

KINGDOM OF THAILAND

MASTER PLAN REPORT

OF

ELECTRIC DISTRIBUTION SYSTEM

IN

BANGKOK

(1982 — 2001)

LOAD DENSITY MAP

AUGUST 1982

JAPAN INTERNATIONAL COOPERATION AGENCY

MPN

82-121(3/3)





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EXPLANATION OF LOAD DENSITY MAP

This load density map shows KW in september for each mesh in the whole supplying area of MEA.

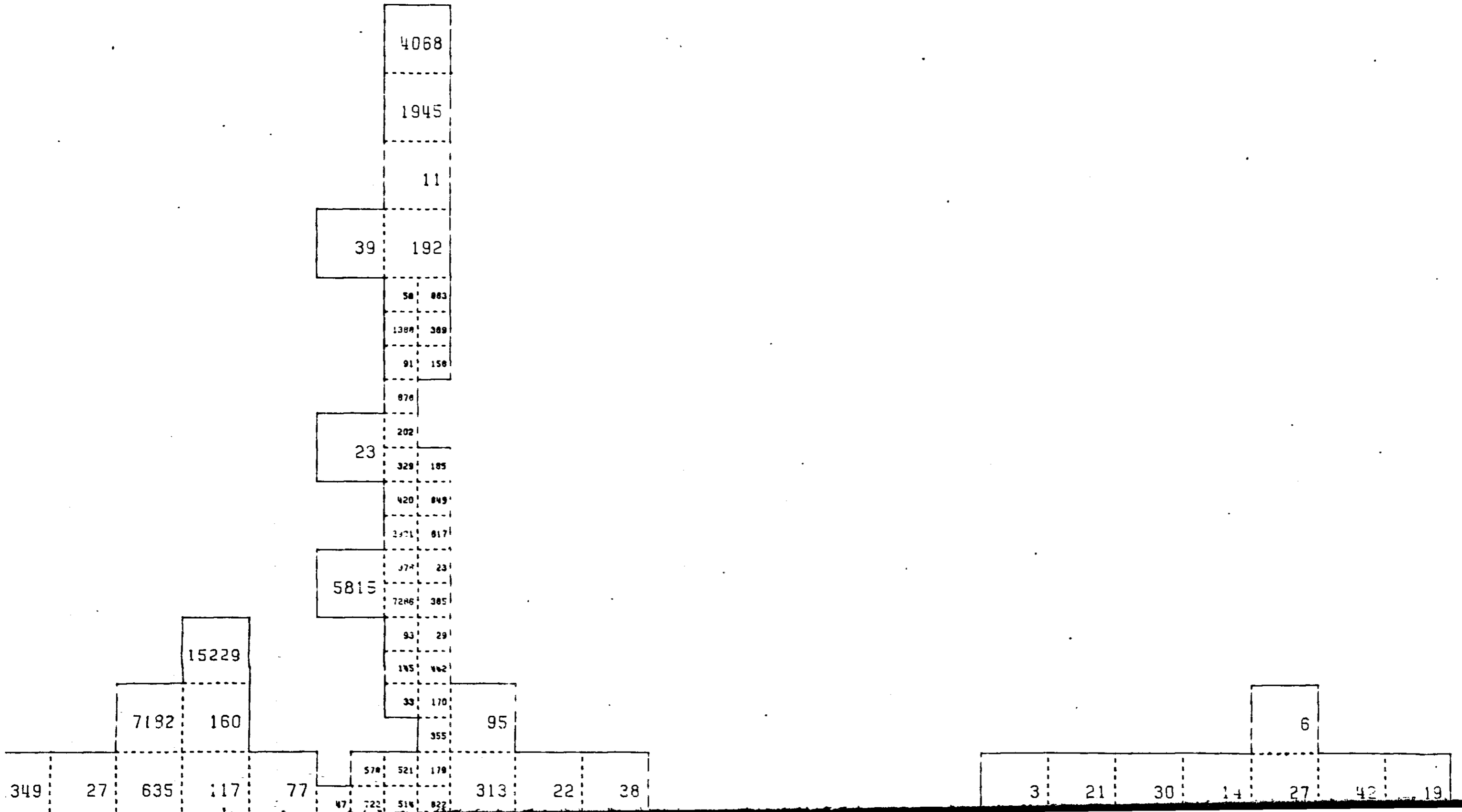
1. Squares shown by black dotted line show the following mesh area.

Large-size square	2km x 2km mesh
Medium-size square	1 km x 1km mesh
Small-size square	0.5km x 0.5km mesh
2. Figures written in each square show KW in the mesh.
3. Big sheet is the load density map for whole area of MEA, and small sheet is for 0.5km x 0.5km mesh area only.

