

IV. IONOSPHERE

Mean ionospheric absorption L' (dB) at oblique incidence (A3)

$$f = 270 \text{ kHz}$$

The following tables give the values of mean ionospheric absorption at oblique incidence (A3) for certain zenith distances of the Sun (χ) expressed in decibels (dB). Values for ground sunset (SS) and ground (SR) are given for periods of 20 minutes centered on the times of $\chi = 90^\circ$. Night values have been determined by taking the periods ranging from $\chi = 100^\circ$ to 23 00 GMT. The date column gives year, month, day (e.g. 920101 indicates 1992 January 1). SS and Night values in actual row are valid for the actual day, however, the SR values always for the next day's dawn. Values uncertain for some reason are entered in round brackets (). Some gaps are due to missing records.

The sky wave of the transmitter Československo ($f = 272 \text{ kHz}$) has been recorded since January 1967. The geographical coordinates of the reflection point are 48.4° N , 17.1° E . Because of reconstruction works on the transmitter Československo, the absorption measurement at 272 kHz and the publication of data were suspended from April 1975 till September 1978. (At present the transmitter frequency is 270 kHz.)

The equipment and the method have been described in the papers by BENCZE P and MÄRCZ F: "Atmosphärisch-elektrische und ionosphärische Messungen im Observatorium bei Nagycenk". *Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967*, as well as by BENCZE P, HORVÁTH J, MÄRCZ F: "A new equipment for the measurement of ionospheric absorption" *Geophysical Observatory Report of the Geodetic and Geophysical Research Institute of the Hungarian Academy of Sciences, Year 1975. Observatory of Nagycenk, Sopron, 1976*. Further information is given by BENCZE P and MÄRCZ F: "The Geophysical Observatory near Nagycenk II. Atmospheric electric and ionospheric measurements" (*Acta Geod. Geoph. Mont. Hung.*, 16, 1981, 353-357).

Mean ionospheric absorption L' (dB) at oblique incidence (A3)
f = 270 kHz
 1992

Date	SS	Night	SR
920101	33.2	18.1	25.7
920102	28.2	24.4	30.3
920103	31.7	21.4	33.2
920104	33.2	20.2	
920105	29.2	19.5	31.7
920106	35.2	25.7	41.2
920107	33.2	21.4	37.7
920108	28.2	21.4	
920109	33.2	25.7	31.7
920110	41.2	30.3	33.2
920111	35.2	27.2	30.3
920112	41.2	27.2	29.2
920113	35.2	23.8	24.4
920114	35.2	27.2	
920115	26.4	24.4	41.2
920116	33.2	30.3	41.2
920117	41.2	25.0	35.2
920118	35.2	27.2	30.3
920119	31.7	21.8	29.2
920120	30.3	23.2	30.3
920121	28.2	25.7	
920122	30.3	22.2	27.2
920123	28.2	23.8	37.7
920124	33.2	25.7	37.7
920125	31.7	23.8	35.2
920126	41.2	22.2	35.2
920127	35.2	28.2	33.2
920128	31.7	21.4	27.2
920129	35.2	23.8	22.2
920130	37.7	19.9	28.2
920131	31.7	17.3	31.7
920201	31.7	23.8	25.7
920202	37.7	20.6	30.3
920203	27.2	20.6	22.7
920204	41.2	19.9	30.3
920205	33.2	19.2	23.2
920206	33.2	17.6	30.9
920207	30.3	21.4	23.2
920208	23.8	23.2	26.4

