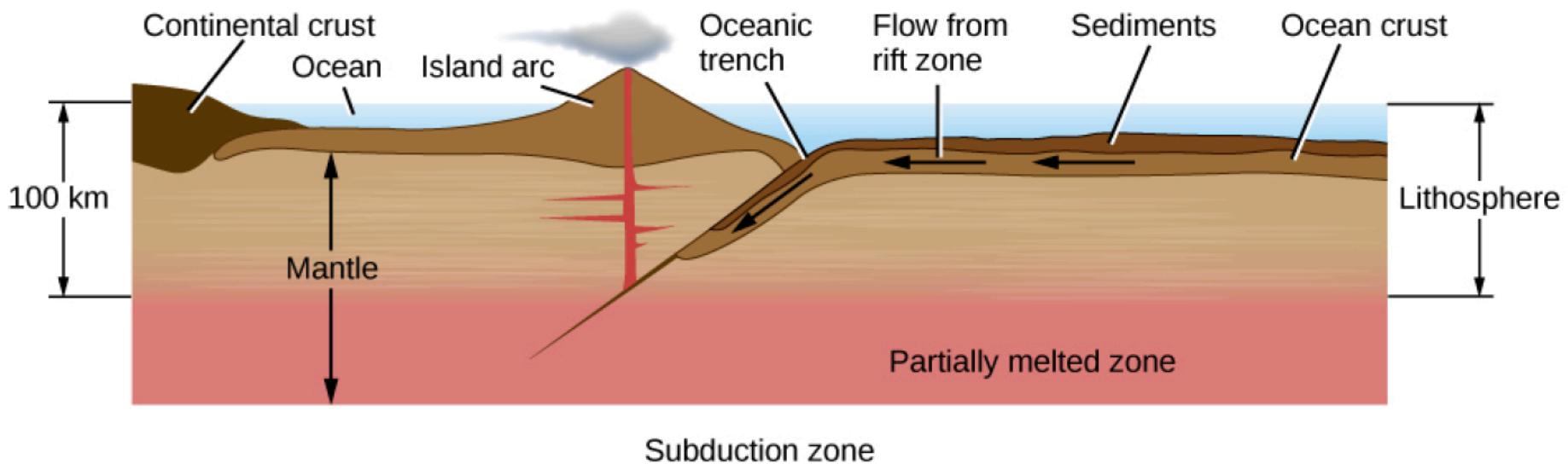


Rift zone

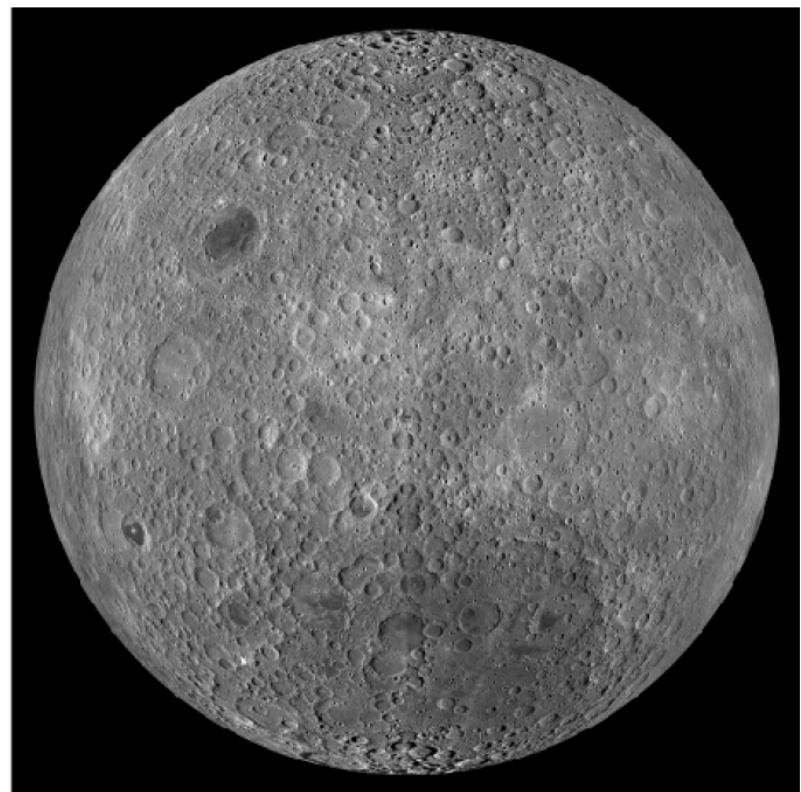
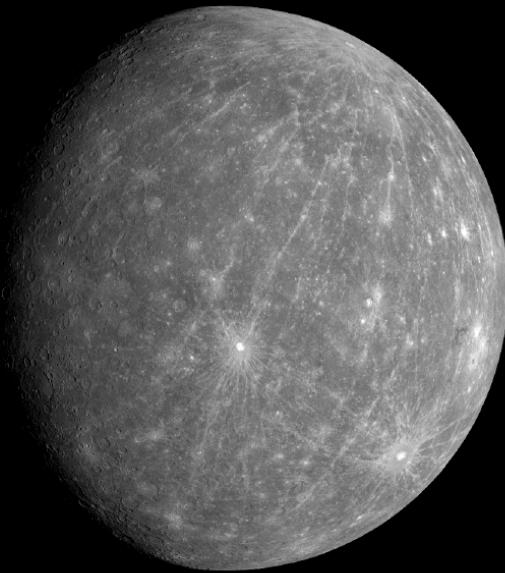


