

Comparison of AstroAlmanac106f.htm

with: **Nautical Almanac 2022 (UKHO and Naut.Alm.Off. US-Naval Observatory)**

The difference "diff arcmin" is defined as: = [Naut.Alm.] - [AstroAlmanac], etc.

Note that precision of Nautical Almanac is only +/- 0,1 arcmin, for GHA-SUN only 0,15

because some correction up to 0,15' was added, in order to ignore the v-correction for sun.

SUMMARY: AstroAlmanac106 agrees with Nautical Almanac 2022 within indicated precision.

Rectascension-values (RA) must be multiplied by 15 to convert from Seconds to ArcSeconds.

Relation between Greenwich Hour Angle (GHA) and Right Ascension (RA), involving

Greenwich apparent Sidereal Time (GAST = also: hour angle of ARIES-point): **GHA=(GAST-RA)*15+360.**

Delta-T= 69.3 given by IERS for jan 1, 2022

dtr= 0,01745 =degrees-to-radians conversion

2022-04-01 ### 00h. JD=2459670,5 APRIL ##### ONE-Digit Precision!

SUN	GHA =Greenw.HourAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	178	59,9		----	4	26,9		----
AstroAlmanac106	178	59	46,6	0,12	4	26	54,90	-0,02

MOON	GHA =Greew.degAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	180	32,6		----	0	11		----
AstroAlmanac106	180	32	37,9	-0,03	0	10	58,50	0,03

Venus	GHA =Greew.degAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	222	16,6		----	-12	20,6		----
AstroAlmanac106	222	16	39,1	-0,05	-12	20	38,40	-0,04

Mars	GHA =Greew.degAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	227	11,6		----	-16	10,6		----
AstroAlmanac106	227	11	37,9	-0,03	-16	10	36,30	-0,01

Jupiter	GHA =Greew.degAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	196	55,8		----	-4	22,6		----
AstroAlmanac106	196	55	45,6	0,04	-4	22	35,50	0,01

Saturn	GHA =Greew.degAngle			diff arcmin	DEClination			diff '
	deg	min	sec		deg	arcmin	arcsec	
Naut.Almanac2022	224	36,9		----	-15	3,4		----
AstroAlmanac106	224	36	51,6	0,04	-15	3	21,00	0,05

ARIES	GAST		
Naut.Almanac 2022	deg	min	sek
	189	20,1	
AstroAlm106	hours	minuter	sek
	12	37	20,3 diff arcmin

degrees= 189,335 0,02

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2022-7-1 ### 00h. JD=2459761,5 JULY ##### ONE-Digit Precision!

SUN	GHA =Greenw.HourAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	179 2,7	----	23 7,2	----
AstroAlmanac106	179 2 46,2	-0,07	23 7 14,60	-0,04

MOON	GHA =Greew.degAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	156 5,5	----	24 51,6	----
AstroAlmanac106	156 5 28,1	0,03	24 51 33,00	0,05

Venus	GHA =Greew.degAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	210 58,0	----	20 31,3	----
AstroAlmanac106	210 57 59,2	0,01	20 31 20,60	-0,04

Mars	GHA =Greew.degAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	253 18,4	----	8 42,6	----
AstroAlmanac106	253 18 25,3	-0,02	8 42 38,00	-0,03

Jupiter	GHA =Greew.degAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	271 38,9	----	1 46,8	----
AstroAlmanac106	271 38 35,3	0,31	1 46 47,80	0,00

Saturn	GHA =Greew.degAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	311 36,6	----	-14 25,2	----
AstroAlmanac106	311 36 35,3	0,01	-14 25 9,70	0,04

ARIES	GAST	
	deg min sek	
Naut.Almanac 2022	279 1,7	
	hours minuter sek	
AstroAlm106	18 36 7,0	diff arcmin
degrees=	279,03	-0,04

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2022-10-31 ### 00h. JD=2459883,5 OCTOBER ##### ONE-Digit Precision!

SUN	GHA =Greenw.HourAngle	diff arcmin	DECLination	diff '
	deg min sec		deg arcmin arcsec	
Naut.Almanac2022	184 5,5	----	-14 1,6	----

AstroAlmanac106 184 5 26,5 0,06 -14 1 36,40 -0,01

MOON GHA =Greew.degAngle diff arcmin DEClination diff '
deg min sec deg arcmin arcsec
Naut.Almanac2022 106 6,4 ---- -26 39,9 ----
AstroAlmanac106 106 6 22,6 0,02 -26 39 53,90 0,00

Venus GHA =Greew.degAngle diff arcmin DEClination diff '
deg min sec deg arcmin arcsec
Naut.Almanac2022 181 48,0 ---- -13 55,4 ----
AstroAlmanac106 181 48 0,8 -0,01 -13 55 24,40 -0,01

Mars GHA =Greew.degAngle diff arcmin DEClination diff '
deg min sec deg arcmin arcsec
Naut.Almanac2022 314 4,5 ---- 23 49,7 ----
AstroAlmanac106 314 4 29,8 0,00 23 49 41,70 0,01

Jupiter GHA =Greew.degAngle diff arcmin DEClination diff '
deg min sec deg arcmin arcsec
Naut.Almanac2022 38 52,2 ---- -1 31,3 ----
AstroAlmanac106 38 52 9,3 0,05 -1 31 17,80 0,00

Saturn GHA =Greew.degAngle diff arcmin DEClination diff '
deg min sec deg arcmin arcsec
Naut.Almanac2022 77 47,3 ---- -16 28 ----
AstroAlmanac106 77 47 19,2 -0,02 -16 27 58,20 0,03

ARIES **GAST**
deg min sek
Naut.Almanac 2022 39 16,7
hours minuter sek
AstroAlm106 2 37 6,7 diff arcmin
degrees= 39,28 0,02

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