

Capri Chasma Targets

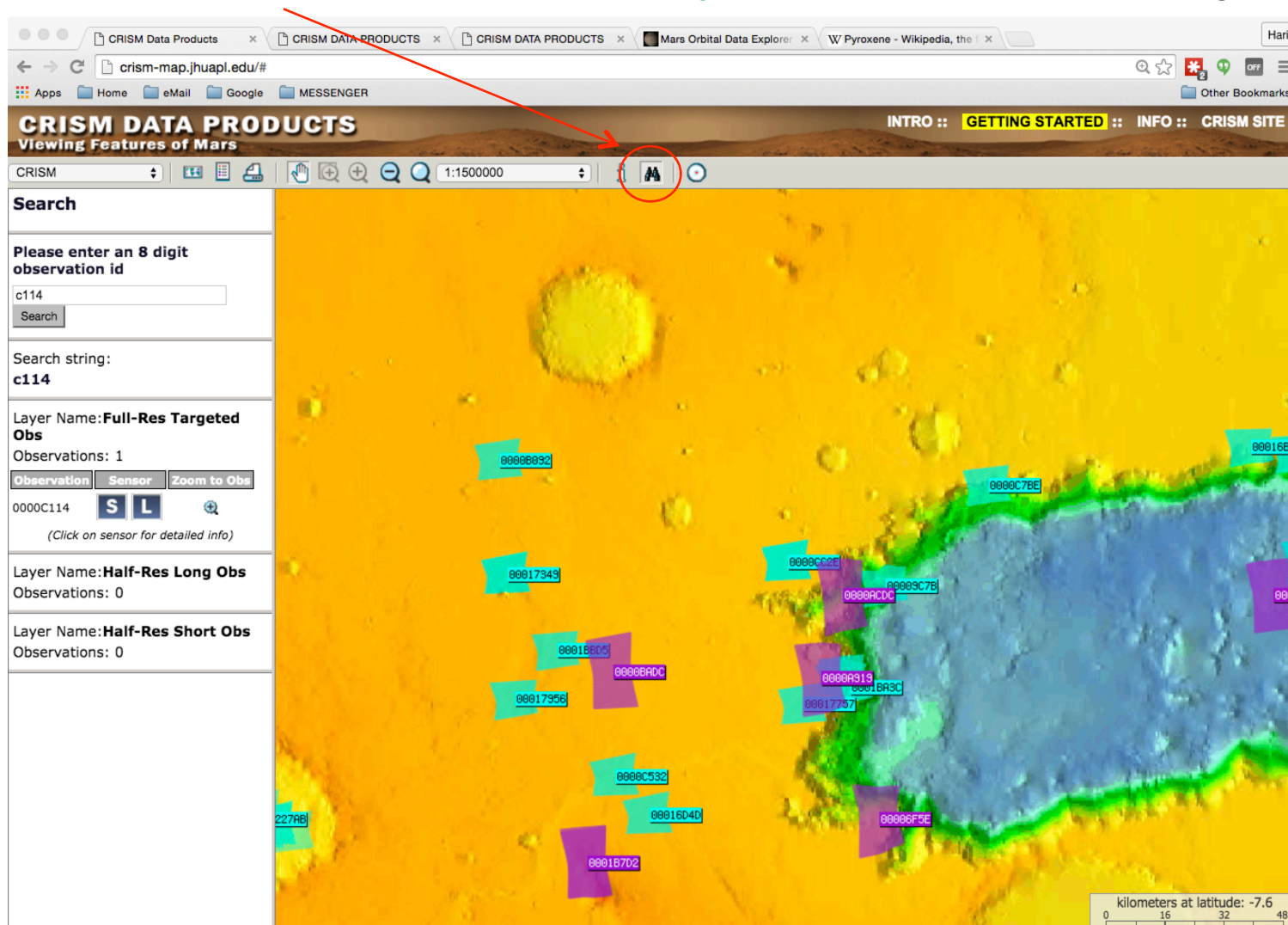
Hari Nair, Christina Viviano-Beck, Kim Seelos,
Debra Buczkowski, Frank Morgan, Frank Seelos,
Scott Murchie, and the CRISM Science
Operations Center

Johns Hopkins University Applied Physics Lab

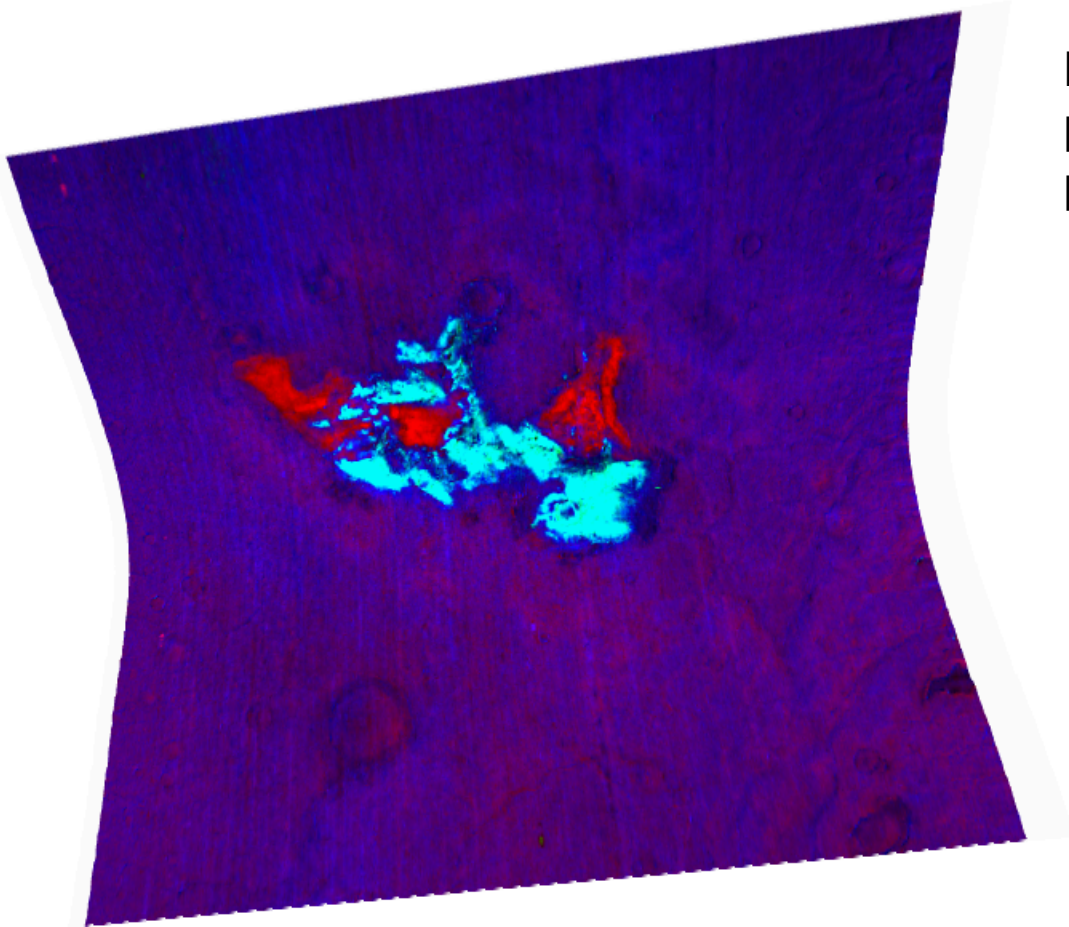
Presented at the Mars Data Analysis Meeting
ISRO Headquarters, Bangalore

Feb 22-25, 2016

Use the binocular icon on <http://crism-map.jhuapl.edu> to zoom in on target ID C114



The screenshot shows a web browser window with the URL crism-map.jhuapl.edu/#. The page title is "CRISM DATA PRODUCTS" with a subtitle "Viewing Features of Mars". The navigation bar includes links for "INTRO :: GETTING STARTED :: INFO :: CRISM SITE". The search interface on the left contains a search box with "c114" entered, a search string "c114", and a list of observation layers: "Full-Res Targeted Obs" (1 observation), "Half-Res Long Obs" (0 observations), and "Half-Res Short Obs" (0 observations). The main map area displays a false-color image of the Capri Chasma region, with various observation targets marked by colored labels. A red circle highlights the binocular icon in the map toolbar, which is used to zoom in on the target ID C114. A scale bar at the bottom right indicates "kilometers at latitude: -7.6" with markers at 0, 16, 32, and 48 kilometers.



