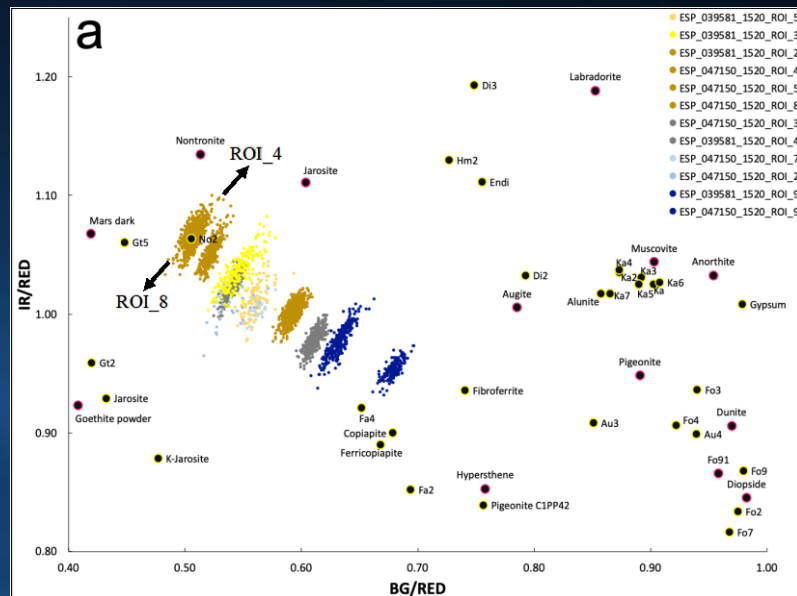


# Mars Mud Volcanoes in Color

Color band ratios from the Mars Reconnaissance Orbiter (MRO) High Resolution Imaging Science Experiment (HiRISE) camera can be used as a complementary mineralogical investigation tool

- We use HiRISE quantitative color band ratios to investigate the compositional characteristics of proposed mud volcanoes on Mars
- We demonstrate the value of HiRISE color ratios for comparative planetology

Left Figure – (a) HiRISE color band ratio of point clusters representing the observed color variation associated with proposed mud mounds (Hemmi and Miyamoto, 2017) and surrounding materials. Two point clusters overlap with the Fe-smectite nontronite (No2) from the CRISM spectral library.



Right Figure - (b) MOLA globe inset with white arrow denoting Terra Sirenum basin where mounds are located. (c-f) Examples of identified locations. Filled in and open color points correlate with cluster colors in (a). Filled in and open color points in (e) and (f) denote locations of point cluster ROI\_8.

