GEODETIC CO-ORDINATES.

Book 14

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Azimuth a:

Spherical angle:

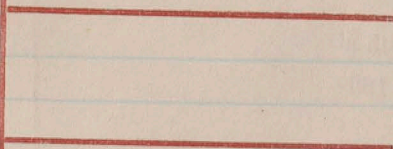Azimuth a'

$\delta a + 180°$

Azimuth (a)

Geodetic co-ordinates.

LATITUDE.		LONGITUDE.
L:		λ:
δL		$\delta \lambda$
L'		λ'

computation for latitude:

log. dist.

"   B

"   cos a'

log. (I)

log. dist.²

"   C

"   sin²a

log (II)

log. D

"   [(I +(II)]²

log. (III)

log. E

"   cos²a'

"   (I)

log (IV)

δL

computation for longitude:

log. dist.

"   sin a'

"   A'

"   sec L'

log. (V)

$\delta \lambda$

computation for azimuth:

log. (V)

" $\sin \left(\dfrac{L+L'}{2}\right)$

" $\sec \dfrac{\delta L}{2}$

log. (VI)

δa

Azimuth a:	Twin to C	328 14 37.37
Spherical angle:	a " "	− 41 43 10.24
Azimuth a'	" " Cave Rock	286 31 27.13
δ a + 180°		+ 10 45.14
Azimuth (a)	Cave Rock . Twin	106 42 12.27

Geodetic co-ordinates.

LATITUDE.		Twin	LONGITUDE	
L:	39 6 37.06		λ:	120 13 47.00
δ L	− 3 58.02		δλ	− 17 3.44
L'	39 2 39.04	Cave Rock	λ'	119 56 43.56

computation for latitude:

log. dist.	4.4094036
" B	8.5109576
" cos a'	9.4539606
log. (I)	2.3743218 + 236.767
	+ 1.250
log. dist.²	8.81881
" C	1.31479
" sin²a	9.96336
log. (II)	0.09696
log. D	2.3775
" [I +(II)]²	4.7532
log. (III)	7.1307 + 13
	− 17
log. E	6.086
" cos²a'	8.782
" (I)	2.374
log. (IV)	7.242

− δL + 23802

computation for longitude.

log. dist.	4.4094036
" sin a'	9.9816826ₙ
" A'	8.5092058 − 12
" sec L'	0.1097688 + 18
log. (V)	3.0100698ₙ + 6
δλ	− 1023.4+

computation for azimuth:

log. (V)	3.0100614ₙ
" sin (L+L')/2	9.7995936
" sec δL/2	
log. (VI)	2.8096550ₙ
− δa −	645.14

Azimuth a:		C to Twin	148 18 29.57	
Spherical angle:		av.	97 41 0.24	
Azimuth a'		" " Cave Rock	245 59 29.81	
δ a + 180°			+ 6 52.22	
Azimuth (a)		Cave Rock - C	66 6 21.03	

Geodetic co-ordinates.

LATITUDE.				LONGITUDE.	
L.	38 58 52.11	Carpenter C	λ:	120 7 38.39	
δL	+ 3 46.93		δλ	— 10 54.83	
L'	39 2 39.04	Cave Rock	λ'	119 56 43.56	

computation for latitude:

log. dist.	4.2364576			
" B	8.510972			
" cos a'	9.609457 n			
log. (I)	2.3568829 n	— 227.448		
		+ .509		
log. dist.²	8.47294	+ 2		
" C	1.31279			
" sin²a	9.92140	226.94		
log (II)	9.70750			
log. D	2.3791			
" [(I +(II)]²	4.71020			
log. (III)	7.0894	+ 12		
		+ 7		
log. E	6.083			
" cos²a'	8.394			
" (I)	2.357			
log (IV)	6.834			

δ L _____

computation for longitude:

log. dist.	4.2364576		
" sin a'	9.607015 n		
" A'	8.809205 n	— 5	
" sec L'	0.109788	+ 8	
log. (V)	2.816133 n		
	+ 7		
δλ	— 654.83		

computation for azimuth:

log. (V)	2.816130 n	
" sin (L+L'/2)	9.798990 n	
" sec δL/2		
log. (VI)	2.615127 n	
— δ a	— +12.22	

Azimuth a:	*av.* O to Pyramid	47	35	18.50
Spherical angle:		48	31	50.57
Azimuth a'	" " Ellis	96	7	9.07
δ a + 180°			–17	59.02
Azimuth (a)	Ellis " O	275	55	10.05

Geodetic co-ordinates.

LATITUDE.					LONGITUDE.			
L:	39	2	26.35	λ:	119	52	43.03
δ L		+1	33.83	δλ		+19	1.22
L'	39	4	0.18	λ'	120	11	44.25

O

Ellis

computation for latitude: *computation for longitude.*

log. dist.	4.4407379	log. dist.	4.4407379
" B	8.6109627	" sin a'	9.9975184
" cos a'	9.0277452₄	" A'	8.5092053
		" sec L'	0.1099074
log. (I)	1.9794458₄ –95.377	log. (V)	3.0573690
	+1550		
log. dist.²	8.88157 +1		
" C	1.31371	δλ +	1141.22
" sin²a	9.99504		
log. (II)	0.19032	*computation for azimuth :*	
log. D	2.3773	log. (V)	3.0573690
" [I +(II)]²	3.9444	" sin (L+L')/2	9.7993732
log. (III)	6.3217	" sec δL/2	
log. E	6.084	log. (VI)	2.8567422
" cos²a'	8.877		
" (I)	1.979	– δa + 719.02	
log. (IV)	6.9		

– δL – 93.83

Azimuth a:
Spherical angle:

Pyramid to Q   227 24 51.53
       55 18 40.57

Azimuth a'
$\delta a + 180°$

   "   " Ellis   172 6 10.96
     – 1 30.35

Azimuth (a)   Ellis   " Pyramid   352 4 40.61

Geodetic co-ordinates.

Pyramid

Ellis

	LATITUDE.		LONGITUDE.		
L:	32 50 32.55	λ:	120 9 20.55		
δL	+ 13 27.63	$\delta\lambda$	+ 2 23.71		
L'	39 4 0.18	λ'	120 11 44.25		

computation for latitude:

log. dist.   4.4003926
" B   8.5109775
" cos a'   9.9958619 n

log. (I)   2.9072320 n   – 807.666
      .024
log. dist.²   8.80078   + 16
" C   1.31065
" sin²a   8.27598

log. (II)   8.38741

log. D   2.3766
" [(I +(II)]²   5.8144

log. (III)   8.1910

log. E   6.040
" cos²a'   6.0
" (I)   29

log. (IV)

    – δL – 807.63

computation for longitude:

log. dist.   4.4003926
" sin a'   9.1379903
" A'   8.5092053
" sec L'   0.1099074

log. (V)   2.1574956

$\delta\lambda$ + 143.71

computation for azimuth:

log. (V)   2.1574956
" sin $\left(\frac{L+L'}{2}\right)$ 9.7984453
" sec $\frac{\delta L}{2}$

log. (VI)   1.9559409

   – δa + 90.35

Jan. 29. 71

Azimuth a:	ℓ to Freell	4 32 50.93
Spherical angle:	av.	34 54 0.30
Azimuth a'	" " Carpentes 8	39 26 51.23
δa + 180°		− 8 19.61
Azimuth (a)	Carpentes 8 . O	219 18 31.62

Geodetic co-ordinates.

O

	LATITUDE.			LONGITUDE	
L:	39 2 26.35		λ:	119 52 43.03	
δL	−12 36.48		δλ	+ 13 14.99	
L'	38 49 49.87	Carpentero 8	λ'	120 5 58.02	

computation for latitude: *computation for longitude.*

log. dist.	4.4796598		log. dist.	4.4796598	
" B	8.5109627		" sin a'	9.8030279	
" cos a'	9.8877334		" A'	8.5092111	
			" sec L'	0.1084603	
log. (I)	2.8783559	+ 755.711			
		+ .757	log. (V)	2.9003591	
log. dist.²	8.95932				
" C	1.31371		δλ	+ 794.985	
" sin²a	9.60605				
log. (II)	9.87908		*computation for azimuth:*		
log. D	2.3773		log. (V)	2.9003591	
" [I +(II)]²	5 7574		" sin (L+L'/2)	9.7982679	
			" sec δL/2		
log. (III)	8.1347	+ 14	log. (VI)	2.6986270	
		− 3			
log. E	6.084		− δa	+ 499.61	
" cos²a'	8.565				
" (I)	2.878				
log. (IV)	7.527				

− δL + 756.48

96 46.6
11.024
68.9
1.032

Azimuth a:		*Freels to P*	184	32	8.15
Spherical angle:		at "	103	13	W. 30
Azimuth a'		" " Carpenters ♂	81	18	47.85
δa + 180°			− 7	3/5.92	
Azimuth (a)		*Carpenters ♂ . Freels*	261	11	11.93

Geodetic co-ordinates.

LATITUDE.					*Freels*	LONGITUDE.		
L:	38	51	17.37			λ:	119 53 51.08
δL	− 1	27.50				δλ	+12 6.94
L'	38	49	49.87		*Carpenters ♂*	λ'	120 5 58.02

computation for latitude: computation for longitude:

log. dist.	4. 2488350	log. dist.	4. 2488350
" B	8.5109765	" sin a'	9.9949893
" cos a'	9.1790675	" A'	8.5092111
		" sec L'	0.1084603
log. (I)	1.9388790 + 86.872	log. (V)	2.8614957
	+ 629		
log. dist.²	8.49767	δλ + 726.935	
" C	1.3108		
" sin²a	9.98998		
log (II)	9.79850	*computation for azimuth:*	
log. D	2.3767	log. (V)	2.8614957
" [I +(II)]²	3.8840	" sin (L+L')/2	9.7973950
log. (III)	6.2609	" sec δL/2	
log E	6.081	log. (VI)	2.6588907
" cos²a'	8.487	− δa + 455.92	
" (I)	1.93		
log (IV)			

−δL + 87.50

	C to Irwin	148 18 29.57
Azimuth a:		
Spherical angle:	a,	52 2 10.38
Azimuth a'	" - Hot Springs	200 20 39.90
δ a + 180°		+ 4 24.45
Azimuth (a)	Hot Springs " C	20 25 4.35

Geodetic co-ordinates.