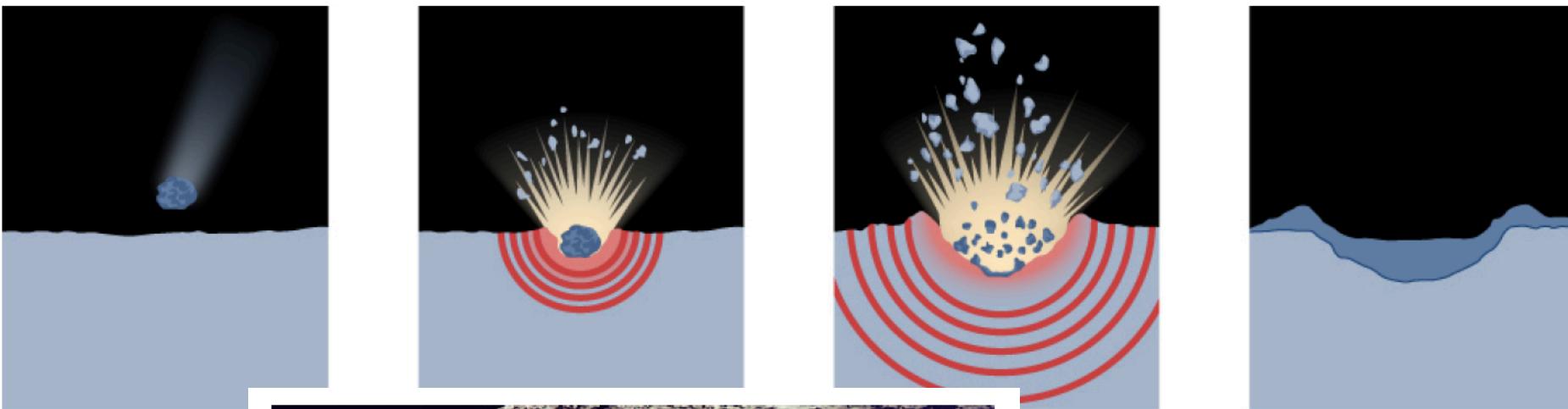
Subduction zone

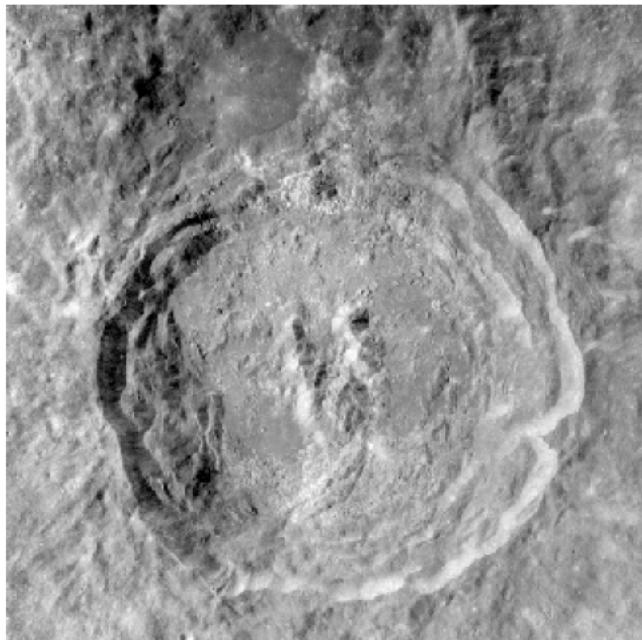
## Properties of the Moon and Mercury

Property	Moon	Mercury
Mass (Earth = 1)	0.0123	0.055
Diameter (km)	3476	4878
Density (g/cm <sup>3</sup> )	3.3	5.4
Surface gravity (Earth = 1)	0.17	0.38
Escape velocity (km/s)	2.4	4.3
Rotation period (days)	27.3	58.65

# The moon and Mercury



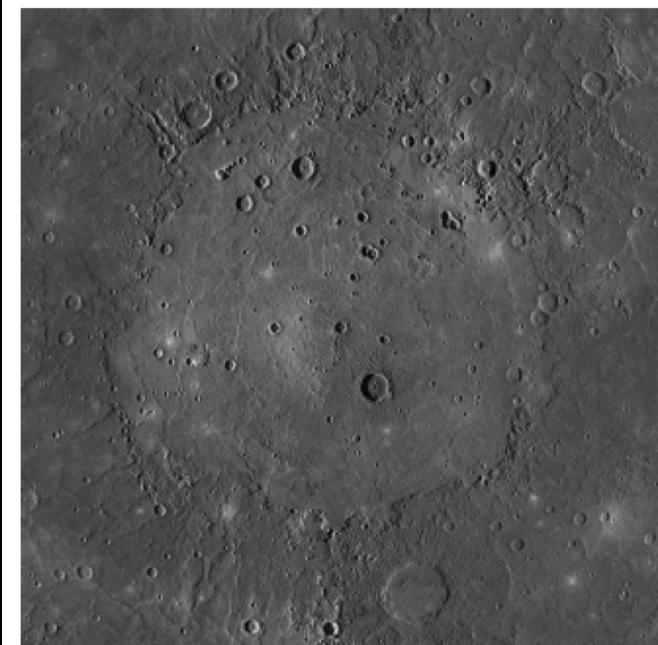
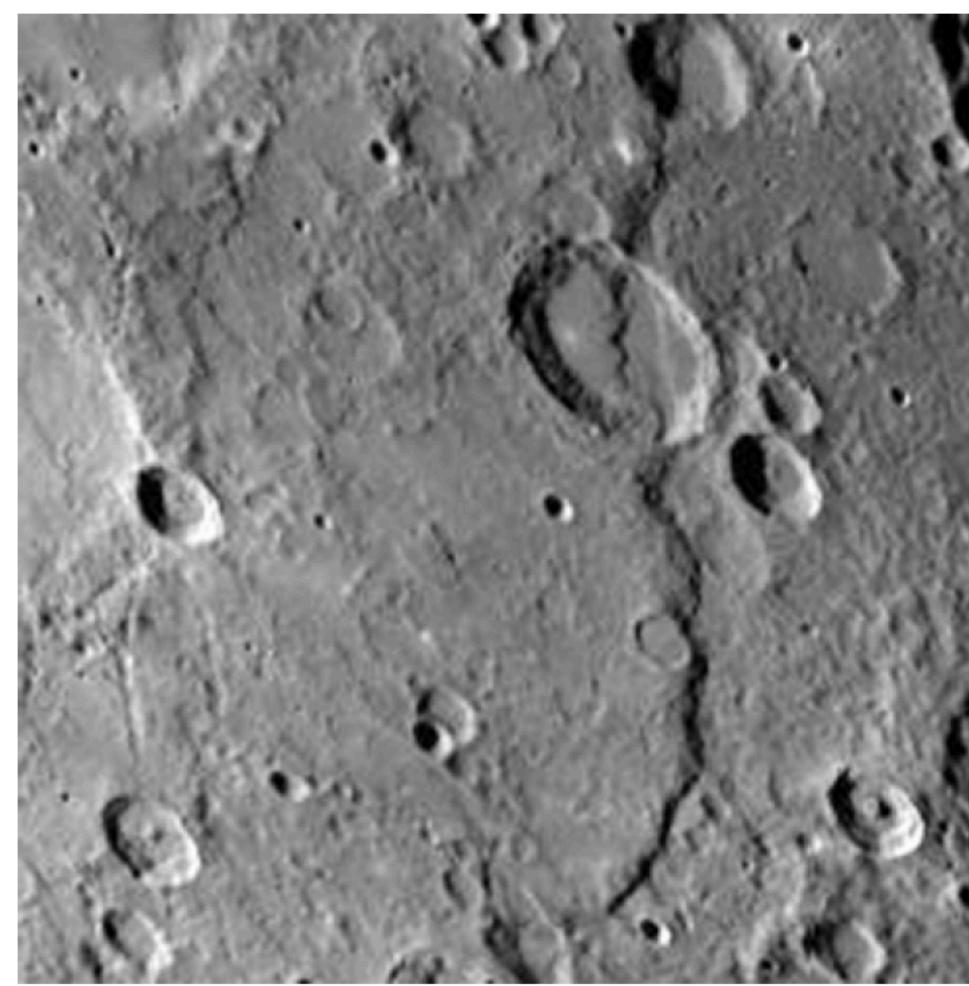


