Relativistic Space-Time Perspective

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 .

$$velocity_{SRPD} = velocity_{noSRPD}/(1- velocity_{noSRPD}^2/ c^2)^{½}$$
$$velocity_{noSRPD} = velocity_{SRPD}/(1+ velocity_{SRPD}^2/ c^2)^{½}$$

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 $Velocity_{noSRPDBack}$ (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 ANYBODY.

Appendix A - Principle Relativistic Perspective Equations

The principle Relativistic Perspective equations:

$$velocity_{SRPD} = velocity_{noSRPD}/(1 - velocity_{noSRPD}^2/c^2)^{½} \quad \text{Equation 1}$$
$$velocity_{noSRPD} = velocity_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 2}$$

Can be re-written as:

$$velocity_{noSRPD} / velocity_{SRPD} = (1 - velocity_{noSRPD}^2/c^2)^{½}$$

and

$$velocity_{SRPD} / velocity_{noSRPD} = (1 + velocity_{SRPD}^2/c^2)^{½}$$

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

$$time_{noSRPD} = time_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 3}$$
$$time_{SRPD} = time_{noSRPD}*(1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 4}$$
$$mass_{noSRPD} = mass_{SRPD}/(1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 5}$$
$$mass_{SRPD} = mass_{noSRPD}*(1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 6}$$
$$length_{noSRPD} = length_{SRPD} * (1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 7}$$
$$length_{SRPD} = length_{noSRPD} / (1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 8}$$
$$Time' = Time / (1 - velocity_{noSRPD}^2/c^2)^{½} \quad \text{Equation 9}$$
$$Time = Time' / (1 + velocity_{SRPD}^2/c^2)^{½} \quad \text{Equation 10}$$

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:

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

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

velocity_{noSRD} - rest velocity with no relativistic distortions
velocity_{SRD} - apparent velocity with relativistic distortions
$\text{velocity}_{noSRDback}$ - 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 velocity_{noSRD} value and the $\text{velocity}_{noSRDback}$ 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.

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

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

Non-Relativistic Velocity: 1.000~000E-500

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

$velocity_{SRD}$= 1.00000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000

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}

$velocity_{SRD}$= 1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
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}

$velocity_{SRD}$ =1.00000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000000000000000000000000000000000000000000000000000000000000000000000000~
00000000055632502802680921608704498242400499580376621723748118723311 74~
39773455500673933678686871250886324491293323575211772271487374345569 81~
60605208815554138669803807520408432383794741280336506150746067948842 23~
51817086538566662460972817652939760189966423575545717859359072816113 66~
25518756979965578241473269552481304764462640880971793497600124211502 37~
95888205228420737866123727632558996013678703274666251919941806969709 61~
85756241393176359104215018507980665910297598152822397249607928715832 53~
12563312922904903071075430888349015131745095306847281841156156466390 35~
14240723389805545190290206528636330100246217540740812991739683697734 88~
30862356406901374332934624111918806060427026664904349891659503932604 99~
52789042687938257701772307180462083694295593935072452193933019178931 66~
46428233036471512264814735593161903031672883969724267154975057408076 14~
64722355980284289887427152102040451571144861212577565102559269495139 78~
70870939946146491185838427569719639633445084389905305215350573428206 98~
77174716670192001396760609040301212850317756367325447377476075250743 73~
38515340167821940217775662952261099829300311535128629018866797661680 60~
90649684851614033633287260552177750999838150663423838572278875640066 71~
34722304523858927630179136078175018151101022908797146935596665756863 87~
46857304536096776955876459727956140777123954164599317184176866874243 23~
91155134691181765301160920425989010038673988615849740864406137289453 2~
92395451524409687371440472979030057773366105294042132830700955725852 21~
53928637602472798165419761404730076957828647567856967787474660917548 86~
86068968952495211908392627055569282370893829203368 70E-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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000005563250280268092160870449824240049958037662172374811~
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~
150509826617107097541210984228554470312845768414090E-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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000005~
563250280268092160870449824240049958037662172374811872331174397734555 0~
067393367868687125088632449129332357521177227148737434556981606052088 1~
555413866980380752040843238379474128033650615074606794888865981223000 8~
365633438912477133800846612964035440275247555600746875284249489065626 8~
103740210360115814567287337746005551392622349440344117533726060970913 9~
599671332294708036963229258964373621869562184841615661602237741740668 8~
467606660017679528084857398277313044160282059817111560718934478547889 7~
273931277341214236134781125752677872412766400277859329320123888821394 6~
260734225550393301675799484389352802508483630990979467568473883407243 2~
193034686133115113900717407639073328148157156357645295118370689022439 9~
874180075431510926712962880008852572406614852712480501211926800966314 4~
237548073019186742183874766670972580383914359731663617300397394419652 7~
692357203520424586735242032888829274621607177531864093196164460697660 4~
134009072331845227636683363264676555164533630335170742007731591222356 5~
467337359930094347043664525802983457562319147361415209421937547874466 4~
493976637409352596824240921765675083510756049630261078004513549104564 2~
141422004132358161837086854342179090046459031502602240709624756875753 3~
648046839075058810366105665896060838417610044269518097150500385000103 1~
671968308853995127168812193718823944379339553318409091183766022640982 2~
989123595639185002595619165840694042277593609266415447766158688489125 1~
109662288889279893912429945056737202727200928073444730864577618401760 2~
334759514377570944686137924231238579504116614217838996743612388585830 0~
097783084574113283030786839436245504649264863933372995497693539000268 4~
551494746965945097651183867175925248951178533240769351048793137538580 0~
598124652793611250202156467379521144787902361453629741679516710507886 9~
818988027926304334446270349714559208205005658970717 0E-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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000055632502802680921608700~
449824240049958037662172374811872331174397734555006739336786868712508 8~
632449129332357521177227148737434556981606052088155541386698038075204 0~
843238379474128497896920288151884556151670124550454372564283659003736 1~
552985480601724842895173741608353435228383076162991224395412147328479 2~
430444479433726445989558646179997125694782234789357546999932730098371 2~
103048427157633597078334374378260891813946215878317406941389812737925 5~
881917669382596847993046046501190985339107854976319725058861153856492 5~
123769703061094064069324530225110279659831394476082667988718801325714 0~
578909677427165185921841832089416261777508028366422899474706712470723 3~
203666461460413823005540133846369747928431664083545903692688581264309 2~
667306460691981961818950266541943368553354265071401084505325470087580 0~
469185506498276384126177778246868131502802955657399505530904612612597 8~
965146161576523883688006862936296259832569811324277309857694526696010 5~
918549402633563194531098386511436515305917705319078801592969747422163 1~
912352900077477804335031182567473592590521628084543886096708984868945 1~
377184034759574986395999290717904708514697252229941673356263841091601 7~
973476720636450796877226285137152007940154793531593918510046704623140 7~
436248507738477457143413743698370627157583036732835185292965062931297 1~
288247541419081291892900300058329967303422284696939077166638591337713 1~
805895818435719686107454296766282894727364243105728850178701800767229 9~
921275710457830092983865015369303630436420987611719698449850961785009~
001045082007575499194550212351191123359265610724572920881901151373213 0~
702216278148848844071556552507552671611318356883447936935740146236286 4~
895808109254611616187925311588444098563062478814475803509739659122244 1~
663923762907162726509053103712027453832713625135414257359199817399175 7~
057177178639075380166248699427700820732972016038220E-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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000005563250280268092160870449824240049958037 6~
621723748118723311743977345550067393367868687125088632449129332357521 1~
772271487374345569816060520881555413866980380798465473759733983095226 4~
658104431136654781909112535860614362894493218494126314799566749539940 7~
845747952264384726659966508652426554627464290790129151365063022116095 9~
262838138822592746808990072597109663575355440296317392939017115170780 9~
375508073050623780028160151730402081652938821010740786942718687181230 0~
008865311811566501674573776933091655533901526359907930229828077902024 9~
044199368033672045805406514553046588823913476187804253519856565589260 0~599
508938671818712499495969132052549657700365376020061208365527185003 5~
536913189251722227355760637113596342920206641893429946453308265883674 7~
689591309205275111553995862472647140438269012243924533812853750504994 7~
951724982104947765610447410634497107934886317780738337618575411213973 3~
084577356746936915580139127798380057710057529162807087288524058570162 8~
853991943130645656404592891526158604168272755698507350926969593887752 6~
151833071911181945599725424338559364315052437394172907040604436265705 7~
590253478255598849408112257091230599987440439883239818646400856535337 2~
955417987044284337162000924203013193913253013152655091998039557862074 1~
541489313969532642396460008869706854743338693987988989892588919637893 1~
188825073358858547715257706664657280821541655279083581450387468632957 5~
967105454286016634719564736054308702580644792997290614255442919399268 9~
474725246527250980996705021416817033391463654654343112743751974280800 2~
257976040577173114812063073563159330517449736110452633389589882215651 6~
312887315006128134377411345171548623654185726766093825700690493041977 8~
085329288298801962158318418982633448856430676029193415881407637405499 4~
940121358096236061236034919282854577785920918746106136626113474158908 4~
572720435221196696803113399363729462268175149946115E-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