LATITUDE.	Carpenter C	LONGITUDE
L: 38 58 52.10		λ: 120 7 38.39
δL +14 39.30		$\delta\lambda$ − 6 59.28
L' 39 13 31.40	Hot Springs	λ' 120 0 39.11

computation for latitude:

log. dist.	4.4612559
" B	8.5109672
" cos a'	9.9720267 u
log. (I)	2.9442498 u − 879.528
	.20 8
log. dist.²	8.92251 + 19
" C	1.31279
" sin²a	9.08232 227
log. (II)	9.31962
log. D	2.3771
" [I+(II)]²	5.3883
log. (III)	8.2654 +18
	+1
log. E	6.083
" cos²a'	8.005
" (I)	2.944
log. (IV)	7.032

− δL − 879.30

computation for longitude.

log. dist.	4.4612559
" sin a'	9.5411580 w
" A'	8.509 2013
" sec L'	0.110 8864
log. (V)	2.6225016.
$\delta\lambda$ −	419.277

computation for azimuth:

log. (V)	2.6225016 n
" sin $\left(\frac{L+L'}{2}\right)$	9.7998365
" sec $\frac{\delta L}{2}$	
log. (VI)	2.4223381 n
− δ a −	264.4547

Azimuth a:	*Dorin to C*	328 14 37.37
Spherical angle:	"	92 21 20.3?
Azimuth a'	" " *Hot Springs*	235 53 17.04
δ a + 180°		+ 8 17.62
Azimuth (a)	*Hot Springs to Dorin*	56 1 34.66

Geodetic co-ordinates.

Twin

Hot Springs

LATITUDE.		LONGITUDE.	
L: 39 6 37.06		λ:	120 13 47.00
δL + 6 54.34		δλ	− 13 7.88
L' 39 13 31.40		λ'	120 0 39.12

computation for latitude:

log. dist. 4.3583689
" B 8.5109570
" cos a' 9.7488169n

log. (I) 2.618143.n = 415.091
+ .737 6
log. dist.² 9.71674
" C 1.31479   34
" sin²a 9.83600

log (II) 9.86753

log. D 2.3775
" [I +(II)]² 5 2348

log. (III) 7.6123   4
                    2
log. E 6.086
" cos²a' 8.553
" (I) 2.618

log (IV) 7.257

          − δL − 414.34

computation for longitude:

log. dist. 4.3583689
" sin a' 9.9180007n
" A' 8.5092013
" sec L' 0.110886?

log. (V) 2.8964573n

δλ   − 787.875

computation for azimuth:

log. (V) 2.8964573n
" sin (L+L')/2 9.8004381
" sec δL/2

log. (VI) 2.696895?n

− δa   − 497.62

Azimuth a:	*Trees to Twin*	134 40 48.9)
Spherical angle:	*av " " "*	51 12 50.86
Azimuth a'	*" " " Carpenter 4*	185 53 39.77
δ a + 180°		+ 1 21.23
Azimuth (a)	*Carpenter 4 . Trees*	5 55 1.00

Geodetic co-ordinates.

Trees

	LATITUDE.			LONGITUDE		
L:	38	51	17.37	λ:	119 53 51.07
δL	+ 16	14.02		δλ	− 2 9.16
L′	39	7	31.39	*Carpenter 4* λ′	119 51 41.97

computation for latitude:

log. dist.	4.4799120
" B	8.5109765
" cos a'	9.9976977 n
log. (I)	2.9885862 n
log. dist.²	8.9598
" C	1.31025
" sin²a	8.02340
log. (II)	8.29377
log. D	2.3767
" [I +(II)]²	5.977 n
log. (III)	8.3539
log. E	6.084
" cos²a'	6
" (I)	3
log (IV)	

computation for longitude.

log. dist.	4.4799120
" sin a'	9.011 5492 w
" A'	8.509 20 38
" sec L'	0.110 2688
log. (V)	2.110 9338 n
δλ −	129.10

computation for azimuth :

log. (V)	2. 110 9338 n
" sin (L+L')/2	9.798 7800
" sec δL/2	
log. (VI)	1. 909 7138 n
δa	− 81.23

− 974.061
+ 20
+ 22

− δL 974.02

Twin to Freds   314   28   16.63

av "   47   36   0.80

" " " Carpenter 4   266   52   15.83

+13   5.98

Carpenter 4 " Twin   87   6   11.81

Geodetic co-ordinates.

		Azimuth a:	Spherical angle:

Twin

LATITUDE.			
L:	39 6 37.06		
δL	+0 54.33		
L'	39 7 31.39		

Carpenter 4

LONGITUDE.	
λ:	120 13 47.00
$\delta\lambda$	−22 5.03
λ'	119 51 41.97

computation for latitude:

log. dist.	4.5033983
" B	8.5109576
" cos a'	8.7370966 n
log. (I)	1.7514525 n

−56.423

2.081

log. dist.²	9.00679
" C	1.31479
" sin²a	9.99870
log (II)	0.31828
log. D	2.3775
" [(I +(II)]²	3.503
log. (III)	
log. E	9.005
" cos²a'	6.026
" (I)	1.75
log (IV)	

− δL −   54.33

computation for longitude:

log. dist.	4.5033983
" sin a'	9.9935204
" A'	8.5092038
" sec L'	0.1102688
log. (V)	3.1222229 u

$\delta\lambda$ −   13   25.03

computation for azimuth:

log. (V)	3.1222229 u
" sin $\left(\frac{L+L'}{2}\right)$	9.7999725
" sec $\frac{\delta L}{2}$	
log. (VI)	2.9221954 u

− δa −   835.98

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Azimuth a:		Freels to Irvin	134 40 48.97
Spherical angle:		a "	47 36 0.86
Azimuth a'		" " Carpenters ᵺ	182 16 49.77
δ a + 180°			+ 0 33.24
Azimuth (a)		Carpenters ᵺ . Freels	2 17 23.01

Geodetic co-ordinates.

LATITUDE.				LONGITUDE	
L:	38 51 17.37	Freels	λ:	119 53 51.07
δ L	+17 12.80		δ λ	— 0 52.81
L'	39 8 30.17	Carpenters ᵺ	λ'	119 52 58.26

computation for latitude: *computation for longitude.*

log. dist.	4. 5033983		log. dist.	4. 5033983
" B	8. 5109765		" sin a'	8. 5997912 w — 18
" cos a'	9. 9996590		" A'	8. 509 2034
			" sec L'	0. 1103995
log. (I)	3. 0140307 — 1032.834		log. (V)	1. 7227624
	+ 3			
log. dist.²	9. 00679 + 25		δ λ — 52.82
" C	1. 31085		
" sin²a	7. 19958		*computation for azimuth :*
log. (II)	7. 51722		
log. D	2. 3767		log. (V)	1. 7227624
" [I +(II)]²	6. 0280		" sin (L+L'/2)	9. 7988531
			" sec δL/2	
log. (III)	8. 4047		log. (VI)	1. 5216155
log. E	6. 081			
" cos²a'			— δ a — 33.24
" (I)			
log. (IV)			

— δL — 1032.80

Azimuth a:		Twin to Freels	314 28 16.63
Spherical angle:		ar	51 1n 50.80
Azimuth a'		„ „ Carpenter 4	263 15 25.83
δa + 180°			+13 7.99
Azimuth (a)		Carpenter 4 „ Twin	83 28 33.82

Geodetic co-ordinates.

LATITUDE.				LONGITUDE.	
L:	39 6 37.06	Twin		λ:	120 13 47.00
δL	+1 53.11			$\delta\lambda$	−20 48.74
L'	39 8 30.17	Carpenter 4		λ'	119 52 58.26

computation for latitude:

log. dist.   4.4799120
" B   8.510976
" cos a'   9.0697.63 „

log. (I)   2.0605859 „   − 114.970
                            + 1.856

log. dist.² 8.95982
" C   1.31479
" sin²a   9.99397

log. (II)   0.26858

log. D   2.3775
" [(I +(II)]² 4.106 „

log. (III)   6.4837

log. E   6.086
" cos²a'   8.953
" (I)   2.060

log. (IV)   7.099

              − δL − 113.11

computation for longitude:

log. dist.   4.4799120
" sin a'   9.9969857 √   − 16.v
" A'   8.509 2034   26
" sec L'   0.110 3695

log. (V)   3.0964706 „

$\delta\lambda$ −   1248.74   +10

computation for azimuth:

log. (V)   3.0964716
" sin (L+L'/2) 9.8000485
" sec δL/2

log. (VI)   2.8965201 „

− δa −   787.99

Azimuth a:	Frees to Twin	134 20 48.97
Spherical angle:	a	64 42 33.24
Azimuth a'	" " White Cliff	199 23 22.21
δa + 180°		+ 4 13.82
Azimuth (a)	White Cliff " Frees	19 27 36.03

Geodetic co-ordinates.