Note: The value of load density (KW/km²) calculated by means of

- (1) Multiplying KW in the 0.5km mesh by 4
- (2) Dividing KW in the 2km mesh by 4

TY. MAP OF MEA



UNIT: KW

1982

3	21	30	14	27	42	19
				6		

	22	31	1	23	7	35	35	32	3	6	3													
14	7	39	4	4	4	5	59	30	3	1	4	0	1349											
23	14	10	5	49	71	38	6	41	106	46	11	27	802	1										
11	26	11	19	30	38	53	52	3	87	9	47	2521	1224											
	27	11	27	30	39	33	46	11	55	50		857	378	9	705									
												40	2578	725	878	157								
16	5	32	12	50	36	66	118	531	57	5		1484	380	181	1380	480								
												38	810	87	43	975								
	20	22	25	38	25	24	37	78	71	189		15	502	358	878	918								
												40	450	798	1548	382								
	23	22	16	28	27	26	67	54	124	69		14	95	185	23	123								
												88	15	148	442	2750								
		54	32	9	28	68	65	34	44	41		25	51	188	1188	1897								
												55	37	118	553	2725								
	35	51	84	21	5	54	137	1207				835	45	487	258	429	1023	2391						
												181	84	592	1523	1288	1857	1233						
	22	54	24	14	17	23	80	221				233	37	1023	2157	3089	4033	3994						
												388	475	2151	872	8013	3235	2818						
	4	54	30	37	16	51	123	203				358	2110	3908										
												577	2294	4381										
	12	884	1533	374	74	23	103	672				487	1210	2044										
												987	1814	2987	2845	4131								
	15	13	16	1175	823							25	45	80										
												778	2181	1090	35	2208	1479	1489	2088	1850	553	5308	4818	9273
	13	2821	300	3085	1960							142	1058	1584	358	330	23	388	1073	1040	1508	3721	2018	5397
												18	834	847	818	33	115	1071	5813	3297	7214	1012	857	2153
	7	148	2567	843	72							28	857	151	3421	247	1081	2211	848	212	757	13035	2029	1750
												31	533	858	1434	887	850	88	832	5143	2874	7102	1883	2

						6					
		3	21	30	14	27	42	19			
17	38	31	36	30	6	14	70	20			
70	63	26	5	31	12	6	54	2			
35	18	26	60	29	18	15	63	3			
77	44	43	43	63	208	350	63	66			
2	38	178	76	46	110	101	88	22	35	22	
993	16		42	19	426	19	152	16	37	21	
913	66	57	73	19	190	11	7	28	25	3	
397	25	36	39	36	13	38	23	60	15		
373	43	4	4	37	13	25	7	29			
1005	36	31	40	24	33	14	23				
8566	47	455	40	15	42	11	11				
154	80	681	127	15	26	71					
136	8	26	24	63	30	4	35	4			
4	8	15	7	48	5	40	21	62			

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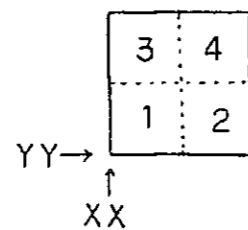
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15	13	16	1175	823	779	2181	1080	35	2208	1479	1489	2088	1850	
13	2821	300	3085	1960	162	1050	1500	358	388	23	308	1073	1040	
7	148	2567	843	72	18	834	847	818	38	115	1071	5913	3297	
					29	857	151	3821	287	1081	2211	848	212	
					31	533	858	1434	887	858	88	832	9143	
	132	23	61	6	35	516						187	780	1507
												118	208	278
	7	54	93	61	37	860	195	103	11					
		46	36	19	89	59	49	117						
			50	141	27	13	40	43						
			25	239	2	38	29	31						
					18	29	10	6						
						50	5	22						
					19	9	5	43						
					9	5	16							
					9	21	26	14						

Note

1. 0.5 X 0.5 Km² Mesh No. XXYY - 1



" - 2

" - 3

" - 4

2. 1 X 1 Km² Mesh No. XXYY - 0

3. 2 X 2 Km² Mesh No. XXYY - 9

7	136	8	26	24	63	30	4	35	4			
7	4	8	15	7	48	5	40	21	62			
0	13	46	73	34	18	9	62	3	56	11	4	8
0	52	58	60	11	9	22	46		52	23	33	11
4	529	35	4	14	18	23	31	40	13	19	10	16
2	1103	165	2235	1856	9	42	17	13	34	23	19	
4	29	64	278	65	267	84	54	22	34	28		
1	132	24	28	64	8	530	158	60	865			
6	34	57	8	6	34	50	8	56	76			
6	46	19	36	60	77	61	8	27	8			
3	29	153	20	35	765	323	31	11				
2	58	115	14	73	29	52	14					
							8					

