ตารางแนบท้ายที่ I

Table A 1
The world-wide net of cosmic-my stations

Code	No. ICY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
	E 577	Achimota, Gana	5.61 N	0.20 w		14.94		T
AHM	E 518	Ahmedabad. India	23.02 N	72.60 E	0	14.58 (15.8)	15.94 (16.00)	T, N, N*
ALB	c 179	Albuquerque. USA	35.03 N	106.30 W	1575	3.93 (4.52)	4.47	N
ALE		Alert, Canada	82.52 N	62.60 W	66		0.00	N*, T
		Aligarth, India	27.95 N	78.07 E	186		14.85	N
ALM	050	Alma-Ata, USSR	43.25 N	76.92 E	806	5.47 (6.6)	6.69	N*, T, B, N, S
AMS	B 080	Amsterdam, the Netherlands	52.22 N	4.92 E	0	2.09 (2.58)	2.69	I, N
ATH		Athens. Greece	37.97 N	23.72 E	110		8.72	N*
APA		Apatity. USSR	67.55 N	33.33 E	182		0.64 (0.60)	T, N, N*, B
		Auckland, New Zealand	36.85 S	174.75 E				S
		Banff, Canada	51.20 N	115.60 W	3000			T, N
		Bangui, Central Afric. Repub.	4.60 N	18.58 E	0			S
BER	A 136	Bergen, Norway	60.40 N	5.32 E	0	0.96 (1.13)	1.13	T, N
BEI		Beirut, Lebanon	33.86 N	35.50 E			10.42	N
		Belfast, Northern Ireland	54.58 N	5.93 w	16		1.92	N*, T
		Belsk, Poland	51.83 N	20.78 E	180		3.18	T
BER	C 127	Berkeley, USA	37.87 N	122.30 W	0	4.01 (4.58)	4.54	T, N
	B 196	Bismark. USA	46.80 N	100.76 W		1.09		B
	E 582	Bogota, Columbia	4.62 N	74.15 w		12.70		T. N
BOL	B 237	Bologna. Italy	44.50 N	11.35 E	0	4.18	5.22	T
	c 055	Botev Vran, Bulgaria	42.70 N	24.10 E		5.04		
		Brisbane, Australia	21.53 S	152.92 E	0		7.21	N
	B 111	Bristol, England	51.45 N	2.60 W		2.12		S
	C 400	Brownwood, USA	32.00 N	99.00 W		4.44		B

Table A I (continued)

Code	No. IGY Station		Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
BUD	B 039	Budapest, Hungary	47.50 N	18.90 E	410	3.57	4.44	T, U
BUE	C 961	Buenos-Aires, Argentina	34.60 S	58.48 w	0	10.70 (11.4)	10.03 (10.63)	T, N, N
	C 254	Cairo Giza, Egypt	30.03 N	31.20 E		IO.11		N
		Calcutta, India	22.66 N	88.33 E	0			I, T
CAL		Calgary, Canada	51.08 N	114.13 W	1128		1.09 (1.10)	N*
		Cambridge Tunnel. Australia	42.85 S	147.42 E	110		1.19	U, I
CAH		Cape Hallet, Antarctica	72.30 S	170.22 E			0.04	N
CAS	A 052	Cape Schmidt, USA	h8.92 N	179.48 W	0	0.50 (0.55)	0.60	I, N
CAT	c 950	Cape-Town. South Africa	33.95 s	18.47 E	103	5.10	4.96	T
		Casey. Antarctica	66.28 S	110.53 E	0		0.01	N
CHA	E 665	Chacaltaya, Bolivia	16.32 S	68.15 W	5243	13.53 (13.3)	13.10	T, S, N, N*
		Cheltenham, USA	38.70 N	76.80 W	72	(2.19)	2.09	I
CHI	B 277	Chicago, USA	41.83 N	87.67 W	200	1.54 (1.91)	1.72	N, N*
CHR	B 982	Christchurch, New Zealand'	43.50 S	172.60 E	8	2.55 (2.53)	2.71	T, I. N
CHU	A 145	Churchill. Canada	58.75 N	94.08 w	39	0.11 (0.186)	0.21 (0.21)	T, N, B, N*
CLI	B 305	Climax, USA	39.37 N	106.18 W	3400	2.77 (3.08)	3.03 (3.06)	I, N, T
COL	A 092	College. USA	64.85 N	147.83 W	91	0.48 (0.454)	0.54	B, N
	c 359	Colomb-Bechar, Algeria	32.00 N	2.50 w		7.05		B
	B 311	Colombia, USA	38.93 N	92.40 W		2.19		
COM	E 608	Colombo, Ceylon	6.90 N	79.87 E	0	17.47 (17.6)	17.46	T
COR		Cordoba, Argentina	31.42 S	64.20 W	434		11.45	N
DAC		Dacca, Bangla Desh	23.75 N	90.42 E	0		16.22	N, T
DAL		Dallas, USA	32.98 N	96.73 W	208		4.35 (4.30)	N*
DAR	E 500	Darjeeling, India	27.05 N	68.27 E	2200	3.51	15.35	T, N, I
	AM.7	Davis Strait, Canada	67 N	58 W	0	0.05		B

