User's Manual

FullAndNewMoons

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Mac OS X:

Obtaining FullAndNewMoons

`FullAndNewMoons` is delivered through the Mac OS X App Store.

Installation

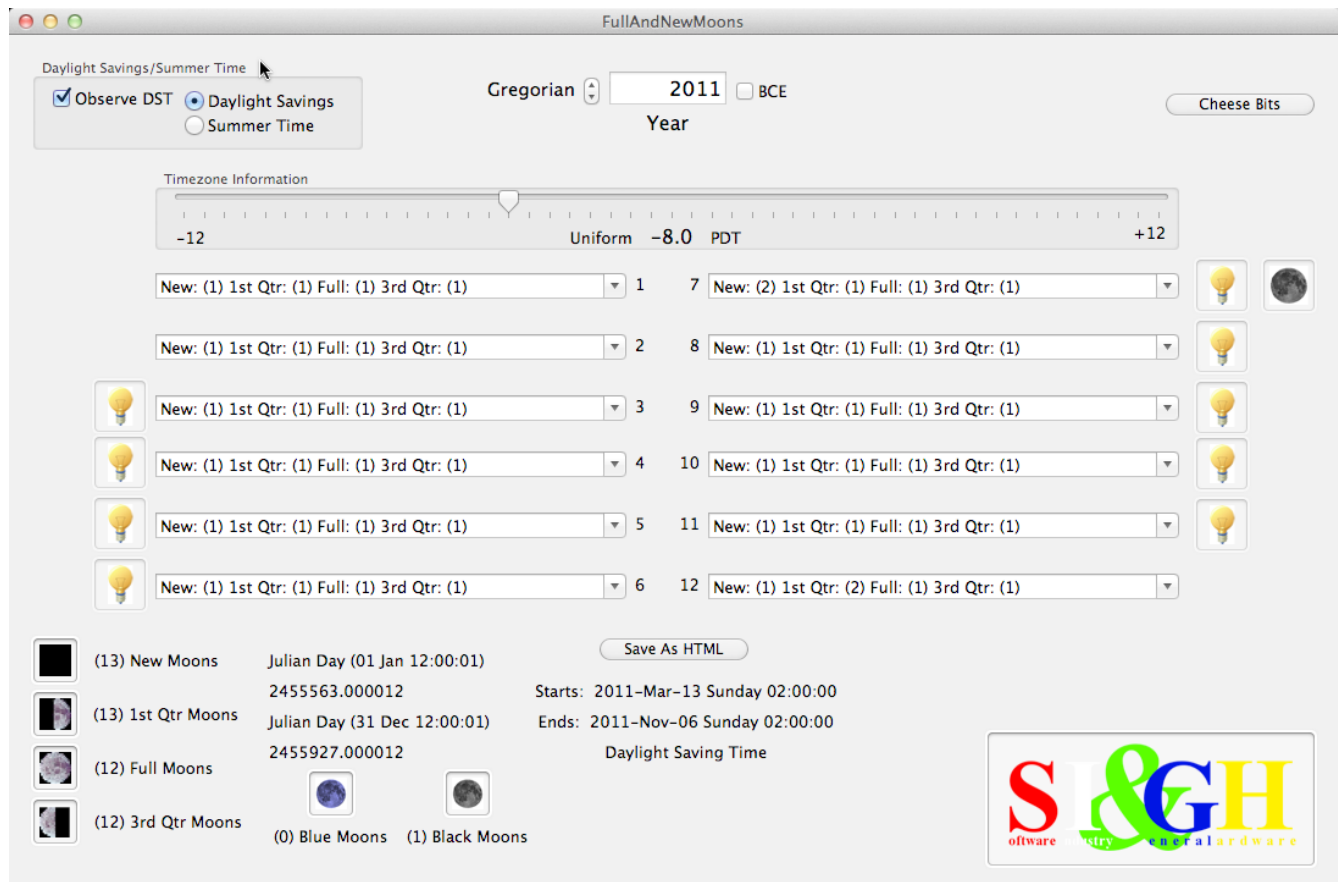The Mac OS X App Store will install `FullAndNewMoons` to your Applications folder.