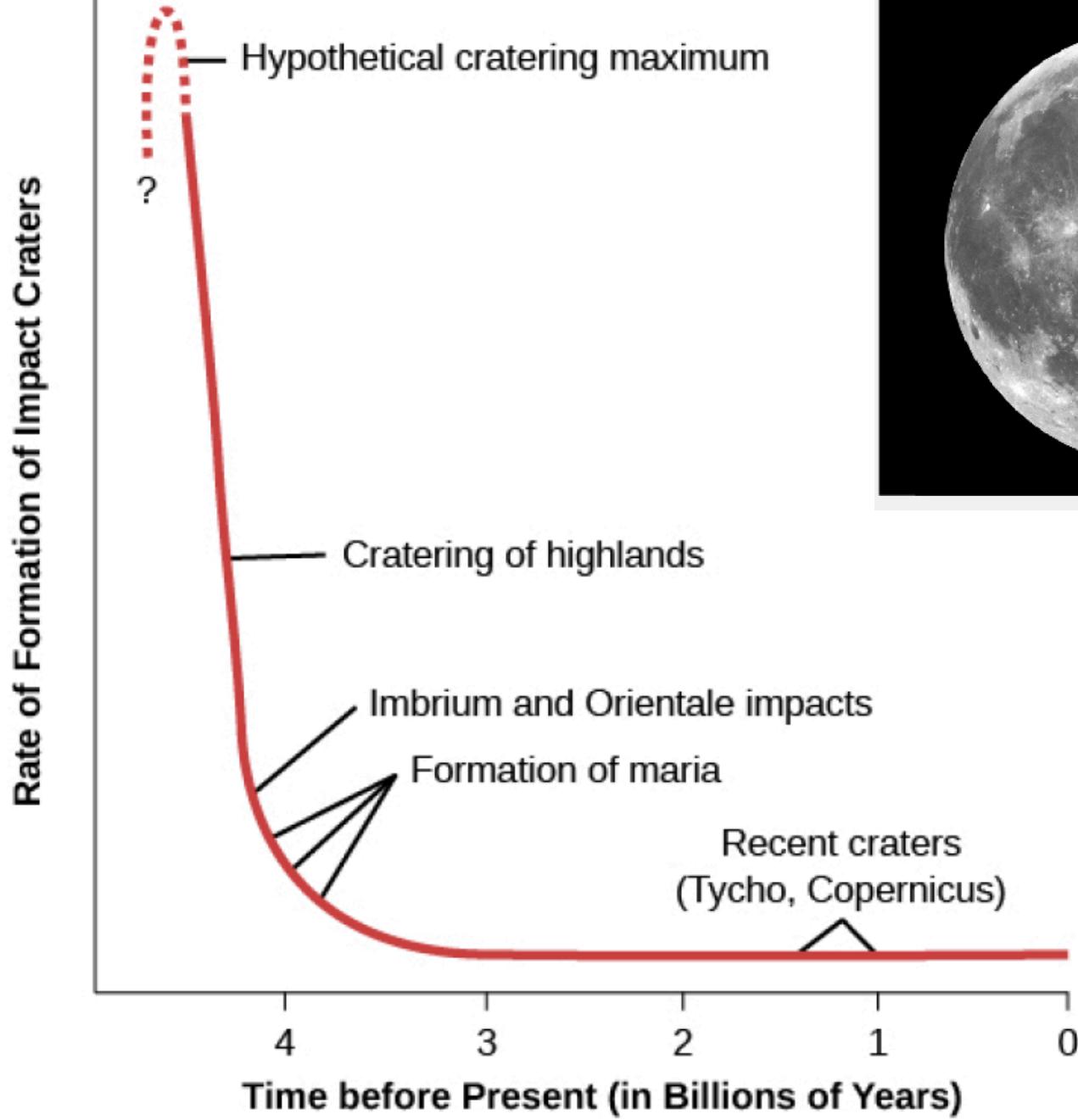


Craters: old surface  
Smooth: new surface

Mare=sea





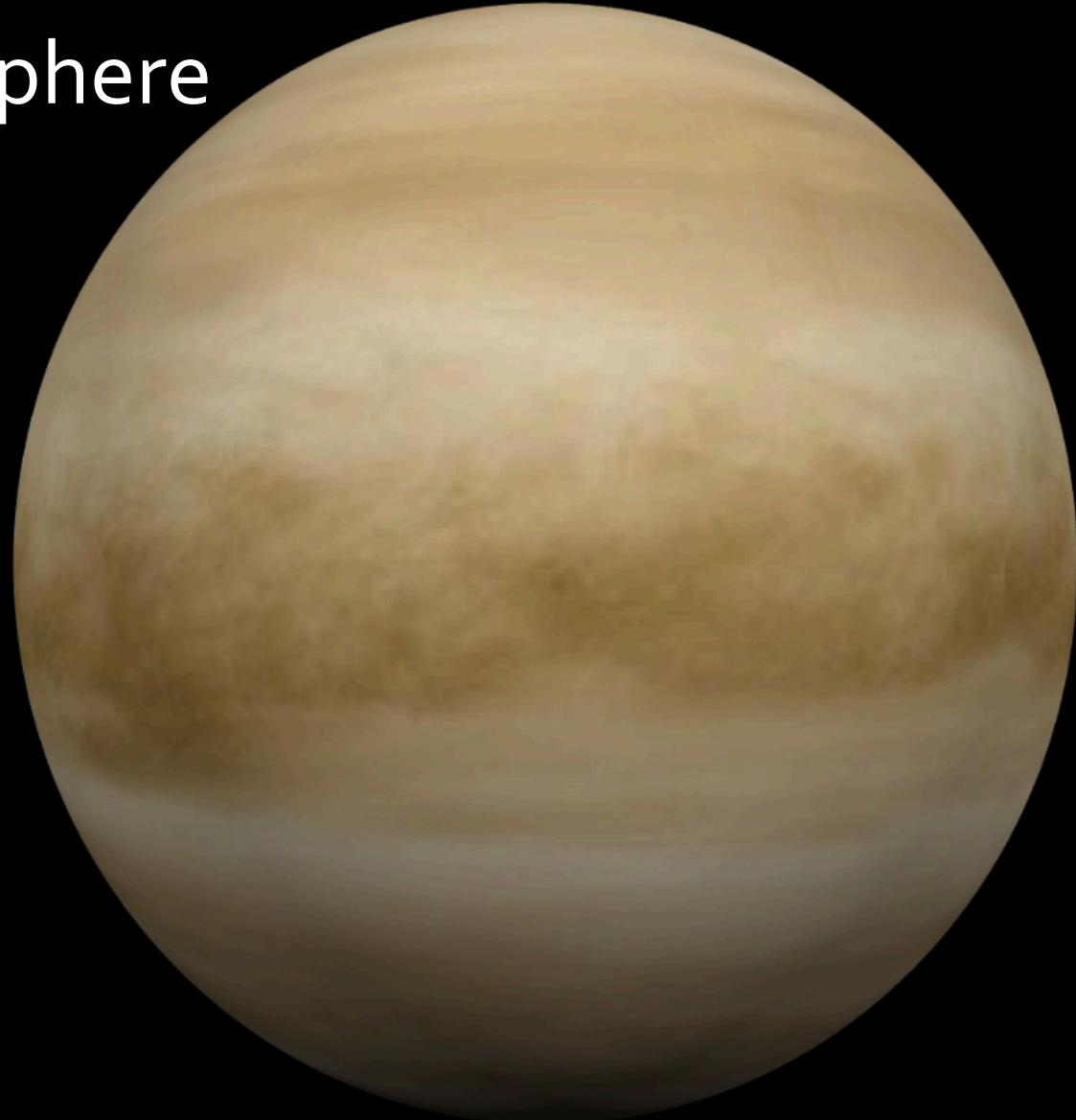


## Properties of Earth, Venus, and Mars

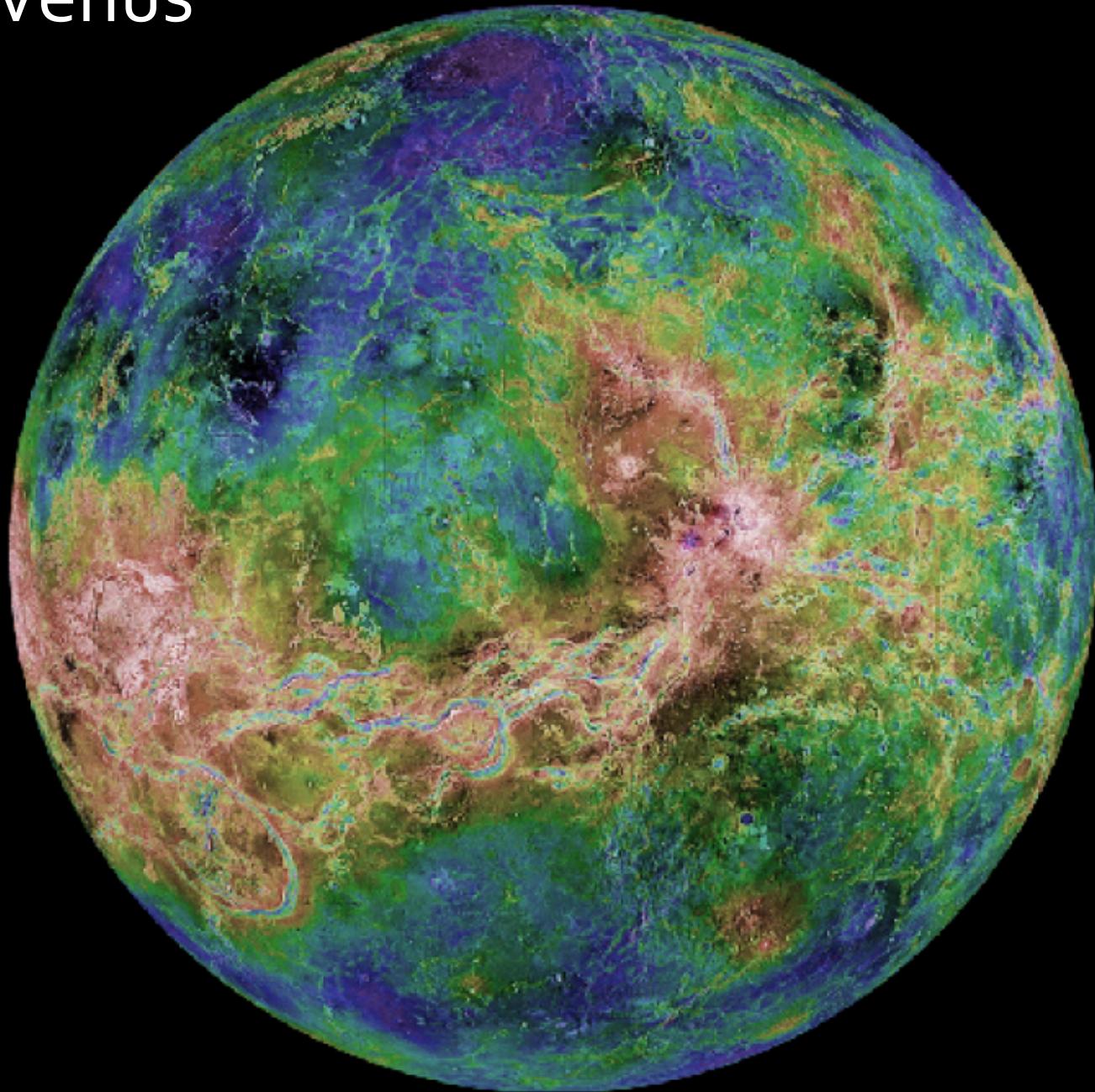
Property	Earth	Venus	Mars