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LOAD DENSITY MAP OF MEA

UNIT: KW
1982

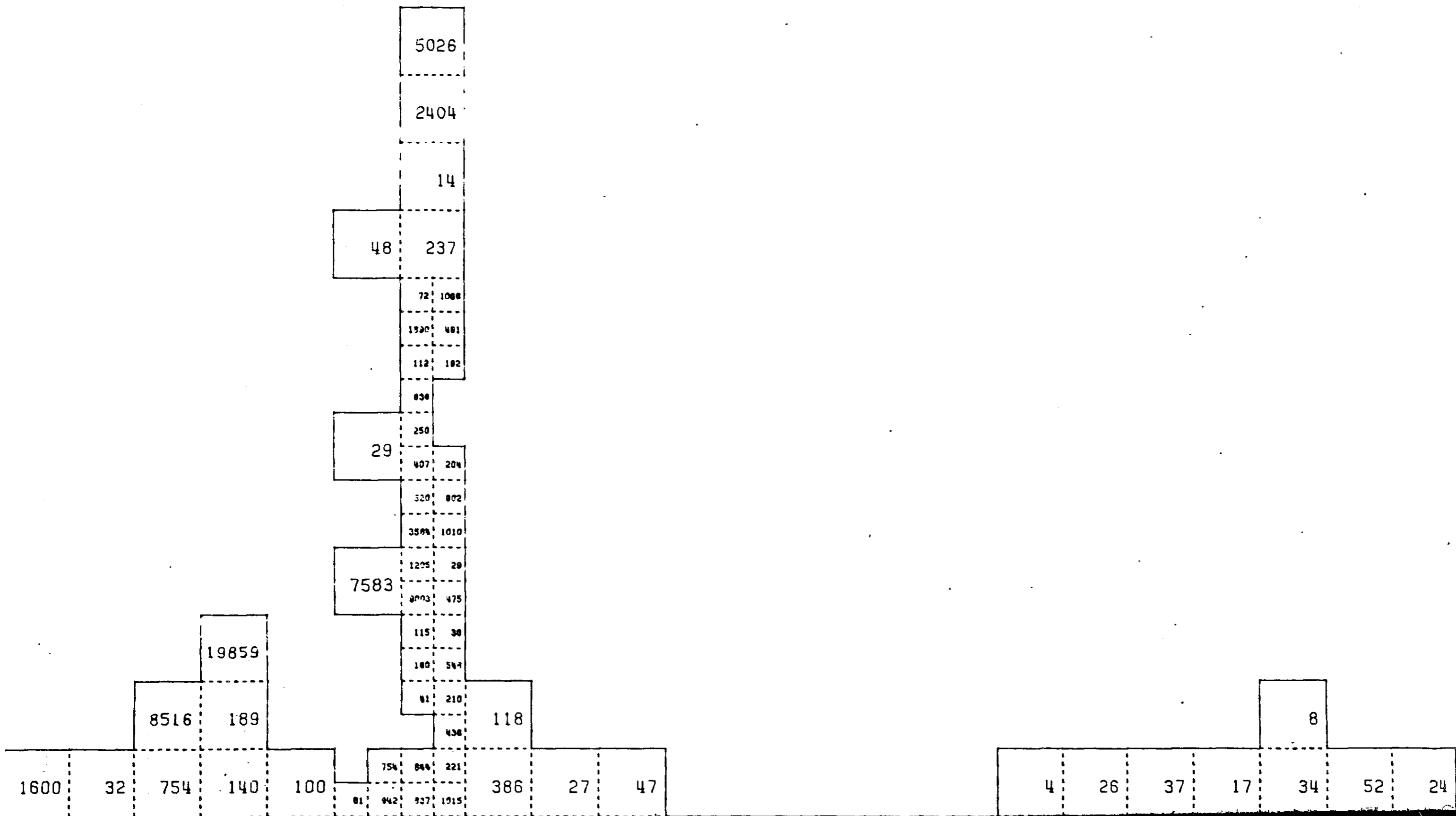
	993	1944	2544	1819	1872	54	189	2943	759	1447	945	1723	1045	940	1034		
426	2019	4166	1366	1714	2115	2016	1134	680	1090	3797	2463	664	202	1200	1252		
1608	1696	3368	2832	2140	2278	1483	969	1465	1942	2449	5932	1344	248	141	271		
1647	2364	3068	2781	2483	4107	5545	1915	1079	1026	1430	2811	3389	747	419	3338		
299	1320	2363	5116	4819	3014	1179	1690	2514	1201	6382	5802	4742	2639	1339	2101		
1455	522	1547	2232	6468	6729	1464	1524	1822	759	582	1195	1895	2505	3733	3626		
				1813	2621	1797	2059	2115	2117	1220	557	1935	920	548	1095		
				915	525	2315	1914	2553	9510	6869	2092	590	1101		49		
								3600	9104	7224	5752	4780	2186	2087	3751	137	
								2201	5931	1241	488	758	695	1212	1750	1124	912