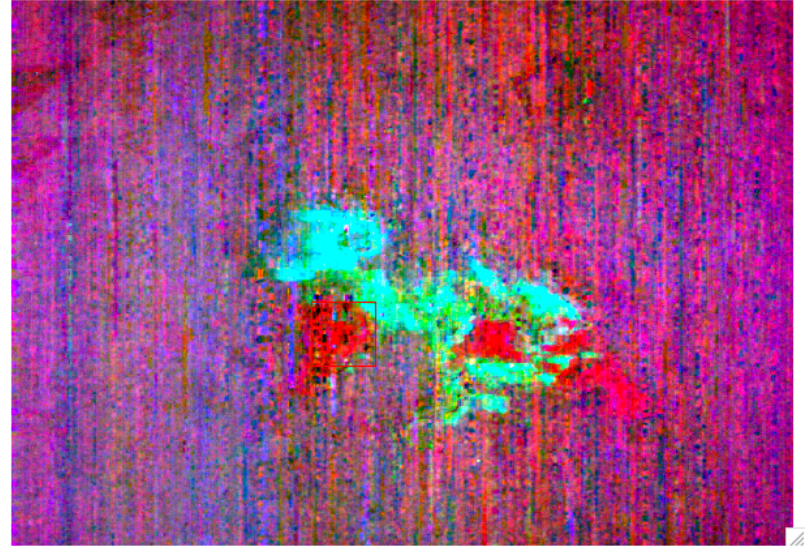
MAF browse product shows possible olivine and low-Ca pyroxene spectral features

1. From PDS retrieve IR files for target IDs C114, 8112, and A0F0.
2. Load into CAT, convert to CAT format, and perform atmospheric correction.
3. Create summary products.
4. Load window with MAF browse product (OLINDEX3, LCPINDEX2, and HCPINDEX2), along with RGB composite.
5. Link displays.

#1 (R:Band 233,G:Band 78,B:Band 13):frt0000c114_07_if164l_trr3_CAT_corr.img
File Overlay Enhance Tools Window



#2 (R:OLINDEX3,G:LCPINDEX2,B:HCPINDEX2):frt0000c114_07_if164l_trr3_CAT_c...
File Overlay Enhance Tools Window

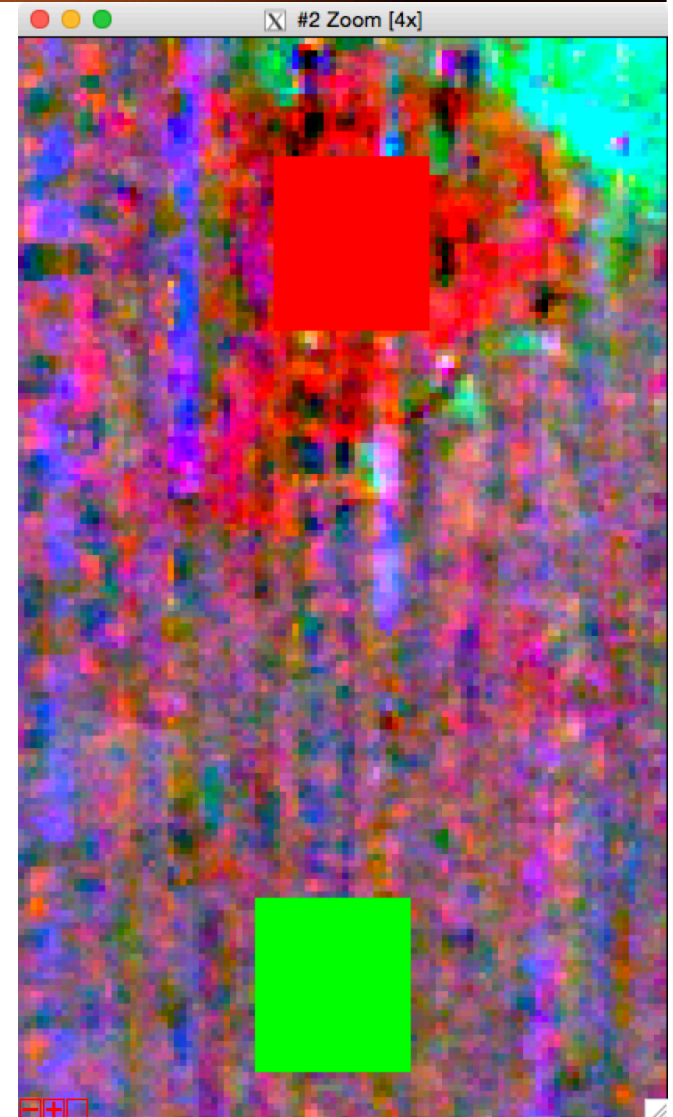


Create a region of interest with the ROI tool in the red region below and to the left of center.



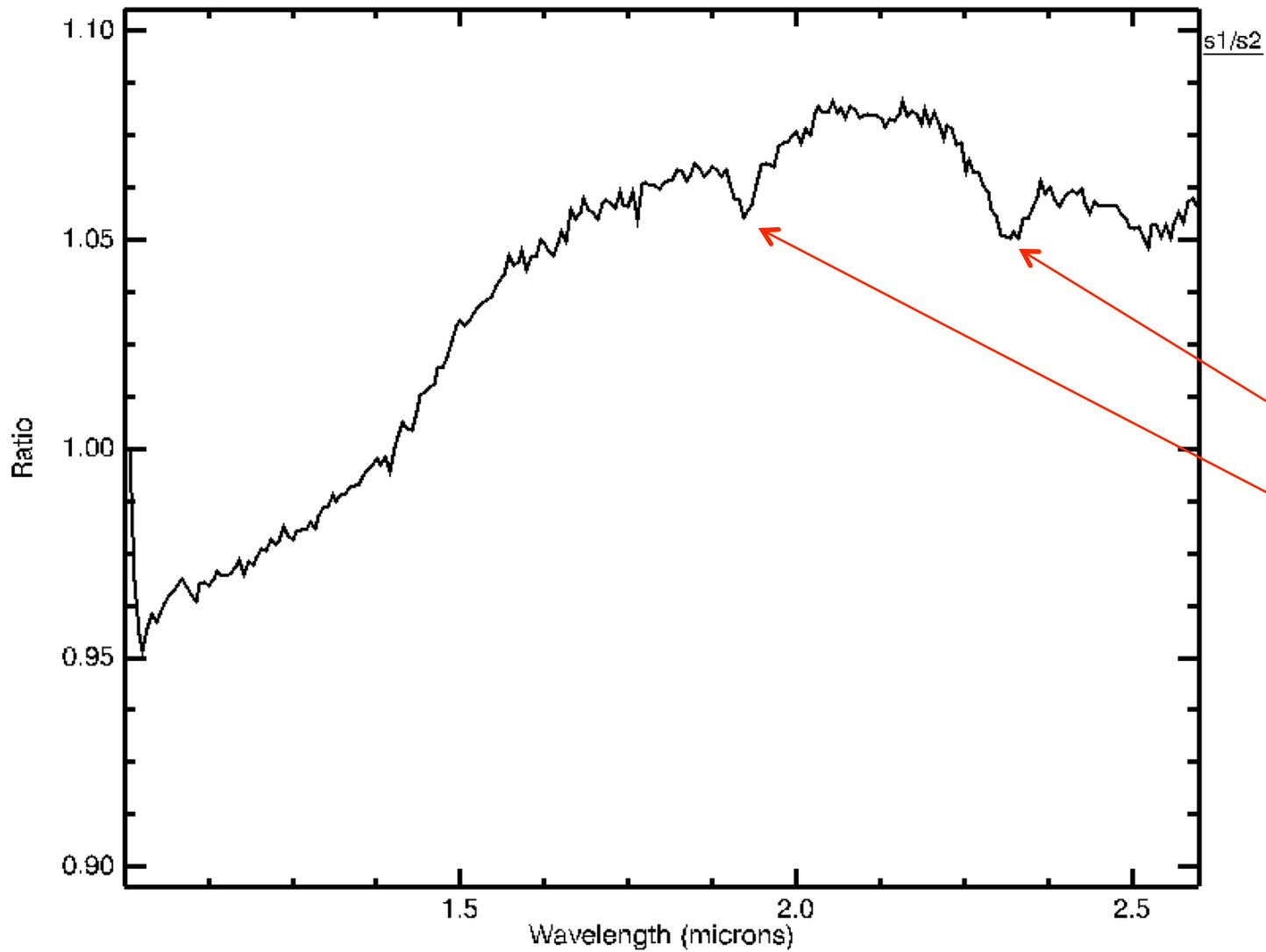
Create two regions of interest using the ROI tool in the zoom windows.

