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LATITUDE OBSERVATIONS RESULTS BY A ZENITH STARS PROGRAM

by

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1 - Individual values of latitudes observed with the transit instrument Bamberg 6000 in the period July 1965 - June 1966 are given in table I.

These results are the continuation of the latitude observations carried out from 1960 and previously issued ([1]).

However, these last individual values of latitude have been reported without any declination correction, while, on the contrary, the values published here have been corrected utilising the declination correction calculated on the ground of same latitude observations by methods described in ([2]).

To convert the individual values of the latitudes observed in the period August 1961 - June 1965 in the declination system utilised in the reduction of the latitudes reported in table 1 it is necessary to add the declination correction $\bar{\Delta}\delta_i$ given below to the values published in ([1]).

i (star number)	$\bar{\Delta}\delta_i$	i (star number)	$\bar{\Delta}\delta_i$	i (star number)	$\bar{\Delta}\delta_i$
	"		"		"
1	- 2.527	24	- 0.183	48	- 0.058
2	+ 0.206	25	- 1.234	49	+ 0.027
3	- 0.462	26	+ 1.149	50	+ 0.691
4	- 0.423	27	- 0.380	51	+ 0.985
5	- 0.391	28	- 0.138	52	+ 0.348
5a	- 0.938	29	- 0.302	53	+ 0.463
6	+ 0.833	30	+ 0.234	54	+ 0.114
7	- 0.166	31	- 0.387	55	+ 0.365
8	- 1.810	32	- 0.750	56	+ 0.284
9	+ 2.047	33	- 0.145	57	+ 0.234
10	- 0.365	34	+ 1.029	58	- 0.088
11	+ 1.077	35	+ 0.383	59	- 0.017
12	+ 0.211	36	+ 1.763	60	- 0.233
13	- 0.577	37	+ 0.067	61	- 0.479
14	- 1.159	38	+ 0.814	62	+ 0.032
15	- 0.978	39	+ 0.101	63	- 0.006
16	- 0.612	40	- 0.138	64	+ 0.054
17	+ 0.960	41	- 0.566	65	+ 0.455
18	+ 0.369	42	- 0.189	66	- 0.838
19	+ 0.088	43	+ 0.452	67	+ 1.319
20	- 1.116	44	+ 0.191	68	+ 1.229
21	- 0.244	45	+ 0.647	69	- 0.256
22	+ 0.092	46	+ 1.357	70	- 0.106
23	+ 0.081	47	- 1.241	71	+ 1.607

The method of reduction and the utilised micrometer constants were the same adopted previonsly.

The atmospheric condition usualy observed during the latitude observations are pointed out in table 2.

The following quantities are showed in this Table:

T_e	Exterior temperature (°C)
T_n, T_s	Interior temperature (°C), North and South sides respectively
T	Temperature of telescope tube (°C)
Dir	Wind direction
Vel	Wind velocity (kilometers per hour)
Hum	Relative umidity.

Bibliography

(^{1}) - Proverbio E., Astron. Obser. of Milan Circ. N. 18, 1966

(^{2}) - Proverbio E., Mem. S.A. It., Vol. XXXVII, (4), 1966.

T A B L E 1

1965			VII							
			33	34	35	36	37	38	39	40
JUL	05	45°27'	58.30	59.59	59.77	59.21	59.85	59.02	58.85	58.69
	06		58.54	59.69	59.63	58.99	59.29	58.91	59.30	59.34
	08			59.42	59.56	59.12	60.26	59.32	59.32	59.48
	12		59.30	60.11	59.68	59.81	59.32	58.90	59.30	58.64
	13		58.30	59.93	59.44	59.39	59.15	59.66	59.10	59.10
	14			60.06	59.70	59.59	60.02	59.00	59.10	59.81
	19			60.17	59.91	60.17	59.47	58.94	59.35	59.57
	21						59.37	59.38	59.15	59.58

			VIII					
			41	42	43	44	45	46
JUL	12	45°27'	59.01	59.41	59.67	60.07	59.66	60.27
	13			59.83	59.64	60.13	59.68	60.08
	19		58.63	59.84	59.47	60.29		
	21		58.54	59.31	59.52	60.17	59.36	60.39

			VII					VIII			
			36	37	38	39	40	42	43	44	45
AUG	01	45°27'	59.24	60.16							
	02			59.60	58.75	60.04	58.76	60.00	59.77	60.15	60.20
	03				59.38	59.32	59.50	59.52	59.52	60.35	59.77

