" BABYLONIA"
a program for
BABYLONIAN
ASTROLOGY & ASTRONOMY

INSTALLATION

It's a standrd windows procedure. Insert the CD and click on the setup.exe file. Follow the instructions. After the installation, manually create a shortcut of the program to the desktop.

COMPUTER REQUIREMENTS

Should have windows 2000 or 98. Settings on the 'Display':   'true color' and screen area '1024 / 768 pixels'. Math coprocessor recommended (all presentday computers have it) and speed of more than 60 MHz.

PURPOSE:

1   To compute the (most likely dates of the) real, practically observed heliacal phases of the planets and the Moon. Good visibility and average eyesight assumed.

2   To compute the Babylonian Calendar for any place where it can be valid (latitudes less than 66).   Only second Addar is added (no second Ulul). 1st of Nisan is the first NewCrescent with Sun in tropical Aries.

3   To give useful astronomical information helping the eventual observer.
         (Here are the azimuths and the arcus visionis at rise and set of the planets, the time when the Sun reaches -18, -16... degrees below horizon and so on...for any chosen day...)

4   In short, the purpose of the program is to help everyone who wants to watch the sky the babylonian-way (with unaided eyes observing the heliacal phases and the beauty of the sunrise and the sunset.

THE MATH BASIS:

1   Schoch's Oxford tables (for arcus visionis of the planets)

2   the astronomical algorithms propagated by Jean Meuus (VSOP 87)

3   My own observations for 2 years that so far closely agree with the values of Schoch

BY-PRODUCTS:

1   The dates of the program for the Babylonian Calendar and the heliacal phases of the planets agree extremely good with the dates from the cuneiform texts (-600 to 0 mainly checked out)

2   The heliacal phases of the planets (by the program) agree best with cuneiform texts with proven theory A descent

NOTES:

1   My practical observations are for the Moon, Venus, Jupiter and Saturn. To a less extent to Mercury and Mars.

2   More work is needed (in the eventual future versions) on the heliacal phases of Mercury, Mars and the stars.

(Because the magnitudes of Mars and Mercury in one and the same heliacal phase, but different heliacal cycles, are considerably different due to their greater eccentricity of orbit. This may have impact on their respective arcus visionis. So, the heliacal dates for these planets, produced by the program, are somewhat for orientation purposes mainly)

3   The program computes the heliacal phases of the planets according to the babylonian theory A (to my knowledge) which I have found correct from my personal observations for the last 2 years.

The data given by the program is almost 100% identical with the data from the cuneiform texts. I made a special database with all horoscopes given by Franceska Rochberg in her study 'Babylonian Horoscopes'.

4   The price of Babylonia is $ 150. The book about Babylonian Astrology, which is essential for understanding the program, costs $ 25. $5 are for packaging and postal fees. A short manual comes with the program.