Date	SS	Night	SR
920209	29.2	23.8	23.8
920210	25.0	19.5	25.7
920211	28.2	19.9	23.2
920212	31.7	22.2	22.7
920213	21.8	20.2	24.4
920214	31.7	19.5	27.2
920215			
920216	41.2	23.8	29.2
920217	33.2	21.0	28.2
920218	37.7	21.4	31.7
920219	33.2	21.0	26.4
920220	33.2	25.7	27.2
920221			
920222			
920223	35.2	19.5	30.3
920224	37.7	19.5	31.7
920225	35.2	20.6	26.4
920226	30.3	27.2	27.2
920227	33.2	23.8	35.2
920228	37.7	29.2	33.2
920229	41.2	26.4	41.2
920301	30.3	26.4	27.2
920302	33.2	21.4	31.7
920303	31.7	18.3	28.2
920304	27.7	18.9	22.7
920305	30.3	20.6	26.4
920306			
920307			
920308	23.8	21.4	26.4
920309	37.7	23.8	30.3
920310	33.2	25.0	31.7
920311	33.2	20.2	30.3
920312	26.4	15.9	26.4
920313	26.4	20.6	23.8
920314	27.7	18.9	22.7
920315	37.7	(19.5)	
920316	30.3	24.4	25.7
920317	28.2	26.4	(28.2)
920318	26.4	17.6	24.4
920319	27.2	17.6	24.4
920320	25.0	25.7	24.4
920321	28.2	18.9	26.4
920322	19.2	17.8	27.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920323	29.2	21.4	26.4
920324	22.7	20.2	23.2
920325	21.4	17.8	27.2
920326	25.0	19.9	24.4
920327	22.7	21.8	33.2
920328	26.4	21.0	30.3
920329	35.2	23.8	30.3
920330	31.7	23.2	21.4
920330			19.9
920401	20.2	25.7	17.8
920402	23.8	17.3	22.2
920403	19.9	23.8	19.5
920404	26.4	18.1	28.2
920405	28.2	16.7	22.7
920406	27.2	20.2	13.2
920407	17.3	20.2	18.3
920408	21.0	20.6	16.7
920409	27.2	18.1	21.4
920410	21.4	19.2	16.1
920411	23.8	22.2	20.2
920412	27.2	19.5	21.0
920413	19.5	17.6	18.1
920414	29.2	17.6	20.6
920415	25.0	14.9	23.8
920416	19.2	23.2	22.2
920417	31.7	21.4	24.4
920418	25.7	(17.1)	
920419	29.2	21.8	25.0
920420	27.2	18.1	21.0
920421	27.2	18.1	23.8
920422	18.3	20.6	21.4
920423	30.3	21.4	25.7
920424	27.2	30.2	31.7
920425	35.2	25.0	23.2
920426	25.7	19.5	28.2
920427	31.7	19.2	26.4
920428	28.2	19.2	28.2
920429	31.7	21.8	29.2
920430	31.7	27.2	27.2
920501	33.2	22.2	25.0
920502	25.0	23.8	25.7
920503	30.3	25.0	33.2
920504	30.3	31.7	31.7

Date	SS	Night	SR
920505	28.2	21.0	28.2
920506	35.2	17.3	21.0
920507	21.8	19.5	33.2
920508	30.3	31.7	31.7
920509	37.7	23.8	27.2
920510	29.2	26.4	31.7
920511	30.3	24.4	35.2
920512	35.2	25.7	21.4
920513	20.2	22.2	23.2
920514	26.4	28.2	27.2
920515	33.2	26.4	26.4
920516	24.4	22.7	30.3
920517	30.3	19.9	35.2
920518	37.7	19.5	26.4
920519	30.3	24.4	27.2
920520	31.7	20.2	28.2
920521	33.2	21.8	28.2
920522	35.2	28.2	25.7
920523	31.7	22.7	26.4
920524	30.3	23.2	26.4
920525	37.7	20.2	25.7
920526	25.0	25.0	30.3
920527	27.2	20.6	28.2
920528	29.2	23.2	33.2
920529	35.2	23.2	23.8
920530	28.2	23.2	28.2
920531	37.7	27.2	30.3
920601	31.7	20.6	28.2
920602	25.0	21.4	21.8
920603	33.2	25.7	30.3
920604	26.4	21.0	25.7
920605	33.2	21.4	24.4
920606	28.2	24.4	26.4
920607	35.2	27.2	25.7
920608	41.2	23.8	23.2
920609	20.6	29.2	30.3
920610	27.2	25.7	25.7
920611	33.2	30.3	29.2
920612	28.2	23.2	28.2
920613	41.2	25.0	31.7
920614	31.7	21.8	21.8
920615	33.2	22.7	21.8
920616	28.2	22.2	19.5

