Siebenter Abschnitt.

Ausgleichung der Dreiecke zwischen Bahn und der Berliner Grundlinie.

§ 89. Bedingungsgleichungen.

I. *Bahn-Vogelsang-Kleistberg*.

Bahn	65° 53′	6,″152 + (3) − (2)
Vogelsang	73 31	26 , 514
Kleistberg	40 35	34 , 067
Summe	180 . 0	6 , 733
180° + ε . . .	180 0	7 , 032
0 =		− 0,″299 − (2) + (3)

II. *Luckow-Vogelsang-Bahn*.

Luckow	78° 9′	40,″220 + (4)
Vogelsang	50 50	25 , 039
Bahn	50 59	56 , 261 + (2) − (1)
Summe	180 0	1 , 520
180° + ε . . .	180 0	3 , 219
0 =		− 1,″699 − (1) + (2) + (4)

III. *Koboldsberg-Luckow-Bahn*.

Koboldsberg . . .	76° 5′	31,″926 + (12) − (10)
Luckow	55 24	19 , 269 + (5) − (4)
Bahn	48 30	9 , 629 + (1)
Summe	180 0	0 , 824
180° + ε . . .	180 0	2 , 084
0 =		− 1,″260 + (1) − (4) + (5) − (10) + (12)

IV. *Koboldsberg - Vogelsang - Bahn.*

Koboldsberg . . .	49° 40′	59,″912	+ (12) — (11)
Vogelsang	30 48	56, 562	
Bahn	99 30	5, 890	+ (2)
Summe	180 0	2, 364	
180° + ε . . .	180 0	3, 464	

$$0 = | - 1,″100 + (2) - (11) + (12)$$

V. *Vogelsang - Bahn - Koboldsberg - Luckow.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } BKV \cdot \text{Sin } KLV \cdot \text{Sin } LBV}{\text{Sin } KBV \cdot \text{Sin } LKV \cdot \text{Sin } BLV}$$

$BKV = \ 49° \ 40′ \ 59,″912 + (12) - (11)$ $KBV = 99° \ 30′ \ 5,″890 + (2)$

$KLV = 133 \ 33 \ 59,489 + (5)$ $LKV = 26 \ 24 \ 32,014 + (11) - (10)$

$LBV = \ 50 \ 59 \ 56,261 + (2) - (1)$ $BLV = 78 \ \ 9 \ 40,220 + (4)$

$9,8822283 \ , 4 + 0,8486 \{(12) - (11)\}$ $9,9940006 \ , 4 - 0,1674 \ (2)$

$9,8600831 \ , 2 - 0,9512 \ (5)$ $9,6481395 \ , 4 + 2,0137 \{(11) - (10)\}$

$9,8904962 \ , 1 + 0,8098 \{(2) - (1)\}$ $9,9906623 \ , 0 + 0,2096 \ (4)$

$\overline{9,6328076 \ , 7}$ $\overline{9,6328024 \ , 8}$

$9,6328024 \ , 8$

$\overline{0,0000051 \ , 9 \ldots + 1,0000119 \ , 7}$

$ - 1,\ldots\ldots$

$ \overline{+ 0,0000119 \ , 7 \ldots \text{Log } 5,07809}$

$\phantom{0,0000051 \ , 9 \ldots + 0,0000119 \ , 7 \ldots \text{Log }} 5,31443$

$\phantom{0,0000051 \ , 9 \ldots + 0,0000119 \ , 7 \ldots \text{Log }} \overline{0,39252 \ldots + 2,469}$

$$0 = + 2,469 - 0,8098 \ (1) + 0,9772 \ (2) - 0,2096 \ (4) - 0,9512 \ (5) + 2,0137 \ (10) - 2,8623 \ (11) + 0,8486 \ (12)$$

VI. *Künkendorf - Luckow - Koboldsberg.*

Künkendorf . . .	54° 52′	13,″567	+ (17) — (16)
Luckow	47 9	0, 882	+ (6) — (5)
Koboldsberg . . .	77 58	47, 861	+ (10) — (9)
Summe	180 0	2, 310	
180° + ε . . .	180 0	1, 713	

$$0 = | + 0,″597 - (5) + (6) - (9) + (10) - (16) + (17)$$

VII. *Buchholz - Luckow - Künkendorf.*

Buchholz	71° 48′	56,″370	+ (18)
Luckow	47 43	22, 381	+ (7) — (6)
Künkendorf . . .	60 27	42, 465	+ (16) — (15)
Summe	180 0	1, 216	
180° + ε . . .	180 0	1, 893	

$$0 = | - 0,″677 - (6) + (7) - (15) + (16) + (18)$$

VIII. *Templin - Buchholz - Künkendorf.*

Templin	56° 4′ 42,″180	+ (20)
Buchholz	84 28 53,775	+ (19) − (18)
Künkendorf . . .	39 26 23,902	+ (15) − (14)
Summe	179 59 59,857	
180° + ε . . .	180 0 1,291	

$$0 = \big| -1,″434 - (14) + (15) - (18) + (19) + (20)$$

IX. *Hausberg - Templin - Künkendorf.*

Hausberg	80° 41′ 19,″365	− (28)
Templin	27 31 48,214	+ (21) − (20)
Künkendorf . . .	71 46 53,254	+ (14) − (13)
Summe	180 0 0,833	
180° + ε . . .	180 0 1,085	

$$0 = \big| -0,″252 - (13) + (14) - (20) + (21) - (28)$$

X. *Koboldsberg - Hausberg - Künkendorf.*

Koboldsberg . . .	16° 49′ 32,″751	+ (9) − (8)
Hausberg	29 43 40,167	+ (24)
Künkendorf . . .	133 26 46,812	+ (13) − (17)
Summe	179 59 59,730	
180° + ε . . .	180 0 0,665	

$$0 = \big| -0,″935 - (8) + (9) + (13) - (17) + (24)$$

XI. *Koboldsberg - Luckow - Buchholz - Templin - Hausberg - Künkendorf.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } KfLKg \cdot \text{Sin } KfBL \cdot \text{Sin } KfTB \cdot \text{Sin } KfHT \cdot \text{Sin } KfKgH}{\text{Sin } KfKgL \cdot \text{Sin } KfLB \cdot \text{Sin } KfBT \cdot \text{Sin } KfTH \cdot \text{Sin } KfHKg}$$

$KfLKg = 47° \quad 9′ \quad 0,″882 + (6) - (5)$ $\qquad$ $KfKgL = 77° \quad 58′ \quad 47,″861 + (10) - (9)$

$KfBL = 71 \quad 48 \quad 56,370 + (18)$ $\qquad$ $KfLB = 47 \quad 43 \quad 22,381 + (7) - (6)$

$KfTB = 56 \quad 4 \quad 42,180 + (20)$ $\qquad$ $KfBT = 84 \quad 28 \quad 53,775 + (19) - (18)$

$KfHT = 80 \quad 41 \quad 19,365 - (28)$ $\qquad$ $KfTH = 27 \quad 31 \quad 48,214 + (21) - (20)$

$KfKgH = 16 \quad 49 \quad 32,751 + (9) - (8)$ $\qquad$ $KfHKg = 29 \quad 43 \quad 40,167 + (24)$

9,8651866 , 3 + 0,92763 $\{(6) - (5)\}$ 9,9903720 , 6 + 0,21292 $\{(10) - (9)\}$

9,9777498 , 0 + 0,32848 (18)   9,8691729 , 5 + 0,90920 $\{(7) - (6)\}$

9,9189743 , 7 + 0,67252 (20)   9,9979825 , 6 + 0,09661 $\{(19) - (18)\}$

9,9942396 , 8 + 0,16396 $-$ (28)   9,6648429 , 8 + 1,91852 $\{(21) - (20)\}$

9,4615919 , 5 + 3,30679 $\{(9) - (8)\}$ 9,6953770 , 1 + 1,75121 (24)

9,2177424 , 3   9,2177475 , 6

9,2177475 , 6

9,9999948 , 7 .... + 0,9999882 , 0

 $-$ 1,.......

 $-$ 0,0000118 , 0 .... Log 5,07188n

 5,31443

 0,38631n.... $-$ 2,434

$$0 = -\, 2{,}434 - 0{,}9276\ (5) + 1{,}8368\ (6) - 0{,}9092\ (7) - 3{,}3068\ (8) + 3{,}5197\ (9) - 0{,}2129\ (10) + 0{,}4251\ (18) - 0{,}0966\ (19)$$
$$+\, 2{,}5910\ (20) - 1{,}9185\ (21) - 1{,}7512\ (24) - 0{,}1640\ (28)$$

XII. *Freienwalde - Hausberg - Künkendorf.*

Freienwalde . . .	31° 51′ 53,″759	+ (32) $-$ (31)
Hausberg	94 31 26 , 022	+ (25)
Künkendorf. . . .	53 36 40 , 649	+ (13)
Summe	180 0 0 , 430	
180° + ε . . .	180 0 0 , 813	

$$0 = |\; -\, 0{,}''383 + (13) + (25) - (31) + (32)$$

XIII. *Koboldsberg - Freienwalde - Hausberg.*

Koboldsberg . . .	36° 35′ 5,″400	+ (8)
Freienwalde . . .	78 37 10 , 533	+ (33) $-$ (31)
Hausberg	64 47 45 , 855	+ (25) $-$ (24)
Summe	180 0 1 , 788	
180° + ε . . .	180 0 1 , 851	

$$0 = |\; -\, 0{,}''063 + (8) - (24) + (25) - (31) + (33)$$

XIV. *Koboldsberg - Künkendorf - Hausberg - Freienwalde.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } KfFKg \cdot \text{Sin } KfHF \cdot \text{Sin } KfKgH}{\text{Sin } KfKgF \cdot \text{Sin } KfFH \cdot \text{Sin } KfHKg}$$

$KfFKg = 46°\ 45′\ 16{,}''774 + (33) - (32)$ $KfKgF = 53°\ 24′\ 38{,}''151 + (9)$

$KfHF = 94\ \ 31\ \ 26\ , 022 + (25)$ $KfFH = 31\ \ 51\ \ 53\ , 759 + (32) - (31)$

$KfKgH = 16\ \ 49\ \ 32\ , 751 + (9) - (8)$ $KfHKg = 29\ \ 43\ \ 40\ , 167 + (24)$

9,8623858 , 1 + 0,94055{(33) — (32)} 9,9046765 , 0 + 0,74238 (9)
9,9986448 , 8 — 0,07912 (25) 9,7225670 , 1 + 1,60876{(32) — (31)}
9,4615919 , 5 + 3,30679{(9) — (8)} 9,6953770 , 1 + 1,75121 (24)
9,3226226 , 4 9,3226205 , 2
9,3226205 , 2

