

Appendix II -- Table of Astronomical Alignments  
 Azimuth (Corrected Compass) Readings for Important Solar and Lunar Events  
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		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major	Minor		Major	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	Standstill	Standstill	Standstill	Standstill	
							+(e+i)	+(e-i)	-(e-i)	-(e+i)	
0	-0.33	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	0.00	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	0.33	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	0.67	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	1.00	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	2	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	3	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	4	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	
0	5	66.56	73.24	90.00	105.83	113.44	61.42	71.70	108.30	118.58	

		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major	Minor		Major	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	Standstill	Standstill	Standstill	Standstill	
							+(e+i)	+(e-i)	-(e-i)	-(e+i)	
10	-0.33	65.98	72.79	89.82	105.90	113.63	60.93	71.40	108.58	119.05	
10	0.00	66.06	72.87	89.90	105.97	113.71	61.01	71.48	108.66	119.14	
10	0.33	66.12	72.93	89.95	106.03	113.77	61.07	71.53	108.72	119.20	
10	0.67	66.22	73.02	90.04	106.12	113.87	61.17	71.62	108.81	119.30	
10	1.00	66.29	73.09	90.10	106.19	113.94	61.25	71.69	108.88	119.37	
10	2	66.50	73.29	90.30	106.39	114.15	61.47	71.90	109.09	119.60	
10	3	66.71	73.48	90.49	106.59	114.36	61.68	72.10	109.28	119.81	
10	4	66.91	73.68	90.67	106.78	114.56	61.89	72.29	109.48	120.03	
10	5	67.10	73.87	90.85	106.97	114.76	62.10	72.48	109.67	120.23	

		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major	Minor		Major	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	Standstill	Standstill	Standstill	Standstill	
							+(e+i)	+(e-i)	-(e-i)	-(e+i)	
20	-0.33	64.55	71.75	89.64	106.49	114.65	59.38	70.46	109.50	120.58	
20	0.00	64.72	71.91	89.79	106.65	114.81	59.55	70.62	109.66	120.76	
20	0.33	64.84	72.03	89.90	106.77	114.93	59.68	70.74	109.78	120.89	
20	0.67	65.04	72.21	90.08	106.95	115.13	59.89	70.93	109.97	121.10	
20	1.00	65.19	72.36	90.22	107.10	115.28	60.05	71.07	110.12	121.26	
20	2	65.63	72.78	90.62	107.52	115.73	60.51	71.50	110.54	121.73	
20	3	66.06	73.18	91.00	107.93	116.16	60.95	71.91	110.96	122.18	
20	4	66.47	73.58	91.38	108.32	116.58	61.38	72.30	111.36	122.63	
20	5	66.88	73.97	91.76	108.72	117.00	61.81	72.70	111.77	123.08	

		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major	Minor		Major	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	Standstill	Standstill	Standstill	Standstill	
							+(e+i)	+(e-i)	-(e-i)	-(e+i)	
25	-0.33	63.45	70.96	89.54	107.03	115.52	58.11	69.71	110.25	121.83	
25	0.00	63.66	71.17	89.73	107.23	115.73	58.34	69.91	110.45	122.06	
25	0.33	63.82	71.31	89.87	107.38	115.89	58.51	70.06	110.60	122.23	
25	0.67	64.08	71.56	90.10	107.62	116.15	58.78	70.31	110.85	122.50	
25	1.00	64.27	71.74	90.28	107.81	116.34	58.98	70.49	111.04	122.71	
25	2	64.84	72.28	90.79	108.35	116.92	59.58	71.04	111.59	123.32	
25	3	65.39	72.80	91.29	108.87	117.48	60.15	71.56	112.12	123.92	
25	4	65.92	73.31	91.77	109.38	118.03	60.71	72.07	112.65	124.51	
25	5	66.45	73.81	92.25	109.89	118.57	61.26	72.58	113.17	125.09	

		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major	Minor		Major	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	Standstill	Standstill	Standstill	Standstill	

Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
30	-0.33	62.01	69.94	89.42	107.75	116.70	56.44	68.71	111.23	123.50
30	0.00	62.28	70.20	89.67	108.01	116.97	56.72	68.97	111.49	123.79
30	0.33	62.47	70.38	89.84	108.19	117.16	56.93	69.16	111.67	124.00
30	0.67	62.79	70.68	90.12	108.49	117.48	57.27	69.46	111.98	124.34
30	1.00	63.04	70.92	90.34	108.72	117.73	57.53	69.70	112.22	124.61
30	2	63.75	71.59	90.98	109.39	118.45	58.28	70.37	112.91	125.38
30	3	64.44	72.23	91.59	110.04	119.15	59.00	71.02	113.57	126.14
30	4	65.10	72.87	92.19	110.69	119.84	59.70	71.66	114.23	126.89
30	5	65.75	73.49	92.79	111.32	120.53	60.38	72.28	114.88	127.63

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
32.5	-0.33	61.14	69.33	89.37	108.20	117.43	55.41	68.11	111.83	124.52
32.5	0.00	61.44	69.62	89.63	108.48	117.72	55.73	68.40	112.11	124.84
32.5	0.33	61.66	69.82	89.82	108.68	117.94	55.96	68.60	112.32	125.08
32.5	0.67	62.01	70.15	90.14	109.01	118.30	56.34	68.94	112.66	125.46
32.5	1.00	62.29	70.41	90.38	109.27	118.57	56.63	69.20	112.92	125.76
32.5	2	63.08	71.16	91.08	110.01	119.37	57.46	69.95	113.68	126.63
32.5	3	63.83	71.87	91.76	110.74	120.16	58.26	70.67	114.43	127.48
32.5	4	64.57	72.57	92.42	111.45	120.93	59.04	71.37	115.16	128.32
32.5	5	65.29	73.25	93.08	112.15	121.69	59.80	72.06	115.88	129.16

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
35	-0.33	60.15	68.65	89.30	108.71	118.26	54.23	67.43	112.50	125.69
35	0.00	60.48	68.96	89.59	109.02	118.59	54.59	67.74	112.82	126.05
35	0.33	60.72	69.18	89.80	109.24	118.83	54.84	67.97	113.05	126.31
35	0.67	61.12	69.55	90.15	109.61	119.22	55.26	68.34	113.42	126.74
35	1.00	61.42	69.84	90.42	109.89	119.53	55.59	68.63	113.71	127.08
35	2	62.30	70.66	91.19	110.71	120.42	56.52	69.45	114.56	128.05
35	3	63.13	71.44	91.93	111.51	121.29	57.41	70.24	115.38	129.00
35	4	63.95	72.21	92.66	112.30	122.15	58.27	71.02	116.19	129.94
35	5	64.75	72.97	93.38	113.08	123.00	59.11	71.78	116.99	130.89

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
37.5	-0.33	59.02	67.87	89.24	109.30	119.21	52.87	66.65	113.28	127.04
37.5	0.00	59.39	68.21	89.56	109.64	119.58	53.27	66.99	113.62	127.44
37.5	0.33	59.66	68.46	89.79	109.88	119.85	53.56	67.24	113.88	127.73
37.5	0.67	60.10	68.87	90.16	110.28	120.28	54.03	67.65	114.29	128.21
37.5	1.00	60.43	69.18	90.46	110.59	120.62	54.39	67.97	114.61	128.58
37.5	2	61.40	70.08	91.30	111.50	121.61	55.42	68.88	115.54	129.67
37.5	3	62.32	70.95	92.12	112.38	122.57	56.40	69.75	116.45	130.74
37.5	4	63.22	71.79	92.92	113.25	123.53	57.36	70.60	117.35	131.80
37.5	5	64.10	72.62	93.71	114.11	124.48	58.29	71.43	118.24	132.87

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
40	-0.33	57.73	66.99	89.16	109.97	120.31	51.31	65.76	114.15	128.59
40	0.00	58.14	67.36	89.51	110.34	120.72	51.75	66.14	114.54	129.04
40	0.33	58.44	67.64	89.77	110.61	121.01	52.07	66.42	114.82	129.37
40	0.67	58.92	68.08	90.18	111.05	121.49	52.59	66.87	115.27	129.91
40	1.00	59.30	68.43	90.50	111.39	121.87	52.99	67.21	115.63	130.32
40	2	60.37	69.42	91.42	112.39	122.96	54.14	68.21	116.65	131.55
40	3	61.39	70.37	92.32	113.36	124.03	55.24	69.17	117.66	132.75
40	4	62.38	71.29	93.19	114.31	125.10	56.29	70.10	118.65	133.95

