

AstroNavigation

File Algorithms!

Home Identification of Stars and Planets Nautical Almanac Sights Celestial Fix About

Time

Date 13/12/2011

UT1 20:45:42

Now

Observer Position

B [+N/-S] = 33.366000 °

L [+E/-W] = -97.235000 °

Celestial Body

☒ Sun

☐ Moon

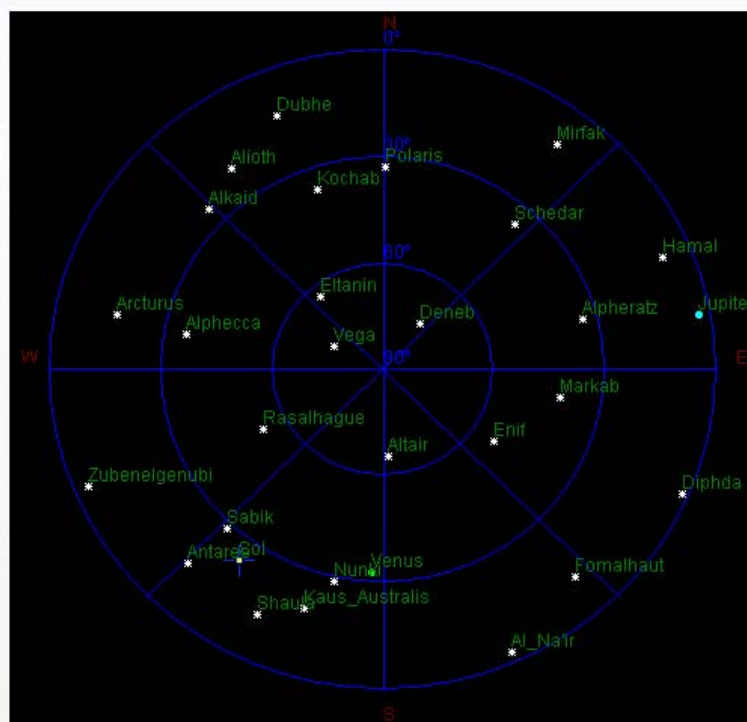
☐ Planet

Mercury

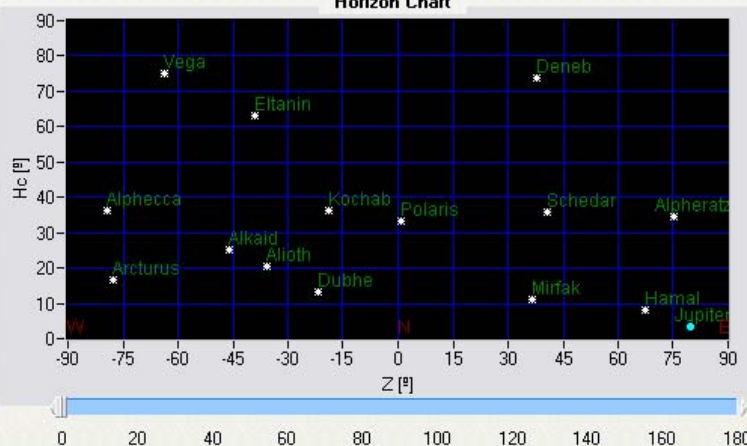
☐ Star

Acamar

☐ Aries



Horizon Chart



	Body	Z	Hc
1	Sol	215.90	24.10
2	Venus	183.10	33.10
3	Jupiter	79.80	3.60
4	Al_Na'ir	156.40	3.50
5	Alioth	324.20	20.60
6	Alkaid	313.90	25.00
7	Alphecca	280.60	36.20
8	Alpheratz	75.20	34.50
9	Altair	176.50	65.50
10	Antares	224.10	14.30
11	Arcturus	282.30	16.60
12	Deneb	38.00	73.90
13	Diphda	113.30	2.30
14	Dubhe	338.20	13.20
15	Eltanin	320.80	63.30
16	Enif	123.60	54.00
17	Fomalhaut	138.40	12.30
18	Hamal	67.30	8.30
19	Kaus_Australis	197.60	19.70
20	Kochab	340.90	36.40
21	Markab	99.30	41.50
22	Mirfak	36.50	11.20
23	Nunki	192.70	29.20
24	Polaris	0.80	33.20
25	Rasalhague	242.70	53.80
26	Sabik	223.20	28.60
27	Schedar	40.80	35.90
28	Shaula	206.30	13.20
29	Vega	296.40	75.20
30	Zubenelgenubi	247.50	4.30