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

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000000000000000000000000~
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~
329542619216202068296830957720409688151410368520240E-60

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

$velocity_{noSRDback}$ = 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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000000000000000000000055632502802~
680921608704498242400499580376621723748118723311743977345550067393367 8~
686871250886324491293323575211772271951620650783361150192809707367552 0~
490866917147740655862318246820465518034391336647936253532515984554839 2~
888503782913949564817183421595138344392526708080279108768829400110565 8~
722237042538499328131845220514829679225010961373729347919607440286166 7~
146965250001270945630392933081862213261596091589086028732207630687329 2~
768613921626198949426796925154341466957885580612586230564537568495914 4~
933411321244044016975835158221029032883263339750590542459274629794070 7~
197990630505153714501390906287687732575539692228200423734606328991846 6~
296138530569940933874722017937410292478803854280718319622043811851104 5~
873420926276010381867143992786243524498825488274611188238700990543237 6~
880815780424897792558602712905877521581505335135251808590414472178738 4~
094912647022490954942196326751019952872725632875867280505866314782911 8~
948466482983543909406431790378673111045185956415109296711185036576957 3~
099664025869630228576079275076108547660736456342780594403527927830416 6~
515101159739044142534363471544798858769541628053909633106798290242545 1~
354069903815987473182223590820789107238676729067413152225763394409282 1~
950673329233406135553068165952076323516787574037232936547998695001396 6~
819028045532954672596982612195089605535390042465197401546957175623758 9~
736394892263675810937099781419197759782213653115777332131361748249113 0~
243394423862265429767008059556835364491584444199890584342809660498580 2~
397259165789530355570507526253403402399492435289689675727747668133208 2~
225264015677885822759531446573181625519282311830047498380276219953330 9~
074442910407230189721056784994519015693807930075419591766519050841226 8~
910968356794986385983989828413449744787289862764242826415345128906805 1~
189135986704328904687496522517014086788150002140034961839601005208174 5~
929194933659076611889515316517344053166752940175461 0E-50
87289862764242826415345128906805 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}

$velocity_{SRD}$ =1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000000000000000000000000055632502802680921608704498242 40~
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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000000~
000000000000000000055632502802680921608704498242400499580376621723748 1~
187233117439773455500673938321149923386337221210574843112062459330884 1~
136538418836374873655147811553038116030483749402578528633114858667680 5~
319043485252836767335423063253143557748412521105151264066987752181576 6~
091836765710802681168795823087024531922793308050364082006188952209334 6~
026899058090757912930601950760412503651012905775073244226798668562861 6~
433091966766301922826708657279512658824814259624145834811243367749513 7~
689394838855533933074969043495669235565568832959211625296830966716753~
399137210660119124197517499244864251874175694102321170665945143106671 6~
816366385511209825029282494285124817445810468461489943254778428716853 0~
883350716943631933457530941723146168275713412323616435904215274053412 1~
888275995382331761217176082475407533019266871835410919407384324095852 0~
399083144676330681733130809063600804511301443678642442383288045450010 1~
415988676517987627967309972013944918781832444998291393032742193658471 9~
269491570900791108933409303974939064184609875589907034192132605999674 9~
676258696824395080502323425758929947957381179965266574150615472233243 6~
685773025753036779630926466111292672979183323718621328883326816782196 9~
189945430992140126198654112857155687596138220129009416911826997372045 3~
068619926003243133253783123161634680743716449001516256332584772866706 8~
694143189372498900638158786131817181166619593125330912048048517415918 7~
728206157450220477002420161375635883349964820517869653716948334523193 1~
729619662819098065319632936531459869079610821287362988425725087064478 3~
174342188857130429530622695154657150781405941954956563303228241974364 3~
838441970183167788481502160670865571986732984355510093460532568253619 5~
178506002926791181534365258441130393148198379762526050711755184572556 5~
995017658475983171144611563124595720584975684599497321940889020463323 9~
158327161781834712873334147449609961828673188811932200422113347361506 3~
391299453221483649195674285367915543127579573627432 0E-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}

$velocity_{SRD}$=1.000000000000000000000000000000000000000000000000000000000055~
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

$velocity_{SRD} = 1.000\sim000E\text{-}10/(1 - (1.000\sim000E\text{-}10)^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=1.000000000000000000000000000000000005563250280268092160 87~
044982424004995850190847758835696200310254968824007548832176725941773 1~
871788245972855561403233169849905828197231713219066004146709629177557 1~
889023849035634331658714129391829321297140272717826746758632560724107 2~
969732492843356256607780877457739971081153127075487744132464916866605 5~
392660133132343780454167803948337149117086387900592207500535861897004 2~
117052807447082356811158976987020806290161066184550977853965162541109 2~
220497160540291061749524063647807056245222722949615309339965837712648 3~
059548977213849914688570289752375672876788240552831337051732499379758 7~
247798627409490652547365192876246680539267045407827332830111816003236 0~
460366945545086747538357946119597551637990542679071534907016973920015 7~
498258649870215594480811917150049201224396515883379172662608133346452 6~
956677227621385018819364637378811174812590536391775860211494055637261 1~
471030478833692325289515781468020695029285465117821013926022516560278 0~
676499853071641237089096313723986578964497952549429772138631575985229 9~
083297342496365746705281506961822727146202087039355165036819149368976 0~
722043077079748402008341006586331781972723940551530244530602795668053 8~
213087828225321077374396368307104320483848413202473779101227414005368 2~
583441900120858201582188663088372692784141052994884550920884214576194 3~
947651266567468865237222779890318585680325867076085311751834935856498 9~
172451226683043550238377502242720558816340205178380000187259122667181 8~
610527636337375045182953737388611287098171772196273632502419169727671 0~
689727456466129706828637566506269121010437360092584567706502868983191 5~
426646813591412746697740009121884278830072658400293822613170001989677 2~
961555881929438751289365003269770169073331823812940300270886915428278 7~
345073254045710123458907298880915131480701207454487872602818419814784 4~
723682799464510303859748911173257233009460554075468629578690013433869 6~
590462630621993953220019061436668930217914856387589257754038920203791 2~
945997445272152659124129768703825686947258369013507 0E-10

$velocity_{noSRDback} = (1.00000\sim35070E\text{-}10)/(1+ ((1.00000\sim35070E\text{-}10)^2/299{,}792{,}458^2)^{½}$

