocity
c -	Speed of light (299,792,458 m/s)

Because of the nature of the software, values that would not appear in the display, would be included in the calculations. So some calculations show a maximum difference between the $\text{velocity}_{\text{noSRD}}$ value and the $\text{velocity}_{\text{noSRDback}}$ value of ±1.0E-1992 even though the responsible digit would not be displayed. It is a simple consequence of the fundamental irrationality of relativistic values, multiplied by the speed of light (i.e. the uncertainty is of the order of ±1.0E-2001→±9.0E-2001; on a random the basis be great enough to be off by whatever is the precision multiplied by 299,792,458). Higher precision values will be produced upon request, though it may take a few weeks to actually calculate them to 3000 or 4000 decimal.5+9

The table examines 39 velocity values, ranging from 1.000~000E-500 m/s to c-1.000~000E-500 m/s.

$$\text{velocity}_{\text{SRD}} = \text{velocity}_{\text{noSRD}}/(1- \text{velocity}_{\text{noSRD}}^2/ c^2)^{½}$$
$$\text{velocity}_{\text{noSRD}} = \text{velocity}_{\text{SRD}}/(1+ \text{velocity}_{\text{SRD}}^2/ c^2)^{½}$$

7.0.1 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table

Non-Relativistic Velocity: 1.000~000E-500

velocity_{SRD} =1.000~000E-500/(1- (1.000~000E-500)^2/299,792,458^2)^{½}

velocity_{SRD}= 1.00000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000556325028026809216087~
0449824240049958037662172374811872331174397734555006739336786868712508~
8632449129332357521177227148737434556981606052088155541386698038075204~
0843238379474128033650615074606794884223518170865385666624609728176529~
3976018996642357554571785935907281611366255187569799655782414732695524~
8130476446264088097179349760012421150237958882052284207378661237276325~
5899601367870327466625191994180696970961857561949685458377497060513151~
6547054179072755885500416688725294616769166265840905661225009682485021~
3622627242593844554754037786071346671001972768885087846565735326089829~
5399482653888788314430969733674674793275458148238105680539877584320313~
6154084060451832085262560511512915459998452216143366725002027891548321~
9766609116050028164966557917906994373950026539811338886104134619740152~
1232078661797005978551782981569186181342956047083014518960094779063501~
2182529084936518352282266348016180103279804964290751320212148294754414~
8603826209755555341187438184213584580273607451330210E-500

$\text{velocity}_{noSRDback}$ =(1.00000~30210E-500)/(1+ (1.00000~30210E-500)^2/299,792,458^2)^{½}

$\text{velocity}_{noSRDback}$ = 1.00000~00000E-500

$\text{velocity}_{noSRDback}$ =1.000~000E-500

Difference velocity_{noSRD}-vs.-$\text{velocity}_{noSRDback}$= 1.000~000E-500 - 1.000~000E-500

Difference velocity_{noSRD}-vs.-$\text{velocity}_{noSRDback}$= 0.000~000E0

7.0.2 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-400

$velocity_{SRD}$ =1.000~000E-400/(1- (1.000~000E-400)^2/299,792,458^2)^{½}

$velocity_{SRD}$= 1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000055632502802~
680921608704498242400499580376621723748118723311743977345550067393367 8~
686871250886324491293323575211772271487374345569816060520881555413866 9~
803807520408432383794741280336506150746067948842235181708653856666246 0~
972817652939760189966423575545717859359072816113662551875697996557824 1~
473269552481304764462640880971793497600124211502379588820522842073786 6~
123727632558996013678703274666251919941806969709618575619496854583774 9~
706051315165470541790727558855004166887252946167691662658409056612250 0~
968248502136226272425938445547540377860713466710019727688850878465657 3~
532608982953994826538887883144309697336746747932754581482381056805398 7~
758432031361540840604518320852625605115129154599984522161433667250020 2~
789154832197666091160500281649665579179069943739500265398113388861041 3~
461974015212320786617970059785517830279938167026974650142758297143286 0~
164965746861133562916942150006782030768485188838499121466769641090714 6~
745161571460184591641855521445044020190946054688903650488758932010234 6~
679217933053914222475500550019412378790483680896362960570867453999256 4~
767265821137876080061634489707414067439087080439363583037724370560087 8~
384265832312454555470460021427735347645943848569253 0E-400

$velocity_{noSRDback}$ =(1.00000~92530E-400)/(1+ (1.00000~92530E-400)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.00000~00000E-400

$velocity_{noSRDback}$ =1.000~000E-400

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-400 - 1.000~000E-400

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.3 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-300

$velocity_{SRD}$ =1.000~000E-300/(1- (1.000~000E-300)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
556325028026809216087044982424004995803766217237481187233117439773455 5~
006739336786868712508863244912933235752117722714873743455698160605208 8~
155541386698038075204084323837947412803365061507460679488422351817086 5~
385666624609728176529397601899664235755457178593590728161136625518756 9~
799655782414732695524813047644626408809717934976001242115023795888205 2~
284207378661237276325589960136787032746662519199418069697096185756194 9~
685458377497060513151654705417907275588550041668872529461676916626584 0~
905661225009682485021362262724259384455475403778607134667100197276888 5~
087846565735326089829539948265388878831443096973367467479791792120037 3~
556577259159103857164302467802784491480593833017635250913288168609420 0~
377443240649170434253892347041579149146040955759823869075743812862867 3~
014645858702853267522856173625830030038148873278369769093460258937911 7~
532138168150505585483469087313666080489665704435302693684611493154004 0~
649635446974736514728369747963254217009513667337637796200546386574151 5~
346141907554420746239527238815692988214002173660916894222952835711659 2~
357974612552658634144305985394257790799508993324950579322518692566248 8~
254962988579767475245291096622237799922083760160653713218347650057735 4~
941840297518622902600981346088914953819324256946255207993429372464264 5~
179417374301461139241017816618484022236769590467935681014438741247716 1~
737314317415246481646374511683128450121127017604229 50E-300

$velocity_{noSRDback}$ =(1.00000~22950E-300)/(1+ (1.00000~22950E-300)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.00000~00000E-300

$velocity_{noSRDback}$ =1.000~000E-300

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-300 - 1.000~000E-300

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.4 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-200

$velocity_{SRD}$ =1.000~000E-200/(1- (1.000~000E-200)^2/299,792,458^2)^{½}

$velocity_{SRD}$ =1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000556325028026809216087044982424004995803766217237481187233117 4~
397734555006739336786868712508863244912933235752117722714873743455698 1~
606052088155541386698038075204084323837947412803365061507460679488422 3~
518170865385666624609728176529397601899664235755457178593590728161136 6~
255187569799655782414732695524813047644626408809717934976001242115023 7~
958882052284207378661237276325589960136787032746662519199418069697096 1~
857562413931763591042150185079806659102975981528223972496079287158325 3~
125633129229049030710754308883490151317450953068472818411561564663903 5~
142407233898055451902902065286363301002462175407408129917396836977348 8~
308623564069013743329346241119188060604270266649043498916595039326049 9~
527890426879382577017723071804620836942955939350724521939330191789316 6~
464282330364715122648147355931619030316728839697242671549750574080761 4~
647223559802842898874271521020404515711448612125775651025592694951397 8~
708709399461464911858384275697196396334450843899053052153505734282069 8~
771747166701920013967606090403012128503177563673254473774760752507437 3~
385153401678219402177756629522610998293003115351286290188667976616806 0~
906496848516140336332872605521777509998381506634238385722788756400667 1~
347223045238589276301791360781750181511010229087971469355966657568638 7~
468573045360967769558764597279561407771239541645993171841768668742432 3~
911551346911817653011609204259890100386739886158497408644096137289453 2~
923954515244096873714404729790300577733661052940421328307009557258522 1~
539286376024727981654197614047300769578286475678569677874746609175488 6~
860689689524952119083926270555692823708938292033687 0E-200

$velocity_{noSRDback}$ =(1.00000~36870E-200)/(1+ (1.00000~36870E-200)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.00000~00000E-200

$velocity_{noSRDback}$ =1.000~000E-200

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=1.000~000E-200-1.000~000E-200

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=1.0000~0000E-2200

7.0.5 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-100

$velocity_{SRD}$ =1.000~000E-100/(1- (1.000~000E-100)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000556325028026809216087044982424004995803766217237481 1~
872331174397734555006739336786868712508863244912933235752117722714873 7~
434556981606052088155541386698038075204084323837947412803365061507460 6~
794884223518170865385666671034358697883906569092479431123964049187558 1~
212438573012884218195592511247071476094920230030839197669037091837300 9~
835783192388878855601171213542258164942347557682469368020369848857014 5~
729914991227059970970505910093398138027476885300089625476836918320969 1~
518399887494245895664828826401634754857896351005542372688502839098819 7~
209996820071605315461362128044221721643253232236504237308938305953208 6~
923060701662220044904316478403918434552454224863680359821259052795402 6~
025995272408176075011341859487537584550361587561770251134356547252221 4~
901701270681608380644490136472608095755198057702353410188795586529283 5~
052109522472955213708847767229841476383251949910545783404139256272699 5~
857157882435994928094918194292333107018365814199869921959173500182791 9~
259134761240203994530425091873364498486014770777565995475590578071759 6~
654624877816266976129597810068783206212841243440059484920658070185607 5~
381175749423586037295147303621182032908966544862616953911165845844021 1~
789738239788981380541449503832797244863500640790541871223097845102374 1~
644645675923742486372529738279536446394763904922573218834211403277376 8~
849697245915272904602042751678458912331780691112901510053786742275809 8~
444757946277199254118679663511406134881234254157942133912088660988208 6~
717793646092810125710889337138614164183435587574256434010474165743492 1~
215762275520926711746680914614979498293290153548068375094226056174153 6~
268516301949821026883369858926989679907517328791128181278419074380749 9~
706600984105323233625527665607104018320384652292311606995361730014153 8~
1505098266171070975412109842285544703128457684140 90E-100

$velocity_{noSRDback}$ =(1.00000~14090E-100)/(1+ (1.00000~14090E-100)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.00000~00000E-100

$velocity_{noSRDback}$ =1.000~000E-100

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-100 - 1.000~000E-100

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.6 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-90

