Mapping on Mars as an exercise in observation and geologic mapping

Kevin Williams, Smithsonian Institution/ Buffalo State College

The four large data products are 10° by 10° centered at 17.5° S, 20° W and cover four MTM quadrangles

Possible questions using these products:

What can be observed from the image mosaic only? From only the topography?

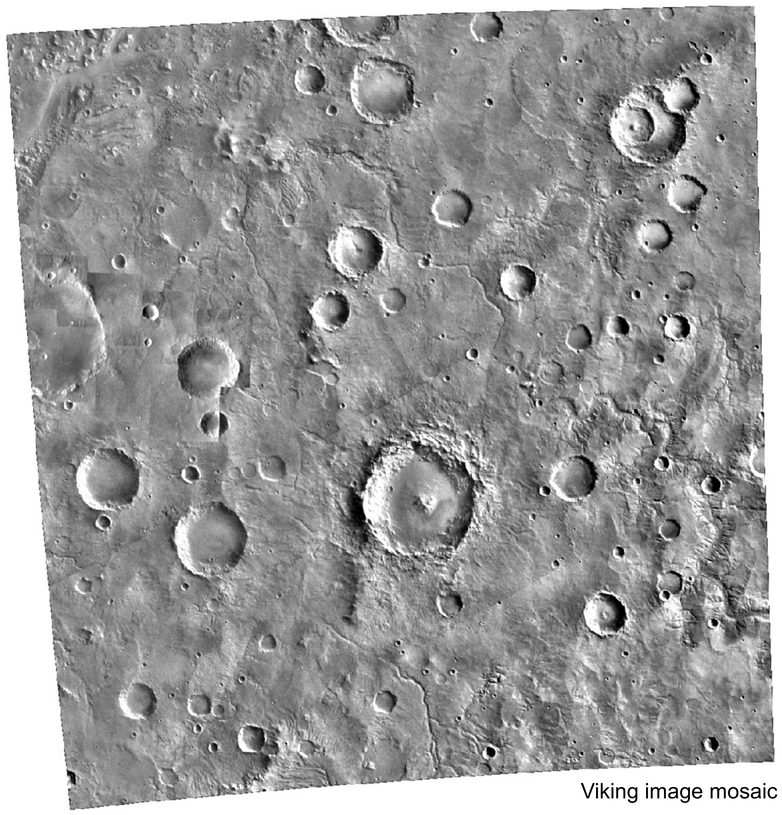
How are these observations enhanced when the two data sets are combined?

**How can these thoughts be combined into a cohesive activity for a class?*

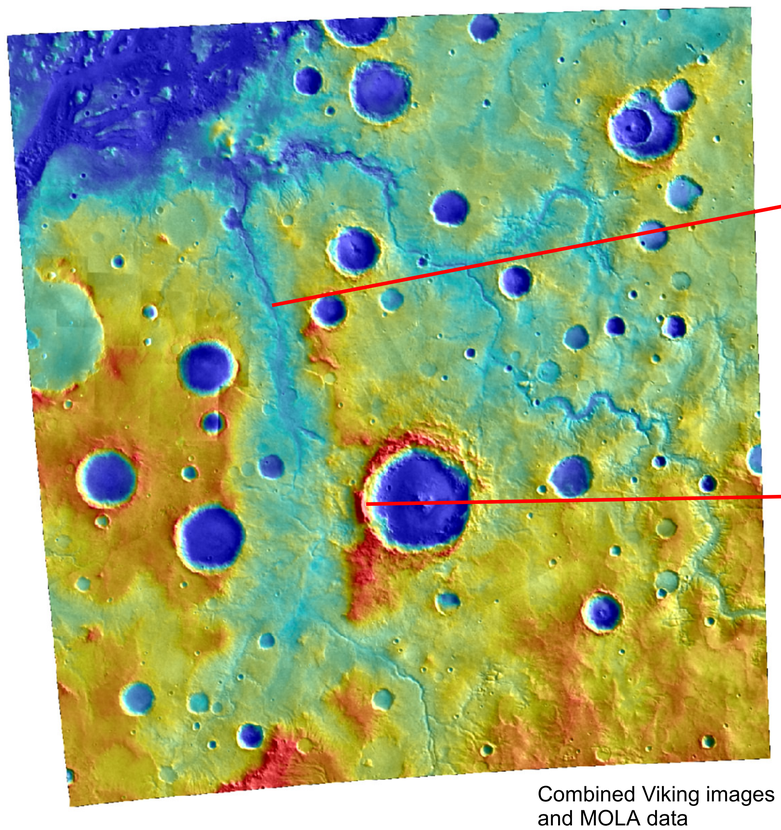
How do interpretations change when you have higher resolution images or other types of data?

What are the trade-offs between resolution and coverage area?

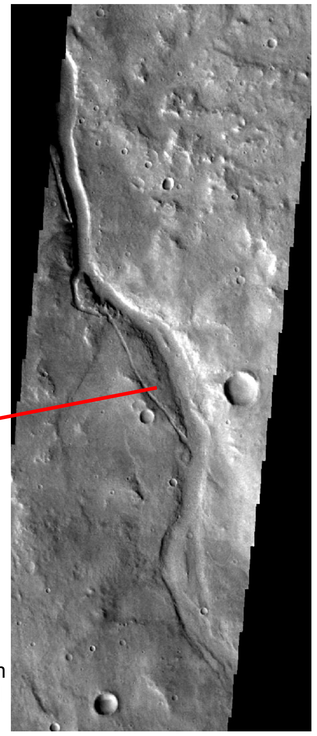
Is there an ideal combination of sensors or does it always depend on the focus of the mission?