Table Al (continued)

Code	No. ICY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
		Deception, Antarctica	62.98 s	60.7 1 W				T, N
	B 211	Deep River, Canada	46.10 N	77.50 w	145	0.87 (0.98)	1.02 (1.04)	I, N. N*, T
DEN		Denver, USA	39.67 N	105.00 W	1600		2.91	N*, N, T
		Derwood, USA	39.10 N	77.16 W	0			I
DOU		Dour, Belgium	50.10 N	4.60 E	225		3.24	N*, T
		Dumont d'Urvill, Antarctica	66.67 S	140.02 E	45		0.01	N*, N
	B 991	Dunedin, New Zealand	45.86 S	170.53 E	0	2.00		I
DUR		Durham. USA	43.10 N	70.80 W	0	1.42 (1.36)	1.41 (1.44)	N*
ELI		El Infernillo, Chile	33.17 s	70.28 W	4343		11.45	N, T
ELL	A 990	Ellsworth, Antarctica	77.72 S	41.14 w	0	1.06 (0.72)	0.79	T, N
		Embudo, USA	35.20 N	6.01 W	2621		4.36	U
		Fairbanks, USA	64.83 N	147.71 W				N
FRD	B 318	Frederiksburg, USA	3X.20 N	77.40 w	69	2.1 I	2.18	I
FRE	B 171	Freiburg, Germany	48.00 N	7.87 E	1220	3.15 (3.97)	4.10	T, I, N. S
	A 111	Frobisher, Canada	63.75 N	68.56 W		0.06		B
		Fukushima, Japan	37.75 N	140.48 l'	66		10.55	N*
		General Belgrano, Antarctica	77.97 s	38.40 W	0		0.77	N*
		Gif sur Yvette, France	48.68 N	2.13 E	40		3.61	N*
GOD	A049	Godhavn, Greenland	69.20 N	54.00 W	9	0.03 (0.028)	0.03	I, T
GOT	B 106	Göttingen, Germany	51.52 N	9.93 I	273	2.36 (3.04)	3.00	N
GOO		Goose Bay, Canada	53.27 N	60.40 W	46		0.52	T, N*
	E 555	Guam, USA	13.50 N	144.66 E				B
GUL	c 201	Gulmarg, India	34.07 N	74.42 E	2743	9.29	11.91	T, N
HAF	8181	Hafelekar, Austria	47.32 N	11.38 E	2300	3.4 1	4.37	T, N*, I, N
HAI	C 322	Haifa, Israel	32.82 N	35.on E	193	8.92 (11.3)	10.96	T, U
HAL	B 107	Halle, Germany	51.48 N	11.97 E	100	2.41	3.07	I, N

Table A1 (continued)

