

COURSE NO. 5 (B53)----- (B61)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
B52		62-24-49					
B53	0-00-00	62-24-49	56.175	32051.886	-42473.837	62-24-50	56.174
B68	208-32-50	90-57-42	44.111	32077.900	-42424.049	90-57-43	44.111
B69	186-18-50	97-16-34	43.972	32077.159	-42379.944	97-16-35	43.972
B70	171-02-53	88-19-29	41.807	32071.590	-42336.327	88-19-30	41.807
B61	270-21-03	178-40-34		32072.812	-42294.538		

SIGM		SIGM		SIGM		SIGM	
CAL----	DA= -11. H=1/109175	S= 186.065	DX= 0.001	DY= 0.001	DS= 0.002		
LIMIT--	DA= 132 H=1/ 3000		DS= 0.18721				

*** END ***

多角測量点計算書

路線名 B-22

角の閉合差 0-00-21

(B-22)

測点 A11 カラ (502)

実測精度 1 / 17581

距離の和

324.176

測角点	方向点	測角	補正	方向角	距離	COS	SIN	Δ X	Δ Y	ε X	ε Y	X	Y	測点
A12	A11			66-42-21								32326.467	-42144.944	A11
A11	B71	334-46-05	-4	221-28-22	30.264	-0.749270	-0.662264	-22.676	-20.043	0	-2	32303.791	-42164.989	B71
B71	B72	127-32-05	-3	169-00-24	45.137	-0.981649	0.190695	-44.309	8.607	1	-2	32259.483	-42156.384	B72
B72	B73	158-27-50	-4	147-28-10	84.770	-0.843105	0.537749	-71.470	45.585	1	-5	32188.014	-42110.804	B73
B73	B74	176-14-43	-3	143-42-50	96.367	-0.806072	0.591818	-77.679	57.032	1	-5	32110.336	-42053.777	B74
B74	(502)	137-38-20	-4	101-21-06	67.638	-0.196830	0.980438	-13.313	66.315	1	-4	32097.024	-41987.466	(502)
(502)	(4)	15-38-10	-3	296-59-13										

観測方向角	296-59-34							Δ X, Δ Y 合計	-229.447	157.496		32097.024	-41987.466	(502)
既知方向角	296-59-13	距離合計			324.176			Δ X, Δ Y	-229.443	157.478				
測角誤差	0-00-21							閉合差	-0.004	0.018	0.018439	32326.467	-42144.944	A11
配布点数	6							配布点数	5					

TYPE Y 1 2 3

17 1 MA= 2 (M) (M)
MX= 0.002 MY= 0.006

ホウコウカク ノ 裨イケツン 20 + 50.0 n
サマヒョウ ノ 裨イケツン 15.0+ 10.0 N·S
ツユクツヤク ケイス 1.000000

DATE 88/04/14

COURSE NO. 1 (A13)----- (B77)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A11		326-54-29					
A13	181-33-28	148-27-56	49.422	32218.631	-42074.668	148-28-04	49.419
B75	172-04-45	140-32-40	57.906	32176.509	-42048.823	140-32-46	57.903
B76	186-59-23	147-32-02	47.767	32131.800	-42012.028	147-32-10	47.764
B77	360-00-00	327-32-01		32091.500	-41986.390		

SIGM		SIGM		SIGM		SIGM	
CAL----	DA= 3. H=1/	15568	S= 155.095	DX=-0.004	DY= 0.009	DS= 0.010	
LIMIT--	DA= 107 H=1/	3000	DS= 0.17686				

COURSE NO. 2 (A31)----- (B77)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
(502)		59-56-29					
A31	0-38-38	60-35-08	41.068	31995.123	-42163.548	60-35-11	41.068
B78	183-09-23	63-44-31	95.546	32015.292	-42127.774	63-44-34	95.547
B79	174-54-05	58-38-37	65.221	32057.562	-42042.086	58-38-40	65.221
B77	88-53-25	327-32-02		32091.500	-41986.390		

	SIGM		SIGM	SIGM	SIGM
CAL----	DA=	-2. H=1/ 55624	S=	201.835	DX= 0.002
					DY=-0.003
LIMIT--	DA=	120 H=1/ 3000	DS=	0.18496	DS= 0.003

