

# LROC Quickmap June 2020 Update

## New & Updated Layers

### Lunar Prospector

- Magnetic Field Magnitude *updated*

### LRO LOLA

- SLDEM2015 Slope
- SLDEM2015 Azimuth
- Roughness at 25m - 75% Quantile
- Roughness at 25m - 50% Quantile
- Roughness at 25m - 25% Quantile
- Roughness at 25m - Average
- Roughness at 100m
- Slope at 100m
- Sky Visibility
- Earth Visibility 240m
- Earth Visibility 120m
- Earth Visibility 60m
- Sun Visibility 240m
- Sun Visibility 120m
- Sun Visibility 60m

### Geologic Features and Maps

- Unified Geologic Map
- Unified Geologic Map Labels

### LROC NAC

- NAC DTMs (Color Shaded Relief) *updated*
- NAC DTMs (Shaded Relief) *updated*
- Photometry Sites *updated*
- Stereo Observations *updated*
- Feat. Mosaics Observations *updated*

- NAC ROI Mosaics *updated*

## LROC WAC Basemaps

- Polar illumination maps *updated*

# LROC QuickMap January 2020 Update

## New & Updated Layers

### Overlays

- 3D Printing Sites
- Nomenclature *updated*
- LRO Satellites (satview)

### ACT/Virtual Layers (experimental)

- GLD100 (+LOLA) Slope [dynamic]
- SLDEM2015 (+LOLA) Slope [dynamic]
- Shaded Relief [time dynamic]
- Shaded Relief + WAC No Shadows [dynamic]

### Geologic Features

- Hiesinger Mare Count Areas [vector]
- Hiesinger Mare Age [vector]

### Instrument Footprints

- LROC NAC Footprints *updated*

### Chandrayaan-1

- M3 2um Band Center
- M3 1um Band Depth

### GRAIL

- Crustal Thickness
- Free Air Gravity

## Lunar Prospector

- Titanium Abundance
- Iron Abundance

## LROC NAC

- PSR Mosaics [updated]
- NAC Polar Mosaics (1 m/pix, uncontrolled) *updated*
- NAC ROI Mosaics *updated*
- Feat. Mosaics Obs *updated*
- Stereo Obs *updated*
- NAC DTMs Shaded Relief *updated*
- NAC DTMs Color Shaded Relief *updated*
- Photometry Sites

## LROC Global DTM (GLD100)

- GLD100 (+LOLA)

## LROC WAC basemaps

- Polar Illumination Maps *updated*
- WAC Mosaics *updated to use sommer mosaics*