Tutorial:

All information below is valid for Mac OS X.

Layout

Dates and Times

Here is a screen-shot of the main screen of `FullAndNewMoons`:

From left to right, top to bottom

Daylight Saving Time/SummerTime Group Box

- In North America during the "summer" months in all but two States the USA observes Daylight Saving Time (not Daylight Savings Time, with a letter-s added to Saving). Essentially the clock is rolled back one-hour during these "summer" months. It saves a lot of energy, not one bit of time is saved as near as anyone knows but it does save energy. This similar standard is observed in Europe. It is often called "Summer" Time in the United Kingdom and in Europe. Australia too observes this standard however they observe it in Southern Hemisphere Summer. The Australians also have at least one Territory that observes a ½ hour rollback during this time. All of these standards are arbitrary, observe different start and end dates, etceteras. The standards have changed over the years for both Europe and the USA. If you want to observe DST (AKA Summer-time) choose the DST check box. If you are observing the North American standard choose the Daylight Saving radio button, otherwise choose the Summer Time radio button.

Year Type

- "Gregorian" is a description of the year type. If a Julian year is displayed in the year edit box then "Julian" will be displayed. The year displayed is converted to an Astronomical Year prior to calculations.

Year Edit Box

- You may enter a year value into the edit box here. Only years representable as a Julian Day (NOT Julian Calendar) may be entered. This means that you cannot enter a year prior to: January 1, 4713 BCE Greenwich noon time.

Before the Common Era/Common Era Check Box

- Before the Common Era represents a year before 1 AD. The year value is actually a secular year so there is no year zero. However `FullAndNewMoons` uses an Astronomical year to do all the calculations so there is a year zero internally.

Cheese Bits Push Button

- If you would like to read about some interesting Lunar facts click on this button. You can add your own facts if you wish. More on this later. Currently this button is hidden in the Mac OS X version of `FullAndNewMoons`.

Timezone Horizontal Slider and/or Edit Box

- Your timezone of interest can be set using either of these widgets. If you have a ½-hour difference click the ½-hour check box. Timezone names are picked using the Military designations for each of the timezones. Thus Greenwich is the ZULU timezone. Pacific Time in North America is the UNIFORM time zone, etceteras. Each timezone is named for a letter in the phonetic alphabet.

Month Combo Box Display

- Month combo box display. Each secular month (01 through 12) is displayed in as a combo box with the months 01 through 06 on the left and 07 through 12 on the right. The first line of each combo box contains the total number of moon phases that occur in that month. Using the display above for month 04 (April) there is 01-New, 01-1st Qtr, 01-Full and 01-Last Qtr Moon phases. The month 05 shows a single phase entry for the Last Qtr which happened on Wednesday 2010-05 at 21:16 local time. And since DST is being observed there are yellow light-bulbs next to the months where DST hours are observed. If you remove the check mark on the DST check box the light-bulbs will disappear but the times are still local times. If you move the slider to Timezone 0 hours you will see the Coordinated Universal Time (essentially GMT) time for each phase.
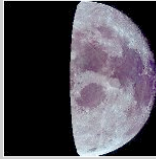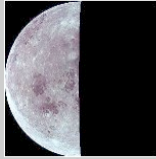
Save As HTML Push Button

- If you would like a calendar of the phases for the displayed year click this button and choose a location to save the file. Here is an example of the output as an HTML file:

Lunar Phase Totals For The Year

- This group box contains the total count of the phases per year. In the case of year 2011 there were 13 phases of New and First Qtr Moons. There were 12 Full and Last Quarter phase moons.