THE FIRST SCREEN
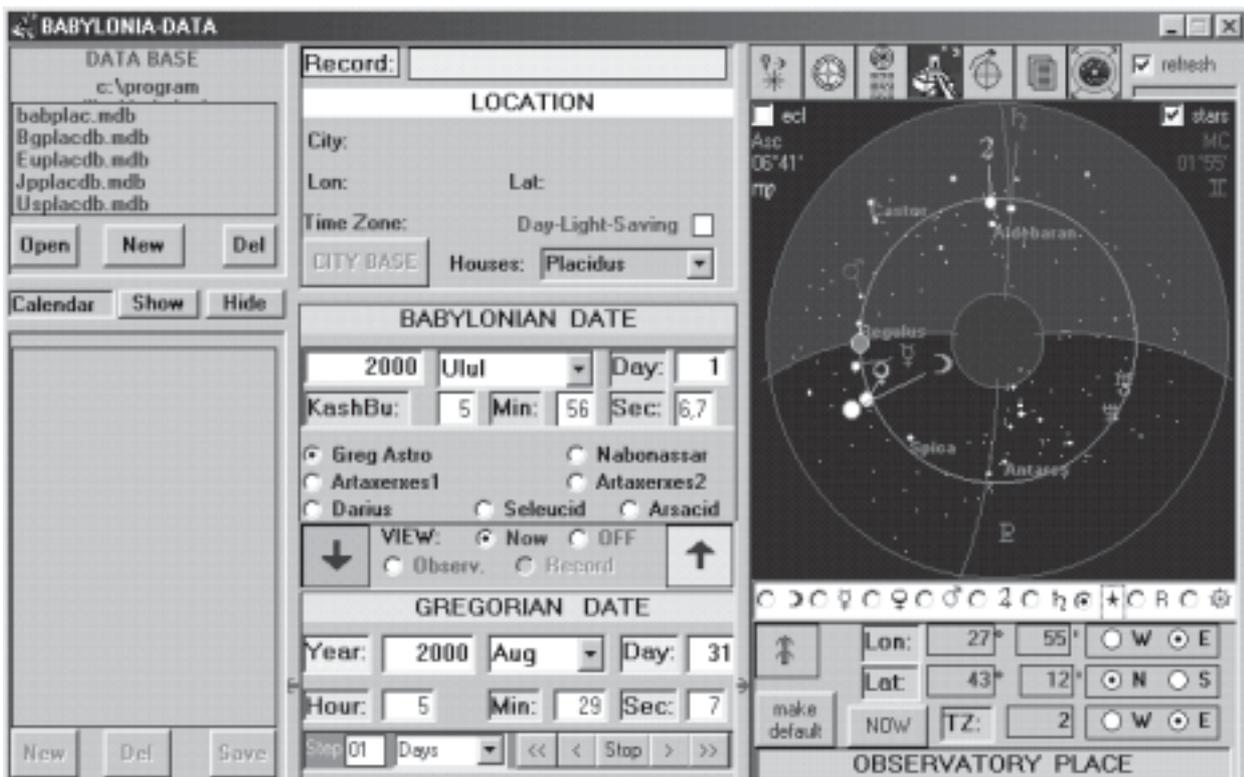
The first screen shows the sky at the present moment at the city of Varna. If you want to change the location, enter the coordinates in the 'Observatory Place' Panel and click on the red arrow in the same panel
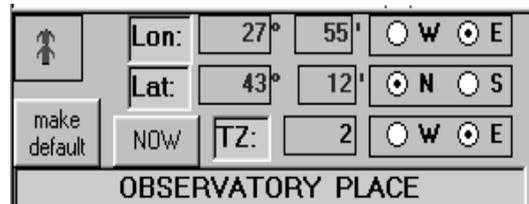
OBSERV. PLACE PANEL

to refresh. If you want these coordinates to become default, just click on the button '**make default**'. The program is in MODE 'NOW'. It will refresh the screen every 10 seconds. To switch on or off the refresh, look in the upper right corner:

REFRESH BOX

THE MODES 'NOW', 'OBSERV.(ATORY)' AND 'RECORD'

The program works in 3 modes. The mode panel is in the center of the program.

MODE PANEL

'**NOW**' mode uses the momentaneous date and time and the coordinates in the 'Observatory Place' panel.
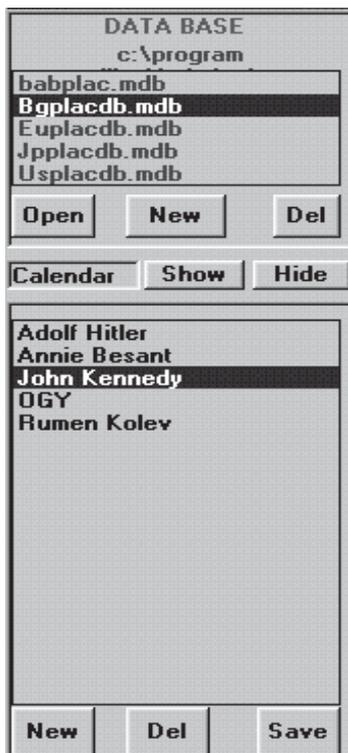
'**OBSERV**.' uses the same coordinates, but the date/time come from the 'GREGORIAN DATE' panel. You may enter time there and then click on the red arrow (refresh-date arrow) in the 'Observ. Place' Panel.
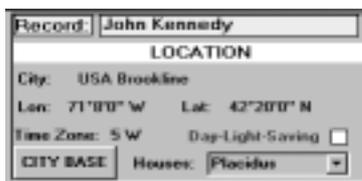
refresh-date arrow