Code	No. ICY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
	B 061	Hamburg, Germany	53.62 N	10.00 E		1.99		T, N
	B 026	Harwell, England	51.56 N	1.31 W	0	2.12		I, S
HEI	A 009	Heiss Island, USSR	80.62 N	58.05 E	20	0.07	0.09	T, N
HFR	C 957	Hermanus, South Africa	34.42 S	19.22 E	26	4.94 (6.4)	4.90	T, N, B, N*
HEX	B 120	Herstmonceux, England	50.87 N	0.33 E	23	2.30 (2.81)	2.92	T, N
HOB	B 977	Hobart, Australia	42.90 S	147.33 E	0	1.71 (1.79)	1.89	T, N, U, B
		Hong Kong	22.42 N	114.20 E	30		16.23	I
HOW	E 588	Howrah, India	22.66 N	88.32 E	0	15.42	16.43	I
HUA	E 616	Huankayo, Peru	12.02 S	75.33 W	3350	14.18 (13.7)	13.45 (13.36)	N, I
Hill		Inuvik, Canada	68.35 N	133.42 W	21		0.18	N*, I
INV	B 994	Invercargill, New Zealand	46.00 S	168.40 E	0	1.81	1.86 (1.81)	T, N
IRK	C 002	Irkutsk, USSR	52.48 N	104.03 E	433	2.82 (3.45)	3.66	I, N, T, B, N*
JUN	B 203	Jungfraujoch, Switzerland	46.50 N	7.59 E	3550	3.52 (4.77)	4.48	T, N
		Kerguelen, Indian Ocean	49.35 S	70.22 E	0		1.19	T, N*, N
KIE		Kiel, Germany	54.30 N	10.10 E	54		2.29 (2.23)	T, N, N*
		Kiev, USSR	50.72 N	30.31) E	120		3.62	N*
KIR	A 060	Kiruna, Sweden	67.83 N	20.43 E	400	0.47 10.505)	0.54 (0.52)	T, B, N*
KOD	E 566	Kodaikanal, India	10.23 N	77.4x E	2443	17.56 (17.5)	11.47	T, N,
KOE		Koenje, Japan	35.7 1 W	139.64 E	42		1.58	I, T
KUH	B 037	Kühlungsborn, Germany	54.12 N	11.77 E	70	1.92	2.43	I, T, N
KUL		Kula, Hawaii	20.73 N	156.33 W	930		13.20	N*, T
LAE	E 636	Lae, New Guinea	6.73 S	147.110 E	0	14.89 (15.81	15.52 (15.40)	T, N
	C 244	Lahore, Pakistan	31.55 N	74.33 E		10.35		I
LEE	B 057	Leeds, England	53.83 N	1.58 W	100	1.71 (2.08)	2.20	N, N*
	B 977	Legionowo, Poland	52.41 N	20.96 E		2.44		

Table Al (continued)

Code	No. ICY	Station.	Geographic latitude	Geographic longitude	Height above sea level. m	Vetical cutoff rigidity, GV [1] approximate computation	Vetical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
LIE		Limeil, France	48.73 N	2.42 E	50	2.84	3.64	N, T
LIL	c 112	Lincoln. USA	40.82 N	96.68 W	350	1.99 (2.24)	2.22	T, N
LIN	B 285	Lindau, Germany	51.60 N	10.10 E	140	2.38 (2.87)	3.00	T, N, N*
LIS	B 154	Lisbon, Portugal	38.80 N	9.15 w	81	5.20	6.65	T
LOM		Lomnicky Stit. Czechoslovakia	49.20 N	20.22 E	2634	3.15 (3.97)	4.00	T, N, S
LON	A 055	London. England	51.53 N	0.10 w	0	7.16 (2.70)	2.73 (2.83)	T, N, B
	C 160	Loparskaya, USSR	6X.95 N	33.05 E.	0	0.49 (0.50)		T, N, I
		Los Cerrilos Station, Chile	33.50 S	70.30 W	512		11.44	T
MAA	C`279	Macao, Macao	22.20 N	113.55 E	65	15.29	16.28	T, N
MAC	A 980	Macquarie Island, Australia	54.48 S	158.97 E	0	0.51 (0.37)	0.55 (0.55)	T, N
		Mncul Station. Chile	33.45 S	70.20 W	570		11.41	T
	E 526	Madrid, Spain	40.40 N	3.69 W		4.96		T, N
		Magadan, USSR	60.11 N	151.01 E	0		2.10	N*
MAK		Makapuu Point, USA	21.30 N	157.65 W	91	II.03	13.23	N
MAR	E 615	Makerere, Uganda	00.34 N	32.56 E	1196	14.90 (15.3)	14.98	T, N
		Massachusetts (MIT). USA	42.39 N	71.10 w	0	1.57	1.52	T
		Matsumoto, Japan	36.23 N	138.00 E	630		11.31	U
MAW	C 290	Mawson, Antarctica	67.60 S	62.88 E	0	0.57 (0.189)	0.22	T, I, N
MCM	A 961	Mc Murdo, Antarctica	77.85 S	166.72 E	48	0.03 (0.024)	0.01	T, N, N*
	B 230	Melbourne, Australia	37.82 S	144.51 E		2.66		B
MEU		Meudon, France	48.81 N	2.25 E	110		3.60	N
MEX	B 962	Mexico City, Mexico	19.33 N	99.18 W	2200	9.10 (10.0)	9.53 (9.44)	S, N. N*, T
MIN	E 704	Mina Aguilar, Argentina	23.10 S	65.30 w	4000	12.45 (12.6)	12.51 (12.28)	N

Table Al (continued)