Julian Day Information For Year Start And End Group

- To the right of the group box is the Julian Day for January 01 of the shown year and the Julian Day for December 31 of the year shown

Blue And Black Moon Yearly Counts

- Below the Julian Day Year Information is the count of Blue Moons and Black Moons found during the year. Definitions of Blue And Black Moons can be found from the Menu Bar "Info->Lunar" drop down menu item.

Menu Items

Each menu

About FullAndNewMoons Menu Item

Under FullAndNewMoons is the About Menu Item:

Clicking on the About menu item will display the following panel:

FullAndNewMoons

Version 1.0 (1)

Engineering:
   SIGH--FANM Group

Human Interface Design:
   SIGH--FANM Group

Testing:
   SIGH--DVT Group

Documentation:
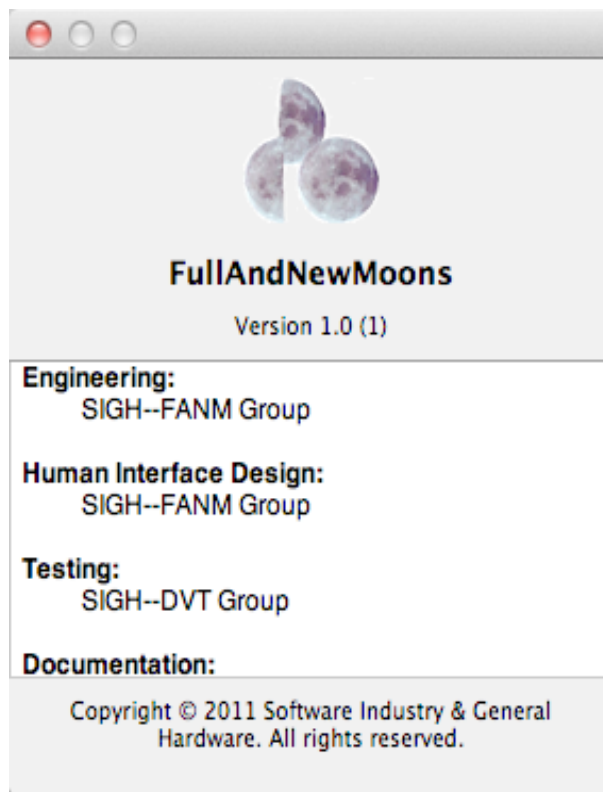
File, Edit and View Menu Items

There will be no unusual items under File, Edit or View

Info Menu Item

Under the Menu Item Info are several sub-menu items: Calendar, Lunar and Time
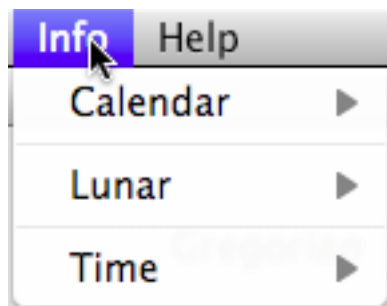
Info->Calendar Menu Item: Astronomical Year, Julian Date, Julian Year, Gregorian Year, Interstitial Year, Year Zero, CE and BCE, ISO 8601