$velocity_{noSRDback}$ = 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}

$velocity_{SRD}$=1.000000000000000000055632502802680921613346961294535950477 5~
263563078837495729215151304054028405464072803121648972034640440385464 3~
661329864846713417064380007167770210892357157803891331281152954572543 4~
576495852327034004164135196366496935036555083575982722427819328842423 1~
761117161478024757438781750092123314246132182660010020475207342586368 6~
289930758562738975675234429960442517853685641355871447778580967508992 3~
877914815281821629759263837528150458840338171336538535541200431085325 8~
220514487989982220866566025798747866863133318431425254073247593528826 2~
333385427639840380484517512907575610723719230674133175527918326751326 1~
053325778213111206594803291506202049706361036335193023590416951441920 1~
606753955256190823512715626809513304390010277668020249807242433916406 3~
573309429323172662298121310960022767509238867138387203998287433766650 5~
516940997277609984407579115270053433020442939513736928246748133395233 9~
437362401460079674094256836788280669337847513331948393885664495336655 6~
202119405159223387461520762565911650338527170126722891087130386661565 1~
795708582323695831757121281260238715150717301670039029402317931786514 5~
489663616715917280946191759290003422968112076883061486904840833414798 4~
251593139735436300751570063437104389521153461070970102294650698186772 9~
447212516144115398528629366794345170867352686259353258758207763421958 5~
066952400617316972108178368248095428620579303854119447673896366923113 4~
411534301137492161484719246213384500249153509025035513615811080525620 9~
072013271190979805926826951042300761758457954770426867766268961282899 5~
054848107532249206810715344169022441771695334887219411663319936409484 5~
906343362510890418664839291591507813628347256742255234759165934578369 7~
856993155111943857636368842264974803148438469452264676059751478093336 7~
746060963571844840169559409389420049430523407746288061431380427426271 2~
741434073305582389198232291003766474077402519110264011312649478145090 9~
867371252381954623555433646699376730053810227583992462355905720194944 0~
952339517380834025117433682756502470892596994514188 0E-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~
419665234854421487197026382303446485659074100559842140342603302901146 2~
827998006314776562486297710547896657368307466699323920415890181544132 5~
711478927266971313784234201216811456479406653651887030671138605615772 5~
942465529332145360016613821592964056565899223413882292277326690456529 3~
692832029518093868572449059802126233249514276779463427981029440457531 3~
791411283629748315283197165444064947557414895882776217420556929482631 7~
419932500806478474458492286006701337576262888001461469584266820932392 8~
407728196906289896213563538161360225164086476996616570445423199159423 1~
098884450729704418741016522059643647516335589883099762571865487798408 8~
086554245715725036586455541042161038049013161648976911947204791239617 0~
178840223239943239251066600956818265268792238326245865574520566793343 5~
403814287669561284064135785626072701834059371427060974304076108311360 6~
841953623440467966000658241279419153781744088819707086038480041740144 3~
777179383857302711588361685039963283869053704167722963342857299160231 0~
375609098769315108881527321799365845986082489071236917074842257041178 0~
992575907104880193278640993380053505656195362793434438399029211597030 3~
142035137031497805033658763251861812642054099394678187574751957905699 1~
529625187295740238536726042473172300118815405741617681289804564554923 1~
456595673042977123465545618955352510587068317833455360886073163834053 3~
332513497294659491947654129378998631796184377133521889453750195627289 6~
855341448088760880239620849284752595837344560557530161218514722936508 0~
089812567800944461969590255633958721783998011907486649917081377635870 7~
638908545130032071349654206839943965939812163520259145732027370028989 7~
084065170272605308514447680847458224275041092412671441246311270232384 6~
955756510090464627238616900481235633341650550875995653501633291697597 0~
550501739285569287531175767831969697855344755840719355846475105602999 9~
794800130070013214711051707015750805829146626747902715554616891745942 5~
840117876537717975688981193862682016406393851330001 0E0

$velocity_{noSRDback}$ = (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~
515041340331667276318819380617822026449861517470096477847521042826140 8~
220938391340216840083815717153878351154363165846296371237024487505778 5~
357278444200000103311819909864321869000470147392566645437322127355584 1~
350352169581879263976637015510820759483645470813329052458195120314971 2~
397219913721640392788580937652528443796135252499186124786596779385422 1~
079639278259710699576348001056514461118296879889804886437906165958668 5~
957551325525345176380532466440401658108798046437669699327706167515662 1~
392537921496191306459173556251984859357029988740719369168006702440373 5~
073741375615181979461133984770547400145427789790491071514840856947686 4~
608600162555080269231561194298428876517801232169991662985261626960941 3~
246400244021510803348730432098166398321594219418542909238456162126211 5~
815121289722712394655287625885463513681736434580447768973887556289643 0~
416338003991020209081255789297739436457591251588694322831156935849485 9~
597296203037306705727688405248182761057902807014481047963807050686082 7~
996549754341063985002197536822129255590999212682331955076592556803047 7~
049090705066746676220846900442423999951480643319526283102925465881741 1~
070276561774275461168233810661414675431305231320706098030857936016126 6~
104686229811015392747255386251855947981944128334250382487822129727243 4~
781402366297860989772209856135047231286523708677249261551567927246527 3~
412065185926082381932887863017484040449622776950180484756946897517363 4~
687416360036445166920279468115117918390836929071140340754829131539198 1~
530798590058382043181698993913423283557176163203203546358799855929265 0~
050476850927105692409189363609586348488450025068972556417646124173464 9~
827971791934481534450048487881440086227160148213678145792756248835065 5~
310928831830134761971517155803787629985695349483521406357789310844268 7~
423935980224071387641790110107505793170343577748911720454661119165125 0~
123751684396244899545230824925809920934875432247249683967727929283998 1~
431194877301834196467399099559403400494436741939018 0E1

$velocity_{noSRDback}$ =(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}

$velocity_{SRD}$= 1.000000000005563250280314516791392234786271845744152270663047562287320282959041250913922859119911645219518739255515842377957796517290708361433149411582802525150770711015406450514437692910976472780485~062904295689106720834177683128191476625352383620629981632847737467299557074520224489509896495309036936167639437939946189644648560968660475509891547809500730905956795330042476412469074863659985430108360054126229~553347473471298756843955924403593245929003906628524429123930281461059618607979752346398936750326814763811641961862698480609064281524258559668627801332070850577669080784216633626609542022497449893965794410861094~676014226984425411182635030874485024810604507614435678983902590721930805944941689303818485071185538894625417627588590669439949541707145641389561271006410202494861532556416915575289648793280664473504457542100827~552283588855392411419213736168253287795307341899397261443531201170974572962958926848002479996407879808855074304232213271240302708442634466758820073297238822826754840576304318939381663593899764363201775755967252~680117430396801923982107595282805138529661072216027257890972978752584387993152412647231903074133679390090766023852303868513845552161182710165782082553750661148242289072699738151982242010660100332989985073805543514999495725202864471683759521328203798989410025376068136158887122193531669843330041342547974961525861502384014605011338703743943352946361249~585098349657694325933599260584270732095826145325942219132874663265168482105257783740989896529401636171892917414381960725872429522126249136121866470480050496973157263983006737555933854080677695121204808987293061~884421679469385795404265575763938624662717885180442537600258453107380659030594996208965493929464582597946537176686347123931962112401772707713545414427193507586164501075853318693833998947763252542428975584259461~321202674841170338585066943589331426584523152431720893831099536264180198585509221347393817132169793020298542988811952000191468796300357638036043324728938338587606792752299128813529871568105340E+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~
889255408236276193997527656295619432543448943241221129166503788419720 5~
488523038927677909431049326502180589495077063815130069404341339279414 3~
727401902806927979012965929704779767807094874691152325007225825898919 9~
506442706769565851990118617106517979833676406234964929616300344974909 9~
255380112302233243497492393874136186503846109515473821042697591230507 6~
964188956729913307385891862385130226787369729962158279954035995415861 1~
074599491201138894115994359154452722322437022940844845486275078073000 5~
948466920190533357509727847629996920568959553409363433713918985162933 9~
806833975210239387651790335265456130647699673035341254182225927601815 3~
762330335966091221154380151467184911903885027444111008664369108903207 8~
190204402199972053924628569051741900261203805208417530950936979454362 6~
460679529697776570377738194870061974997427522049968082428322957541266 8~
374177727522538314070081574009810924068399144792302498735710839797036 5~
020358577532768488446794259820829989744489333084136230694749761980846 6~
944733936505490464347087147372041742068033710680215578000267320224730 8~
645322580152217316248906494394079726431635706286825252683802659818566 9~
447422190025607711697267021555946420169139470681192686371007390134888 2~
258262692740098944044844807344981932843761987143822545228799587913715 4~
682806271825335479196045552469406695178339807026816186472416202603212 8~
058944635377958013148340387674809188374160076545557903988251938590633 3~
231289666124767753237652321799948332936491719051007876595278440710925 4~
068333725114530234716272368979221231918256311628040128797030695004386 8~
117228814280856496555317911875921643930954672836468413126839245147586 2~
507243254311547273850510534541165314288390449291073364099148746003024 6~
349349399483579928361790809376328024934586358866409135649500747377914 5~
364093328349334834849838376334864152940386409586614912976674326083214 6~
106134593697359297892730597560675510871411633141683054907626575673960 1~
957749131961653779839357807812296630461857405772441 0E+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~
68818994097532698655072358324953067445359251743267758725165174916187 3~
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