Code	No. IGY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
	A 976	Minneapolis, USA	44.91 N	93.22 W	0	1.16 (1.34)		N, I
MIR		Mirny, Antarctica	66.55 S	93.02 E	30	0.17	0.04	I, T, N, B
		Mont Blanc Tunnel. France	45.80 N	4.52 E	1300		4.65	V
		Morioka, Japan	39.70 N	141.13 E	135		10.16	N
MOS	A 010	Moscow, USSR	55.47 N	37.22 E	200	2.03 (2.30)	2.46 (2.40)	B, U.S. I, T, N. N*
HAK		Mt. Haleakala, Hawaii	20.72 N	156.27 W	3052	11.3 (13.5)	13.30f13.07)	T, N
	C 150	Mt. Noricura, Japan	36.12 N	137.55 F	2770	9.13 (12.2)	Il.39 (11.46)	N*, I, T
SUL	B 115	Mt. Sulphur, Canada	51.20 N	115.60 W	2283	0.94 (1.10)	1.14 (1.15)	T, N, N*
MTW	B 306	Mt. Washington, USA	44.30 N	71.30 w	1917	1.16 (1.34)	1.24	N
MTL		Mt. Wellington, Australia	42.91 S	147.23 E	725	1.7 I	1.89	N, N*
		Mt. Wrangell, USA	62.00 N	144.10 w	4200	0.63 (0.63)		N
MUN		Munich, Germany	48.20 N	11.60 E	500	3.19 (3.99)	4.14	T, N
MUR		Murchison Bay, Norway	80.05 N	18.25 E	0	0.06 (0.066)	0.06	N
		Mussala, Bulgaria	42.18 N	25.58 E	2925		6.45	N
		Nagoya. Japan	35.01 N	136.90 E	5		12.06	T
NED		Nera, the Netherlands	52.23 N	5.08 E			2.76	N
		Norilsk, USSR	69.26 N	88.05 E	0		0.6 3	N*
NOR		Northfield. USA	44.41 N	93.25 W	287		1.43	N
	B 222	Ottawa, Canada	45.40 N	75.60 W	57	0.96 (1.05)	1.08 (1.12)	T, N
OUL		Oulu, Finland	65.02 N	25.50 E	15		0.81 (0.83)	N*, T
		Peking, China	31.10 N	121.20 E				T. N, I
PIC	B 260	Pic du Midi, France	42.93 N	0.25 E	2860	4.30 (5.6)	5.36	T. N. S, N*

Table A I (continued)

Code	No. ICY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
	E 581	Popayan Coyna, Columbia	2.00 N	74.00 W		13.27		T
	B 998	Port aux Français, France	49.35 S	70.21 E		1.74 (1.17)	1.19	T, N, N*
	B 035	Port Moresby, Australia	9.43 S	147.20 E	0			T, N, I
		Potchefstroom, South Africa	26.70 S	27.10 E	135 I		7.30	N
PRA	B 139	Prague, Czechoslovakia	50.08 N	14.42 W	215	2.77	3.53	T. N. I
		Predigtstuhl, FRG	47.70 N	12.88 E	1614		4.30	N*, T
	A 114	Prince Albert. Canada	53.20 N	105.70 W		0.50		B
	C 251	Quetta, Pakistan	30.02 N	67.02 E				N
RES	A.030	Resolute, Canada	74.72 N	94.98 W	17	0.00 (0.0018)	0.00	T, N. N*
RIO	E 703	Rio de Janeiro, Brazil	22.95 S	43.17 w	0	11.47 (12.1)	II.73 (11.45)	T, N
	c 031	Rio Pedras, Puerto Rico	18.40 N	66.05 W		8.08		N
ROM	c 073	Rome, Italy	41.90 N	12.52 E	60	5.04 (6.4)	6.32	T, N, N*
SAC	c 228	Sacramento Pic, USA	32.72 N	105.75 W	3000	4.58 (5.1)	4.98	N, T
		Saint Maur, France	40.75 N	2.28 E	35		3.63	N
		San Miguel, Argentina	34.60 S	58.70 W				
	E 706	San Paulo, Brazil	23.55 S	46.65 W		II.55		T, N
SAE		Sanae, Antarctica	70.30 S	2.35 W	53		1.06 (0.98)	N*
SAN	c 195	Santa Barbara. USA	34.41 N	119.31 W		4.86	5.50	S
SAO	C 889	Santiago, Chile	50.76 S	75.42 W			7.70	T
SAP	c 052	Sapporo, Japan	43.03 N	141.35 E	54	'6.18	8.22	I, T
	A 157	Saskatoon, Canada	52.13 N	106.66 W		0.6 I		T, N, B
		Schauinsland, FRG	47.92 N	7.75 E	1200		4.10	T, I, N
SEO		Seoul. Korea	37.58 N	127.05 E	50		10.79	T
SIM		Simferopol, USSR	44.73 N	34.00 E	570	4.54	5.5 I	T. B, N

Table A1 (continued)

