Gravity Survey along the Lines of Precise Levels throughout Japan by Means of a WORDEN Gravimeter.

Part III. Supplement to the Previous Report of the Gravity Survey in Shikoku.

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In the previous report of the gravity measurements in Shikoku (TSUBOI et al. : 1953), the BOUGUER anomalies were calculated on the basis of the HELMERT formula of 1901. In this supplement, the BOUGUER anomalies based on the International Formula

$$\gamma=978.0490(1+0.0052884\sin^2\varphi-0.0000059\sin^2 2\varphi)$$

are given in the accompanying Tables I~IV. The materials concerning latitudes, longitudes, and heights of the gravimetric stations listed in the tables are to be seen in the corresponding Tables XII~XV in Part I. The distribution of the BOUGUER anomalies based on this formula is shown in Fig. 1 which is in the pocket attached to the end of this report.

Of course no sensible differences are seen when compared with the map attached to the previous report.

Reference

TSUBOI, C., JITSUKAWA, A., TAJIMA, H., and OKADA, A.:
1953 "Gravity Survey along the Lines of Precise Levels throughout Japan by Means of a WORDEN Gravimeter. Part I. Shikoku District." Bull. Earthq. Res. Inst., Suppl. Vol. IV, Part 1.

Table I. Gravity Anomalies in Tokushima Prefecture Based on the International Formula.

(I)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
326	20	6762	29.3	4.9
324	21	6738	18.9	0.0
322	22	6719	16.7	5.0
320	23	6695	10.7	3.9
318	24	6688	11.0	7.4
316	25	6698	10.6	7.1
314	26	6705	2.3	0.3
312	27	6723	2.6	0.0
310	28	6730	0.9	0.2
308	29	6741	3.9	2.9
306	30	6740	0.1	− 0.1
J. 5066	31	6747	2.4	2.2
5068	32	6719	0.7	0.6
5070	33	6688	6.2	5.9
5072	34	6663	14.0	13.8
〃	〃	〃	13.9	13.8
5074	35	6638	17.3	17.2
〃	〃	〃	17.4	17.2
Tokushima W.S.	36	6657	10.3	10.2
5077	37	6606	26.1	25.9
5079	38	6585	17.9	17.6
5081	39	6570	12.1	11.4
5082	40	6557	12.8	12.0
5084	41	6534	9.4	8.8
5086	42	6507	11.4	10.2
5088	43	6488	16.5	12.5
5090	44	6460	17.6	15.6
5092	45	6440	25.5	16.8
5095	46	6421	19.0	18.3
5098	47	6399	22.4	22.1
5100	48	6388	24.5	24.3
5102	49	6379	27.9	24.5
5104	50	6372	35.2	27.1
5106	51	6363	33.9	28.0
5108	52	6345	34.3	33.8
5109	53	6332	38.2	37.1
〃	〃	〃	〃	〃
5110	54	6328	37.9	37.6
5113	55	6303	41.6	41.4
5115	56	6282	41.2	40.8
5116	57	6269	46.0	43.1
5119	58	6251	44.5	44.2

(II)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
5031	106	6479	19.7	− 2.2
5033	107	6503	16.9	− 3.3
〃	〃	〃	〃	〃
5036	108	6538	11.9	− 6.4
5038	109	6561	14.7	− 1.8
5040	110	6586	16.3	1.9
5042	111	6602	19.5	6.2
5043	112	6614	20.3	7.7
5045	113	6637	23.7	7.7
5047	114	6641	19.2	9.9
5051	115	6664	47.1	− 1.5
5052	116	6671	58.7	− 2.1

(III)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
No. 8	3665	6807	5.7	3.6
299	3664	6780	5.9	5.5
300	3663	6769	7.7	6.7
302	3658	6759	7.1	6.9
303	3659	6755	6.1	5.9
304	3660	6751	5.0	4.7

Table II. Gravity Anomalies in Kagawa Prefecture Based on the International Formula.

