

## V. SOLAR RADIO EMISSION

### EXPLANATION

#### Observing Stations

1. Code names are consistent with those in Solar Geophysical Data (S.G.D.), NOAA, Boulder, U.S.A.
2. Std. CMP shows approximate UT of the local noon. Two figures after each of Std. CMP may be used for estimating approximate observation time. For example, 1200,7,3 means that observations will be possible during the period between 1200-0700 and 1200+0700, and 1200-0300 and 1200+0300 near solstices in June and December respectively.

#### Daily and Monthly Means of Flux Density

1. Daily mean values are approximated by integers. Monthly mean values are approximated to tenths in the cases when the observations are complete, when the mean value is less than 10 solar flux units, or when number of days with no observation is only one for frequencies less than 1000 MHz. Mean values are not entered when number of days with no observation is greater than or equal to 4.

$$1 \text{ solar flux unit (s.f.u.)} = 10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}.$$

2. Correction factors which are shown for frequencies greater than or equal to 500 MHz are derived from smooth spectrum connecting monthly means of absolutely calibrated values. They are marked with underlines when these values are consistent with those reported in the Final Report of the Working Group on the absolute solar radio flux calibration presented to the URSI General Assembly, Warsaw 1972 (cf. Solar Physics, 29, 243-262, 1973). The values of correction factor without underlines are regarded as provisional ones which are applicable only to the present 3 months.

WDC-C2 for Solar Radio Emission  
Nobeyama  
K. Shibasaki

Observing Station	CODE	Lat.	Long.	Std. CMP	Frequencies (MHz)
Hiraiso Radio Wave Obs., Radio Res. Lab., Nakaminato, Japan	HIRA	36.37N	140.63E	0240,6,4	500, 200
Nobeyama Solar Radio Obs, TAO, Minamimaki, Nagano, Japan	NOBE	35.94N	138.48E	0240,6,4	17000
Toyokawa Observatory, Nagoya Univ., Toyokawa, Japan	TYKW	34.83N	137.37E	0250,6,4	9400, 3750, 2000, 1000
Ussurijsk Astronomical Observatory, Voroshilov, U.S.S.R.	VORO	43.81N	131.89E	0310,7,3	2930
Purple Mountain Observatory, Nanjing, China	PURP	32.07N	118.82E	0410	3000
Beijing Astronomical Observatory, Beijing, China	BEIJ	40.10N	116.33 E	0410,5,4	2840
Yunnan Observatory, Kunming, China	YUNN	25.03N	102.78E	0510	2840
Res. Inst. of Radiophysics, Gorky Univ., Gorky, U.S.S.R.	GORK	56.01N	44.03E	0900,8,2	9100, 2950, 950, 650, 200, 100
Abastmani Astrophysical Obs., Gruzinskaya, U.S.S.R.	ABST	41.75N	42.83E	0910,7,3	221
Kislovodsk Radioastronomical Obs., Kislovodsk, U.S.S.R.	KISV	43.73N	42.52E	0910,7,3	15000, 9300, 5900
IZMIRAN WDC-B2, Molodezhnaya, Moscow, U.S.S.R.	IZMI	55.47N	37.30E	0930,8,2	204
Crimean Astrophysical Obs., Simeis, U.S.S.R.	CRIM	44.40N	33.90E	0940,7,3	3100
Astronomical Observatory, Jagillonian Univ., Cracow, Poland	KRAK	50.05N	19.83E	1050,7,3	810, 430
Astronomical Obs., Nicolas Copernicus Univ., Torun, Poland	TORN	53.0 N	18.6 E	1050,7,3	127
Ondrejov Observatory, Ondrejov near Prague, Czechoslovakia	ONDR	49.91N	14.78E	1100,7,3	536, 260
Heinrich-Hertz-Institut, Tremisdorf near Potsdam, DDR	BERL	52.28N	13.13E	1110,7,3	9500, 1470, 234
Observatoire de l'Universite, de Bordeaux, Bordeaux, France	BORD	44.85N	0.30W	1200,7,3	930
Sagamore Hill Radio Observatory, Hamilton, MA, U.S.A.	SGMR	42.63N	70.82W	1640,7,3	15400, 8800, 4995, 2695, 1415, 610, 410, 245
Instituto Geofisico del Peru, Huancayo, Peru	HUAN	12.04S	75.32W	1700,5,5	9400
Algonquin Radio Observatory, NRC, Ottawa, Canada	OTTA	45.95N	78.05W	1710,7,3	2800
Dept. of Astronomy, Academy of Sci., Havana, Rep. of Cuba	CUBA	23.1 N	82.4 W	1730,6,4	15000, 9500, 6700, 235, 230
Dominion Radio Astrophys. Obs., Penticton, Canada	PENT	49.32N	119.62W	2000,7,3	2700



