0,0000021 , 2 .... + 1,000004876
— 1,.........
+ 0,000004876 .... Log 4,68806
5,31443
0,00249 .... + 1,006

$$0 = + 1{,}006 - 3{,}3068 (8) + 2{,}5644 (9) - 1{,}7512 (24) - 0{,}0791 (25) + 1{,}6088 (31) - 2{,}5493 (32) + 0{,}9406 (33)$$

XV. *Prenden - Templin - Hausberg.*

Prenden	50° 37′ 49,″305	+ (36) — (35)
Templin	31 37 52 , 545	+ (22) — (21)
Hausberg	97 44 19 , 943	+ (28) — (26)
Summe	180 0 1 , 793	
180° + ε . . .	180 0 1 , 519	

$$0 = \mid + 0{,}''274 - (21) + (22) - (26) + (28) - (35) + (36)$$

XVI. *Freienwalde - Prenden - Hausberg.*

Freienwalde . . .	43° 46′ 34,″063	+ (31) — (30)
Prenden	49 10 30 , 920	+ (37) — (36)
Hausberg	87 2 54 , 670	+ (26) — (25)
Summe	179 59 59 , 653	
180° + ε . . .	180 0 1 , 136	

$$0 = \mid - 1{,}''483 - (25) + (26) - (30) + (31) - (36) + (37)$$

XVII. *Künkendorf - Templin - Prenden - Freienwalde - Hausberg.*

$$\text{Bedingung} .... \; 1 = \frac{\operatorname{Sin} HPT . \operatorname{Sin} HFP . \operatorname{Sin} HKF . \operatorname{Sin} HTK}{\operatorname{Sin} HTP . \operatorname{Sin} HPF . \operatorname{Sin} HFK . \operatorname{Sin} HKT}$$

$HPT =$ 50° 37′ 49,″305 + (36) — (35) $HTP =$ 31° 37′ 52,″545 + (22) — (21)
$HFP =$ 43 46 34 , 063 + (31) — (30) $HPF =$ 49 10 30 , 920 + (37) — (36)
$HKF =$ 53 36 40 , 649 + (13) $HFK =$ 31 51 53 , 759 + (32) — (31)
$HTK =$ 27 31 48 , 214 + (21) — (20) $HKT =$ 71 46 53 , 254 + (14) — (13)

38 *

$$9,8882187,0 + 0,82052\{(36) - (35)\}$$
$$9,8400071,4 + 1,04366\{(31) - (30)\}$$
$$9,9058017,1 + 0,73696 \ (13)$$
$$9,6648429,8 + 1,91852\{(21) - (20)\}$$
$$9,2988705,3$$
$$9,2988672,4$$
$$0,0000032,9 \ \ldots\ + 1,0000075,76$$

$$9,7197045,8 + 1,62349\{(22) - (21)\}$$
$$9,8789310,7 + 0,86393\{(37) - (36)\}$$
$$9,7225670,1 + 1,60876\{(32) - (31)\}$$
$$9,9776645,8 + 0,32914\{(14) - (13)\}$$
$$9,2988672,4$$

$$- 1,\ldots\ldots\ldots$$
$$+ 0,0000075,76 \ \ldots \text{Log } 4,87944$$
$$5,31443$$
$$0,19387 \ \ldots\ + 1,563$$

$$0 = + 1,563 + 1,0661 \ (13) - 0,3291 \ (14) - 1,9185 \ (20) + 3,5420 \ (21) - 1,6235 \ (22) - 1,0437 \ (30) + 2,6524 \ (31) - 1,6088 \ (32)$$
$$- 0,8205 \ (35) + 1,6845 \ (36) - 0,8639 \ (37)$$

XVIII. *Gransee-Templin-Prenden.*

Gransee	71° 47′ 43,″102 + (41)
Templin	65　8　51,411 + (23) − (22)
Prenden	43　3　29,739 + (35)
Summe	180　0　4,252
180° + ε . . .	180　0　2,421

$$0 = \ | \ + 1,″831 - (22) + (23) + (35) + (41)$$

XIX. *Eichstädt-Gransee-Prenden.*

Eichstädt	65° 27′ 11,″068 + (44)
Gransee	54　16　28,876 + (42) − (41)
Prenden	60　16　23,157 − (39)
Summe . . .	180　0　3,101
180° + ε . . .	180　0　2,625

$$0 = \ | \ + 0,″476 - (39) - (41) + (42) + (44)$$

XX. *Berlin-Eichstädt-Prenden.*

Berlin	67° 14′ 24,″580 + (51) − (50)
Eichstädt	58　11　22,583 + (45) − (44)
Prenden	54　34　12,926 + (39) − (38)
Summe . . .	180　0　0,089
180° + ε . . .	180　0　2,026

$$0 = \ | \ - 1,″937 - (38) + (39) - (44) + (45) - (50) + (51)$$

XXI. *Freienwalde - Hausberg - Templin - Gransee - Eichstädt - Berlin - Prenden.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } PHF . \text{Sin } PTH . \text{Sin } PGT . \text{Sin } PEG . \text{Sin } PBE . \text{Sin } PFB}{\text{Sin } PFH . \text{Sin } PHT . \text{Sin } PTG . \text{Sin } PGE . \text{Sin } PEB . \text{Sin } PBF}$$

$PHF = 87°$ 2′ 54,″670 $+$ (26) $-$ (25)	$PFH = 43°$ 46′ 34,″063 $+$ (31) $-$ (30)
$PTH = 31$ 37 52,545 $+$ (22) $-$ (21)	$PHT = 97$ 44 19,943 $+$ (28) $-$ (26)
$PGT = 71$ 47 43,102 $+$ (41)	$PTG = 65$ 8 51,411 $+$ (23) $-$ (22)
$PEG = 65$ 27 11,068 $+$ (44)	$PGE = 54$ 16 28,876 $+$ (42) $-$ (41)
$PBE = 67$ 14 24,580 $+$ (51) $-$ (50)	$PEB = 58$ 11 22,583 $+$ (45) $-$ (44)
$PFB = 39$ 29 54,300 $+$ (30) $-$ (29)	$PBF = 38$ 12 33,924 $+$(29)$-$(30)$+$(37)$-$(38)

$9,9994235,1 + 0,05156\{(26) - (25)\}$	$9,8400071,4 + 1,04366\{(31) - (30)\}$
$9,7197045,8 + 1,62349\{(22) - (21)\}$	$9,9960263,2 - 0,13590\{(28) - (26)\}$
$9,9776991,4 + 0,32887 \,(41)$	$9,9577956,8 + 0,46317\{(23) - (22)\}$
$9,9588606,3 + 0,45672 \,(44)$	$9,9094627,9 + 0,71924\{(42) - (41)\}$
$9,9647942,8 + 0,41954\{(51) - (50)\}$	$9,9293152,6 + 0,62028\{(45) - (44)\}$
$9,8034959,7 + 1,21317\{(30) - (29)\}$	$9,7913661,2 + 1,27034\{(29)-(30)+(37)-(38)\}$
$\underline{9,4239781,1}$	$9,4239733,1$
$\underline{9,4239733,1}$	
$0,0000048,0 \dots + 1,0000111$	
$\underline{- 1,\dots\dots}$	
$+ 0,0000111 \dots \text{Log } 5,04532$	
$5,31443$	
$0,35975 \dots + 2,290$	

$0 = + 2,290 - 1,6235 \,(21) + 2,0867 \,(22) - 0,4632 \,(23) - 0,0516 \,(25) - 0,0843 \,(26) + 0,1359 \,(28) - 2,4835 \,(29) + 3,5272 \,(30)$
$- 1,0437 \,(31) - 1,2703 \,(37) + 1,2703 \,(38) + 1,0481 \,(41) - 0,7192 \,(42) + 1,0770 \,(44) - 0,6203 \,(45) - 0,4195 \,(50) + 0,4195 \,(51)$

XXII. *Krugberg - Berlin - Freienwalde.*

Krugberg		$77°$ 0′ 42,″901 $+$ (49) $-$ (48)
Berlin		24 41 19,281 $-$ (29) $+$ (30) $-$ (37) $+$ (38) $-$ (51) $+$ (52)
Freienwalde . . .		78 17 59,609 $+$ (29)
Summe		180 0 1,791
$180° + \varepsilon$ . . .		180 0 2,269
$0 =$		$-$ 0,″478 $+$ (30) $-$ (37) $+$ (38) $-$ (48) $+$ (49) $-$ (51) $+$ (52)

XXIII. *Colberg - Berlin - Krugberg.*

Colberg		$66°$ 24′ 58,″393 $+$ (75) $-$ (73)
Berlin		57 35 10,914 $+$ (54) $-$ (52)
Krugberg		55 59 54,569 $+$ (48)
Summe		180 0 3,876
$180° + \varepsilon$ . . .		180 0 4,169
$0 =$		$-$ 0,″293 $+$ (48) $-$ (52) $+$ (54) $-$ (73) $+$ (75)

XXIV. *Eichberg-Berlin-Colberg.*

Eichberg	58° 27′	1,″998	+ (66) − (59)
Berlin	83 14	12,439	− (54)
Colberg	38 18	48,915	+ (73) − (72)
Summe	180 0	3,352	
180° + ε . . .	180 0	3,228	

$$0 = \; + 0,″124 - (54) - (59) + (66) - (72) + (73)$$

XXV. *Eichstädt-Berlin-Eichberg.*

Eichstädt	47° 9′	48,″509	+ (46) − (45)
Berlin	89 2	18,862	+ (50)
Eichberg	43 47	54,320	+ (59)
Summe	180 0	1,691	
180° + ε . . .	180 0	2,231	

$$0 = \; - 0,″540 - (45) + (46) + (50) + (59)$$

XXVI. *Eichstädt-Eichberg-Colberg-Krugberg-Freienwalde-Prenden-Berlin.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } BEgEt \cdot \text{Sin } BCEg \cdot \text{Sin } BKC \cdot \text{Sin } BFK \cdot \text{Sin } BPF \cdot \text{Sin } BEtP}{\text{Sin } BEtEg \cdot \text{Sin } BEgC \cdot \text{Sin } BCK \cdot \text{Sin } BKF \cdot \text{Sin } BFP \cdot \text{Sin } BPEt}$$