Mesh No. XX →

31 32 33 34 35 36 37 38 250 39

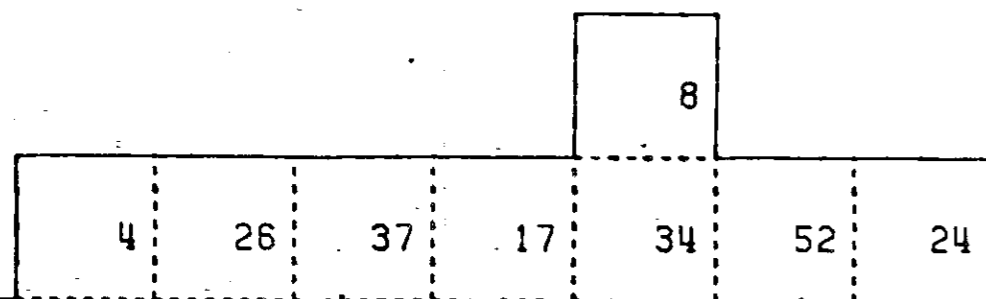
32
31
30 Mesh No. YY
29
28
27

TY MAP OF MEA



UNIT: KW

1986



19	9	51	6	5	5	6	76	39	3	2	5	1	1600										
30	18	13	7	63	92	49	7	52	137	59	14	33	951										
13	33	14	25	38	49	68	67	3	112	11	60	2995	1451										
	34	14	34	38	51	42	60	14	71	64		1020	447	11	838								
												86	3057	660	1041								
	21	7	41	16	64	46	84	152	682	73	7	1788	487	217	1838								
												82	1055	80	51								
		26	28	32	48	32	31	47	100	91	240	17	651	435	602								
												52	585	1828	1805								
		30	29	21	36	34	33	86	69	159	89	18	85	215	38								
												88	18	184	577								
			69	41	12	36	87	83	43	57	53	82	88	253	1550								
												71	87	182	711								
			50	66	108	27	6	69	176	1551		817	57	801	333	551	1315						
												245	82	781	1958	1832	2081						
			33	78	31	19	22	30	103	284		288	88	1315	2776	3928	3437						
												500	811	2783	1122	7087	3305						
			6	78	43	54	21	71	172	270		882	2718	5025									
												748	2838	5558									
			17	1279	2218	542	107	33	148	972		629	1888	2702									
												1220	2477	3948	3328	5182							
			22	18	24	1700	1154					81	187	78		587	1808	2828	5217	8558	5847	5839	3148
												1102	3038	1370	84	3192	2130	2128	2595	2088	885	8855	5879
			19	4082	434	4464	2720					178	1481	2078	508	821	28	887	1345	1305	1883	1834	2805
												28	788	1188	1138	84	155	1343	502	8188	3345	1407	1131
			10	215	3645	1214	93					28	824	183	8888	310	1388	2774	1288	288	388	1887	2843
												38	888	1077	1738	1088	585	87	1088	7878	3807	8052	2421

		4	26	37	17	34	52	24		
1	47	38	45	37	8	17	86	25		
6	77	32	8	38	15	8	67	3		
3	23	32	74	35	22	19	78	4		
5	54	52	54	82	277	447	83	88		
3	51	239	102	61	148	136	118	29	46	29
6	22		56	26	573	26	205	22	50	28
9	88	77	99	26	255	15	9	37	34	4
4	33	48	53	48	17	52	31	80	20	
1	58	6	6	50	18	34	10	38		
3	48	42	54	32	45	19	31			
4	63	613	54	20	57	15	15			
8	104	877	163	19	35	93				
4	11	33	31	81	41	6	45	6		
5	11	19	10	62	6	51	27	80		

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70	44	3182	2130	2128	2585	2088	885	8855	5873	8078	3159	2285	1883	4384	4948	3472	5737	5787	3142	385	228	344	111		1905	682	9069	2577	198	104	877	163	19	35					
78	508	421	28	487	1345	1305	1889	4834	2005	7481	7222	4801	3484	727	1895	87	2803	2550	3144	1050	882	214	421		150	194	78	503	921	174	11	33	31	81	41				
89	1139	44	155	1343	502	4188	3345	1407	1181	2893	4858	1883	714		13	153	103	440	3430	1889	234		731		1204	426	128	111	22	5	11	19	10	62	6				
89	4888	310	1388	2774	1208	288	388	4847	2843	2432	2482	2133	328	2487	48		83	134	7188	5830	428	408	175																
77	1788	1088	585	87	1088	7878	3487	8052	2421	7	8333	1287	189	272	88	58	48	1288	1285	1718	758	487	183																
653	86																																						
1095	249																																						
75	62																																						
16	51																																						
49	36																																						
38	13																																						
64	6																																						
12	6																																						
6	21																																						
27	34																																						

LOAD DENSITY MAP OF MEA

UNIT: KW
1986

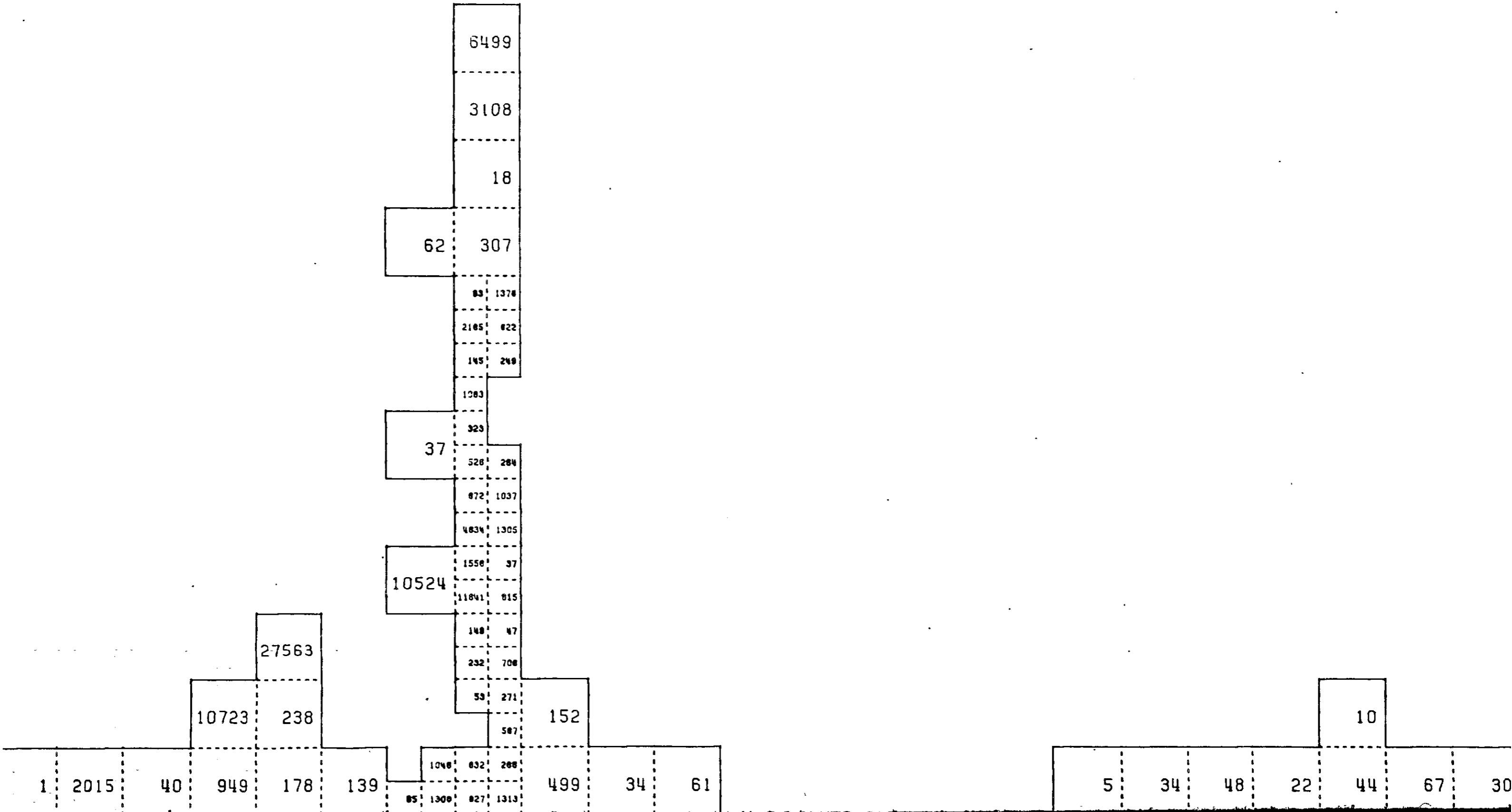
	1228	2369	3011	2123	2078	60	214	3325	857	1635	1063	2479	1515	1363	1499	
526	2496	5149	1688	2029	2502	2342	1282	767	1229	4274	2772	922	294	1741	1816	
1988	2096	4162	3500	2558	2696	1733	1080	1625	2180	2767	6702	1809	334	193	376	
2048	2922	3792	3437	2946	4861	6563	2119	1194	1147	1614	3261	4496	1005	564	4477	
375	1631	2920	6292	5883	3675	1411	1870	2782	1329	7063	6423	5248	3006	1713	2467	
1825	645	1912	2729	7896	8215	1767	1687	2016	840	644	1322	2098	2773	4775	4639	
				2246	3200	2207	2518	2394	2342	1350	616	2141	1018	701	1398	
				1148	644	2918	2441	3189	11094	7878	2435	653	1218		63	
							4551	10891	8620	6733	5631	2633	2514	4380	175	
							2577	6958	1481	586	964	874	1566	2203	1441	1167