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

$velocity_{SRD}$=2.68476940168284230230641309115422971642954181738437323386 07~
86326237967653167691100795495758324151253500457777704441201055638173 44~
78741172004120678272701872383221537547891009981807038538014792616755 63~
16231935599341219764830064081455395317740452952668130682733630258245 35~
52597847016615395968548103929352934244696773545996755713086314283645 85~
93330059556436783670587459252333843614227315548596974191961664461238 18~
42512726390893976202511673709822935302268887696611054227330889837059 03~
59603061822040057813999056177858281352105253571161631148014326718188 72~
10351479321030477158480928584036741846413546294207087185679205145182 94~
57654814504618495541932060578225492798201175047725788824985966075873 79~
70254042310035775853813319779475915709031715489735937683915894041165 13~
70586149550530751468058849185788736513942137464591450553547100738151 94~
51420640933484477999401635656041176375306465286346067244802587388491 05~
76224512794809092101804442424402172423837000879821846565076631786042 88~
02563010328091789306832083480547964044060043883291439739433037548557 98~
34284559413479735976536364377820037685303433704678478794062276055550 36~
82912837340779310390017549100433064009900791386940285482631125305648 85~
62326701750127593574682560182789781680679564888194268317242465594570 22~
07117285350740627273935097871726597883059562690019486779936010907896 22~
52351073452113282668268016809838592247412450338613557565777158001280 10~
66069010426456937692095569343891800246382605420414096696290345644929 50~
49169726301241091556422553502491120408724464713211705196121190074868 78~
06054204495074912877677121801965197265109247634580984890346924608409 95~
60338877771660017167622394356472091434386266689463643340964630476006 09~
73670637165884319457527380138275384813114162016722288224733318356916 05~
92315504095645410586579457334590115778942998808339555181647559934056 49~
51057859321647047147042697524739163087335048275809212074809502432215 80~
88798113048405486431163004926510356474647836384504334258932076995177 69~
23084183493719779791978484390692824668112015566070 20E+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}

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

$velocity_{SRD}$=4.114959862332528454521851208826810218803991094681197638655801607539397905202570547358634918657162232010127018091699836115277904793222658497240262267385405056690115602829269920290353087879674911343616~9486413972069925394285760770331282237279924018609160978164038768728316~0531406968534875078577832333539504185571313385042195952455275284528100~7138725545274527675026680035186616648799908220637488037255581352867671~9454844123305997509625018297840078701818022646307515554846584672491252~6963683398698740066738027669387596541056820182861126275565344194935299~1659758662664661481819620553412014877483387057312961850606439442137184~8132323254251570617537254148068073848331745082475708052933789745681163~2359830736077118167775547840846742841492272238239640492986786297474947~8803408735534527391402339685053357949311041776228245570949074847638384~4329920504318152504021666005802170852770993418843659228262488063700968~8308922558710238004446806234285588717375117208231723615650087038351085~6128188110642160238107425400919010778583308253727281607278353902846085~1594515424480680997478385361594886319376100221569606327205476690125284~1868067099873852288114873932985949972420769347192385979810234485696618~5132748765279970898938657204374460401005865847722270782196196612194700~4114495401127912771780376884614166426500316231832148298279193380638200~9290885460641504589379112782976355364743476486101441802611408736879285~8828502845850877670375333635530360160448666076707885123319927609445776~9865004377983523444834859516220131682660263907080833205105082029480507~7434979837169929069701367128960132259244962714551942115480981807568912~8924280945497650855409225466733864334811998348271170831332275734032939~9391259947870996786528211874561789443641223206768578638406221266988663~5522705574880336979311479139923877979183940072688886124002119778575149~3771632731810657449988837192042916377070074888662518081351979935517178~1861160381744029071001846599181427676745182246380994516344303299497595~3637576706545445917855780107576057559378226364626700E+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}

$velocity_{SRD}$=1.71507382913988236288509890729903181954979870243324507468 61~
16479646467295166620308553914797859389228966897067029828125459540953 59~
06806432882425210894965588189239821459208331267357501595139255744987 77~
04798184905401838929214415360684870147283829900113569458468436007770 86~
52029146461244931120164570177534415065601179573961226306638711207365 63~
07892061317353958611103188068437385289241177156968688465814327737731 59~
41473931607947102198782037483165961602579699034691151360086064156781 15~
57535604190808195758438881093509368676206391716991404589362024627235 31~
71751573743858153895009292595930377126786132495112540494293023595437 60~
29064929623978698050082548509983443275022532644367643440566908291527 76~
94525590419926484844972555626248792386341857492265522268803570041909 72~
41048434991563220005596701086900661432824174059041098669397977586712 52~
90255438580622902229477879778913027775762266404895089329413413792881 37~
73349559506824178550825820447415920679718946791767488073910718404734 38~
85278107093770679252767872563219354476022938898730085097319096027703 25~
74623954389688355609389707543825683151070910964847444220006169814471 84~
06352459510966459206908594431742520912734096970732006993822562755252 18~
53890276258184322678008080702519805906253051626275960757880099462814 32~
76777081727915329857118031700865737578419635401205998063210484406083 45~
26155858377750569277072965378721921785122373367968684913131963366240 88~
40234592000217579055243047781927378743904520284113798393007793787928 90~
24785741432721860739842034230651104278113288407264668726281315117727 56~
03976051771712767528115401921194344577006211720310594034294051043161 72~
59694348886887010749137910427753271206623383218502307947422075648996 81~
46567482126322240206423640139301870727216703705183507731887833019799 17~
65052474504159685591073940619658701021701621969539012581187098429404 32~
74562558629715424405331418214392377438066508665559278614661386946898 47~
50217166622601344792123231420801602825312728852747001217637925939070 75~
33287061967078162550400444914316150268732411536348 30E+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

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

$velocity_{SRD}$=3.67042247449532114509869733264363661473184065266505885378227
0130389273047956065393291075395309774598924014033072667147775466349197
9152090376798843088416672481791051651723925876940913074508305171598986~
4989756779403714319460692449484423955798354072777981289975685574654551~
4298972831799604431519590323394249000262462456108051532877187936264589~
8642084870882190097198916694228157928322083725579741561159420825759816~
7873305611858320761188384910232364197636079322012293001154707536839254~
9892729191372624269425568956060028635652563415324718840315289260442073~
5762138954868198501668038133099849840544138378412431129474841542208698~
3927931203595054886690714361836721816899990486224169562559984147879964~
1111610745680321523568222436722525562583822674976213079949728888505312~
7549732615764175940469890544361088276907054723130339901312521619867984~
8384209284741663245889967347151577492412810487666385129252573199366525~
7677280780669662089776070989004945262419788571342501268787482775773564~
3384850843313142941315366266019529421595439701825612895772620533359940~
9320608853297439678762241726784750362615020723773077984286366287236955~
4838843326836156554629103687426304051767456601229239400385976828881187~
8746726177787255367237666833876800231238515271531877270071702346805626~
3688575232586946589140933019858362650295101489865671233585979884064553~
0638617590028686852392892536106321557545434405731335395878979069486461~
8275254681382899036371097446737310387452981012371287688726648964543901~
4193184720761870810884324027682916782742098271158631286937344693991636~
1115430278034932555314177679809210344451863420115790575503498901094123~
7789109874824727422607661055572613127973036455364987217165119260973092~
2246391383553259592075191131558820039113776496452913486606715202772834~
9354339297232075831499894191983473377969131686586560674268965882608275~
9089240621769193132597720200175916838736829292091421847000131194146915~
0108840123675913769832365422749492102978867267981321067334775029969417~
8250230352040642745120338757011895326448171081926150E+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)