GREG. DATE PANEL
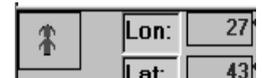
LOCATION PANEL

DATABASE AND RECORDS LIST

'**RECORD**' mode uses the date and time and the coordinates from a record you have opened. First you need to open a database from the list at the top left. Just click once on a database and then again twice to open it. Then the records list below the database list will fill up. To open a record, do the same with a record in the list. Now the 'LOCATION' panel in the top center will fill up and in the 'Observatory Place' panel will come up 'DataBase Place' inscription, in order to remind you that you work with the geo. coordinates of the record now. However, because you are still in MODE 'NOW' and the 'refresh' is on, the program will change the time. Don't worry. Just click on the option 'RECORD' in the MODE panel and you can work safely with the record now.

Below the database and records list, there are 3 buttons: 'New', 'Del' and 'Save'
If you want to enter a new record, you first click on the button '**NEW**' below the
record list (bottom left), then enter the date/time in the 'Gregorian Date' panel.
Then you click on the '**CITY BASE**' button from the 'LOCATION' panel and choose
a place. If you do not find the place you want there, you can add.
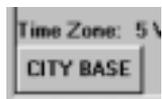
After you are done, you should
click on the button '**SAVE**' to save
the new record. The button '**DEL**'
deletes a record.

You can enter dates directly in Babylonian Calendar. You just choose the Era
and then enter the bab. date. Then You have to convert it in gregorian date by click-
ing on the big arrow (on blue background) in the left of the MODE panel.

Now you can click on the refresh-date red arrow to update the screen or click
'SAVE' button if you want to save a new record. In any mode except the 'NOW'
(with refresh box checked), you can enter dates and click on the arrows to convert
between them. **In 'RECORD' mode, the location comes from the record.**
 In 'OBSERV.' and 'NOW' modes : from the 'OBSERV. PLACE' panel.
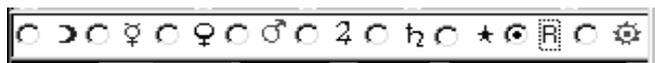
BABYLONIAN DATE PANEL
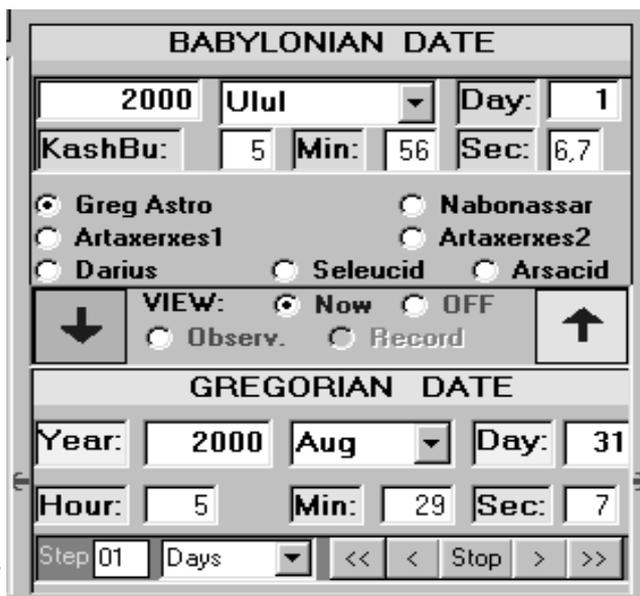
Arrow to → *convert from BAB. to GREG. dates*