SEPTEMBER 1988

1988 SEP.	GORK 100	TORN 127	GORK 200	HIRA 200	IZMI 204	ABST 221	CUBA 235	SGMR 245	ONDR 260	CUBA 280	SGMR 410	KRAK 430	HIRA 500	ONDR 536	SGMR 610	GORK 650	KRAK 810	GORK 950	TYKW 1000	SGMR 1415	TYKW 2000	SGMR 2695	PENT 2700	
1	5	-	11	10	12	11	17	39	18	24	33	41	49	75	61	86	60	112	112	133	151	168	178	
2	2	-	7	10	12	18	16	14	14	23	29	40	45	64	62	87	64	114	109	133	145	165	174	
3	2	-	8	11	11	16	17	20	17	22	31	38	46	71	57	79	60	108	107	127	143	159	-	
4	2	-	6	12	9	15	15	17	15	19	35	38	44	63	60	79	58	105	104	125	136	156	-	
5	-	-	-	8	11	10	14	15	14	21	31	38	44	67	56	78	58	103	102	119	133	157	-	
6	-	-	-	10	10	12	13	19	14	19	31	37	42	62	56	-	55	103	95	103	125	157	151	
7	-	-	-	10	10	11	12	16	14	23	30	35	42	65	58	77	54	96	94	106	122	146	142	
8	-	-	-	10	8	19	13	13	14	21	31	35	45	65	58	70	55	96	94	107	115	125	132	
9	-	-	-	10	8	12	15	20	16	23	30	36	44	64	52	75	53	92	91	100	109	118	124	
10	-	-	-	10	14	19	22	24	18	27	27	37	43	67	39	71	52	83	87	96	103	112	-	
11	-	-	-	10	10	29	22	23	17	32	31	38	42	62	50	-	52	87	87	96	101	107	-	
12	5	-	13	10	19	18	34	41	25	37	35	35	42	58	58	61	49	87	87	98	102	113	124	
13	50	-	40	10	56	29	42	-	35	41	40	39	43	69	55	64	51	90	89	98	104	116	126	
14	12	-	30	10	34	26	45	-	26	41	33	36	42	68	55	62	48	80	90	97	103	118	129	
15	20	-	30	-	44	19	39	36	33	39	33	35	-	62	52	59	50	80	86	95	106	118	122	
16	9	-	20	10	22	23	27	39	22	25	30	34	40	61	54	57	50	82	84	92	102	115	125	
17	2	-	10	10	13	22	-	20	18	-	29	34	39	54	52	60	50	81	85	97	106	123	-	
18	3	-	7	10	10	11	15	21	19	23	29	34	39	63	53	60	50	86	86	99	109	126	-	
19	2	-	7	11	9	13	19	27	17	24	28	35	39	66	51	60	50	81	87	99	110	127	139	
20	2	-	7	9	9	9	54	-	17	55	46	-	41	58	59	63	-	91	91	109	119	140	146	
21	12	-	25	10	27	14	50	58	24	52	40	-	44	62	56	65	-	92	95	113	125	145	161	
22	2	-	25	10	44	15	47	31	40	51	37	44	47	70	62	70	60	103	104	124	138	167	172	
23	6	7	9	10	9	9	15	18	17	29	30	40	45	68	54	68	58	103	104	132	141	162	176	
24	7	9	9	10	8	14	19	13	-	24	37	39	44	-	61	68	60	110	110	133	145	161	-	
25	4	8	9	11	10	11	22	15	-	28	31	37	44	-	62	68	57	111	114	134	152	159	-	
26	7	11	9	10	10	10	19	37	17	25	32	41	44	66	60	71	60	111	116	132	158	156	171	
27	40	137	19	10	28	24	18	53	22	24	37	43	44	66	60	71	62	111	112	139	150	178	179	
28	12	6	9	10	11	14	16	17	14	24	30	41	46	67	58	71	61	107	114	129	143	154	169	
29	2	5	7	8	9	9	18	20	18	25	31	44	47	69	57	74	65	114	120	132	152	156	169	
30	2	5	9	9	10	9	17	24	17	23	34	43	45	62	62	71	61	108	111	129	144	159	173	
MEAN				10.0	16.6	15.7	23.9	26	20	29.1	32.7	38	43.5	65	56.3	69	56	97.6	98.9	114.2	126.4	142.1		
C.F.													1.0	0.7	1.0	0.8	1.4	1.0	<u>0.98</u>	1.1	<u>1.03</u>	0.89		