COURSE NO. 3 (A26)----- (B77)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A25		131-46-40					
A26	191-51-55	323-38-35	72.853	31934.594	-41844.987	323-38-41	72.850
B80	184-24-53	328-03-29	63.864	31993.265	-41888.172	328-03-35	63.862
B81	170-53-50	318-57-19	45.684	32047.458	-41921.957	318-57-25	45.682
B82	146-36-10	285-33-30	35.748	32081.912	-41951.953	285-33-30	35.746
B77	221-58-32	327-32-02		32091.500	-41986.390		

	SIGM		SIGM	SIGM	SIGM
	DA=	-2. H=1/	21056 S=	218.149	DX= 0.003
					DY=-0.010
	LIMIT--	DA= 132 H=1/	3000 DS=	0.19363	DS= 0.010

*** END ***

TYPE	H	1	2	3	4	5
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			(M)	(M)
1	MA= 2	MX= 0.002	MY= 0.004	
2	MA= 2	MX= 0.002	MY= 0.005	

ホウコウカク ノ ビイゲツ 20 + 50.0 n
 サ"ヒヨウ ノ ビイゲツ 15.0+ 10.0 N.S
 シュクシヤク ケイス 1.000000

DATE 88/04/15

COURSE NO. 1 (A31)----- (B85)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
(502)		59-56-29					
A31	158-02-03	217-58-34	50.767	31995.123	-42163.548	217-58-34	50.767
B83	128-10-13	166-08-49	57.571	31955.105	-42194.786	166-08-48	57.571
B84	174-49-55	160-58-47	53.917	31899.209	-42181.002	160-58-45	53.917
B85	98-17-18	79-16-07		31848.236	-42163.430		

SIGM		SIGM		SIGM	
CAL----	DA= -9.H=1/125119	S= 162.255	DX=-0.001	DY=-0.001	DS= 0.001
LIMIT--	DA= 120 H=1/ 3000		DS= 0.17810		

COURSE NO. 2 (A27)----- (B85)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A32		310-17-53					
A27	97-05-20	47-23-15	37.230	31686.061	-42189.457	47-23-05	37.229
B86	118-32-58	345-56-14	35.579	31711.268	-42162.059	345-56-06	35.580
B87	195-34-15	1-30-31	60.333	31745.781	-42170.706	1-30-21	60.334
B88	186-11-05	7-41-37	42.524	31806.094	-42169.121	7-41-27	42.524
B85	251-34-28	79-16-07		31848.236	-42163.430		

	SIGM		SIGM	SIGM	SIGM
	DA=	-8. H=1/	19774	S=	175.666
	CAL----			DX=-0.003	DY= 0.008
	LIMIT--	DA= 132 H=1/	3000	DS= 0.009	
				DS= 0.18513	

COURSE NO. 4 (A28)----- (B91)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A29		123-30-52					
A28	196-42-05	320-12-52	46.267	31572.921	-42045.963	320-12-49	46.267
B92	227-07-43	7-20-30	47.729	31608.475	-42075.571	7-20-26	47.729
B93	179-13-35	6-33-59	52.362	31655.812	-42069.473	6-33-56	52.362
B94	172-20-53	358-54-47	58.720	31707.831	-42063.486	358-54-44	58.720
B95	168-14-10	347-08-52	50.199	31766.540	-42064.600	347-08-48	50.199
B96	176-18-48	343-27-35	48.758	31815.481	-42075.767	343-27-31	48.758
B91	360-00-00	163-27-29		31862.222	-42089.649		

	SIGM		SIGM	SIGM	SIGM
CAL----	DA= 31. H=1/	59089	S= 304.035	DX= 0.000	DY= 0.005
LIMIT--	DA= 142 H=1/	3000		DS= 0.005	
				DS= 0.22447	

COURSE NO. 5 (B85)----- (B91)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
B84		79-16-07					
B85	0-00-00	79-16-07	75.097	31848.236	-42163.430	79-16-01	75.094
B91	264-11-20	163-27-31		31862.222	-42089.649		

	SIGM		SIGM	SIGM	SIGM
CAL----	DA=	-8 H=1/ 20768	S=	75.097	DX=-0.002 DY= 0.003 DS= 0.004
LIMIT--	DA=	91 H=1/ 3000			DS= 0.15751