40	5	63.35	72.20	94.06	115.26	126.16	57.32	71.02	119.63	135.16
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		Sun's Azimuths					Moon's Azimuths				
							Major			Major	
Latitude	Apparent		May 7	March 23	Nov 6		Standstill	Minor	Standstill	Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
42.5	-0.33	56.26	65.98	89.09	110.73	121.58	49.49	64.75	115.16	130.40	
42.5	0.00	56.71	66.40	89.47	111.14	122.02	49.99	65.17	115.58	130.90	
42.5	0.33	57.04	66.70	89.74	111.44	122.35	50.35	65.47	115.89	131.27	
42.5	0.67	57.58	67.19	90.20	111.92	122.89	50.93	65.97	116.39	131.87	
42.5	1.00	57.99	67.57	90.54	112.30	123.30	51.38	66.35	116.78	132.34	
42.5	2	59.17	68.66	91.55	113.39	124.52	52.66	67.44	117.92	133.72	
42.5	3	60.30	69.70	92.53	114.46	125.71	53.87	68.49	119.02	135.08	
42.5	4	61.40	70.71	93.48	115.51	126.89	55.05	69.52	120.12	136.45	
42.5	5	62.46	71.71	94.43	116.56	128.08	56.19	70.52	121.21	137.84	

		Sun's Azimuths					Moon's Azimuths				
							Major			Major	
Latitude	Apparent		May 7	March 23	Nov 6		Standstill	Minor	Standstill	Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
45	-0.33	54.55	64.84	89.00	111.61	123.04	47.36	63.59	116.31	132.51	
45	0.00	55.06	65.30	89.42	112.06	123.54	47.93	64.05	116.78	133.08	
45	0.33	55.43	65.63	89.72	112.39	123.90	48.33	64.38	117.11	133.49	
45	0.67	56.02	66.17	90.21	112.92	124.49	48.99	64.93	117.67	134.17	
45	1.00	56.48	66.59	90.59	113.33	124.95	49.49	65.35	118.10	134.71	
45	2	57.79	67.78	91.70	114.54	126.31	50.92	66.55	119.35	136.28	
45	3	59.04	68.93	92.76	115.71	127.64	52.28	67.71	120.58	137.84	
45	4	60.25	70.04	93.80	116.88	128.97	53.58	68.83	121.80	139.41	
45	5	61.43	71.13	94.84	118.04	130.31	54.85	69.92	123.01	141.02	

		Sun's Azimuths					Moon's Azimuths				
							Major			Major	
Latitude	Apparent		May 7	March 23	Nov 6		Standstill	Minor	Standstill	Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
47.5	-0.33	52.57	63.53	88.91	112.63	124.74	44.85	62.25	117.64	135.01	
47.5	0.00	53.14	64.04	89.37	113.12	125.29	45.49	62.76	118.15	135.66	
47.5	0.33	53.55	64.40	89.69	113.48	125.70	45.95	63.13	118.52	136.13	
47.5	0.67	54.21	65.00	90.23	114.07	126.36	46.69	63.73	119.14	136.91	
47.5	1.00	54.72	65.45	90.65	114.52	126.88	47.26	64.19	119.61	137.52	
47.5	2	56.18	66.77	91.85	115.85	128.40	48.87	65.52	121.01	139.33	
47.5	3	57.57	68.02	93.01	117.15	129.89	50.40	66.79	122.37	141.14	
47.5	4	58.91	69.25	94.15	118.43	131.39	51.85	68.02	123.72	142.99	
47.5	5	60.21	70.44	95.28	119.72	132.91	53.27	69.22	125.08	144.89	