← *Babylonian ERA options*

← *Arrow to convert from GREG. to BAB. dates*

Panel for → *animation*

## *GREGORIAN DATE* PANEL

THE PLANETS PANEL

 It is below the screen. With it, you control the info on the screen. The options with
the **symbols of the planets** give info about the heliacal cycles of the planets. The
STAR shows a picture of the sky. The SUN symbol gives info about the twilight
time. The '**R**' symbol has many options that show when you click on it. '**VIS**' is
visual info about the rise/set of the planets. '**RISE/SET**' is in text. '**GEO**' and
'**HELIO**' are coordinates. '**DRAWHELIO**' draws the orbits of the planets with
center SUN.
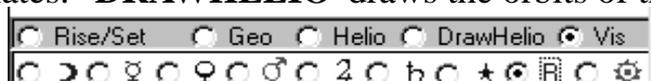
SKY PICTURE

The Meridian and Horizon are thin green lines. On left is East; on right: West. The ecliptic is a yellow circle. The center is the South Pole of the ecliptic. The breath of the ecliptic is from -20 to +20 latitude.

If you want to see it bigger, you click on the button-icon on the right:
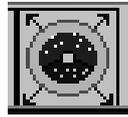
In the **animation panel** that is a part of the GREG DATE panel, you can choose step and click on the '>>' button to animate all pictures coming on the screen:

ANIMATION

THE PLANETS PANEL: MOON

The bab. days are in the inside circle. The greg. days in the outside. In the center is the month and whether the previous month has had 29 or 30 days. Ulul 30 means that previous month has had 29 days. Ulul 1 that it has had: 30 days. The phases and the time go counterclockwise. NC is at the right by analogy that it is the WEST where we see the New Crescent for the first time, facing South... In the upper left corner: info about the NC of the month. Bottom, left: info about the next NC. In the upper right corner is info about the altitude and the 'na' of the Moon in her AR and CS phases in the month.
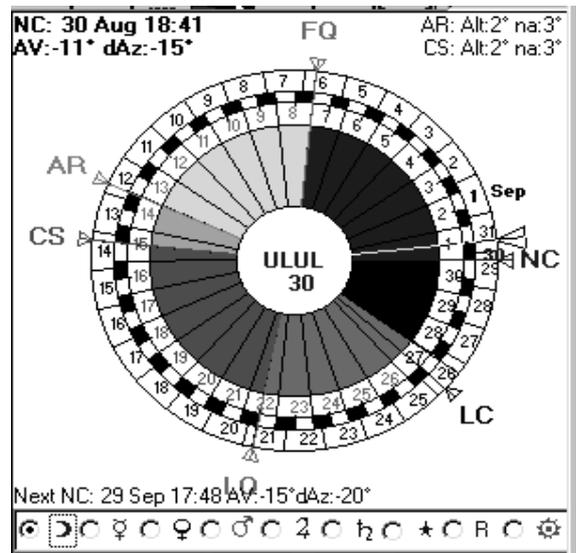
THE PLANETS PANEL: OTHER PLANETS

The phases and the time go clockwise. MF is at the left by analogy that it is the EAST where we see the Morning Star phase of a planet, facing South... The dates of the heliacal phases are given greg. and bab. Then follow the AV and the brightness (magnitude). You should look into the book 'The babylonian Astrology and Astronomy' for the abreviations. In the left top corner are given the tropical ecliptical coordinates of where the planet is in its phases.

