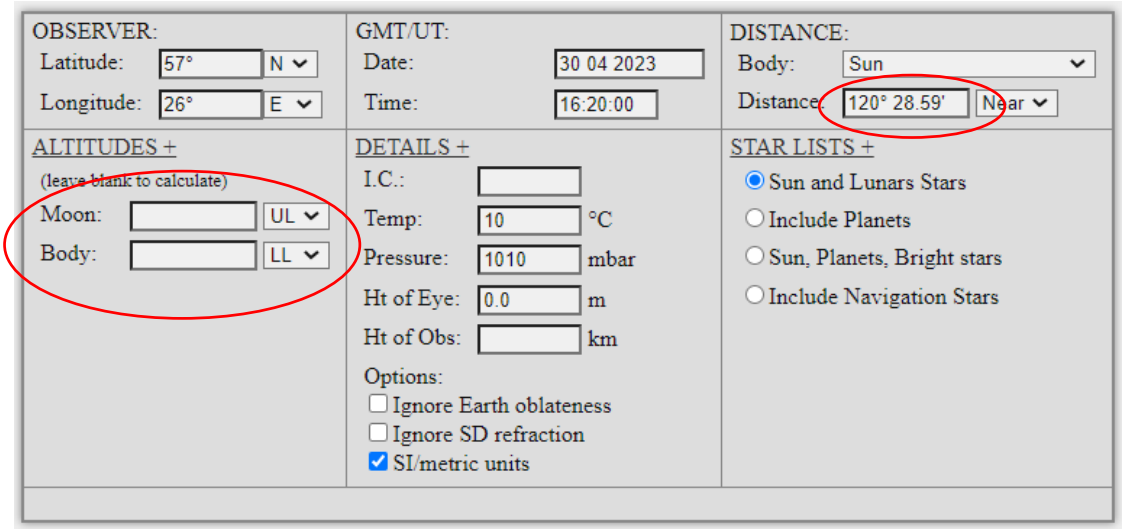
Fr. Reed's online calculator results

1. Sun lunar

Fields left blank to calculate altitudes:



OBSERVER:			GMT/UT:			DISTANCE:		
Latitude:	57°	N	Date:	30 04 2023		Body:	Sun	
Longitude:	26°	E	Time:	16:20:00		Distance:	120° 28.59'	Near
ALTITUDES +			DETAILS +			STAR LISTS +		
(leave blank to calculate)			I.C.:			◉ Sun and Lunars Stars		
Moon:		UL	Temp:	10	°C	○ Include Planets		
Body:		LL	Pressure:	1010	mbar	○ Sun, Planets, Bright stars		
			Ht of Eye:	0.0	m	○ Include Navigation Stars		
			Ht of Obs:		km			
			Options:					
			☐ Ignore Earth oblateness					
			☐ Ignore SD refraction					
			☑ SI/metric units					

Error in Lunar: 0.00'
Equivalent Error in Longitude: 0.15'
Equivalent Position Error: 0.08 miles

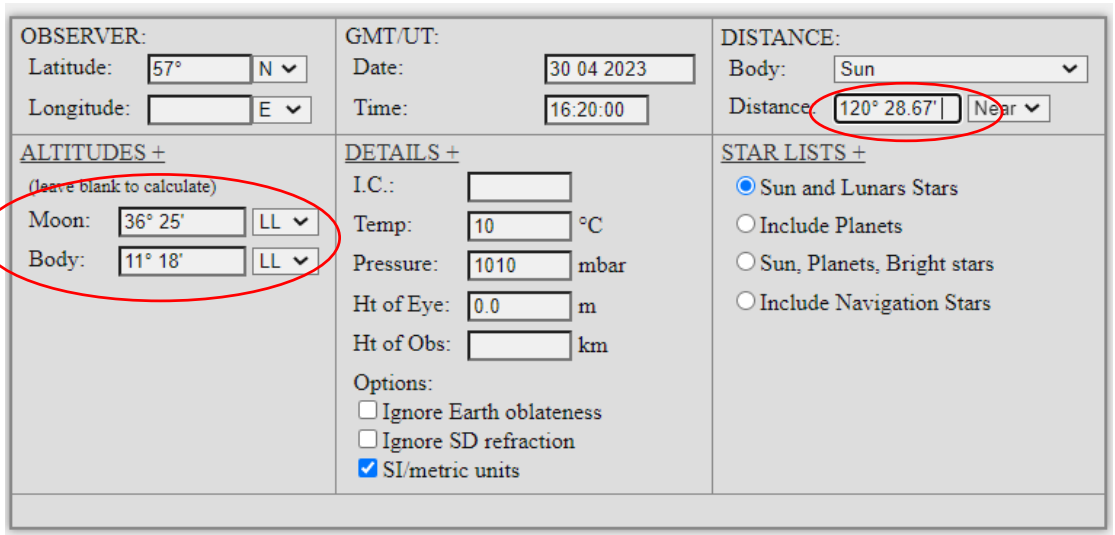
Using ***calculated*** Moon Altitude.
Using ***calculated*** Sun Altitude.
Moon SD refraction negligible.
Sun SD corrected for refraction.
Corrected for Earth oblateness.