$BEgEt =$ 43° 47′ 54,″320 + (59)	$BEtEg =$ 47° 9′ 48,″509 + (46) − (45)
$BCEg =$ 38 18 48,915 + (73) − (72)	$BEgC =$ 58 27 1,998 + (66) − (59)
$BKC =$ 55 59 54,569 + (48)	$BCK =$ 66 24 58,393 + (75) − (73)
$BFK =$ 78 17 59,609 + (29)	$BKF =$ 77 0 42,901 + (49) − (48)
$BPF =$ 102 17 33,953 + (38) − (37)	$BFP =$ 39 29 54,300 + (30) − (29)
$BEtP =$ 58 11 22,583 + (45) − (44)	$BPEt =$ 54 34 12,926 + (39) − (38)

9,8401834 , 6 + 1,04285 (59)	9,8652796 , 8 + 0,92720 {(46) − (45)}
9,7923672 , 1 + 1,26560 {(73) − (72)}	9,9305358 , 8 + 0,61399 {(66) − (59)}
9,9185664 , 9 + 0,67455 (48)	9,9621211 , 2 + 0,43655 {(75) − (73)}
9,9908813 , 3 + 0,20709 (29)	9,9887447 , 9 + 0,23065 {(49) − (48)}
9,9899267 , 8 − 0,21790 {(38) − (37)}	9,8034959 , 7 + 1,21317 {(30) − (29)}
9,9293152 , 6 + 0,62028 {(45) − (44)}	9,9110653 , 9 + 0,71144 {(39) − (38)}
9,4612405 , 3	9,4612428 , 3
9,4612428 , 3	

$$9,9999977 , 0 \ldots + 0,9999947$$
$$- 1, \ldots \ldots$$
$$- 0,0000053 \ldots \text{Log } 4,72427 \, n$$
$$5,31443$$
$$0,03870 \, n \ldots - 1,093$$

$$0 = - 1,093 + 1,4203 \,(29) - 1,2132 \,(30) + 0,2179 \,(37) + 0,4935 \,(38) - 0,7114 \,(39) - 0,6203 \,(44) + 1,5475 \,(45) - 0,9272 \,(46)$$
$$+ 0,9052 \,(48) - 0,2307 \,(49) + 1,6568 \,(59) - 0,6140 \,(66) - 1,2656 \,(72) + 1,7022 \,(73) - 0,4366 \,(75)$$

XXVII. *Müggelsberg - Berlin - Krugberg.*

Müggelsberg . . .	110° 41′ 23,″722 + (85)	
Berlin.	47 4 7,055 + (53) − (52)	
Krugberg	22 14 31,652 + (48) − (47)	
Summe	180 0 2,429	
180° + ε . . .	180 0 1,617	

$$0 = | \ + 0,″812 − (47) + (48) − (52) + (53) + (85)$$

XXVIII. *Müggelsberg - Krugberg - Colberg.*

Müggelsberg . . .	88° 7′ 16,″249 + (86) − (85)	
Krugberg	33 45 22,917 + (47)	
Colberg.	58 7 23,904 + (75) − (74)	
Summe	180 0 3,070	
180° + ε . . .	180 0 2,187	

$$0 = | \ + 0,″883 + (47) − (74) + (75) − (85) + (86)$$

XXIX. *Müggelsberg - Colberg - Eichberg.*

Müggelsberg . . .	105° 28′ 28,″819 + (89) − (86)	
Colberg.	46 36 23,404 + (74) − (72)	
Eichberg	27 55 8,406 + (66) − (64)	
Summe	180 0 0,629	
180° + ε . . .	180 0 2,142	

$$0 = | \ − 1,″513 − (64) + (66) − (72) + (74) − (86) + (89)$$

XXX. *Colberg - Krugberg - Berlin - Eichberg - Müggelsberg.*

$$\text{Bedingung} \ldots \ 1 = \frac{\mathrm{Sin}\,MKC \cdot \mathrm{Sin}\,MBK \cdot \mathrm{Sin}\,MEB \cdot \mathrm{Sin}\,MCE}{\mathrm{Sin}\,MCK \cdot \mathrm{Sin}\,MKB \cdot \mathrm{Sin}\,MBE \cdot \mathrm{Sin}\,MEC}$$

$MKC = 33° 45′ 22,″917 + (47)$ $MCK = 58° 7′ 23,″904 + (75) − (74)$

$MBK = 47 4 7,055 + (53) − (52)$ $MKB = 22 14 31,652 + (48) − (47)$

$MEB = 30 31 53,592 + (64) − (59)$ $MBE = 93 45 16,298 − (53)$

$MCE = 46 36 23,404 + (74) − (72)$ $MEC = 27 55 8,406 + (66) − (64)$

9,7448111 , 9 + 1,49625 (47)

9,8646119 , 3 + 0,93028 $\left\{(53) - (52)\right\}$

9,7058746 , 2 + 1,69553 $\left\{(64) - (59)\right\}$

9,8613268 , 7 + 0,94544 $\left\{(74) - (72)\right\}$

9,1766246 , 1

9,1766131 , 0

0,0000115 , 1 .... + 1,0000265

         − 1,.......

         + 0,0000265 .... Log 5,42324

                5,31443

                0,73767 .... + 5,466

9,9290031 , 1 + 0,62188 $\left\{(75) - (74)\right\}$

9,5780904 , 8 + 2,44528 $\left\{(48) - (47)\right\}$

9,9990669 , 2 − 0,06562 · − (53)

9,6704526 , 6 + 1,88716 $\left\{(66) - (64)\right\}$

9,1766131 , 0

0' = + 5,466 + 3,9415 (47) − 2,4453 (48) − 0,9303 (52) + 0,8647 (53) − 1,6955 (59) + 3,5827 (64) − 1,8872 (66) − 0,9454 (72) + 1,5673 (74) − 0,6219 (75)

XXXI. *Berlin-Müggelsberg-Colberg-Eichberg.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } EMC \cdot \text{Sin } EBM \cdot \text{Sin } ECB}{\text{Sin } ECM \cdot \text{Sin } EMB \cdot \text{Sin } EBC}$$

$EMC = 105° \ 28' \ 28,''819 + (89) - (86)$

$EBM = 93 \ 45 \ 16 , 298 - (53)$

$ECB = 38 \ 18 \ 48 , 915 + (73) - (72)$

$ECM = 46° \ 36' \ 23,''404 + (74) - (72)$

$EMB = 55 \ 42 \ 51 , 210 - (89)$

$EBC = 83 \ 14 \ 12 , 439 - (54)$

9,9839637 , 0 − 0,27685 $\left\{(89) - (86)\right\}$

9,9990669 , 2 − 0,06562 − (53)

9,7923672 , 1 + 1,26560 $\left\{(73) - (72)\right\}$

9,7753978 , 3

9,7753994 , 2

9,9999984 , 1 .... + 0,9999963

         − 1,.......

         − 0,0000037 ..... Log 4,56820 n

                5,31443

                9,88263 n .... − 0,763

9,8613268 , 7 + 0,94544 $\left\{(74) - (72)\right\}$

9,9171052 , 4 + 0,68179 · − (89)

9,9969673 , 1 + 0,11859 · − (54)

9,7753994 , 2

0 = − 0,763 + 0,0656 (53) + 0,1186 (54) − 0,3202 (72) + 1,2656 (73) − 0,9454 (74) + 0,2769 (86) + 0,4049 (89)

XXXII. *Glienicke-Colberg-Müggelsberg.*

Glienicke	50° 26′ 14,″007	+ (79) − (78)
Colberg	50 17 7 , 313	+ (74) − (71)
Müggelsberg . . .	79 16 38 , 333	+ (87) − (86)
Summe	179 59 59 , 653	
180° + ε . . .	180 0 1 , 404	

0 = | − 1,″751 − (71) + (74) − (78) + (79) − (86) + (87)

XXXIII. *Glienicke-Müggelsberg-Berlin.*

Glienicke	41° 25′ 12,″300	+ (78)
Müggelsberg . . .	81 54 41 , 696	— (87)
Berlin	56 40 6 , 561	+ (56) — (53)
Summe	180 0 0 , 557	
180° + ε . . .	180 0 1 , 118	

$$0 = | - 0,″561 - (53) + (56) + (78) - (87)$$

XXXIV. *Glienicke-Berlin-Eichberg.*

Glienicke	78° 31′ 34,″941	— (81)
Berlin	37 5 9 , 737	— (56)
Eichberg	64 23 15 , 795	+ (67) — (59)
Summe	180 0 0 , 473	
180° + ε . . .	180 0 1 , 312	

$$0 = | - 0,″839 - (56) - (59) + (67) - (81)$$

XXXV. *Berlin-Müggelsberg-Colberg-Glienicke.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} GMB . \operatorname{Sin} GCM . \operatorname{Sin} GBC}{\operatorname{Sin} GBM . \operatorname{Sin} GMC . \operatorname{Sin} GCB}$$

$GMB = 81° 54′ 41,″696 - (87)$ $GBM = 56° 40′ 6,″561 + (56) - (53)$

$GCM = 50 \ 17 \ 7 , 313 + (74) - (71)$ $GMC = 79 \ 16 \ 38 , 333 + (87) - (86)$

$GBC = 46 \ 9 \ 2 , 702 + (56) - (54)$ $GCB = 41 \ 59 \ 32 , 824 + (73) - (71)$

$9,9956580 , 9 + 0,14211 - (87)$ $9,9219492 , 2 + 0,65766 \{ (56) - (53) \}$

$9,8860598 , 0 + 0,83065 \{ (74) - (71) \}$ $9,9923499 , 3 + 0,18936 \{ (87) - (86) \}$

$9,8580346 , 6 + 0,96062 \{ (56) - (54) \}$ $9,8254473 , 1 + 0,11091 \{ (73) - (71) \}$

$9,7397525 , 5$ $9,7397464 , 6$

$9,7397464 , 6$

$0,0000060 , 9 \ldots 1,0000140$

$- 1, \ldots \ldots$

$+ 0,0000140 \ldots 5,14612$

$5,31443$

$0,46055 \ldots + 2,888$

$$0 = + 2,888 + 0,6577 (53) - 0,9606 (54) + 0,3030 (56) + 0,2803 (71) - 1,1109 (73) + 0,8307 (74) + 0,1894 (86) - 0,3315 (87)$$

XXXVI. *Eichberg - Berlin - Müggelsberg - Glienicke.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} BGE \cdot \operatorname{Sin} BMG \cdot \operatorname{Sin} BEM}{\operatorname{Sin} BEG \cdot \operatorname{Sin} BGM \cdot \operatorname{Sin} BME}$$

