Example from Nautical Almanav 1993 (only to check altitude reductions, not for fix computation)

Date = 1993.06.28
ic = 0
Height of eye = 5.4 m
Temperature = -3 °C
Pressure = 982 mb
Moon sights are assumed to be taken at 10:00 UT (plugin changes time automatically; this prevents to make time corrections).

	Sun LL	Sun UL	Moon LL	Moon UL	Venus	Polaris
H sextant	**21.3283°**	**3.3367°**	**33.4600°**	**26.1117°**	**4.5433°**	**49.6083°**
Dip	0.0681°	0.0681°	0.0681°	0.0681°	0.0681°	0.0681°
H apparent	**21.2602°**	**3.2686°**	**33.3919°**	**26.0436°**	**4.4752°**	**49.5402°**
H app plugin	21.2602°	3.2686°	33.3919°	26.0436°	4.4752°	49.5402°
diff H app in '	0.00'	0.00'	0.00'	0.00'	0.00'	0.00'
Refraction	0.0431°	0.2304°	0.0256°	0.0344°	0.1834°	0.0144°
Parallax	0.0024°	0.0024°	0.9850°	0.9850°	0.0033°	0.0000°
Par. in Alt.	0.0022°	0.0024°	0.8224°	0.8850°	0.0033°	0.0000°
SD	0.2633°	0.2633°	0.2683°	0.2683°	0.0000°	0.0000°
H observed	**21.4827°**	**2.7773°**	**34.4570°**	**26.6258°**	**4.2952°**	**49.5258°**
H obs plugin	21.4834°	2.7677°	34.4155°	26.6050°	4.2878°	49.5265°
diff H obs in '	**0.04'**	**-0.58'**	**-2.49'**	**-1.25'**	**-0.44'**	**0.04'**

Almanac Data For Polaris

Geographical Position (lat, lon) = 89.2642 -39.5152
GHAAST = 77 28.1'
SHA = 322 2.8'
GHA = 39 30.9'
Dec = N 89 15.9'
SD = 0.0'
HP = 0.0'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 49.6083 - 0.0000 - 0.0681
ApparentAltitude = 49.5402

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*49.5402 + 4.848e-2*(Pi/180) / (tan(Pi/180*49.5402) + .028))
x = 1.1742
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0

RefractionCorrection = 0.0138

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 49.5402 - 0.0138 - 0.0000
CorrectedAltitude = 49.5265

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 49.5265 - 0.0000
ObservedAltitude = 49.5265

Almanac Data For Venus

Geographical Position (lat, lon) = 15.5212 -26.8466
GHAAST = 77 7.8'
SHA = 309 43.0'
GHA = 26 50.8'
Dec = N 15 31.3'
SD = 0.0'
HP = 0.0'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 4.5433 - 0.0000 - 0.0681
ApparentAltitude = 4.4752

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*4.4752 + 4.848e-2*(Pi/180) / (tan(Pi/180*4.4752) + .028))
x = 0.0863
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0
RefractionCorrection = 0.1875

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 4.4752 - 0.1875 - 0.0000
CorrectedAltitude = 4.2878

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 4.2878 - 0.0000
ObservedAltitude = 4.2878

Almanac Data For Moon (UL)
Geographical Position (lat, lon) = -13.7173 126.3537
GHAAST = 76 51.5'
SHA = 156 47.3'
GHA = 233 38.8'
Dec = S 13 43.0'
SD = 15.5'
HP = 56.9'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 26.1117 - 0.0000 - 0.0681
ApparentAltitude = 26.0436

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*26.0436 + 4.848e-2*(Pi/180) / (tan(Pi/180*26.0436) + .028))
x = 0.4907
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0
RefractionCorrection = 0.0330

Moon selected, Limb Correction
SD = 0.2591
lc = 180/Pi * asin(Pi/180*SD)
lc = 0.2591
Upper Limb
LimbCorrection = 0.2591

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 26.0436 - 0.0330 - 0.2591
CorrectedAltitude = 25.7516

Moon selected, parallax correction
HP = 0.9475
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * HP) * cos(Pi/180 * CorrectedAltitude))
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * 0.9475) * cos(Pi/180 * 25.7516))
ParallaxCorrection = -0.8534

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 25.7516 - -0.8534
ObservedAltitude = 26.6050