	Moon	Sun
GHA	299° 31.9'	65° 41.4'
Dec	11° 28.6'	14° 50.2'
HP	54.72	0.15

	Moon	Sun
True Altitude	37° 22.0'	11° 29.5'
Azimuth	135.7	279.6
Alt Correction	-0° 42.6'	0° 04.6'
Apparent Alt	36° 39.3'	11° 34.0'
Raw Alt	36° 54.6'	11° 18.1'
Alt Error	. . .	. . .

True LD	120° 31.9'
cos δAzm	-0.80745
cos α	0.7386
cos β	0.8338
Cleared LD	120° 31.9'

Altitudes filled in:



Error in Lunar: -0.00'
Equivalent Error in Longitude: 0.14'
Equivalent Position Error: 0.08 miles

Using ***observed*** Moon Altitude.
Using ***observed*** Sun Altitude.
Moon SD refraction negligible.
Sun SD corrected for refraction.
Corrected for Earth oblateness.

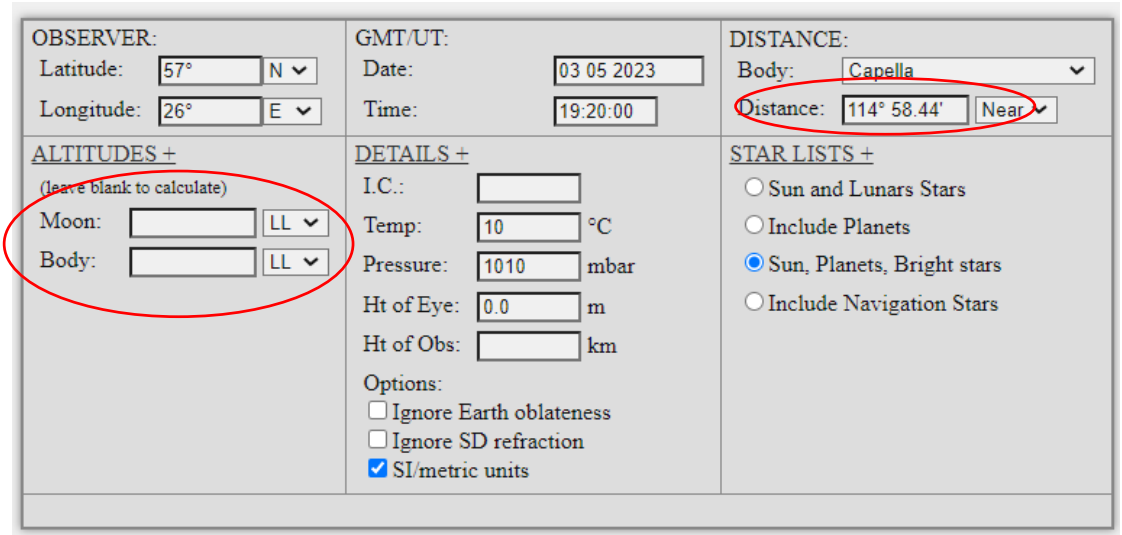
	Moon	Sun
GHA	299° 31.9'	65° 41.4'
Dec	11° 28.6'	14° 50.2'
HP	54.72	0.15

	Moon	Sun
True Altitude	37° 22.7'	11° 29.3'
Azimuth	109.2	257.6
Alt Correction	-0° 42.7'	0° 04.5'
Apparent Alt	24° 40.2'	25° 35.6'
Raw Alt	36° 25.0'	11° 18.0'
Alt Error	11° 59.8'	-14° 01.7'

True LD	120° 31.9'
cos δAzm	-0.80760
cos α	0.7388
cos β	0.8340
Cleared LD	120° 31.9'

2. Capella lunar

Fields left blank to calculate altitudes:



Error in Lunar: -0.00'
Equivalent Error in Longitude: 0.09'
Equivalent Position Error: 0.05 miles