$velocity_{SRD}$ =1.000~000E-90/(1 - (1.000~000E-90)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000005~
5632502802680921608704498242400499580376621723748118723311743977345550~
0673933678686871250886324491293323575211772271487374345569816060520881~
5554138669803807520408432383794741280336506150746067948888659812230008~
3656334389124771338008466129640354402752475556007468752842494890656268~
1037402103601158145672873377460055513926223494403441175337260609709139~
5996713322947080369632292589643736218695621848416156616022377417406688~
4676066600176795280848573982773130441602820598171115607189344785478897~
2739312773412142361347811257526778724127664002778593293201238888213946~
2607342255503933016757994843893528025084836309909794675684738834072432~
1930346861331151139007174076390733281481571563576452951183706890224399~
8741800754315109267129628800088525724066148527124805012119268009663144~
2375480730191867421838747666709725803839143597316636173003973944196527~
6923572035204245867352420328888292746216071775318640931961644606976604~
1340090723318452276366833632646765551645336303351707420077315912223565~
4673373599300943470436645258029834575623191473614152094219375478744664~
4939766374093525968242409217656750835107560496302610780045135491045642~
1414220041323581618370868543421790900464590315026022407096247568757533~
6480468390750588103661056658960608384176100442695180971505003850001031~
6719683088539951271688121937188239443793395533184090911837660226409822~
9891235956391850025956191658406940422775936092664154477661586884891251~
1096622888892798939124299450567372027272009280734447308645776184017602~
3347595143775709446861379242312385795041166142178389967436123885858300~
0977830845741132830307868394362455046492648639333729954976935390002684~
5514947469659450976511838671759252489511785332407693510487931375385800~
5981246527936112502021564673795211447879023614536297416795167105078869~
8189880279263043344462703497145592082050056589707170E-90

$velocity_{noSRDback}$ =(1.00000~07170E-90)/(1+ (1.00000~07170E-90^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.0000000000E-90

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-90 - 1.000~000E-90

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=0.000~000E0

7.0.7 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-80

$velocity_{SRD}$ =1.000~000E-80/(1 - (1.000~000E-80)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000005563250280268092160870~
4498242400499580376621723748118723311743977345550067393367868687125088~
6324491293323575211772271487374345569816060520881555413866980380752040~
8432383794741284978969202881518845561516701245504543725642836590037361~
5529854806017248428951737416083534352283830761629912243954121473284792~
4304444794337264459895586461799971256947822347893575469999327300983712~
1030484271576335970783343743782608918139462158783174069413898127379255~
8819176693825968479930460465011909853391078549763197250588611538564925~
1237697030610940640693245302251102796598313944760826679887188013257140~
5789096774271651859218418320894162617775080283664228994747067124707233~
2036664614604138230055401338463697479284316640835459036926885812643092~
6673064606919819618189502665419433685533542650714010845053254700875800~
4691855064982763841261777782468681315028029556573995055309046126125978~
9651461615765238836880068629362962598325698113242773098576945266960105~
9185494026335631945310983865114365153059177053190788015929697474221631~
9123529000774778043350311825674735925905216280845438860967089848689451~
3771840347595749863959992907179047085146972522299416733562638410916017~
9734767206364507968772262851371520079401547935315939185100467046231407~
4362485077384774571434137436983706271575830367328351852929650629312971~
2882475414190812918929003000583299673034222846969390771666385913377131~
8058958184357196861074542967662828947273642431057288501787018007672299~
9212757104578300929838650153693036304364209876111719698449850961785009~
0010450820075754991945502123511911233592656107245729208819011513732130~
7022162781488488440715565525075526716113183568834479369357401462362864~
8958081092546116161879253115884440985630624788144758035097396591222441~
6639237629071627265090531037120274538327136251354142573591998173991757~
0571771786390753801662486994277008207329720160382 20E-80

$velocity_{noSRDback}$ =(1.00000~38220E-80)/(1+ ((1.00000~38220E-80)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-80

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-80 - 1.000~000E-80

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.8 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-70

$velocity_{SRD}$ =1.000~000E-70/(1 - (1.000~000E-70)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000556325028026809216087044982424004995803 76~
6217237481187233117439773455500673933678686871250886324491293323575211~
7722714873743455698160605208815554138669803807984654737597339830952264~
6581044311366547819091125358606143628944932184941263147995667495399407~
8457479522643847266599665086524265546274642907901291513650630221160959~
2628381388225927468089900725971096635753554402963173929390171151707809~
3755080730506237800281601517304020816529388210107407869427186871812300~
0088653118115665016745737769330916555339015263599079302298280779020249~
0441993680336720458054065145530465888239134761878042535198565655892600~599
5089386718187124994959691320525496577003653760200612083655271850035~
5369131892517222273557606371135963429202066418934299464533082658836747~
6895913092052751115539958624726471404382690122439245338128537505049947~
9517249821049477656104474106344971079348863177807383376185754112139733~
0845773567469369155801391277983800577100575291628070872885240585701628~
8539919431306456564045928915261586041682727556985073509269695938877526~
1518330719111819455997254243385593643150524373941729070406044362657057~
5902534782555988494081122570912305999874404398832398186464008565353372~
9554179870442843371620009242030131939132530131526550919980395578620741~
5414893139695326423964600088697068547433386939879889898925889196378931~
1888250733588585477152577066646572808215416552790835814503874686329575~
9671054542860166347195647360543087025806447929972906142554429193992689~
4747252465272509809967050214168170333914636546543431127437519742808002~
2579760405771731148120630735631593305174497361104526333895898822156516~
3128873150061281343774113451715486236541857267660938257006904930419778~
0853292882988019621583184189826334488564306760291934158814076374054994~
9401213580962360612360349192828545777859209187461061366261134741589084~
572720435221196696803113399363729462268175149946115 0E-70

$velocity_{noSRDback}$ =(1.00000~61150E-70)/(1+ ((1.00000~61150E-70)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-70

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-70 - 1.000~000E-70

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=0.000~000E0

7.0.9 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-60

$velocity_{SRD}$ =1.000~000E-60/(1 - (1.000~000E-60)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000~
000000005563250280268092160870449824240049958037662172374811872331174 3~
977345550067393367868687125088632449129332357521177227148737434556981 6~
060525524018466002431277471322362775230161187430389923346674371850707 4~
775381537090544303108000003915254904928558043684545932265451581579399 4~
252563716744634487448171378280732311861895145624287699200771276147754 8~
780086120026341754148562601203967790139920879699658269099491148902503 9~
835849025816672026241415576673890518377934479522907452687536040842996 5~
834865409293828055087286358548123016740945600092265883355952280855403 7~
532086424265679397192136328899327682167085704805816561840324304118001 9~
407375867883225969164379307505681192625254899236908083878305133815374 2~
495978198926605861149548939518662324901425406011282749206343661429156 0~
005104393777865698172005911039660039652005935558542450493997849234006 1~
543135282367830436200159396473546534541189877730393956307798040934353 7~
759259109607042183163066455298087681872997820691356183074353188743456 3~
806928795616647308970158156973725039406101908256013789285930516868481 7~
803213928388155166896683863486125118754505497682245668024111494797519 0~
536295849928900046643771000769630121076830560520456253818357582799462 4~
222710077770926006269914265936670029931561596604781374058687463749858 3~
793261625318555980181038129216880723224775347134981049688999066778783 2~
938127859111036301130915893502158518253645350663600224652096487952591 1~
500341922696477491053600320260790677454488286670306719601600662871227 9~
745426817059801187164913903228889783987541595582570438543390669625699 4~
197655586763749097978670808226312757541141095774455054599435309009356 4~
335363433253938074792828217105554691563472112058914898100732440893366 4~
955688833507388246850489814215970877246711043666317954893306341916207 0~
163920874263037419007008130472737125788311674448604482889648679680982 7~
32954261921620206829683095772040968815141036852024 0E-60

$velocity_{noSRDback}$ =(1.00000~20240E-60)/(1+ ((1.00000~20240E-60)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-60

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ = 1.000~000E-60 - 1.000~000E-60

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.10 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-50

$velocity_{SRD}$ =1.000~000E-50/(1 - (1.000~000E-50)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000~
0000000000000000000000000000000000000000000000000000000000055632502802~
6809216087044982424004995803766217237481187233117439773455500673933678~
6868712508863244912933235752117722719516206507833611501928097073675520~
4908669171477406558623182468204655180343913366479362535325159845548392~
8885037829139495648171834215951383443925267080802791087688294001105658~
7222370425384993281318452205148296792250109613737293479196074402861667~
1469652500012709456303929330818622132615960915890860287322076306873292~
7686139216261989494267969251543414669578855806125862305645375684959144~
9334113212440440169758351582210290328832633397505905424592746297940707~
1979906305051537145013909062876877325755396922282004237346063289918466~
2961385305699409338747220179374102924788038542807183196220438118511045~
8734209262760103818671439927862435244988254882746111882387009905432376~
8808157804248977925586027129058775215815053351352518085904144721787384~
0949126470224909549421963267510199528727256328758672805058663147829118~
9484664829835439094064317903786731110451859564151092967111850365769573~
0996640258696302285760792750761085476607364563427805944035279278304166~
5151011597390441425343634715447988587695416280539096331067982902425451~
3540699038159874731822235908207891072386767290674131522257633944092821~
9506733292334061355530681659520763235167875740372329365479986950013966~
8190280455329546725969826121950896055353900424651974015469571756237589~
7363948922636758109370997814191977597822136531157773321313617482491130~
2433944238622654297670080595568353644915844441998905843428096604985802~
3972591657895303555705075262534034023994924352896896757277476681332082~
2252640156778858227595314465731816255192823118300474983802762199533309~
0744429104072301897210567849945190156938079300754195917665190508412268~
9109683567949863859839898284134497447872898627642428264153451289068051~
1891359867043289046874965225170140867881500021400349618396010052081745~
9291949336590766118895153165173440531667529401754610E-50
8728986276424282641345128906805 1

$velocity_{noSRDback}$ =(1.00000~54610E-50)/(1+ ((1.00000~54610E-50)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-50