Almanac Data For Moon (LL)
Geographical Position (lat, lon) = -13.7140 126.6149
GHAAST = 76 35.2'
SHA = 156 47.9'
GHA = 233 23.1'
Dec = S 13 42.8'
SD = 15.5'
HP = 56.9'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 33.4600 - 0.0000 - 0.0681
ApparentAltitude = 33.3919

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*33.3919 + 4.848e-2*(Pi/180) / (tan(Pi/180*33.3919) + .028))
x = 0.6609
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0
RefractionCorrection = 0.0245

Moon selected, Limb Correction
SD = 0.2591
lc = 180/Pi * asin(Pi/180*SD)
lc = 0.2591
Lower Limb
LimbCorrection = -0.2591

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 33.3919 - 0.0245 - -0.2591
CorrectedAltitude = 33.6265

Moon selected, parallax correction
HP = 0.9475
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * HP) * cos(Pi/180 * CorrectedAltitude))
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * 0.9475) * cos(Pi/180 * 33.6265))
ParallaxCorrection = -0.7890

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 33.6265 - -0.7890
ObservedAltitude = 34.4155

Geographical Position (lat, lon) = 23.2672 21.0291
GHAAST = 76 18.9'
SHA = 262 39.4'
GHA = 338 58.3'
Dec = N 23 16.0'
SD = 15.7'
HP = 0.1'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 3.3367 - 0.0000 - 0.0681
ApparentAltitude = 3.2686

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*3.2686 + 4.848e-2*(Pi/180) / (tan(Pi/180*3.2686) + .028))
x = 0.0671
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0
RefractionCorrection = 0.2411

Sun selected, Limb Correction
ra = 1.0166, lc = 0.266564/ra = 0.2622
LimbCorrection = 0.2622

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 3.2686 - 0.2411 - 0.2622
CorrectedAltitude = 2.7653

Sun selected, parallax correction
rad = 1.0166, HP = 0.002442/rad = 0.0024
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * HP) * cos(Pi/180 * CorrectedAltitude))
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * 0.0024) * cos(Pi/180 * 2.7653))
ParallaxCorrection = -0.0024

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 2.7653 - -0.0024
ObservedAltitude = 2.7677

Almanac Data For Sun (LL)
Geographical Position (lat, lon) = 23.2673 21.2957
GHAAST = 76 2.9'
SHA = 262 39.4'
GHA = 338 42.3'
Dec = N 23 16.0'
SD = 15.7'
HP = 0.1'

Formulas used to calculate sight

Index Error is 0.0000 degrees

Eye Height is 5.4000 meters
Height Correction Degrees = 1.758*sqrt(5.4000) / 60.0
Height Correction Degrees = 0.0681

Apparent Altitude (Ha)
ApparentAltitude = Measurement - IndexCorrection - EyeHeightCorrection
ApparentAltitude = 21.3283 - 0.0000 - 0.0681
ApparentAltitude = 21.2602

Refraction Correction
x = tan(Pi/180*ApparentAltitude + 4.848e-2*(Pi/180) / (tan(Pi/180*ApparentAltitude) + .028))
x = tan(Pi/180*21.2602 + 4.848e-2*(Pi/180) / (tan(Pi/180*21.2602) + .028))
x = 0.3914
RefractionCorrection = .267 * Pressure / (x*(Temperature + 273.15)) / 60.0
RefractionCorrection = .267 * 982.0000 / (x*(-3.0000 + 273.15)) / 60.0
RefractionCorrection = 0.0413

Sun selected, Limb Correction
ra = 1.0166, lc = 0.266564/ra = 0.2622
Lower Limb
LimbCorrection = -0.2622

Corrected Altitude
CorrectedAltitude = ApparentAltitude - RefractionCorrection - LimbCorrection
CorrectedAltitude = 21.2602 - 0.0413 - -0.2622
CorrectedAltitude = 21.4811

Sun selected, parallax correction
rad = 1.0166, HP = 0.002442/rad = 0.0024
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * HP) * cos(Pi/180 * CorrectedAltitude))
ParallaxCorrection = -180/Pi * asin(sin(Pi/180 * 0.0024) * cos(Pi/180 * 21.4811))
ParallaxCorrection = -0.0022

Observed Altitude (Ho)
ObservedAltitude = CorrectedAltitude - ParallaxCorrection
ObservedAltitude = 21.4811 - -0.0022
ObservedAltitude = 21.4834