

Motion of the observer

Time - minutes

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
1														
	+ -													
K	0/180 0	0	0	0	.1	.1	.1	.1	.1	.1	.2	.3	.5	1.0
N	20/160 0	0	0	0	.1	.1	.1	.1	.1	.1	.2	.3	.5	.9
O	40/140 0	0	0	0	.1	.1	.1	.1	.1	.1	.1	.3	.4	.8
T	60/120 0	0	0	0	0	0	.1	.1	.1	.1	.1	.2	.3	.5
	80/100 0	0	0	0	0	0	0	0	.1	.1	.1	.1	.1	.2
	90/270 0	for ZN~TR of 90 and 270 the correction is always zero for all speeds												0

2														
	+ -													
K	0/180 0	0	.1	.1	.1	.2	.2	.2	.3	.3	.3	.7	1.0	2.0
N	20/160 0	0	.1	.1	.1	.2	.2	.2	.3	.3	.3	.6	.9	1.9
O	40/140 0	0	.1	.1	.1	.1	.2	.2	.2	.2	.3	.5	.8	1.5
T	60/120 0	0	0	.1	.1	.1	.1	.1	.1	.2	.2	.3	.5	1.0
S	80/100 0	0	0	0	0	0	0	0	0	.1	.1	.1	.2	.3

3														
	+ -													
K	0/180 0	0	.1	.2	.2	.3	.3	.4	.4	.5	.5	1.0	1.5	3.0
N	20/160 0	0	.1	.1	.2	.2	.3	.3	.4	.4	.5	.9	1.4	2.8
O	40/140 0	0	.1	.1	.2	.2	.2	.3	.3	.3	.4	.8	1.1	2.3
T	60/120 0	0	.1	.1	.1	.1	.2	.2	.2	.2	.3	.5	.8	1.5
S	80/100 0	0	0	0	0	0	.1	.1	.1	.1	.1	.2	.3	.5

4														
	+ -													
K	0/180 0	.1	.1	.2	.3	.3	.4	.5	.5	.6	.7	1.3	2.0	4.0
N	20/160 0	.1	.1	.2	.3	.3	.4	.4	.5	.6	.6	1.3	1.9	3.8
O	40/140 0	.1	.1	.2	.2	.3	.3	.4	.4	.5	.5	1.0	1.5	3.1
T	60/120 0	0	.1	.1	.1	.2	.2	.2	.3	.3	.3	.7	1.0	2.0
S	80/100 0	0	0	0	0	.1	.1	.1	.1	.1	.1	.2	.3	.7

5														
	+ -													
K	0/180 0	.1	.2	.3	.3	.4	.5	.6	.7	.8	.8	1.7	2.5	5.0
N	20/160 0	.1	.2	.2	.3	.4	.5	.5	.6	.7	.8	1.6	2.3	4.7
O	40/140 0	.1	.1	.2	.3	.3	.4	.4	.5	.6	.6	1.3	1.9	3.8
T	60/120 0	0	.1	.1	.2	.2	.3	.3	.3	.4	.4	.8	1.3	2.5
S	80/100 0	0	0	0	.1	.1	.1	.1	.1	.1	.1	.3	.4	.9

Time - minutes

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
6														
	+ -													
K	0/180 0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	2.0	3.0	6.0
N	20/160 0	.1	.2	.3	.4	.5	.6	.7	.8	.8	.9	1.9	2.8	5.6
O	40/140 0	.1	.2	.2	.3	.4	.5	.5	.6	.7	.8	1.5	2.3	4.6
T	60/120 0	0	.1	.1	.2	.2	.3	.3	.4	.4	.5	1.0	1.5	3.0
S	80/100 0	0	0	.1	.1	.1	.1	.1	.1	.2	.2	.3	.5	1.0

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
7														
	+ -													
K	0/180 0	.1	.2	.4	.5	.6	.7	.8	.9	1.1	1.2	2.3	3.5	7.0
N	20/160 0	.1	.2	.3	.4	.5	.7	.8	.9	1.0	1.1	2.2	3.3	6.6
O	40/140 0	.1	.2	.3	.4	.4	.5	.6	.7	.8	.9	1.8	2.7	5.4
T	60/120 0	.1	.1	.2	.2	.3	.4	.4	.5	.5	.6	1.2	1.8	3.5
S	80/100 0	0	0	.1	.1	.1	.1	.1	.2	.2	.2	.4	.6	1.2

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
8														
	+ -													
K	0/180 0	.1	.3	.4	.5	.7	.8	.9	1.1	1.2	1.3	2.7	4.0	8.0
N	20/160 0	.1	.3	.4	.5	.6	.8	.9	1.0	1.1	1.3	2.5	3.8	7.5
O	40/140 0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	2.0	3.1	6.1
T	60/120 0	.1	.1	.2	.3	.3	.4	.5	.5	.6	.7	1.3	2.0	4.0
S	80/100 0	0	0	.1	.1	.1	.1	.2	.2	.2	.2	.5	.7	1.4

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
9														
	+ -													
K	0/180 0	.2	.3	.5	.6	.8	.9	1.1	1.2	1.4	1.5	3.0	4.5	9.0
N	20/160 0	.1	.3	.4	.6	.7	.8	1.0	1.1	1.3	1.4	2.8	4.2	8.5
O	40/140 0	.1	.2	.3	.5	.6	.7	.8	.9	1.0	1.1	2.3	3.4	6.9
T	60/120 0	.1	.2	.2	.3	.4	.5	.5	.6	.7	.8	1.5	2.3	4.5
S	80/100 0	0	.1	.1	.1	.1	.2	.2	.2	.2	.3	.5	.8	1.6