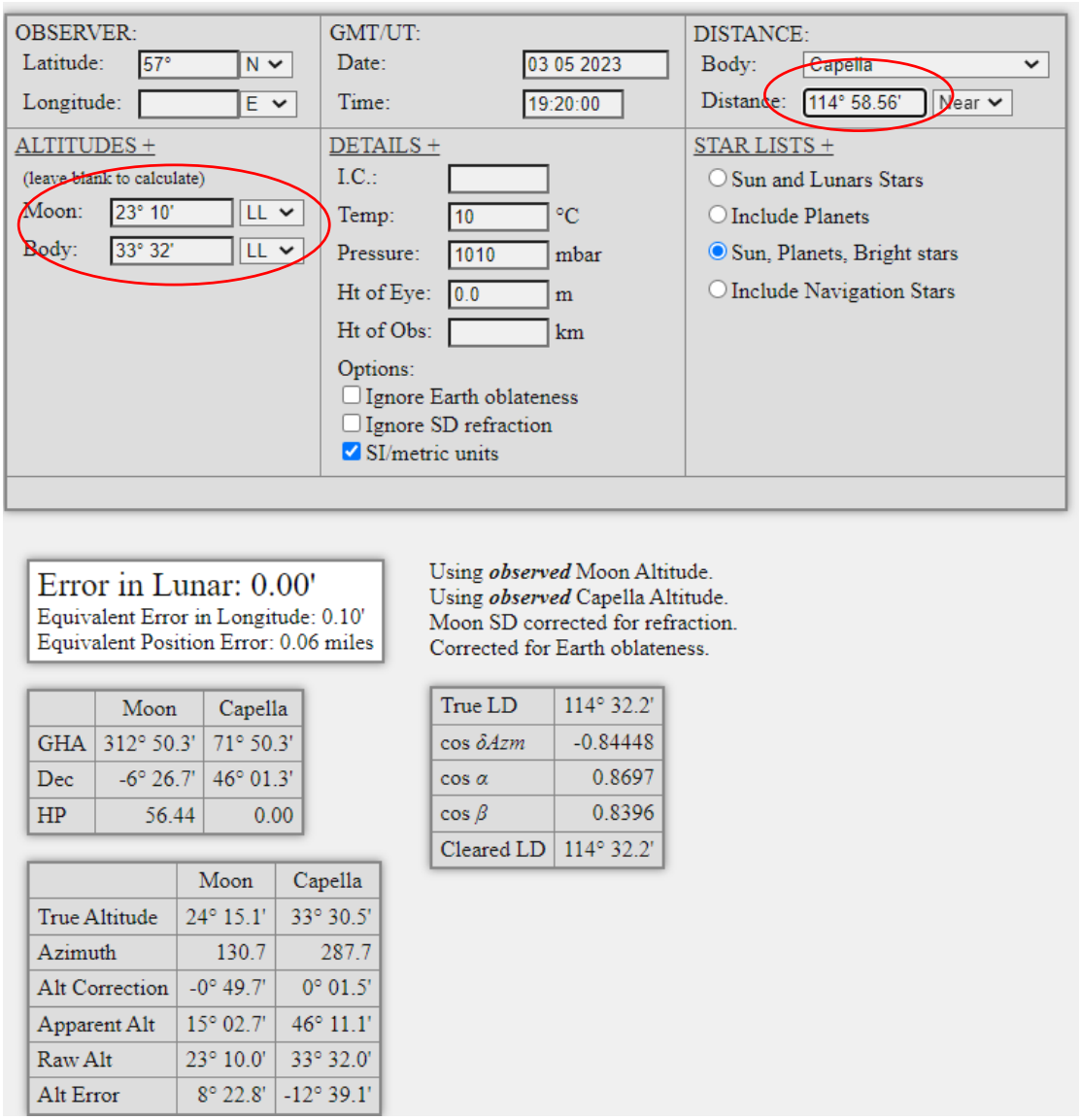
Using ***calculated*** Moon Altitude.
Using ***calculated*** Capella Altitude.
Moon SD corrected for refraction.
Corrected for Earth oblateness.

	Moon	Capella
GHA	312° 50.3'	71° 50.3'
Dec	-6° 26.7'	46° 01.3'
HP	56.44	0.00

True LD	114° 32.2'
cos δAzm	-0.84411
cos α	0.8694
cos β	0.8392
Cleared LD	114° 32.2'

	Moon	Capella
True Altitude	24° 14.4'	33° 30.0'
Azimuth	156.8	304.4
Alt Correction	-0° 49.6'	0° 01.5'
Apparent Alt	23° 24.9'	33° 31.5'
Raw Alt	23° 09.6'	33° 31.5'
Alt Error	. . .	. . .

Altitudes filled in:



Error in Lunar: 0.00'
Equivalent Error in Longitude: 0.10'
Equivalent Position Error: 0.06 miles

Using ***observed*** Moon Altitude.
Using ***observed*** Capella Altitude.
Moon SD corrected for refraction.
Corrected for Earth oblateness.

	Moon	Capella
GHA	312° 50.3'	71° 50.3'
Dec	-6° 26.7'	46° 01.3'
HP	56.44	0.00

True LD	114° 32.2'
cos δAzm	-0.84448
cos α	0.8697
cos β	0.8396
Cleared LD	114° 32.2'

	Moon	Capella
True Altitude	24° 15.1'	33° 30.5'
Azimuth	130.7	287.7
Alt Correction	-0° 49.7'	0° 01.5'
Apparent Alt	15° 02.7'	46° 11.1'
Raw Alt	23° 10.0'	33° 32.0'
Alt Error	8° 22.8'	-12° 39.1'