LATITUDE.		LONGITUDE	
L: 38 51 17.37	Frees	λ: 119 53 51.07	
δL + 14 573.13		δλ − 6 43.51	
L' 39 6 10.50	White Cliff	λ' 119 47 7.56	

computation for latitude:

log. dist. 4.4653974
" B 8.5109765
" cos a' 9.9746423ₙ

log. (I) 2.9510162ₙ − 893.339
+ 0.193
+ 19

log. dist.² 8.9309
" C 1.31085
" sin²a 9.04225

log. (II) 9.78389

log. D 2.3767
" [I+(II)]² 5.9020

log. (III) 8.2787

log. E 6.081
" cos²a' 7.973
" (I) 2.951

log. (IV) 7.005

− δL − 893.13

computation for longitude.

log. dist. 4.4653974
" sin a' 9.5211227 ₙ
" A' 8.5092045 ₙ
" sec L' 0.1101303 −15

log. (V) 2.6058549ₙ −12

δλ − 403.51

computation for azimuth:

log. (V) 2.6058537ₙ
" sin (L+L'/2) 9.7986741
" sec δL/2

log. (VI) 2.4045278ₙ

− δa − 253.82

Azimuth a:	Irvin to Freels	314 28 16.63
Spherical angle:	av „	43 23 24.41
Azimuth a'	„ „ „ White Cliff	271 4 52.22
δ a + 180°		+16 48.87
Azimuth (a)	White Cliff „ Irvin	91 21 41.09

Geodetic co-ordinates.

LATITUDE.		LONGITUDE.
L: 39 6 37.06	Irvin	λ: 120 13 47.00
δ L ~ 0 26.55		δ λ − 26 39.43
L' 39 6 10.51	White Cliff	λ' 119 47 7.57

computation for latitude:

log. dist.	4.5847068	
" B	3.510957₆	
" cos a'	8.2755233	
log. (I)	1.3711877	+ 23.506
		+ 3.048
log. dist.²	9.16941	
" C	1.31479	
" sin²a	9.99984	
log (II)	0.48404	
log. D	2.3775	
" [(I +(II)]²	2	
log. (III)		
log. E	6.086	
" cos²a'	9.169	
" (I)	1.37!	
log (IV)		

− δ L ~ 26.55

computation for longitude:

log. dist.	4.5847068	
" sin a'	9.999228„	− 26
" A'	8.509204₅	+ 43
" sec L'	0.1101303	
log. (V)	3.203964„	
	+17	
δ λ −	1599.43	

computation for azimuth :

log. (V)	3.203961„	
" sin $\left(\frac{L+L'}{2}\right)$	9.7998678	
" sec $\frac{\delta L}{2}$		
log. (VI)	3.0038394„	

− δa ~ 1008.87

Azimuth a:		Twin to Oreck's 314 28 16.63
Spherical angle:		Δ - 28 51 52.89
Azimuth a'		- Carpenters 8 343 20 9.52
δa + 180°		+ 3 4.04
Azimuth (a)		Carpenters E. Twin 163 23 13.56

Geodetic co-ordinates.

Twin

Carpenters 8.

	LATITUDE.			LONGITUDE	
L:	39 6 37.06		λ:	120 13 47.00	
δL	-12 43.51		δλ	4 52.44	
L'	38 53 53.55		λ'	120 8 54.56	

computation for latitude:

log. dist.	4.390 4318
" B	8.510 9576
" cos a'	9.981 3668
log. (I)	2.882 7562 + 763.409
	+ .102
log. dist.²	8.780 86
" C	1.314 99
" sin²a	8.915 03
log. (II)	9.010 68
log. D	2.3775
" [I +(II)]²	5.7652
log. (III)	8.1431
log. E	6.026
" cos²a'	7
" (I)	2
log (IV)	

- δL +763.51

computation for longitude.

log. dist.	4.390 4318
" sin a'	9.457 5171 n
" A'	8.509 2095
" sec L'	0.108 8737
log. (V)	2.466 0321 n
δλ	- 292.44

computation for azimuth:

log. (V)	2.466 0321 n
" sin (L+L'/2)	9.798 8856
" sec δL/2	
log. (VI)	2.264 9177 n
δa	- 184.04

Azimuth a:	*Erecta to Twin*	134 40 48.97
Spherical angle:	*ar "*	32 7 56.1?
Azimuth a'	*" " Carpenter E.*	102 32 52.86
δ a + 180°		← 9 27.87
Azimuth (a)	*Carpenter E. " Erecta*	282 23 25.79

Geodetic co-ordinates.

LATITUDE.			LONGITUDE.	
L.	38 51 17.37	*Erecta*	λ:	119 53 51.07
δL	+ 2 36.17		δλ	+ 15 3.49
L'	38 53 53.54	*Carpenter E.*	λ'	120 8 54.56

computation for latitude:		*computation for longitude:*	
log. dist.	4.3483376	log. dist.	4.3483376
" B	8.5109765	" sin a'	9.989500₇
" cos a'	9.3369752ₙ	" A'	8.5092095
log. (I)	2.1962893ₙ	" sec L'	0.1028737
		log. (V)	2.9559215₇
log. dist.²	8.6966₇		
" C	1.31085	δλ + 903.49	
" sin²a	9.97900		
log (II)	9.98652	*computation for azimuth:*	
log. D	2.3767	log. (V)	2.9559215
" [(I +(II)]²	.48474	" sin (L+L'/2)	9.7977135
log. (III)	6.7641	" sec δL/2	
		log. (VI)	2.7536350
log. E	6.081		
" cos²a'	8.676	— δa + 567.07	
" (I)	2.196		
log (IV)	6.953		

− 157.141
+ .969
+ i

− δL − 156.17

Febr. 2

Azimuth a:	Treeto & Twin	134	to 48.97
Spherical angle:	an .	43	23 24.41
Azimuth a'	" " n White Cliff	178	4 13.38
δ a + 180°			— 0 33.97
Azimuth (a)	White Cliff . Treeto	358	3 39.41

Geodetic co-ordinates.

	LATITUDE.			LONGITUDE
L:	38 51 17.37	Treeto	λ:	119 53 51.07
δL	+ 20 45.73		δλ	+ 0 53.94
L'	39 12 3.10	White Cliff	λ'	119 54 45.01

computation for latitude: *computation for longitude.*

log. dist.	4.5847068		log. dist.	4.5847068
" B	8.5109765		" sin a'	8.5272663
" cos a'	9.9997536ₙ		" A'	8.5092020
			" sec L'	0.1107347
log. (I)	3.0954369ₙ — 1245.767			
	+ 3		log. (V)	1.7319098
log. dist.²	9.16941 + 37			
" C	1.31085		δλ + 53.94	
" sin²a	7.05453			
log. (II)	7.53479		*computation for azimuth :*	
log. D	2.3767		log. (V)	1.7319098
" [I +(II)]²	6.1909		" sin $\left(\frac{L+L'}{2}\right)$	9.7991322
			" sec $\frac{\delta L}{2}$	
log. (III)	8.5676		log. (VI)	1.5310420
log. E	6.081		— δa + 33.97	
" cos²a'	6			
" (I)	3			
log. (IV)				

— δL — 1245.78

Azimuth a:		Twin to Freels	314 28 16.63
Spherical angle:		a "	64 42 33.24
Azimuth a'		" " White Cliff	249 45 43.39
δ a + 180°			+ 12 1.08
Azimuth (a)		White Cliff " Twin	69 57 44.47

Geodetic co-ordinates.

Twin

White Cliff

	LATITUDE.			LONGITUDE.
L.	39 6 37.06		λ:	120 13 47.00
δL	+ 5 26.04		$\delta\lambda$	— 19 1.98
L'	39 12 3.10		λ'	119 54 45.02

computation for latitude: *computation for longitude:*

log. dist.	4.4653974		log. dist.	4.4653974	
" B	8.5109576		" sin a'	9.972325ₙ	
" cos a'	9.538975 ₙ		" A'	8.5092020	
log. (I)	2.5153302ₙ		" sec L'	0.1107347	
		— 327.590	log. (V)	3.057659 2ₙ	
		+ 1.550 5			
log. dist.²	8.93079		$\delta\lambda$	— 1141.98	
" C	1.31479				
" sin²a	9.9465				
log. (II)	0.19023		*computation for azimuth :*		
			log. (V)	3.057659 2ₙ	
log. D	2.3775		" sin (L+L'/2)	9.8003238	
" [I +(II)]²	5.0264		" sec δL/2		
log. (III)	7.4039	+ ⁿ⁄₃₀	log. (VI)	2.8579830ₙ	
log. E	6.086		— δa	— 721.08	
" cos²a'	8.875				
" (I)	2.515				
log. (IV)	7.476				

— δL — 326.04

Feb. 2

Azimuth a:		ℭ to *Twin*	148 18 29. 57
Spherical angle:		at "	79 58 34. 61
Azimuth a'		" " *Snow Valley Pt.*	228 17 4. 18
δ a + 180°			+ 9 20. 38
Azimuth (a)		*Snow Valley Pt. to* ℭ	48 26 24. 56

Geodetic co-ordinates.

Carpenters ℭ

Snow Valley Pt.

	LATITUDE.				LONGITUDE	
L:	38 58 52. 10			λ:	120 7 38. 39
δ L	+ 10 16. 24			δ λ	− 14 49. 18
L'	39 9 8. 34			λ'	119 52 49. 21

computation for latitude: *computation for longitude.*

log. dist.	4. 4563443			log. dist.	4. 4563443
" B	8. 5109672			" sin a'	9. 8730055.
" cos a'	9. 8231039			" A'	8. 5392031
				" sec L'	0. 1104349
log. (I)	2. 7904154.	−	617.125	log. (V)	2. 9489878.
		+	8.936		
log. dist.²	8. 91269	+	12	δ λ	− 889. 18
" C	1. 31279				
" sin²a	9. 74601		948		*computation for azimuth :*
log. (II)	9. 97149				
				log. (V)	2. 9489878 .
log. D	2. 3771			" sin ($\frac{L+L'}{2}$)	9. 7994956
" [I + (II)]²	5. 5794			" sec $\frac{δL}{2}$	
log. (III)	7. 9564	+	90	log. (VI)	2. 7484834.
		+	33		
log. E	6. 083			− δ a	− 560. 38
" cos²a'	8. 659				
" (I)	2. 790				
log. (IV)	7. 532				

− δ L − 616.24

808.8
9422.
+ 07.
90 7.
1 97.