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60
10														
	+ -													
K	0/180 .1	.2	.3	.5	.7	.8	1.0	1.2	1.3	1.5	1.7	3.3	5.0	10.0
N	20/160 .1	.2	.3	.5	.6	.8	.9	1.1	1.3	1.4	1.6	3.1	4.7	9.4
O	40/140 .1	.1	.3	.4	.5	.7	.8	.9	1.0	1.1	1.3	2.6	3.8	7.7
T	60/120 0	.1	.2	.3	.3	.4	.5	.6	.7	.7	.8	1.7	2.5	5.0
S	80/100 0	0	.1	.1	.1	.1	.2	.2	.2	.3	.3	.6	.9	1.7

Time - minutes

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
11															
	+ -														
K	0/180	.1	.2	.4	.6	.7	.9	1.1	1.3	1.5	1.7	1.8	3.7	5.5	11.0
N	20/160	.1	.2	.3	.5	.7	.9	1.0	1.2	1/4	1.6	1.7	3.4	5.2	10.3
O	40/140	.1	.1	.3	.4	.6	.7	.8	1.0	1.1	1.3	1.4	2.8	4.2	8.4
T	60/120	0	.1	.2	.3	.4	.5	.6	.6	.7	.8	.9	1.8	2.7	5.5
S	80/100	0	0	.1	.1	.1	.2	.2	.2	.3	.3	.3	.6	1.0	1.9

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
12															
	+ -														
K	0/180	.1	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	4.0	6.0	12.0
N	20/160	.1	.2	.4	.6	.8	.9	1.1	1.3	1.5	1.7	1.9	3.8	5.6	11.3
O	40/140	.1	.2	.3	.5	.6	.8	.9	1.1	1.2	1.4	1.5	3.1	4.6	9.2
T	60/120	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	1.0	2.0	3.0	6.0
S	80/100	0	0	.1	.1	.1	.2	.2	.2	.3	.3	.3	.7	1.0	2.1

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
13															
	+ -														
K	0/180	.1	.2	.4	.6	.9	1.1	1.3	1.5	1.7	1.9	2.2	4.3	6.5	13.0
N	20/160	.1	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	4.1	6.1	12.2
O	40/140	.1	.2	.3	.5	.7	.8	1.0	1.2	1.3	1.5	1.7	3.3	5.0	10.0
T	60/120	.1	.1	.2	.3	.4	.5	.6	.8	.9	1.0	1.1	2.2	3.2	6.5
S	80/100	0	0	.1	.1	.2	.2	.2	.3	.3	.3	.4	.8	1.1	2.2

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
14															
	+ -														
K	0/180	.1	.2	.5	.7	.9	1.2	1.4	1.6	1.9	2.1	2.3	4.7	7.0	14.0
N	20/160	.1	.2	.4	.7	.9	1.1	1.3	1.5	1.6	2.0	2.2	4.4	6.6	13.1
O	40/140	.1	.2	.4	.5	.7	.9	1.1	1.3	1.4	1.6	1.8	3.6	5.4	10.7
T	60/120	.1	.1	.2	.3	.5	.6	.7	.8	.9	1.0	1.2	2.3	3.5	7.0
S	80/100	0	0	.1	.1	.2	.2	.2	.3	.3	.4	.4	.8	1.2	2.4

	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
15															
	+ -														
K	0/180	.1	.2	.5	.7	1.0	1.2	1.5	1.7	2.0	2.2	2.5	5.0	7.5	15.0
N	20/160	.1	.2	.5	.7	.9	1.2	1.4	1.6	1.9	2.1	2.3	4.7	7.0	14.1
O	40/140	.1	.2	.4	.6	.8	1.0	1.1	1.3	1.5	1.7	1.9	3.8	5.7	11.5
T	60/120	.1	.1	.2	.4	.4	.5	.6	.7	.9	1.1	1.2	2.5	3.7	7.5
S	80/100	0	0	.1	.1	.2	.2	.3	.3	.3	.4	.4	.9	1.3	2.6

Time - minutes

17	ZN~TR ½	1	2	3	4	5	6	7	8	9	10	20	30	60	
	+ -														
K	0/180	.1	.3	.6	.6	.9	1.4	1.7	2.0	2.3	2.6	2.8	5.7	8.5	17.0
N	20/160	.1	.3	.5	.8	1.0	1.3	1.6	1.9	2.1	2.4	2.7	5.3	8.0	16.0
O	40/140	.1	.2	.4	.7	.9	1.1	1.3	1.5	1.7	1.9	2.2	4.3	6.5	13.0
T	60/120	.1	.1	.3	.4	.6	.7	.9	1.0	1.1	1.3	1.4	2.8	4.3	8.5
S	80/100	0	0	.1	.1	.2	.2	.3	.3	.4	.4	.5	1.0	1.5	3.0

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21															
	+ -														
K	0/180	.2	.4	.7	1.0	1.4	1.8	2.1	2.5	2.8	3.2	3.5	7.0	10.5	21.0
N	20/160	.2	.3	.7	1.0	1.3	1.6	2.0	2.3	2.6	3.0	3.3	6.6	10.0	16.1
O	40/140	.1	.3	.5	.8	1.1	1.3	1.6	1.9	2.1	2.4	2.7	5.4	8.0	11.5
T	60/120	.1	.2	.4	.5	.7	.9	1.1	12.3	1.4	1.6	1.8	3.5	5.3	10.5
S	80/100	0	.1	.1	.2	.2	.3	.4	.4	.5	.5	.6	1.2	1.8	3.6

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