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-50 - 1.000~000E-50

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=0.000~000E0

7.0.11 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-40

$velocity_{SRD}$ =1.000~000E-40/(1 - (1.000~000E-40)^2/299,792,458^2)^{½}

$velocity_{SRD}$ =1.000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000556325028026809216087044982424 0~
049958037662172374811872331174397734555006739336786868712508863245377 1~
795409656628123868018954093832293111484894849658765615041688043691126 2~
708006090661333313228078074686079844796984897622618396452607465332015 9~
324646420899145863516201651074539089262468555852604960099258938230906 6~
571094419332776618303228969301305374905151077999494843330162398719906 1~
970021922858004273913361073085130988583921065403380613881482102361118 3~
583219163134948350547375710286522825181711924787222408688210909821121 4~
824013905576629750545750076956303729270266280112287070420196734000126 0~
231941578110005690441875148488124748935019704137382934887579961811274 9~
985096932944196079716637623421972565694731834629453377548672472645510 6~
795529390740313437138944357912695125502671536570225072645681485234782 0~
830092525369748852821201848724521662246250375042628903177744783111938 6~
252925901390625498382777027344745706304180629882260926257840004648206 6~
930403535887390639433287105945852428902231233943891789042499742448817 4~
384362017374030213667446009101725586887468116954683298264219438162769 6~
372260935993300012598485081841028740502776867828870152292772205917181 1~
705014701424460954909662472105341620981164868623777611466019740668502 4~
376168152368168952544744665851667551652934094100178389223743619242515 0~
659446463879803510384853486201521045807028802970902619218752374402828 1~
475871159746638943149852374253525142580881152359579942213289170692804 6~
514061373630047170513915280010652311917095375022211933908830358058846 3~
364605047209277315092108865227653161778958260111408261029586586769063 8~
890835254616469263271933707688037683027750250992624626460362491162218 7~
868918976246867386674497206068557898352746042943517464584415250163400 2~
022323673589753956903426959654574023904384757642027036663859372310796 0~
222505432266045179896374731552581125628154096970949237641372296601859 4~
636239566514858458393469599877143669203634615194310 0E-40

$velocity_{noSRDback}$ =(1.00000~43100E-40)/(1+ ((1.00000~43100E-40)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-40

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-40 - 1.000~000E-40

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.12 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-30

$velocity_{SRD}$ =1.000~000E-30/(1 - (1.000~000E-30)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000000~
0000000000000000000556325028026809216087044982424004995803766217237481~
1872331174397734555006739383211499233863372212105748431120624593308841~
1365384188363748736551478115530381160304837494025785286331148586676805~
3190434852528367673354230632531435577484125211051512640669877521815766~
0918367657108026811687958230870245319227933080503640820061889522093346~
0268990580907579129306019507604125036510129057750732442267986685628616~
4330919667663019228267086572795126588248142596241458348112433677495137~
6893948388555339333074969043495669235565568832959211625296830966716753~
3991372106601191241975174992448642518741756941023211706659451431066716~
8163663855112098250292824942851248174458104684614899432547784287168530~
8833507169436319334575309417231461682757134123236164359042152740534121~
8882759953823317612171760824754075330192668718354109194073843240958520~
3990831446763306817331308090636008045113014436786424423832880454500101~
4159886765179876279673099720139449187818324449982913930327421936584719~
2694915709007911089334093039749390641846098755899070341921326059996749~
6762586968243950805023234257589299479573811799652665741506154722332436~
6857730257530367796309264661112926729791833237186213288833268167821969~
1899454309921401261986541128571556875961382201290094169118269973720453~
0686199260032431332537831231616346807437164490015162563325847728667068~
6941431893724989006381587861318171811666195931253309120480485174159187~
7282061574502204770024201613756358833499648205178696537169483345231931~
7296196628190980653196329365314598690796108212873629884257250870644783~
1743421888571304295306226951546571507814059419549565633032282419743643~
8384419701831677884815021606708655719867329843555100934605325682536195~
1785060029267911815343652584411303931481983797625260507117551845725565~
9950176584759831711446115631245957205849756845994973219408890204633239~
1583271617818347128733341474496099618286731888119322004221133473615063~
3912994532214836491956742853679155431275795736274320E-30

$velocity_{noSRDback}$ =(1.00000~74320E-30)/(1+ ((1.00000~74320E-30)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-30

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-30 - 1.000~000E-30

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=0.000~000E0

7.0.13 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-20

$velocity_{SRD}$ =1.000~000E-20/(1 - (1.000~000E-20)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000000000000000000000000000000000000000055~
6325028026809216087044982424004995803766217237481187233581686078669045~
7636056068388249359550304309672544024185303985888348810788109077682980~
9942705768297878810580209972615066873264797888913467252483086662942427~
2528718263310243143679823604048024425921679671948243762698793539190501~
7853649084331490561274559574873065521587995855535054296825898660552458~
0403518764484318745668042179287321042108392153419834728818699517053606~
4258977283729266695428290054472239054405685822724745060211553860130092~
4287477286194506499006332940316337561122428170683832963034349180764780~
6437857451324816679402925061601728588877827916774322063893408423713924~
5025833072694092220725795422494699664832431856618606103521595919407716~
8498199087364955249158616933062902591120211071820555295437804480961461~
8897362503777231330540441531077622814176293743099037097330083853254419~
1636633044278126341677955224287965433329826533348923326622369685792440~
7370575681177892397385157389836092993510045887943986401646466630983291~
9048339781104209497982510474906643440662024342250054108937794348393659~
1621523246763399057471956036412683455203677573983527733818377906416646~
9999535084341071173029134317690311722324359793780131200392583205789415~
8909747906025779749207610219306864713170051497176812629315416150407834~
5550973453870281273380005992691086058784348369049996309317541627589289~
3067982200736569137919072815905417955849992318421937286454422482065007~
2835597732921067189585673808835212564520200592779366103984148878618651~
3504721128209714506787207515335484008500308757587635719909134800171532~
7710394349545289489266753387632939666352088136838542207459415845297606~
7419216737118787921889378086429122356413717558226883872039643801919716~
7841140434305080655850934914045570581974519473773372473797594993644311~
0967651567546131484773544598946168145533039782863480003567494563490195~
4419002865125602096509540450370982702552588955546444203332485905415157~
9410651800069906082149225614567513009974251347048 40E-20

$velocity_{noSRDback}$ =(1.00000~04840E-20)/(1+ ((1.00000~04840E-20)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-20

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-20 - 1.000~000E-20

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.14 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-10

$velocity_{SRD}$ =1.000~000E-10/(1 - (1.000~000E-10)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000000000000000000000000000000000000055632502802680921608 7~
0449824240049958501908477588356962003102549688240075488321767259417731~
8717882459728555614032331698499058281972317132190660041467096291775571~
8890238490356343316587141293918293212971402727178267467586325607241072~
9697324928433562566077808774577399710811531270754877441324649168666055~
3926601331323437804541678039483371491170863879005922075005358618970042~
1170528074470823568111589769870208062901610661845509778539651625411092~
2204971605402910617495240636478070562452227229496153093399658377126483~
0595489772138499146885702897523756728767882405528313370517324993797587~
2477986274094906525473651928762466805392670454078273328301118160032360~
4603669455450867475383579461195975516379905426790715349070169739200157~
4982586498702155944808119171500492012243965158833791726626081333464526~
9566772276213850188193646373788111748125905363917758602114940556372611~
4710304788336923252895157814680206950292854651178210139260225165602780~
6764998530716412370890963137239865789644979525494297721386315759852299~
0832973424963657467052815069618227271462020870393551650368191493689760~
7220430770797484020083410065863317819727239405515302445306027956680538~
2130878282253210773743963683071043204838484132024737791012274140053682~
5834419001208582015821886630883726927841410529948845509208842145761943~
9476512665674688652372227798903185856803258670760853117518349358564989~
1724512266830435502383775022427205588163402051783800001872591226671818~
6105276363373750451829537373886112870981717721962736325024191697276710~
6897274564661297068286375665062691210104373600925845677065028689831915~
4266468135914127466977400091218842788300726584002938226131700019896772~
9615558819294387512893650032697701690733318238129403002708869154282787~
3450732540457101234589072988809151314807012074544878726028184198147844~
7236827994645103038597489111732572330094605540754686295786900134338696~
5904626306219939532200190614366689302179148563875892577540389202037912~
9459974452721526591241297687038256869472583690135070E-10

$velocity_{noSRDback}$ =(1.00000~35070E-10)/(1+ ((1.00000~35070E-10)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-10

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=1.000~000E-10 - 1.000~000E-10

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=-1.000~000E-2010

7.0.15 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1.000~000E-1

$velocity_{SRD}$ =1.000~000E-1/(1 - (1.000~000E-1)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.0000000000000000000556325028026809216133469612945359504775~
2635630788374957292151513040540284054640728031216489720346404403854643~
6613298648467134170643800071677702108923571578038913312811529545725434~
5764958523270340041641351963664969350365550835759827224278193288424231~
7611171614780247574387817500921233142461321826600100204752073425863686~
2899307585627389756752344299604425178536856413558714477785809675089923~
8779148152818216297592638375281504588403381713365385355412004310853258~
2205144879899822208665660257987478668631333184314252540732475935288262~
3333854276398403804845175129075756107237192306741331755279183267513261~
0533257782131112065948032915062020497063610363351930235904169514419201~
6067539552561908235127156268095133043900102776680202498072424339164063~
5733094293231726622981213109600227675092388671383872039982874337666505~
5169409972776099844075791152700534330204429395137369282467481333952339~
4373624014600796740942568367882806693378475133319483938856644953366556~
2021194051592233874615207625659116503385271701267228910871303866615651~
7957085823236958317571212812602387151507173016700390294023179317865145~
4896636167159172809461917592900034229681120768830614869048408334147984~
2515931397354363007515700634371043895211534610709701022946506981867729~
4472125161441153985286293667943451708673526862593532587582077634219585~
0669524006173169721081783682480954286205793038541194476738963669231134~
4115343011374921614847192462133845002491535090250355136158110805256209~
0720132711909798059268269510423007617584579547704268677662689612828995~
0548481075322492068107153441690224417716953348872194116633199364094845~
9063433625108904186648392915915078136283472567422552347591659345783697~
8569931551119438576363688422649748031484384694522646760597514780933367~
7460609635718448401695594093894200494305234077462880614313804274262712~
7414340733055823891982322910037664740774025191102640113126494781450909~
8673712523819546235554336466993767300538102275839924623559057201949440~
9523395173808340251174336827565024708925969945141880E-1

$velocity_{noSRDback}$ =(1.00000~41880E-1)/(1+ ((1.0000~41880E-10)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E-1

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-1 - 1.000~000E-1

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.16 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1||1.000~000E+0