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920617	33.2	21.4	24.4
920618	27.2	27.2	23.2
920619	31.7	23.8	25.7
920620	33.2	25.7	28.2
920621	28.2	25.7	24.4
920622	27.2	22.7	24.4
920623	35.2	21.4	22.2
920624	27.2	23.8	33.2
920625	29.2	28.2	35.2
920626	27.2	24.4	23.8
920627	23.8	24.4	29.2
920628	27.2	17.6	27.2
920629	28.2	23.2	35.2
920630	28.2	25.0	24.4
920701	29.2	25.0	30.3
920702	28.2	25.0	26.4
920703	30.3	24.4	26.4
920704	21.0	24.4	33.2
920705	28.2	24.4	33.2
920706	30.3	27.2	21.0
920707	25.7	22.7	25.0
920708	28.2	21.4	25.0
920709	24.4	23.2	26.4
920710	27.2	20.6	27.2
920711	26.4	20.2	22.2
920712	27.2	21.8	25.7
920713	30.3	24.4	25.0
920714	24.4	23.8	26.4
920715	21.8	22.2	29.2
920716	35.2	24.4	27.2
920717	26.4	24.4	25.0
920718	37.7	21.8	27.2
920719	30.3	21.4	31.7
920720	28.2	20.2	27.2
920721	27.2	21.4	26.4
920722	28.2	25.7	23.8
920723	33.2	22.2	23.2
920724	31.7	21.4	33.2
920725	23.2	21.8	26.4
920726	31.7	21.8	25.7
920727	26.4	25.7	31.7
920728	26.4	21.8	23.2
920729	26.4	14.4	25.0

Date	SS	Night	SR
920730	28.2	23.8	29.2
920731	33.2	23.8	31.7
920801	35.2		
920802	27.2	19.2	23.8
920803	41.2	37.7	33.2
920804	35.2	33.2	41.2
920805	41.2	37.7	35.2
920806	41.2	37.7	37.7
920807	23.8	18.3	26.4
920808	31.7	22.7	30.3
920809	30.3	23.2	22.7
920810	(24.4)		
920811	27.2	21.4	20.6
920812	25.7	20.6	20.2
920813	23.8	17.6	25.0
920814	26.4	16.3	18.9
920815	21.4	19.5	23.8
920816	21.4	25.0	19.2
920817	27.2	17.6	27.2
920818	26.4	18.6	17.8
920819	25.0	16.3	23.8
920820	28.2	20.6	25.0
920821	21.4	18.1	24.4
920822	30.3	23.2	26.4
920823	23.8	19.5	20.6
920824	29.2	23.2	26.4
920825	29.2	21.8	28.2
920826	28.2	19.9	25.7
920827	22.7	23.8	21.4
920828	26.4	23.8	25.0
920829	24.4	22.7	23.8
920830	25.7	21.0	27.2
920831	26.4	19.2	
920901	27.2	20.2	
920902			
920903	23.8	24.4	23.8
920904	21.8	19.9	25.7
920905	22.2	20.2	24.4
920906			
920907	26.4	18.9	27.2
920908	30.3	22.2	22.2
920909	27.2	23.8	26.4
920910	29.2	29.2	23.8