Under Calendar you may the following: Astronomical Year, Julian Date, Julian Year, Gregorian Year, Interstitial Year, Year Zero, CE And BCE and ISO 8601.
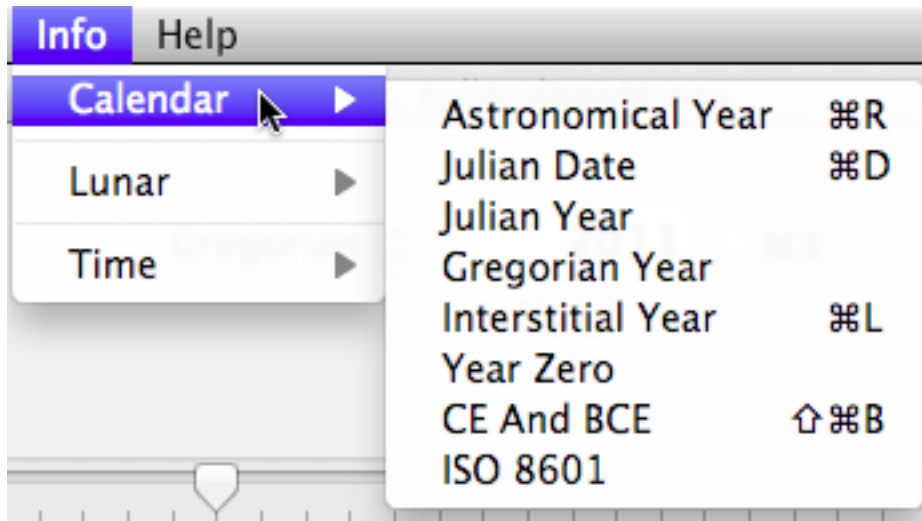
Info Lunar Menu Item: Blue Moon, Black Moon, Cheese Bits

Under Lunar you will find explanations of Blue Moon, Black Moon and Cheese Bits.
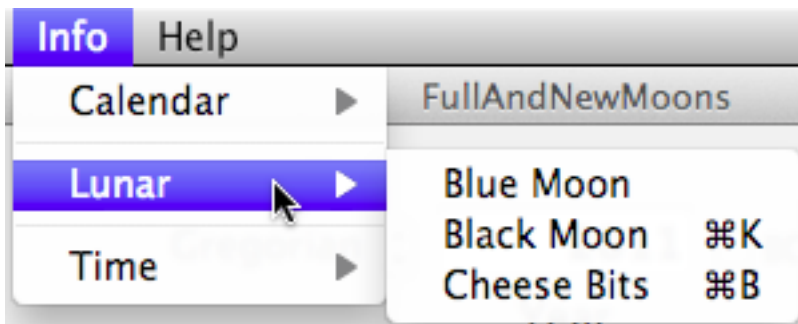
Time Menu Item: Daylight Saving (DST), Summer Time, Timezones, Military Timezones

Under the Menu Item Time you will find: Daylight Saving (DST), Summer Time, Timezones and Military Timezones.
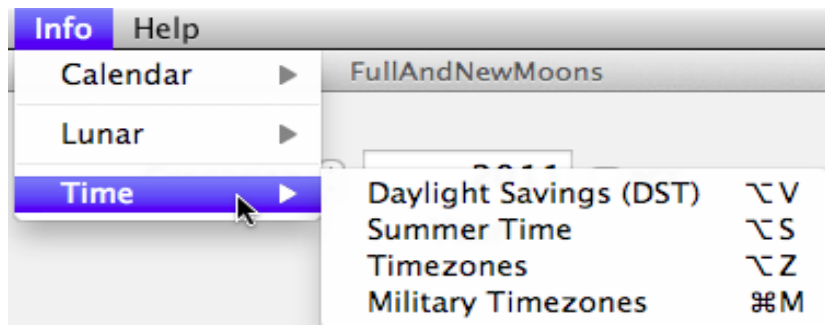
Reading the Display

Although the display can seem a bit busy the information is easy to interpret and while the presentation is dense it is rich in visual content.

Interpreting Icons

Daylight Saving Time In Effect	Blue Moon Found
Black Moon Found	S.I.G.H. QR
S.I.G.H. Logo	Leap Year
New Moon	First Quarter Moon
Full Moon	Third Quarter Moon
	Icons shown on *FullAndNewMoons*

Daylight Saving/Summer Time Indicator Icon

💡 • This lightbulb icon indicates that some or all of a month is affected by Daylight Saving/Summer Time.

🌑 • This blue-shaded image of the moon indicates that a month contains a Blue Moon.

🌑 • This grey-shaded image of the moon indicates that a month contains a Black Moon.

🧍 • This figure indicates that the year shown is a leap year.