2 619
26 19
29
2 492

Azimuth a:	Twin to C	328 14 37.37
Spherical angle:	at "	67 7 58.64
Azimuth a'	" " Snow Valley Pk	261 6 38.73
δ a + 180°		+ 13 13.78
Azimuth (a)	Snow Valley Pk. Twin	81 19 52.51

Geodetic co-ordinates.

Twin

LATITUDE.		LONGITUDE.	
L:	39 6 37.06	λ:	120 13 47.00
δL	+2 31.29	δλ	−20 57.77
L'	39 9 8.35	λ'	119 52 49.23

Snow Valley Pk

computation for latitude:

log. dist.	4.4852118
" B	8.5109576
" cos a'	9.1890252ₙ
log. (I)	2.1851946ₙ	−153.177
		+ 1.882
log. dist.²	8.97042	+ 2
" C	1.31479
" sin²a	9.98950
log. (II)	0.27471
log. D	2.3775
" [(I +(II)]²	4.3596
log. (III)	6.7371
log. E	6.026
" cos²a'	8.960
" (I)	2.185
log (IV)	7.231
	− δL − 151.29

computation for longitude:

log. dist.	4.4852118
" sin a'	9.9947521ₙ
" A'	8.5092031	−17
" sec L'	0.1104349	+27
log. (V)	3.0996019ₙ
δλ	− 1257.77

computation for azimuth:

log. (V)	3.0996029ₙ
" sin (L+L')/2	9.8000980
" sec δL/2	
log. (VI)	2.8997009.
− δa	− 793.78

Azimuth a:	a	Pyramid to Twin	167 51 16.56
Spherical angle:		"	28 55 31.81
Azimuth a'		" " Rose Knob	196 46 48.37
δa + 180°			+ 6 28.72
Azimuth (a)		Rose Knob " Pyramid	16 53 17.09

Geodetic co-ordinates.

LATITUDE.				LONGITUDE	
L:	38 50 32.55	Pyramid	λ:	120 9 20.54
δL	+ 26 29.37		δλ	−10 16.84
L'	39 17 1.92	Rose Knob	λ'	119 59 3.70

computation for latitude:				*computation for longitude.*	
log. dist.	4.7092857		log. dist.	4.7092857
" B	8.5109775		" sin a'	9.4604458 u
" cos a'	9.9810124 u		" A'	8.509 1999 −47
			" sec L'	0.1142486 +6
log. (I)	3.2013656 u − 1589.885		log. (V)	2.7901800 u
	+ .447			−41
log. dist.²	9.41857 + 64		δλ	− 616.855
" C	1.31065			
" sin²a	8.92094	511		*computation for azimuth:*
log. (II)	9.65016		log. (V)	2.7901759
log. D	2.3766		" sin (L+L')/2	9.7994618
" [I +(II)]²	6 4026		" sec δL/2	
log. (III)	8.7792 + 64		log. (VI)	2.5896377 u
log. E	6.080		− δa	− 388.72
" cos²a'	8.339			
" (I)	3.201			
log (IV)	7.620			
	− δL − 1589.37			

Azimuth a:		Twin & Pyramid	347 48 28.96
Spherical angle:		at "	120 9 40.11
Azimuth a'		" " Rose Knob	227 38 48.85
δ a + 180°			+ 9 18.24
Azimuth (a)		Rose Knob " Twin	47 48 7.09

Geodetic co-ordinates.

Twin

LATITUDE.		LONGITUDE.	
L: 39 6 37.06		λ: 120 13 47.00	
δL + 10 24.86		δλ — 14 43.30	
L' 39 17 1.92	*Rose Knob*	λ' 119 59 3.70	

computation for latitude:

			computation for longitude:	
log. dist.	4.4570102		log. dist.	4.4570102
" B	8.5109575		" sin a'	9.8686486ₙ
" cos a'	9.8284651ₙ		" A'	8.5091999 −15
			" sec L'	0.1112486 +13
log. (I)	2.7964328ₙ −625.796		log. (V)	2.9461073/2
	+ .925			
log. dist.²	8.91402 + 13		δλ — 883.30	
" C	1.31480			
" sin²a	9.73729 938		computation for azimuth:	
log. (II)	9.96611			
			log. (V)	2.9461071
log. D	2.3775		" sin (L+L')/2	9.8007101
" [I +(II)]²	5.5916		" sec δL/2	
log. (III)	7.9691 + 93		log. (VI)	2.7468172ₙ
	34			
log. E	6.086		δ a — 558.24	
" cos²a'	8.651			
" (I)	2.796			
log. (IV)	7.533			

— δL — 624.86

Azimuth a:		C to Irvin		148 18 29.57	
Spherical angle:		av.		88 40 33.88	
Azimuth a'		" " Shakespear Cliff		237 59 3.45	
δa + 180°				+ 7 14.94	
Azimuth (a)		Shakespear's Cliff. C		57 6 18.39	

Geodetic co-ordinates.

LATITUDE.					LONGITUDE	
L:	32 58 52.10	Carpenters C		λ:	120 7 33.39	
δL	+ 5 49.26			δλ	—11 30.69	
L'	39 4 41.36	Shakespear's Cliff		λ'	119 56 7.70	

computation for latitude: *computation for longitude.*

log. dist.	4.296872		log. dist.	4.296872
" B	8.5109672		" sin a'	9.9245147⊕
" cos a'	9.7362920ₙ		" A'	8.5092051
log. (I)	2.5438464ₙ — 349.824		" sec L'	0.1099778
	+ .566		log. (V)	2.8392841ₙ
log. dist.²	8.59317 + 7			
" C	1.31279	57	δλ —	690.69
" sin²a	9.84703			
log. (II)	9.75299		*computation for azimuth:*	
log. D	2.3771		log. (V)	4.296872
" [I + (II)]²	5.0824		" sin (L+L'/2)	9.7991478
log. (III)	7.4595		" sec δL/2	2.8392841
				2.6384319ₙ
log. E	6.083		log. (VI)	2.0957350ₙ
" cos²a'	8.442		— δa	—434.966
" (I)	2.542			
log. (IV)	7.067			

— δL — 349.26

5 47.7
4 39.8

Twin to C

Azimuth a:	328 14 37.37
Spherical angle:	at " 50 21 26.96
Azimuth a'	" " Shakespear Cliff 277 53 10.41
δ a + 180°	+ 11 7.98
Azimuth (a)	Shakespear Cliff to Twin 98 4 18.39

Geodetic co-ordinates.

Twin   Shakespear' Cliff

LATITUDE.		LONGITUDE.	
L:	39 6 37.06	λ:	120 13 47.00
δL	- 1 55.70	δλ	- 17 39.29
L'	39 4 41.36	λ'	119 56 7.71

computation for latitude: computation for longitude:

log. dist.	4.4099584	log. dist.	4.4099584	
" B	8.5109576	" sin a'	9.9958731 n	
" cos a'	9.1373744	" A'	8.509 2050	-12
log. (I)	2.0582904 + 114.364	" sec L'	0.1099778	'9
	+ 1.338	log. (V)	3.0250143 n	
log. dist.²	8.81992 - - +		+ 7	
" C	1.31479	δλ -	1059.29	
" sin²a	9.99144			
log (II)	0.12645	computation for azimuth:		
log. D	2.3775	log. (V)	4.4099584	
" [I +(II)]²	4.1766	" sin (L+L'/2)	9.7997522	
		" sec δL/2	3.0250150 n	
log. (III)	6.5041		2.8247672 n	
log. E	6.086	log. (VI)	2.2097126 n	
" cos²a'	8.801			
" (I)	2.058	- δa - 667.98		
log (IV)				

- δL + 115.70

Febr. 6.

Azimuth a:	*Shakespeari Cliff to Lion*	98	4	18.39
Spherical angle:	*as ,, .*	63	55	51.05
Azimuth a'	*,, ,, Wharar Gl.*	162	0	9.44
δ a + 180°			−	7.38
Azimuth (a)	*Wharar El ,, Shakesp. Cl.*	342	0	2.06

Geodetic co-ordinates.

Shakespeari Cliff

Wharf at Glenbrook

	LATITUDE.					LONGITUDE		
L:	39	4	41.36		λ:	119	56	7.71
δ L	+0	28-10			δ λ	+0	11.71
L'	39	5	9.46		λ'	119	56	19.42

computation for latitude:

log. dist.	2.9595218
" B	8.5109600
" cos a'	9.9782128₄
log. (I)	1.4486946₄ − 28.10
log. dist.²	
" C	1.31428
" sin²a	
log. (II)	
log. D	2.3774
" [I +(II)]²	
log. (III)	
log. E	6.085
" cos²a'	
" (I)	
log. (IV)	
δ L	

computation for longitude.

log. dist.	2.9595218
" sin a'	9.4899212
" A'	8.5092048
" sec L'	0.1102259
log. (V)	1.0686737
δ λ	+ 11.71

computation for azimuth:

log. (V)	1.063 6737
" sin $\left(\frac{L+L'}{2}\right)$	9.7996388
" sec $\frac{\delta L}{2}$	
log. (VI)	0.8683125
− δ a	+ 7.38

Azimuth a:	Twin to Shakesp. Cliff	277 53 10.41
Spherical angle:	av.	1 51 9.00
Azimuth a'	" " Wharf at Gl.	276 2 1.41
δa + 180°		+ 11 0.65
Azimuth (a)	wharf at Gl. to Twin	96 13 2.06

Geodetic co-ordinates.