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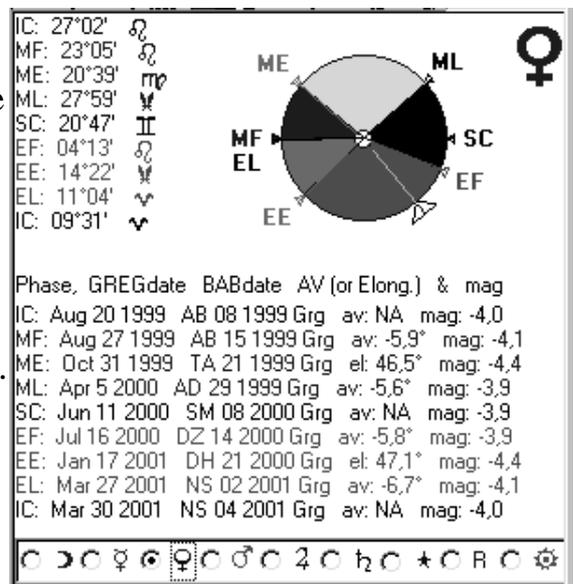
THE PLANETS PANEL: THE SUN

This option gives the time of the given babylonian day when the Sun is approaching the horizon: at sunset and sunrise. From -18° to 0° with step of 2°.
This is useful for practical purpose of observation.

THE PLANETS PANEL: THE 'R'ISE / SET

This option shows another panel:

When you click it for the first time it automatically goes on 'VIS' which is **'VIS'**UAL RISE / SET of the planets. The graph above shows the hours in the given babylonian day. The picture visualizes the sunset twilight (left), night (black), sunrise twilight (center) and day (yellow, right). The dash line shows exactly where is on the picture the moment of the given day (hour and minute). For each planet are given its RISE, TRANSIT (when in culmination on the Meridian) and SET.
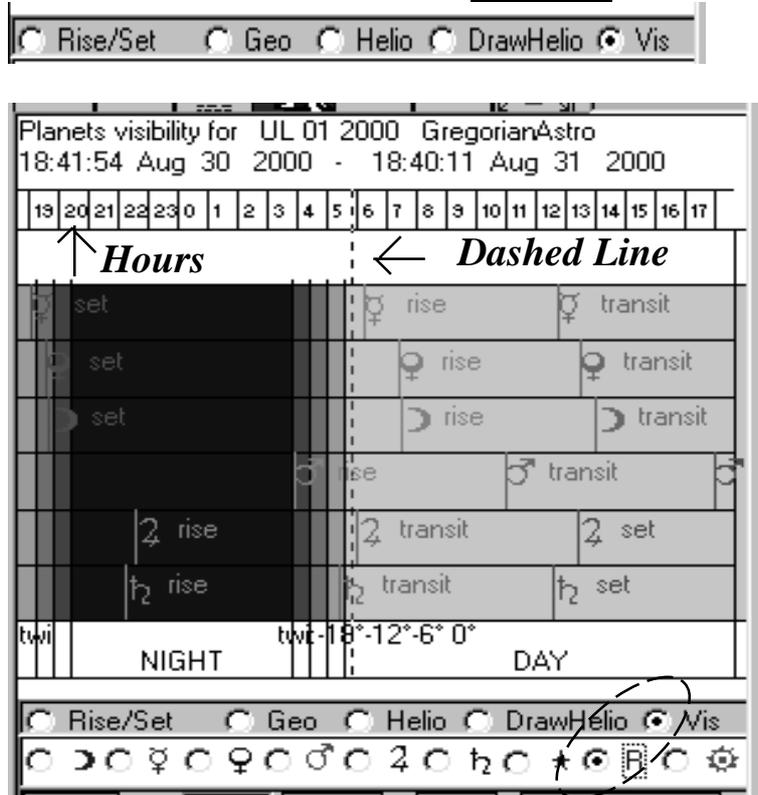
The **DASHED LINE** shows where in the picture is the time moment (in the GREG Date Panle). In the case, it's about 5:50 AM and the Sun is already above horizon!

The 'VIS' suboption of the RISE/SET option, is very important in the prognosis!