$velocity_{SRD}$ =1.000~000E+0/(1 - (1.000~000E+0)^2/299,792,458^2)^{½}

$velocity_{SRD}$= 1.000000000000000005563250280268092207295080345594559355683 5~
4196652348544214871970263823034464856590741005598421403426033029011462~
8279980063147765624862977105478966573683074666993239204158901815441325~
7114789272669713137842342012168114564794066536518870306711386056157725~
9424655293321453600166138215929640565658992234138822922773266904565293~
6928320295180938685724490598021262332495142767794634279810294404575313~
7914112836297483152831971654440649475574148958827762174205569294826317~
4199325008064784744584922860067013375762628880014614695842668209323928~
4077281969062898962135635381613602251640864769966165704454231991594231~
0988844507297044187410165220596436475163355898830997625718654877984088~
0865542457157250365864555410421610380490131616489769119472047912396170~
1788402232399432392510666009568182652687922383262458655745205667933435~
4038142876695612840641357856260727018340593714270609743040761083113606~
8419536234404679660006582412794191537817440888197070860384800417401443~
7771793838573027115883616850399632838690537041677229633428572991602310~
3756090987693151088815273217993658459860824890712369170748422570411780~
9925759071048801932786409933800535056561953627934344383990292115970303~
1420351370314978050336587632518618126420540993946781875747519579056991~
5296251872957402385367260424731723001188154057416176812898045645549231~
4565956730429771234655456189553525105870683178334553608860731638340533~
3325134972946594919476541293789986317961843771335218894537501956272896~
8553414480887608802396208492847525958373445605575301612185147229365080~
0898125678009444619695902556339587217839980119074866499170813776358707~
6389085451300320713496542068399439659398121635202591457320273700289897~
0840651702726053085144476808474582242750410924126714412463112702323846~
9557565100904646272386169004812356333416505508759956535016332916975970~
5505017392855692875311757678319696978553447558407193558464751056029999~
7948001300700132147110517070157508058291466267479027155546168917459425~
8401178765377179756889811938626820164063938513300010E0

$velocity_{noSRDback}$ = (1.00000~00010E+0)/(1+ ((1.00000~E+00010)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E+0

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E+0 - 1.000~000E+0

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E+0

7.0.17 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 10||1.000~000E+01

$velocity_{SRD}$ =1.000~000E+01/(1 - (1.000~000E+01)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000000000000000556325028026809680333350195969525120796516 9~
5150413403316672763188193806178220264498615174700964778475210428261408~
2209383913402168400838157171538783511543631658462963712370244875057785~
3572784442000001033118199098643218690004701473925666454373221273555841~
3503521695818792639766370155108207594836454708133290524581951203149712~
3972199137216403927885809376525284437961352524991861247865967793854221~
0796392782597106995763480010565144611182968798898048864379061659586685~
9575513255253451763805324664404016581087980464376696993277061675156621~
3925379214961913064591735562519848593570299887407193691680067024403735~
0737413756151819794611339847705474001454277897904910715148408569476864~
6086001625550802692315611942984288765178012321699916629852616269609413~
2464002440215108033487304320981663983215942194185429092384561621262115~
8151212897227123946552876258854635136817364345804477689738875562896430~
4163380039910202090812557892977394364575912515886943228311569358494859~
5972962030373067057276884052481827610579028070144810479638070506860827~
9965497543410639850021975368221292555909992126823319550765925568030477~
0490907050667466762208469004424239999514806433195262831029254658817411~
0702765617742754611682338106614146754313052313207060980308579360161266~
1046862298110153927472553862518559479819441283342503824878221297272434~
7814023662978609897722098561350472312865237086772492615515679272465273~
4120651859260823819328878630174840404496227769501804847569468975173634~
6874163600364451669202794681151179183908369290711403407548291315391981~
5307985900583820431816989939134232835571761632032035463587998559292650~
0504768509271056924091893636095863484884500250689725564176461241734649~
8279717919344815344500484878814400862271601482136781457927562488350655~
3109288318301347619715171558037876299856953494835214063577893108442687~
4239359802240713876417901101075057931703435777489117204546611191651250~
1237516843962448995452308249258099209348754322472496839677279292839981~
4311948773018341964673990995594034004944367419390180E1

$velocity_{noSRDback}$ =(1.00000~90180E+01)/(1+ ((1.00000~90180E+01)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E+01

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E+01 - 1.000~000E+01

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.18 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1,000||1.000~000E+03

$velocity_{SRD}$ =1.000~000E+03/(1 - (1.000~000E+03)^2/299,792,458^2)^{½}

$velocity_{SRD}$= 1.000000000005563250280314516791392234786271845744152270663 0~
4756228732028295904125091392285911991164521951873925551584237795779651~
7290708361433149411582802525150770711015406450514437692910976472780485~
0629042956891067208341776831281914766253523836206299816328477374672995~
5707452022448950989649530903693616763943793994618964464856096866047550~
9891547809500730905956795330042476412469074863659985430108360054126229~
5533474734712987568439559244035932459290039066285244291239302814610596~
1860797975234639893675032681476381164196186269848060906428152425855966~
8627801332070850577669080784216633626609542022497449893965794410861094~
6760142269844254111826350308744850248106045076144356789839025907219308~
0594494168930381848507118553889462541762758859066943994954170714564138~
9561271006410202494861532556416915575289648793280664473504457542100827~
5522835888553924114192137361682532877953073418993972614435312011709745~
7296295892684800247999640787980885507430423221327124030270844263446675~
8820073297238822826754840576304318939381663593899764363201775755967252~
6801174303968019239821075952828051385296610722160272578909729787525843~
8799315241264723190307413367939009076602385230386851384555216118271016~
5782082553750661148242289072699738151982242010660100332989989850738055 4~
3514994957252028644716837595213282037989894100253760681361588871221935~
3166843330041342547974961525861502384014605011338703743943352946361249~
5850983496576943259335992605842707320958261453259422191328746632651684~
8210525778374098989652940163617189291741438196072587242952212624913612~
1866470480050496973157263983006737555933854080677695121204808987293061~
8844216794693857954042655757639386246627178851804425376002584531073806~
5903059499620896549392946458259794653717668634712393196211240177270771~
3545414427193507586164501075853318693833998947763252542428975584259461~
3212026748411703385850669435893314265845231524317208938310995362641801~
9858550922134739381713216979302029854298881195200019146879630035763803~
604332472893833858760679275229912881352987156810534 0E+03

$velocity_{noSRDback}$ = 1.00000~05340E+03/((1+ ((1.00000~05340E+03)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E+03

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E+03 - 1.000~000E+03

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.19 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 1,000,000||1.000~000E+06

$velocity_{SRD}$ =1.000~000E+06/(1 - (1.000~000E+06)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.000005563296705329070770776894693987419455395797498645140 3~
8892554082362761939975276562956194325434489432412211291665037884197205~
4885230389276779094310493265021805894950770638151300694043413392794143~
7274019028069279790129659297047797678070948746911523250072258258989199~
5064427067695658519901186171065179798336764062349649296163003449749099~
2553801123022332434974923938741361865038461095154738210426975912305076~
9641889567299133073858918623851302267873697299621582799540359954158611~
0745994912011388941159943591544527223224370229408448454862750780730005~
9484669201905333575097278476299969205689595534093634337139189851629339~
8068339752102393876517903352654561306476996730353412541822259276018153~
7623303359660912211543801514671849119038850274441110086643691089032078~
1902044021999720539246285690517419002612038052084175309509369794543626~
4606795296977765703777381948700619749974275220499680824283229575412668~
3741777275225383140700815740098109240683991447923024987357108397970365~
0203585775327684884467942598208299897444893330841362306947497619808466~
9447339365054904643470871473720417420680337106802155780002673202247308~
6453225801522173162489064943940797264316357062868252526838026598185669~
4474221900256077116972670215559464201691394706811926863710073901348882~
2582626927400989440448448073449819328437619871438225452287995879137154~
6828062718253354791960455524694066951783398070268161864724162026032128~
0589446353779580131483403876748091883741600765455579039882519385906333~
2312896661247677532376523217999483329364917190510078765952784407109254~
0683337251145302347162723689792212319182563116280401287970306950043868~
1172288142808564965553179118759216439309546728364684131268392451475862~
5072432543115472738505105345411653142883904492910733640991487460030246~
3493493994835799283617908093763280249345863588664091356495007473779145~
3640933283493348348498383763348641529403864095866149129766743260832146~
1061345936973592978927305975606755108714116331416830549076265756739601~
9577491319616537798393578078122966304618574057724410E+06

$velocity_{noSRDback}$ =1.00000~24410E+06/((1+ ((1.00000~24410E+06)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E+06

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E+06 - 1.000~000E+06

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1994

7.0.20 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 100,000,000||1.000~000E+08

$velocity_{SRD}$ =1.000~000E+08/(1 - (1.000~000E+08)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.06075200044420400242450730650056697170087263780301215365 38~
42314890913185258155225452871290167917788974883027932442824652667507 47~
05099533746935619720961868952606070841528138749261759305216501339864 80~
92428996845455796395499199689628779618222973863107895575939995026011 34~
08532495136440656769678431150286696767596159494497481627033098193730 65~
66327637041319406879480142722249854819032971541383437058009080332264 86~
87622448440607476691465738533413606700194662770471317383795262606728 81~
68818994097532698655507235832495306744535925174326775872516517491618 73~
57331568762486529619892541537148464081746279236516994562126476493226 90~
98761321336349940140505186776966453064467431967328497435518301610834 18~
05361559025053972149886409251569578632894974588831101947667093424519 64~
32421690313729350026113024770542816886759874931741774219986442721433 13~
75567814554427031198470829010444650468740437938585903760991597359735 64~
36290037063881033457029674611138540899440376224044189875592139103492 12~
31911896018958248888747767150673475795128308215861621835622473866543 58~
41031940558926529805588686541404530983593441421961046150094664966272 16~
44167953512852711766438919542297061966826162718650966104859756562206 64~
14023942843416234244942733459904412217125216394604337239436334546257 15~
04356882471370778519108045570204093339912403452487974856826193835388 05~
03569081545845454895068344249187541467634959635454459351552671509781 59~
06240612352473861099502121220986398352925174499052830570851258096439 28~
19494733859694248871637444850202887208431844688475058954944473799715 85~
87337302286182619166596957683354015964106684338675610030421900801816 79~
76180372003206629030373209969331264701982958591174475688456026161097 03~
61185367954186790614391918267842923583858974898262526993683629088727 02~
69283721912172194052905225669005329690921363632471279728902331918901 81~
18184625374334362178897545766264976180535063953383057671880304744162 88~
53541598235330732129047986823126455719246297408373370818168590150449 05~
07754636739575651842735561163104295836413015646631 00E+08

$velocity_{noSRDback}$ =1.06075~63100E+08/((1+ ((1.06075~63100E+08)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 1.000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E+08 - 1.000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ = 0.000~000E0

7.0.21 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 200,000,000||2.000~000E+08

