

LETTERS TO EDITOR

(See also page 480)

AVERAGES OF CRITICAL FREQUENCIES AND VIRTUAL HEIGHTS OF THE IONOSPHERE, OBSERVED BY THE NATIONAL BUREAU OF STANDARDS AT WASHINGTON, D. C., JULY TO SEPTEMBER, 1939¹

The following ionosphere data are in continuation of those published in this JOURNAL² and in each issue subsequently.

Key to symbols:

EST = Eastern Standard Time (75° west meridian time)

= manual measurements made on Wednesdays

* = less than ten measurements with automatic recorder

+ = h_{F_2} measured at 6200 kc; at other times h_F and h_{F_2} are lowest

F -layer and F_2 -layer virtual height between 2500 and 4400 kc

All critical frequencies are in terms of the ordinary wave.

TABLE 1—*Ionosphere data, National Bureau of Standards, Washington, D. C.*
(Average for all days of the month including disturbed days)

EST	h_E	h_{F_1}	h_{F_2}	f_E	$f_{F_1}^o$	$f_{F_2}^x$	h_E	h_{F_1}	h_{F_2}	f_E	$f_{F_1}^o$	$f_{F_2}^x$
h	m	km	km	kc/sec	kc/sec	kc/sec	km	km	km	kc/sec	kc/sec	kc/sec
				July, 1939						August, 1939		
00			307			5620			314			5217
01			311			5270			316			5052
02			315			4750			300			4648
03			336			4340			308			4277
04	115#		321	750#		4050	115#		334	1300#		3826
05	115#		304	1567#		4270	118#		325	1300#		3867
06	115#	220	258	2475	3620*	5020	112#	266	300	2247	3789*	5161
07	118	239		2905	4180	5580	121	242	343+	2760	4062*	6065
08	114	224	402+	3334	4420*	5870	119	234	363+	3167	4406#	6645
09	113	223	403+	3482	4680#	6050	117	226	365+	3520	4669#	6884
10	114	212	417+	3860	4790#	6220	118	219	379+	3746	4843#	7068
11	113	211	435+	3921	4890#	6330	117	218	382+	3880	4943#	7168
12	116	214	433+	3974	4890#	6410	117	218	404+	3939	4986#	7303
13	114	216	441+	3959	4900#	6540	118	224	396+	3906	4979#	7352
14	115	230	438+	3865	4900#	6710	118	232	390+	3802	4921#	7374
15	116	228	443+	3719	4840#	6770	119	236	381+	3626	4800#	7397
16	116	232	416+	3468	4630#	6960	120	237	360+	3364	4656#	7497
17	119	238	385+	3113	4400*	7090	124	240	316	2958	4196	7519
18	120#	246	306	2662	4100*	7230	121#	257	288	2467	3793	7432
19	115#		267	2125#		7220	118#		273	1780#		7400
20	115#		262	1600#		7200			279	820#		7184
21			277			6960			281			6626
22			288			6520			303			6045
23			297			6020			317			5660

¹Communicated by the Director of the National Bureau of Standards of the United States Department of Commerce.

²T. R. Gilliland, S. S. Kirby, N. Smith, and S. E. Reymier, Terr. Mag., 41, 379-388 (1936).

TABLE 1—Ionosphere data, National Bureau of Standards,
Washington, D. C.—Continued

(Averages for all days of the month including disturbed days)

EST	h_E	h_{F_1}	h_{F_2}	f_E	$f_{F_1}^o$	$f_{F_2}^o$
h	km	km	km	kc/sec	kc/sec	kc/sec
September, 1939						
00			317			5510
01			314			5310
02			311			5070
03			310			4710
04			310			4400
05	113#		315	900#		4100
06	111#		268	1930		5000
07	114#		248	2630		6830
08	115	236	275	3150		7690
09	114	225	328	3470	4850#	8140
10	114	223	316	3720	5100#	7980#
11	116	223	328	3830	5080#	8180#
12	114	226	340	3880	5250#	8230#
13	114	228	335	3850	5300#	8150#
14	116	235	330	3770	5120#	8230#
15	118	235	327	3550	5200#	8300#
16	120	243	315	3170		8350#
17	115#	248	274	2690		8430#
18	113#		250	1950		8640
19	110#		251	1030#		8240
20	110#		261	830#		7390
21			280			6630
22			290			6160
23			310			5740

NATIONAL BUREAU OF STANDARDS,
UNITED STATES DEPARTMENT OF COMMERCE,
Washington, D. C.

PROVISIONAL SOLAR AND MAGNETIC CHARACTER-FIGURES,
MOUNT WILSON OBSERVATORY
APRIL TO SEPTEMBER, 1939

Greenwich mean time						Range hor. int.
Beginning			Ending			
<i>1939</i>	<i>h</i>	<i>m</i>	<i>d</i>	<i>h</i>	<i>m</i>	<i>γ</i>
Apr. 17	1	58*	18	1	..	238
Apr. 23	5	45*	23	24	..	164
Apr. 24	17	37*	26	1	..	239
May 1	11	35	3	24	..	143
May 5	20	44*	9	20	..	181
June 13	16	..	15	3	..	113
July 3	00	39*	4	5	..	114
	4	14	6	4	..	177
	19	22	21	5	..	94
	21	9	22	12	..	117
Aug. 12	1	39*	13	8	..	295
	16	9	17	6	..	122
	22	0	23	16	..	216
Sep. 2	21	41*	3	23	..	195

*Sudden commencement.