		Sun's Azimuths					Moon's Azimuths				
							Major			Major	
Latitude	Apparent		May 7	March 23	Nov 6		Standstill	Minor	Standstill	Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
50	-0.33	50.24	62.01	88.81	113.80	126.74	41.82	60.70	119.18	138.01	
50	0.00	50.88	62.57	89.31	114.35	127.36	42.56	61.26	119.75	138.76	
50	0.33	51.34	62.98	89.67	114.74	127.81	43.09	61.67	120.16	139.30	
50	0.67	52.09	63.63	90.25	115.39	128.56	43.94	62.34	120.84	140.21	
50	1.00	52.66	64.14	90.71	115.89	129.14	44.59	62.85	121.37	140.93	
50	2	54.30	65.59	92.02	117.36	130.85	46.43	64.31	122.92	143.06	
50	3	55.84	66.97	93.29	118.80	132.55	48.15	65.71	124.44	145.22	
50	4	57.33	68.32	94.53	120.22	134.26	49.80	67.06	125.96	147.46	
50	5	58.77	69.63	95.77	121.65	136.00	51.38	68.39	127.49	149.81	

		Sun's Azimuths					Moon's Azimuths				
							Major			Major	
Latitude	Apparent		May 7	March 23	Nov 6		Standstill	Minor	Standstill	Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
60	-0.33	34.34	52.64	88.27	121.02	139.95	16.63	50.99	128.80	162.82	
60	0.00	35.60	53.55	89.00	121.87	141.08	18.99	51.92	129.73	165.46	
60	0.33	36.48	54.19	89.52	122.48	141.92	20.53	52.57	130.41	167.69	

60	0.67	37.89	55.24	90.37	123.50	143.33	22.84	53.64	131.54	172.72
60	1.00	38.95	56.03	91.03	124.29	144.44	24.48	54.46	132.43	#NUM!
60	2	41.90	58.31	92.94	126.64	147.87	28.74	56.77	135.07	#NUM!
60	3	44.59	60.45	94.78	128.97	151.52	32.36	58.94	137.74	#NUM!
60	4	47.10	62.50	96.60	131.33	155.57	35.59	61.02	140.49	#NUM!
60	5	49.49	64.49	98.39	133.75	160.32	38.54	63.04	143.38	#NUM!

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
-10	-0.33	66.37	73.16	90.18	106.26	114.02	60.95	71.42	108.60	119.07
-10	0.00	66.29	73.08	90.10	106.19	113.94	60.86	71.34	108.52	118.99
-10	0.33	66.23	73.03	90.05	106.13	113.88	60.80	71.28	108.47	118.93
-10	0.67	66.13	72.94	89.96	106.04	113.78	60.70	71.19	108.38	118.83
-10	1.00	66.06	72.87	89.90	105.97	113.71	60.63	71.12	108.31	118.75
-10	2	65.85	72.66	89.70	105.77	113.50	60.40	70.91	108.10	118.53
-10	3	65.64	72.47	89.51	105.57	113.29	60.19	70.72	107.90	118.32
-10	4	65.44	72.27	89.33	105.38	113.09	59.98	70.52	107.71	118.11
-10	5	65.24	72.08	89.15	105.19	112.90	59.77	70.33	107.52	117.90

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
-20	-0.33	65.36	72.51	90.36	107.25	115.45	59.42	70.50	109.54	120.62
-20	0.00	65.19	72.35	90.21	107.09	115.28	59.24	70.34	109.38	120.45
-20	0.33	65.07	72.24	90.10	106.98	115.16	59.11	70.22	109.26	120.32
-20	0.67	64.87	72.05	89.92	106.79	114.96	58.90	70.03	109.07	120.11
-20	1.00	64.72	71.91	89.78	106.65	114.81	58.74	69.88	108.93	119.95
-20	2	64.27	71.48	89.38	106.23	114.37	58.27	69.46	108.50	119.49
-20	3	63.84	71.07	89.00	105.83	113.94	57.82	69.04	108.10	119.05
-20	4	63.42	70.67	88.62	105.43	113.53	57.37	68.64	107.70	118.62
-20	5	63.00	70.28	88.24	105.05	113.12	56.92	68.23	107.31	118.19