Code	No. ICY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
		Socorro, USA	14.07 N	6.93 W	1676		4.73	U
SOF		Sofia, Bulgaria	42.67 N	23.30 I	518		6.15	T
SOU		South Pole, Antarctica	89.59 S	00.00	2820		0.11 (0.10)	N
	B 010	Stockholm, Sweden	59.33 N	17.95 L		1.22 (1.38)		T
SVE	B 019	Sverdlovsk, USSR	56.73 N	61.07 E	290	1.91 (2.29)	2.30 (2.24)	I
SWA	B 299	Swarthmore, USA	39 90 N	75.31 w		1.79	1.92 (1.94)	I, B, N*
SYD	C 948	Sydney, Australia	33.89 h	151.19 E	43	4.03 (4.27)	4.69	N
SYO	A984	Syowa Base, Antarctica	69.00 S	39.60 Ii	15	0.85 (0.347)	0.42	I, N, N*
	C 335 *	Tacuba, Mexico	19.46 N	99.20 w		9.18		T
		Takeyama, Japan	35.22 N	139.62 I	0		11.84	U
	C 901	Tananarive, Madagascar	IX.91 S	47.55 E	1380	8.03		B, S
TBI	C 072	Tbilisi, USSR	41.72 h	44.73 I.	510	5.63 (6.9)	6.91	T, N, I, U, N*, S
	C 058	Tcherni Vrah, Yugoslavia	42.60 N	23.29 I		5.08		
TEH	C 163	Teheran, Iran	35.70 N	51.40 I	1400	8.06	10.56	N*
	C 266	Tenerife, Spain	28.00 N	17.00 w		8.97		T
THU	A 025	Thule, Greenland	76.58 N	68.42 W	260	0.00 (0.00039)	0.00	T. N, B, N*
TIX	A 037	Tixie Bay, USSR	71.59 N	129.00 E	0	0.27	0.53 (0.50)	I, N*
TOI	C 160	Tokyo-Itabashi, Japan	35.75 N	139.72 E	20	9.34	11.61	I, T, N*
TOM	CO92	Tokyo-Mabashi, Japan	35.66 N	139.75 E		9.34	11.61	T
	C 098	Toledo, Spain	39.90 N	4.05 w		5.09		T, N
		Torino, Italy	45.05 N	7.75 E	240		4.94	U
	E 603	Trivandrum, India	8.49 N	76.95 E		17.48		T
	A 047	Tromsö, Norway	69.66 N	18.95 E		0.36 (0.389)		T

Table AI (continued)

Code	No. IGY	Station	Geographic latitude	Geographic longitude	Height above sea level, m	Vertical cutoff rigidity, GV [1] approximate computation	Vertical cutoff rigidity, GV [1] trajectory computation	Equipment [2]
UPP	B 001	Uppsala, Sweden	59.85 N	17.58 E	0	1.17 (1.35)	1.43 (1.42)	T, N
USH	c 998	Ushuaia, Argentina	54.80 S	68.32 W	0	5.89 (6.6)	5.68	T, N
		Utrecht, the Netherlands	52.10 N	5.12 E			2.76	N*, T
VIC		Victoria, Canada	48.42 N	123.32 W	71		1.86 (1.85)	N*
VOS		Vostok, Antarctica	78.47 S	106.80 E	3488		0.00	T, N
	B 313	Washington D.C., USA	38.91 N	77.07 W		1.98		T, N, B, S
WEI	B 188	Weissenau, Germany	47.80 N	9.50 E	427	3.22 (4.01)	4.16	T, N, I
WEL	B 973	Wellington, New Zealand	41.28 S	174.77 E	125	3.20 (3.19)	3.42	T, N, S
WHI		White Mountains, USA	37.58 S	118.25 W	3800		4.40	T, N
	C 233	White Sands, USA	32.40 N	106.86 W	1500	4.78		T, N, B
WIL	A972	Wilkes. Antarctica	66.25 S	110.52 E	0	0.06	0.01	N, T
YAK	A 124	Yakutsk, USSR	62.01 N	129.72 E	105	1.19 (1.38)	1.70 (1.64)	T. N, I, N*
ZUG	B 327	Zugspitze, Germany	47.42 N	10.98 E	2960	3.33 (4.52)	4.24	T, N

[1] Sources of numbers for vertical cutoff ridigity

approximate computations	not in parentheses	Quenby and Webber
	in parentheses	Quenby and Wenk
trajectory computations	not in parentheses	McCracken et al. based on field development
	in parentheses	based on field development, Jensen and Cain

[2] Equipment: I – ionization chamber; T -counter telescope; N – neutron monitor; S – extensive atmospheric showers; U – counter telescope underground; B – measures on balloons. airplanes and rockets; N* – neutron supermonitor.