(I)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
3400	131	6649	0.2	− 0.2
3398	130	6671	0.2	− 0.3
3396	129	6698	5.6	3.9
3394	128	6719	6.9	5.7
3392	127	6741	12.4	9.8
3390	126	6770	15.9	14.9
3388	125	6783	24.6	17.7
3387	124	6797	16.8	14.3
J. 3385	1	6821	19.4	17.4
〃	〃	〃	〃	〃
〃	〃	〃	19.5	17.5
3383	2	6849	22.9	22.4
3381	3	6878	22.0	21.7
J. 354	4	6875	23.5	23.4
353	5	6875	25.2	24.9
351	6	6865	24.2	22.8
349	7	6865	26.1	22.5
347	8	6875	28.2	26.8
345	9	6896	31.9	31.5
343	10	6900	27.9	27.7
Takamatsu W.S.	11	6879	24.1	23.0
341	12	6881	22.6	22.2
339	13	6859	20.2	18.8
337	14	6839	22.7	20.0
335	15	6835	23.5	19.5
333	16	6833	24.8	21.2
〃	〃	〃	〃	〃
331	17	6824	24.0	18.2
〃	〃	〃	24.1	〃
330	18	6810	24.4	13.5
〃	〃	〃	24.5	13.6
327	19	6776	40.3	8.4

(II)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
5065	123	6810	20.6	17.7
5063	122	6783	20.2	14.2
5061	121	6756	16.5	6.6
5059	120	6727	15.2	1.2
5057	119	6703	11.0	− 3.4
5055	118	6684	28.9	− 5.6
5054	117	6677	40.0	− 5.0

Table III. Gravity Anomalies in Ehime Prefecture Based on the International Formula.

(I)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
4613	232	5749	31.7	21.2
4610	233	5753	21.8	19.3
4608	234	5753	17.5	17.0
4606	235	5764	16.3	14.7
4603	236	5793	12.4	10.3
4598	237	5852	13.2	10.8
4596	238	5880	7.9	7.6
4595	239	5893	9.0	8.3
4592	240	5922	11.0	5.2
4590	241	5946	3.8	2.5
F. 44	242	5962	3.2	2.1
〃	〃	〃	〃	〃
Uwajima W.S.	243	5970	4.4	− 0.5
〃	244	〃	4.5	− 0.2
4587	245	5981	1.5	0.1
4585	246	6002	3.1	− 3.7
4583	247	6013	− 6.1	− 6.3
4581	248	6039	− 2.3	− 9.7
4580	249	6050	13.6	−13.4
4578	250	6074	20.4	−10.9
4577	251	6082	13.5	−10.3
4575	252	6101	15.9	− 8.6
4572	253	6126	8.4	− 7.6
4570	254	6148	2.1	0.4
J. 4569	255	6161	− 1.6	− 1.9
4567	256	6172	− 3.7	− 7.7
4565	257	6179	14.8	− 5.7
4563	258	6194	− 7.1	− 9.4
4562	259	6202	− 9.2	−10.9
〃	〃	〃	〃	〃
4561	260	6213	−10.6	−11.9
4558	261	6226	− 9.9	−11.7
4557	262	6223	− 1.3	− 5.6
4555	263	6242	− 4.6	−12.6
4552	264	6275	0.8	−11.3
4550	265	6307	3.8	−14.6
4548	266	6316	− 1.2	−20.7
4547	267	6331	9.2	−17.1
4545	268	6352	20.8	−16.1
4543	269	6378	−20.7	−28.1
4541	270	6406	−42.3	−42.6
4539	271	6438	−46.6	−46.8
4538	272	6447	−44.2	−44.7
4536	273	6460	−38.0	−39.7
Matsuyama W.S.	166	6481	−40.9	−44.6

