VIRTUAL MOON ATLAS "PRO" VERSION 5.1

MOON SURVEY FREE SOFTWARE. Christian Legrand[1] and Patrick Chevalley[2], [1]Software conceiver / Ch. Legrand 668 Rue du Tour de Préaux 76160 PREAUX (France) / chlegrand76@hotmail.fr , [2]P. Chevalley / Software writer 160 Route d'Aire CH-1219 AIRE (Switzerland) / pch@ap-i.net.

INTRODUCTION : Since 10 years, we have developed a freeware to help Moon observing by amateurs, to improve interest for Moon in general public and to provide a basic lunar tool to professionals.

Pro" version uses datas coming from USGS and from Dr Mark Robinson, Alan Binder and Dr Maria Zuber teams, Kaguya, ISROand Chandrayaan missions.

The software includes management of a complete database (9100 entries) of named and satellite features of Nearside and Farside. DATLUN © A specific database manager is included

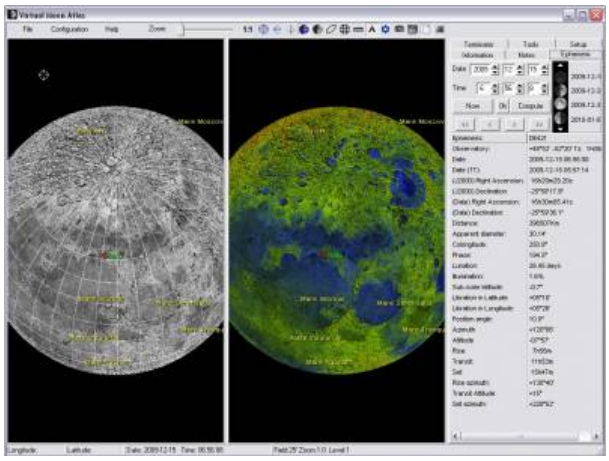
Pictures libraries presenting each formations and coming from LPI resources (Used by permission), amateurs shootings are associated and contain more than 7000 pictures. PHOTLUN © is a specific included pictures manager.

VMA Pro 5 is presently available for Windows, Linux and Mac 0S.

The VMA software has been reviewed in main amateur astronomy magazines [1],[2],[3]…and downloaded near 700 000 times worldwide since 2002. Several translations are available in all major languages (FR / SP / IT / CN…) .

The VMA software has been used by several professional organizations such as Kitt Peak Observatory, National Japan Observatory, Birkbeck College / University College London (K. Joy), BBC Sky at night. It has been recommended par ESA Smart-1 team and by French ministry for education. It has been presented at 2006 and 2007 LPSCs.

We are presently preparing Version 6 that will include all new LRO textures / DEM, "Anonyms" craters databases and the new IAU database. All other improvements proposal are welcome..



Picture 1 : Double windowed VMA main screen

REFERENCES: [1] Gary Seronik. (2003) Sky & Telescope. [2] Richard Bartlett (2003) Astronomy Magazine. [3] David Fosset (2010) Ciel & Espace

SOFTWARE FEATURES :

Main "Pro" version features are :

- « Map » window with various functions thumbnails including « Informations », « Ephemeresis », « Tools », « Setup», « Notes», …
- Complete rotating Moon globe with coordinates grid
- Second window opening permitting comparisons between different textures and overlays combinations
- Real time or choosen phase and librations display
- Orienttation of the lunar disk with powerful zoom
- Formations search function starting from name
- Formations names display according to zoom power
- Orbital viewing simulation
- Integrated notepad for your own notes on formations
- Size and distance measurement tool on maps
- Context menu on right mouse click
- Maps and database printing with captions setup
- Eyepieces field simulation
- Full screen display for projector presentations

DATABASES :

Included databases are :

- Nearside named formations
- Farside named formations
- Nearside satellite formations
- Farside satellites formations
- Human exploration sites (Historical)
- Lisa Gaddis pyroclastic deposits
- ALPO domes databases

For each formation, included informations about :

- Formation geology
- Formation localization on lunar disk
- Formation detailed description
- Detailed formation name origin

DATLUN © is a specific database manager using SQL requests permitting sortings and extractions on every word of the databases.

Picture 2 : DATLUN main screen

MAPPING TEXTURES :

The used mapping textures are David Seals JPL shaded relief with and without albedo (1000 m per pixel), Dr Robinson Northern University Clementine (500 m per pixel) and USGS Lunar Orbiter high resolution textures (200 m per pixel) (Used by permissions).

