Mars for Earthlings

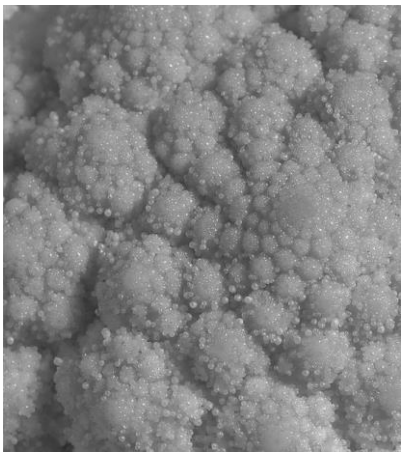
LESSON 4: Remote Sensing Mars

In-Class Activity 1

Scale and Context

Purpose: Recognize the purpose and need for understanding the scale and context of various remote sensing imaging techniques.

Study the following images: What observations can you make?



(Figs 1 & 2, Image credit: Petr Kratochvil (public domain)

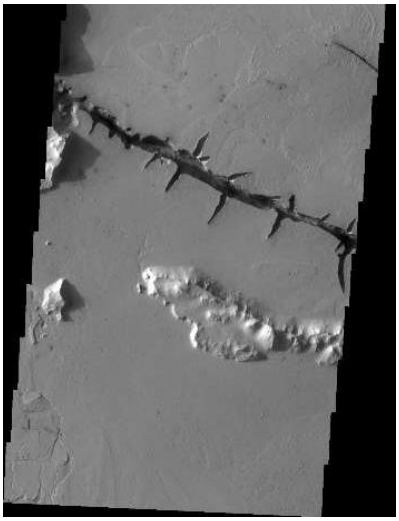


Figure 1: THEMIS Image #V13300013; Lat 7.3/Long 161.3. Image credit: NASA/JPL/ASU; Image Source: http://themis.asu.edu/zoom-20050225a

Mars for Earthlings

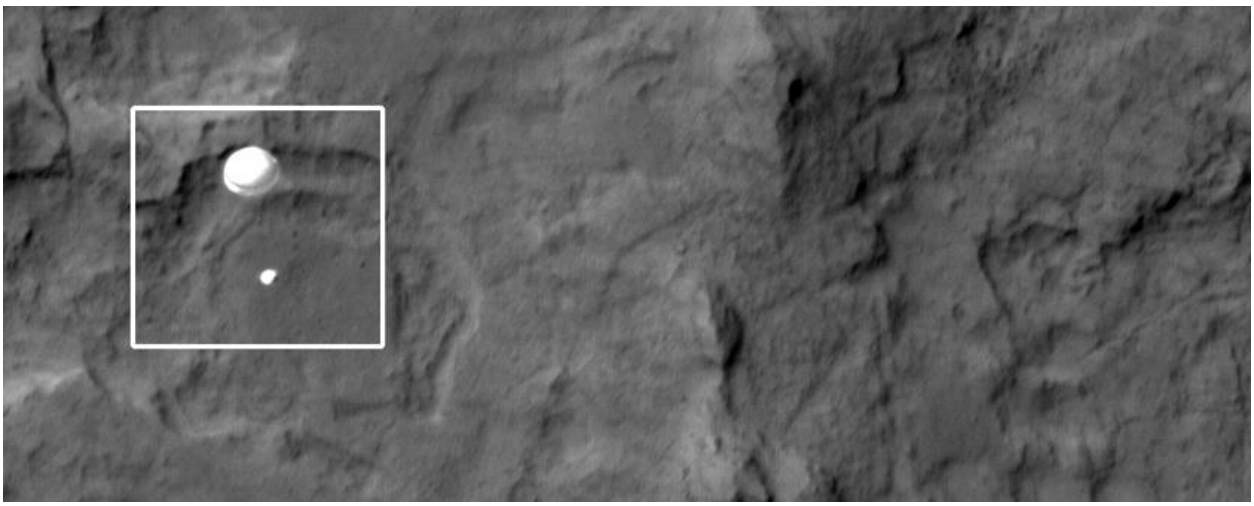


Figure 2 HiRISE image (ESP_028256_9022) of Curiosity descending to the Martian surface acquired August 5, 2012. Image Source: http://hirise.lpl.arizona.edu/releases/msl-descent.php

Seeing "scale" at work

Referring to Figure 1-2

1. Hypothesize what might be pictured in Figure 1 & 2.

2. Upon what evidence are you basing your hypothesis?

3. What other information could aid you in determining the identity of the image? List at least (4) ideas and explain your reasoning.

Does scale matter?

Come up with definitions for the following:

- Scale

- Context

Mars for Earthlings

In Figures 1 & 2, estimate a scale considering each image's context

1. Figure 1 Scale:

2. Figure 2 Scale:

What are you seeing on Mars?

1. What do you see in the Mars images, Figure 3-4? Anything familiar?

2. What would aid you in their interpretation?

THEMIS & HiRISE Imagery

Explore one of the following websites:
(http://themis.asu.edu) or HiRISE (http://hirise.lpl.arizona.edu)

1. Choose an image that interests you. What caught your interest? What features do you see?

2. Can you find the scale and context of the image? After knowing the scale and context, does your interpretation of the image change?