Mesh No. XX →

31 32 33 34 35 36 37 38 250 39

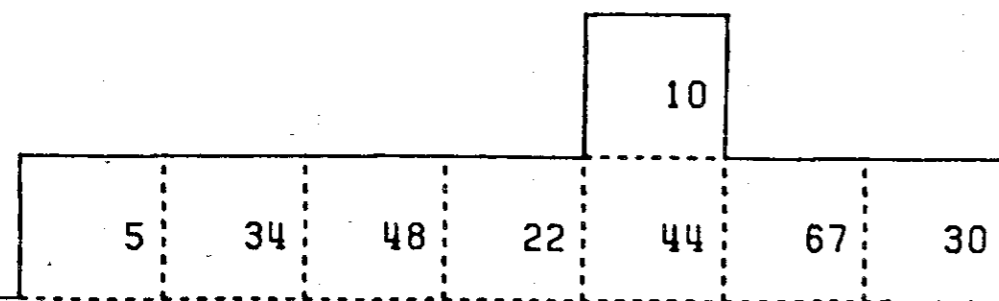
32
31
30 Mesh No. YY
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28
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ITY MAP OF MEA



UNIT: KW

1991



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			5	34	48	22	44	67	30		
96	27	61	49	58	48	10	22	111	32		
72	111	100	42	10	49	19	10	86	4		
27	56	29	42	95	46	29	24	101	5		
31	123	70	68	70	111	387	600	115	125		
32	3	72	339	144	87	209	192	168	41	66	41
74	1641	31		79	37	811	37	290	31	71	40
1	1600	125	109	140	37	362	21	12	53	48	6
7	757	47	68	75	69	24	73	43	113	28	
1	710	82	9	9	70	25	48	14	54		
8	1916	69	59	76	45	64	27	43			
0	16314	90	868	76	28	81	21	21			
7	267	144	1184	219	26	49	126				
9	234	15	44	42	109	58	9	61	9		
0	6	15	26	13	84	8	68	37	108		

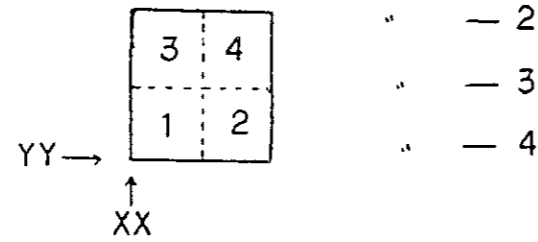
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Note

1. 0.5 X 0.5 Km² Mesh No. XXYY - 1



2. 1 X 1 Km² Mesh No. XXYY - 0

3. 2 X 2 Km² Mesh No. XXYY - 9

25	5399	574	5905	3599	295	1980	2708	859	557	36	858	1781	1728
13	284	4822	1606	124	20	1054	1572	1488	58	201	1778	10015	5551
					38	1091	250	8058	410	1811	3872	1824	385
					51	884	1428	2381	1440	749	118	1443	10722
	249	38	102	10	58	878	117				324	1369	2813
											202	381	482
	12	90	155	106	65	1491	338	178	191				
		77	62	32	155	102	85	203	12				
			87	245	47	22	69	76	6				
			44	414	3	66	50	54					
					32	51	18	11	1				
						87	8	38	9				
					33	16	8	74	2				
					16	8	28						
					16	37	46	24	2				