Use the spectral math tool to ratio the spectra of the red region to the green region.

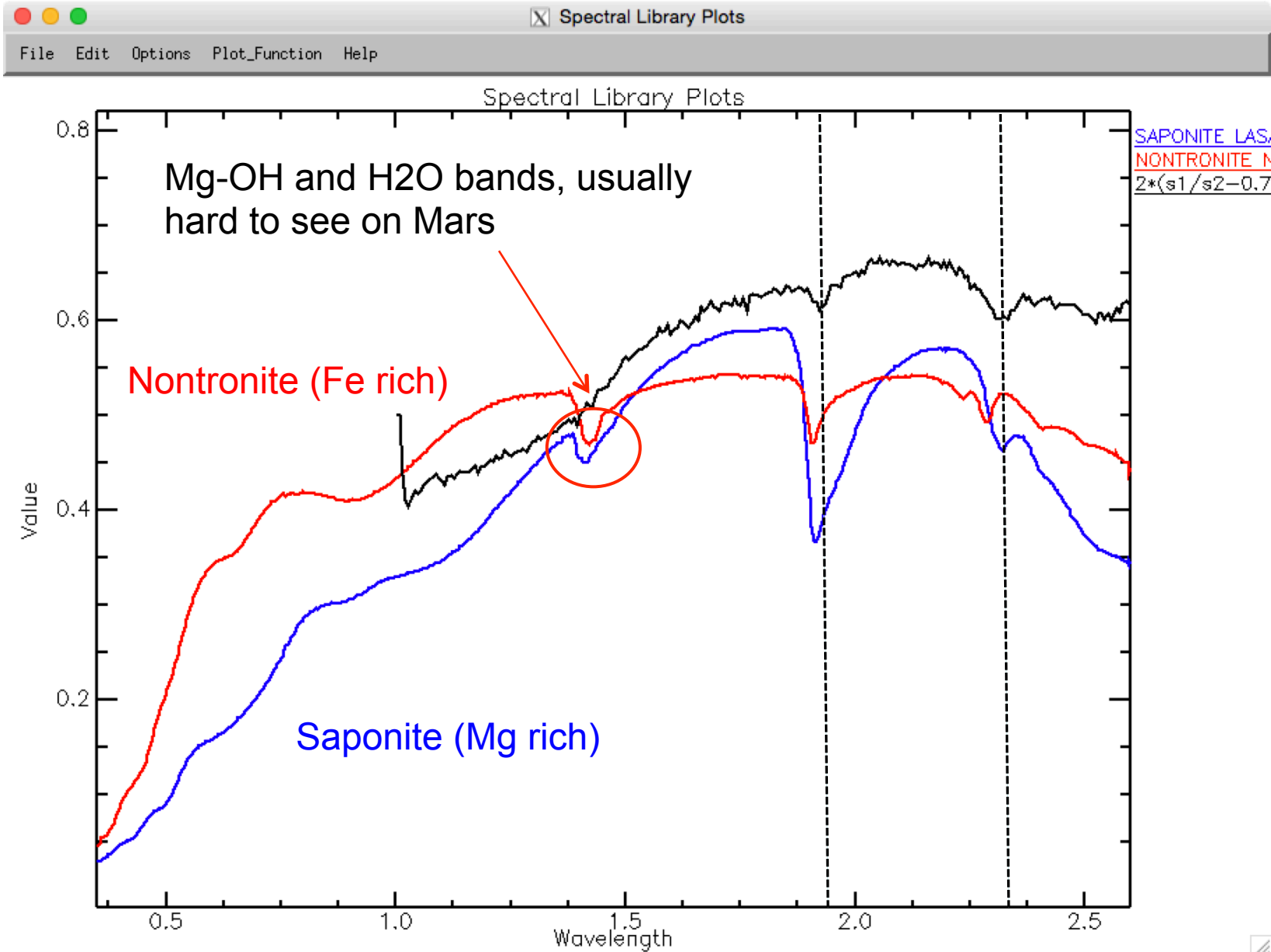


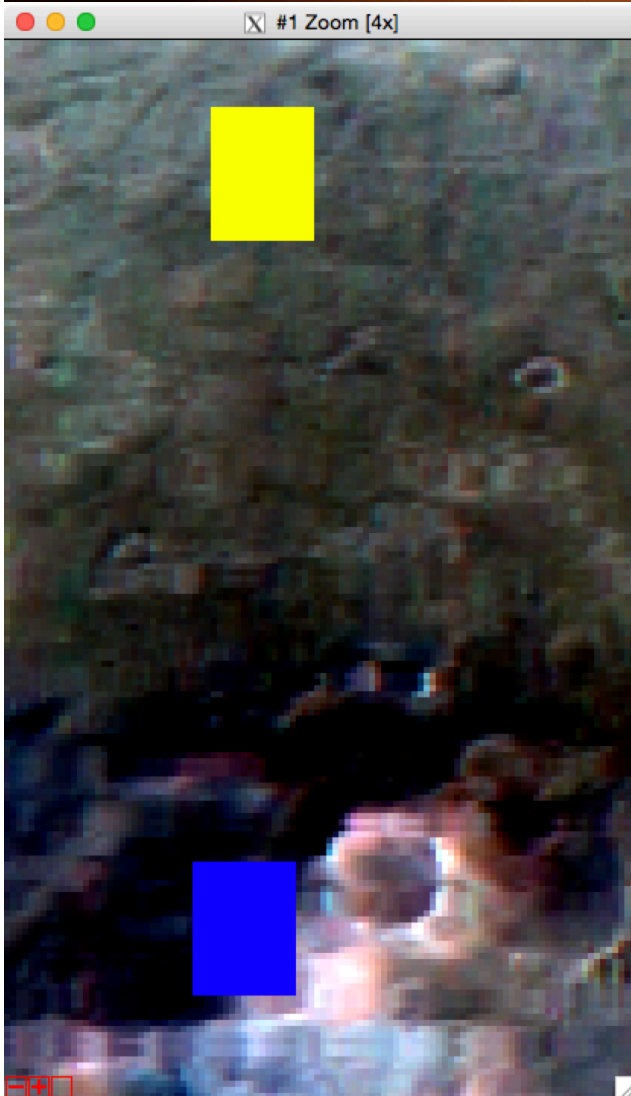
File Edit Options Plot_Function Help

X Spectral Math Result



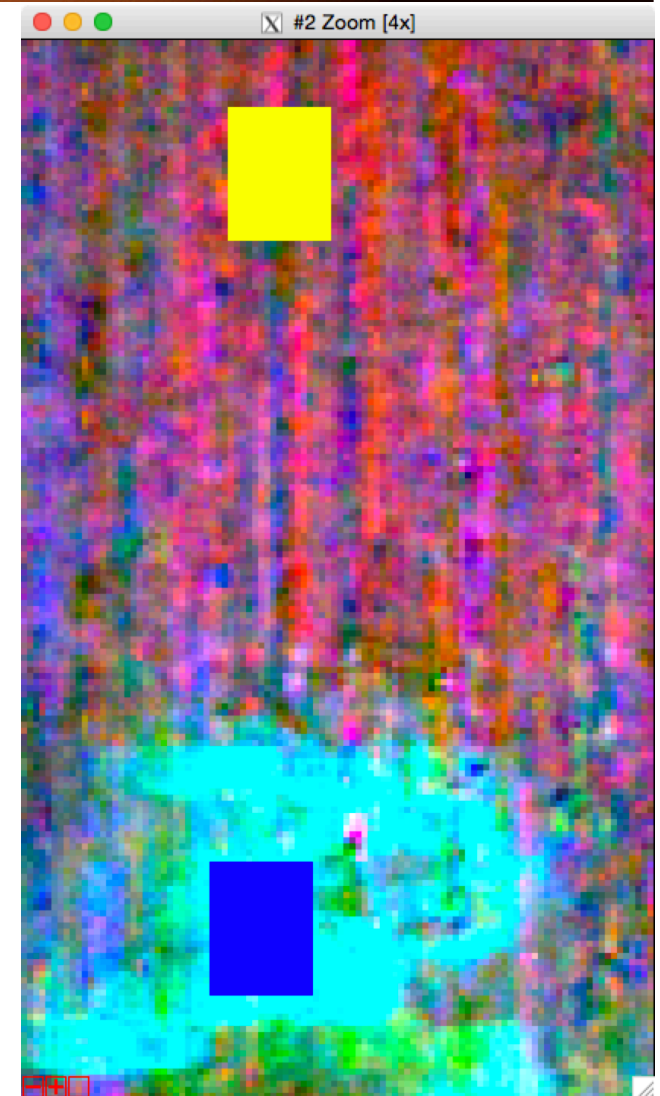
Phyllosilicate bands:
~2.32 microns
~1.92 microns





Create two regions of interest using the ROI tool in the zoom windows.

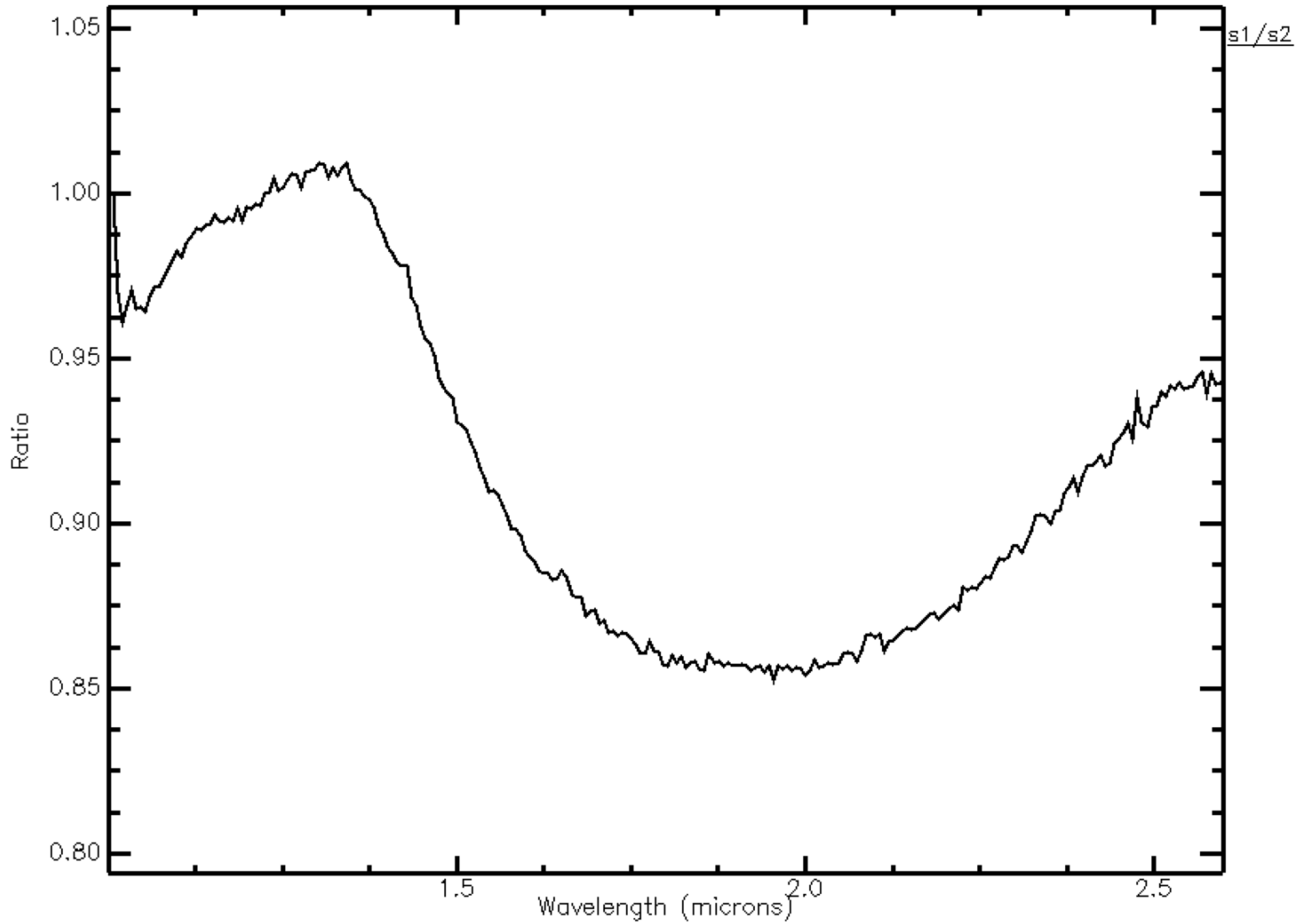
Use the spectral math tool to ratio the spectra of the blue region to the yellow region.