$BGE = 78°\ 31'\ 34,''941 - (81)$	$BEG = 64°\ 23'\ 15,''795 + (67) - (59)$
$BMG = 81\ 54\ 41,696 - (87)$	$BGM = 41\ 25\ 12,300 + (78)$
$BEM = 30\ 31\ 53,592 + (64) - (59)$	$BME = 55\ 42\ 51,210 - (89)$

$9,9912333,2 + 0,20297 - (81)$	$9,9550812,5 + 0,47938\{(67) - (59)\}$
$9,9956580,9 + 0,14211 - (87)$	$9,8205789,0 + 1,13348\ (78)$
$9,7058746,2 + 1,69553\{(64) - (59)\}$	$\underline{9,9171052,4 + 0,68179 - (89)}$
$\underline{9,6927660,3}$	$9,6927653,9$
$9,6927653,9$	

$$0,0000006,4 \ldots 1,0000015$$
$$- 1, \ldots \ldots$$
$$+ 0,0000015 \ldots 4,17609$$
$$\underline{5,31443}$$
$$9,49052 \ldots + 0,309$$

$$0 = + 0,309 - 1,2162\,(59) + 1,6955\,(64) - 0,4794\,(67) - 1,1335\,(78) - 0,2030\,(81) - 0,1421\,(87) + 0,6818\,(89)$$

XXXVII. *Berlin - Müggelsberg - Ruhlsdorf.*

Berlin	86°	5'	43,''379	$+ (58) - (53)$
Müggelsberg . . .	48	11	58,472	$- (90)$
Ruhlsdorf	45	42	17,270	$+ (95)$
Summe	179	59	59,121	
$180° + \varepsilon$ . . .	180	0	0,929	

$$0 = \ | \ -1,''808 - (53) + (58) - (90) + (95)$$

XXXVIII. *Glienicke - Müggelsberg - Ruhlsdorf.*

Glienicke	82°	23'	12,''050	$+ (78) - (82)$
Müggelsberg . . .	33	42	43,224	$+ (90) - (87)$
Ruhlsdorf	63	54	4,920	$+ (97) - (95)$
Summe	180	0	0,194	
$180° + \varepsilon$ . . .	180	0	0,873	

$$0 = \ | \ -0,''679 + (78) - (82) - (87) + (90) - (95) + (97)$$

XXXIX. *Glienicke - Eichberg - Ruhlsdorf.*

Glienicke	37° 33′ 35,″191	+ (82) − (81)
Eichberg	51 14 17,276	+ (67) − (61)
Ruhlsdorf.	91 12 9,213	+ (98) − (97)
Summe.	180 0 1,680	
180° + ε . . .	180 0 0,426	

$$0 = \mid + 1,″254 - (61) + (67) - (81) + (82) - (97) + (98)$$

XL. *Berlin-Müggelsberg-Glienicke-Ruhlsdorf.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} MRG . \operatorname{Sin} MBR . \operatorname{Sin} MGB}{\operatorname{Sin} MGR . \operatorname{Sin} MRB . \operatorname{Sin} MBG}$$

$MRG = 63° 54′ 4,″920 + (97) − (95)$ $MGR = 82° 23′ 12,″050 + (78) − (82)$

$MBR = 86 \ 5 \ 43,379 + (58) − (53)$ $MRB = 45 \ 42 \ 17,270 + (95)$

$MGB = 41 \ 25 \ 12,300 + (78)$ $MBG = 56 \ 40 \ 6,561 + (56) − (53)$

$9{,}9532947{,}7 + 0{,}48987 \{(97) − (95)\}$ $9{,}9961545{,}9 + 0{,}13367 \{(78) − (82)\}$

$9{,}9989907{,}7 + 0{,}06825 \{(58) − (53)\}$ $9{,}8547621{,}0 + 0{,}97570 \ (95)$

$9{,}8205789{,}0 + 1{,}13348 \ (78)$ $9{,}9219492{,}2 + 0{,}65766 \{(56) − (53)\}$

$9{,}7728644{,}4$ $9{,}7728659{,}1$

$9{,}7728659{,}1$

$9{,}9999985{,}3 \ldots 0{,}9999966$

$- 1{,}\ldots\ldots$

$- 0{,}0000034 \ldots 4{,}53147 n$

$5{,}31443$

$9{,}84590 n \ldots - 0{,}701$

$$0 = - 0{,}701 + 0{,}5894 \ (53) - 0{,}6577 \ (56) + 0{,}0683 \ (58) + 0{,}9998 \ (78) + 0{,}1337 \ (82) - 1{,}4656 \ (95) + 0{,}4899 \ (97)$$

XLI. *Berlin-Glienicke-Eichberg-Ruhlsdorf.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} GRE . \operatorname{Sin} GBR . \operatorname{Sin} GEB}{\operatorname{Sin} GER . \operatorname{Sin} GRB . \operatorname{Sin} GBE}$$

$GRE = 91° 12′ 9,″213 + (98) − (97)$ $GER = 51° 14′ 17,″276 + (67) − (61)$

$GBR = 29 \ 25 \ 36,818 + (58) − (56)$ $GRB = 109 \ 36 \ 22,190 + (97)$

$GEB = 64 \ 23 \ 15,795 + (67) − (59)$ $GBE = 37 \ 5 \ 9,737 − (56)$

$$9,9999043\,,3 \; - \; 0,02099 \big\{ (98) - (97) \big\}$$
$$9,6913579\,,3 \; + \; 1,77277 \big\{ (58) - (56) \big\}$$
$$9,9550812\,,5 \; + \; 0,47938 \big\{ (67) - (59) \big\}$$
$$\overline{9,6463435\,,1}$$
$$9,6463459\,,3$$
$$\overline{9,9999975\,,8} \;\dots\; 0,9999944$$

$$9,8919581\,,0 \; + \; 0,80293 \big\{ (67) - (61) \big\}$$
$$9,9740607\,,6 \; - \; 0,35621 \; (97)$$
$$9,7803270\,,7 \; + \; 1,32291 \; - \; (56)$$
$$\overline{9,6463459\,,3}$$

$$\underline{- \; 1,\dots\dots}$$
$$- \; 0,0000056 \;\dots\; 4,74818\,n$$
$$\overline{5,31443}$$
$$\overline{0,06261\,n} \;\dots\; - \; 1,155$$

$$0 = -\,1,155 - 0,4499\,(56) + 1,7728\,(58) - 0,4794\,(59) + 0,8029\,(61) - 0,3236\,(67) + 0,3772\,(97) - 0,0210\,(98)$$

XLII. *Berlin - Müggelsberg - Rauenberg.*

Berlin	72°	10′	1,″694	$+$ (57) $-$ (53)
Müggelsberg . . .	25	20	59,301	$-$ (92)
Rauenberg	82	28	58,431	$+$ (99)
Summe	179	59	59,426	
180° $+\ \varepsilon$ . . .	180	0	0,368	

$$0 = \big| -\,0,″942 - (53) + (57) - (92) + (99)$$

XLIII. *Müggelsberg - Glienicke - Rauenberg.*

Müggelsberg . . .	56°	33′	42,″395	$+$ (92) $-$ (87)
Glienicke	47	31	1,842	$+$ (78) $-$ (84)
Rauenberg	75	55	16,887	$+$ (104) $-$ (99)
Summe	180	0	1,124	
180° $+\ \varepsilon$ . . .	180	0	0,905	

$$0 = \big| +\,0,″219 + (78) - (84) - (87) + (92) - (99) + (104)$$

XLIV. *Glienicke - Ruhlsdorf - Rauenberg.*

Glienicke	34°	52′	10,″208	$+$ (84) $-$ (82)
Ruhlsdorf	100	7	25,446	$+$ (97) $-$ (93)
Rauenberg	45	0	23,093	$+$ (106) $-$ (104)
Summe	179	59	58,747	
180° $+\ \varepsilon$ . . .	180	0	0,433	

$$0 = \big| -\,1,″686 - (82) + (84) - (93) + (97) - (104) + (106)$$

XLV. *Glienicke - Eichberg - Rauenberg.*

Glienicke	72° 25′ 45,″399 + (84) − (81)
Eichberg	56 59 47, 286 + (67) − (60)
Rauenberg . . .	50 34 26, 352 + (107) − (104)
Summe	179 59 59, 037
180° + ε . . .	180 0 0, 926

$$0 = | -1,″889 - (60) + (67) - (81) + (84) - (104) + (107)$$

XLVI. *Berlin - Müggelsberg - Glienicke - Rauenberg.*

$$\text{Bedingung} \ldots\ 1 = \frac{\text{Sin } MRB \cdot \text{Sin } MGR \cdot \text{Sin } MBG}{\text{Sin } MBR \cdot \text{Sin } MRG \cdot \text{Sin } MGB}$$

$MRB = 82° 28′ 58,″431 + (99)$ $MBR = 72° 10′ 1,″694 + (57) − (53)$

$MGR = 47\ 31\ 1, 842 + (78) − (84)$ $MRG = 75\ 55\ 16, 887 + (104) − (99)$

$MBG = 56\ 40\ 6, 561 + (56) − (53)$ $MGB = 41\ 25\ 12, 300 + (78)$

9,9962514 , 6 + 0,13196 (99)	9,9786159 , 3 + 0,32170 $\{$ (57) − (53) $\}$
9,8677501 , 6 + 0,91578 $\{$ (78) − (84) $\}$	9,9867550 , 5 + 0,25079 $\{$ (104) − (99) $\}$
9,9219492 , 2 + 0,65766 $\{$ (56) − (53) $\}$	9,8205789 , 0 + 1,13348 (78)
9,7859508 , 4	9,7859498 , 8
9,7859498 , 8	
0,0000009 , 6 1,0000022	

$$- 1, \ldots\ldots$$
$$+ \ \overline{0,0000022} \ldots\ 4,34242$$
$$5,31443$$
$$\overline{9,65685} \ldots\ + 0,454$$

$θ = + 0,454 - 0,3360 \ (53) + 0,6577 \ (56) - 0,3217 \ (57) - 0,2177 \ (78) - 0,9158 \ (84) + 0,3828 \ (99) - 0,2508 \ (104)$

XLVII. *Müggelsberg - Glienicke - Ruhlsdorf - Rauenberg.*

$$\text{Bedingung} \ldots\ 1 = \frac{\text{Sin } MR_f R_g \cdot \text{Sin } MGR_f \cdot \text{Sin } MR_g G}{\text{Sin } MR_g R_f \cdot \text{Sin } MR_f G \cdot \text{Sin } MGR_g}$$

$MR_f R_g = 36° 13′ 20,″526 + (95) − (93)$ $MR_g R_f = 120° 55′ 39,″980 + (106) − (99)$

