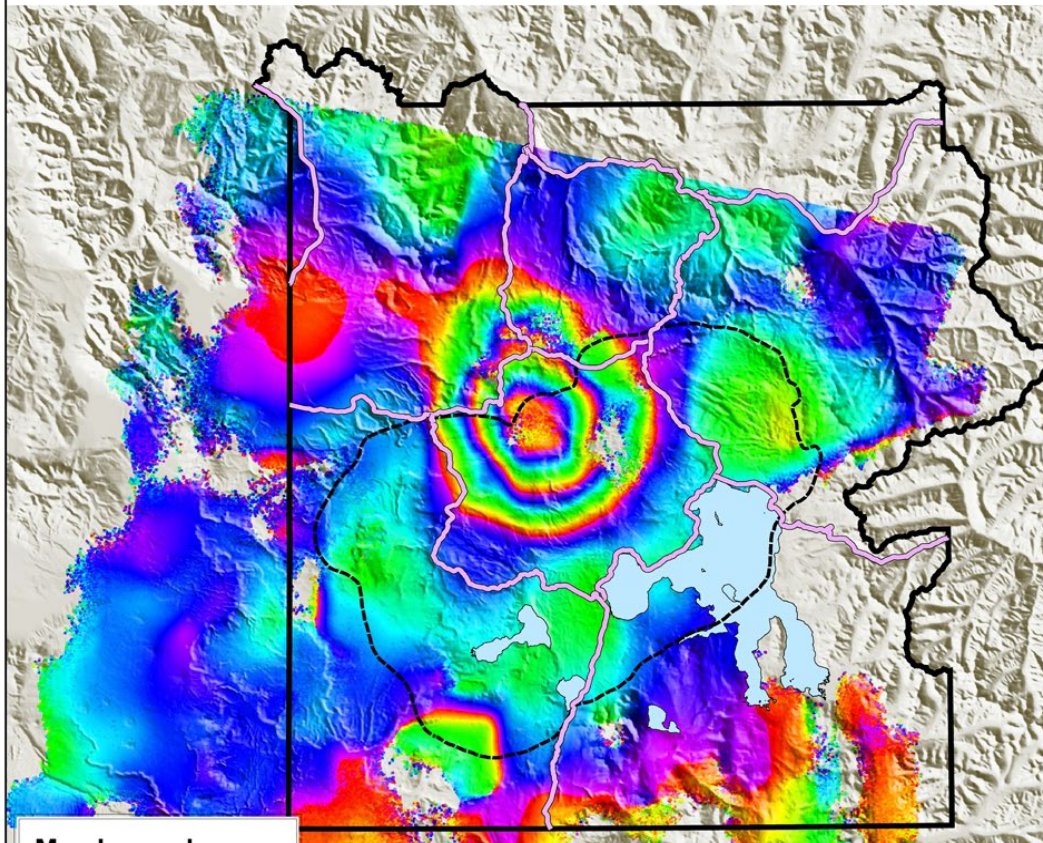


# RADAR satellite interferometric image of Yellowstone 1996-2000



## Map Legend

- Major Roads
- Yellowstone Caldera
- Lakes
- YNP Boundary

## INSAR 1996-2000

### RGB

- Red: Band\_1
- Green: Band\_2
- Blue: Band\_3

This image of ground deformation was created using data from several satellite passes from 1996 through 2000. The image shows 125 mm (about 5 in) of uplift centered within the northern end of Yellowstone caldera (black dotted line), about 10 km (6.2 miles) south of Norris. Each full spectrum of color (from red to purple) represents about 28 mm (1 inch) of uplift. The uplift is approximately 35 km x 40 km (22 miles x 25 miles) in size. (source <http://volcanoes.usgs.gov/yvo/2006/uplift.html>, Chuck Wicks USGS)



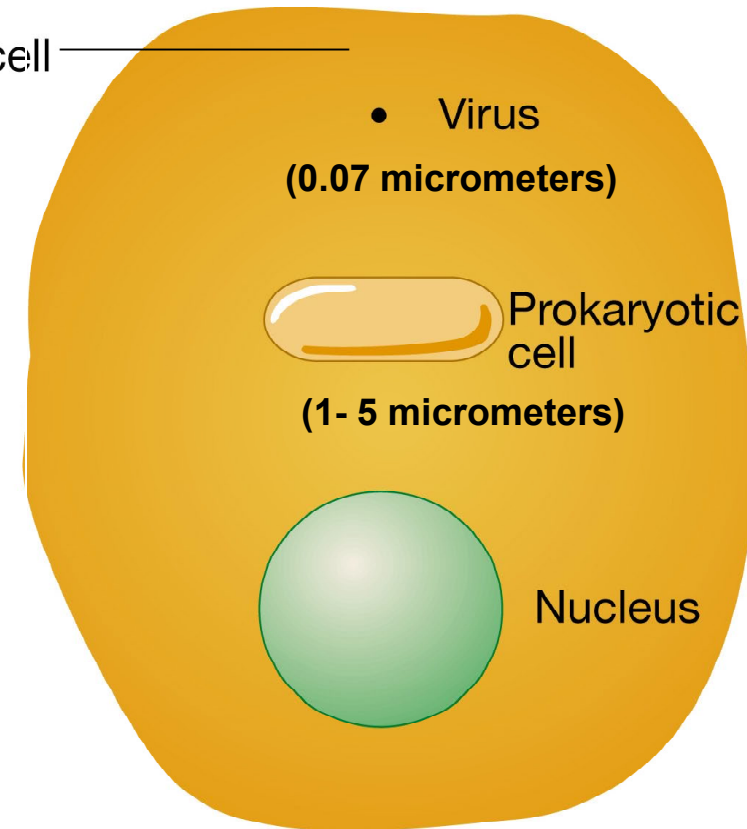




# Who are the Microbes?

- Eucarya
  - Protists (Algae, Fungi, Protozoa)  
100-300 micrometers ( $\mu\text{m}$ )
- Bacteria
  - Diverse metabolism
    - 1-5 micrometers ( $\mu\text{m}$ )
    - A micrometer is 1/1000 of a millimeter
    - 1000 micrometers would span the head of a pin
- Archaea
  - Life's extremists  
1-5 micrometers ( $\mu\text{m}$ )
- Viruses
  - Abundant
    - 0.07 micrometers
      - Or 70 nanometers
      - 1 nanometer is 1/1000 of micrometer

Typical eukaryotic cell  
(300 micrometers)



On the head of a pin: ~200 bacteria and archaea  
~2,000,000 virus particles