$velocity_{SRD}$ = (2.000~000E+08))/(1 - (2.000~000E+08)^2/299,792,458^2)^{½}

$velocity_{SRD}$=2.684769401682842302306413091154229716429541817384373233860 7~
863262379676531676911007954957583241512535004577777044412010556381734 4~
787411720041206782727018723832215375478910099818070385380147926167556 3~
162319355993412197648300640814553953177404529526681306827336302582453 5~
525978470166153959685481039293529342446967735459967557130863142836458 5~
933300595564367836705874592523338436142273155485969741919616644612381 8~
425127263908939762025116737098229353022688876966110542273308898370590 3~
596030618220400578139990561778582813521052535711616311480143267181887 2~
103514793210304771584809285840367418464135462942070871856792051451829 4~
576548145046184955419320605782254927982011750477257888249859660758737 9~
702540423100357758538133197794759157090317154897359376839158940411651 3~
705861495505307514680588491857887365139421374645914505535471007381519 4~
514206409334844779994016356560411763753064652863460672448025873884910 5~
762245127948090921018044424244021724238370008798218465650766317860428 8~
025630103280917893068320834805479640440600438832914397394330375485579 8~
342845594134797359765363643778200376853034337046784787940622760555503 6~
829128373407793103900175491004330640099007913869402854826311253056488 5~
623267017501275935746825601827897816806795648881942683172424655945702 2~
071172853507406272739350978717265978830595626900194867799360109078962 2~
523510734521132826682680168098385922474124503386135575657771580012801 0~
660690104264569376920955693438918002463826054204140966962903456449295 0~
491697263012410915564225535024911204087244647132117051961211900748687 8~
060542044950749128776771218019651972651092476345809848903469246084099 5~
603388777716600171676223943564720914343862666894636433409646304760060 9~
736706371658843194575273801382753848131141620167222882247333183569160 5~
923155040956454105865794573345901157789429988083395551816475599340564 9~
510578593216470471470426975247391630873350482758092120748095024322158 0~
887981130484054864311630049265103564746478363845043342589320769951776 9~
2308418349371977979197848439069282466811201556607020E+08

$velocity_{noSRDback}$ =2.68476~07020E+08/((1+ ((2.68476~07020E+08)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 2.000~000E+08 - 2.000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.22 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 299,000,000||2.99E+08

$velocity_{SRD}$ = (2.99E+08))/(1 - (2.99E+08)^2/299,792,458^2)^{½}

$velocity_{SRD}$=4.114959862332528454521851208826810218803991094681197638655 8~
0160753939790520257054735863491865716223201012701809169983611527790479~
3222658497240262267385405056690115602829269920290353087879674911343616~
9486413972069925394285760770331282237279924018609160978164038768728316~
0531406968534875078577832333539504185571313385042195952455275284528100~
7138725545274527675026680035186616648799908220637488037255581352867671~
9454844123305997509625018297840078701818022646307515554846584672491252~
6963683398698740066738027669387596541056820182861126275565344194935299~
1659758662664661481819620553412014877483387057312961850606439442137184~
8132323254251570617537254148068073848331745082475708052933789745681163~
2359830736077118167775547840846742841492272238239640492986786297474947~
8803408735534527391402339685053357949311041776228245570949074847638384~
4329920504318152504021666005802170852770993418843659228262488063700968~
8308922558710238004446806234285588717375117208231723615650087038351085~
6128188110642160238107425400919010778583308253727281607278353902846085~
1594515424480680997478385361594886319376100221569606327205476690125284~
1868067099873852288114873932985949972420769347192385979810234485696618~
5132748765279970898938657204374460401005865847722270782196196612194700~
4114495401127912771780376884614166426500316231832148298279193380638200~
9290885460641504589379112782976355364743476486101441802611408736879285~
8828502845850877670375333635530360160448666076707885123319927609445776~
9865004377983523444834859516220131682660263907080833205105082029480507~
7434979837169929069701367128960132259244962714551942115480981807568912~
8924280945497650855409225466733864334811998348271170831332275734032939~
9391259947870996786528211874561789443641223206768578638406221266988663~
5522705574880336979311479139923877979183940072688886124002119778575149~
3771632731810657449988837192042916377070074888662518081351979935517178~
1861160381744029071001846599181427676745182246380994516344303299497595~
3637576706545445917855780107576057559378226364626700E+09

$velocity_{noSRDback}$ =4.11495~26700E+09/(1+ (4.11495~26700E+09)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 2.9900~000E+08 - 2.9900~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0

7.0.23 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: 299,792,000||2.9979200~000E+08

$velocity_{SRD}$ = (2.9979200~000E+08)/(1 - (2.9979200~000E+08)^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.715073829139882362885098907299031819549798702433245074686 1~
1647964646729516662030855391479785938922896689706702982812545954095359~
0680643288242521089496558818923982145920833126735750159513925574498777~
0479818490540183892921441536068487014728382990011356945846843600777086~
5202914646124493112016457017753441506560117957396122630663871120736563~
0789206131735395861110318806843738528924117715696868846581432773773159~
4147393160794710219878203748316596160257969903469115136008606415678115~
5753560419080819575843888109350936867620639171699140458936202462723531~
7175157374385815389500929259593037712678613249511254049429302359543760~
2906492962397869805008254850998344327502253264436764344056690829152776~
9452559041992648484497255562624879238634185749226552226880357004190972~
4104843499156322000559670108690066143282417405904109866939797758671252~
9025543858062290222947787977891302777576226640489508932941341379288137~
7334955950682417855082582044741592067971894679176748807391071840473438~
8527810709377067925276787256321935447602293889873008509731909602770325~
7462395438968835560938970754382568315107091096484744422000616981447184~
0635245951096645920690859443174252091273409697073200699382256275525218~
5389027625818432267800808070251980590625305162627596075788009946281432~
7677708172791532985711803170086573757841963540120599806321048440608345~
2615585837775056927707296537872192178512237336796868491313196336624088~
4023459200021757905524304778192737874390452028411379839300779378792890~
2478574143272186073984203423065110427811328840726466872628131511772756~
0397605177171276752811540192119434457700621172031059403429405104316172~
5969434888688701074913791042775327120662338321850230794742207564899681~
4656748212632224020642364013930187072721670370518350773188783301979917~
6505247450415968559107394061965870102170162196953901258118709842940432~
7456255862971542440533141821439237743806650866555927861466138694689847~
5021716662260134479212323142080160282531272885274700121763792593907075~
3328706196707816255040044491431615026873241153634830E+11

$velocity_{noSRDback}$=1.71507~34830E+011/(1+ (1.71507~34830E+011)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.9979200~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ = 2.9979200~000E+08-2.9979200~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ = 0.000~000E0

7.0.24 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-1.000~000E+00||299,792,457

$velocity_{SRD} = 299{,}792{,}457/(1 - 299{,}792{,}457^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042247449532114509869733264363661473184065266505885378 22~
70130389273047956065393291075395309774598924014033072667147775466349 19~
91520903767988430884166724817910516517239258769409130745083051715989 86~
49897567794037143194606924494844239557983540727779812899756855746545 51~
42989728317996044315195903233942490002624624561080515328771879362645 89~
86420848708821900971989166942281579283220837255797415611594208257598 16~
78733056118583207611883849102323641976360793220122930011547075368392 54~
98927291913726242694255689560600286356525634153247188403152892604420 73~
57621389548681985016680381330998498405441383784124311294748415422086 98~
39279312035950548866907143618367218168999904862241695625599841478799 64~
11116107456803215235682224367225255625838226749762130799497288885053 12~
75497326157641759404698905443610882769070547231303399013125216198679 84~
83842092847416632458899673471515774924128104876663851292525731993665 25~
76772807806696620897760709890049452624197885713425012687874827757735 64~
33848508433131429413153662660195294215954397018256128957726205333599 40~
93206088532974396787622417267847503626150207237730779842863662872369 55~
48388433268361565546291036874263040517674566012292394003859768288811 87~
87467261777872553672376668338768002312385152715318772700717023468056 26~
36885752325869465891409330198583626502951014898656712335859798840645 53~
06386175900286868523928925361063215575454344057313353958789790694864 61~
82752546813828990363710974467373103874529810123712876887266489645439 01~
41931847207618708108843240276829167827420982711586312869373446939916 36~
11154302780349325553141776798092103444518634201157905755034989010941 23~
77891098748247274226076610555726131279730364553649872171651192609730 92~
22463913835532595920751911315588200391137764964529134866067152027728 34~
93543392972320758314998941919834733779691316865865606742689658826082 75~
90892406217691931325977202001759168387368292920914218470001311941469 15~
01088401236759137698323654227494921029788672679813210673347750299694 17~
82502303520406427451203387570118953264481710819261 50E+12

$velocity_{noSRDback}$ =3.67042~26150E+12/(1+ (3.67042~26150E+12)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = c-1.000~000E+00||299,792,457

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$
= (c-1.000~000E+00) - (2.99792457000~000E+08)

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$
= 1.000~000E-1992

7.0.25 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-1)

$velocity_{SRD}$ = (c-(1.000~000E-1))/(1 - (c-(1.000~000E-1))^2/299,792,458^2)^{½}

$velocity_{SRD}$=1.160689502061009033296113298142212256761311333859853743810 8~
4807117086940376691216842397467055133273455254527087812514372573490225~
4785645193895131841354749755570136939861883824494772989151191175364664~
5837199962103494363300357595158021543799930459695077226167572875730885~
6132852970438996578453668272535027786566415928718083119319006120491242~
2922613880318513606261101188588669593939782449779540477205461609731428~
6932390547884729662635645911359341832581010002795301621276618422515222~
0172899698903688874992423663839899557017018318474898620068231703795542~
9149613820120504949170597897303733731615661686450856763387309735209251~
5269760496616744924054006806748253955724474540925866250710238963020914~
1463733401382603095181331252614175222513789071623356719705241041632855~
8894410732184545142806399310243075800720650737808919983350962791276825~
8981892515028038140043509353571347383940495060393715149471290389690012~
6228567055424811338996325080727229344923279829717729902056432557248363~
3340063927562752485518900889903681017624652669625216774971802299582147~
7707568496461047358142873976161836859662287654191995869641181991350106~
3660118517807353660752172105898287029759993739395806407626075354391096~
7324076918685680098034972905717590240664655285254014300189944468959197~
1913805277951722576954054938314694466004961751032755454130652046196087~
2448939562706260301662927784702037336856636198473664150342654136068500~
4428005573581802556775517772185217249203459920711793330517093008974369~
8824397876686665999045319132971662637992682406070295197877869987466137~
8817665732649301494466789639830816605272947933660882436734608821106520~
3120351992479298893402189584244259559816718230060514523876262814401541~
6766080716648334201312074411077228982286286042103171290609722952606647~
1245891137841336703825800301266889246384596226755975357618150423046595~
9501210145674115356062540095556905858758006066222441595344801088149609~
7275285891872267190551476456626327419703384146085272582692639785388842~
2080027815693071659187499450167105218534865250388030E+13