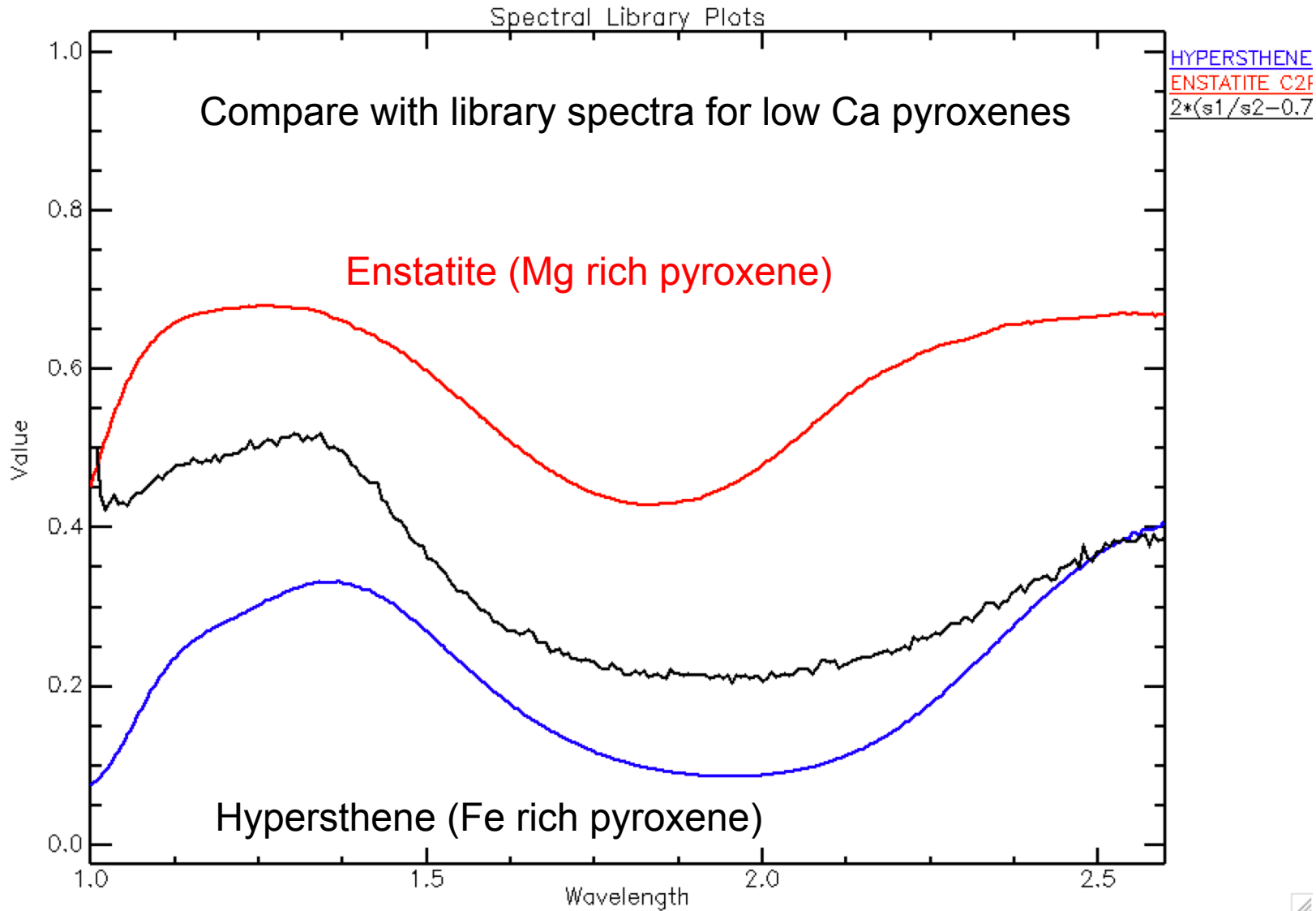
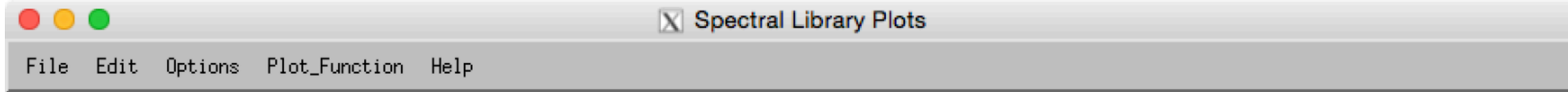