T A B L E 1

1965			VIII						IX	
			41	42	43	44	46	47	48	49
SEP	06	45°27'	59.98	59.08	59.30	60.23	60.32			
	08							58.71	58.60	60.18
	16							59.65	58.36	59.87
	17							59.44		
	20								58.28	60.24
	22								58.29	60.24
	23								58.51	59.64

			IX							
			50	51	52	53	54	55	56	57
SEP	06	45°27'	59.88		59.87					
	07		60.16	59.90	59.54	59.89	60.02	59.74		
	08		59.48	59.23	59.67			59.63		
	13		59.89	59.66	59.63	59.77	60.14	59.00	59.54	58.64
	15			60.53	60.05	59.68	58.95	59.44	59.26	59.17
	16		59.67	60.44	59.98	59.74	59.02	59.54	59.67	
	20		60.02					59.51		
	21		59.83	59.98	59.71					58.16
	22		60.08	60.04	59.74	59.72	60.27	58.86	59.42	57.82
	23		59.64	60.24	60.11	60.01	59.76	59.48		58.18
	27									58.23

T A B L E 1

1965			IX			X			
			58	59	60	61	62	63	64
SEP	07	45°27'	59.52						
	13		60.06	59.63	59.42	60.76	57.80	59.25	
	15		59.82	59.84	59.37	60.57	58.66	59.83	59.90
	20			59.28	59.54				
	21			59.53	60.04				
	22		59.86	60.11	59.37	59.98	58.03	59.96	
	23		59.79	60.03	59.58	59.87			
	27			60.31	59.70				

			IX	X					
			60	70	71				
OCT	01	45°27'	59.70	59.04	60.11				
	25			58.94	59.96				
	26			58.78	60.55				

			X						I
			66	67	68	69	70	71	1
NOV	15	45°27'				59.76	59.62		
	30		~~60.62~~ 59.55	61.24	60.66	60.00	59.92	60.28	
	31							59.96	60.39
	33								60.45

T A B L E 1

1965			I					
			2	3	4	5	5a	6
NOV	15	45°27'	58.81	59.80	59.39			
	30		59.37	60.25	59.59			58.67
	31		58.83	59.92	59.33	59.01		58.71
	33		59.37	59.51	58.91	59.93	58.71	58.87

			I					
			2	3	4	5	5a	6
DEC	09	45°27'		60.68	59.73	59.79	58.74	58.92
	10		58.77	60.86	59.63			59.62
	14		58.07	59.62	59.94	59.69	58.69	58.92

1966			II							
			7	8	9	10				
JAN	02	45°27'	59.81	59.29	59.51	60.09				
	19		59.65	58.94	59.01	60.09				
	~~33~~		~~59.04~~	~~59.11~~						

			III							
			11	12	13	14	15	16	7	8
	07								59.04	59.11
FEB	29	45°27	59.66	59.66	59.73					
	30			60.05	59.60		59.24	58.55		
	31		59.64	59.79	59.87	59.93	58.90	59.05		

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T A B L E 1

1966			III				
			11	12	13	14	15
MAR	10	45°27'	60.03	59.09	59.92		59.31
	16						59.65
	17		60.30	59.94	59.30	59.99	59.09

			III	IV			
			16	17	18	19	20
MAR	10	45°27'	59.12				
	16		59.00	59.34	59.27	59.95	60.69
	17		58.97	58.90	59.59	~~60.04~~ 59.94	60.20
	23			59.66	58.76	60.46	59.73
	24			59.40	58.93	59.62	60.43
	32				58.80	~~60.27~~ 59.79	

			IV					
			17	18	19	20	21	22
APR	06	45°27'	60.00	59.10	59.70	59.03		59.61
	14				60.16	60.08	58.92	60.41

			V					
			23	24	25	26	27	28
APR	06	45°27'	59.43					
	14		58.67	59.30		58.78	59.84	59.41
	28					59.12	59.86	59.96

TABLE 1

1966			V						
			23	24	25				
APR	29	45°27'	59.71	58.76	58.25				
			V						
			23	24	25	26	27	28	
MAY	04	45°27'	~~49.08~~	58.76	57.29	59.29	60.19	60.22	59.59
			VI						
			29	30	31	32			
MAY	18	45°27'		60.64	59.68				
	26		59.58	60.23	59.42	58.80			
	27		59.98	60.21	59.44				
	30		59.12	60.46	59.60				
	31			60.14	60.14				
			VII						
			33	34	35	36	37		
JUN	29	45°27'	59.36	60.13	59.95	59.88	59.72		
	30			60.23	60.37				
	31			60.37	60.11				
	33		59.35	59.63	59.65	59.76	59.80		