$velocity_{SRD} = (c\text{-}(1.000\sim000E\text{-}1))/(1 - (c\text{-}(1.000\sim000E\text{-}1))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=1.160689502061009033296113298142212256761311333859853743810 8~
480711708694037669121684239746705513327345525452708781251437257349022 5~
478564519389513184135474975557013693986188382449477298915119117536466 4~
583719996210349436330035759515802154379993045969507722616757287573088 5~
613285297043899657845366827253502778656641592871808311931900612049124 2~
292261388031851360626110118858866959393978244977954047720546160973142 8~
693239054788472966263564591135934183258101000279530162127661842251522 2~
017289969890368887499242366383989955701701831847489862006823170379554 2~
914961382012050494917059789730373373161566168645085676338730973520925 1~
526976049661674492405400680674825395572447454092586625071023896302091 4~
146373340138260309518133125261417522251378907162335671970524104163285 5~
889441073218454514280639931024307580072065073780891998335096279127682 5~
898189251502803814004350935357134738394049506039371514947129038969001 2~
622856705542481133899632508072722934492327982971772990205643255724836 3~
334006392756275248551890088990368101762465266962521677497180229958214 7~
770756849646104735814287397616183685966228765419199586964118199135010 6~
366011851780735366075217210589828702975999373939580640762607535439109 6~
732407691868568009803497290571759024066465528525401430018994446895919 7~
191380527795172257695405493831469446600496175103275545413065204619608 7~
244893956270626030166292778470203733685663619847366415034265413606850 0~
442800557358180255677551777218521724920345992071179333051709300897436 9~
882439787668666599904531913297166263799268240607029519787786998746613 7~
881766573264930149446678963983081660527294793366088243673460882110652 0~
312035199247929889340218958424425955981671823006051452387626281440154 1~
676608071664833420131207441107722898228628604210317129060972295260664 7~
124589113784133670382580030126688924638459622675597535761815042304659 5~
950121014567411535606254009555690585875800606622244159534480108814960 9~
727528589187226719055147645662632741970338414608527258269263978538884 2~
208002781569307165918749945016710521853486525038803 0E+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)

$velocity_{SRD} = (c\text{-}(1.000\sim000E\text{-}10))/(1 - ((c\text{-}(1.000\sim000E\text{-}10))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981128341329179510923156145605732887215604 37~
14936514229516460888427300314924907549042214296322725242677965796435 84~
40084597296965293445964780364477177361570477324717429374542845815310 10~
04168708331001508349900224088720879087083539596845340621355125658364 96~
75838668648043521511934098307077792375939364589330688427057882104225 80~
38102588382294712004279411123405537757186229086937377376899946028218 33~
59522281928300371374473363800076204532253923022151307182003849139010 34~
88138004338499256051241233868644975740694564509790381311316250137194 92~
83783311533716872544252660870241760006257404487130225075956687171858 60~
33714578567552556705655745757512870328037176817700671910565492800202 62~
75700533560150263206305988885964708202766610367138532194825428809113 92~
84977475334537437505888806374616470428799860641334915729080024416839 70~
01493590472232201162541222142701762644520727268483285659793584902633 56~
57274529016935390093860611574464291576391795759757305087804442011334 31~
79767465172157714350001455033130042332633933198438742002543522179551 89~
70021350746542108841777576184287600966748797487047946410315551325256 05~
13459969588554367593123971245158173592757341700045916280361198770370 24~
18049973233545451629010580670124417142158210407788507804850598506949 53~
69461468555577510085868756811224898916320285306268536733279135960429 84~
42703196031913489580242829235758742674070351699699712159693399503354 25~
55223149561213588256460793648397630536676291857017753529989579642399 43~
13183921716153577627736905941116967072005043466426339250486401074904 29~
91948254919046100532841545906685261120728866903370087603528113011885 78~
91180300111344522853638095214116497796497128751165968372638536314469 40~
40603354882043400922761346814020421309882970717890723118514459455737 38~
78757267100661440691249273187228385389285642285568435472025673578245 42~
77791076296758713436102392475569275789863232366292279007232865574574 89~
90366571842957530995515053475682095761317296351108463642966643826065 03~
35913741165444877448864145440608738256103006980853 70E+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~
55974346964448424428648779561742221981349201542043550252957720880634 10~
53656939193783698204886146689750524515360314601372925923259658039287 22~
00056538719025855019395008170071264717263133768152605653346627215785 09~
74223813814488602836282650129847928981065200292200188039008516571401 64~
65339830649269621494159101864470680828187099446112569646159516291618 03~
73066914941010870290560471302738086990490239457940261450772388210045 11~
80686308263217743966250274259857325470992958178349630624042504300820 96~
19524345508975398989162267288895518490721295905776817435091448054718 78~
21187759006798790475468862324015640139663708912089538659746663580560 69~
65532317669968569998210815400144428017411906133971008398925301664158 37~
22998358276676300920076928985689505638350312610412315120529512968786 03~
89586391534848765779963907262019716966755670953400096017223338995995 58~
45094591380558609586378980329526697713176096288651211408044415151393 09~
64409601297185684350204521513487275378531597078187820330737651139684 14~
42838426658381772503065610549946815522159494894303564859446406899684 98~
68226244838929114186476401281121619879110944069386073809340453547602 39~
99180311463029231405702984969735200054026646593305966997489822179653 88~
98458214159619616062759820068752266791967327019390316850488802413312 92~
24265303923375430129224902627887660307822130997438872425175950225628 22~
14741323811981359085225662092322516498009134149899495476446429430486 83~
03363091327290372194003191059906719270717140604395991584050022671309 34~
51217440517737307474986050915783816823277387191093741318747556626171 80~
21470443171499623839119419392786870083500083264878116957832519522115 21~
12881788354079227575275376510707138438201001917132955838226190814785 2~
16264797550445514825571151699774065283961687487825203986407056497924 01~
94673397002255926608392470383261207245741606924118155266482655267670 76~
46586424196155483878915387287780710536226477406147896807384892464071 68~
10714270956250101415209349738128288205133652835857 80E+22

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

$velocity_{noSRDback}$ = 2.99792457999999999999999999900000~00000E+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)

$velocity_{SRD} = (c-(1.000\sim000E-30))/(1 - (c-(1.000\sim000E-30))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619742402376415376992995 04~
82143322770636870665427940946558822745011536685649272298508053846875 02~
46583572584352923444022056015554162050388558676057264669161014765386 16~
00323366138136765945599532051022617871362605704791308204120225443054 00~
99351706816518642499244051724858885026125245551365675552594832365246 88~
72952307099648501348557152642769104901531795471966195165540353529635 08~
25272407127766831643073863797683051468564809992792218786238101983195 76~
14929174508264226815975357116546769094179432442882577452494824667761 14~
24789673461619312609594313575261181715877102000700759420142585945992 2~
76294576697744538824246967586161858793964036303554663828631060583975 69~
14131291672638869242925137126781993752469359025067149395077546175598 03~
83125176655183513897392989077531517321434178493207615583599790451682 11~
93211925537746974353000137924505669195600057489457370224726930282874 19~
91600601508918805256642687528284544869405720999344408026049504622382 56~
48199501625160235177695520114973070324720904660971079444909097936385 96~
96287579960139457274769173237830753033592192559722660679557187736336 58~
98547249708948195863605106031447412109057692238672822078927960594536 64~
65767424456966526816460501810255224302648782652692794877140104203474 32~
91487714387916485400956412890792612698635928533359937525243317042518 72~
60557411553120446510988515555930082004817282102162688294722703964234 06~
06123381146318028902409504621429651940481246829925177176922196083148 07~
22322628268512317238435238444028804283460443691754693754575348516842 37~
81801680835856271071199277030325652524600964432746860816208709612224 39~
01594677942478527643837848878815959826889412871761340468591496175440 95~
53446891670750190964080406844034534412121917282085704613961261950267 51~
97714506945895208358436345925922984622961175758042654787102666059104 44~
79095079228533204961077231396018705357398639095431039387462917761680 05~
56435753669753792979533266307875089028128255770179215157088061133700 29~
47945154907725895663295858399780246123728609214065 10E+27