2011/12/13 20:45:42 B.L = 33.37, -97.23

Z = 0.0 Hc = 0.0

Update

español english deutsch

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☐ Sun

☐ Moon

☐ Planet Jupiter

☒ Star Polaris

☐ Aries

Local Apparent Sidereal Time = 355:45:31

Greenwich Apparent Sidereal Time = 02:14:28

Hc Z

Ephemeris

t

Day

Month

Year

	Date	UT1	Body	GHA	Dec	SD	HP	RA	EoT [min]	illum
1	13/12/2011	20:45:42	Jupiter	4° 38.5'	10° 26.9'	0.38	0.03	01:55:53	0.000000	99.41
2	13/12/2011	20:45:42	Polaris	351° 32.7'	89° 19.2'	0.00	0.00	02:48:17	0.000000	0.00

Sun



Annual curves: GHA & Dec

Curves at noon: H & Z

Moon



Moon phases for a given month

español

english

deutsch

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☐ Moon

☒ Planet Jupiter

☐ Star Polaris

☐ Aries

Sight

Observer

h eye 2.50 m

Sextant

IE 0.00

Atmospheric variables

Pressure 1010.0 hPa

Temperature 10.0 °C

Observation

Altitude Hs 3.83771904 °

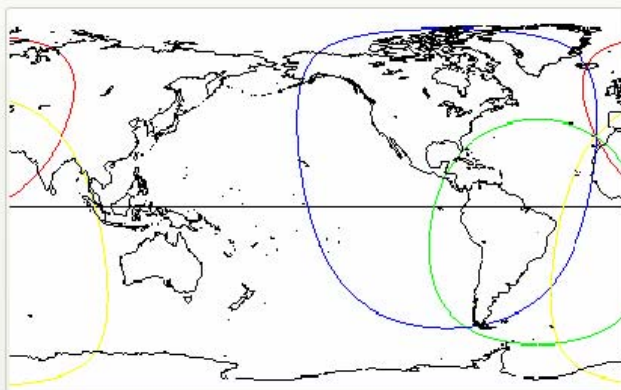
Limb center

Reference Sea Horizon

Insert Observation for Fix

Hs --> Ho

Lines of Position



Marcq St Hilaire LoP

CoP

Fix by 2 MSH LoPs

13/12/2011

20:45:42 UT1

Be = 33.366000 ° = 33° 22.0'

Le = -97.235000 ° = -97° 14.1'

ALMANAQUE NAUTICO - NAUTICAL ALMANAC

Planet Jupiter

GHA = 4.642263 ° = 4° 38.5'

Dec = 10.447660 ° = 10° 26.9'

SD = 0.382977

HP = 0.034167

CORRECCION DE LA ALTURA - ALTITUDE CORRECTIO

Ref: Sea Horizon

Hs = 3.8377 ° = 3° 50.3'

ie = 0.0000

heas = 2.5000 m

T = 10.0000 °C

P = 1010.0000 hPa

Hoi = 3.8377 °

dip = 0.0464 °

Ha = 3.7913 ° = 3° 47.5'

R = 0.2041 °

OB = -0.00000056 °

HP = 0.0006 °

PA = 0.00056765 °

SD = 0.0000 °

Aug = 0.00000000 °

SDag = 0.000000 °

Ho = 3.5879 ° = 3° 35.3'

DETERMINANTE DE LA RECTA DE ALTURA - Marcq St

LHA = 267.407263 ° = 267° 24.4'

Hc = 3.5879 ° = 3° 35.3'

Z = 79.8 °

p = Ho-Hc = -0.000001 ° = -0.000033'