• The other icons should fairly self-explanitory.

Month Combo Box Information Boxes

Each month combo box has as the first entry the number of New, 1st Qtr, Full and 3rd Qtr moons. If you select the expand turnstyle (depicted as a solid colored triangle icon) the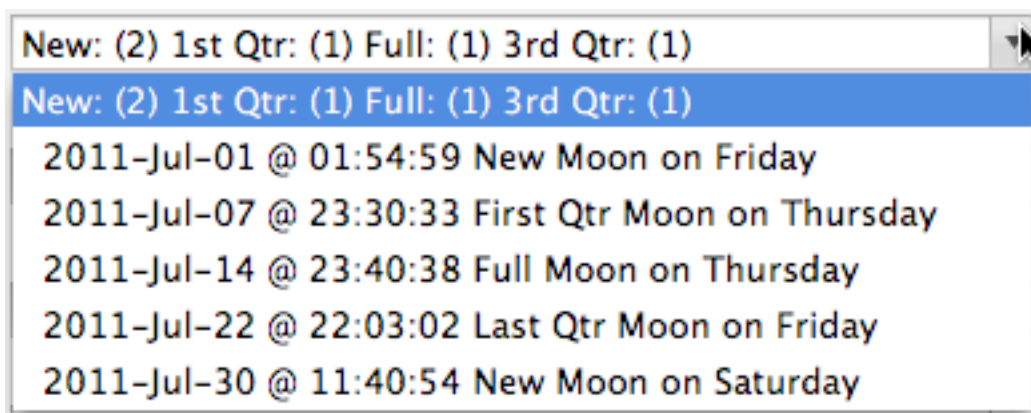 menu combo box will expand as shown above. Each of the Qarters is shown sorted by date and time. The date is shown in the ISO 8601 standard of year, month, day. The time is separated from the date by an "@" sign. The time is shown in the hh:mm:ss standard followed by a textual description of which quarter is on that date and the day of the week that the date refers.

As an example look at the first line below the blue selected line in the combo box depicted above. This happens to be for the seventh-month (July in english, abreviated to Jul). The first New Moon of that month occurs on the first of July at 01:54:59 which is a Friday.

Note that on this month we have a Black Moon as a second New Moon occurs on Saturday the 30th of July that same month at 11:40:54.

You may be surprised to see that some phases of the moon happen in the daylight hours. The moon is up, much of the time, during both the day and the night.