$velocity_{noSRDback} = 3.67042\sim06510E+27/(1+ (3.67042\sim06510E+27)^2/299{,}792{,}458^2)^{½}$

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$=(c-(1.000~000E-30)) -
2.99792457999999999999999999999999999999900000~00000E+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)

$velocity_{SRD} = (c-(1.000\sim000E-40))/(1 - ((c-(1.000\sim000E-40))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281357355874247~
893487958494428966554827561604073409891952410135029418507569460940078 3~
343331116012716289792535014228402350674287561256255691869583932082520 0~
456906047018362834221625436868250209651855682709336081361353788787774 3~
796192033540853634531965317911023553174553652109963134350498174783483 7~
792080693349633380565296232574032180672525994160725222623576426346404 8~
123466978153247666594738909503817113529163029919577685039848295053794 1~
817848207748255726741034639821874086892312044650617291713550411301060 8~
311124890256238455653699459336827583598875663304040066893360794199441 9~
889093336671118028339567771804564924721014901410871306264063117265963 4~
774173165741588229194922510928406148319544639385490452376706877235070 4~
734776226283721452658638240108036382874648445507604019099861107120324 2~
896848659162265306662162458083585800821238250023032290182193307901702 1~
997486894510836702176261216336789434830034361732997869210305804789936 2~
915019527735274347691132364340017953224392050144828430669094873030877 5~
825057030073807464335109734063444379517409016296672357471802403248207 2~
845312814256460887851234012414987225520960817546378754647870960819725 8~
624600383126077271387443710334995918603899852795659252973444155888475 5~
537475979061536915825018745916984623895296609143044381148305649595395 6~
386624069961376253117264107272261197884576663756478228740770650867696 1~
344452263059159805842558995668257357489719150993239826399214135191694 0~
461572202952341087122947641683148875168810940420910544153864730297929 9~
971056416766647872942410050843967466894853446937497908658049982530894 6~
053395603252002090257862622395638339775801076338923979630416872961734 3~
082247539147017716994441718161365976494001234082370594586848963417217 2~
990555186521319304734431222793502152347501786974928432320174293398807 3~
188492480468412126117174498067879475813274200336347187574668950031853 9~
730498595395979827883295172865952370835180423444579481796277626893739 7~
365669129567478292353547028041557827049556921283356 0E32

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

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999999999999900000~
00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-40)) –
2.997924579999999999999999999999999999999999999999000000~00000E+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)

$velocity_{SRD} = (c-(1.000\sim000E-50))/(1 - ((c-(1.000\sim000E-50))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960846971167505016344396336335875877471379467445254382301830460678324722366~
62030035052707675196104547350660641396980346853281188924457425792439488522388020829722140577898076445275321618546918754587352191387719569140~
92306308476011048624245749782657119819676349571268638501765141988512689964579280633023390563933551756591733515819439844790571263189396336554~
89598934835802451175190409668885958504543161026829601697395501146333034893644371898053256589086780272997014302926663534714635889587092570037~
28296925257674279804043141417815629864116489985321527579387882786062006191209269574564478479255056681549475232909548245076077501218139627229~
90811067699199235425735847397531095341024107088097059395508213930435983639808334789686309258223148848311792116539831226618952399290865245881~
70194085085315223686666475167941060888534549770256535713863080283853947019405085315223686666475167941060888534549770256535713863080283853942595139671791793338668416284362163385301608774395619700071522923768814~
52388375636910003808886452279334907380944407885838293705309006099584304188199073975550396051359963974181122913822864392495427487625371953612697073978021397656273103506652782532708456713856316744296719148024211~
84630463298860855865037586160821821787270382978395442479756759375000621968223065325566824876921579464108749621719559433867664916145220421989~
99251376521758071665388226369073038469478399089990835399658401870445690439394269885532280372027590069784465250875490569603431111567305988713194392823969696724021282485237134624621658637660310601095971842403111~
24693847849386736841412349317246051099106946941300169727126596915441678466388194669952834972041689471964828937616425597175493365719347904514~
64944365723431692641368163918695804302199856462494654003585764815084550317730766167370744025873320292202485624963591140317044538567947782501~
32580494002979468627372319155875883792394608514664541787948736989090600217310129335157267048966098734708182384883508006055888764055853374967345854660588807542253165260224205862636965484050460E37

$velocity_{noSRDback} = 3.67042\sim50460E+37 /(1+ (3.67042\sim50460E+37)^2/299{,}792{,}458^2)^{½}$

$velocity_{noSRDback}$ = 2.997924579999999999999999999999999999999999999999999999~
999900000~00000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= c-(1.000~000E-50)) –
2.997924579999999999999999999999999999999999999999999999999999999900000~
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~
15357616481997318834354134895627740545111898243645583704797344896676666~
97853573324971667101002046394642029147246360735185061314597857306235420~
56039655458158576354306938856241530068309302327817392898072922315831000~
49362420645624750061382442619919124596893660605800027294627711010866680~
09854090672923051811936647433179151310427440768140914155048393410342900~
53513993693619773507914521080107284703172280260241662188247483281723820~
11891479646170213402691777007103557022838541606005647184106442055042150~
00642890439745178106977882068435270237044757551466136530476368984121260~
33197606289846371188652245217636571302888402644188853491514963623037040~
37962613837265428107214545956156251856327741052994176535720515759344950~
28513813636097275903720036625652697578917475653381831100015946874665240~
55538650703140824005679040412811253405411767790375054026994630219382450~
91706726512716924529043285108759793413787229399394868029486185397085570~
72549858214309801165794024507277669626383694000911232384966885278303810~
67091429647660269365216080059981902296449616524606915363631451514716530~
23489308179910709390685028736699177783364984109489293035946511026429050~
64301573131119638280668992253714087029601282420332429553015533335575850~
41512876304555542703329247079059458288526750741074690541374360346495430~
20044707903122780810255232391562946572510998725659354644851578258566410~
31428455943320959885906291809397357005947022900630940941767939968446680~
76554814045685974557409240893481467857118183905449716029268814790007560~
08239249260409310908607989302330218117219506144962285223780416026829420~
61704126704548429667702413190455377095607810249823807635115089628603880~
04187473808775869285036427924114799187232416240924969204408368432405430~
86525448940428242501539722422436108800847220523411144540778304950494710~
23398364313213447081360681920520980714247228589965873645006504357456450~
09855598697777200103550119931196402868073195163975374325767053171270530~
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)

$velocity_{SRD} = (c-(1.000\sim000E-70))/(1 - ((c-(1.000\sim000E-70))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
61535761657382140543239042281569979527589995850348232098533888496254 89~
82919085427632404839785174855333966635293512752038617177493831783198 41~
07923908671505472071515992188719902857145019954470906350537391291231 98~
29937419824088330878228784611238643602004162641205544266563821316922 51~
30356658586458055274027685274693807123998660019322050388147241798516 63~
16601818795301550556766116190151155646739974668022740674754616044152 40~
35198497225719130872884417366036147645095611385006580050990501232818 01~
16329027900088791062286383768574455878816366661957719911763891350357 72~
97307987906977676152795193554993453710928948061484629601733124147485 18~
25753675604762356485995054650371209461906610270117838431622878109920 50~
09387033338840517758407665980063738395959398901833314864478234494936 93~
51635812468653887317858119438469319643823180645888095447125639039922 92~
65329154563058892792042721388213856002516298569675845890527940700898 75~
15859147484359791560428767794768172762755616622094564064342711539047 50~
43164670223257734041011544696636931072643287077533349725239683644915 60~
72048140135905544294454638963919082958405725762868451079290862142799 60~
95890060676299757055393494068016828383228105409284724757406819980226 83~
07259246250619248213310320680174487915802383435150987876157585842660 21~
81538743883296686768717702563314605230691917438833567539294263776639 94~
06514619446563208337264840386041202462378479501207069565375483182702 05~
32357017288551752065897454089805211395500535864853237170979562687284 15~
82489456171388000148138491195071810139266481785388481115270214469141 80~
64312686290388566242577751064466426199925980372836090650345372664487 64~
90768736090280617669350328143588822816230828639687752558227494324811 87~
18399637073468752485948698285066933005681259400394702662086737575020 67~
64432900986880909306358922967067353477870399280171856568736082117101 98~
52345748953352856299667999036096135965079487549149962516905785465849 91~
68231844911393535681071887095777719866701789591247 30E47