1781	1728	2501	8333	3604	9827	9280	5855	4477	983	2895	59	3458	3385	4229	1412	917	287	588	201	260	106	677	1239	234	15	44	42	109	58	9	61	
10015	555	2282	1808	1531	3648	9368	2394	918		18	208	138	582	4624	2245	814		983	1620	573	172	149	30	6	15	26	13	84	8	68	37	
1624	385	1323	22711	3544	3125	3189	2741	428	3238	85		58	180	9888	7573	573	539	235	1813	359	54	829	18	22	80	127	60	32	16	107	6	
1443	10722	4637	2317	3287	9	9137	1854	284	350	94	78	85	1733	1729	2311	1019	548	258														
1389	2813	8950	8334	16973	10115		758	308	585	59	33		77	3477	802	832	1319	384	1813	359	54	829	18	22	80	127	60	32	16	107	6	
381	882	184	1877	7000	8848	3022	3889	2407	80	21	2930	2275	2481	3108	1044	581	33	15														
			4111	785	3021	202	3401	14584	12088	15338	9385	1397	4838	4748	2872	1759			481	19	348	2724	617	18	89	100	103	19	16	38	80	
178	1916		1344	388	1348		5472	773	5518	14582	11018	18312	8885	3353	2759	438																
			388		1018	5089		2023			533	2144	8780	1742	4004	1718			1414	150	19	45	1063	1111	914	61	7	24	32	41	53	68
			70	43							1310	2834	109			179																
									8223				3458	908					829	1289	1305	250	778	56	1905	284	3860	3204	16	72	29	22
									908	3213			1508	1823	224	18																
									5171	4359	940	8	1183	4109	124																	
									91	228	801	2154	98	4817	1230	817			6370	55	46	66	131	2442	50	110	3560	112	461	144	92	38
									3841				551	1522	850	3229																
									154	213	2881	2043	540						626	51	98	33	37	20	228	41	12372	110	14	915	273	103
									188				188	3447	48				1605	24	74	114	75	10	59	99	6175	10	58	87	14	99
									122				188	4882	3783	521																
74	28	99	41	131	47	467	108	5328	13471	2671	74	30	43	10	80	32	63	103	133	106	14	47										
																			7869	1245	14504	2029	28	178	50	264	35	61	1321	557	53	20
24	24	47	74	52	11															74	10	51	3	100	198	25	127	50	89	25		

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234	15	44	42	109	58	9	61	9				
6	15	26	13	84	8	68	37	108				
22	80	127	60	32	16	107	6	96	18	7	14	
89	100	103	19	16	38	80		89	39	56	18	
914	61	7	24	32	41	53	68	22	32	17	28	
1905	284	3860	3204	16	72	29	22	59	41	32		
50	110	3560	112	461	144	92	38	59	49			
228	41	12372	110	14	915	273	103	1493				
59	99	6175	10	58	87	14	99	131				
80	32	63	103	133	106	14	47	14				
50	264	35	61	1321	557	53	20					
100	198	25	127	50	89	25						
						14						

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LOAD DENSITY MAP OF MEA

UNIT: KW
1991

	1623	3063	3711	2624	2519	72	255	3966	1023	1951	1256	3447	2116	1904	2093
695	3299	6807	2232	2500	3081	2849	1529	911	1459	5063	3280	1271	410	2431	2535
2628	2771	5502	4626	3206	3323	2117	1254	1867	2569	3301	7996	2562	473	273	529
2709	3863	5013	4544	3648	5991	8089	2424	1365	1342	1920	4001	6287	1423	799	6320
497	2156	3860	8261	7681	4789	1786	2138	3182	1520	8077	7350	6002	3569	2313	3040
2417	854	2527	3567	10308	10725	2275	1929	2306	960	737	1512	2399	3171	6451	6266
				2954	4177	2903	3287	2830	2679	1544	704	2449	1164	948	1883
				1519	843	3944	3342	4261	13610	9456	2979	747	1393		85
						6169	13804	10892	8294	6993	3362	3209	5380		237
						3174	8578	1869	746	1266	1172	2150	2961	1958	1576