Semimajor axis (AU)	1.00	0.72	1.52
Period (year)	1.00	0.61	1.88
Mass (Earth = 1)	1.00	0.82	0.11
Diameter (km)	12,756	12,102	6,790
Density (g/cm <sup>3</sup> )	5.5	5.3	3.9
Surface gravity (Earth = 1)	1.00	0.91	0.38
Escape velocity (km/s)	11.2	10.4	5.0
Rotation period (hours or days)	23.9 h	243 d	24.6 h
Surface area (Earth = 1)	1.00	0.90	0.28
Atmospheric pressure (bar)	1.00	90	0.007

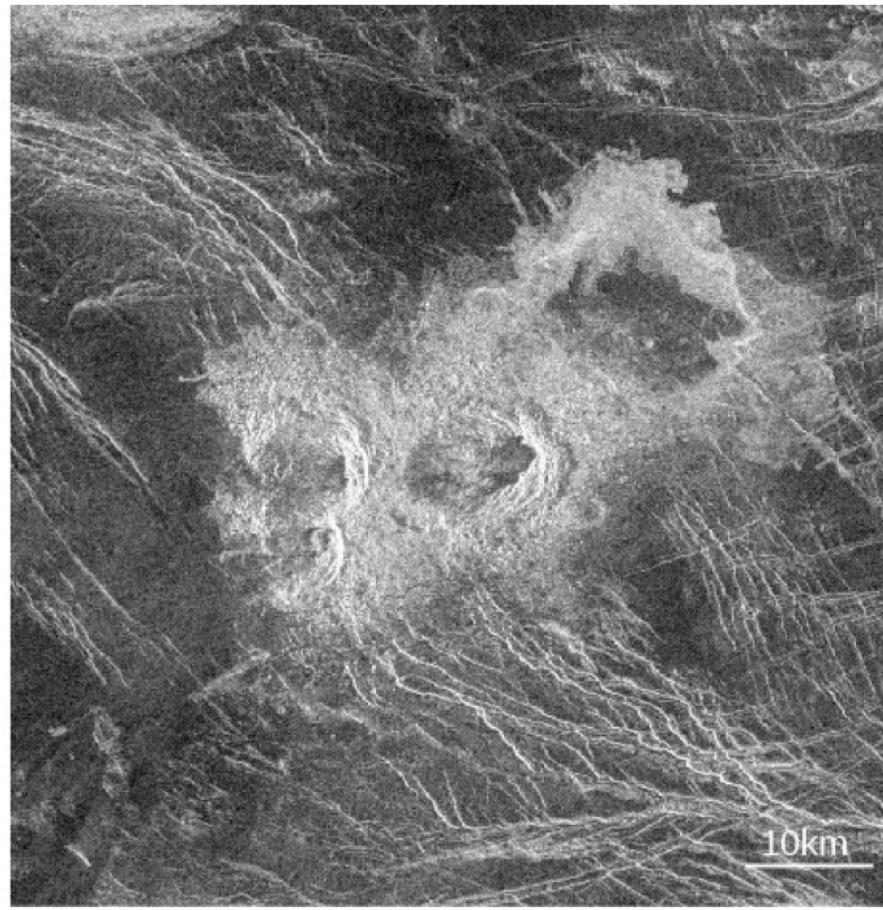
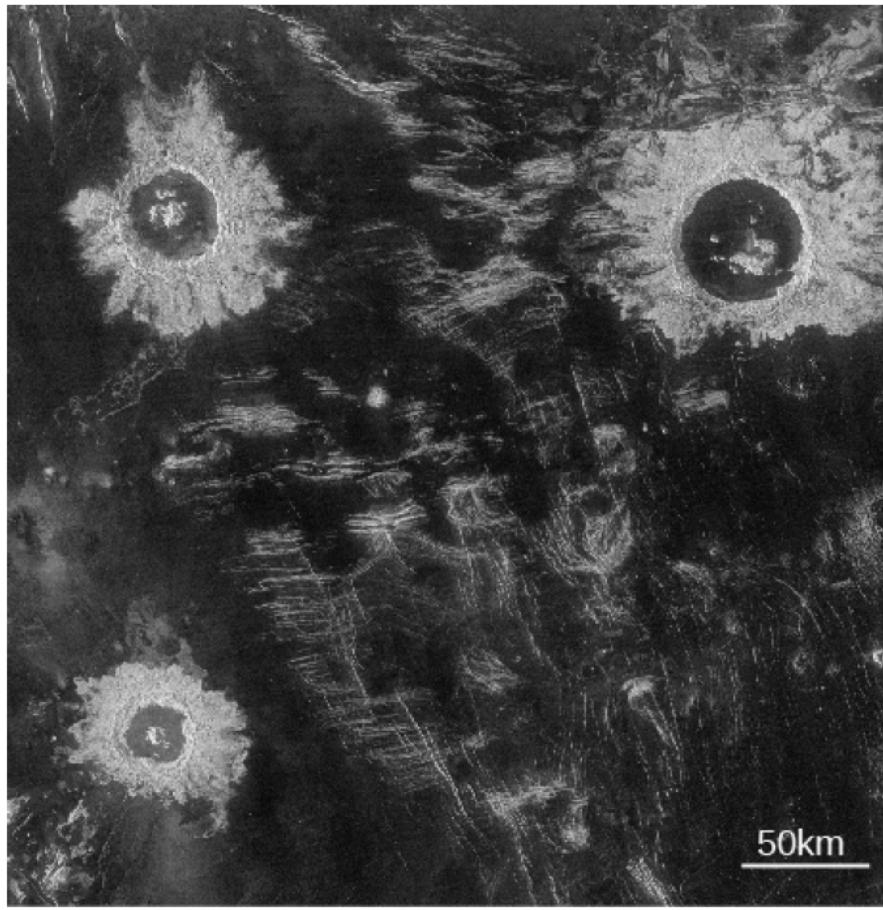
Venus