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

$velocity_{noSRDback}$=2.99792457999999999999999999999999999999999999999999999~
999999999999999999999999000~0008

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-70)) –
2.99792457999999999999999999999999999999999999999999999999999999999999~
999999999999000~000E+8

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

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

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

$velocity_{SRD} = (c-(1.000\sim000E-80))/(1 - ((c-(1.000\sim000E-80))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
61535761657382140544157283147550342406790716397656112701132255869060 31~
36925672658945777642917611509246060715897549334740206825262728093069 27~
22188885316146201454227231241151517081869784448790876583690029837578 17~
07156991096612169877265751217114679147348561127229898270075656037487 85~
48672207079129531111027556136427006289706363746371530136841344279533 60~
71863745565096860393980796635765176489185049323175977317242238225112 87~
17340525092087588330108074426824087767121934913679908764615291044285 4~
84886353401697570875480671741064181013130953763637902089053677555595 34~
66959835768555703580470012422051116291370105366034744570505743998421 35~
30672448178126143672987920423208850925350106504416495546846770366187 71~
28369948859500950159189251759215701906710266893643391469351487652150 76~
42465845663820450787625835954939732406142053291721136001207690028812 41~
05290799238920041395700979926245837792172798187069469125286909620898 37~
64698272826638941611669786421845493499436774254039586967298543829778 67~
54840670218407509752820715451072629879773517160762465751709067399062 29~
88995309519020255238646675742608899389293741759365939684566733083075 24~
87376162076373026431504663379264857589312458539923971535451621887559 44~
59714613116944239221472183535129016967490988437095714651670477835297 81~
19714661815161492158456599788075784455917479958273115261240395339326 37~
74508986291348863801250566004091906668263585502241021665943590846862 47~
52882263962977143904491638925095664429712246697343760389097032987225 79~
18583452125992371510995256297018228941360872280862052424733803423273 83~
77811666837143064286435288955403634521657778675346025633402993745303 29~
84957900281862454799313882830432845382643711519444449345401963063307 03~
11440970025489478132085826711202540653399265767096265578011288965244 79~
69196462231157257814785264844406533536176969000028120478336934315578 07~
55707606897223494849548036678858940851450981747789997481932968715407 69~
71779982861453248311537242776792297041754902860188 60E+52

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

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999999~
99999999999999999999999999999999999900000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-80)) –
2.99792457999999999999999999999999999999999999999999999999999999999~
99999999999999999999999900000~00000E+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)

$velocity_{SRD} = (c-(1.000\sim000E-90))/(1 - ((c-(1.000\sim000E-90))^2/299{,}792{,}458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960850~
61535761657382140544157283147642166493388752685576184755863043929320150~
04298478074346436366048948789559304381224947871210046454123057659952600~
88696747866093225864373428197186728338559344194958502337084285324321710~
20381060529072910339823162710392094717430496807997346810089485912599870~
06496629076657770678451045137573918257263504852035859920073509782011450~
23346592815761112257152559123663144810539822204466938932678115053162870~
45400782257421037907572599037034851107157419244306724166126982697370560~
32596708871516366369253880786624219177346302994733700476185583819747830~
60529862569361939288976232047732460747795069144202151537552262521537880~
72784178095724979970191954534932127361438112529085780365068153522150940~
60556929492934438038229875590083743750271828351089623799422901591856220~
17715564893158374759722318026465852204472965353934205574010459789032400~
05677407529596692288691389364782680436065129235054001525376066544817910~
09444935195651930526768363130648765199797070585274137660854987452376160~
89285478085746539538523273283198718167458590396910517286484091797982780~
50499901808861644343047469914641291703717481062241871242768586491124150~
34327567434890753478748027304080092024679168206326457261442963835664160~
22652372142158013616129705446290716654635767204439627963221214576921950~
21496889118739241133537768451107519532686398544799466773282762362474386~
19100464330245823403364346907133842390096597726517970443030313538311970~
68458421586256488949908866823850980111039001477830234604420677191626550~
01371315655799828553942978747745764831267822934395998908699449218255900~
37964366064257625512244191247618568915051235764668708647856613728510210~
37954492127901161552921608188707622793707045032799602736439730342525100~
14878921125288683532717212663482910439007708868531525839455514117145410~
99805104095206058719793380745991240235480878147637115006812641174306370~
32157108070777615432091724360840288531895677937244419940603961722545400~
18435381817256713025069193957723521213067441968823905E57

$velocity_{noSRDback} =3.67042\sim82390E+57/(1+ (3.67042\sim82390E+57)^2/299{,}792{,}458^2)^{½}$

$velocity_{noSRDback}$ =2.997924579999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999000~000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-90)) –
2.997924579999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999000~000E+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}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
61535761657382140544157283147642166493397935094235988384655051134793 22~
92358737911083716907589014661872438109256272237742786307769403514122 73~
61860690219804222764070110555086553301619686560805099185215511882898 83~
40553676365426260291881697343013775324983843396956800995630647569550 86~
29541438219989332810761266239121771473903594998650983096583397558844 10~
59557546994182870489707571599017429597863522234350444737836885226623 94~
06797038197272615614833062558106150298926265222019098507406801663719 33~
54085161330236445300256660489856630135082694443100893426058632056980 20~
98146813621988169205423590272644070457032922389272070505434289592015 33~
20541151747638529339748366983964848070897444538482579082284501179254 90~
58982186002478158617814096623882849810755071248163133543137650498990 07~
25972315118718412158496741581725982151013482743630306049488355012791 56~
50251536956301019169569214253567929730839760214721751882104733320908 67~
93488812892075027239836023331442752785873765896014018845099249139356 87~
22180828284740823672075033366325885074283915229019148435960409692100 06~
59489867242649804399355513963386641697468487117869243282289077005670 01~
81357208914309571350002076673480313417584441226017751332439070725695 83~
78742945294532697535932553494859445645249239367738468393045125731176 00~
71718726511420020665611748990915352126626462226848411744060874037879 69~
29975823158828857428930163325193807722137462266087685313905556340688 32~
00330960401662345924985901032294913829023328302499176969260364499890 72~
26304523639273380253388459898783048215709997820855711295890907627119 73~
48331864608406484760424719693829832167303725154515788565376239848920 86~
21117822177378872546846699357314386955215989596091525382109311326886 04~
51643680597200730594755356350920400453613467077598203931181318125034 80~
37853332373703451736806237969312781249986072523091881070648608249924 44~
45780096565305762861837206475356517214178560522671007571982441558733 95~
63148555163764331343915334488918351983101720439881 10E62