'DRAW-HELIO' draws the orbits of the planets and their aphelions (most distant point form Sun) and perihelions (most near point). This is useful when we assess the global cycles of the planets (consult the book).

'HELIO' gives the helio coordinates of the planets.

'Radius' is their distance from the Sun; RtoEarth: distance from Earth; RMin: their minimal distance from the Sun in their orbit and Rmax: maximal distance from Sun.

'GEO' gives the geocentric coordinates of the planets.

'Rise/Set' gives info about the rise and set of the planets for the given babylonian day. Time, AV, eastern or western of the Meridian position of the Sun, brightness of the planet and azimuth of rise or set. Very useful for practical observations

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THE VARIOUS FUNCTIONS PANEL

It's above the picture for drawing.

We talked about:

The PRINT-PHASES button

Calls a panel below from which you can print the lunar or planets heliacal phases for the given year and place.

The ADJUST-CHART button

Calls a horoscopic chart with animation bar and coordinates info. Useful to adjust the time by the MC or ASC or other parameters.

The PRIMARY DIRECTIONS button

Works only if you are in a 'record' MODE. Calls a small horoscope with the directions of the planets to the angles(mundo and zodiacal). You may check them with different keys (time-measures). Screen area should be enough (~ 1000 / 800 pixels) to enlarge the form. On the screen with the directions show 2 buttons. One is for printing. The other is for rectification of the birth-time. It calls one big picture where you can see the hits of the directions   and the years of the hits. Moving the mouse over a graphed time-table, the hits change.

The HOROSCOPE button calls a horoscope

The BABYLONIAN PROGNOSIS

Works only if you are in a 'record' MODE. Calls a control panel below where you can switch between 6 prognosis time-span relations and the 'radix'. The prognosis methods are in order of their time lenght and time sensitivity:

0: 'radix'
1: 4 time-minutes = 1 b. year (similar to the primary directions)
2: 1 kash-bu = 1. b. year (1 kash-bu=2 seasonal hours)
3: 1 b.day = 1 b. year (similar to the progressions)
4: 1 b. day = 1 b. month
5: 1 b. month = 1 b. year
6: 1 b. day = 1 b. day (transits)

When you click on one of these, the picture above changes as to the correlated time. You may see the real time (correlated time) in a long green panel at left. Below these options, there is an animation/time-input panel. You may input time there, then click on the 'REFRESH' button and see the astro parameters in force at that time.

From the graphic options, I recommend you stay in the 'VIS' suboptions of the 'R' ('Rise/Set' option) when you use the prognosis.

Suppose you want to see the situation with you on 1st of Sep, 2000 according to the relation 1 babylonian day = 1 babylonian year...

You open your own record, then click on the 'PROGNOSIS' icon

Then you click on the 'R' option   and then on
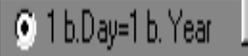
Then you click on   Then you input Sep 1, 2000 in the time

/ animation bar below:
and click 'REFRESH'

You watch where is the dashed line on the 'VIS' screen and if it goes through rise, transit or set of a planet, then this 'quick' primary direction will be in force at that time.   You may use also the animation bar. Input a step and click on '>>' or '<<' buttons. Then wait for the dashed line to come over rise/transit/set of a planet.

You may view all different graphic options like Lunar cycle or DrawHelio or planets Cycle... in a certain prognosis method. The best, however, for practical purposes, are 'VIS' (from 'R') and the SKY VIEW (the star symbol). In the sky view you may see in what year of life of the native are different stars approaching the horizon and meridian. The real time and the time corresponding to it, are in the long green label at left.

Real Time: Aug 20 1917 20:30:27 CORResponding TO: Sep 01 2000 10:42:39

Panel for view options →

Panel for technique (time correspondance) →

Input Date Panel →

Panel for animation →

Print the hits according to the technique ←

Refresh the screen after you input date/time of interest ←

Move back with 1 step only

Stop the animation

Move forward auto

Close the prognosis panel

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