ตารางแนบท้ายที่ II

Table A2

Cutoff rigidities for vertical incidence

Geog. lat.	Geographical longitude (East)								
	10	20	30	40	50	60	70	80	90
85	0.0 1	0.02	0.02	0.02	0.03	0.03	0.03	0.01	0.04
80	0.04	0.06	0.07	0.08	0.09	0.09	0.10	0.11	0.11
75	0.13	0.16	0.18	0.20	0.22	0.24	0.25	0.26	0.27
70	0.32	0.37	0.42	0.46	0.48	0.5 1	0.52	0.54	0.55
65	0.67	0.76	0.83	0.89	0.95	0.98	1.02	1.05	1.10
60	1.25	1.40	1.50	1.57	1.65	1.70	1.75	1.85	1.95
55	2.22	2.42	2.51	2.68	2.75	2.82	2.85	2.87	2.90
so	3.50	3.18	3.90	3.95	4.00	4.05	4.25	4.45	4.65
45	5.00	5.20	5.35	5.40	5.45	5.55	5.65	5.80	6.00
40	6.95	7.15	7.37	7.52	7.80	8 25	8.57	8.90	9.15
35	9.47	9.65	9.98	10.43	10.87	11.33	Il.72	12.07	12.35
30	I 1.45	11.70	12.05	12.47	13.02	13.55	13.85	14.25	14.45
25	13.10	13.60	14.05	14.40	14.72	14.95	15.30	15.65	IS.95
20	14.20	14.60	14.95	15.30	15.65	16.05	16.40	16.75	16.95
15	J4.86	15.20	15.51	15.85	16.21	16.63	17.02	17.31	I7 51
10	14.98	IS.31	15.65	16.00	16.39	16.81	17.20	17.50	17.73
5	14.77	15.64	15.40	15.78	16 20	16.64	17.03	17.32	17 53
0	14.20	14.50	14.75	15.15	IS.45	15.90	16.35	16.70	17.00
5	13.50	13.70	13.96	14.25	14 60	15 00	15.45	15.85	16.07
-10	12.42	12.60	12.85	13.20	13.55	13.95	14.30	14.55	14.75
-15	I I.00	11.25	11.60	1 1.95	12.22	12.42	12.60	12.80	13.00
-20	0.50	9.65	IO.05	10.40	10.67	10.80	10.60	10.37	10.22
-25	7.57	7.62	7.85	8.15	8.35	8.05	7.52	7.25	7.10
-30	6.20	6.15	6.12	6.00	5.80	5.67	5.45	5.25	5.10
-35	5.00	4.70	4.55	4.45	4.35	4.25	4.07	3.87	3.67
-40	4.02	3.72	3.50	3.30	3.15	2.95	2.75	2.50	2.30
-45	3.37	2.97	2.70	2.47	2.25	2.20	1.80	1.60	I.45
-50	2.80	2.40	2.10	1.80	1.50	1.30	1.10	0.89	0.73
-55	2.25	1.85	1.55	1.30	1.04	0.85	0.66	0.50	0.37
-60	1.70	1.40	1.15	0.87	0.68	0.52	0.38	0.26	0.17
-65	1.20	0.95	0.74	0.57	0.43	0.31	0.20	0.13	0.07
-70	0.80	0.64	0.49	0.37	0.26	0.18	0.1 I	0.06	0.03
-75	0.52	0.41	0.31	0.23	0.16	0.11	0.05	0.03	0.02
-80	0.31	0.25	0.20	0.16	0.12	0.06	0.03	0.02	0.01
-85	0.18	0.16	0.13	0.11	0.05	0.03	0.01	0.00	0.00

Table AZ (continued)