$MGR_f = 82\ 23\ 12, 050 + (78) − (82)$ $MR_f G = 63\ 54\ 4, 920 + (97) − (95)$

$MR_g G = 75\ 55\ 16, 887 + (104) − (99)$ $MGR_g = 47\ 31\ 1, 842 + (78) − (84)$

$9,7715292 , 1 + 1,36521 \{(95) - (93)\}$
$9,9961545 , 9 + 0,13367 \{(78) - (82)\}$
$9,9867550 , 5 + 0,25079 \{(104) - (99)\}$
$9,7544388 , 5$
$9,7544390 , 6$
$9,9999997 , 9 \dots 0,9999995$
$\qquad - 1, \dots\dots$
$\qquad - 0,0000005 \dots 3,69897\,n$
$\qquad\qquad 5,31443$
$\qquad\qquad 9,01340\,n \dots - 0,103$

$9,9333941 , 3 - 0,59915 \{(106) - (99)\}$
$9,9532947 , 7 + 0,48987 \{(97) - (95)\}$
$9,8677501 , 6 + 0,91578 \{(78) - (84)\}$
$9,7544390 , 6$

$0 = - 0,103 - 0,7821\,(78) - 0,1337\,(82) + 0,9158\,(84) - 1,3652\,(93) + 1,8551\,(95) - 0,4899\,(97) - 0,8499\,(99) + 0,2508\,(104)$
$+ 0,5992\,(106)$

XLVIII. *Müggelsberg-Glienicke-Eichberg-Rauenberg.*

$$\text{Bedingung} \dots 1 = \frac{\operatorname{Sin} RGM . \operatorname{Sin} REG . \operatorname{Sin} RME}{\operatorname{Sin} RMG . \operatorname{Sin} RGE . \operatorname{Sin} REM}$$

$RGM = 47° 31' \; 1,''842 + (78) - (84)$ $RMG = 56° 33' 42,''395 + (92) - (87)$
$REG = 56 \;\; 59 \;\; 47 , 286 + (67) - (60)$ $RGE = 72 \;\; 25 \;\; 45 , 399 + (84) - (81)$
$RME = 30 \;\; 21 \;\; 51 , 909 + (92) - (89)$ $REM = 23 \;\;\; 8 \;\; 25 , 083 + (64) - (60)$

$9,8677501 , 6 + 0,91578 \{(78) - (84)\}$
$9,9235740 , 1 + 0,64950 \{(67) - (60)\}$
$9,7037194 , 7 + 1,70689 \{(92) - (89)\}$
$9,4950436 , 4$
$9,4950411 , 1$
$0,0000025 , 3 \dots 1,0000058$
$\qquad - 1, \dots\dots$
$\qquad + 0,0000058 \dots 4,76342$
$\qquad\qquad 5,31443$
$\qquad\qquad 0,07785 \dots + 1,196$

$9,9214161 , 3 + 0,66034 \{(92) - (87)\}$
$9,9792501 , 2 + 0,31666 \{(84) - (81)\}$
$9,5943748 , 6 + 2,33991 \{(64) - (60)\}$
$9,4950411 , 1$

$0 = + 1,196 + 1,6904\,(60) - 2,3399\,(64) + 0,6495\,(67) + 0,9158\,(78) + 0,3167\,(81) - 1,2324\,(84) + 0,6603\,(87)$
$- 1,7069\,(89) + 1,0466\,(92)$

XLIX. *Eichberg-Berlin-Ziethen.*

Eichberg	31° 37'	35,''166	+ (65) - (59)
Berlin	47 11	19 , 023	- (55)
Ziethen	101 11	8 , 034	+ (110) - (114)
Summe	180 0	2 , 223	
180° + ε . . .	180 0	0 , 927	

$0 = | + 1,''296 - (55) - (59) + (65) + (110) - (114)$

L. *Eichberg - Glienicke - Ziethen.*

Eichberg	32° 45′ 40,″629	+ (67) — (65)
Glienicke	91 54 58,288	+ (77) — (81)
Ziethen	55 19 21,406	+ (114) — (113)
Summe	180 0 0,323	
180° + ε . . .	180 0 0,589	

$$0 = | -0,″266 - (65) + (67) + (77) - (81) - (113) + (114)$$

LI. *Ruhlsdorf - Glienicke - Ziethen.*

Ruhlsdorf	53° 26′ 48,″254	+ (97) — (96)
Glienicke	54 21 23,097	+ (77) — (82)
Ziethen	72 11 48,564	+ (115) — (113)
Summe	179 59 59,915	
180° + ε . . .	180 0 0,373	

$$0 = | -0,″458 + (77) - (82) - (96) + (97) - (113) + (115)$$

LII. *Ruhlsdorf - Rauenberg - Ziethen.*

Ruhlsdorf	46° 40′ 37,″192	+ (96) — (93)
Rauenberg . . .	70 15 36,689	+ (106) — (103)
Ziethen	63 3 45,580	+ (108) — (115)
Summe	179 59 59,461	
180° + ε . . .	180 0 0,273	

$$0 = | -0,″812 - (93) + (96) - (103) + (106) + (108) - (115)$$

LIII. *Rauenberg - Müggelsberg - Ziethen.*

Rauenberg	50° 40′ 3,″291	+ (103) — (99)
Müggelsberg . . .	32 8 34,509	+ (92) — (88)
Ziethen	97 11 22,735	+ (112) — (108)
Summe	180 0 0,535	
180° + ε . . .	180 0 0,342	

$$0 = | +0,″193 - (88) + (92) - (99) + (103) - (108) + (112)$$

LIV. *Rauenberg - Berlin - Müggelsberg - Ziethen.*

$$\text{Bedingung} \ldots\ 1 = \frac{\operatorname{Sin} MRB \cdot \operatorname{Sin} MZR \cdot \operatorname{Sin} MBZ}{\operatorname{Sin} MBR \cdot \operatorname{Sin} MRZ \cdot \operatorname{Sin} MZB}$$

$MRB = 82° 28′ 58,″431 + (99)$ $\qquad$ $MBR = 72° 10′ 1,″694 + (57) - (53)$
$MZR = 97 11 22,735 + (112) - (108)$ $\qquad$ $MRZ = 50 40 3,291 + (103) - (99)$
$MBZ = 46 33 57,275 + (55) - (53)$ $\qquad$ $MZB = 75 56 27,439 + (112) - (110$

9,9962514 , 6 $+$ 0,13196 (99)
9,9965717 , 9 $-$ 0,12615$\{$(112)$-$(108)$\}$
9,8610357 , 5 $+$ 0,94678$\{$(55) $-$ (53)$\}$
9,8538590 , 0
9,8538582 , 6
0,0000007 , 4 1,0000017
$-$ 1,.......
$+$ 0,0000017 4,23044
5,31443
9,54487 .... $+$ 0,351

9,9786159 , 3 $+$ 0,32170$\{$(57) $-$ (53)$\}$
9,8884500 , 6 $+$ 0,81944$\{$(103) $-$ (99)$\}$
9,9867922 , 7 $+$ 0,25042$\{$(112)$-$(110)$\}$
9,8538582 , 6

$0 = + 0,351 - 0,6251$ (53) $+ 0,9468$ (55) $- 0,3217$ (57) $+ 0,9514$ (99) $- 0,8194$ (103) $+ 0,1262$ (108) $+ 0,2504$ (110) $- 0,3766$ (112)

LV. *Rauenberg-Müggelsberg-Glienicke-Ziethen.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } MZR . \text{Sin } MGZ . \text{Sin } MRG}{\text{Sin } MRZ . \text{Sin } MZG . \text{Sin } MGR}$$

$MZR =$ 97° 11′ 22,″735 $+$ (112) $-$ (108)
$MGZ =$ 28 1 48,953 $+$ (78) $-$ (77)
$MRG =$ 75 55 16,887 $+$ (104) $-$ (99)

$MRZ =$ 50° 40′ 3,″291 $+$ (103) $-$ (99)
$MZG =$ 127 33 3,121 $+$ (113) $-$ (112)
$MGR =$ 47 31 1,842 $+$ (78) $-$ (84)

9,9965717 , 9 $-$ 0,12615$\{$(112)$-$(108)$\}$
9,6720404 , 6 $+$ 1,87833$\{$(78) $-$ (77)$\}$
9,9867550 , 5 $+$ 0,25079$\{$(104) $-$ (99)$\}$
9,6553673 , 0
9,6553707 , 6
9,9999965 , 4 0,9999920
$-$ 1,.......
$-$ 0,0000080 .... 4,90309n
5,31443
0,21752n .... $-$ 1,650

9,8884500 , 6 $+$ 0,81944$\{$(103) $-$ (99)$\}$
9,8991705 , 4 $-$ 0,76874$\{$(113)$-$(112)$\}$
9,8677501 , 6 $+$ 0,91578$\{$(78) $-$ (84)$\}$
9,6553707 , 6

$0 = - 1,650 - 1,8783$ (77) $+ 0,9626$ (78) $+ 0,9158$ (84) $+ 0,5687$ (99) $- 0,8194$ (103) $+ 0,2508$ (104) $+ 0,1262$ (108) $- 0,8949$ (112) $+ 0,7687$ (113)

LVI. *Glienicke-Ruhlsdorf-Rauenberg-Ziethen.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } R_fZG . \text{Sin } R_fR_gZ . \text{Sin } R_fGR_g}{\text{Sin } R_fGZ . \text{Sin } R_fZR_g . \text{Sin } R_fR_gG}$$

$R_fZG =$ 72° 11′ 48,″564 $+$ (115) $-$ (113)
$R_fR_gZ =$ 70 15 36,689 $+$ (106) $-$ (103)
$R_fGR_g =$ 34 52 10,208 $+$ (84) $-$ (82)

$R_fGZ =$ 54° 21′ 23,″097 $+$ (77) $-$ (82)
$R_fZR_g =$ 63 3 45,580 $+$ (108) $-$ (115)
$R_fR_gG =$ 45 0 23,093 $+$ (106) $-$ (104)

9,9786882 , 2 $+$ 0,32113$\{$(115) $-$ (113)$\}$ 9,9099076 , 8 $+$ 0,71708$\{$(77) $-$ (82)$\}$
9,9736985 , 8 $+$ 0,35884$\{$(106) $-$ (103)$\}$ 9,9501225 , 7 $+$ 0,50815$\{$(108) $-$ (115)$\}$
9,7571752 , 3 $+$ 1,43509$\{$(84) $-$ (82)$\}$ 9,8495336 , 3 $+$ 0,99978$\{$(106) $-$ (104)$\}$
9,7095620 , 3   9,7095638 , 8
9,7095638 , 8
9,9999981 , 5 0,9999957
$-$ 1, ...
$-$ 0,0000043 .... Log 4,63346 n
5,31443
9,94789 n .... $-$ 0,887