Getting Menu Items Drawer To Display And Close

When you select a menu item a drawer panel will appear from one side of the *FullAndNewMoons* main window.
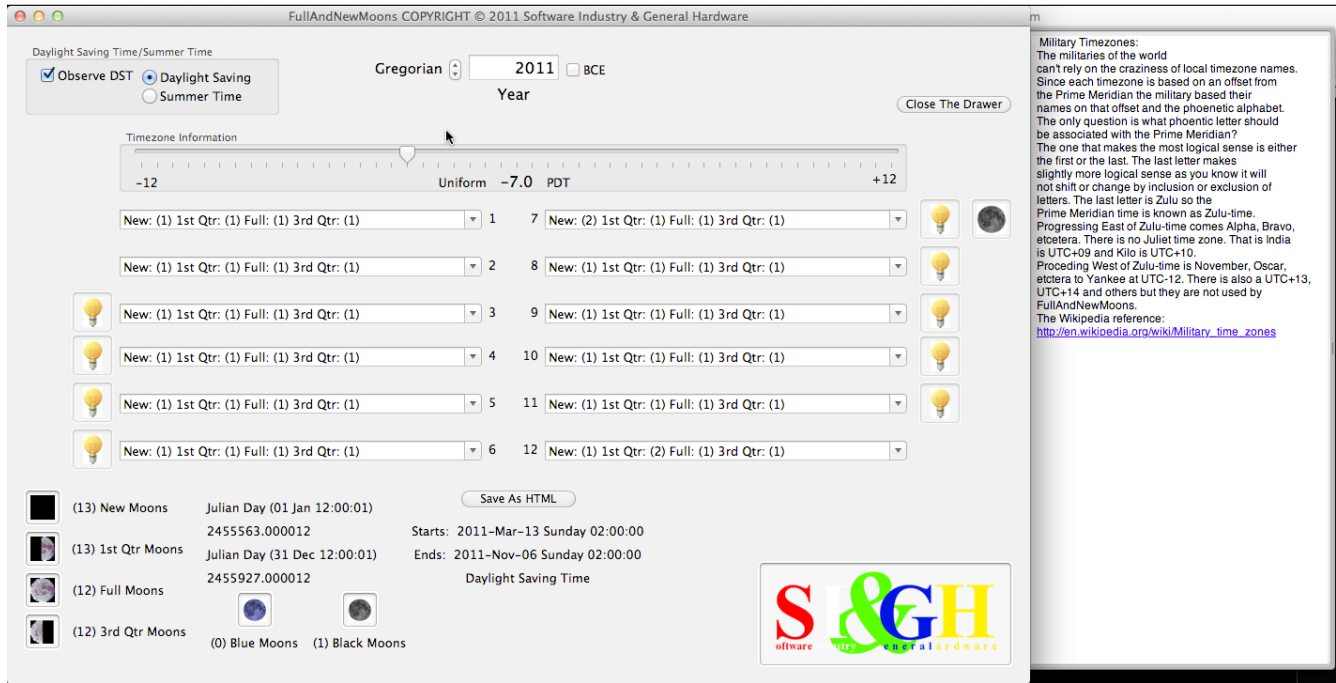
When you open the drawer a new button will appear: [Close The Drawer] This button allows you to close the door without effort.