1988 SEP.	PURP 2700	OTTA 2800	YUNN 2840	BEIJ 2840	GORK 2950	CRIM 3100	TYKW 3750	SGMR 4995	KISV 5900	CUBA 6700	SGMR 8800	GORK 9100	KISV 9300	TYKW 9400	CUBA 15000	KISV 15000	SGMR 15400	NOBE 17000	1 AU FAC.				
1	168	188	178	164	179	183	177	187	268	234	287	325	323	322	683	531	532	547	1.018				
2	153	176	183	164	177	182	166	182	269	232	276	318	326	315	681	530	539	548	1.018				
3	146	174	175	161	172	170	164	179	252	223	272	312	314	312	680	532	568	519	1.018				
4	154	163	191	146	164	163	158	178	243	213	279	309	307	308	677	524	504	518	1.016				
5	148	164	187	146	158	159	152	172	236	218	278	313	307	306	676	538	499	541	1.016				
6	148	150	176	141	146	144	145	186	230	208	278	306	306	304	669	527	511	534	1.016				
7	137	143	172	141	141	138	142	162	230	205	271	304	304	306	667	526	476	550	1.016				
8	129	137	-	129	133	131	134	150	220	194	258	297	298	299	-	528	474	541	1.014				
9	114	126	144	116	124	128	123	140	202	191	242	292	288	290	664	524	443	539	1.014				
10	116	116	134	105	118	116	117	133	208	190	236	282	286	287	662	518	476	530	1.014				
11	116	120	148	106	116	111	116	138	201	188	252	284	273	288	662	522	478	529	1.014				
12	112	125	148	108	120	113	117	142	206	193	255	288	285	289	664	522	468	532	1.012				
13	116	123	150	110	122	115	122	143	208	-	254	284	291	292	-	523	458	548	1.012				
14	106	129	139	111	118	118	120	144	206	195	270	288	287	291	667	521	476	540	1.012				
15	107	125	145	115	121	116	123	142	207	190	250	284	289	291	666	520	483	530	1.012				
16	117	127	153	109	122	115	119	143	205	-	248	288	289	289	671	523	477	540	1.010				
17	122	134	151	112	126	120	126	149	209	-	253	289	292	294	-	521	482	523	1.010				
18	128	138	161	117	129	129	130	150	217	196	259	297	298	295	676	531	474	535	1.010				
19	129	137	156	123	134	129	131	152	216	203	258	298	300	301	678	530	476	550	1.008				
20	136	150	174	128	143	140	142	163	229	208	267	300	294	311	681	524	480	537	1.008				
21	144	157	184	139	149	146	146	164	233	211	267	306	310	309	683	540	489	551	1.008				
22	160	177	190	149	164	167	157	182	257	217	285	317	328	320	687	553	521	553	1.008				
23	150	177	195	150	166	167	153	179	244	220	283	314	314	315	691	522	521	550	1.006				
24	163	178	193	157	168	178	160	177	250	222	281	318	322	318	693	545	530	536	1.006				
25	170	177	198	160	172	173	164	175	248	223	277	322	318	329	695	544	523	534	1.006				
26	161	171	189	167	168	171	172	173	243	220	278	312	319	332	689	538	506	551	1.004				
27	156	179	175	162	171	171	167	202	250	224	310	309	321	330	689	-	536	550	1.004				
28	157	170	175	157	168	165	158	172	245	219	274	-	324	319	688	-	508	546	1.004				
29	165	172	191	158	171	165	168	171	250	218	276	-	321	328	691	542	503	553	1.004				
30	165	173	179	150	166	169	159	176	-	220	275	-	325	324	-	552	501	549	1.002				
MEAN	139.8	152.5	170	136.7	147.5	146.4	144.3	163.5	230	210	268.3	302	305.3	307.1	530	497.1	540.1		1.011				
C.F.	1.0	<u>0.89</u>	0.9	1.0	0.9	0.9	<u>0.97</u>	0.9	0.8	1.0	1.0	<u>0.96</u>	1.0	<u>0.99</u>	1.0	1.3	1.3	1.6					