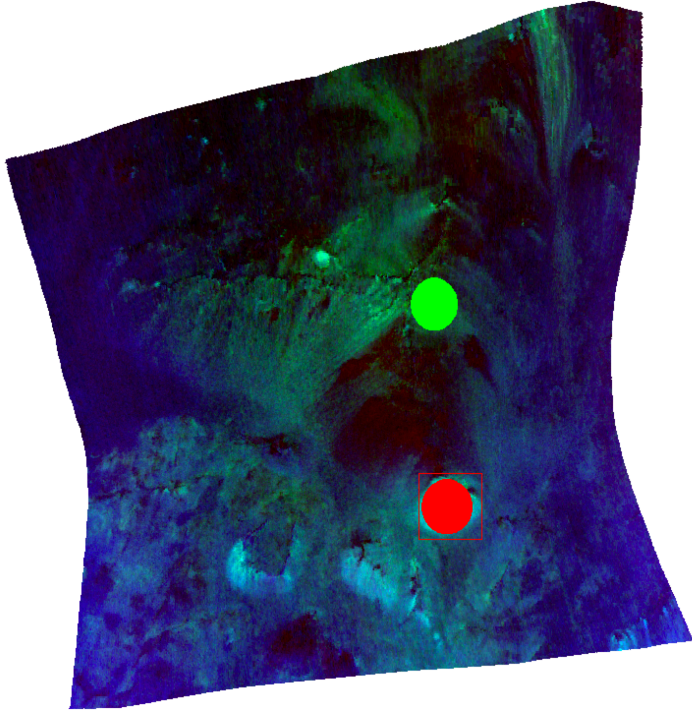
Spectral Math Result

File Edit Options Plot_Function Help

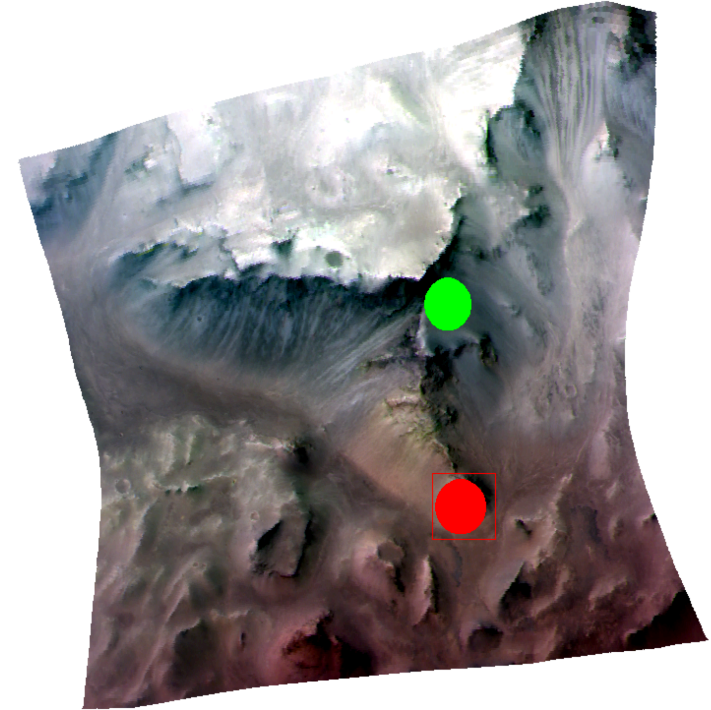




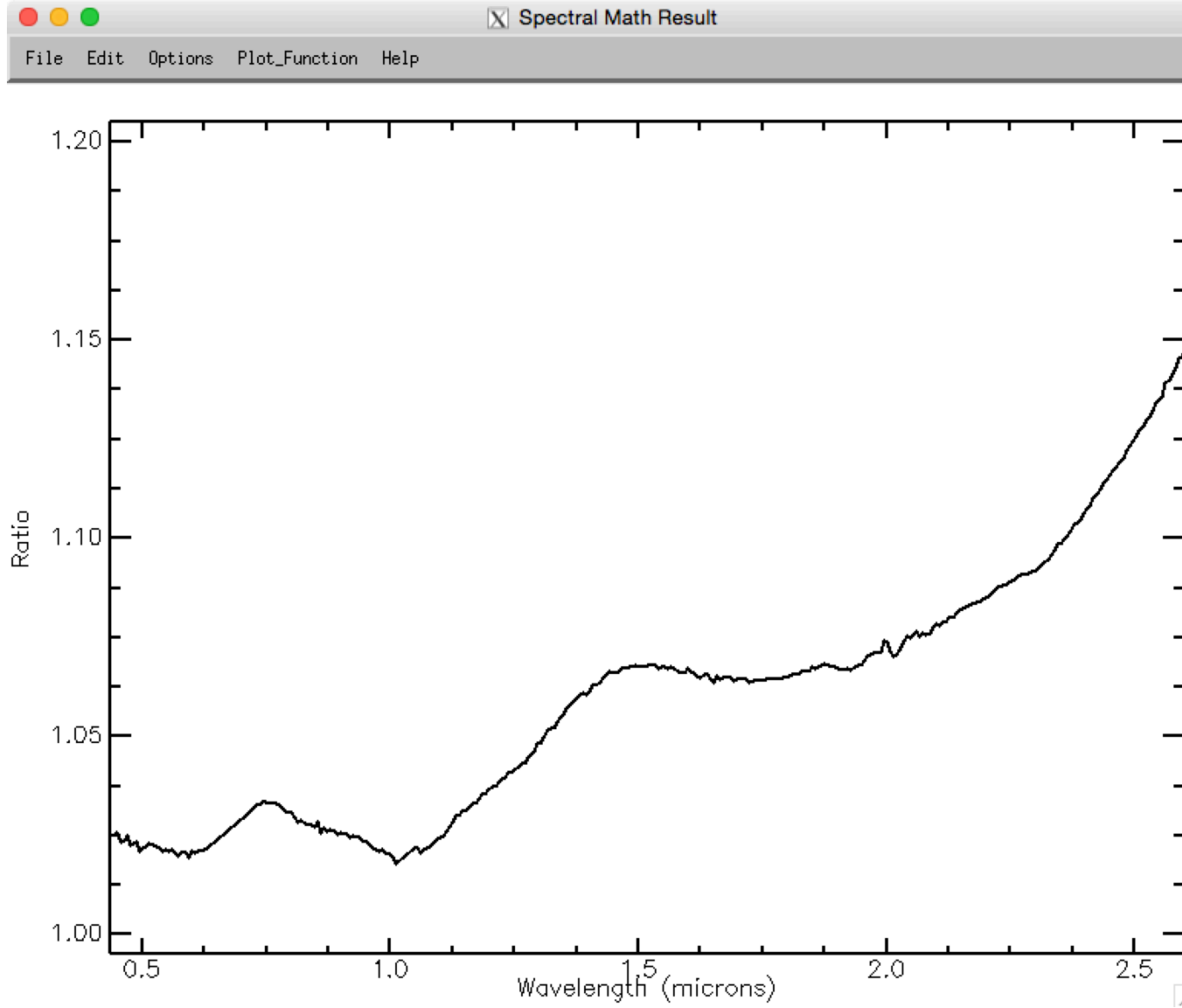
#5 (R:OLINDEX3,G:LCINDEX2,B:HCPINDEX2):FRT00008112_07_BRMAFJ_MTR3.IMG
File Overlay Enhance Tools Window

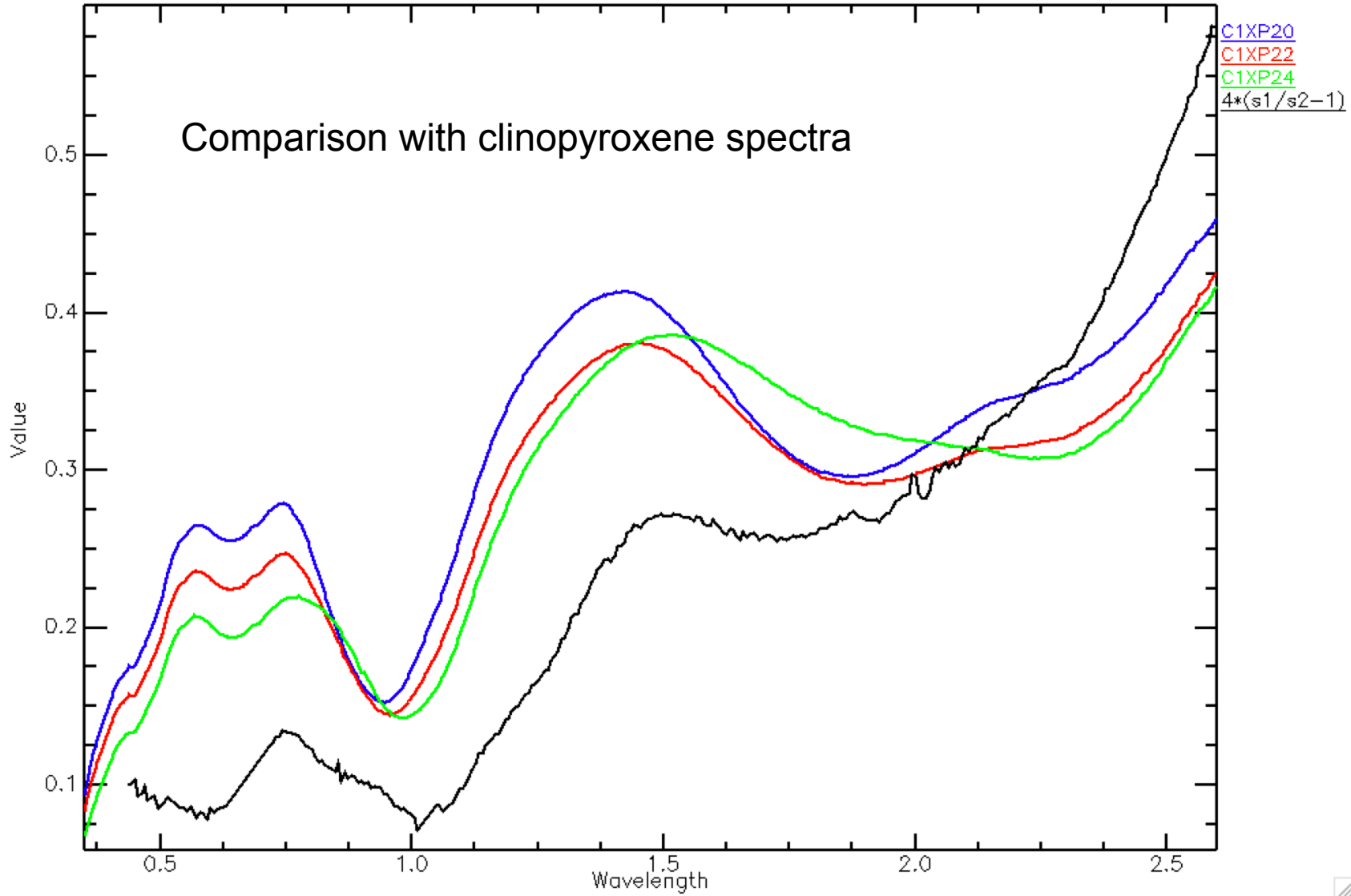