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
920911	26.4	26.4	31.7
920912	25.7	24.4	31.7
920913	27.2	19.2	25.0
920914		20.2	30.3
920915	27.2	25.0	30.3
920916	25.7	18.3	33.2
920917	28.2	23.2	25.7
920918	30.3	18.6	31.7
920919	20.6	18.6	21.4
920920	23.2	15.5	21.8
920921			
920922	21.8	21.8	26.4
920923	21.0	17.1	27.2
920924	28.2	19.2	20.2
920925	19.9	16.9	26.4
920926	23.2	16.9	23.8
920927	24.4	16.9	26.4
920928	18.6	17.1	31.7
920929	21.4	18.1	18.1
920930	18.6	18.6	20.6
921001	23.2	18.9	21.8
921002	18.9	18.3	27.2
921003	23.8	17.1	22.2
921004	21.4	17.6	25.7
921005	25.0	17.3	21.8
921006	26.4	16.7	30.3
921007	18.1	19.9	18.6
921008	22.2	16.3	18.6
921009	24.4	17.8	24.4
921010	18.1	18.9	18.6
921011	19.5	20.6	23.2
921012	21.4	19.9	19.5
921013	30.3	19.5	
921014	25.0	17.8	30.3
921015	22.7	21.0	23.2
921016	25.0	18.6	21.4
921017	22.7	20.2	26.4
921018	16.9	20.6	26.4
921019	25.7	15.9	35.2
921020	22.7	21.0	21.4
921021	22.2	14.4	25.7
921022	19.5	17.1	23.2
921023	20.6	18.9	24.4

Date	SS	Night	SR
921024	33.2	18.3	27.2
921025	23.2	17.6	26.4
921026	31.7	15.5	25.0
921027	16.9	17.8	30.3
921028	27.2	16.9	24.4
921029	23.2	16.9	27.2
921030	29.2	18.1	27.2
921031	25.7	18.3	28.2
921101	30.3	19.5	35.2
921102	30.3	18.9	29.2
921103	33.2	18.3	23.2
921104	23.2	22.2	23.8
921105	25.7	17.6	23.2
921106	21.8	18.3	23.8
921107	27.2	18.9	22.7
921108	23.2	18.3	29.2
921109	20.2	21.4	30.3
921110	24.4	23.8	29.2
921111	22.7	16.7	29.2
921112	28.2	20.6	26.4
921113	24.4	18.1	23.2
921114	28.2	18.6	30.3
921115	31.7	21.4	21.0
921116	28.2	19.5	26.4
921117	31.7	21.0	27.2
921118	23.8	29.5	22.2
921119	28.2	20.6	23.2
921120	28.2	18.9	23.8
921121	30.3	18.6	26.4
921122	30.3	21.8	31.7
921123	25.7	22.2	31.7
921124	41.2	22.2	
921125	33.2	22.2	27.2
921126	31.7	21.8	30.3
921127	35.2	21.0	26.4
921128	31.7	19.5	24.4
921129	33.2	19.2	25.0
921130	37.7	19.2	28.2
921201	26.4	22.2	31.7
921202	33.2	19.9	27.2
921203	28.2	21.0	28.2
921204	27.2	20.6	41.2
921205	30.3	22.7	28.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
921206	27.2	23.2	35.2
921207	30.3	21.4	30.3
921208	31.7	19.9	33.2
921209	22.7	19.9	21.0
921210			
921211	26.4	23.8	41.2
921212	29.2	20.2	33.2
921213	35.2	23.8	33.2
921214	30.3	26.4	28.2
921215	37.7	23.2	33.2
921216	29.2	25.0	29.2
921217	31.7	29.2	28.2
921218	31.7	21.8	33.2
921219	37.7	30.3	37.7
921220	37.7	23.8	41.2
921221	37.7	23.2	41.2
921222	41.2	21.4	
921223	35.2	20.2	41.2
921224	41.2	25.7	37.7
921225	41.2	22.2	31.7
921226	35.2	22.2	24.4
921227	29.2	21.0	31.7
921228	37.7	25.0	35.2
921229	35.2	23.8	31.1
921230	41.2	21.8	33.2
921231	35.2	21.8	29.2

Mean ionospheric absorption L'_m (dB) at oblique incidence (A3)
 $f = 270$ kHz
 1993