	LATITUDE.				LONGITUDE.	
L:	39 6 37.06	Twin	λ:	120 13 47.00
δ L	− 1 27.60		δλ	− 17 27.58
L'	39 5 9.46	Wharf at Glenbrook	λ'	119 56 19.42

computation for latitude:　　　　　　　　　　　*computation for longitude:*

log. dist.	4.4033674		log. dist.	4.4033674
" B	8.5109576		" sin a'	9.9975874 ,,
" cos a'	9.0216599		" A'	8.5092048 −12
			" sec L'	0.1100259 19
log. (I)	1.9359849 + 86.295			
	1.708		log. (V)	3.0201855 ,, +7
log. dist.²	8.80673			
" C	1.31479		δλ −	1047.58
" sin²a	9.99517			
log. (II)	0.11669		*computation for azimuth:*	
log. D	2.3775		log. (V)	3.0201855
" [(I +(II)]²			" sin (L+L'/2)	9.7997886
log. (III)			" sec δL/2	
log. E	6.086		log. (VI)	2.8199741 ,,
" cos²a'			− δa −	660.65
" (I)				
log (IV)				
		δ L		

Azimuth a:	*Freels to Irvin*	134 40 48.97
Spherical angle:	a′ „	6 22 2.81
Azimuth a′	„ „ *Rowlands*	141 2 51.78
δ a + 180°		− 3 22.22
Azimuth (a)	*Rowlands to Freels*	320 59 29.56

Geodetic co-ordinates.

Freels

Rowlands

	LATITUDE.				LONGITUDE	
L:	38 51 17.37			λ:	119 53 51.07	
δ L	+ 5 10.98			δλ	+ 5 22.04	
L′	38 56 28.35			λ′	119 59 13.11	

computation for latitude:			*computation for longitude.*	
log. dist.	4.091311		log. dist.	4.091311
„ B	8.510976		„ sin a′	9.798748
„ cos a′	9.890952 n		„ A′	3.509208 4
			„ sec L′	0.109136 9
log. (I)	2.492902 8 n	− 311.102	log. (V)	2.507901 2
		+ .123		
log. dist.²	8.18226	+ 2		
„ C	1.31085		δλ	+ 322.04
„ sin²a	9.59685			
log. (II)	9.08996	310.98	*computation for azimuth:*	
			log. (V)	2.507901 2
log. D	2.3767		„ sin (L+L′/2)	9.797915 3
„ [I +(II)]²	4.985		„ sec δL/2	
log. (III)	7.3623		log. (VI)	2.305816 5
log. E	6.08.			
„ cos²a′	7.779		− δa	+ 202.22
„ (I)	2.493			
log. (IV)	6.353			

δ L

Azimuth a:		Twin to Fields	314	28	16.63
Spherical angle:		at "	2	46	57.33
Azimuth a'		" " Rowland	311	41	19.30
δa + 180°			+ 9		10.26
Azimuth (a)		Rowland " Twin	131	50	29.56

Geodetic co-ordinates.

LATITUDE.			LONGITUDE.
L. 39 6 37.06	Twin	λ:	120 13 47.00
δL — 10 8.71		δλ	— 14 33.89
L' 38 56 28.35	Rowland's	λ'	119 59 13.11

computation for latitude:

				computation for longitude:	
log. dist.	4.4499248			log. dist.	4.4499248
" B	8.5109576			" sin a'	9.8731865ₙ
" cos a'	9.8228758			" A'	8.5092084
				" sec L'	0.1091269
log. (I)	2.7837582	+ 607.796		log. (V)	2.9414566ₙ
		+ 0.914			
log. dist.²	8.89985	+		δλ — 873.89	
" C	1.31479				
" sin²a	9.74637				
		608.716		*computation for azimuth:*	
log (II)	9.96101				
				log. (V)	2.9414566ₙ
log. D	2.3775			" sin (L+L')/2	9.7999747
" [(I +(II)]²	5.5688			" sec δL/2	
log. (III)	7.9463	+ 9/3		log. (VI)	2.7406963ₙ
log. E	6.086	—		δa — 550.26	
" cos²a'	8.676				
" (I)	2.784				
log (IV)	7.516				
		δL			

Azimuth a:	*M to Dallas*	29 28 41.89
Spherical angle:	*are M*	55 31 0.92
Azimuth a'	*a " Tahoe City*	84 59 42.81
δ a + 180°		— 9 20.05
Azimuth (a)	*Tahoe City M*	264 50 22.76

Geodetic co-ordinates.

M

LATITUDE.				LONGITUDE	
L:	39 11 11.46	*Tahoe City*	λ:	119 53 31.19	
δ L	— 1 1.37		δλ	+ 14 46.53	
L'	39 10 10.09		λ'	120 8 17.72	

computation for latitude:

log. dist.	4.3296118	
" B	8.5109519	
" cos a'	8.9409095	
log. (I)	1.7812732	+ 60.433
		+ .937
log. dist.²	8.65922	
" C	1.31595	
" sin²a	9.99168	
log. (II)	9.97185	
log. D	2.3778	
" [I +(II)]²	3.5	
log. (III)		
log. E	6.088	
" cos²a'	8 656	
" (I)	1.781	
log. (IV)		

— δL   + 61.37

computation for longitude.

log. dist.	4.3296118
" sin a'	9.9983410
" A'	8.5092027
" sec L'	0.1105404
log. (V)	2.9476959
δλ	+ 886.535

computation for azimuth :

log. (V)	2.9476959
" sin $\left(\frac{L+L'}{2}\right)$	9.8005326
" sec $\frac{\delta L}{2}$	
log. (VI)	2.7482284
— δa	+ 560.05

Azimuth a:		*Tallac to M*	209 20 57.79
Spherical angle:		*at "*	36 17 6.769
Azimuth a'		*" " Tahoe City*	173 3 57.01
δ a + 180°			− 1 34.25
Azimuth (a)		*Tahoe City " Tallac*	353 2 22.76

Geodetic co-ordinates.

Tallac

Tahoe City.

LATITUDE.			LONGITUDE.	
L:	38 54 12.24	λ:	120 5 48.07
δ L	+ 15 57.85	δ λ	+ 2 29.65
L'	39 10 10.09	λ'	120 8 17.72

computation for latitude :

log. dist.	4.4735331
" B	8.5109730
" cos a'	9.9968117 n
log. (I)	2.9813178 n
log. dist.²	8.9470 7
" C	1.3115 9
" sin²a	8.16362
log (II)	8.42228
log. D	2.3768
" [(I +(II)]²	5.9626
log. (III)	8.3394
log. E	6.082
" cos²a'	7.111
" (I)	2.981
log. (IV)	

− 957.895
+ .026
+ 22

computation for longitude :

log. dist.	4.4735331
" sin a'	9.0818108
" A'	8.5092027
" sec L'	0.1105404
log. (V)	2.1750870

δ λ + 149.65

computation for azimuth :

log. (V)	2.1750870
" sin ($\frac{L+L'}{2}$)	9.7992130
" sec $\frac{\delta L}{2}$	
log. (VI)	1.9743000

— δ a + 94.25

— δ L − 957.85

Tallac to *M*

Azimuth a:	209 20 57.70
Spherical angle:	*a N* 16 22 20.36
Azimuth a'	*Yanks Landing* 225 43 18.06
δ a + 180°	+ 1 45.65
Azimuth (a)	*Yanks Landing* to *Tallac* 45 45 3.71

Geodetic co-ordinates.

Tallac

LATITUDE.				LONGITUDE	
L:	38 54 12.24		λ:	120 5 48.07
δ L	+ 2 8.04		δ λ	− 2 48.17
L'	38 56 20.28	*Yanks Landing*	λ'	120 2 59.90

computation for latitude: *computation for longitude.*

log. dist.	3.752529		log. dist.	3.752529
" B	8.5109730		" sin a'	9.854886 ✓
" cos a'	9.8439453ₙ		" A'	8.509 2084
			" sec L'	0.1091232
log. (I)	2.1074482ₙ − 128.070		log. (V)	2.2267484ₙ
	+ 34			
log. dist.²	7.50506		δ λ − 168.17	
" C	1.31159			
" sin²a	9.70977		*computation for azimuth:*	
log. (II)	8.52642		log. (V)	2.2267484ₙ
			" sin (L+L'/2)	9.7984397
log. D	2.3768		" sec δL/2	
" [I +(II)]²	4.2149			
log. (III)	6.5917		log. (VI)	2.0238805 ₋
log. E	6.082		− δ a − 105.65	
" cos²a'	7 ₂			
" (I)	2			
log (IV)				

− δ L − 128.036

Azimuth a:		*Mt. to Tallac*	29 28 44.89	
Spherical angle:			12 58 39.79	
Azimuth a'		*Yank's Landing*	26 30 2.10	
δ a + 180°			− 5 58.39	
Azimuth (a)		*Yank's Landing " M*	206 24 3.71	

Geodetic co-ordinates.

	LATITUDE.	*M*		LONGITUDE.	
L:	39 11 11.46		λ:	119 53 31.19	
δ L	− 14 51.18		δλ	+ 9 28.71	
L'	38 56 20.28	*Yank's Landing*	λ'	120 2 59.90	

computation for latitude: *computation for longitude:*

log. dist.	4.4870271		log. dist.	4.4870271
" B	8.5109519		" sin a'	9.6495363
" cos a'	9.9517890		" A'	8.5092084
			" sec L'	0.1091232
log. (I)	2.9497680	+ 890.775	log. (V)	2.7548950
		+ .388		
log. dist.²	8.97405	+ .017		
" C	1.31595		δλ + 568.71	
" sin²a	9.29907			
log (II)	9.58907		*computation for azimuth:*	
		1.18		
log. D	2.3778		log. (V)	2.7548950
" [(I +(II)]²	5.8298		" sin (L+L'/2)	9.7994582
			" sec δL/2	
log. (III)	8.2776	+ 19	log. (VI)	2.5543532
		/ 2		
log. E	6.048		− δa + 358.39	
" cos²a'	8.273			
" (I)	2.950			
log (IV)	7.311			

− δL + 891.18

Febr 7.