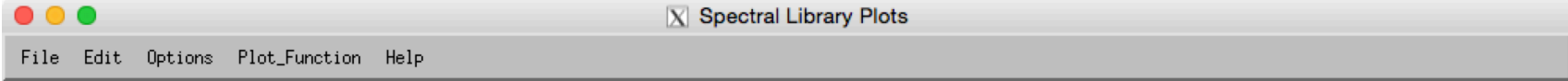


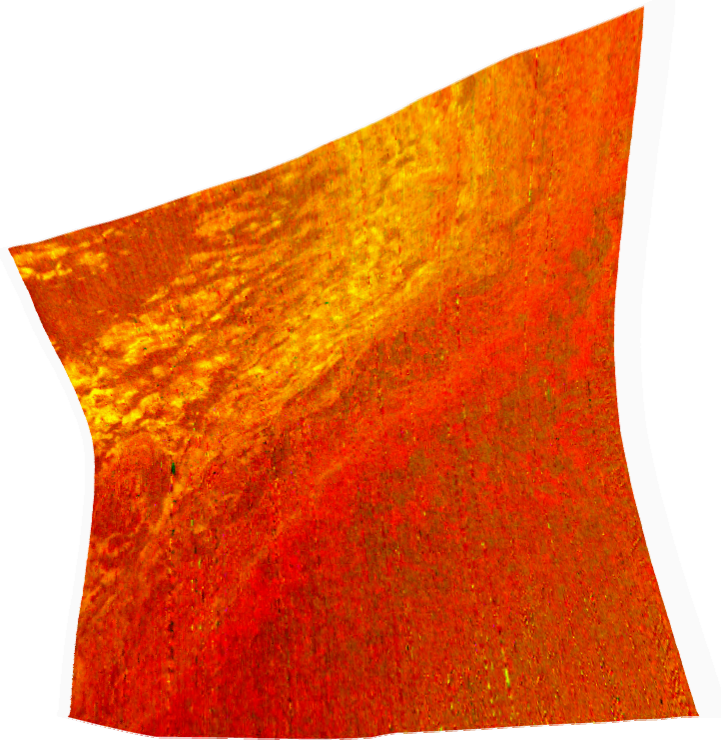
#6 (R:Band 305,G:Band 123,B:Band 42):FRT00008112_07_IF164J_MTR3.IMG
File Overlay Enhance Tools Window



New data product – will be available on PDS in the near future. Using MTRDR for this demonstration but TER is a better choice for ratioing spectra.