0 $=$ $-$ 0,887 $-$ 0,7171 (77) $-$ 0,7180 (82) $+$ 1,4351 (84) $-$ 0,3588 (103) $+$ 0,9998 (104) $-$ 0,6409 (106) $-$ 0,5082 (108)
$-$ 0,3211 (113) $+$ 0,8293 (115)

LVII. *Glienicke - Eichberg - Rauenberg - Ziethen.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin} \, EZG \cdot \text{Sin} \, ERZ \cdot \text{Sin} \, EGR}{\text{Sin} \, EGZ \cdot \text{Sin} \, EZR \cdot \text{Sin} \, ERG}$$

$EZG =$ 55° 19′ 21,″406 $+$ (114) $-$ (113) $EGZ =$ 91° 54′ 58,″288 $+$ (77) $-$ (81)
$ERZ =$ 75 49 39 , 948 $+$ (107) $-$ (103) $EZR =$ 79 56 12 , 738 $+$ (108) $-$ (114)
$EGR =$ 72 25 45 , 399 $+$ (84) $-$ (81) $ERG =$ 50 34 26 , 352 $+$ (107) $-$ (104)

9,9150665 , 5 $+$ 0,69185$\{$(114) $-$ (113)$\}$ 9,9997571 , 2 $-$ 0,03346$\{$(77) $-$ (81)$\}$
9,9865765 , 7 $+$ 0,25252$\{$(107) $-$ (103)$\}$ 9,9932668 , 1 $+$ 0,17746$\{$(108) $-$ (114)$\}$
9,9792501 , 2 $+$ 0,31666$\{$(84) $-$ (81)$\}$ 9,8878677 , 5 $+$ 0,82217$\{$(107) $-$ (104)$\}$
9,8808932 , 4   9,8808916 , 8
9,8808916 , 8
0,0000015 , 6 1,0000036
$-$ 1, ...
$+$ 0,0000036 4,55630
5,31443
9,87073 .... $+$ 0,743

0 $=$ $+$ 0,743 $+$ 0,0335 (77) $-$ 0,3501 (81) $+$ 0,3167 (84) $-$ 0,2525 (103) $+$ 0,8222 (104) $-$ 0,5697 (107) $-$ 0,1775 (108)
$-$ 0,6919 (113) $+$ 0,8693 (114)

LVIII. *Müggelsberg - Ziethen - Buckow.*

Müggelsberg . . .	21° 58′ 35,″200 $+$ (91) $-$ (88)
Ziethen	70 17 43 , 127 $+$ (112) $-$ (111)
Buckow	87 43 41 , 490 $-$ (131)
Summe	179 59 59 , 817
180° $+$ ε . . .	180 0 0 , 177
0 $=$	$-$ 0,″360 $-$ (88) $+$ (91) $-$ (111) $+$ (112) $-$ (131)

LIX. *Müggelsberg-Glienicke-Buckow*.

Müggelsberg . . .	$46°$ $23'$ $43,''086$	$+ (91) - (87)$
Glienicke	33 20 $5,476$	$+ (78) - (76)$
Buckow	100 16 $12,014$	$+ (124) - (131)$
Summe	180 0 $0,576$	
$180° + \varepsilon$ . . .	180 0 $0,577$	

$$0 = \mid -0,''001 - (76) + (78) - (87) + (91) + (124) - (131)$$

LX. *Ziethen-Rauenberg-Buckow*.

Ziethen	$26°$ $53'$ $39,''608$	$+ (111) - (108)$
Rauenberg	25 35 $4,801$	$+ (103) - (100)$
Buckow	127 31 $15,402$	$+ (130)$
Summe	179 59 $59,811$	
$180° + \varepsilon$ . . .	180 0 $0,058$	

$$0 = \mid -0,''247 - (100) + (103) - (108) + (111) + (130)$$

LXI. *Glienicke-Eichberg-Buckow*.

Glienicke	$86°$ $36'$ $41,''765$	$+ (76) - (81)$
Eichberg	44 26 $50,585$	$+ (67) - (63)$
Buckow	48 56 $28,106$	$+ (126) - (124)$
Summe . . .	180 0 $0,456$	
$180° + \varepsilon$ . . .	180 0 $0,830$	

$$0 = \mid -0,''374 - (63) + (67) + (76) - (81) - (124) + (126)$$

LXII. *Müggelsberg-Ziethen-Rauenberg-Buckow*.

Bedingung .... $1 = \dfrac{\text{Sin } ZBR \cdot \text{Sin } ZMB \cdot \text{Sin } ZRM}{\text{Sin } ZRB \cdot \text{Sin } ZBM \cdot \text{Sin } ZMR}$

$ZBR = 127°\ 31'\ 15,''402 + (130)$ $\qquad ZRB = 25°\ 35'\ 4,''801 + (103) - (100)$

$ZMB = 21\ 58\ 35,200 + (91) - (88)$ $\qquad ZBM = 87\ 43\ 41,490 - (131)$

$ZRM = 50\ 40\ 3,291 + (103) - (99)$ $\qquad ZMR = 32\ 8\ 34,509 + (92) - (88)$

$9,8993448,0 - 0,76791 \,(130)$ $\qquad 9,6353272,8 + 2,08859\{(103) - (100)\}$

$9,5731332,4 + 2,47802\{(91) - (88)\}$ $\qquad 9,9996585,2 + 0,03967 - (131)$

$9,8884500,6 + 0,81944\{(103) - (99)\}$ $\qquad 9,7259386,1 + 1,59149\{(92) - (88)\}$

$9,3609281,0$ $\qquad\qquad\qquad\qquad\qquad 9,3609244,1$

$9,3609244,1$

$0,0000036,9 \ldots 1,0000085$

$- 1,\ldots\ldots$

$+ 0,0000085 \ldots 4,92941$

$5,31443$

$0,24384 \ldots + 1,753$

$$0 = + 1,753 - 0,8865\,(88) + 2,4780\,(91) - 1,5915\,(92) - 0,8194\,(99) + 2,0886\,(100) - 1,2692\,(103) - 0,7679\,(130) + 0,0397\,(131)$$

LXIII. *Müggelsberg - Glienicke - Rauenberg - Buckow.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } GBM \cdot \text{Sin } GRB \cdot \text{Sin } GMR}{\text{Sin } GMB \cdot \text{Sin } GBR \cdot \text{Sin } GRM}$$

$GBM = 100° \ 16' \ 12,''014 + (124) - (131)$ $GMB = 46° \ 23' \ 43,''086 + (91) - (87)$

$GRB = 50 \ 50 \ 18,397 + (104) - (100)$ $GBR = 114 \ 58 \ 44,878 + (130) - (124)$

$GMR = 56 \ 33 \ 42,395 + (92) - (87)$ $GRM = 75 \ 55 \ 16,887 + (104) - (99)$

$9,9929856 , 3 \ - \ 0,18119\{(124) - (131)\}$ $9,8598077 , 0 \ + \ 0,95244\{(91) - (87)\}$

$9,8895080 , 6 \ + \ 0,81446\{(104) - (100)\}$ $9,9573494 , 2 \ - \ 0,46586\{(130) - (124)\}$

$\underline{9,9214161 , 3 \ + \ 0,66034\{(92) - (87)\}}$ $\underline{9,9867550 , 5 \ + \ 0,25079\{(104) - (99)\}}$

$9,8039098 , 2$ $9,8039121 , 7$

$\underline{9,8039121 , 7}$

$9,9999976 , 5 \ \dots \ 0,9999945$

           $\underline{- \ 1, \dots \dots}$

           $- \ 0,0000055 \ \dots \ 4,74036 \, n$

                  $\underline{5,31443}$

              $0,05479 \, n \ \dots \ - \ 1,134$

$0 = - 1,134 + 0,2921 \, (87) - 0,9524 \, (91) + 0,6603 \, (92) + 0,2508 \, (99) - 0,8145 \, (100) + 0,5637 \, (104) - 0,6471 \, (124)$
$+ \ 0,4659 \, (130) + 0,1812 \, (131)$

LXIV. *Müggelsberg - Glienicke - Eichberg - Buckow.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } GBM \cdot \text{Sin } GEB \cdot \text{Sin } GME}{\text{Sin } GMB \cdot \text{Sin } GBE \cdot \text{Sin } GEM}$$

$GBM = 100° \ 16' \ 12,''014 + (124) - (131)$ $GMB = 46° \ 23' \ 43,''086 + (91) - (87)$

$GEB = 44 \ 26 \ 50,585 + (67) - (63)$ $GBE = 48 \ 56 \ 28,106 + (126) - (124)$

$GME = 26 \ 11 \ 50,486 + (89) - (87)$ $GEM = 33 \ 51 \ 22,203 + (67) - (64)$

$9,9929856 , 3 \ - \ 0,18119\{(124) - (131)\}$ $9,8598077 , 0 \ + \ 0,95244\{(91) - (87)\}$

$9,8452555 , 6 \ + \ 1,01948\{(67) - (63)\}$ $9,8773916 , 3 \ + \ 0,87109\{(126) - (124)\}$

$\underline{9,6448957 , 8 \ + \ 2,03250\{(89) - (87)\}}$ $\underline{9,7459409 , 2 \ + \ 1,49062\{(67) - (64)\}}$

$9,4831369 , 7$ $9,4831402 , 5$

$\underline{9,4831402 , 5}$

$9,9999967 , 2 \ \dots \ 0,9999924$

           $\underline{- \ 1, \dots \dots}$

           $- \ 0,0000076 \ \dots \ \text{Log} \ 4,88081 \, n$

                  $\underline{5,31443}$

              $0,19524 \, n \ \dots \ - \ 1,568$

$0 = - 1,568 - 1,0195 \, (63) + 1,4906 \, (64) - 0,4711 \, (67) - 1,0801 \, (87) + 2,0325 \, (89) - 0,9524 \, (91) + 0,6899 \, (124)$
$- \ 0,8711 \, (126) + 0,1812 \, (131)$

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LXV. *Rauenberg - Buckow - Marienfelde.*

