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"CCLUN"

Command center of the Virtual Moon Atlas

Documentation usable with version 8

In 2022, we celebrated 20 years of the Virtual Moon Atlas (VMA). Since 2002, as amateur astronomers ourselves, we continue to produce and perfect the VMA to design ever more useful software for observers, photographers, organizations interested in the Moon, ever more practical for use on field and of interest to professionals as a tool for cartography and basic lunar study. We also try to define the most user-friendly and intuitive features and interface possible.

As new data has been released based on new results from the main current lunar probes, we have enough "hardware" to release a new version. We are happy to present to you now, after two years of development, the new version 8 of the "Virtual Atlas of the Moon".

THE WINDOWS DOWLOADABLE VERSION

Version 8.0 is usable on **Windows and Linux** computers. Powerful configurations are recommended to be able to take full advantage of high resolution textures, extensive databases, scientific layers, bi-windowing, "full screen" and dual screen display, as well as dynamic shadows on the terminator .

This version is free to download from the VMA website. It can be supplemented by the many image libraries that can also be downloaded free of charge from the VMA website.

Please note that, given the positions of Microsoft (c) and Apple (c) on support for older versions of their respective operating systems or graphics engines, we now only ship the VMA for computers running Windows 7, Windows 10 and under Linux. Compatibility with Windows 11 has not been tested.

THE BASIC VERSION

The basic version includes all the necessary elements to discover the possibilities and the power of VMA without difficulty and without headache. It includes :

- CcLun Command Center
- AtLun Map Manager
- DatLun Database Manager
- PhotoLun Images Library Manager
- CalcLun Ephemeris Calculation Manager
- NoteLun External Documents Manager
- WebLun Web Sites Manager
- Low resolution LRO WAC texture
- LRO low resolution texture – Kaguya Shaded
- Hevelius 1647 historical texture
- Historical Beer & Madler 1841 Texture
- Basic digital terrain model
- Altitude Overlay
- Geological Overlay
- Database of named formations
- Database of satellite formations
- Apollo Hasselblad Image Library
- Apollo Mapping image library
- Complete English and French versions with illustrated documentation in pdf format.

THE DOWNLOADABLE DATAS

The basic version can then be completed with the many "add-ons" that can be associated with it:

- The additional data packs (medium resolution textures / historical textures / scientific layers / images of space probes, etc.)
- High resolution textures
- Very high resolution textures
- Textures created by David O'Bien from LPI
- Amateur image libraries
- The translations

THE « SD CARD » VERSION FOR WINDOWS / LINUX

We have choosen this distribution support given its large capacity under maximum compactness. In addition, the user can then reuse this medium for personal purposes. You can order the "SD Card" versions from the VMA website if you want to support us or because you don't have a fast internet connection or if you prefer a convenient and quick installation.

These versions can be used with powerful configurations. The SD card contains the Windows version or the Linux version with an installer, all modules, all textures up to resolution level L6, all scientific layers and several public domain image libraries (LOPAM, Apollo , Apollo Mapping, LAC/LM, Clementine, LROC and Consolidated Lunar Atlas).

This SD version can be supplemented with other non-public image libraries (Best of Amateurs, Best of Peach, Best of Cathala, Best of Brahic, Best of Villadrich, Best of Pic du Midi, Kaguya...) and textures made by David O'Brien of the LPI also free to download from the VMA website, if you want to make the atlas even better.

WHY THIS MANUAL ?

Even if the VMA is relatively easy to access, the manual is necessary to discover all the possibilities of the ever-increasing software. We advise you to read it carefully while at the same time practicing the use of the functions described. Now each module has its own manual in pdf format.

Have a good use and we hope you enjoy this program and recommend it around you.

Thank you all for your support which has allowed us to continue to develop the Atlas for 20 years !

Christian Legrand & Patrick Chevalley

The authors hard at work on the VMA ! In the foreground P. Chevalley and in the background C. Legrand

DOCUMENTATION

THE VIRTUAL MOON ATLAS MODULES IN VERSION 8.0

The "**Virtual Moon Atlas" version 8** now includes 6 modules :

- The "**ATLUN**" module (c): this is the cartography module which is the basic module of the AVL. It has its own manual.

- The "**DATLUN**" module (c): this is the database management module which has powerful sorting functions. It has its own manual.

- The "**PHOTLUN**" module (c): this is the image library management module which has particularly powerful processing functions. It has its own manual.

- The "**WEBLUN**" module (c): this is the module for managing lunar-oriented Internet sites which has sorting functions. It has its own manual.

- The "**CALCLUN**" module (c): this is the module for in-depth calculation of lunar ephemerides allowing more detailed planning of observation sessions and forecasting the visibility of formations. It has its own manual.

- The "**NOTELUN**" module (c): this is the module for managing the notes and documents associated with each of the lunar formations. It allows you to link to the VMA external Internet links, personal notes, pdf documents, Word documents to have more complete information. It has its own manual.

These modules are launched from the “**VMA COMMAND CENTER**” of which here is the manual.

THE COMMANDE CENTER

The "**VMA COMMAND CENTER**" screen has buttons for loading the modules or documentation of your choice

VMA Commande Center screen

The **Command Center** screen contains 9 currently usable buttons:

AtLun: allows you to load the lunar mapping program.

DatLun: allows you to load the AVL training database manager.

WebLun: allows you to load the lunar web site manager.

PhotLun: allows to load the image manager of the AVL image libraries.

CalcLun: allows you to load the AVL ephemeris and planning calculator.

NoteLun: allows you to load the manager of notes, links and documents associated with the AVL lunar formations.

Documentation: opens a scrolling list to open the desired documentation.

Tutorial: opens the tutorial showing how to use AVL properly.

Quit: allows you to quit the VMA 8.

END OF CCLUN MODULE MANUAL VERSION 8

The authors kindly ask users to report any errors found in this manual to them through the website forum.