Geog. lat.	Geographical longitude (East)								
	100	110	120	130	140	150	160	170	180
85	0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.02	0.02
80	0.11	0.11	0.11	0.11	0.11	0.10	0.09	0.08	0.07
75	0.27	0.28	0.28	0.29	0.28	0.28	0.26	0.23	0.20
70	0.57	0.58	0.60	0.61	0.62	0.61	0.59	0.55	0.49
65	1.12	1.15	1.17	1.20	1.22	1.20	1.17	1.10	0.99
60	2.00	2.05	2.10	2.15	2.22	2.25	2.22	2.17	1.95
55	2.95	3.05	3.20	3.28	3.33	3.30	3.27	3.10	2.95
50	4.80	4.90	4.95	5.00	5.05	4.85	4.80	4.67	4.45
45	6.22	6.38	6.55	6.77	6.95	7.05	6.85	6.55	6.10
40	9.32	9.45	9.55	9.7s	9.95	9.85	9.25	8.62	7.95
35	12.55	12.65	12.65	12.35	11.95	11.50	11.00	10.40	9.75
30	14.55	14.45	14.35	14.20	13.95	13.55	13.15	12.65	11.85
25	15.98	15.85	15.55	15.27	14.90	14.55	14.15	13.72	13.25
20	16.95	16.70	16.45	16.10	15.75	15.35	14.95	14.55	14.15
15	17.50	17.28	16.99	16.58	16.18	15.85	15.50	15.15	14.80
10	17.66	16.51	17.23	16.86	16.52	16.20	IS.91	15.64	15.37
5	17.53	17.40	17.19	16.90	16.61	16.32	16.10	15.88	15.61
0	17.15	17.00	16.81	16.61	16.40	16.16	16.02	15.90	15.77
-5	16.20	16.20	16.15	16.05	15.95	15.85	15.75	15.65	15.56
-10	14.90	15.00	15.05	15.03	14.97	14.95	14.97	15.03	15.05
-15	13.22	13.40	13.55	13.60	13.65	13.75	13.90	14.02	14.14
-20	10.30	10.70	11.15	11.10	11.05	11.05	11.50	12.15	12.85
-25	7.10	7.18	7.45	7.80	8.20	8.70	9.45	10.30	10.95
-30	5.00	4.90	4.95	5.20	5.55	5.90	6.45	7.20	8.05
-35	3.50	3.35	3.25	3.40	3.72	4.10	4.55	5.20	5.95
-40	2.15	2.10	2.20	2.32	2.50	2.70	3.10	3.60	4.05
-45	1.30	1.25	1.30	1.37	1.50	1.70	1.95	2.27	2.75
-50	0.61	0.55	0.54	0.58	0.67	0.81	1.05	1.35	1.75
-55	0.28	0.24	0.22	0.24	0.28	0.37	0.50	0.68	0.92
-60	0.11	0.08	0.07	0.07	0.09	0.14	0.21	0.32	0.48
-65	0.04	0.02	0.01	0.01	0.02	0.04	0.07	0.13	0.22
-70	0.02	0.01	0.01	0.00	0.00	0.01	0.02	0.05	0.10
-75	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.0s
-80	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.04
-85	0.00	0.00	0.00	0.00	0.00	0.0 1	0.01	0.02	0.03

Table A2 (continued)

Geog. lat.	Geographical longitude (West)								
	-170	-160	-150	-140	-130	-120	-110	-100	-90
85	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
80	0.0s	004	0.03	0.02	0.01	0.00	0.00	0.00	0.00
15	0.16	0.13	0.09	0.06	0.03	0.92	0.0t	0.01	0.00
70	0.4 1	0.32	0.24	0.17	0.10	0.06	0.03	0.02	0.01
55	0.85	0.70	0.54	0.39	0.27	0.17	0.10	0.06	0.04
60	1.62	1.35	1.05	0.79	0.58	0.40	0.27	0.18	0.14
55	2.55	2.12	1.72	1.37	I.09	0.80	0.58	0.43	0 . 3 4
50	4.12	3.52	2.85	2.35	1.90	1.45	1.10	0.85	0.69
45	5.50	4.87	4.25	3.68	3.08	2.55	2.02	I.65	1.37
40	7.20	6.40	5.45	4.80	4.22	3.65	3.10	2.62	2.20
35	9.32	8.77	8.15	7.20	6.22	5.35	4.65	3.9s	3.35
30	11.15	10.67	IO.15	9.45	8.42	7.25	6.35	5.40	4.70
25	12.87	12.52	12.15	Il.65	10.95	10.15	9.00	7.60	6 %
20	13.85	13.55	13.25	12.85	12.40	11.85	10.95	9.30	8.05
15	14.55	14.30	14.05	13.75	13.35	12.90	12.20	Il.25	9.95
I0	IS.10	14.85	14.65	14.40	14.10	13 75	13.25	12.60	11.80
5	IS.46	IS 27	15.07	14.83	14.55	14.25	13.95	13.45	12.90
0	I5.60	15.41	IS.21	15.01	14.80	14.60	14.30	13.97	13.61
-5	15.45	IS.32	IS.17	15.00	14.82	14.64	14.40	14.15	13.85
10	15.00	14.90	14 85	14.70	14.60	14.50	14.33	14.11	13.85
15	14.25	14 35	14 40	14.35	14.30	14.20	14.05	13.90	13.70
-20	13 IS	13.35	13.55	13.67	13.70	13.68	13.60	13.50	13.35
-25	I1.25	I1.62	12.05	12.55	12.95	13.05	13.07	13.05	12.95
-30	8 50	9.00	9.55	IO.10	11.30	12.15	12.37	12.37	12.35
-35	6.45	7.10	8.00	8.55	9.25	10.27	Il.15	11.55	11.65
-40	4.55	5.20	5.75	6.48	7.35	8.35	9.20	10.15	10.75
-45	3.15	3.60	4.13	4.65	5.25	5.95	7.05	8.15	9.25
-50	2.07	2.50	2.95	3.45	3.95	4.45	5.25	6.30	7.15
-55	1.20	1.55	I.90	2.30	2.80	3.35	3.90	4.55	5.15
-60	0.67	0.91	1.25	1.60	2.05	2.45	3.00	3.50	3.9s
-65	0.35	0.51	0.70	0.93	1.20	I.49	1.90	2.25	2.60
-70	0.17	0.27	0.40	0.55	0.73	0.93	1.12	1.35	1.57
-75	0.09	0.14	0.22	0.31	0.42	0.54	0.67	0.80	0.92
-80	0.06	0.09	0.13	0.18	0.24	0.30	0.36	0.43	0.49
-85	0.04	0.05	0.08	0.10	0.12	0.14	0.17	0.20	0.22