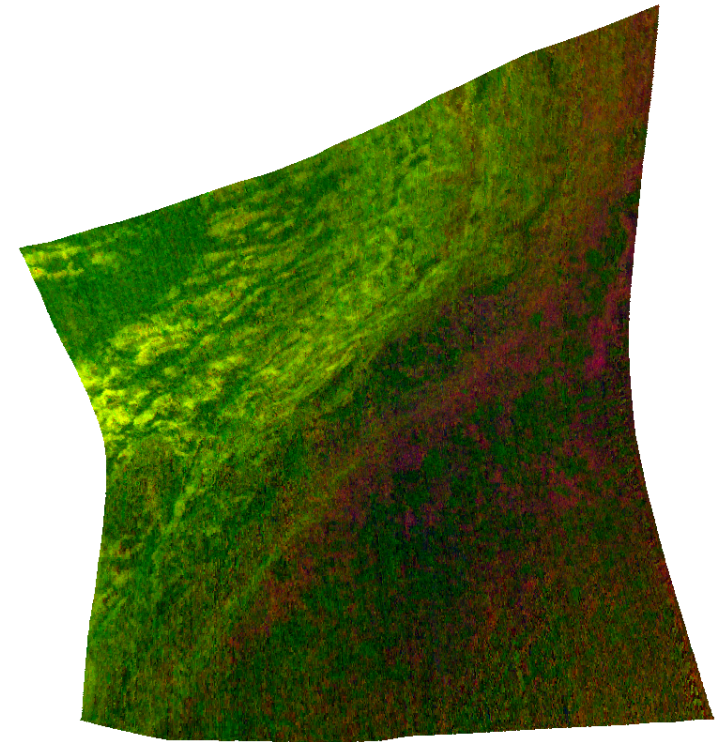


Old HYD browse product on crism-map

SINDEX

BD2100

BD1900



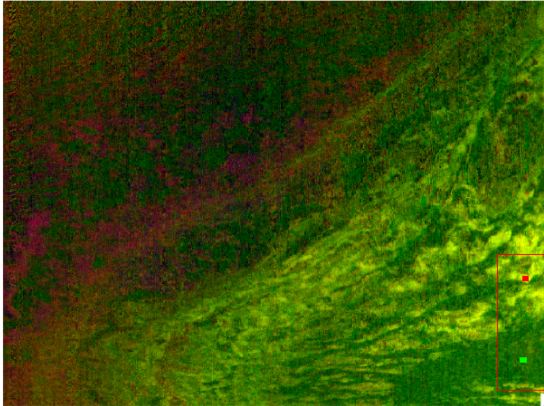
New HYD browse product from MTRDR

SINDEX2

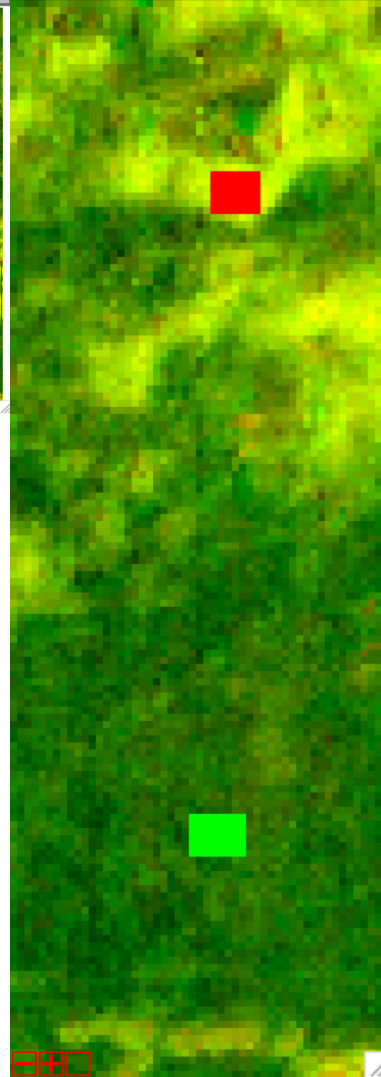
BD2100_2

BD1900_2

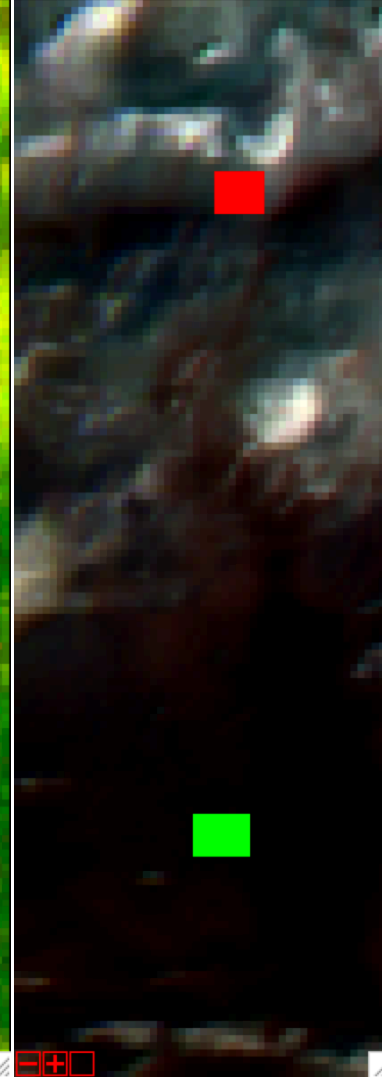
#1 (R:SINDEK2,G:BD2100_2,B:BD1900_2):FRT0000A0F0_07_BRHYDJ_TER3.IMG
File Overlay Enhance Tools Window



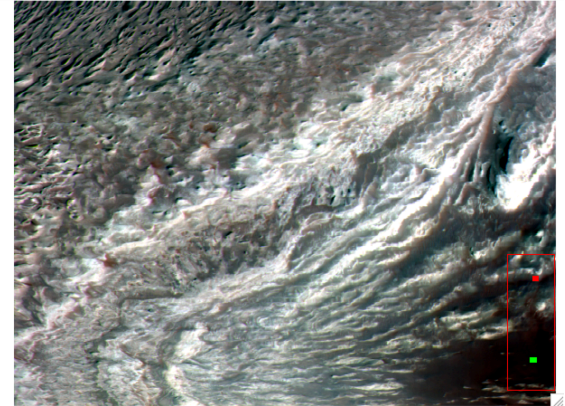
#1 Zoom [4x]