Azimuth a:	$\mathcal{O}$ to Fred	4 32 50.93
Spherical angle:		147 41 20.21
Azimuth a'	" " State line mon.	152 14 11.14
$\delta a + 180°$		− 4 36.13
Azimuth (a)	State line mon. $\mathcal{O}$	332 9 35.01

Geodetic co-ordinates.

$\mathcal{O}$

LATITUDE.		LONGITUDE
L:	39 2 26.35	λ:	119 52 43.03
δL	+10 46.33	$\delta\lambda$	+ 7 17.55
L'	39 13 12.7	State line monument λ'	120 0 0.58

computation for latitude: *computation for longitude.*

log. dist.	4.35276	log. dist.	4.35276
" B	8.51096	" sin a'	9.66822
" cos a'	9.94688,	" A'	8.50920
		" sec L'	0.11085
log. (I)	2.81060,	log. (V)	2.64103

− 646.55
+ 22

log. dist.²	8.70552
" C	1.31371
" sin²a	9.77644
log. (II)	9.34567

$\delta\lambda$	437.55

computation for azimuth:

log. D	2.337
" [(I +(II)]²	
log. (III)	

log. (V)	2.64103
" sin $\left(\frac{L+L'}{2}\right)$	9.80009
" sec $\frac{\delta L}{2}$	
log. (VI)	2.44112

log. E	6.024
" cos²a'	
" (I)	

− δa + 276.13

log (IV)

δL

Azimuth a:	*Freels* to 6	18 32 8. 10
Spherical angle:	at "	16 51 40. 20
Azimuth a'	" " " *State line mon.*	167 40 27. 90
δ a + 180°		— 3 52. 73
Azimuth (a)	*State line mon.* " *Freels*	347 36 35. 22

Geodetic co-ordinates.

Freels

LATITUDE.					
L:	38 51 17. 37		λ:	119 53 51. 08	
δL	+ 21 55. 30		δλ	+ 6 9. 50	
L'	39 13 12.7	*State line monument*	λ'	120 0 0. 58	

computation for latitude:

log. dist.	4. 6 1 8 24		
" B	8. 51 0 98		
" cos a'	9. 98 987		
log. (I)	3. 1 1 9 0 9	— 1315. 50	
		16	
log. dist.²	9. 2 3 6 + 8	4	
" C	4 3 1 0 8 5		
" sin²a	8. 6 5 8 6 8		
		1315. 3	
log. (II)	9. 2 0 6 0 1		
log. D	2. 3 7 6 9		
" [(I +(II)]²	6. 2 3 8		
log. (III)	8. 6 1 6		
log. E			
" cos²a'			
" (I)			
log. (IV)			

computation for longitude:

log. dist.	4. 6 1 8 2 4
" sin a'	9. 3 2 9 3 4
" A'	8. 5 0 9 2 0
" sec L'	0. 1 1 0 8 5
log. (V)	2. 5 6 7 6 3
δλ +	369. 50

computation for azimuth:

log. (V)	2. 5 6 7 6 3
" sin $\left(\frac{L+L'}{2}\right)$	9. 7 9 9 2 2
" sec $\frac{δL}{2}$	
log. (VI)	2. 3 6 6 8 5
— δa +	232. 73

δL

Feb 8

Pyramid to Dallas   21 7 4 17
at "   17 45 7

" " *K.d.m. S End*   234 49 34

S.l.m. d End " *Pyramid*

Geodetic co-ordinates.

Pyramid

	LATITUDE.					LONGITUDE		
L:	38	50	32.55		λ:	120	9	20.54
δL		+ 6	48.92		$\delta\lambda$		- 12	24.34
L'	38	57	21.47		λ'	119	56	56.2

Stake line now at North end of Lake Tahoe

computation for latitude:			*computation for longitude.*	
log. dist.	4.34089		log. dist.	4.34089
" B	8.51098		" sin a'	9.9124...
" cos a'	9.76047		" A'	8.50921
			" sec L'	0.10923
log. (I)	2.61234 — 409.58		log. (V)	2.87177
	+ 66		$\delta\lambda$ — 744.34	
log. dist.²	8.68178			
" C	1.31061		*computation for azimuth:*	
" sin²a	9.82488			
log. (II)	9.81731		log. (V)	
			" sin $\left(\frac{L+L'}{2}\right)$ 9.79793	
log. D	2.3766		" sec $\frac{\delta L}{2}$	
" [(I +(II)]²				
log. (III)			log. (VI)	
log. E				
" cos²a'			δa	
" (I)				
log. (IV)				

— δL — 408.92

Azimuth a:
Spherical angle:

a   *Tallac to Pyramid*   37 6 31
a   "   15 38 53

Azimuth a'
$\delta a + 180°$
"   *St.L. in S.End*   245 27 38

Azimuth (a)
L. in S.E.   " Tallac

Geodetic co-ordinates.

Tallac

LATITUDE.

L: 38 54 12.24
δL + 3 9.24

L'   38 57 21.49   *State line mon. at South end of Lake Tahoe*

LONGITUDE.

λ: 120 5 48.07
$\delta \lambda$ − 8 51.84

λ' 119 56 56.2

computation for latitude:

log. dist.   4.14845
" B   8.51097
" cos a'   9.61838

log. (I)   2.27780 −189.58
                  + .34

log. dist.²   8.29690
" C   1.31154
" sin²a   9.91778

log. (II)   9.52622

log. D   2.377
" $[I + (II)]^2$

log. (III)

log. E
" cos²a'
" (I)

log. (IV)

−δL 189.24

computation for longitude:

log. dist.   4.14845
" sin a'   9.95889
" A'   8.50921
" sec L'   0.10923

log. (V)   2.72578

$\delta \lambda$ − 531.84

computation for azimuth:

log. (V)
" $\sin\left(\frac{L+L'}{2}\right)$ 9.79821
" $\sec\frac{\delta L}{2}$

log. (VI)

δa

Azimuth a:	a' Irvin to Rockn	227	38	49
Spherical angle:		9	50	19
Azimuth a'	" " Carpenter 10	237	29	8
δ a + 180°		+	10	6
Azimuth (a)	Carpenter 10 " Irvin	57	39	14

Geodetic co-ordinates.

LATITUDE.	Irvin	LONGITUDE
L: 39 6 37.06		λ: 120 13 47.00
δL + 7 54.76		δλ − 16 0.00
L' 39 14 31.82	Carpenter Station 10	λ' 119 57 47.00

computation for latitude: *computation for longitude.*

log. dist. 4.43612 log. dist. 4.43612
" B 8.51096 " sin a' 9.9259 6..
" cos a' 9.73039.. " A' 8.5092 20
log. (I) 2.677474 − 475.85 " sec L' 0.11099
+ 1 09 log. (V) 2.98229.

log. dist.² 8.87224 δλ − 960.00
" C 1.31480
" sin²a 9.85192 *computation for azimuth:*

log. (II) 0.03896 log. (V) 2.98229.
" sin (L+L')/2 9.80051
log. D " sec δL/2
" [(I +(II)]² log. (VI) 2.78278..

log. (III) − δa − 606.4

log. E
" cos²a'
" (I)

log. (IV)

− δL − 474.76

Azimuth a:
Spherical angle:

Azimuth a'
δ a + 180°

Azimuth (a)

Rose Knob to Twin 47 48 7
at „ 69 28 44

„ „ Carpenter 10 338 19 26
+ 0 48

Carpenter 10 „ Rose Knob 158 20 14

Geodetic co-ordinates.

Rose Knob

LATITUDE.
L: 39 17 1.92
δL − 2 30.10
L' 39 14 31.82 Carpenter Station 10

LONGITUDE.
λ: 119 59 3.70
δλ − 1 16.72
λ' 119 57 46.98

computation for latitude:

log. dist.   3.69727
" B   8.51094
" cos a'   9.96815
log. (I)   2.17636 + 150.09 +

log. dist.²   7.39452
" C   1.31744
" sin²a   9.13490
log (II)   7.84688

log. D
" [I +(II)]²

log. (III)

log. E
" cos²a'
" (I)

log (IV)

δ L

computation for longitude:

log. dist.   3.69727
" sin a'   9.69745ₙ
" A'   8.50920
" sec L'   0.11099
log. (V)   1.88491ₙ

δλ − 76.72

computation for azimuth:

log. (V)   1.88491ₙ
" sin (L+L'/2)   9.80132
" sec δL/2
log. (VI)   1.68623ₙ

− δ a − 48.6

Azimuth a:	Irwin to Von Knob	227 38 49
Spherical angle:	at "	29 8 38
Azimuth a'	" " " Carpenter 21	256 47 27
δ a + 180°		+ 11 21
Azimuth (a)	Carpenter 21 to Irwin	76 58 48

Geodetic co-ordinates.

Irwin

Carpenter. 21.