Mesh No. XX →

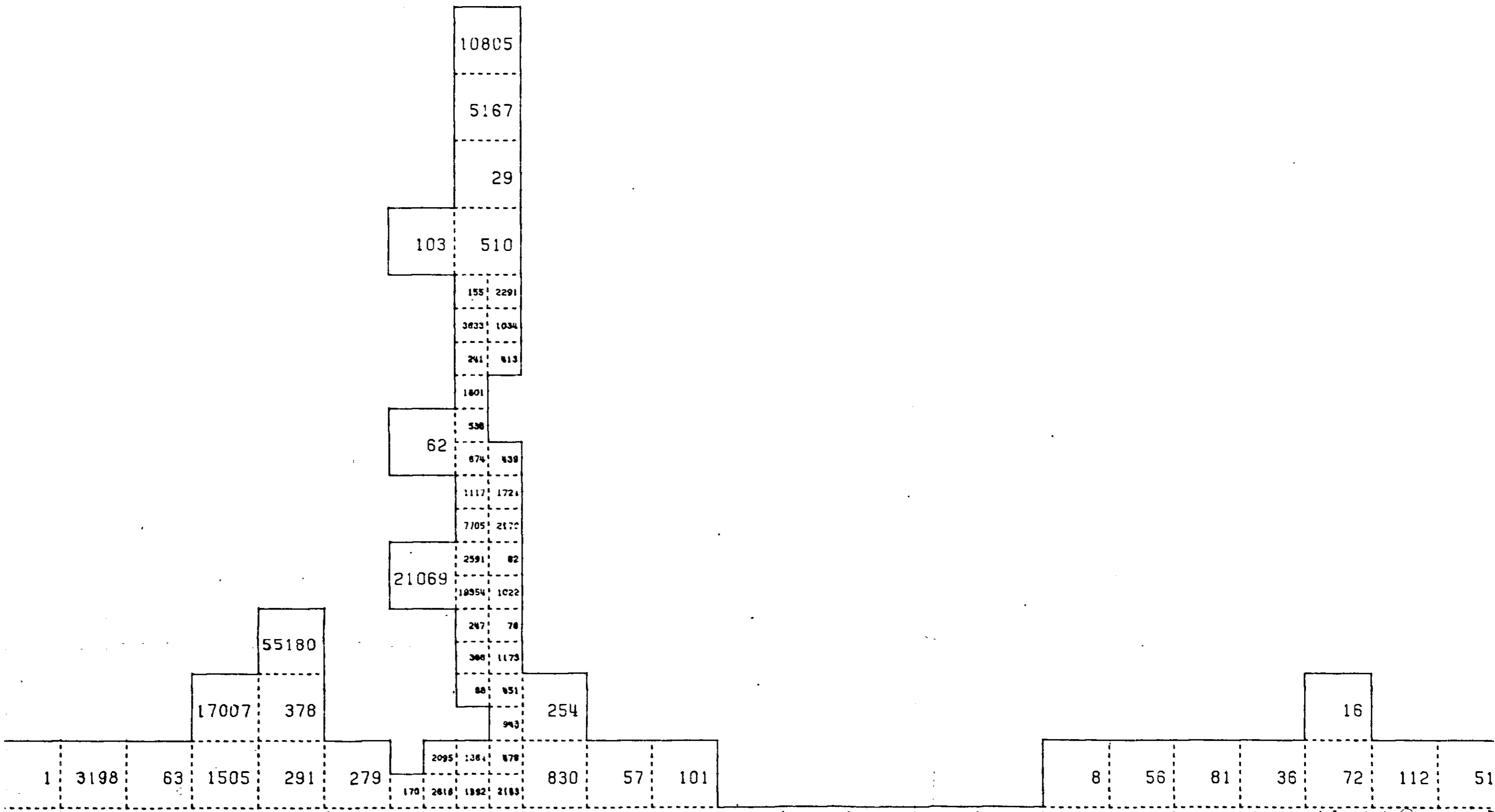
31 32 33 34 35 36 37 38 250 39

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30 Mesh No. YY
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LOAD DENSITY

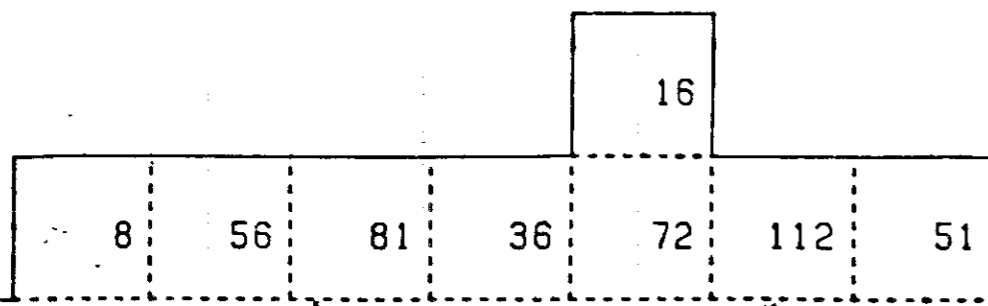
													8													
13	17		4	13																						
30	13		4	13																						
12	8		8		159																					
8	8		4	13																						
17	17		4	26																						
66	4	13	26	13																						
61	14	18	134	13																						
13	30	10	26	136	126	136	73																			
20	58	48	27	169	199	176	111	14	66	10																
	71	98	4	73	23	109	109	101	8	20	10															
45	23	124	14	12	13	14	186	96	8	4	12	1	3198													

ITY MAP OF MEA



UNIT: KW

2001



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					16				
	8	56	81	36	72	112	51		
01	82	97	81	16	37	185	53		
66	70	16	82	32	16	143	6		
49	70	158	76	48	40	168	8		
16	113	121	208	759	1083	218	250		
44	678	289	174	419	385	335	82	132	82
61		159	74	1624	74	580	61	143	80
50	217	279	74	724	41	25	106	96	12
84	137	149	137	49	146	87	227	56	
65	17	17	140	51	96	28	109		
87	118	152	91	128	53	87			
30	1737	152	56	161	43	43			
74	2192	404	48	99	236				
27	81	77	200	116	17	113	17		
27	48	24	154	15	126	68	203		

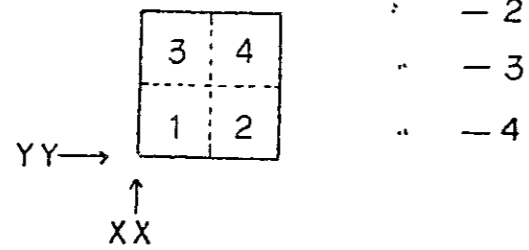
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Note