T A B L E 2

Date	T_e	T_n	T_s	T	Dir	Vel	Hum
1965							
JULY 5	+ 18.70	+ 17.60	+ 18.23		ESE	18.0	71
6	+ 19.50	+ 20.85	+ 21.15		SSE	6.0	59
8	+ 21.00	+ 21.78	+ 21.58		NNW	10.0	59
9	+ 22.10				NW	5.5	50
12	+ 23.30	+ 24.70	+ 24.97		WSW	9.5	50
13	+ 23.60	+ 26.20	+ 26.27		WSW	5.0	60
14	+ 25.50	+ 27.30	+ 27.27	+ 27.5	WSW	8.5	50
19	+ 23.10				WSW	7.0	65
21	+ 22.10	+ 23.25	+ 23.18	+ 23.5	WNW	7.0	58
23	+ 23.20				WSW	6.0	61
26	+ 18.80	+ 21.60	+ 21.20		SE	7.0	72
27	+ 20.6				SSE	4.5	67
SEP 6	+ 16.70				WNW	6.0	80
7	+ 17.30	+ 20.20	+ 20.20		W	3.0	78
8	+ 18.20				Var	4.0	83
13	+ 15.70	+ 18.80	+ 18.82		W	5.0	79
15	+ 17.00				NNW	4.5	83
16	+ 18.00				N	0.0	81
17	+ 18.40	+ 20.18	+ 20.48		SSE	3.0	79
20	+ 15.40	+ 17.19	+ 17.44		Var	2.5	73
21	+ 15.90	+ 17.40	+ 17.50		ESE	4.0	70
22	+ 16.20			+ 17.8	SE	4.0	78
23	+ 16.40	+ 18.40	+ 18.40	+ 18.7	ESE	4.5	78
27	+ 15.10				ESE	15.0	87
OCT 25	+ 8.30				N	3.0	78
26	+ 10.00	+ 12.22	+ 12.55		NE	6.5	70
NOV 15	+ 5.20	+ 5.40	+ 5.40		NW	4.0	74
30	+ 4.50	+ 5.30	+ 5.00		NW	9.0	35

T A B L E 2

Date	T_e	T_n	T_s	T	Dir	Vel	Hum
1965							
DEC 1	+ 3.80	+ 3.60	+ 3.56	+ 3.5	NNW	9.0	52
3	+ 3.60	+ 3.10	+ 3.28		NE	6.0	64
9	+ 5.40	+ 4.80	+ 5.18	+ 4.7	ESE	8.0	67
10	+ 8.70	+ 8.40	+ 8.55	+ 8.7	NNW	9.5	75
1966							
JAN 13	+ 1.10	+ 0.25	+ 0.20	- 0.3	WSW	8.0	63
19	- 1.50				NW	6.0	80
FEB 7	+ 8.1				Var	4.0	85
MAR 1	+ 14.7			+ 10.7	NNE	14.0	27
2	+ 12.6				SSW	6.5	41
3	+ 11.5	+ 9.38	+ 9.10		NW	6.5	41
10	+ 15.5	+ 14.10	+ 14.30	+ 14.6	ESE	11.0	54
16	+ 10.2	+ 10.00	+ 10.20	+ 10.0	ESE	12.0	29
17	+ 10.1	+ 10.70	+ 10.80	+ 10.5	SSW	4.5	46
23	+ 12.6				SSE	3.0	67
APR 1	+ 12.7				NW	6.0	63
6		+ 14.80	+ 14.70	+ 15.0			
14	+ 16.7			+ 15.0	WSW	11.0	67
28	+ 18.8	+ 20.58	+ 20.60	+ 21.0	NE	6.5	55
MAY 4	+ 21.8				WSW	11.5	48
18	+ 21.2				ESE	10.0	63
26	+ 19.5				WNW	10.0	64
27	+ 19.2	+ 19.40	+ 19.22	+ 19.4	NNE	12.5	24
30	+ 16.9	+ 19.18	+ 19.21		SW	3.5	58
JUN 1	+ 18.7	+ 18.60	+ 18.50		SSE	9.0	54
30	+ 20.1				Var	5.0	58