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
-30	-0.33	63.30	71.16	90.58	108.97	117.99	56.50	68.77	111.29	123.56
-30	0.00	63.03	70.91	90.33	108.71	117.72	56.21	68.51	111.03	123.28
-30	0.33	62.84	70.73	90.16	108.53	117.53	56.00	68.33	110.84	123.07
-30	0.67	62.52	70.42	89.88	108.23	117.21	55.66	68.02	110.54	122.73
-30	1.00	62.27	70.19	89.66	108.00	116.96	55.39	67.78	110.31	122.47
-30	2	61.55	69.51	89.02	107.33	116.25	54.62	67.09	109.63	121.72
-30	3	60.85	68.86	88.41	106.69	115.57	53.86	66.43	108.98	121.00
-30	4	60.16	68.21	87.81	106.06	114.90	53.11	65.77	108.34	120.30
-30	5	59.47	67.57	87.21	105.44	114.25	52.37	65.12	107.72	119.62

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
-40	-0.33	59.69	68.79	90.84	111.76	122.27	51.41	65.85	114.24	128.69
-40	0.00	59.28	68.42	90.49	111.38	121.86	50.96	65.46	113.86	128.25
-40	0.33	58.99	68.14	90.24	111.11	121.56	50.63	65.18	113.58	127.93
-40	0.67	58.51	67.70	89.82	110.67	121.08	50.09	64.73	113.13	127.41
-40	1.00	58.13	67.35	89.50	110.33	120.70	49.68	64.37	112.79	127.01
-40	2	57.04	66.35	88.58	109.34	119.64	48.45	63.35	111.79	125.86
-40	3	55.97	65.37	87.68	108.40	118.61	47.25	62.34	110.83	124.76
-40	4	54.90	64.40	86.81	107.48	117.62	46.05	61.35	109.90	123.71
-40	5	53.84	63.44	85.94	106.58	116.65	44.84	60.37	108.98	122.68

Sun's Azimuths							Moon's Azimuths			
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill	Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)
-50	-0.33	53.26	64.67	91.19	116.43	129.76	41.99	60.82	119.30	138.18
-50	0.00	52.64	64.12	90.69	115.87	129.12	41.24	60.25	118.74	137.44

-50	0.33	52.19	63.72	90.33	115.48	128.66	40.70	59.84	118.33	136.91
-50	0.67	51.44	63.07	89.75	114.83	127.91	39.79	59.16	117.66	136.06
-50	1.00	50.86	62.56	89.29	114.33	127.34	39.07	58.63	117.15	135.41
-50	2	49.15	61.07	87.98	112.90	125.71	36.94	57.08	115.69	133.57
-50	3	47.45	59.61	86.71	111.53	124.16	34.78	55.56	114.29	131.85
-50	4	45.74	58.16	85.47	110.20	122.67	32.54	54.04	112.94	130.20
-50	5	44.00	56.70	84.24	108.90	121.23	30.19	52.51	111.61	128.62

		Sun's Azimuths					Moon's Azimuths				
Latitude	Apparent		May 7	March 23	Nov 6		Major Standstill	Minor Standstill		Major Standstill	
Degrees	Altitude	June 22	August 6	Sept 21	Feb 6	Dec 22	+(e+i)	+(e-i)	-(e-i)	-(e+i)	
-60	-0.33	40.05	56.87	91.73	125.14	145.66	17.18	51.20	129.01	163.37	
-60	0.00	38.92	56.01	91.00	124.27	144.40	14.54	50.27	128.08	161.01	
-60	0.33	38.08	55.38	90.49	123.64	143.52	12.31	49.59	127.43	159.47	
-60	0.67	36.67	54.33	89.63	122.62	142.11	7.28	48.46	126.36	157.16	
-60	1.00	35.56	53.52	88.97	121.84	141.05	#NUM!	47.57	125.54	155.52	
-60	2	32.13	51.11	87.06	119.62	138.11	#NUM!	44.93	123.23	151.26	
-60	3	28.48	48.70	85.22	117.52	135.41	#NUM!	42.26	121.06	147.64	
-60	4	24.43	46.25	83.40	115.51	132.90	#NUM!	39.51	118.98	144.41	
-60	5	19.68	43.73	81.61	113.55	130.51	#NUM!	36.62	116.96	141.46	