$velocity_{noSRDback}$ =1.16068~88030E+13/(1+ (1.16068~88030E+13)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ =
= (c-(1.000~000E-1)-2.99792457900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E+0

7.0.26 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-10)

$velocity_{SRD}$ = (c-(1.000~000E-10))/(1 - ((c-(1.000~000E-10))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981128341329179510923156145605732887215604 37~
1493651422951646088842730031492490754904221429632272524267796579643584~
4008459729696529344596478036447717736157047732471742937454284581531010~
0416870833100150834990022408872087908708353959684534062135512565836496~
7583866864804352151193409830707779237593936458933068842705788210422580~
3810258838229471200427941112340553775718622908693737737689994602821833~
5952228192830037137447336380007620453225392302215130718200384913901034~
8813800433849925605124123386864497574069456450979038131131625013719492~
8378331153371687254425266087024176000625740448713022507595668717185860~
3371457856755255670565574575751287032803717681770067191056549280020262~
7570053356015026320630598888596470820276661036713853219482542880911392~
8497747533453743750588880637461647042879986064133491572908002441683970~
0149359047223220116254122214270176264452072726848328565979358490263356~
5727452901693539009386061157446429157639179575975730508780444201133431~
7976746517215771435000145503313004233263393319843874200254352217955189~
7002135074654210884177757618428760096674879748704794641031555132525605~
1345996958855436759312397124515817359275734170004591628036119877037024~
1804997323354545162901058067012441714215821040778850780485059850694953~
6946146855557751008586875681122489891632028530626853673327913596042984~
4270319603191348958024282923575874267407035169969971215969339950335425~
5522314956121358825646079364839763053667629185701775352998957964239943~
1318392171615357762773690594111696707200504346642633925048640107490429~
9194825491904610053284154590668526112072886690337008760352811301188578~
9118030011134452285363809521411649779649712875116596837263853631446940~
4060335488204340092276134681402042130988297071789072311851445945573738~
7875726710066144069124927318722838538928564228556843547202567357824542~
7779107629675871343610239247556927578986323236629227900723286557457489~
9036657184295753099551505347568209576131729635110846364296664382606503~
359137411654448774488641454406087382561030069808537 0E+17

$velocity_{noSRDback}$ =3.67042~85370E+17/(1+ (3.67042~85370E+17)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$ = (c-(1.000~000E-10) - 2.997924579999999999~0000000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

7.0.27 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-20)

$velocity_{SRD}$ = (c-(1.000~000E-20))/(1 - (c-(1.000~000E-20))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415777547211082598747623369787521 90~
5597434696444842442864877956174222198134920154204355025295772088063410~
5365693919378369820488614668975052451536031460137292592325965803928722~
0005653871902585501939500817007126471726313376815260565334662721578509~
7422381381448860283628265012984792898106520029220018803900851657140164~
6533983064926962149415910186447068082818709944611256964615951629161803~
7306691494101087029056047130273808699049023945794026145077238821004511~
8068630826321774396625027425985732547099295817834963062404250430082096~
1952434550897539898916226728889551849072129590577681743509144805471878~
2118775900679879047546886232401564013966370891208953865974666358056069~
6553231766996856999821081540014442801741190613397100839892530166415837~
2299835827667630092007692898568950563835031261041231512052951296878603~
8958639153484876577996390726201971696675567095340009601722333899599558~
4509459138055860958637898032952669771317609628865121140804441515139309~
6440960129718568435020452151348727537853159707818782033073765113968414~
4283842665838177250306561054994681552215949489430356485944640689968498~
6822624483892911418647640128112161987911094406938607380934045354760239~
9918031146302923140570298496973520005402664659330596699748982217965388~
9845821415961961606275982006875226679196732701939031685048880241331292~
2426530392337543012922490262788766030782213099743887242517595022562822~
1474132381198135908522566209232251649800913414989949547644642943048683~
0336309132729037219400319105990671927071714060439599158405002267130934~
5121744051773730747498605091578381682327738719109374131874755662617180~
2147044317149962383911941939278687008350008326487811695783251952211521~
1288178835407922757527753765107071384382010019171329558382261908147852~
1626479755044551482557115169977406528396168748782520398640705649792401~
9467339700225592660839247038326120724574160692411815526648265526767076~
4658642419615548387891538728778071053622647740614789680738489246407168~
1071427095625010141520934973812828820513365283585780E+22

$velocity_{noSRDback}$ =3.67042~85780E+22/(1+ (3.67042~85780E+22)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-20)) –
2.99792457999~99900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E+0

7.0.28 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-30)

$velocity_{SRD}$ = (c-(1.000~000E-30))/(1 - (c-(1.000~000E-30))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619742402376415376992995 04~
8214332277063687066542794094655882274501153668564927229850805384687502~
4658357258435292344402205601555416205038855867605726466916101476538616~
0032336613813676594559953205102261787136260570479130820412022544305400~
9935170681651864249924405172485888502612524555136567555259483236524688~
7295230709964850134855715264276910490153179547196619516554035352963508~
2527240712776683164307386379768305146856480999279221878623810198319576~
1492917450826422681597535711654676909417943244288257745249482466776114~
2478967346161931260959431357526118171587771020007007594201425859459922~
7629457669774453882424696758616185879396403630355466382863106058397569~
1413129167263886924292513712678199375246935902506714939507754617559803~
8312517665518351389739298907753151732143417849320761558359979045168211~
9321192553774697435300013792450566919560005748945737022472693028287419~
9160060150891880525664268752828454486940572099934440802604950462238256~
4819950162516023517769552011497307032472090466097107944490909793638596~
9628757996013945727476917323783075303359219255972266067955718773633658~
9854724970894819586360510603144741210905769223867282207892796059453664~
6576742445696652681646050181025522430264878265269279487714010420347432~
9148771438791648540095641289079261269863592853335993752524331704251872~
6055741155312044651098851555593008200481728210216268829472270396423406~
0612338114631802890240950462142965194048124682992517717692219608314807~
2232262826851231723843523844402880428346044369175469375457534851684237~
8180168083585627107119927703032565252460096443274686081620870961222439~
0159467794247852764383784887881595982688941287176134046859149617544095~
5344689167075019096408040684403453441212191728208570461396126195026751~
9771450694589520835843634592592298462296117575804265478710266605910444~
7909507922853320496107723139601870535739863909543103938746291776168005~
5643575366975379297953326630787508902812825577017921515708806113370029~
479451549077258956632958583997802461237286092140 6510E+27

$velocity_{noSRDback}$ =3.67042~06510E+27/(1+ (3.67042~06510E+27)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=(c-(1.000~000E-30)) -
2.997924579999999999999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E+0

7.0.29 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-40)

$velocity_{SRD}$ = (c-(1.000~000E-40))/(1 - ((c-(1.000~000E-40))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.6704224836777298122016541578672961974332061728135735587424~
8934879584944289665548275616040734098919524101350294185075694609400783~
3433311160127162897925350142284023506742875612562556918695839320825200~
4569060470183628342216254368682502096518556827093360813613537887877743~
7961920335408536345319653179110235531745536521099631343504981747834837~
7920806933496333805652962325740321806725259941607252226235764263464048~
1234669781532476665947389095038171135291630299195776850398482950537941~
8178482077482557267410346398218740868923120446506172917135504113010608~
3111248902562384556536994593368275835988756633040400668933607941994419~
8890933366711180283395677718045649247210149014108713062640631172659634~
7741731657415882291949225109284061483195446393854904523767068772350704~
7347762262837214526586382401080363828746484455076040190998611071203242~
8968486591622653066621624580835858008212382500230322901821933079017021~
9974868945108367021762612163367894348300343617329978692103058047899362~
9150195277352743476911323643400179532243920501448284306690948730308775~
8250570300738074643351097340634443795174090162966723574718024032482072~
8453128142564608878512340124149872255209608175463787546478709608197258~
6246003831260772713874437103349959186038998527956592529734441558884755~
5374759790615369158250187459169846238952966091430443811483056495953956~
3866240699613762531172641072722611978845766637564782287407706508676961~
3444522630591598058425589956682573574897191509932398263992141351916940~
4615722029523410871229476416831488751688109404209105441538647302979299~
9710564167666478729424100508439674668948534469374979086580499825308946~
0533956032520020902578626223956383397758010763389239796304168729617343~
0822475391470177169944417181613659764940012340823705945868489634172172~
9905551865213193047344312227935021523475017869749284323201742933988073~
1884924804684121261171744980678794758132742003363471875746689500318539~
7304985953959798278832951728659523708351804234445794817962776268937397~
36566912956747829235354702804155782704955692128 33560E32

$velocity_{noSRDback}$ =3.67042~33560E+32/(1+ (3.67042~33560E+32)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999999999900000~
00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-40)) –
2.9979245799999999999999999999999999999999999999000000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

7.0.30 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-50)

$velocity_{SRD}$ = (c-(1.000~000E-50))/(1 - ((c-(1.000~000E-50))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 84~
69711675050163443963363358758774713794674452543823018304606783247 22366~
62030035052707675196104547350660641396980346853281188924457425792 43948~
85223880208297221405778980764452753216185469187545873521913877195 69140~
92306308476011048624245749782657119819676349571268638501765141988 51268~
99645792806330233905639335517565917335158194398447905712631893963 36554~
89598934835802451175190409668885958504543161026829601697395501146 33303~
48936443718980532565890867802729970143029266635347146358895870925 70037~
28296925257674279804043141417815629864116489985321527579387882786 06200~
61912092695745644784792550566815494752329095482450760775012181396 27229~
90811067699199235425735847397531095341024107088097059395508213930 43598~
36398083347896863092582231488483117921165398312266189523992908652 45881~
70194085085315223686666475167941060888534549770256535713863080283 85394~
25951396717917933386684162843621633853016087743956197000715229237 68814~
52388375636910003808886452279334907380944440788583829370530900609 95843~
04189199073975550396051359963974181122913822864392495427487625371 95361~
26970739780213976562731035066527825327084567138563167442967191480 24211~
84630463298860855865037586160821821787270382978395442479756759375 00062~
19682230653255668248769215794641087496217195594338676649161452204 21989~
99251376521758071665388226369073038469478399089990835399658401870 44569~
04393942698855322803720275900697844652508754905696034311115673059 88871~
31943928239696967240212824852371346246216586376603106010959718424 03111~
24693847849386736841412349317246051099106946941300169727126596915 44167~
84663881946699528349720416894719648289376164255971754933657193479 04514~
64944365723431692641368163918695804302199856462494654003585764815 08455~
03177307661673707440258733202922024856249635911403170445385679477 82501~
32580494002979468627377231915587588379239460851466454178794873698 90906~
00217310129335157267048966098734708182384883508006055888764055853 37496~
7345854660588807542253165260224205862636965484050460E37