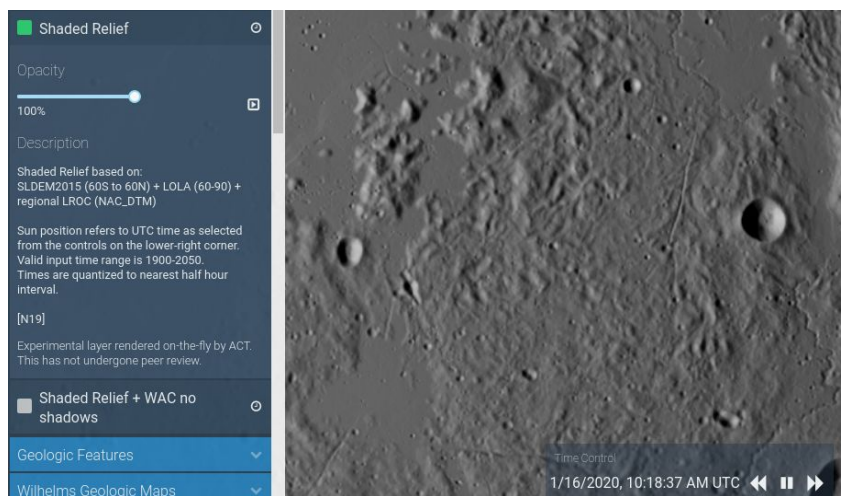
# New Features

## Dynamic Layers

### Time-based Layers

Example: See the new [Shaded Relief](#) layer

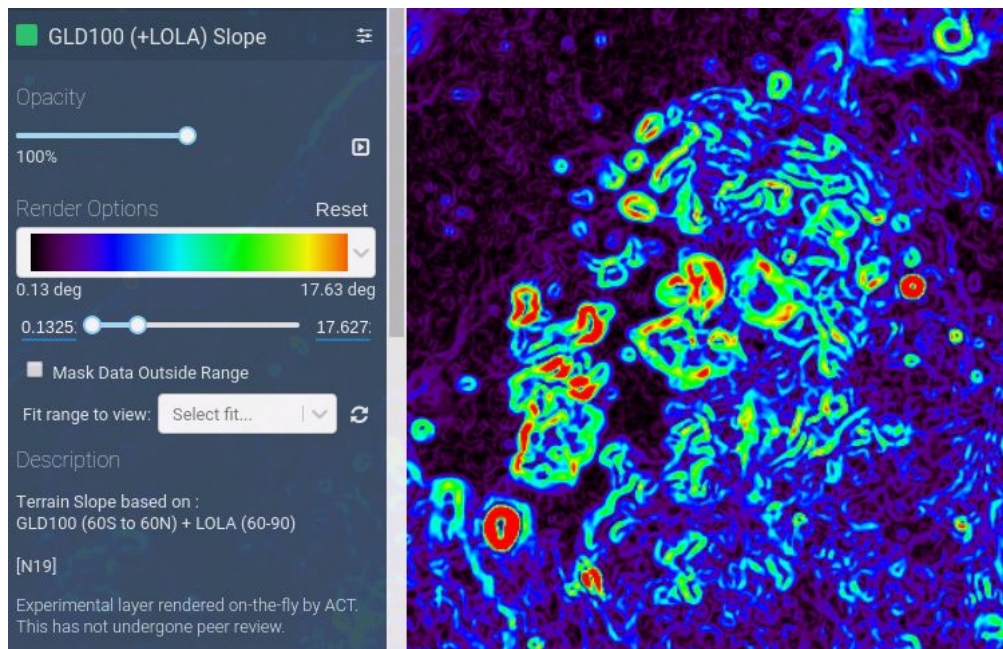
A new type of layer whose rendering is dependent on the application time. When a time-dependent layer is activated the clock widget will appear in the lower-right of the screen allowing the user to control the current time being rendered.



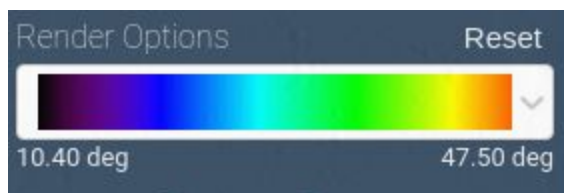
## Numeric Dynamic Layer

Example: [custom slope rendering](#)

Allows users to customize the rendering of numeric/scientific data. Gives control over the color palette used and range of values displayed.



### Palette Selector



Provides a drop-down to the user of all the palettes available. Once selected, the layer is displayed with the newly selected palette.

## Range Slider

Allows the user to select the numeric range of data to be rendered. The range can be selected either via the slider or by using the input boxes on either side.



The 'Mask Data Outside Range' checkbox means any regions with data outside the selected range will be rendered transparent rather than clamped to the min or max palette colors.

## Fit Range to Data in View



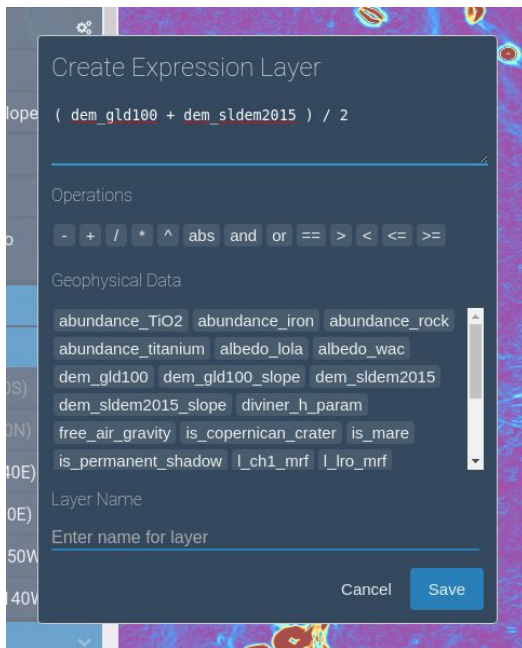
This select box allows one to automatically set the range to the values in the current view. Can select one of 'Full', 'Hist99', 'Sigma1', or 'Sigma2' ranges. When the refresh icon button is activated the range will auto-update with the view.