*** END ***

TYPE H 1 2 3 4 5

17 1 MA= 2 (M) MX= 0.005 MY= 0.009

17 2 MA= 2 (M) MX= 0.005 MY= 0.009

ホウソウカク ノ 変位 (mm) 20 + 50.0 n

サニョウ ノ 変位 (mm) 15.0+ 10.0 N.S

ソウジヤク ケイス 1.000000

DATE 88/04/15

COURSE NO. 1 (A31)----- (B102)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
(502)		59-56-29					
A31	27-33-58	87-30-30	37.721	31995.123	-42163.548	87-30-22	37.722
B97	237-26-35	144-57-08	67.881	31996.764	-42125.862	144-57-00	67.879
B98	184-23-38	149-20-49	65.362	31941.195	-42086.879	149-20-41	65.360
B99	197-41-45	167-02-37	74.620	31884.969	-42053.554	167-02-31	74.617
B100	186-01-20	173-04-00	58.022	31812.251	-42036.822	173-03-55	58.020
B101	174-55-03	167-59-06	49.402	31754.656	-42029.817	167-59-00	49.400
B102	53-11-55	41-11-04		31706.338	-42019.532		

	SIGM		SIGM	SIGM	SIGM
				DX=-0.014	DY=-0.007
CAL----	DA= -21	H=1/ 22232	S= 353.008	DS= 0.016	
LIMIT--	DA= 152	H=1/ 3000		DS= 0.23647	

COURSE NO. 2 (A28)----- (B102)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A29		123-30-52					
A28	321-01-10	84-32-03	25.104	31572.921	-42045.963	84-32-03	25.102
B103	120-29-50	25-01-55	44.804	31575.312	-42020.976	25-01-37	44.802
B104	168-51-20	13-53-16	48.477	31615.907	-42002.022	13-52-57	48.476
B105	132-13-13	326-06-30	52.249	31662.967	-41990.391	326-06-13	52.252
B102	255-04-32	41-11-04		31706.338	-42019.532		

SIGM		SIGM		SIGM		SIGM	
CAL----		DA=	H=1/	S=	DX=	DY=	DS=
CAL----		DA= -7.	H=1/ 10452	S= 170.634	DX= 0.001	DY= 0.016	DS= 0.016
LIMIT--		DA= 132	H=1/ 3000		DS= 0.18413		

COURSE NO. 3 ((502))----- (B111)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
(4)		296-59-13					
(502)	290-17-50	227-17-01	80.592	32097.024	-41987.466	227-16-57	80.592
B106	100-23-50	147-40-49	53.099	32042.352	-42046.678	147-40-48	53.100
B107	182-01-18	149-42-04	51.702	31997.478	-42018.288	149-42-04	51.703
B108	181-23-00	151-05-02	38.785	31952.837	-41992.203	151-05-02	38.786
B109	176-35-13	147-40-13	49.474	31918.887	-41973.449	147-40-13	49.475
B110	174-20-38	142-00-49	51.886	31877.082	-41946.990	142-00-49	51.887
B111	119-36-33	81-37-20		31836.187	-41915.055		

	SIGM		SIGM		SIGM		SIGM
	DA=	15	H=1/	54216	S=	325.538	DX= 0.005
							DY=-0.004
							DS= 0.006
	LIMIT--	DA=	152	H=1/	3000		DS= 0.22974

COURSE NO. 4 (A26)----- (B111)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A25		131-46-40					
A26	16-57-43	148-44-21	53.819	31934.594	-41844.987	148-44-12	53.822
B112	242-01-40	210-45-59	48.429	31888.588	-41817.055	210-45-45	48.428
B113	230-51-23	261-37-20	74.025	31846.974	-41841.825	261-37-14	74.020
B111	360-00-00	81-37-18		31836.187	-41915.055		

	SIGM		SIGM	SIGM	SIGM
CAL----	DA=	6. H=1/ 14740	S= 176.273	DX= 0.003	DY=-0.011
LIMIT--	DA=	107 H=1/ 3000		DS= 0.012	
				DS= 0.18053	

COURSE NO. 5 (B102)----- (B111)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
B101		41-11-04					
B102	0-00-00	41-11-04	32.598	31706.338	-42019.532	41-10-47	32.597
B114	177-10-10	38-21-18	37.865	31730.872	-41998.069	38-21-01	37.864
B115	175-24-40	33-46-02	49.783	31760.567	-41974.575	33-45-45	49.782
B116	189-10-25	42-56-31	46.762	31801.953	-41946.909	42-56-15	46.761
B111	218-40-40	81-37-16		31836.187	-41915.055		