Table A2 (continued)

Geog lat.	Geographical longitude (West)								
	-80	-16	-60	-50	-40	-30	-20	-10	00
85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
80	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.03
75	0.00	0.00	0.01	0.01	0.02	0.03	0.05	0.08	0.10
70	0.00	0.01	0.02	0.03	0.06	0.10	0.15	0.20	0.26
65	0.04	0.04	0.06	0.10	0.16	0.25	0.35	0.46	057
60	0.12	0.14	0.18	0.26	0.38	053	0.75	0.95	1.13
55	0.30	0.32	0.40	0.54	0.74	1.01	1.32	1.67	2.00
50	0.62	0.64	0.76	1.00	1.40	1.85	2.25	2.65	3.05
45	1.13	1.15	1.40	1.80	2.35	3.05	3.70	4.25	4.70
40	1.92	1.95	2.25	2.65	3.32	4.25	5.15	5.90	6.55
35	2.90	2.85	3.10	3.70	4.15	6.45	7.40	8.95	9.3s
30	4.15	3.97	4.20	4.95	6.90	8.92	10.37	10.75	11.10
25	5.35	5.25	5.85	7.35	9.45	1135	11.82	12.25	12.65
20	7.02	6.90	7.47	9.10	11.22	12.45	13.05	13.45	13.85
15	8.55	8.25	9.75	11.70	12.45	13.15	13.65	14.10	14.50
10	Il.05	10.95	11.65	12.45	13.10	13.64	14.00	14.32	14.64
5	12.40	12.30	12.69	13.10	13.47	13.19	14.00	14.24	14.48
0	13.29	13.10	13.14	13.35	13.54	13.70	13.79	13.92	14.00
-5	13.57	13.39	13.31	13.36	13.40	13.42	13.36	13.35	13.40
-10	13.59	13.39	13.23	13.18	13.09	12.95	12.75	12.50	12.35
-15	13.38	13.20	13.00	12.80	12.60	12.35	11.95	11.45	11.05
-20	13.07	12.85	12.65	12.35	12.05	11.62	11.05	10.15	9.60
-25	12.70	12.45	12.10	11.70	11.20	10.55	9.70	8.85	7.95
-30	12.18	11.88	11.45	10.85	10.05	9.18	8.15	7.32	6.67
-35	11.50	11.20	11.65	10.05	9.20	8.25	7.30	6.37	5.60
-40	10.70	10.20	9.75	9.12	8.30	7.45	6.45	5.40	4.45
-45	9.35	8.97	8.45	7.80	7.05	6.13	5.25	4.55	3.85
-50	8.20	8.20	7.85	6.70	5.85	5.05	4.35	3.70	3.20
-55	5.52	5.60	5.45	5.10	4.61	4.15	3.65	3.10	2.60
-60	4.25	4.35	4.25	3.97	3.60	3.22	2.80	2.45	2.10
-65	2.83	2.95	3.00	2.90	2.70	2.42	2.15	1.88	1.55
-70	1.75	1.87	1.90	1.87	1.77	1.58	1.37	1.15	0.95
-75	1.01	1.08	1.11	1.10	1.05	0.97	0.87	0.75	0.63
-80	0.54	0.57	0.59	058	0.57	0.53	0.48	0.43	0.37
-85	0.24	0.25	0.26	0.26	0.26	0.25	0.24	0.22	0.20