## Expression Layers

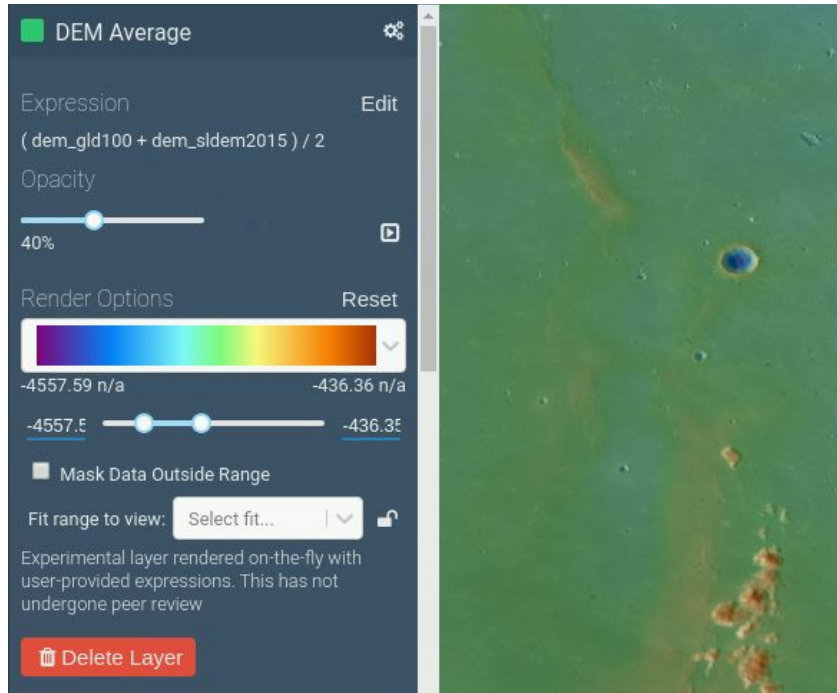
Examples: [Ratio of LOLA and WAC albedo](#), and [comparing DEMs](#)

This powerful new kind of layer allows a user to visualize data by performing calculation on existing numeric data sources.

To create a new expression layer select the '+' icon at the top of the Layers panel.



In the Create Expression Layer dialog you enter the desired expression into the text box. The supported Data Sources and operations that can be used are listed underneath. Once done an optional Layer Name can be supplied and hit 'Save' to have that new layer added to the Layers panel.



Once an expression layer is created it has all the same configuration options as a Numeric Dynamic Layer. The expression can also be edited at any time by selecting the 'Edit' option at the top of the layer description, or deleted by selecting the red 'Delete Layer' button at the bottom.

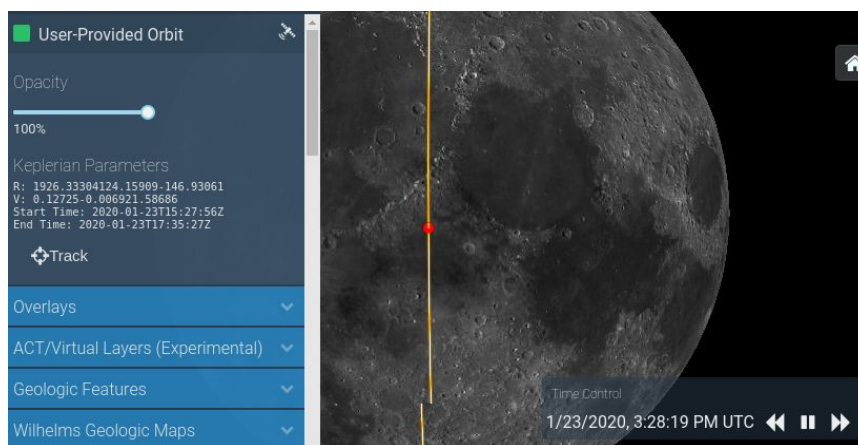


## Visualize Custom Orbits

Allows the user to provide an arbitrary keplerian orbit parameters in the url and have the satellite track rendered. The feature is currently a bit advanced requiring the user to supply the Keplerian parameters via the url string.

Example URL:

<https://quickmap.lroc.asu.edu/layers?sat=1926.33304,124.15909,-146.93061,0.12725,-0.00692,1.58686>



## Layer Tree Search

Example: [try it out in the Layer Panel interface](#)



Filters the Layer Tree showing only those layers whose name or description contains the search text.

Clear filtered state by deleting text in search box or selecting the 'x' icon in the search box.

∴ ACT