$velocity_{noSRDback}$ = 3.67042~50460E+37 /(1+ (3.67042~50460E+37)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999999~
999900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= c-(1.000~000E-50)) –
2.9979245799999999999999999999999999999999999900000~
00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

7.0.31 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-60)

$velocity_{SRD}$ = (c-(1.000~000E-60))/(1 - ((c-(1.000~000E-60))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960856~
15357616481997318834354134895627740545111898243645583704797344896676 66~
97853573324971667101002046394642029147246360735185061314597857306235 42~
56039655458158576354306938856241530068309302327817392898072922315831 00~
49362420645624750061382442619919124596893660605800027294627711010866 68~
09854090672923051811936647433179151310427440768140914155048393410342 90~
53513993693619773507914521080107284703172280260241662188247483281723 82~
11891479646170213402691777007103557022838541606005647184106442055042 15~
00642890439745178106977882068435270237044757551466136530476368984121 26~
33197606289846371188652245217636571302888402644188853491514963623037 04~
37962613837265428107214545956156251856327741052994176535720515759344 95~
28513813636097275903720036625652697578917475653381831100015946874665 24~
55538650703140824005679040412811253405411767790375054026994630219382 45~
91706726512716924529043285108759793413787229399394868029486185397085 57~
72549858214309801165794024507277669626383694000911232384966885278303 81~
67091429647660269365216080059981902296449616524606915363631451514716 53~
23489308179910709390685028736699177783364984109489293035946511026429 05~
64301573131119638280668992253714087029601282420332429553015533335575 85~
41512876304555542703329247079059458288526750741074690541374360346495 43~
20044707903122780810255232391562946572510998725659354644851578258566 41~
31428455943320959885906291809397357005947022900630940941767939968446 68~
76554814045685974557409240893481467857118183905449716029268814790007 56~
08239249260409310908607989302330218117219506144962285223780416026829 42~
61704126704548429667702413190455377095607810249823807635115089628603 88~
04187473808775869285036427924114799187232416240924969204408368432405 43~
86525448940428242501539722422436108800847220523411144540778304950494 71~
23398364313213447081360681920520980714247228589965873645006504357456 45~
09855598697777200103550119931196402868073195163975374325767053171270 53~
62135576722042598227478821137213490699678223559362 0E42

$velocity_{noSRDback}$ =3.67042~93620E+42/(1+ (3.67042~93620E+42)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999999~
99999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-60))-
2.99792457999999999999999999999999999999999999999999999999999999999~
9999000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-1992

7.0.32 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-70)

$velocity_{SRD}$ = (c-(1.000~000E-70))/(1 - ((c-(1.000~000E-70))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.6704224836777298122016541578672961974332061728144917996085~
6153576165738214054323904228156997952758999585034823209853388849625489~
8291908542763240483978517485533396663529351275203861717749383178319841~
0792390867150547207151599218871990285714501995447090635053739129123198~
2993741982408833087822878461123864360200416264120554426656382131692251~
3035665858645805527402768527469380712399866001932205038814724179851663~
1660181879530155055676611619015115564673997466802274067475461604415240~
3519849722571913087288441736603614764509561138500658005099050123281801~
1632902790008879106228638376857445587881636666195771991176389135035772~
9730798790697767615279519355499345371092894806148462960173312414748518~
2575367560476235648599505465037120946190661027011783843162287810992050~
0938703333884051775840766598006373839595939890183331486447823449493693~
5163581246865388731785811943846931964382318064588809544712563903992292~
6532915456305889279204272138821385600251629856967584589052794070089875~
1585914748435979156042876779476817276275561662209456406434271153904750~
4316467022325773404101154469663693107264328707753334972523968364491560~
7204814013590554429445463896391908295840572576286845107929086214279960~
9589006067629975705539349406801682838322810540928472475740681998022683~
0725924625061924821331032068017448791580238343515098787615758584266021~
8153874388329668676871770256331460523069191743883356753929426377663994~
0651461944656320833726484038604120246237847950120706956537548318270205~
3235701728855175206589745408980521139550053586485323717097956268728415~
8248945617138800014813849119507181013926648178538848111527021446914180~
6431268629038856624257775106446642619992598037283609065034537266448764~
9076873609028061766935032814358882281623082863968775255822749432481187~
1839963707346875248594869828506693300568125940039470266208673757502067~
6443290098688090930635892296706735347787039928017185656873608211710198~
5234574895335285629966799903609613596507948754914996251690578546584991~
6823184491139353568107188709577771986670178959124730E47

$velocity_{noSRDback}$ =3.67042~24730E+47/(1+ (3.67042~24730E+47)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$=2.997924579999999999999999999999999999999999999999999999999~
999999999999999999999999000~0008

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-70)) –
2.9979245799999999999999999999999999999999999999999999999999999999~
999999999999000~000E+8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

Non-Relativistic Velocity: c-(1.000~000E-80)

$velocity_{SRD}$ = (c-(1.000~000E-80))/(1 - ((c-(1.000~000E-80))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.6704224836777298122016541578672961974332061728144917996085~
6153576165738214054415728314755034240679071639765611270113225586906031~
3692567265894577764291761150924606071589754933474020682526272809306927~
2218888531614620145422723124115151708186978444879087658369002983757817~
0715699109661216987726575121711467914734856112722989827007565603748785~
4867220707912953111102755613642700628970636374637153013684134427953360~
7186374556509686039398079663576517648918504932317597731724223822511287~
1734052509208758833301080744268240877671219349136799087646152910442854~
8488635340169757087548067174106418101313095376363790208905367755559534~
6695983576855570358047001242205111629137010536603474457050574399842135~
3067244817812614367298792042320885092535010650441649554684677036618771~
2836994885950095015918925175921570190671026689364339146935148765215076~
4246584566382045078762583595493973240614205329172113600120769002881241~
0529079923892004139570097992624583779217279818706946912528690962089837~
6469827282663894161166978642184549349943677425403958696729854382977867~
5484067021840750975282071545107262987977351716076246575170906739906229~
8899530951902025523864667574260889938929374175936593968456673308307524~
8737616207637302643150466337926485758931245853992397153545162188755944~
5971461311694423922147218353512901696749098843709571465167047783529781~
1971466181516149215845659978807578445591747995827311526124039533932637~
7450898629134886380125056600409190666826358550224102166594359084686247~
5288226396297714390449163892509566442971224669734376038909703298722579~
1858345212599237151099525629701822894136087228086205242473380342327383~
7781166683714306428643528895540363452165777867534602563340299374530329~
8495790028186245479931388283043284538264371151944444934540196306330703~
1144097002548947813208582671120254065339926576709626557801128896524479~
6919646223115725781478526484440653353617696900002812047833693431557807~
5570760689722349484954803667885894085145098174778999748193296871540769~
7177998286145324831153724277679229704175490286018860E+52

$velocity_{noSRDback}$ =3.67042~18860E+52/(1+ (3.67042~18860E+52)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999~
99999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-80)) –
2.99792457999999999999999999999999999999999999999~
9999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E+0

7.0.34 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-90)

$velocity_{SRD}$ = (c-(1.000~000E-90))/(1 - ((c-(1.000~000E-90))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.6704224836777298122016541578672961974332061728144917996085~
6153576165738214054415728314764216649338875268557618475586304392932015~
0429847807434643636604894878955930438122494787121004645412305765995260~
8869674786609322586437342819718672833855934419495850233708428532432171~
2038106052907291033982316271039209471743049680799734681008948591259987~
0649662907665777067845104513757391825726350485203585992007350978201145~
2334659281576111225715255912366314481053982220446693893267811505316287~
4540078225742103790757259903703485110715741924430672416612698269737056~
3259670887151636636925388078662421917734630299473370047618558381974783~
6052986256936193928897623204773246074779506914420215153755226252153788~
7278417809572497997019195453493212736143811252908578036506815352215094~
6055692949293443803822987559008374375027182835108962379942290159185622~
1771556489315837475972231802646585220447296535393420557401045978903240~
0567740752959669228869138936478268043606512923505400152537606654481791~
0944493519565193052676836313064876519979707058527413766085498745237616~
8928547808574653953852327328319871816745859039691051728648409179798278~
5049990180886164434304746991464129170371748106224187124276858649112415~
3432756743489075347874802730408009202467916820632645726144296383566416~
2265237214215801361612970544629071665463576720443962796322121457692195~
2149688911873924113353776845110751953268639854479946677328276362474386~
1910046433024582340336434690713384239009659772651797044303031353831197~
6845842158625648894990886682385098011103900147783023460442067719162655~
0137131565579982855394297874774576483126782229343959989086994492182559~
3796436606425762551224419124761856891505123576466870864785661372851021~
3795449212790116155292160818870762279370704503279960273643973034252510~
1487892112528868353271721266348291043900770886853152583945551411714541~
9980510409520605871979338074599124023548087814763711500681264117430637~
3215710807077761543209172436084028853189567793724441994060396172254540~
1843538181725671302506919395772352121306744196882390E57

$velocity_{noSRDback}$ =3.67042~82390E+57/(1+ (3.67042~82390E+57)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ =2.99792457999999999999999999999999999999999~
99999999999999999999999999999999999000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-90)) –
2.99792457999999999999999999999999999999999999999999~
999999999999999999999999999000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E-0

7.0.35 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-100)

velocity$_{SRD}$ = (c-(1.000~000E-100))/(1 - ((c-(1.000~000E-100))^2/299,792,458^2)^{½}

velocity$_{SRD}$=3.6704224836777298122016541578672961974332061728144917996085~
6153576165738214054415728314764216649339793509423598838465505113479322~
9235873791108371690758901466187243810925627223774278630776940351412273~
6186069021980422276407011055508655330161968656080509918521551188289883~
4055367636542626029188169734301377532498384339695680099563064756955086~
2954143821998933281076126623912177147390359499865098309658339755884410~
5955754699418287048970757159901742959786352223435044473783688522662394~
0679703819727261561483306255810615029892626522201909850740680166371933~
5408516133023644530025666048985663013508269444310089342605863205698020~
9814681362198816920542359027264407045703292238927207050543428959201533~
2054115174763852933974836698396484807089744453848257908228450117925490~
5898218600247815861781409662388284981075507124816313354313765049899007~
2597231511871841215849674158172598215101348274363030604948835501279156~
5025153695630101916956921425356792973083976021472175188210473332090867~
9348881289207502723983602333144275278587376589601401884509924913935687~
2218082828474082367207503336632588507428391522901914843596040969210006~
5948986724264980439935551396338664169746848711786924328228907700567001~
8135720891430957135000207667348031341758444122601775133243907072569583~
7874294529453269753593255349485944564524923936773846839304512573117600~
7171872651142002066561174899091535212662646222684841174406087403787969~
2997582315882885742893016332519380772213746226608768531390555634068832~
0033096040166234592498590103229491382902332830249917696926036449989072~
2630452363927338025338845989878304821570999782085571129589090762711973~
4833186460840648476042471969382983216730372515451578856537623984892086~
2111782217737887254684669935731438695521598959609152538210931132688604~
5164368059720073059475535635092040045361346707759820393118131812503480~
3785333237370345173680623796931278124998607252309188107064860824992444~
4578009656530576286183720647535651721417856052267100757198244155873395~
6314855516376433134391533448891835198310172043988110E62

velocity$_{noSRDback}$ =3.67042~88110E+62/(1+ (3.67042~88110E+62)^2/299,792,458^2)^{½}

velocity$_{noSRDback}$ = 2.9979245799999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999000000~00000E+08