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
3482	164	6493	−31.7	−34.1
〃	〃	〃	−31.5	−34.0
〃	〃	〃	−31.7	−34.1
3480	163	6521	−28.7	−29.4
3478	162	6556	−23.6	−24.1
3476	161	6585	−17.9	−18.2
3474	160	6602	−12.5	−13.0
3472	159	6623	− 6.6	− 6.9
3470	158	6632	− 2.1	− 5.6
3468	157	6650	− 2.5	− 2.7
3466	156	6662	− 1.4	− 1.8
3464	155	6667	− 1.6	− 1.9
3444	154	6713	6.3	5.9
3442	153	6685	3.5	2.7
3440	152	6662	2.3	1.9
3439	151	6652	3.7	3.4
3437	150	6630	4.0	3.7
3435	149	6603	0.0	− 1.7
3434	148	6591	− 0.2	− 5.7
3432	147	6564	−11.9	−13.0
3430	146	6552	−16.4	−16.6
3429	145	6542	−16.2	−16.5
3427	144	6522	−11.8	−14.6
3425	143	6525	− 9.0	− 9.6
3423	142	6542	−12.3	−12.6
3421	141	6546	− 3.4	− 8.7
3419	140	6553	− 4.9	− 9.8
3417	139	6560	− 3.1	−10.0
3415	138	6559	8.8	− 9.1
3413	137	6571	− 4.5	−10.4
3412	136	6577	− 6.9	−10.6
3410	135	6581	− 6.0	− 9.4
3408	134	6584	− 5.2	− 6.2
3405	133	6603	− 1.1	− 2.0
3403	132	6624	− 0.7	− 1.0
〃	〃	〃	− 0.6	− 0.9

Table III. (Continued)

(II)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
4733	167	6456	−32.8	−35.5
4731	168	6427	−29.7	−34.0
4729	169	6400	− 7.3	−20.9
4728	170	6395	7.8	−18.0
4727	171	6389	22.0	−14.5
4726	172	6381	35.4	−12.7
4724	173	6365	55.2	−12.9
4722	174	6364	65.0	− 7.7
4720	175	6339	51.4	− 6.6
4718	176	6314	44.4	− 8.3
4716	177	6295	38.9	− 8.7
4714	178	6293	33.7	−10.6
〃	〃	〃	〃	〃
4711	179	6273	33.1	− 6.1
4709	180	6251	19.6	−15.9
4707	181	6231	13.7	−15.7
4705	182	6231	15.6	−11.7

(III)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
3447	2288	6794	2.4	− 0.4
3448	2289	6798	0.2	0.0
3449	2290	6811	− 0.8	− 1.0
3450	2291	6819	− 0.6	− 1.3
3451	2292	6825	9.0	0.4
3453	2293	6850	3.0	2.7
3454	2294	6859	1.9	1.6

Table IV. Gravity Anomalies in Kôchi Prefecture Based on the International Formula.

(I)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
5121	59	6233	46.4	46.1
5123	60	6215	48.9	48.2
5125	61	6194	53.4	51.4
5128	62	6150	57.9	57.0
5131	63	6112	67.5	66.5
5133	64	6089	66.5	65.7
5135	65	6061	70.6	69.8
5137	66	6034	74.2	73.4
5138	67	6019	78.7	78.0
F. 46	68	5988	84.7	83.7
5142	69	6002	83.7	82.5
Muroto W.S.	70	5991	96.0	76.2
△	71	5990	98.9	78.2
5144	72	6024	81.2	80.5
〃	〃	〃	80.6	79.9
M. 1	73	6024	81.0	79.2
5146	74	6031	77.0	76.2
5148	75	6057	71.2	70.4
5150	76	6076	67.9	66.9
5152	77	6089	62.3	61.4