Thick atmosphere

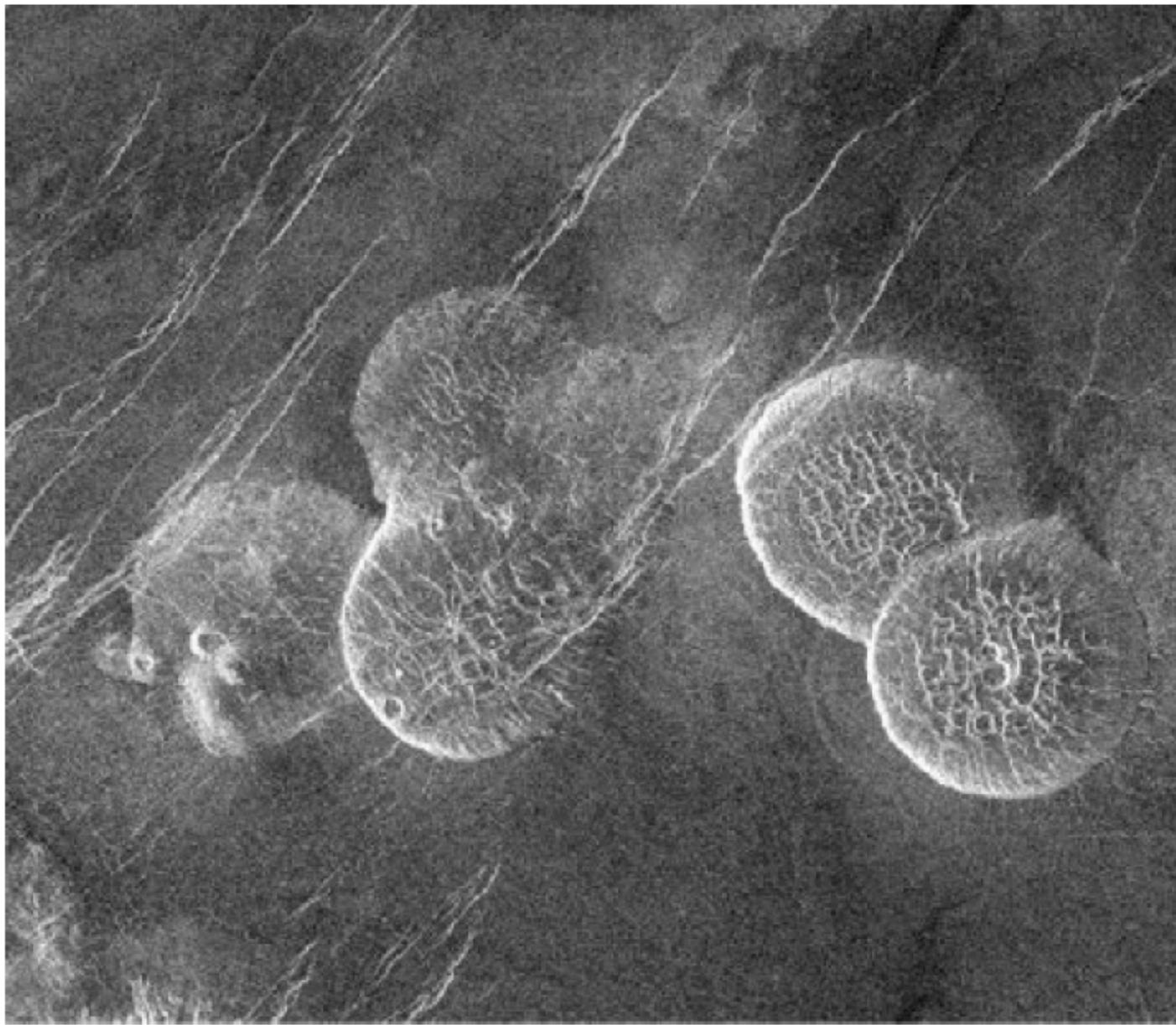


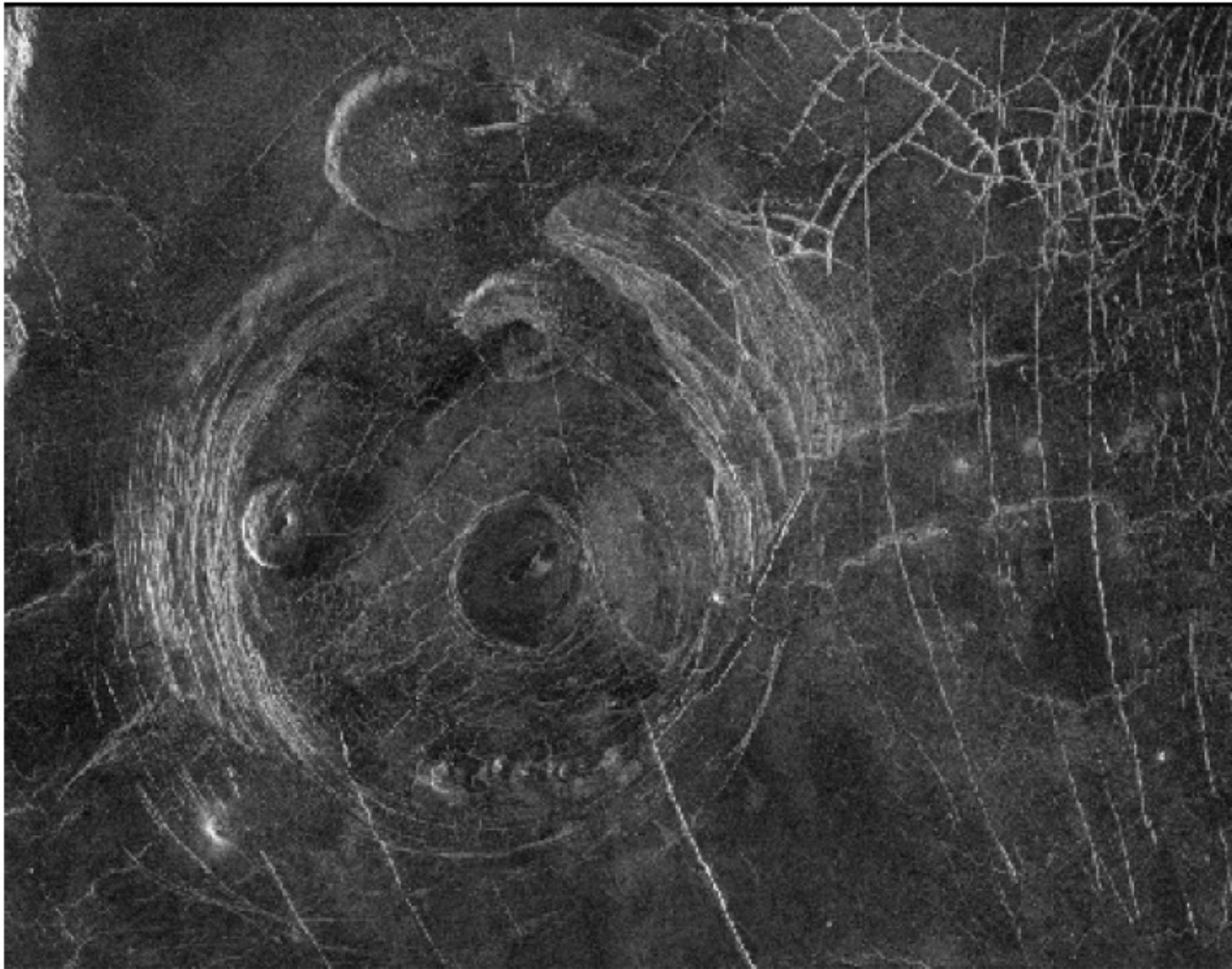
# Venus

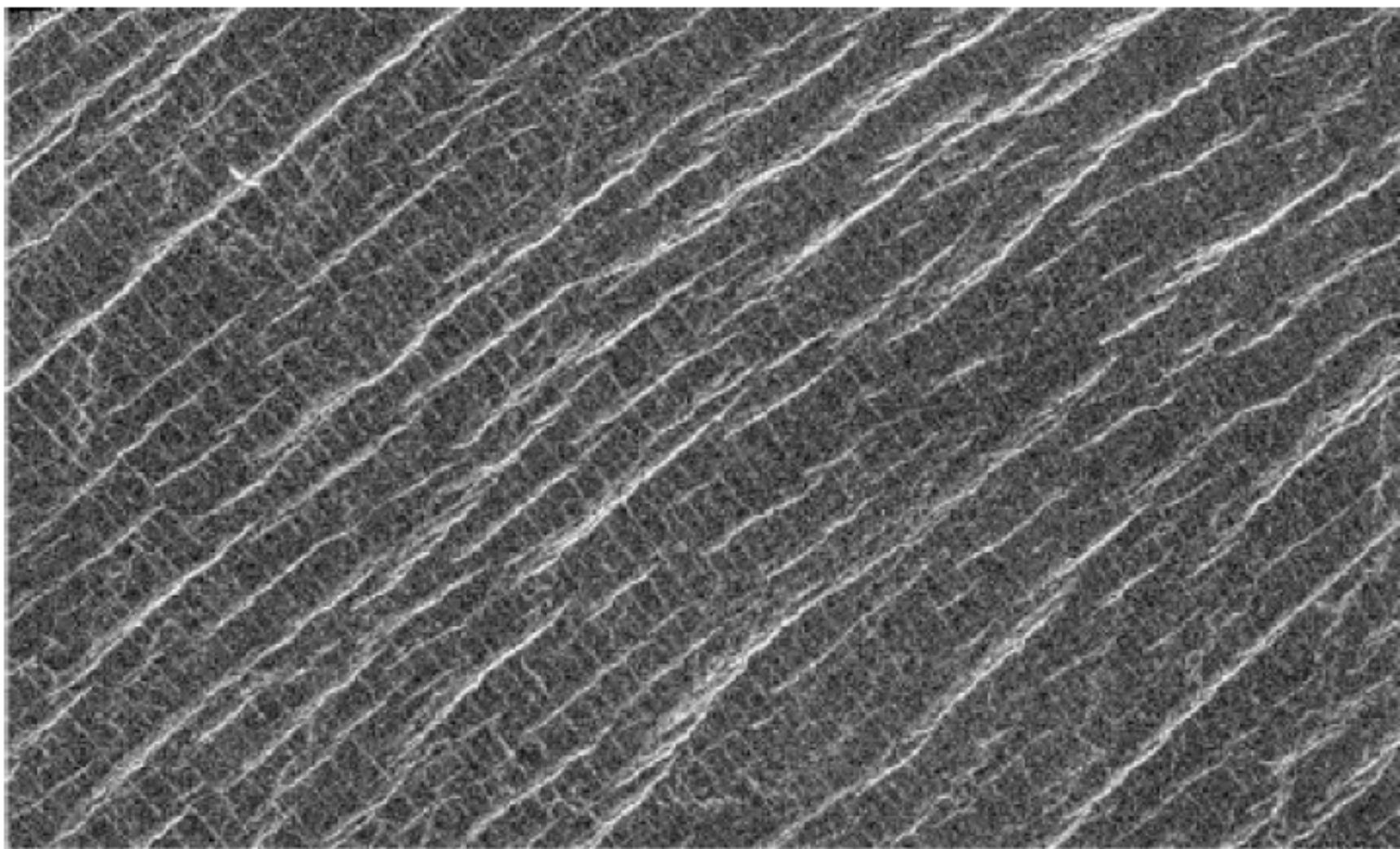


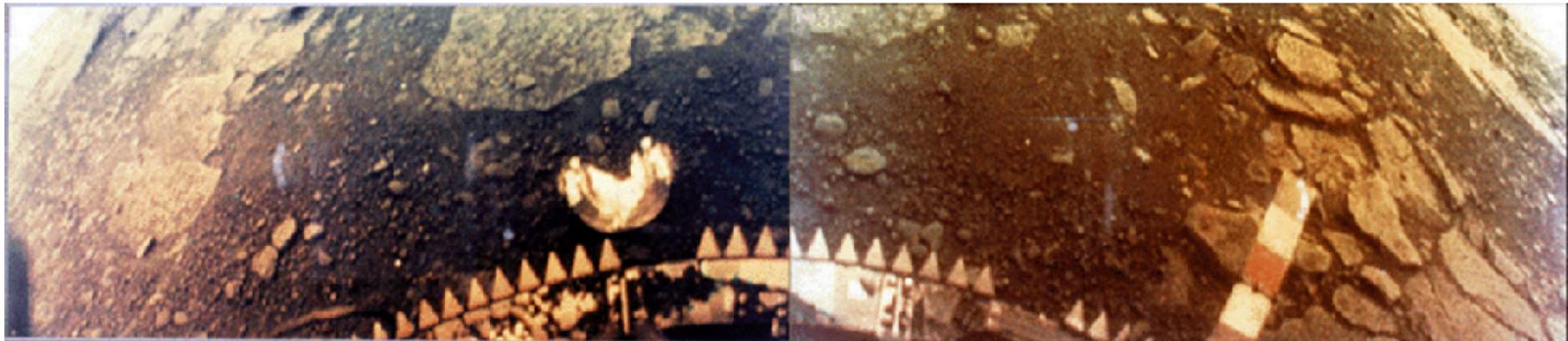


Only a few landers  
(all Soviet Union)



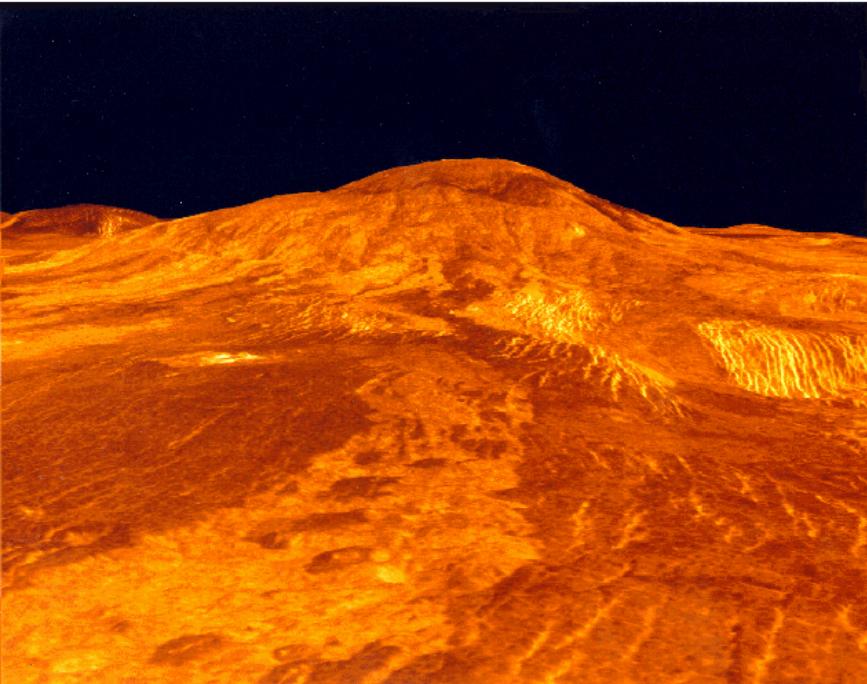






Venus has hardly any impact craters; the surface density of craters indicates most of the surface is only 600 million years old; but craters do not appear to be eroding. Where are all the older craters?

Perhaps Venus undergoes periodic **catastrophic resurfacing**. The last such event would have taken place about 600 million years ago.



The volcano Sif Mons. is about 2 km high and nearly 300 km across. There appear to be recent lava flows at the front of the image: these flows are about 120 km long, which suggests that these lavas were also very fluid.

## Atmospheric Composition of Earth, Venus, and Mars

Gas	Earth	Venus	Mars
Carbon dioxide (CO <sub>2</sub> )	0.03%	96%	95.3%
Nitrogen (N <sub>2</sub> )	78.1%	3.5%	2.7%
Argon (Ar)	0.93%	0.006%	1.6%
Oxygen (O <sub>2</sub> )	21.0%	0.003%	0.15%
Neon (Ne)	0.002%	0.001%	0.0003%