

### **Working with jpeg2000 Lunar Orbiter Images in ArcMap**

1. Download/copy jpeg2000 LO data into folder on your PC
2. Launch ArcMap opening a new empty map
3. Select Coordinate system and background color of project.
  - a. Right click “Layers” in left panel and select Properties (or simply double-click the “Layers”
  - b. Select Coordinate System tab
    - i. In the bottom panel “Select a coordinate system”, open the “Layers” folder using the plus sign, open the folder for one of the images and either verify it matches the current coordinate system above or select coordinate system from one of the image layers.

OR for geocentric (lat/lon)

  - i. Expand Predefined folder in lower panel
  - ii. Expand Geographic Coordinate System
  - iii. Expand Solar System
  - iv. Select Moon 2000
  - c. Select Frame tab
    - i. Set background color to black
  - d. OK to apply changes
4. Import images
  - a. File → Add Data (or click on + symbol in tool bar)
  - b. Navigate to data folder and select all images to import

**SAVE PROJECT FREQUENTLY! FILE→ SAVE AS**

5. Make background NULLS transparent
  - a. Right click an image layer in left panel and select Properties (or double-click the filename)
    - i. Select Symbology tab
    - ii. Check box next to “Display Background Value:”

- iii. OK to apply changes
  - b. Do the same for each image or if 'copy and paste' function is available (download this from: <http://arcscripsts.esri.com/details.asp?dbid=13128> )
    - i. Highlight filename with above settings
    - ii. Click on Copy icon in toolbar
    - iii. Select the remaining filenames to apply changes to
    - iv. Click on Paste icon in toolbar to apply same settings to
6. Stretch image layers
  - a. Select Symbology tab
  - b. Experiment with Stretch Type near bottom of window
  - c. Click Apply to see changes before accepting with OK
  - d. Apply same stretch values to other image layers via Copy and Paste tool
7. Add additional data using the Add Data function
  - a. Add data that has a similar projection and center longitude for best results
8. Reorder image layers
  - a. Highlight layer name and drag to desired position
  - b. Layer at top of list is on top of other layers
9. Turn layers on and off by adding or removing check box next to layer name by clicking in box
10. To group an image set (e.g., all LO3 images), select many using either shift or control click, right click on selected images and choose group. Now all images in group can be turned on and off. Also it is easy to drag images in or out of groups.
11. Measure features by selecting ruler on toolbar
  - a. Set units by selecting second icon from the right in the dialog box
  - b. Click once to set one end of the segment then double-click to end
  - c. Results are displayed in the Measure dialog box
  - d. It is best to hold down shift key while measuring to ensure geodesic lengths.
12. To load in dozens of images for display (analogous to 'virtual mosaic') it might be beneficial to take advantage of ArcMap's unmanaged "raster catalog" type or ArcMap 94 "mosaic catalog" types.