español

english

deutsch

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Celestial Body

☐ Sun

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☐ Planet Jupiter

☒ Star Polaris

☐ Aries

Sight

Observer

h eye 2.50 m

Sextant

IE 0.00

Atmospheric variables

Pressure 1010.0 hPa

Temperature 10.0 °C

Observation

Altitude Hs 33.25072300 °

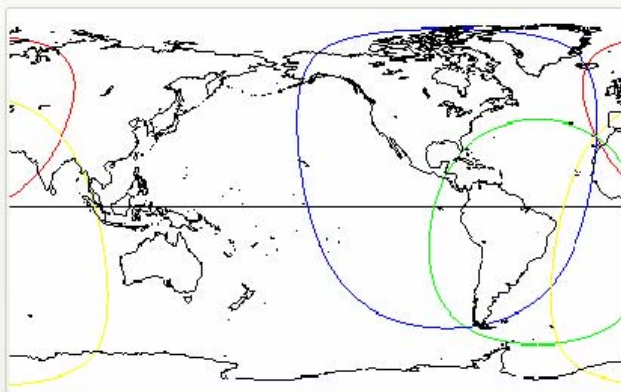
Limb center

Reference Sea Horizon

Insert Observation for Fix

Hs -> Ho

Lines of Position



Marcq St Hilaire LoP

CoP

Fix by 2 MSH LoPs

13/12/2011

20:45:42 UT1

Be = 33.366000 ° = 33° 22.0'

Le = -97.235000 ° = -97° 14.1'

ALMANAQUE NAUTICO - NAUTICAL ALMANAC

Star Polaris

GHA = 351.544913 ° = 351° 32.7'

Dec = 89.319782 ° = 89° 19.2'

SD = 0.000000

HP = 0.000000

CORRECCION DE LA ALTURA - ALTITUDE CORRECTIO

Ref: Sea Horizon

Hs = 33.2507 ° = 33° 15.0'

ie = 0.0000

heas = 2.5000 m

T = 10.0000 °C

P = 1010.0000 hPa

Hoi = 33.2507 °

dip = 0.0464 °

Ha = 33.2043 ° = 33° 12.3'

R = 0.0248 °

OB = 0.00000000 °

HP = 0.0000 °

PA = 0.00000000 °

SD = 0.0000 °

Aug = 0.00000000 °

SDag = 0.000000 °

Ho = 33.1796 ° = 33° 10.8'

DETERMINANTE DE LA RECTA DE ALTURA - Marcq St

LHA = 254.309913 ° = 254° 18.6'

Hc = 33.1796 ° = 33° 10.8'

Z = 0.8 °

p = Ho-Hc = 0.000000 ° = 0.000000 °

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☐ Moon

☐ Planet Jupiter

☐ Star Polaris

☐ Aries

Observations

	Date	UT1	Body	Dec	GHA	Ho	Hs
1	13/12/2011	20:45:42	Jupiter	10.4477	4.6423	3.5879	
2	13/12/2011	20:45:42	Polaris	89.3198	351.5449	33.1796	

New

Delete

Estimated Position at time of Fix

Date: 13/12/2011

UT1 20:45:42

B = 33.3660 °

L = -97.2350 °

Rhumb between observations

COG = 0.0 °

SOG = 0.0 kt

LS Calculation

max iter = 1

% Prob = 95

Do

Output

Fix Position

B = 33° 22.0'

L = -97° 14.1'

Error

DO = 0.00 nm

Results

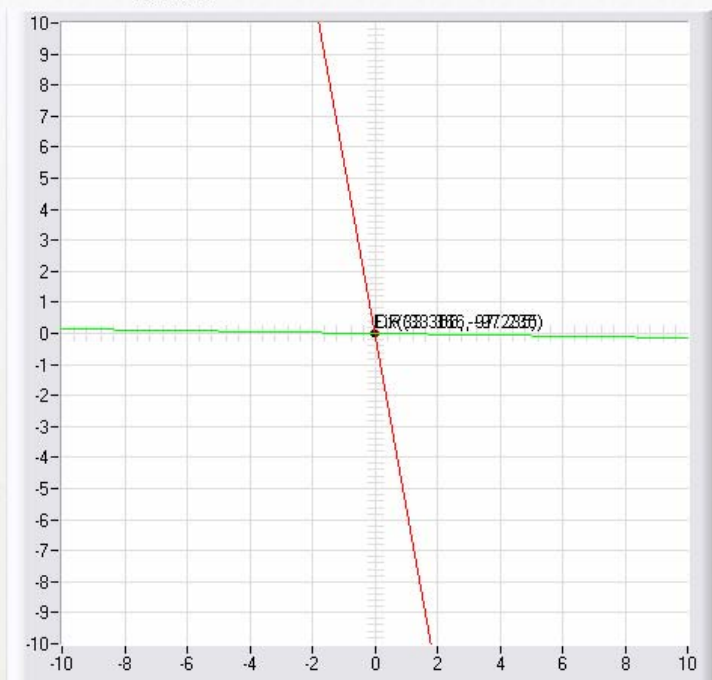
Iterations

Plot CoPs

Coastlines WVS

GFX

LOPs & Fix



Zoom



español

english

deutsch