From Tony Oz 2020-05-03, HoE≈3meters (not so sure but definitely more than 2,5meters), *I am using 2,85m* T_{air}=8°C, P_{air}=757mm Hg 29.82" Watch correction = -0^{h}01^{m}02,5^{s}, Offset+1:09.8 (i.e. WT is "fast") Index Correction = -0°00,1' (an "off-scale" I guess). "V" - Venus, "S" – Sun.

Data processed by A.M. Couëtte 200507

Venus Raw data	**Venus Data corrected for Watch error and for IE**	Sun Raw data	**Sun Data corrected for Watch error and for IE**
V 16:01:35 42°00,8'	**V01 16:00:32,5 42°00,7'**	S 16:03:55 12°55,7'	**S01 16:02:52,5 12°55,6'**
V 16:02:58 42°51,0'	**V02 16:01:55,5 41°50,9'**	S 16:04:48 12°49,0'	**S02 16:03:45,5 12°48,9'**
V 16:06:15 41°27,7'	**V03 16:05:12,5 41°27,6'**	S 16:08:02 12°26,2'	**S03 16:06:59,5 12°26,1'**
V 16:07:09 41°21,3'	**V04 16:06:06,5 41°21,2'**	S 16:09:00 12°19,2'	**S04 16:07:57,5 12°19,1'**
V 16:10:50 40°54,3'	**V05 16:09:47,5 40°54,2'**	S 16:12:45 11°50,7'	**S05 16:11:42,5 11°50,6'**
V 16:11:49 40°47,0'	**V06 16:10:46,5 40°46,9'**	S 16:13:38 11°44,1'	**S06 16:12:35,5 11°44,0'**
V 16:15:14 40°22,9'	**V07 16:14:11,5 40°22,8'**	S 16:17:08 11°19,6'	**S07 16:16:05,5 11°19,5'**
V 16:16:11 40°16,0'	**V08 16:15:08,5 40°15,9'**	S 16:17:46 11°15,0'	**S08 16:16:43,5 11°14,9'**
V 16:18:43 39°57,1'	**V09 16:17:40,5 39°57,0'**	S 16:20:43 10°52,5'	**S09 16:19:40,5 10°52,4'**
V 16:19:43 39°49,6'	**V10 16:18:40,5 39°49,5'**	S 16:21:34 10°46,7'	**S10 16:20:31,5 10°46,6'**
V 16:22:48 39°27,8'	**V11 16:21:45,5 39°27,7'**	S 16:24:30 10°26,1'	**S11 16:23:27,5 10°26,0'**
V 16:23:36 39°21,9'	**V12 16:22:33,5 39°21,8'**	S 16:25:18 10°20,3'	**S12 16:24:15,5 10°20,2'**
V 16:26:30 39°00,2'	**V13 16:25:27,5 39°00,1'**	S 16:28:37 09°55,7'	**S13 16:27:34,5 09°55,6'**
V 16:27:28 38°52,7'	**V14 16:26:25,5 38°52,6'**	S 16:29:25 09°49,8'	**S14 16:28:22,5 09°49,7'**
V 16:30:20 38°32,4'	**V15 16:29:17,5 38°32,3'**	S 16:32:57 09°25,5'	**S15 16:31:54,5 09°25,4'**
V 16:31:48 38°21,6'	**V16 16:30:45,5 38°21,5'**	S 16:33:45 09°20,0'	**S16 16:32:42,5 09°19,9'**
V 16:35:13 37°56,0'	**V17 16:34:10,5 37°55,9'**	S 16:38:50 08°43,0'	**S17 16:37:47,5 08°42,9'**
V 16:37:12 37°40,9'	**V18 16:36:09,5 37°40,8'**		

1ST METHOD : Averaging 6 Height Circles Intersections yielding Position ④

From averaging positions (A) to (F) here-under get Position ④ N60°08.17' E029°56.15'

2nd METHOD-1 : 1st Averaged Set of 12 Classical LOP's yielding Position③

From 1 & 12 get : ① N60°07.3' E029°55.9' used as DR Position here-under

(① N60°07'257034 E029°55'872185 with also Alternate Position at : S09°13.8' E008°11.0')