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

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999000000~00000E+08

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-100)) –
2.99792457999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999000~000E+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)
$velocity_{SRD} = (c-(1.000~000E-200))/(1 - ((c-(1.000~000E-200))^2/299,792,458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960856153576165738214054415728314764216649339793509423690662552112332175903~
7175117679782898677993726970326127020062646881968293840261669270897209~
9690970963763223869085635363526013376288960058231862808247735245830332~
7633993939429685065712895655324455613547754041041626500665843755188585~
9708601902752008370322336015031347172958776160494316759679032764337061~
1147242825579013586910766392678740775018678910385802716004227393329644~
3449799407261228780265195825642116701152176741098403178479121517898349~
5118262674990928427636976789154725531683949805227811396188198753659962~
0075228428886534228453008297054001141150462531015323429750285030032148~
1415771114861286955870551131136526555360263375235692169496422020000337~
7295115958178093939095784819921195656659144404871088698626125434409965~
2531324064475334615807581950787157442570153979162334147570110556821699~
0688716975827322516782984377544482048134352231583996055594940348925740~
5818085050014373641846159973301654793857516582312378480613596939631568~
4688742324951470827339130330117654698702145403294445858016340523413865~
0637414461344348243421938936982127015173229034002265479663932348557209~
6544925873593080361558811629719395174032614273820729799873531932797248~
6839282001401712925990475502364698368202645376496306726832274576581244~
6102942743822270093120077212957936220009575564516296731614431035673197~
4046179424315380587923311444710639712331782677361307314580780996201 71~
3853288841790018985737831592508519246836218869881413375126448874255285~
8885521602401975086836704944487826530310704019769515733280102308845146~
8553668865459019100176784936914819526007387161083858116802874401219072~
0227510145853915932746836182219722164711275927444191241273312052620698~
3335721196162473232714881033521899283552786741418735337117318895136379~
8454553666587411050516061567890315033450978196479017984578729936171158~
0627575658813477895957951557141074420839913533550818132920381829979683~
3042656405166618474216503253394295758546110024971220E+112

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

$velocity_{noSRDback}$=2.997924579999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999000~000E8

Difference $velocity_{noSRD}$-vs.-$velocity_{noSRDback}$= (c-(1.000~000E-100)) –
2.997924579999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999~
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}

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960851~
61535761657382140544157283147642166493397935094236906625521123321759031~
71751176797828986779937269703261270200626468819682938402616692708972091~
96909709646814647351578223293339526201776345852190976337518741290394691~
78305758795817799130020905046879605154895368426336670162578916620690111~
34207967687986734738323868616900740887199959085711207451941984155657731~
20229636558351767008467762705268731658896535462732467356774397477842791~
46549294024778773619967530304133926004853836020109231560050695231938621~
29553787372486257470454267129079486066468230063800331685617734137021201~
54594773871905379358038505036610233829769143722222678491950434792140091~
28397598541709868296090280057070432324732055759534645893772483563852751~
45604611977182546751434185590193275755569762319734931885158393066697381~
98924634011730596443253747026683586945234483149168790474221329483859561~
40121803372481518286763105586748893603436324411602752103711344778833701~
42917535644063432409806442603524940498417931118684583359550031028661681~
39001189863006032491914423058913929311162922543062653697523779327537091~
53824668419801677221027090504640983939352565139560465646364223868521961~
94817932376210486348035263614250735945635745091865361577715231842980161~
10809236596712580014196925409699770682176031921815070427223073490117851~
41306979550208706198712220413541947912774548624146252366107022867931621~
49034502566819644691378928744077458954128964440198970187918032666256301~
33244519892250055589175336377881761948574558433823138280394357664127011~
61596214306993603796941287619024072507781119237504549671576080530647331~
86439473187285140372701457346893942990702244909390057651280270269774161~
77686150278069337558495156415129193445088456245935204646913817892112041~
50550759458322226358391083244026795522425230617246052414984297781746981~
07516919294737848070990760303251436851292889593169289448730911866561421~
31309618101454597516575907537120774145125096305720541357153608332029501~
12534192281857235232704796554692511464443774100077 20E+162

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

$velocity_{noSRDback}$=2.99792457999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999999999999999999999999~
999999999999999999999999999999999999999999999999999000~000E+08

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)

$velocity_{SRD} = (c-(1.000\sim000E-400))/(1 - ((c-(1.000\sim000E-400))^2/299,792,458^2)^{½}$

$velocity_{SRD}$=3.67042248367772981220165415786729619743320617281449179960 85~
61535761657382140544157283147642166493397935094236906625521123321759 03~
71751176797828986779937269703261270200626468819682938402616692708972 09~
96909709646814647351578223293339526201776345852190976337518741290394 69~
78305758795817799130020905046879605154904550834997392032236996013129 00~
01660666411469285152212189530602706706601480034184099400435619204677 14~
98509795762403326213258450747805853607557002113767567865240984747000 40~
68524101705177325136532653175342683213092586779651646542259014537580 85~
78794160283835769008204541538424806270448322509031904572431718683088 24~
54496074483481433919392842660608686361787309563133399391787288268172 59~
85298759503546832763244482917244593227320791951381494949868918805554 97~
96917520969377269994470274615608762615374899975395226776137242829287 18~
99359284056173220225929712891335533939812607542498050731323295866874 67~
39773287872090560076101913737315426306086553007458243085618549742884 12~
68769533773406197359646964429340868286739215982817730856636879608634 49~
08856631117336051742116709834663970489004124508143519421787965429488 82~
16631226943932251171643252428921561028109352888415806353552005129157 12~
66789517413857338890643923353782064699566984642732054900154255979943 73~
54597127434790463603552054651129136959600468752352274488659960640853 19~
59366779495120626245648133222741679887286314253859855416355668362839 41~
61677558207476317752090590094470947853631469368057733251261705094276 31~
61031700555809023038534428587798226022660991817064464721823072541078 58~
93794045865179429477281314440733445958397873322540185714993938587248 40~
97370541707484238015487309340169919345135181100722472557730814598072 69~
27083091437038639088344232549758700968336447490620380547756876992035 71~
11722735437386358498872397150499934545156341481870075980482097099343 24~
10312172585012185788845567105637263142294708633087637441880804076041 36~
99497751587797797810582616632315902872126276278193657431159992624193 33~
57842826388710057765273678883286029798271489040863 80E+212

$velocity_{noSRDback} =3.67042\sim86380E+212/(1+ (3.67042\sim86380E+212)^2/299,792,458^2)^{½}$

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999000~000E+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))-
2.997924579999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
9999999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999900000~00000E+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~
61535761657382140544157283147642166493397935094236906625521123321759 03~
71751176797828986779937269703261270200626468819682938402616692708972 09~
96909709646814647351578223293339526201776345852190976337518741290394 69~
78305758795817799130020905046879605154904550834997392032236996013129 00~
01660666411469285152212189530602706706601480034184099400435619204677 15~
90333882369622022794052375136673306306280484664181456186154686712819 80~
83733586434096810072883143369520963372296638338856437230301551659529 51~
83460670634840853674077233114546781078128721060548469695302927440296 48~
42003669907631256002585899082957926734698659074671149666196633588376 57~
86223211819275700903089943587006385811962916840241229104828169034871 16~
48051372241734557821337723980944923370479310087525098849734496205399 13~
82504222190201861917482943627542735525971166271734299273177480934780 21~
87747115571921456307802723772822577980678562119481548497238565897062 07~
59337024003006481356986926387156050933298723822174672672729629349159 98~
64554932445055444697319082367589627607980177848561089134975010921062 98~
90604876490084727021571018331352564208256188224581429383978013416988 46~
56398964518344114857706847190806920284019989156049042572811153719399 02~
34461230106573852108611677902020452083931287022892230273259660749933 34~
45844143780999172031303633525176512965657385398636828260590090046247 01~
62643236339920745504126275188593021941987309251514322478015050295152 62~
51455215160704751972867862514992279574769996785349941702527055268856 85~
69251270142984107103244611398260128770854210602598174049387152310860 34~
54634080054186678395933040286593800431054321082796804338029278128879 97~
67154980531436510179717896989008438270167889096257065973174790119518 69~
19385100486942396276639178946789523043255148651675578551147923448830 02~
10954523523344523104831895887203036794641150415393961727428474002739 39~
26778616768258473411747986908284352427895417938517608630535003305985 21~
02904970119471759739673171663013457584842813857359 50E262

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

$velocity_{noSRDback}$ = 2.99792457999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999999~
99999999999999999999999999999999999999999999999999999999999990~
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