LATITUDE.		LONGITUDE	
L:	39 6 37.06	λ:	120 13 47.00
δL	+ 3 15.63	δλ	− 17 58.20
L'	39 9 52.69	λ'	119 55 48.80

computation for latitude:

log. dist.	4. 42464
" B	8. 51096
" cos a'	9. 35890ₙ
log. (I)	2. 29450ₙ − 197.010 + 1.383
log. dist.²	8. 84928
" C	1. 31480
" sin²a	9. 97670
log. (II)	0. 14078 − 195.63
log. D	
" [(I +(II)]²	
log. (III)	
log. E	
" cos²a'	
" (I)	
log. (IV)	

δ L

computation for longitude.

log. dist.	4. 42464
" sin a'	9. 98835ₙ
" A'	8. 50920ₙ
" sec L'	0. 11051
log. (V)	3. 03270ₙ
δλ	− 1078.20

computation for azimuth:

log. (V)	3. 03270ₙ
" sin $\left(\frac{L+L'}{2}\right)$	9. 80016
" sec $\frac{δL}{2}$	
log. (VI)	2 83286ₙ
− δa −	680.5

Ross Karb to Twin   47 48 7
at "   69 .6 22

Azimuth a:
Spherical angle:

" " Carpenter 21   370 31 45
Azimuth a'   + 2 3
δ a + 180°

Azimuth (a)   Carpenter 21 " Ross Karb | 160 33 48

Geodetic co-ordinates.

	LATITUDE.			LONGITUDE.
L:	39 17 1.92	Ross Karb λ:	119 59 3.70
δ L	— 9 9.22	δλ	— 3 14.92
L'	39 9 52.70	Carpenter Station 21. λ'	119 55 48.78

computation for latitude: *computation for longitude:*

log. dist.	4.14727		log. dist.	4.14727
" B	8.510 q4		" sin a'	9.52184 w
" cos a'	9.97842		" A'	8.50926
			" sec L'	0.11051
log. (I)	2.63263 + 429.67		log. (V)	2.28985 u
	0.06			
log. dist.²	8.29454			
" C	1.31744		δλ	— 194.92
" sin²a	9.04574			

		+ 429.06	*computation for azimuth:*
log. (II)	8.65972			
log. D			log. (V)	2.28985 u
" [(I +(II)]²			" sin (L+L')/2	9.80096 u
log. (III)			" sec δL/2	
log. E			log. (VI)	2.09084 u
" cos²a'				
" (I)			— δa — 123.3
log. (IV)			

δ L

7

Azimuth a:		C to Irwin	148 18 30
Spherical angle:		at "	128 41 10
Azimuth a'		" " Fridays Cr	276 59 40
δ a + 180°			+ 6 46
Azimuth (a)		Fridays Cr. " C	97 6 26

Geodetic co-ordinates.

C

	LATITUDE.				LONGITUDE	
L:	38 58 52.10			λ:	120. 7 38.39	
δ L	– 1 2.35			δλ	– 10 45.80	
L'	38 57 49.75	Mouth of Friday's Creek		λ'	119 56 52.59	

computation for latitude:				computation for longitude.	
log. dist.	4.19485		log. dist.	4.19485	
" B	4.51097		" sin a'	9.99674ₙ	
" cos a'	9.08555		" A'	8.50921	
			" sec L'	0.10928	
log. (I)	1.79137	+ 61.854	log. (V)	2.81010ₙ	
		+ 496			
log. dist.²	8.38970		δλ –	645.80	
" C	1.31279				
" sin²a	9.99352	35			
log. (II)	9.69601		computation for azimuth:	
log. D	2.3771		log. (V)	2.81010ₙ
" [I +(II)]²			" sin (L+L')/2	9.79861ₙ
log. (III)			" sec δL/2	
log. E			log. (VI)	2.60871ₙ
" cos²a'				
" (I)			– δa	– 406
log. (IV)				
δ L				

Azimuth a:	Twin to C	328	14 37
Spherical angle:	av „	24	38 60
Azimuth a'	„ „ Fridays Cr.	303	45 47
δ a + 180°		+	10 39
Azimuth (a)	Fridays Cr. „ Twin	123	46 26

Geodetic co-ordinates.

Twin

	LATITUDE.		LONGITUDE.
L:	39 6 37.06	λ:	120 13 47.00
δ L	− 8 47.31	δ λ	− 16 54.40
L'	38 57 49.75	Mouth of Fridays Creek λ'	119 56 52.60

computation for latitude: *computation for longitude:*

log. dist.	4.46710	log. dist.	4.46710	
" B	8.51096	" sin a'	9.92062ₙ	
" cos a'	9.74299	" A'	8.50921	
log. (I)	27 2105 + 526.08	" sec L'	0.10928	
	1.23	log. (V)	3.00621ₙ	
log. dist.²	8.93420 +			
" C	1.31479	δ λ	− 1014.40	
" sin²a	9.8412ₙ			
log. (II)	0.09023	*computation for azimuth:*		
log. D	2.3775	log. (V)	3.00621ₙ	
" [I + (II)]²	5.4	" sin (L+L')/2	9.79922	
log. (III)	7.8	" sec δL/2		
log. E		log. (VI)	2.80543ₙ	
" cos²a'		− δ a − 639		
" (I)				
log. (IV)				
δ L				

Feb 9

Azimuth a:	O to Como	273	48	31
Spherical angle:	av,,	68	20	53
Azimuth a'	,, ,, Sheridan	342	9	24
δa + 180°		+	2	12
Azimuth (a)	Sheridan ,, O	162	11	36

Geodetic co-ordinates.

LATITUDE.

L:	39	2	26.35
δL	−8	30.39	
L'	38	53	55.96

O

Sheridan

LONGITUDE

λ:	119	52	43.03
δλ	−3	30.23	
λ'	119	49	12.80

computation for latitude:

log. dist.	4.2180		
" B	8.51096		
" cos a'	9.97859		
log. (I)	2.70785	+	510.329
		+	53
log. dist.²	8.43660	+	6
" C	1.31391		
" sin²a	8.99262		
log. (II)	8.72293		
log. D	2.3773		
" [I +(II)]²	5.4160		
log. (III)	9.7933		
log. E	6.084		
" cos²a'	7 4		
" (I)	2 7		
log. (IV)			

computation for longitude.

log. dist.	4.2180
" sin a'	9.42631u
" A'	8.509u
" sec L'	0.10888
log. (V)	2.32270u
δλ	− 210.23

computation for azimuth:

log. (V)	2.32270u
" sin $\left(\frac{L+L'}{2}\right)$	9.79859
" sec $\frac{\delta L}{2}$	
log. (VI)	2.12129u
− δa	− 132

− δL + 510.39

		Como	to	$\wp$	94	3	56
Azimuth a:							
Spherical angle:		ar "			27	40	7
Azimuth a'		" " " Sheridan			66	23	49
δ a + 180°						13	11
Azimuth (a)		Sheridan " Como			246	10	38

Geodetic co-ordinates.

Como

Sheridan

LATITUDE.				LONGITUDE.			
L:	39	1	7.52	λ:	119	28	14.42
δL		− 7	11.55	δλ		+ 20	58.40
L'	38	53	55.97	λ'	119	49	12.82

computation for latitude:

				computation for longitude:		
log. dist.	4.51967			log. dist.	4.51967	
" B	8.51096			" sin a'	9.96206	
" cos a'	9.60249			" A'	3.50921	
				" sec L'	0.10888	
log. (I)	2.63312	+ 429.655				
		+ 1.891		log. (V)	3.09982	
log. dist.²	9.03934					
" C	1.31324			+ δλ	+ 1258.40	
" sin²a	9.92400					
log. (II)	0.29668			*computation for azimuth:*		
log. D	2.3772			log. (V)	3.09982	
" [I +(II)]²	5 2706			" sin ((L+L') / 2)	9.79848	
				" sec (δL / 2)		
log. (III)	7.6478			log. (VI)	2.89830	
log. E	6.084					
" cos²a'	8.963			− δa	+ 791	
" (I)	2.633					
log. (IV)	7.680					

− δL + 431.83

Azimuth a:		$\mathcal{O}$ to Cons	273 48 31
Spherical angle:		at.	67 15 42
Azimuth a'		Carp. Camp 13	341 4 13
δ a + 180°			+ 3 23
Azimuth (a)		Camp 13 " $\mathcal{O}$	161 7 43

Geodetic co-ordinates.

$\mathcal{O}$

	LATITUDE.			LONGITUDE
L:	39 2 26.35		λ:	119 52 43.03
δL	12 42.23		δλ	− 5 34.15
L'	38 49 44.12	Carpenter's Camp 13.	λ'	119 47 8.88

computation for latitude:

log. dist.	4.39519	
" B	8.51096	
" cos a'	9.97585 +	
log. (I)	2.88200 +	762..080
		134
log. dist.²	8.79038 +	14
" C	1.31371	
" sin²a	9.02218	
log. (II)	9.12629	
log. D	2.3773	
" [I +(II)]²	5.7642	
log. (III)	8.1415	
log. E	6.084	
" cos²a'	7.812	
" (I)	2.882	
log. (IV)	6.778	

− δL + 762.23

computation for longitude.

log. dist.	4.39519
" sin a'	9.51109 "
" A'	8.50921
" sec L'	0.10845
log. (V)	2.52394 "
δλ −	334.15

computation for azimuth :

log. (V)	2.52394 "
" sin $\left(\frac{L+L'}{2}\right)$	9.79826
" sec $\frac{\delta L}{2}$	
log. (VI)	2.32220 "
− δa −	210

Azimuth a:	Como to Q	94 3 56
Spherical angle:	at „	41 36 20
Azimuth a'	„ „ „ Camp 13	52 27 36
δ a + 180°		− 11 53
Azimuth (a)	Camp 13 „ Como	232 15 43

Geodetic co-ordinates.