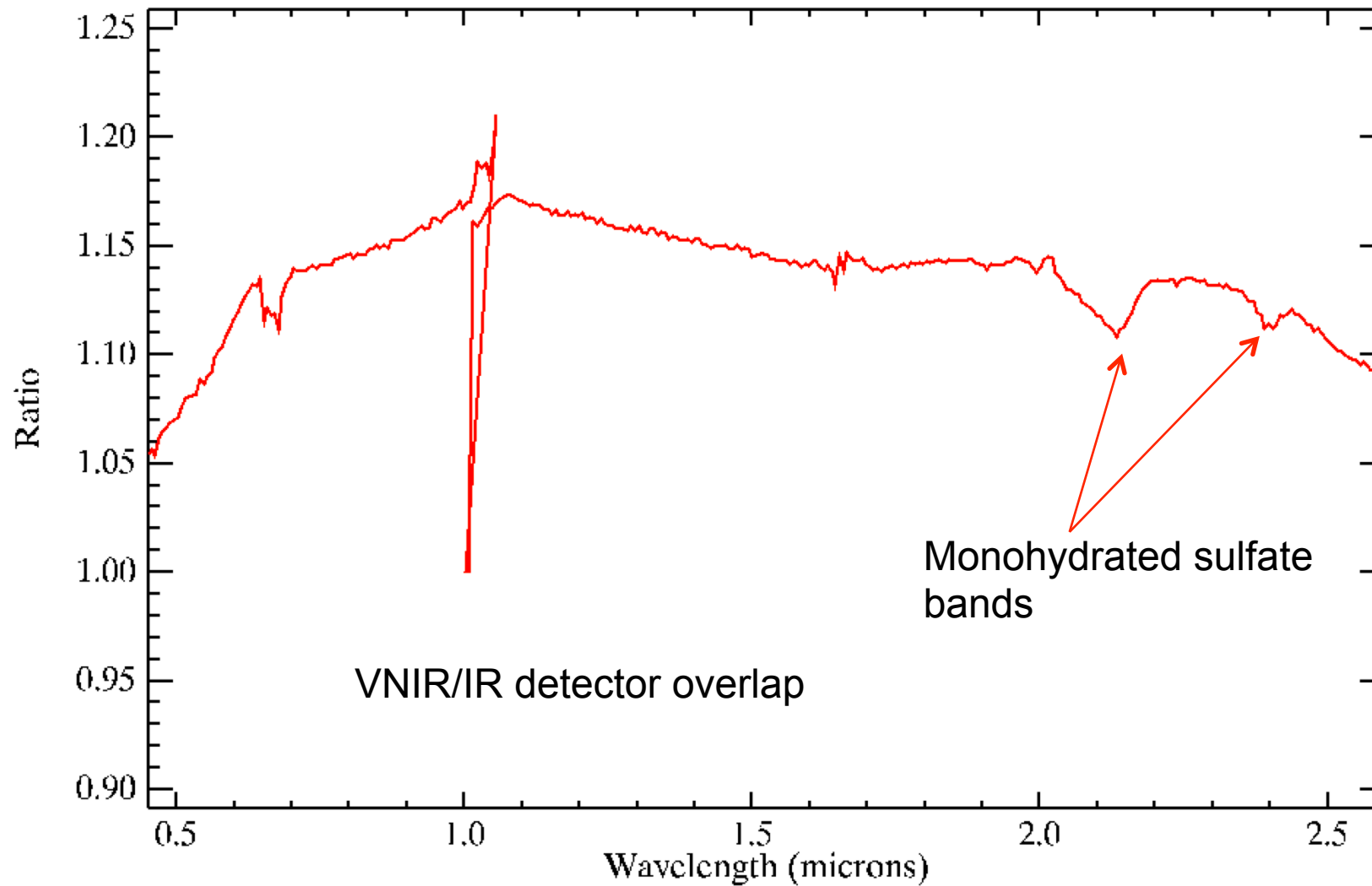


#2 Zoom [4x]



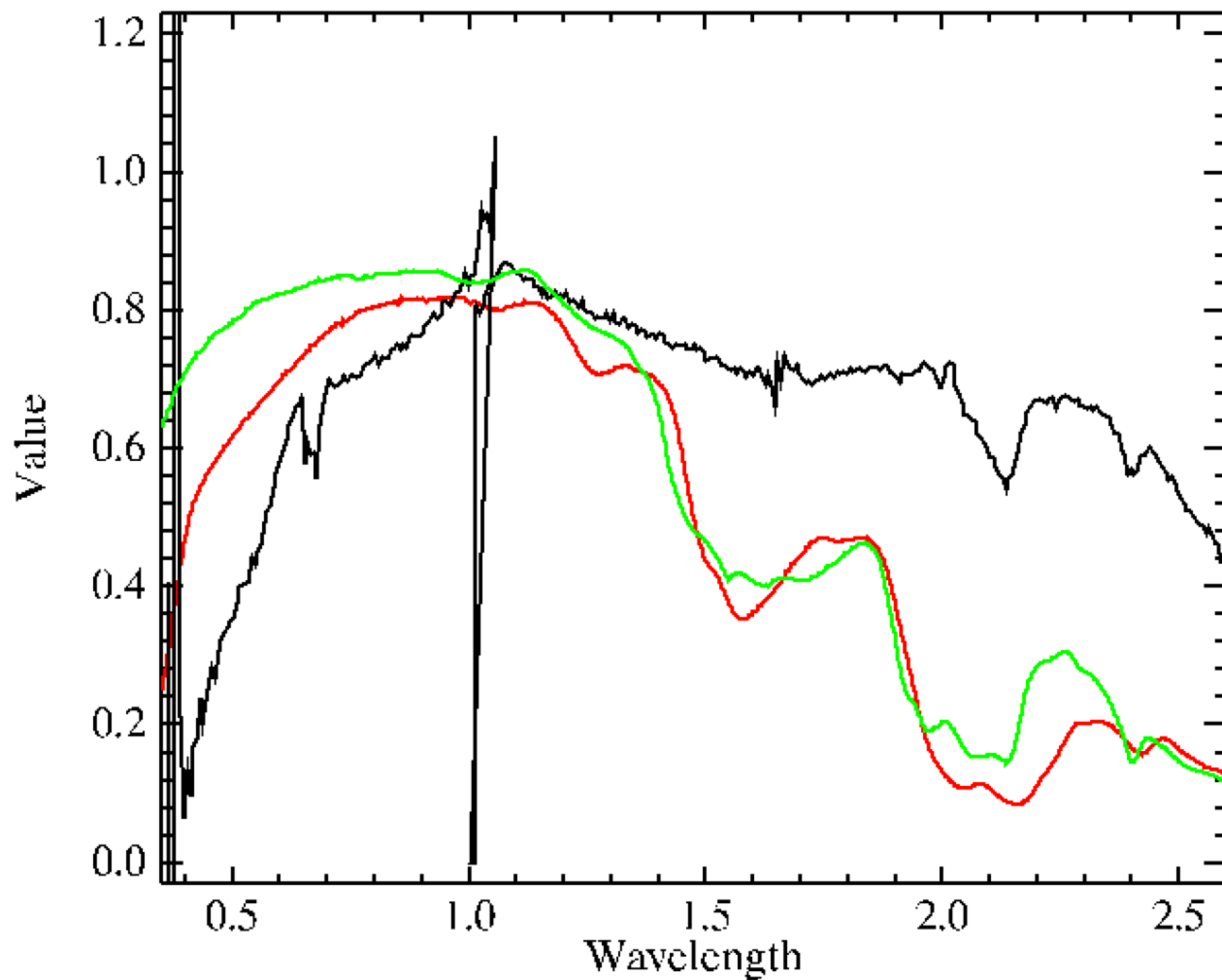
#2 (R:Band 341,G:Band 159,B:Band 64):FRT0000A0F0_07_IF165J_TER3.IMG
File Overlay Enhance Tools Window





Spectral Library Plots

File Edit Options Plot_Function Help



LETOVICITE 45-90UM LASF17E

$5 * (s1/s2 - 1)$

KIESERITE F1CC15

Another A0F0 Region