Difference velocity$_{noSRD}$-vs.-velocity$_{noSRDback}$= (c-(1.000~000E-100)) –
2.997924579999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999000~000E+08

Difference velocity$_{noSRD}$-vs.-velocity$_{noSRDback}$= 1.000~000E-1992

7.0.36 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-200)
$velocity_{SRD}$ = (c-(1.000~000E-200))/(1 - ((c-(1.000~000E-200))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
615357616573821405441572831476421664933979350942369066255211233217590 3~
717511767978289867799372697032612702006264688196829384026166927089720 9~
969097096376322386908563536352601337628896005823186280824773524583033 2~
763399393942968506571289565532445561354775404104162650066584375518858 5~
970860190275200837032233601503134717295877616049431675967903276433706 1~
114724282557901358691076639267874077501867891038580271600422739332964 4~
344979940726122878026519582564211670115217674109840317847912151789834 9~
511826267499092842763697678915472553168394980522781139618819875365996 2~
007522842888653422845300829705400114115046253101532342975028503003214 8~
141577111486128695587055113113652655536026337523569216949642202000033 7~
729511595817809393909578481992119565665914440487108869862612543440996 5~
253132406447533461580758195078715744257015397916233414757011055682169 9~
068871697582732251678298437754448204813435223158399605559494034892574 0~
581808505001437364184615997330165479385751658231237848061359693963156 8~
468874232495147082733913033011765469870214540329444585801634052341386 5~
063741446134434824342193893698212701517322903400226547966393234855720 9~
654492587359308036155881162971939517403261427382072979987353193279724 8~
683928200140171292599047550236469836820264537649630672683227457658124 4~
610294274382227009312007721295793622000957556451629673161443103567319 7~
404617942431538058792331144471063971233317826773613073145807809962017 1~
385328884179001898573783159250851924683621886988141337512644887425528 5~
888552160240197508683670494448782653031070401976951573328010230884514 6~
855366886545901910017678493691481952600738716108385811680287440121907 2~
022751014585391593274683618221972216471127592744419124127331205262069 8~
333572119616247323271488103352189928355278674141873533711731889513637 9~
845455366658741105051606156789031503345097819647901798457872993617115 8~
062757565881347789595795155714107442083991353355081813292038182997968 3~
304265640516661847421650325339429575854611002497122 0E+112

$velocity_{noSRDback}$ =3.67042~71220E+112/(1+ (3.67042~71220E+112)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$=2.997924579999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999000~000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-100)) –
2.99792457999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999~
99999999999999990000~000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-1992

7.0.36 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-200))-2.997924579999999~
999999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999900000~
00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 1.000~000E-1992

7.0.37 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-300)

$velocity_{SRD}$ = (c-(1.000~000E-300))/(1 - ((c-(1.000~000E-300))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
615357616573821405441572831476421664933979350942369066255211233217590 3~
717511767978289867799372697032612702006264688196829384026166927089720 9~
969097096468146473515782232933395262017763458521909763375187412903946 9~
783057587958177991300209050468796051548953684263366701625789166206901 1~
342079676879867347383238686169007408871999590857112074519419841556577 3~
202296365583517670084677627052687316588965354627324673567743974778427 9~
465492940247787736199675303041339260048538360201092315600506952319386 2~
295537873724862574704542671290794860664682300638003316856177341370212 0~
545947738719053793580385050366102338297691437222226784919504347921400 9~
283975985417098682960902800570704323247320557595346458937724835638527 5~
456046119771825467514341855901932757555697623197349318851583930666973 8~
989246340117305964432537470266835869452344831491687904742213294838595 6~
401218033724815182867631055867488936034363244116027521037113447788337 0~
429175356440634324098064426035249404984179311186845833595500310286616 8~
390011898630060324919144230589139293111629225430626536975237793275370 9~
538246684198016772210270905046409839393525651395604656463642238685219 6~
948179323762104863480352636142507359456357450918653615777152318429801 6~
108092365967125800141969254096997706821760319218150704272230734901178 5~
413069795502087061987122204135419479127745486241462523661070228679316 2~
490345025668196446913789287440774589541289644401989701879180326662563 0~
332445198922500555891753363778817619485745584338231382803943576641270 1~
615962143069936037969412876190240725077811192375045496715760805306473 3~
864394731872851403727014573468939429907022449093900576512802702697741 6~
776861502780693375584951564151291934450884562459352046469138178921120 4~
505507594583222263583910832440267955224252306172460524149842977817469 8~
075169192947378480709907603032514368512928895931692894487309118665614 2~
313096181014545975165759075371207741451250963057205413571536083320295 0~
125341922818572352327047965546925114644437741000772 0E+162

$velocity_{noSRDback}$ =3.67042~07720E+162/(1+ (3.67042~07720E+162)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$=2.99792457999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999

7.0 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-300) (cont.)

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-300))-
2.997924579999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

7.0.38 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-400)

$velocity_{SRD}$ = (c-(1.000~000E-400))/(1 - ((c-(1.000~000E-400))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.6704224836777298122016541578672961974332061728144917996085~
61535761657382140544157283147642166493397935094236906625521123321759 03~
7175117679782898677993726970326127020062646881968293840261669270897209~
9690970964681464735157822329333952620177634585219097633751874129039469~
7830575879581779913002090504687960515490455083499739203223699601312900~
0166066641146928515221218953060270670660148003418409940043561920467714~
9850979576240332621325845074780585360755700211376756786524098474700040~
6852410170517732513653265317534268321309258677965164654225901453758085~
7879416028383576900820454153842480627044832250903190457243171868308824~
5449607448348143391939284266060868636178730956313339939178728826817259~
8529875950354683276324448291724459322732079195138149494986891880555497~
9691752096937726999447027461560876261537489997539522677613724282928718~
9935928405617322022592971289133553393981260754249805073132329586687467~
3977328787209056007610191373731542630608655300745824308561854974288412~
6876953377340619735964696442934086828673921598281773085663687960863449~
0885663111733605174211670983466397048900412450814351942178796542948882~
1663122694393225117164325242892156102810935288841580635355200512915712~
6678951741385733889064392335378206469956698464273205490015425597994373~
5459712743479046360355205465112913695960046875235227448865996064085319~
5936677949512062624564813322274167988728631425385985541635566836283941~
6167755820747631775209059009447094785363146936805773325126170509427631~
6103170055580902303853442858779822602266099181706446472182307254107858~
9379404586517942947728131444073344595839787332254018571499393858724840~
9737054170748423801548730934016991934513518110072247255773081459807269~
2708309143703863908834423254975870096833644749062038054775687699203571~
1172273543738635849887239715049993454515634148187007598048209709934324~
1031217258501218578884556710563726314229470863308763744188080407604136~
9949775158779777978105826166323159028721262762781936574311599926241933 3~
5784282638871005776527367888328602979827148904086380E+212

$velocity_{noSRDback}$ =3.67042~86380E+212/(1+ (3.67042~86380E+212)^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999000~000E+08

7.0.38 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-400) (cont.)

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-400))-
2.997924579999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= -1.000~000E-1992

7.0.39 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-500)

$velocity_{SRD}$ = (c-(1.000~000E-500))/(1 - ((c-(1.000~000E-500))^2/299,792,458^2)^{½}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
615357616573821405441572831476421664933979350942369066255211233217590 3~
717511767978289867799372697032612702006264688196829384026166927089720 9~
969097096468146473515782232933395262017763458521909763375187412903946 9~
783057587958177991300209050468796051549045508349973920322369960131290 0~
016606664114692851522121895306027067066014800341840994004356192046771 5~
903338823696220227940523751366733063062804846641814561861546867128198 0~
837335864340968100728831433695209633722966383388564372303015516595295 1~
834606706348408536740772331145467810781287210605484696953029274402964 8~
420036699076312560025858990829579267346986590746711496661966335883765 7~
862232118192757009030899435870063858119629168402412291048281690348711 6~
480513722417345578213377239809449233704793100875250988497344962053991 3~
825042221902018619174829436275427355259711662717342992731774809347802 1~
877471155719214563078027237728225779806785621194815484972385658970620 7~
593370240030064813569869263871560509332987238221746726727296293491599 8~
645549324450554469731908236758962760798017784856108913497501092106298~
906048764900847270215710183313525642082561882245814293839780134169884 6~
563989645183441148577068471908069202840199891560490425728111537193990 2~
344612301065738521086116779020204520839312870228922302732596607499333 4~
458441437809991720313036335251765129656573853986368282605900900462470 1~
626432363399207455041262751885930219419873092515143224780150502951526 2~
514552151607047519728678625149922795747699967853499417025270552688568 5~
692512701429841071032446113982601287708542106025981740493871523108603 4~
546340800541866783959330402865938004310543210827968043380292781288799 7~
671549805314365101797178969890084382701678890962570659731747901195186 9~
193851004869423962766391789467895230432551486516755785511479234488300 2~
109545235233445231048318958872030367946411504153939617274284740027393 9~
267786167682584734117479869082843524278954179385176086305350033059852 1~
029049701194717597396731716630134575848428138573595 0E262

$velocity_{noSRDback}$ =3.67042~35950E+262/(1+ (3.67042~35950E+262^2/299,792,458^2)^{½}

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999~
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999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999990~
00~000E+08

7.0.39 Appendix B - Relativistic vs. non-Relativistic Space-Time Values Table (cont.)

Non-Relativistic Velocity: c-(1.000~000E-500)

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-500))-
2.997924579999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999900~
0~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= 0.000~000E0