Date	SS	Night	SR
930101	37.7	19.5	33.2
930102	37.7	29.2	28.2
930103	35.2		
930104	28.2	27.2	30.3
930105	26.4	26.4	33.2
930106	41.2	25.0	28.2
930107	33.2	23.8	29.2
930108	23.8	21.8	29.2
930109	41.2	24.4	30.3
930110	35.2	24.4	27.2
930111	37.7	25.0	31.7
930112	41.2	23.2	29.2
930113	31.7	20.6	41.2
930114	35.2	24.4	41.2
930115	35.2	27.2	35.2
930116	29.2	26.4	35.2
930117	41.2	25.7	47.2
930118	31.7	26.4	37.7
930119	41.2	22.2	41.2
930120	33.2	30.3	33.2
930121	37.7	24.4	23.8
930122	47.2	25.7	35.2
930123	47.2	28.2	
930124		28.2	30.3
930125	33.2	37.7	28.2
930126	35.2	22.7	
930127	41.2	23.2	31.7
930128	37.7	23.2	26.4
930129	35.2	19.5	26.4
930130	33.2	21.4	21.8
930131	37.7	30.3	33.2
930201	35.2	23.8	29.2
930202	41.2	24.4	22.7
930203	44.2	21.4	35.2
930204	41.2	23.8	35.2
930205	31.7	23.8	24.4
930206	41.2	23.2	22.7
930207	24.4	23.8	26.4
930208	35.2	22.7	21.0

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930209	26.4	19.2	22.7
930210	29.2	18.9	27.2
930211	33.2	22.7	27.2
930212	23.8	20.6	21.4
930213	37.7	25.0	22.7
930214	33.2	18.3	28.2
930215	28.2	18.1	23.2
930216	33.2	21.4	25.0
930217	26.4	19.9	27.2
930218			
930219	33.2	21.8	30.3
930220	41.2	22.2	33.2
930221	37.7	25.0	35.2
930222	33.2	17.3	29.2
930223	33.2	26.4	
930224	33.2	19.9	28.2
930225	41.2	26.4	30.3
930226	35.2	20.6	28.2
930227	31.7	21.8	26.4
930228	31.7	28.2	30.3
930301	31.7	23.8	26.4
930302	26.4	21.0	33.2
930303	28.2	20.2	30.3
930304	31.7	16.9	31.7
930305	33.2	20.6	29.2
930306	26.4	21.0	25.0
930307	37.7	19.5	23.8
930308	33.2	19.9	29.2
930309	25.7	18.1	28.2
930310	35.2	23.2	22.7
930311	23.2	23.2	33.2
930312	28.2	19.5	28.2
930313	33.2	20.6	30.3
930314	33.2	20.2	22.7
930315	37.7	19.5	23.2
930316	23.8	18.1	29.2
930317	21.4	17.6	22.7
930318	24.4	14.1	25.0
930319	22.7	16.5	21.8
930320	28.2	18.9	23.8
930321	35.2	19.9	23.8
930322	26.4	19.2	25.0
930323	28.2	20.6	33.2