SIGM	SIGM	SIGM	SIGM
CAL----- DA= -21 H=1/ 11963 S= 167.008		DX=-0.006	DY= 0.013
		DS= 0.014	
LIMIT-- DA= 132 H=1/ 3000		DS= 0.18340	

*** END ***

多角測量点計算書

路線名 B-36

角の閉合差 0-00-07

(B-36)

測点 A11 カラ A13

実測精度 1 / 64366

距離の和

128.731

測角点	方向点	測角	補正	方向角	距離	COS	SIN	Δ X	Δ Y	ε X	ε Y	X	Y	測点
A12	A11			66-42-21								32326.467	-42144.944	A11
A11	B117	259-15-20	-2	145-57-39	65.360	-0.828655	0.559759	-54.161	36.586	0	1	32272.306	-42108.357	B117
B117	A13	181-55-35	-3	147-53-11	63.371	-0.846996	0.531600	-53.675	33.688	0	1	32218.631	-42074.668	A13
A13	A11	359-01-20	-2	326-54-29										

観測方向角	326-54-36							Δ X, Δ Y 合計	-107.836	70.274		32218.631	-42074.668	A13
既知方向角	326-54-29			距離合計	128.731			Δ X, Δ Y	-107.836	70.276				
測角誤差	0-00-07							閉合差	0.000	-0.002	0.002000	32326.467	-42144.944	A11
配布点数	3							配布点数	2					

ADJUSTMENTS OF THE TRAVERSINGS

TYPE	H	1	2	3	4	5
				(M)		(M)
1ウ 1	MA= 2		MX= 0.003			MY= 0.004
1ウ 2	MA= 2		MX= 0.003			MY= 0.004

ホウコウカク ノ ヒイゲツ 20 + 50.0 n
 サ"ヒヨウ ノ ヒイゲツ 15.0+ 10.0 N・S
 シュクツヤク ケイス 1.000000

DATE 88/04/16

COURSE NO. 1 (A1)----- (B120)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A2		280-46-16					
A1	226-01-30	146-47-41	26.417	32728.861	-42451.028	146-47-42	26.418
B118	225-13-20	192-00-56	41.507	32706.756	-42436.560	192-00-49	41.509
B119	179-36-10	191-37-01	40.480	32666.157	-42445.200	191-36-55	40.481
B120	85-45-10	97-22-07		32626.505	-42453.351		

SIGM		SIGM		SIGM		SIGM	
CAL----	DA= 19 H=1/	20334	S= 108.404	DX= 0.005	DY=-0.003	DS= 0.005	
LIMIT--	DA= 120 H=1/	3000		DS= 0.16878			

COURSE NO. 2 (A5) ----- (B120)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A6		257-52-58					
A5	166-55-13	64-48-17	56.846	32524.347	-42501.204	64-48-05	56.843
B121	116-12-13	1-00-37	38.397	32548.549	-42449.770	1-00-23	38.398
B122	172-51-10	353-51-53	39.790	32586.941	-42449.095	353-51-41	39.792
B120	283-30-07	97-22-07		32626.505	-42453.351		

	SIGM		SIGM	SIGM	SIGM
CAL----	DA= -26	H=1/ 13351	S= 135.033	DX=-0.005	DY= 0.009
LIMIT--	DA= 120	H=1/ 3000		DS= 0.17339	

COURSE NO. 3 (A18)----- (B124)

NO.	B	A	S (M)	X (M)	Y (M)	C.A	C.S (M)
A19		104-29-22					
A18	164-03-30	268-32-56	53.339	32675.273	-42194.178	268-33-00	53.339
B123	128-28-25	217-01-25	52.703	32673.923	-42247.500	217-01-28	52.702
B124	130-39-58	167-41-27		32631.847	-42279.235		

SIGM		SIGM		SIGM		SIGM	
CAL----	DA= -12 H=1/	52663	S= 106.042	DX=-0.002	DS= 0.002	DY= 0.000	
LIMIT--	DA= 107 H=1/	3000		DS= 0.16500			