LATITUDE.	Como		LONGITUDE.
L: 39 1 7.52		λ:	119 28 14.42
δL − 11 23.40		δλ	+ 18 54.44
L' 38 49 44.12	Carpenter Camp 13	λ'	119 47 8.86

computation for latitude: *computation for longitude:*

log. dist.	4.53789		log. dist.	4.53789
" B	8.51096		" sin a'	9.89427
" cos a'	9.72484		" A'	8.50921
			" sec L'	0.10845
log. (I)	2.83369 + 681.852		log. (V)	3.05478
	1.540			
log. dist.²	9.07578 + 5		δλ + 1134.44	
" C	1.31334			
" sin²a	9.79846			
log. (II)	0.18758		*computation for azimuth:*	
			log. (V)	3.05478
log. D	2.3772		" sin (L+L')/2	9.79816
" [I +(II)]²	5.4694		" sec δL/2	
log. (III)	8.0466		log. (VI)	2.85294
log. E	6.084		− δa + 713	
" cos²a'	8.873			
" (I)	2.834			
log. (IV)	7.791			

− δL + 683.40

Febr. 14.

Azimuth a: | Basalt to Jaroggie | 194 40 15.91
Spherical angle: | " " | 28 19 51.68

Azimuth a' | " " Fairview | 223 0 7.64
δa + 180° | | +10 45.65

Azimuth (a) | Fairview to Basalt | 43 10 53.29

Geodetic co-ordinates.

Basalt

Fairview

	LATITUDE.			LONGITUDE	
L:	38 59 9.81		λ:	118 25 59.04	
δL	+14 12.54		δλ	−17 3.65	
L'	39 13 22.35		λ'	118 8 55.39	

computation for latitude:

9.864 11 25 w

log. dist.	4.556 2 92
" B	8.510 9 68
" cos a'	~~9.9003607~~ w

log. (I)	2.931 3585 w	− 853.804
		+ 1.239
log. dist.²	9.11256	+ 23
" C	1.31287
" sin²a	9.66760

| log. (II) | 0.09303 | 1.262 |

| log. D | 2.3771 |
| " [I +(II)]² | 5.8614 |

| log. (III) | 8.2385 | 17 |

log. E	6.083
" cos²a'	8.980
" (I)	2.931

| log (IV) | 7.794 |

− δL − 852.54

computation for longitude.

9.833 80 06 w

log. dist.	4.556 2 92
" sin a'	~~9.990 0011~~ "
" A'	8.509 2014	−24
" sec L'	0.110 8708	+18

log. (V)	3.010 15 20 w
	− 6 w
δλ −	1023.65

computation for azimuth:

log. (V)	3.010 1514 "
" sin (L+L'/2)	9.799 84.79
" sec δL/2	

| log. (VI) | 2.809 999 34 |

− δa − 645.65

Azimuth a:	Jaroggua to Basan	14 47 54.88
Spherical angle:	as "	.25 5.16
Azimuth a'	" " Fairview	349 46 49.72
δ a + 180°		+ 3 9.68
Azimuth (a)	Fairview . Jaroggua	169 49 59.40

Geodetic co-ordinates.

LATITUDE.		Jaroggua		LONGITUDE.
L:	39 34 51.67		λ:	118 13 54.21
δ L	— 21 29.32		δ λ	— 4 58.82
L'	39 13 22.35	Fairview	λ'	118 8 55.39

computation for latitude:

log. dist.   4.6063330
" B   8.5109225
" cos a' 9.9930548
log. (I)   3.1103163   + 1289.170
                        + .108
log. dist.² 9.21267   + 39
" C   1.32201
" sin²a 8.49800
log. (II) 9.03268
log. D   2.2790
" [I +(II)]² 6.2206
log. (III) 8.5996   + 40
                     — 1
log. E   6.096
" cos²a' 9.710
" (I)   3.810
log. (IV) 6.916

— δL + 1289.32

computation for longitude:

log. dist.   4.6063330
" sin a' 9.2490028ₙ
" A'   8.5092014   —29
" sec L' 0.1108708   +2
log. (V)   2.4754080
                      —27"
δλ — 298.82

computation for azimuth:

log. (V)   2.4754053ₙ
" sin (L+L'/2) 9.8026073
" sec δL/2
log. (VI) 2.2780126ₙ
δa — 189.68

Azimuth a:	*Basalt to Darogqua*	194 40 15.96
Spherical angle:	*at "*	21 15 15.10
Azimuth a'	*" " Grants*	215 55 31.06
δa + 180°		+ 19 38.96
Azimuth (a)	*Grants " Basalt*	36 15 10.02

Geodetic co-ordinates.

Basalt

Grant's Pk

LATITUDE.				LONGITUDE			
L:	38	59	9.81	λ:	118	25	59.04
δL	+ 33		6.74	δλ	− 31		2.87
L'	39	32	16.55	λ'	117	54	56.17

computation for latitude:			*computation for longitude.*	
log. dist.	4.8797241		log. dist.	4.8797241
" B	8.5109668		" sin a'	9.7684382n
" cos a'	9.9083685n		" A'	8.5091936 −102
			" sec L'	0.1128311 +59
log. (I)	3.299059 4n = −1990.946		log. (V)	3.2701870n
	4.066			−43
	142		δλ −	1862.87
log. dist.²	9.75945			
" C	1.31287			
" sin²a	9.53687	95+54	*computation for azimuth:*	
		4.208		
log. (II)	0.60919			
			log. (V)	3.2701827n
log. D	2.3971		" sin ((L+L')/2)	9.8093128
" [I+(II)]²	6.5964		" sec δL/2	50
log. (III)	8.9735 + 94		log. (VI)	3.0715555n
	+ 48			
log. E	6.083		− δa −	1178.96
" cos²a'	9.296			
" (I)	3.299			
log. (IV)	8.678			

← δL − 1986.74

Azimuth a:	*Jaroggna to Basalt*	14 47 54.88
Spherical angle:	all "	94 54 44.36
Azimuth a'	" " *Grants*	279 53 10.52
δ a + 180°		+ 12 4.79
Azimuth (a)	*Grants* " *Jaroggna*	100 5 15.31

Geodetic co-ordinates.

Jaroggna

Grant's Pk

LATITUDE.				LONGITUDE.	
L:	39 34 51.67		λ:	118 13 54.21	
δL	← 2 35.12		δλ	− 18 58.04	
L'	39 32 16.55		λ'	117 54 56.17	

computation for latitude:

log. dist.	4.4406293	
" B	8.5109225	
" cos a'	9.2347521	
log. (I)	2.1863039	+ 153.569
		+ 1.550
log. dist.²	8.88126	
" C	1.32201	
" sin²a	9.98700	
log. (II)	0.19027	
log. D	2.3790	
" [(I + (II)]²	4.3812	
log. (III)	6.7602 +	
log. E	6.096 −	
" cos²a'	8.868	
" (I)	2.186	
log. (IV)	7.150	

computation for longitude:

log. dist.	4.4406293	
" sin a'	9.9935026 ₙ	
" A'	8.5091936	− 14
" sec L'	0.1128311	+ 23
log. (V)	3.0561566 ₙ	
	+ 9	
δλ	− 1138.04	

computation for azimuth:

log. (V)	3.0561575 ₙ	
" sin ($\frac{L+L'}{2}$)	9.8040566	
" sec $\frac{δL}{2}$		
log. (VI)	2.8602141 ₙ	
− δa	− 724.79	

− δL → 155.12

Azimuth a:
Spherical angle:

Basalt to Darogqua   194 40 15.96
or "   95 59 37.49

Azimuth a'
δ a + 180°

" " Paradise   290 39 53.05
+ 22 59.06

Azimuth (a)

Paradise " Basalt   111 2 52.11

Geodetic co-ordinates.

Basalt

Paradise

	LATITUDE.				LONGITUDE	
L:	38 59 9.81			λ:	118 25 59.04	
δ L	− 10 53.91			δ λ	− 36 36.31	
L'	38 48 15.90			λ'	117 49 22.73	

computation for latitude:

computation for longitude.

log. dist.	4.7530595			log. dist.	4.7530595	
" B	8.510966			" sin a'	9.9711487 w	
" cos a'	9.5476504			" A'	8.592118 w	− 58
				" sec L'	0.1083011	+ 83
log. (I)	2.8156764	+ 648.152		log. (V)	3.3416911 "	
		+ 5.770				+25
log. dist.²	9.50612	− 12		δ λ −	2196.31	
" C	1.31287					
" sin²a	9.94224	5.768				
log. (II)	0.76123			*computation for azimuth :*		
log. D	2.3771			log. (V)	3.3416936 "	
" [I +(II)]²	5.6342			" sin (L+L'/2)	9.7978895	
				" sec δL/2		
log. (III)	8.0083	107		log. (VI)	3.1395831 "	
		221				
log. E	6.083			− δ a −	1379.06	
" cos²a'	9.447					
" (I)	2.815					
log. (IV)	8.347					

− δ L − 653.91

Jaroqqua v Basan   14 47 54.88
av   "   37 11 59.93
        "   "   Paradin 337 35 54.95
                                        +15 ng.89
Paradin   "   Jaroqqua 157 51 24.84

39 34 51.67   Jaroqqua   118 13 54.21
  – 46 35.77   – 24 31.48
38 48 15.90   Paradise   117 49 22.73

        7. 969 2214   7. 969 2214
        8. 510 9225   9. 581 0310
        9. 965 9242   8. 592 118"   – 154
        3. 446 0681   + 2792.982   0. 108 3011   + 37
                      +   2.645   3. 167 7653₄
        9. 938 44   +   .143   – 117
        1. 322 01   + 2795.97   – 1471.48
        9. 162 06
        0. 422 51

        2. 37 90   3. 167 7536₄
        6. 897 28   9. 800 6696
        9. 271 8   187   100
                         404   2. 968 4332₄
        6. 096
        9. 100   – – 929.89
        3. 446
        8. 642

                                        Jch 55