1. 0.5 X 0.5 Km² Mesh No. XXYY - 1



2. 1 X 1 Km² Mesh No. XXYY - 0

3. 2 X 2 Km² Mesh No. XXYY - 9

					2482	8881	3281	108	7114	4754	4739	5288	5015	
43	9096	967	9948	6209	430	3384	4684	1089	1011	88	1205	3281	3183	
					86	1928	2878	2388	102	337	3255	18287	10135	
21	479	8211	2712	222	71	1398	158	3944	750	3815	8722	2958	888	
					84	1819	2810	4359	2838	1371	217	2831	19550	
												581	2498	4784
					423	69	186	19	107	1603	213	388	858	880
					22	165	284	194	118	2718	617	325	34	
						141	113	59	282	187	154	371	2	
						158	446	86	40	126	138	16		
					80	754	5	121	90	98				
									58	93	33	19		
										158	15	69	1	
										60	30	15	136	
										30	15	52		
										30	67	83	43	

4754	4739	5288	5015	1887	18128	13270	18338	8508	4787	3809	10892	12978	8338	11378	11528	7184	1079	833	877	281		5304	1055	22452	1288	495	274	2152	404	40	59	25					
89	1205	3281	3183	4578	11124	5828	15585	15009	9147	7247	1901	5228	87	8245	8008	7784	2599	1988	524	1042		370	479	194	1246	2280	432	27	81	77	200	116	1				
337	3255	18287	10135	21820	2824	2478	8220	10290	3871	1487		32	381	255	1091	8840	4132	579		1409																	
3315	8722	2958	888	2340	40851	8275	5054	5157	4433	785	5348	118		187	332	17798	13840	1055	391	833		2981	1055	318	275	55	11	27	48	24	154	15	12				
1371	217	2831	19550	8455	22448	5888	14	13180	2875	858	589	171	138	118	3191	3183	4253	1878	1008	478																	
	591	2498	4784	12873	11548	30948	18438		1223	548	1018	108	80		141	8400	1478	1582	2429	870		3338	661	100	1526	33	41	146	233	110	59	29	19				
13	888	858	880	283	2805	12783	18134	5519	7091	4408	72	38	5394	4188	4531	5722	1922	1070	87	27																	
				7498	1432	5508	388	8243	28809	22248	28227	17204	20184	8534	8742	5287	3238																				
17	325	3493		2451	703	2457		10088	1424	10157	28805	20282	33709	18354	8172	5079	807					886	36	641	5015	1137	33	164	185	190	36	29	69	14			
				710		1853	9280		3724				981	3946	12444	3208	7871	3159																			
54	371	225		127	78								2411	4848	201		322					2603	277	36	82	1957	2046	1682	112	14	43	59	75	9			
26	138	109	49	85	1018			11342		1851	5858			8328	1871							1526	2374	2401	460	1432	103	3506	523	7105	5898	29	133	5			
30	98	6	123	106	3997			9428	7948	1184	17	2157	7710	228								11725	102	85	121	240	4495	91	203	6553	206	849	266	17			
33	19	19	23	85	268	145		8838		281	397	4938	3781	995								1152	95	180	61	69	36	420	76	22774	203	25	1684	50			
15	69	173	20	669	55	148		287		222		284	8348	89								2953	44	136	210	138	18	109	182	11367	18	107	160	2			
15	136	52	180	75	239	85	851	198	9808	24797	4917	137	55	80	18	146	59	116	190	245	196	2															
52					40	5	25																14485	2292	26698	3736	51	328	92	486	63	112	2432	1025	9		
33	43	43	85	136	95	20																															

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80	432	27	81	77	200	116	17	113	17			
55	11	27	48	24	154	15	126	68	203			
83	41	146	233	110	59	29	198	10	177	34	14	26
83	164	185	190	36	29	69	146		164	72	104	33
46	1682	112	14	43	59	75	98	126	41	59	31	51
03	3506	523	7105	5898	29	133	53	41	108	75	59	
5	91	203	6553	206	849	266	170	69	108	90		
6	420	76	22774	203	25	1684	502	190	2749			
8	109	182	11367	18	107	160	25	177	240			
8	146	59	116	190	245	196	25	87	25			
8	92	486	63	112	2432	1025	98	36				
6	185	364	45	233	91	164	45					
							26					

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LOAD DENSITY MAP OF MEA

UNIT: KW
2001

	2510	4730	5713	4063	3537	95	337	5249	1354	2581	1677	5940	3665	3298	3627
1075	5102	10527	3451	3849	4733	4149	2024	1210	1939	6745	4373	2226	710	4211	4392
4063	4285	8509	7155	4942	5117	3136	1702	2558	3439	4368	10582	5125	947	523	997
4499	5974	7752	7027	5681	9224	12454	3335	1879	1809	2547	5871	12368	2848	1598	12620
910	3334	5969	12977	13353	8294	2932	2943	4379	2092	11116	10109	8259	5395	4490	4964
4424	1343	3908	6121	17922	18646	3875	2655	3174	1321	1014	2081	3301	4364	12520	12162
				5284	7262	5108	5757	4173	3687	2125	969	3371	1602	1839	3640
				2781	1477	7253	6264	7740	21711	14458	4729	1028	1917		165
						11419	23234	18246	13341	11164	5231	4948	8479		459
						5105	13798	2940	1164	1939	1743	3135	4341	3509	3060

Mesh No. XX →

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30 Mesh No. YY
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JICA