		+T/-A	Az			+T/-A	Az
Equal Heights Circles 1 & 2 Intersection at : (A) N60°07.8' E029°55.6'							
	V01 16:00:32,5 42°00,7' **V02 16:01:55,5 41°50,9'** **V03 16:05:12,5 41°27,6'**				**S01 16:02:52,5 12°55,6'**		
1	**V04 16:06:06,5 41°21,2'**	**+0.00'**	**252.97°**	**2**	**S02 16:03:45,5 12°48,9'**	**+0.23'**	**279.42°**
Equal Heights Circles 3 & 4 Intersection at : (B) N60°09.1' E029°55.8'							
					S03 16:06:59,5 12°26,1' **S04 16:07:57,5 12°19,1'**		
	V05 16:09:47,5 40°54,2'				**S05 16:11:42,5 11°50,6'**		
3	**V06 16:10:46,5 40°46,9'**	**-0.43'**	**254.66°**	**4**	**S06 16:12:35,5 11°44,0'**	**+0.38'**	**280.79°**
Equal Heights Circles 5 & 6 Intersection at : (C) N60°09.0' E029°55.5'							
	V07 16:14:11,5 40°22,8' **V08 16:15:08,5 40°15,9'** **V09 16:17:40,5 39°57,0'**				**S07 16:16:05,5 11°19,5'**		
5	**V10 16:18:40,5 39°49,5'**	**-0.25'**	**256.16°**	**6**	**S08 16:16:43,5 11°14,9'**	**+0.56'**	**282.19°**
Equal Heights Circles 7 & 8 Intersection at : (D) N60°07.1' E029°56.0'							
					S09 16:19:40,5 10°52,4' **S10 16:20:31,5 10°46,6'**		
	V11 16:21:45,5 39°27,7'				**S11 16:23:27,5 10°26,0'**		
7	**V12 16:22:33,5 39°21,8'**	**-0.01'**	**257.54'**	**8**	**S12 16:24:15,5 10°20,2'**	**-0.10'**	**283.37°**

Equal Heights Circles 9 & 10 Intersection at : (E) N60°06.8′ E029°57.0′

	V13 16:25:27,5 39°00,1'						
	V14 16:26:25,5 38°52,6'						
	V15 16:29:17,5 38°32,3'				S13 16:27:34,5 09°55,6'		
9	V16 16:30:45,5 38°21,5'	-0.48′	258.93°	10	S14 16:28:22,5 09°49,7'	-0.69′	284.64°

Equal Heights Circles 11 & 12 Intersection at : (F) N60°09.2′ E029°57.0′

					S15 16:31:54,5 09°25,4'		
	V17 16:34:10,5 37°55,9'				S16 16:32:42,5 09°19,9'		
11	V18 16:36:09,5 37°40,8'	-0.88′	260.61°	12	S17 16:37:47,5 08°42,9'	+0.0′	285.94°

From 12 unweighted classical LOP's : 011°/① /0.7NM σ=0.4′ ② N60°08.0′ E029°56.2′

From 12 weighted* classical LOP's : 010°/① /0.7 NM σ=0.3′ ③ N60°07.9′ E029°56.1′

***weight : each averaged set is given a weight equal to its number of observations**

Most accurate Position derived from the given data : ③ N60°07.9′ E029°56.1′

(③ N60°07′922787 E029°56′105917 i.e. 0.04 NM from Position ⑥)

2nd METHOD-2 : 2nd Averaged Set of 9 Classical LOP's yielding Position ⑥

From 1′ and 2′, get : ⑤ N60°08.6′ E029°55.1′ used as DR Position here-under

(Alternate Position at : S04°46.3′ E013°06.9′)

		+T/-A	Az			+T /-A	Az
	V01 16:00:32,5 42°00,7'				S01 16:02:52,5 12°55,6'		
	V02 16:01:55,5 41°50,9'				S02 16:03:45,5 12°48,9'		
	V03 16:05:12,5 41°27,6'				S03 16:06:59,5 12°26,1'		
1′	V04 16:06:06,5 41°21,2'	+0.0′	252.9°	2′	S04 16:07:57,5 12°19,1'	+0.0′	279.8°
	V05 16:09:47,5 40°54,2'				S05 16:11:42,5 11°50,6'		
	V06 16:10:46,5 40°46,9'				S06 16:12:35,5 11°44,0'		
	V07 16:14:11,5 40°22,8'				S07 16:16:05,5 11°19,5'		
3′	V08 16:15:08,5 40°15,9'	-0.3′	255.2°	4′	S08 16:16:43,5 11°14,9'	-0.5′	281.7°
	V09 16:17:40,5 39°57,0'				S09 16:19:40,5 10°52,4'		
	V10 16:18:40,5 39°49,5'				S10 16:20:31,5 10°46,6'		
	V11 16:21:45,5 39°27,7'				S11 16:23:27,5 10°26,0'		
5′	V12 16:22:33,5 39°21,8'	-0.4′	257.0°	6′	S12 16:24:15,5 10°20,2'	-0.8′	283.4°
	V13 16:25:27,5 39°00,1'				S13 16:27:34,5 09°55,6'		
	V14 16:26:25,5 38°52,6'				S14 16:28:22,5 09°49,7'		
	V15 16:29:17,5 38°32,3'				S15 16:31:54,5 09°25,4'		
7′	V16 16:30:45,5 38°21,5'	-0.6′	258.9°	8′	S16 16:32:42,5 09°19,9'	-0.9′	285.1°
	V17 16:34:10,5 37°55,9'						
8′	V18 16:36:09,5 37°40,8'	-1.1′	260.6°	9′	S17 16:37:47,5 08°42,9'	-1.4′	286.7°

From 9 weighted* classical LOP's : 143°/⑤ /0.9 NM σ=0.3′ ⑥ N60°07.9′ E029°56.1′

Most accurate Position derived from the given data : ⑥ N60°07.9′ E029°56.1′

(⑥ N60°07′883535 - E029°56′108606 i.e. 0.04 NM from position ③)