Rauenberg	51° 36′ 51,″739	+ (105) − (100)
Buckow	51 25 36 , 005	+ (130) − (128)
Marienfelde . . .	76 57 30 , 598	+ (117)
Summe	179 59 58 , 342	
180° + ε . . .	180 0 0 , 048	

$$0 = | -1,″706 - (100) + (105) + (117) - (128) + (130)$$

LXVI. *Buckow - Ziethen - Marienfelde.*

Buckow	76° 5′ 39,″397	+ (128)
Ziethen	45 43 55 , 974	+ (111)
Marienfelde . . .	58 10 25 , 397	+ (120) − (117)
Summe	180 0 0 , 768	
180° + ε . . .	180 0 0 , 057	

$$0 = | + 0,″711 + (111) - (117) + (120) + (128)$$

LXVII. *Ziethen - Ruhlsdorf - Marienfelde.*

Ziethen	44° 13′ 29,″214	− (115)
Ruhlsdorf	27 5 41 , 443	+ (96) − (94)
Marienfelde . . .	108 40 49 , 666	+ (123) − (120)
Summe	180 0 0 , 323	
180° + ε . . .	180 0 0 , 133	

$$0 = | + 0,″190 - (94) + (96) - (115) - (120) + (123)$$

LXVIII. *Glienicke - Ruhlsdorf - Marienfelde.*

Glienicke	34° 39′ 17,″474	+ (83) − (82)
Ruhlsdorf	80 32 29 , 697	+ (97) − (94)
Marienfelde . . .	64 48 13 , 265	+ (123) − (121)
Summe	180 0 0 , 436	
180° + ε . . .	180 0 0 , 338	

$$0 = | + 0,″098 - (82) + (83) - (94) + (97) - (121) + (123)$$

LXIX. *Glienicke - Eichberg - Marienfelde.*

Glienicke	72° 12′ 52,″665	+ (83) − (81)
Eichberg	47 33 34 , 441	+ (67) − (62)
Marienfelde . . .	60 13 33 , 551	+ (122) − (121)
Summe	180 0 0 , 657	
180° + ε . . .	180 0 0 , 725	

$$0 = | - 0,″068 - (62) + (67) - (81) + (83) - (121) + (122)$$

LXX. *Rauenberg - Buckow - Ziethen - Marienfelde.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} BMR \cdot \operatorname{Sin} BZM \cdot \operatorname{Sin} BRZ}{\operatorname{Sin} BRM \cdot \operatorname{Sin} BMZ \cdot \operatorname{Sin} BZR}$$

$BMR = 76° 57' 30,''598 + (117)$ $BRM = 51° 36' 51,''739 + (105) - (100)$

$BZM = 45 \quad 43 \quad 55,974 + (111)$ $BMZ = 58 \quad 10 \quad 25,397 + (120) - (117)$

$BRZ = 25 \quad 35 \quad 4,801 + (103) - (100)$ $BZR = 26 \quad 53 \quad 39,608 + (111) - (108)$

$9,9886511,9 + 0,23163 \ (117)$	$9,8942325,0 + 0,79218\{(105)-(100)\}$
$9,8549647,5 + 0,97476 \ (111)$	$9,9292405,2 + 0,62066\{(120)-(117)\}$
$9,6353272,8 + 2,08859\{(103)-(100)\}$	$9,6554712,7 + 1,97159\{(111)-(108)\}$
$9,4789432,2$	$9,4789442,9$
$9,4789442,9$	
$9,9999989,3 \ldots \quad 0,9999975$	

$$- 1, \ldots \ldots$$
$$- 0,0000025 \ldots \text{Log } 4,39794n$$
$$\underline{5,31443}$$
$$9,71237 n \ldots - 0,516$$

$0 = - 0,516 - 1,2964 \ (100) + 2,0886 \ (103) - 0,7922 \ (105) + 1,9716 \ (108) - 0,9968 \ (111) + 0,8523 \ (117) - 0,6207 \ (12$

LXXI. *Rauenberg - Ziethen - Ruhlsdorf - Marienfelde.*

$$\text{Bedingung} \ldots 1 = \frac{\operatorname{Sin} R_f M R_g \cdot \operatorname{Sin} R_f Z M \cdot \operatorname{Sin} R_f R_g Z}{\operatorname{Sin} R_f R_g M \cdot \operatorname{Sin} R_f M Z \cdot \operatorname{Sin} R_f Z R_g}$$

$R_f M R_g = 116° 11' 14,''339 - (123)$ $R_f R_g M = 44° 13' 49,''751 + (106) - (105)$

$R_f Z M = 44 \quad 13 \quad 29,214 - (115)$ $R_f M Z = 108 \quad 40 \quad 49,666 + (123) - (120)$

$R_f R_g Z = 70 \quad 15 \quad 36,689 + (106) - (103)$ $R_f Z R_g = 63 \quad 3 \quad 45,580 + (108) - (115)$

$9,9529647,9 - 0,49179 \ - (123)$	$9,8435731,6 + 1,02723\{(106)-(105)\}$
$9,8435287,0 + 1,02743 \ - (115)$	$9,9764965,4 - 0,33810\{(123)-(120)\}$
$9,9736985,8 + 0,35884\{(106)-(103)\}$	$9,9501225,7 + 0,50815\{(108)-(115)\}$
$9,7701920,7$	$9,7701922,7$
$9,7701922,7$	
$9,9999998,0 \ldots \quad 0,9999995$	

$$- 1, \ldots \ldots$$
$$- 0,0000005 \ldots \text{Log } 3,69897n$$
$$\underline{5,31443}$$
$$9,01340 n \ldots - 0,103$$

$0 = - 0,103 - 0,3588 \ (103) + 1,0272 \ (105) - 0,6684 \ (106) - 0,5082 \ (108) - 0,5193 \ (115) - 0,3381 \ (120) + 0,8299 \ (123)$

LXXII. *Ziethen-Glienicke-Ruhlsdorf-Marienfelde.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } RZM \cdot \text{Sin } RGZ \cdot \text{Sin } RMG}{\text{Sin } RMZ \cdot \text{Sin } RZG \cdot \text{Sin } RGM}$$

$RZM = 44° \ 13' \ 29,''214 - (115)$ $RMZ = 108° \ 40' \ 49,''666 + (123) - (120)$

$RGZ = 54 \quad 21 \quad 23,097 + (77) - (82)$ $RZG = 72 \quad 11 \quad 48,564 + (115) - (113)$

$RMG = 64 \quad 48 \quad 13,265 + (123) - (121)$ $RGM = 34 \quad 39 \quad 17,474 + (83) - (82)$

$9,8435287,0 + 1,02743 - (115)$ $9,9764965,4 - 0,33810\{(123)-(120)\}$

$9,9099076,8 + 0,71708\{(77)-(82)\}$ $9,9786882,2 + 0,32113\{(115)-(113)\}$

$9,9565787,3 + 0,47049\{(123)-(121)\}$ $9,7548309,2 + 1,44662\{(83)-(82)\}$

$9,7100151,1$ $9,7100156,8$

$9,7100156,8$

$9,9999994,3 \ldots 0,9999987$

$-1,\ldots\ldots$

$-0,0000013 \ldots \text{Log } 4,11394n$

$5,31443$

$9,42837n \ldots -0,268$

$0 = -0,268 + 0,7171\,(77) + 0,7295\,(82) - 1,4466\,(83) + 0,3211\,(113) - 1,3486\,(115) - 0,3381\,(120) - 0,4705\,(121)$
$+ 0,8086\,(123)$

LXXIII. *Glienicke-Eichberg-Ruhlsdorf-Marienfelde.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } GRE \cdot \text{Sin } GMR \cdot \text{Sin } GEM}{\text{Sin } GER \cdot \text{Sin } GRM \cdot \text{Sin } GME}$$

$GRE = 91° \ 12' \ 9,''213 + (98) - (97)$ $GER = 51° \ 14' \ 17,''276 + (67) - (61)$

$GMR = 64 \quad 48 \quad 13,265 + (123) - (121)$ $GRM = 80 \quad 32 \quad 29,697 + (97) - (94)$

$GEM = 47 \quad 33 \quad 34,441 + (67) - (62)$ $GME = 60 \quad 13 \quad 33,551 + (122) - (121)$

$9,9999043,3 - 0,02099\{(98)-(97)\}$ $9,8919581,0 + 0,80293\{(67)-(61)\}$

$9,9565787,3 + 0,47049\{(123)-(121)\}$ $9,9940552,9 + 0,16660\{(97)-(94)\}$

$9,8680441,7 + 0,91442\{(67)-(62)\}$ $9,9385151,0 + 0,57210\{(122)-(121)\}$

$9,8245272,3$ $9,8245284,9$

$9,8245284,9$

$9,9999987,4 \ldots 0,9999970$

$-1,\ldots\ldots$

$-0,0000030 \ldots \text{Log } 4,47712n$

$5,31443$

$9,79155n \ldots -0,619$

$0 = -0,619 + 0,8029\,(61) - 0,9144\,(62) + 0,1115\,(67) + 0,1666\,(94) - 0,1456\,(97) - 0,0210\,(98) + 0,1016\,(121)$
$- 0,5721\,(122) + 0,4705\,(123)$

LXXIV. *Marienfelde - Rauenberg - B.*

Marienfelde	78°	50′	39,″101	+ (118)
Rauenberg	29	11	29,701	+ (105) — (102)
B	71	57	50,614	+ (136) — (135)
Summe	179	59	59,416	
180° + ε . . .	180	0	0,025	

$$0 = | - 0,″609 - (102) + (105) + (118) - (135) + (136)$$

LXXV. *Rauenberg - Buckow - B.*

Rauenberg	22°	25′	22,″038	+ (102) — (100)
Buckow	53	23	59,555	+ (130) — (127)
B	104	10	37,231	+ (138) — (136)
Summe . . .	179	59	58,824	
180° + ε . . .	180	0	0,024	

$$0 = | - 1,″200 - (100) + (102) - (127) + (130) - (136) + (138)$$

LXXVI. *Buckow - Ziethen - B.*

Buckow	74°	7′	15,″847	+ (127)
Ziethen	24	4	20,964	+ (111) — (109)
B	81	48	24,155	+ (139) — (138)
Summe	180	0	0,966	
180° + ε . . .	180	0	0,028	

$$0 = | + 0,″938 - (109) + (111) + (127) - (138) + (139)$$

LXXVII. *Buckow - Rauenberg - Marienfelde - B.*

$$\text{Bedingung} \ldots\ 1 = \frac{\text{Sin } RBM \cdot \text{Sin } RB^wB \cdot \text{Sin } RMB^w}{\text{Sin } RMB \cdot \text{Sin } RBB^w \cdot \text{Sin } RB^wM}$$