You may leave the drawer open too. If *FullAndNewMoons* needs to close the drawer the program will do so.
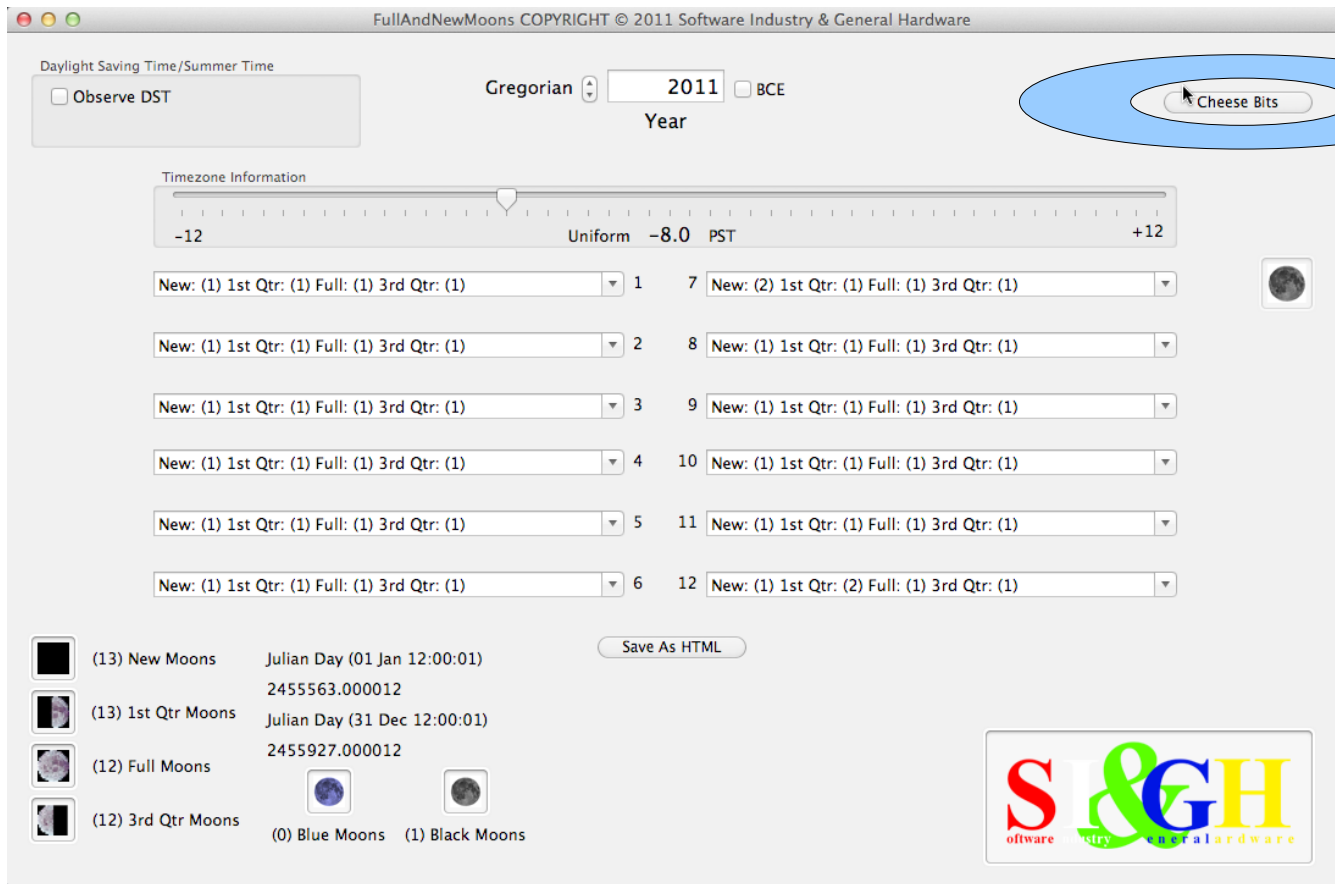
Each menu reference is a quick description of the menu item. For a more in-depth discussion a Wikipedia reference has been made where one exists. Click on the link to open your browser and jump to the Wikipedia page. You may also be interested in LPOD (Lunar Photo Of the Day).
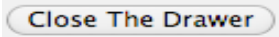
FullAndNewMoons is not intended as a replacement for a planetarium software program. There are several very good examples of such software. S.I.G.H. recommends any of the following:

Distant Suns				
Starry Night				
Stellarium				
Celestia				

Cheese Bits

In the upper right corner of the main window you will find the ⬭ Cheese Bits ⬭ button.

Cheese Bits are morsels of lunar information. They are composed of the following elements:

1. The Author's First Name
2. The Author's Last Name
3. The Author's Email Address
4. The Author's Association
5. The Lunar Information
6. The Supporting Links
7. The Reference Information

You can

- Create your own information
- Add yourself as the author
- Add the supporting links, information and references for your own *Cheese Bits*

Or you may use the *Cheese Bits* library available from *S.I.G.H.*, your friends, colleagues, astronomy clubs or anyone keeping a *Cheese Bits* Library.

Viewing Cheese Bits

There is a default Cheese Bit library supplied with FullAndNewMoons. There are only three Cheese Bits in the library but you will probably like them.