SCIENTIFIC OVERLAYS :

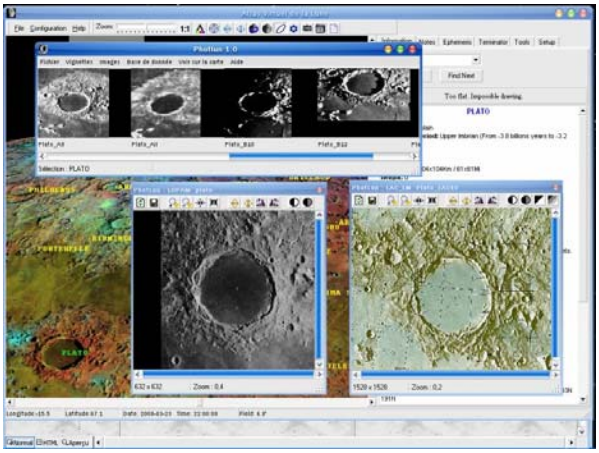
- Gravity, temperature, altimetric, geologic, various elements as thorium, iron, various neutrons varieties… overlays coming from lunar probes results can be applied on each texture. Double window feature permits comparizons between 2 different overlays.

PICTURES LIBRARIES :

VMA includes lunar pictures (More than 7000) from :

- Lunar Orbiter Photographic Atlas of the Moon
- Lunar probes
- Apollo missions mapping and 70 mm cameras
- Consolidated Lunar Atlas
- Lunar Astronautical Charts and Lunar Maps
- Best amateur pictures

PHOTLUN © specific pictures manager with editing possibilitiespermitting basic processing on the pictures (Lighting / contrast / orientation / zoom)



Picture 3 : PHOTLUN main screen

DISTRIBUTION :

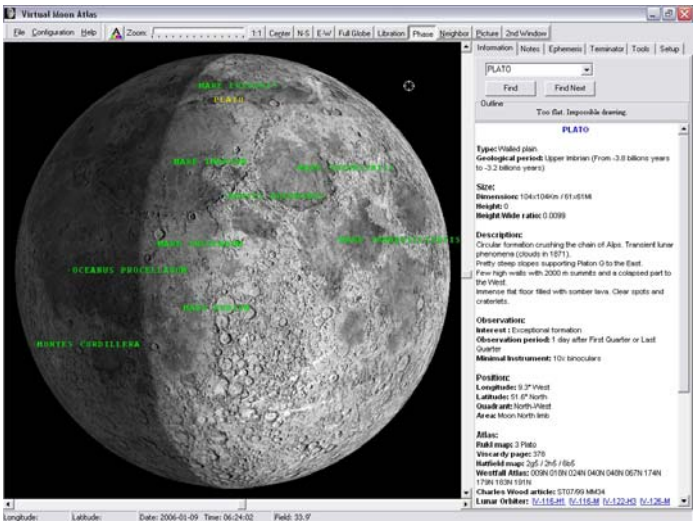
VMA Pro and Expert versions with all add-ons collection are freeware and downloadable from our Web site

http://www.ap-i.net/avl/en/start

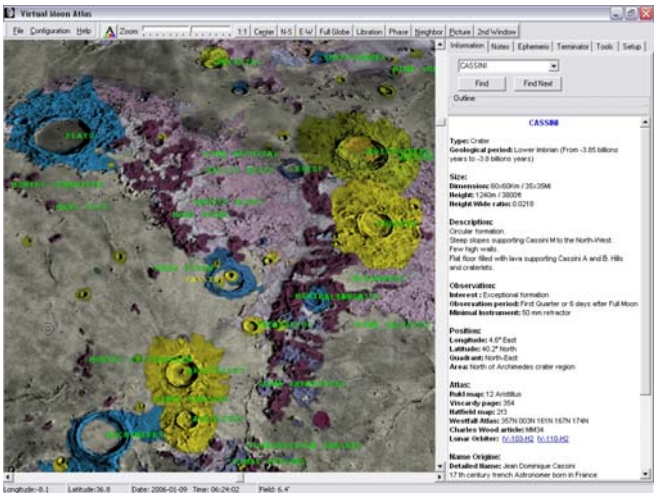
A CD version can also be ordered if necessary.

We maintain a discussion forum about VMA and we encourage other languages VMA translations

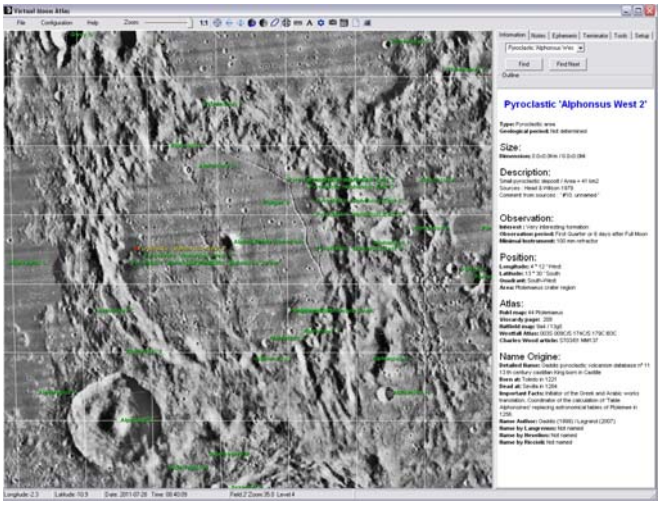
OTHERS SCREEN CAPTURES :



Picture 4 : Basic globe with phase and libration



Picture 5 : Cassini crater area with geology overlay



Picture 6 : Alphonsus crater pyroclastic deposits on LOPAM texture with 1° grid