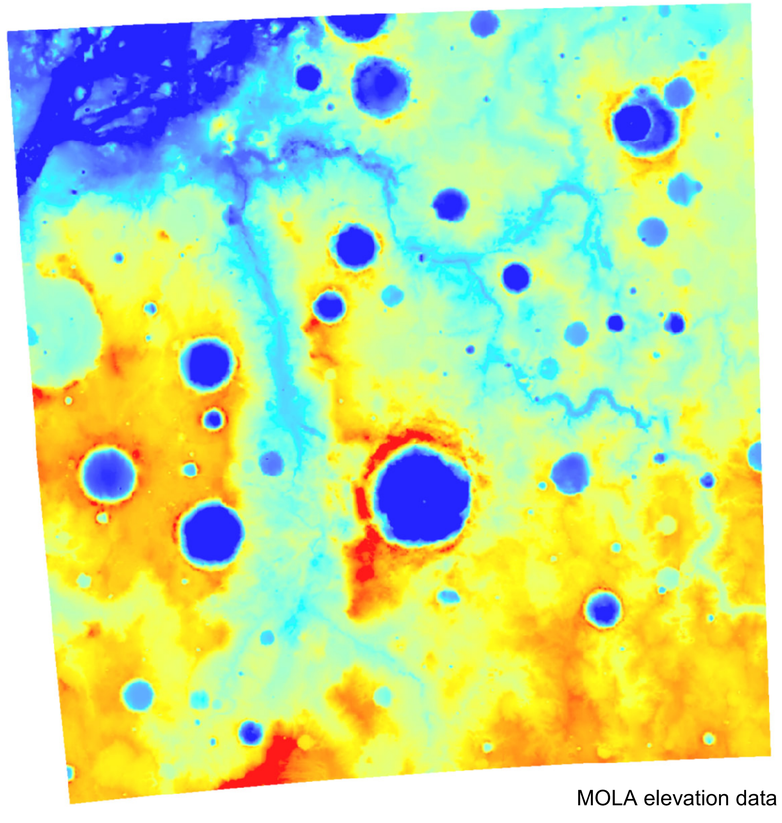
Viking image mosaic



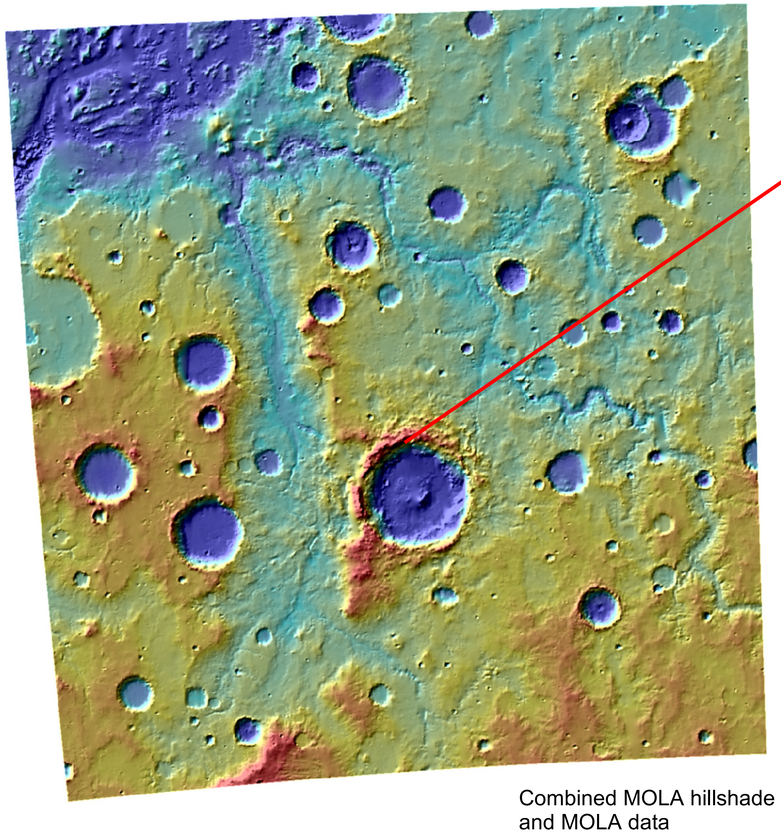
Combined Viking images and MOLA data



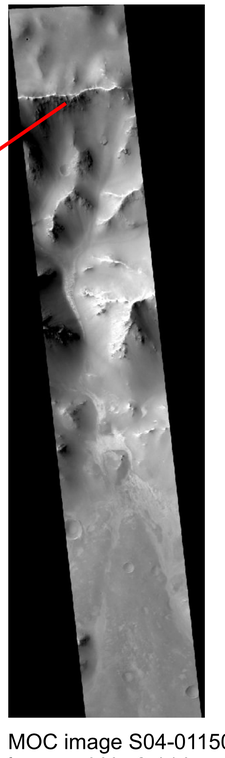
THEMIS visible
image V08153003
Image width: 18.43 km
Resolution: 18 m/pixel
NASA/JPL/ASU



MOLA elevation data



Combined MOLA hillshade and MOLA data



MOC image S04-01150
Image width: 3.14 km
Resolution: 4.8 m/pixel
NASA/JPL/MSSS

THEMIS infrared
image I02523002
Image width: 30.72 km
Resolution: 96 m/pixel
NASA/JPL/ASU