Date	SS	Night	SR
930324	23.8	18.1	27.2
930325	28.2	19.9	25.7
930326	27.2	19.2	24.4
930327	29.2	24.4	31.7
930328	31.7	21.0	20.6
930329	30.3	23.8	
930330	24.4	18.1	20.2
930331	31.7	21.4	
930401	22.2	18.1	18.6
930402	26.4	16.3	16.9
930403	25.7	20.6	26.4
930404	29.2	24.4	25.7
930405	30.3	19.2	30.3
930406	18.6	23.8	27.2
930407	26.4	16.9	28.2
930408	22.7	25.0	17.3
930409	21.8	16.7	22.7
930410	31.7	16.9	19.5
930411	24.4	17.8	25.7
930412	27.2	23.8	21.0
930413	21.8	18.1	23.8
930414	28.2	19.5	19.9
930415	25.7	17.6	21.0
930416	26.4	25.7	17.6
930417	24.4	18.1	19.2
930418	30.3	21.4	21.4
930419	33.2	16.5	25.0
930420	23.2	18.1	19.9
930421	25.7	19.5	16.3
930422	21.8	18.9	21.0
930423	27.2	19.5	19.9
930424	27.2	21.8	23.8
930425	23.8	18.9	24.4
930426	23.8	17.8	28.2
930427	22.2	19.9	21.4
930428	21.4	18.3	
930429	31.7	19.5	21.0
930430	30.3	21.0	23.8
930501	26.4	19.5	24.4
930502	23.8	23.8	25.0
930503	31.7	21.0	24.4
930504	31.7	21.8	37.7
930505	28.2	21.4	27.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930506	27.2	19.5	26.4
930507	27.2	21.0	22.7
930508	18.9	24.4	30.3
930509	35.2	27.2	26.4
930510	27.2	23.2	30.3
930511	31.7	20.6	27.2
930512	31.7	25.0	24.4
930513	25.0	17.8	26.4
930514	18.6	23.2	26.4
930515	28.2	16.9	27.2
930516	29.2	20.6	22.7
930517	33.2	25.0	29.2
930518	41.2	25.7	23.8
930519	30.3	21.8	23.2
930520	31.7	23.2	26.4
930521	35.2	21.4	31.7
930522	29.2	17.8	24.4
930523	25.0	17.8	30.3
930524	37.7	18.3	25.7
930525	27.2	18.3	21.8
930526	31.7	23.8	
930527	35.2	21.4	25.0
930528	27.2	25.0	23.8
930529	29.2	23.2	29.2
930530	31.7	22.2	22.2
930530	26.4	21.4	27.2
930601	29.2	27.2	28.2
930602	31.7	24.4	25.7
930603	27.2	23.8	33.2
930604	35.2	23.2	30.3
930605	30.3	23.8	23.8
930606	27.2	23.8	23.2
930607	28.2	22.7	25.7
930608	28.2	22.2	28.2
930609	33.2	18.9	23.8
930610	23.2	23.2	24.4
930611	21.8	23.2	25.0
930612	25.0	25.0	27.2
930613	21.4	20.6	21.8
930614	26.4	21.4	27.2
930615	26.4	21.8	25.7
930616	25.7	21.4	23.2
930617	19.2	18.9	27.2