To view a Cheese Bit click on the [Cheese Bits] button. A panel will slide out from the side of the Main Window with a Cheese Bit on the panel as shown below:
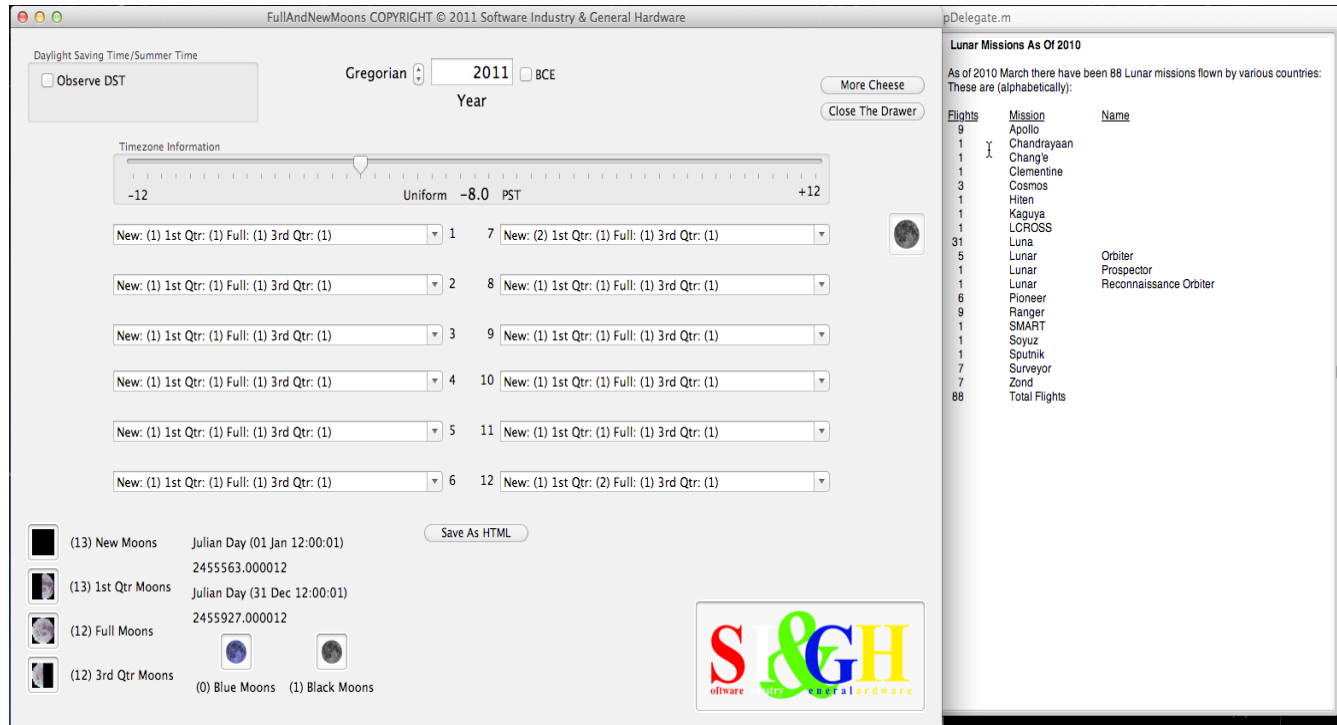
This particular **Cheese Bits** lists the Lunar Missions as of 2010 alphabetically. **Cheese Bits** can be as simple and as complex as you wish.

When you click on the [Cheese Bits] button a **Cheese Bit** will be displayed the panel will open the [Close The Drawer] button will appear and the [Cheese Bits] button will change to: [More Cheese]

If there are 10 or fewer **Cheese Bits** in your library the **Cheese Bits** are shown in order. They will wrap around from the last **Cheese Bit** to the first automatically. If you have more than 10 **Cheese Bits** in your library the **Cheese Bits** are selected more or less randomly. However no **Cheese Bit** is presented twice until you have seen all the **Cheese Bits** in your Library.

Cheese Bit Data File

The Cheese Bit Data File is file that contains all of the Author information, the Links and References as well as the actual information morsel itself. The information is stored in the module as RTF.

RTF (Rich Text Format) was developed by Microsoft®. RTF has detractors and supports. S.I.G.H. is NOT a supporter. But Apple apparently is. The panel methodology limits us to RTF. The Qt version of FullAndNewMoons uses HTML instead of RTF and this makes it far easier for you to edit and manipulate the Cheese Bit Files Data in your files.

FullAndNewMoons does contain a RTF editor in the Mac OS X version so you are okay.

Entering your own Cheese Bits

<TO BE ADDED>