RBM = 71° 57′ 50,″614 + (136) — (135)	RMB = 78° 50′ 39,″101 + (118)
RB^wB = 53 23 59,555 + (130) — (127)	RBB^w =104 10 37,231 + (138) — (136)
RMB^w = 76 57 30,598 + (117)	RB^wM = 51 25 36,005 + (130) — (128)

9,9781177 , 2 + 0,32561 { (136) — (135) }	9,9917153 , 3 + 0,19720 (118)
9,9046161 , 1 + 0,74267 { (130) — (127) }	9,9865673 , 7 — 0,25261 { (138) — (136) }
9,9886511 , 9 + 0,23163 (117)	9,8931016 , 9 + 0,79753 { (130) — (128) }
9,8713850 , 2	9,8713843 , 9
9,8713843 , 9	
0,0000006 , 3 1,0000015	

$$- 1, \ldots \ldots$$
$$+ 0,0000015 \ldots 4,17609$$
$$5,31443$$
$$9,49052 \ldots + 0,309$$

$$0 = + 0,309 + 0,2316\,(117) - 0,1972\,(118) - 0,7427\,(127) + 0,7975\,(128) - 0,0549\,(130) - 0,3256\,(135) + 0,0730\,(136)$$
$$+ 0,2526\,(138)$$

LXXVIII. *Buckow-Ziethen-Marienfelde-B.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } ZBB^w \cdot \text{Sin } ZMB \cdot \text{Sin } ZB^w M}{\text{Sin } ZB^w B \cdot \text{Sin } ZBM \cdot \text{Sin } ZMB^w}$$

$ZBB^w = 81°\ 48'\ 24,''155 + (139) - (138)$ $ZB^w B = 74°\ 7'\ 15,''847 + (127)$

$ZMB = 56\ \ 17\ \ 16,894 + (120) - (118)$ $ZBM = 102\ \ 3\ \ 8,000 + (135) - (139)$

$ZB^w M = 76\ \ 5\ \ 39,397 + (128)$ $ZMB^w = 58\ \ 10\ \ 25,397 + (120) - (117)$

$9,9955443,5 + 0,14398\{(139)-(138)\}$	$9,9831037,1 + 0,28446\ (127)$
$9,9200388,2 + 0,66722\{(120)-(118)\}$	$9,9903201,0 - 0,21351\{(135)-(139)\}$
$9,9870816,9 + 0,24758\ (128)$	$9,9292405,2 + 0,62066\{(120)-(117)\}$
$\underline{9,9026648,6}$	$\underline{9,9026643,3}$
$9,9026643,3$	

$\underline{0,0000005,3} \ldots\ 1,0000012$

$- 1, \ldots \ldots$

$\underline{+ 1,0000012} \ldots 4,07918$

$\quad\quad\quad\quad\quad\quad 5,31443$

$\quad\quad\quad\quad\quad\quad \underline{9,39361} \ldots + 0,248$

$0 = + 0{,}248 + 0{,}6207\ (117) - 0{,}6672\ (118) + 0{,}0466\ (120) - 0{,}2845\ (127) + 0{,}2476\ (128) + 0{,}2135\ (135) - 0{,}1440\ (138)$
$\quad\quad - 0{,}0695\ (139)$

LXXIX. *Marienfelde-Rauenberg-C.*

Marienfelde	49° 49′	8,″899 + (116)
Rauenberg	33 2	35,470 + (105) − (101)
C	97 8	15,268 + (134) − (133)
Summe	179 59	59,637
180° + ε . . .	180 0	0,021

$0 = |\ -\ 0{,}''384 - (101) + (105) + (116) - (133) + (134)$

LXXX. *B-Marienfelde-C.*

B	83° 3′	58,″304 + (137) − (135)
Marienfelde	29 1	30,202 + (118) − (116)
C	67 54	31,042 + (133) − (132)
Summe	179 59	59,548
180° + ε . . .	180 0	0,007

$0 = |\ -\ 0{,}''459 - (116) + (118) - (132) + (133) - (135) + (137)$

LXXXI. *Buckow-B-C.*

Buckow	27° 59′	21,″803 + (129) − (127)
B	93 4	29,541 + (138) − (137)
C	58 56	9,118 + (132)
Summe	180 0	0,462
180° + ε . . .	180 0	0,007

$0 = |\ +\ 0{,}''455 - (127) + (129) + (132) - (137) + (138)$

LXXXII. *Buckow-B-Marienfelde-C.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } CBM \cdot \text{Sin } CB_wB \cdot \text{Sin } CMB_w}{\text{Sin } CMB \cdot \text{Sin } CBB_w \cdot \text{Sin } CB_wM}$$

$CBM = 83°\ 3'\ 58,''304 + (137) - (135)$　　$CMB = 29°\ 1'\ 30,''202 + (118) - (116)$
$CB_wB = 27\ 59\ 21,803 + (129) - (127)$　　$CBB_w = 93\ 4\ 29,541 + (138) - (137)$
$CMB_w = 27\ 8\ 21,699 + (117) - (116)$　　$CB_wM = 26\ 0\ 58,253 + (129) - (128)$

$9,9968120,6 + 0,12161\{(137)-(135)\}$　　$9,6859136,7 + 1,80219\{(118)-(116)\}$
$9,6714580,4 + 1,88157\{(129)-(127)\}$　　$9,9993742,6 - 0,05372\{(138)-(137)\}$
$9,6591137,7 + 1,95087\{(117)-(116)\}$　　$9,6420933,5 + 2,04883\{(129)-(128)\}$
$9,3273838,7$　　$9,3273812,8$
$9,3273812,8$

$0,0000025,9 \dots 1,0000060$
　　　$-1,\dots\dots$
　　$+ 0,0000060 \dots \text{Log } 4,77815$
　　　　　　$5,31443$
　　　　　$0,09258 \dots + 1,238$

$0 = + 1,238 - 0,1487\ (116) + 1,9509\ (117) - 1,8022\ (118) - 1,8816\ (127) + 2,0488\ (128) - 0,1673\ (129) - 0,1216\ (135)$
$\qquad\qquad + 0,0679\ (137) + 0,0537\ (138)$

LXXXIII. *Rauenberg-Marienfelde-B-C.*

$$\text{Bedingung} \dots 1 = \frac{\text{Sin } MCR \cdot \text{Sin } MBC \cdot \text{Sin } MRB}{\text{Sin } MRC \cdot \text{Sin } MCB \cdot \text{Sin } MBR}$$

$MCR = 97°\ 8'\ 15,''268 + (134) - (133)$　　$MRC = 33°\ 2'\ 35,''470 + (105) - (101)$
$MBC = 83\ 3\ 58,304 + (137) - (135)$　　$MCB = 67\ 54\ 31,042 + (133) - (132)$
$MRB = 29\ 11\ 29,701 + (105) - (102)$　　$MBR = 71\ 57\ 50,614 + (136) - (135)$

$9,9966214,3 - 0,12522\{(134)-(133)\}$　　$9,7366124,2 + 1,53733\{(105)-(101)\}$
$9,9968120,6 + 0,12161\{(137)-(135)\}$　　$9,9668853,9 + 0,40588\{(133)-(132)\}$
$9,6881807,7 + 1,78991\{(105)-(102)\}$　　$9,9781177,2 + 0,32561\{(136)-(135)\}$
$9,6816142,6$　　$9,6816155,3$
$9,6816155,3$

$9,9999987,3 \dots\dots 0,9999970$
　　　　$-1,\dots\dots$
　　$- 0,0000030 \dots \text{Log } 4,47712\,n$
　　　　　　$5,31443$
　　　　　$9,79155\,n \dots - 0,619$

$0 = - 0,619 + 1,5373\ (101) - 1,7899\ (102) + 0,2526\ (105) + 0,4059\ (132) - 0,2807\ (133) - 0,1252\ (134) + 0,2040\ (135)$
$\qquad\qquad - 0,3256\ (136) + 0,1216\ (137)$

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LXXXIV. *Marienfelde-B-A.*

Marienfelde	25° 17′ 17,″362	$+ (119) - (118)$
B	96 56 47 , 223	$+ (135)$
A	57 45 54 , 353	$+ (140)$
Summe	179 59 58 , 938	
180° $+ \varepsilon$ . . .	180 0 0 , 007	

$$0 = | - 1,″069 - (118) + (119) + (135) + (140)$$

LXXXV. *Buckow-B-A.*

Buckow	28° 30′ 20,″745	$+ (127) - (125)$
B	86 54 44 , 932	$- (138)$
A	64 34 54 , 612	$+ (141) - (140)$
Summe	180 0 0 , 289	
180° $+ \varepsilon$ . . .	180 0 0 , 006	

$$0 = | + 0,″283 - (125) + (127) - (138) - (140) + (141)$$

LXXXVI. *Buckow-B-Marienfelde-A.*

$$\text{Bedingung} \ldots 1 = \frac{\text{Sin } ABM \cdot \text{Sin } AB^wB \cdot \text{Sin } AMB_w}{\text{Sin } AMB \cdot \text{Sin } ABB_w \cdot \text{Sin } AB^wM}$$

$ABM = 96° 56′ 47,″223 + (135)$　　　$AMB = 25° 17′ 17,″362 + (119) - (118)$

$AB^wB = 28 \ 30 \ 20 , 745 + (127) - (125)$　　　$ABB_w = 86 \ 54 \ 44 , 932 - (138)$

$AMB^w = 27 \ 10 \ 25 , 865 + (119) - (117)$　　　$AB^wM = 30 \ 28 \ 44 , 295 + (128) - (125)$

9,9968003 , 2 $- 0,12184 \ (135)$　　　9,6306017 , 3 $+ 2,11665 \{(119) - (118)\}$

9,6787433 , 8 $+ 1,84133 \{(127) - (125)\}$　　　9,9993691 , 4 $+ 0,05394 - (138)$

9,6596233 , 5 $+ 1,94798 \{(119) - (117)\}$　　　9,7051981 , 8 $+ 1,69909 \{(128) - (125)\}$

9,3351670 , 5　　　　　　　　　　　　　　　9,3351690 , 5

9,3351690 , 5

9,9999980 , 0 . . . . . 　0,9999953

　　　　　　　　　　　　　$- 1, \ldots \ldots$

　　　　　　　　　　$- 0,0000047 \ldots$ Log 4,67209 n

　　　　　　　　　　　　　　　5,31443

　　　　　　　　　　　　　9,98652 n . . . . $- 0,969$

$$0 = - 0,969 - 1,9480 \ (117) + 2,1167 \ (118) - 0,1687 \ (119) - 0,1422 \ (125) + 1,8413 \ (127) - 1,6991 \ (128) - 0,1218 \ (135)$$
$$+ 0,0539 \ (138)$$