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
5154	78	6115	55.7	54.9
5156	79	6136	49.9	49.2
5158	80	6144	46.5	45.5
5160	81	6150	45.4	44.5
5162	82	6184	40.7	40.3
5164	83	6197	32.1	31.1
5166	84	6201	34.4	33.5
5168	85	6213	29.9	28.8
5172	86	6220	29.5	26.6
5174	87	6230	23.5	22.7
5176	88	6246	19.6	17.6
5178	89	6256	15.0	13.5
Kôchi W.S.	90	6251	14.1	13.9
5002	91	6244	12.9	12.7
〃	〃	〃	〃	〃
〃	〃	〃	〃	〃
〃	〃	〃	〃	〃
F. 35	194	6242	14.7	13.7
4998	193	6238	15.3	13.7
4995	192	6228	15.0	12.8

Table IV. (Continued)

(I) (Continued)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
4993	191	6220	14.2	12.1
4991	199	6202	13.3	9.2
J. 4683	200	6195	18.5	9.5
J. 4681	201	6169	21.8	8.9
4677	202	6145	20.9	11.3
4675	203	6126	20.0	19.3
4673	204	6104	23.7	23.1
4670	205	6083	23.9	23.4
4667	206	6060	26.5	26.1
4664	207	6043	37.1	24.4
4661	208	6030	55.6	24.8
4659	209	6006	53.8	26.4
4657	210	5977	54.7	28.1
4654	211	5952	53.2	29.6
〃	〃	〃	〃	〃
4652	212	5925	60.2	31.2
4650	213	5903	40.2	31.9
4648	214	5881	36.3	32.9
4646	215	5866	34.7	33.2
4644	216	5844	36.9	36.3
4642	217	5826	38.8	37.0
4640	218	5808	39.9	38.8
4638	219	5812	36.4	34.9
4636	220	5797	35.3	34.8
4635	221	5787	35.4	34.4
4633	222	5770	36.3	36.0
4631	223	5774	35.4	34.1
4630	224	5766	34.7	34.1
4629	225	5764	33.6	32.9
4627	226	5764	31.6	30.5
4625	227	5753	32.0	31.3
4623	228	5751	31.0	30.0
4621	229	5740	33.8	28.5
4619	230	5731	27.3	27.0
〃	〃	〃	27.4	27.1
4616	231	5734	33.2	24.5

(II)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
J. 5004	92	6263	14.9	14.8
5006	93	6275	20.9	18.8
5008	94	6282	18.6	16.6
5010	95	6302	29.8	16.3
5012	96	6318	49.3	18.2
5013	97	6327	61.4	18.5
5015	98	6343	54.4	15.7
5017	99	6360	48.9	12.0
5019	100	6388	52.6	16.9
5021	101	6410	45.9	17.7
5023	102	6425	31.5	5.9
5025	103	6432	30.8	5.9
5027	104	6439	32.6	4.7
5029	105	6456	22.6	− 1.4

(III)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
4684	190	6208	19.2	8.7
4686	189	6223	13.3	6.1
4687	188	6228	12.3	3.9
4689	187	6241	10.5	− 0.4
4694	186	6257	7.4	− 4.5
4697	185	6245	4.8	− 9.8
4700	184	6233	21.0	− 6.9
4703	183	6228	7.2	−14.4

(IV)

B.M.	No.	γ_0 979.	Δg_0 (mgal.)	$\Delta g_0''$ (mgal.)
10882	195	6219	14.4	14.3
10884	196	6194	20.5	20.3
Urato Tide Gauge	197	6194	21.2	20.9
13	198	6195	21.5	21.3

ウオルドン重力計による日本全国の重力測定

第三報　第一報四国地方に対する補遺

坪井忠二

前報告においては，重力異常を算出するのに，標準重力としては，1901年の HELMERT の式を使つた．この補遺においては，国際式 $\gamma=978.0490(1+0.0052884\sin^2\varphi-0.0000059\sin^2 2\varphi)$ を使つて求めた重力異常を表示した．測定点の経緯度，高さ等は，前報告にくわしく書いてある．

第1図は，国際式にもとずく BOUGUER 異常の分布を示したものである．HELMERT の式にもとずく BOUGUER 異常の分布は前報告につけてあるが，それとくらべて大きい差が無いことは当然である．