Date	SS	Night	SR
930618	22.2	23.2	23.8
930619	22.7	23.8	22.2
930620	25.0	22.7	21.4
930621	26.4	22.4	26.4
930622	26.4	23.8	22.7
930623	23.8	22.2	26.4
930624	23.2	24.4	21.8
930625	25.0	21.8	24.4
930626	30.3	22.2	28.2
930627	23.2	21.8	21.4
930628	26.4	23.2	25.0
930629	28.2	21.0	23.8
930630	26.4	23.2	
930701	24.4	22.7	22.7
930702	22.7	21.8	26.4
930703	25.7	20.6	21.0
930704	21.0	18.1	29.2
930705	22.2	21.8	26.4
930706	27.2	24.4	23.2
930707	27.2	22.2	23.8
930708	28.2	23.2	25.7
930709	21.4	(21.4)	30.3
930710	23.8	21.8	27.2
930711	26.4	23.2	25.7
930712	24.4	23.2	25.0
930713	23.8	21.4	22.2
930714	27.2	22.2	23.2
930715	25.0	21.0	25.7
930716	25.0	26.4	21.4
930717	24.4	21.0	27.2
930718	28.2	25.7	25.0
930719	26.4	21.0	21.0
930720	29.2	23.8	21.8
930721	23.2	21.8	33.2
930722	25.7	25.0	22.2
930723	28.2	21.0	29.2
930724	22.7	21.0	23.8
930725	21.0	23.2	22.7
930726	27.2	21.0	20.6
930727	21.4	29.2	23.2
930728	21.4	23.2	
930729	20.2	21.4	22.7
930730	25.0	21.4	23.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
930731	20.2	20.6	21.8
930801	27.2	18.6	23.2
930802	27.2	19.9	22.7
930803	22.2	21.0	28.2
930804	26.4	25.0	22.2
930805	25.7	20.2	21.0
930806	22.7	19.5	31.7
930807	27.2	18.9	26.4
930808	31.7	21.4	25.7
930809	27.2	23.2	30.3
930810	25.7	22.2	23.2
930811	23.2	21.8	24.4
930812	25.0	19.5	23.8
930813	27.2	18.6	27.2
930814	29.2	20.2	23.8
930815	23.8	21.4	33.2
930816	29.2	23.2	(28.2)
...			
931011			20.6
931012	18.1	18.6	26.4
931013	24.4	18.1	20.6
931014	25.0	15.4	19.5
931015	22.7	16.7	23.2
931016	19.9	17.1	19.9
931017	19.5	16.9	23.2
931018	21.0	17.6	21.8
931019	16.1	15.9	18.1
931020	17.3	19.2	
931021	24.4	19.5	20.2
931022	22.7	16.3	19.2
931023	18.3	16.1	18.1
931024	21.8	17.6	21.8
931025	20.6	(18.3)	
931026	21.8	19.5	23.2
931027	19.2	16.9	25.0
931028	27.2	19.5	23.2
931029	21.4	19.9	21.4
931030	22.2	15.9	22.7
931031	22.7	18.9	23.2
931101	27.2	17.3	22.2
931102	19.5	18.1	20.6
931103	24.4	18.3	22.2
931104	27.2	18.3	25.0

Date	SS	Night	SR
931105	19.5	19.2	27.2
931106	20.6	18.1	29.2
931107	21.0	17.8	27.2
931108	22.7	18.3	23.2
931109	18.6	21.4	23.2
931110	19.9	21.4	23.2
931111	19.2	16.9	21.4
931112	20.2	22.7	25.0
931113	21.4	21.0	26.4
931114	25.0	20.6	23.8
931115	22.2	19.5	27.2
931116	21.0	19.5	27.2
931117	27.2	16.7	25.0
931118	23.2	23.2	26.4
931119	28.2	19.5	27.2
931120	26.4	21.0	27.2
931121	23.8	20.0	23.8
931122	30.3	19.5	27.2
931123	27.2	21.0	28.2
931124	29.2	19.5	
931125	27.2	18.1	26.4
931126	23.2	19.2	27.2
931127	22.2	21.4	25.0
931128	26.4	21.8	27.2
931129	25.7	25.7	27.2
931130	41.2	19.9	29.2
931201	26.4	20.6	29.2
931202	29.2	33.2	31.7
931203	31.7	31.7	30.3
931204	41.2	21.8	25.7
931205	41.2	24.4	31.7
931206	35.2	23.8	33.2
931207	41.2	21.8	31.7
931208	37.7	23.2	33.2
931209	35.2	25.0	33.2
931210	37.7	23.2	27.2
931211	29.2	23.2	35.2
931212	35.2	25.0	28.2
931213	31.7	21.0	27.2
931214	33.2	22.2	31.7
931215	30.3	27.2	25.0
931216	25.7	22.2	35.2
931217	35.2	26.4	41.2

MEAN IONOSPHERIC ABSORPTION

Date	SS	Night	SR
931218	33.2	25.7	35.2
931219	30.3	26.4	37.7
931220	25.7	26.4	37.7
931221	37.7	21.8	30.3
931222	29.2	24.2	31.7
931223	37.7	21.0	29.2
931224	25.0	19.5	25.0
931225	30.3	24.4	23.2
931226	29.2	27.2	30.3
931227	35.2	25.0	29.2
931228	37.7	24.4	35.2
931229	30.3	21.8	27.2
931230	30.3	21.4	25.0
931231	33.2	27.2	31.7