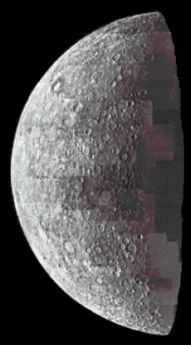
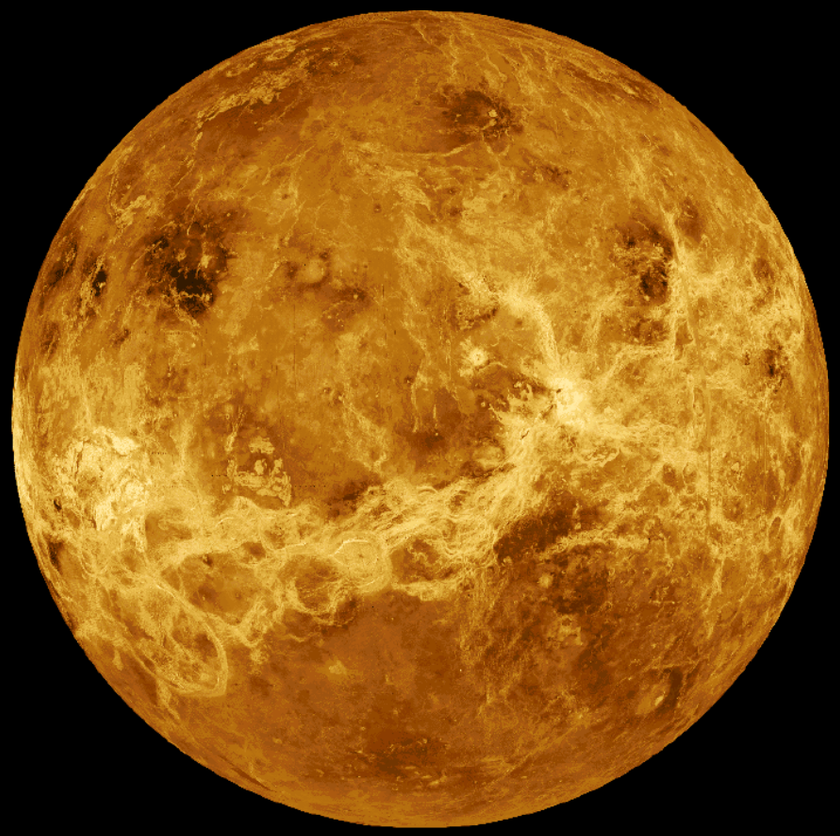
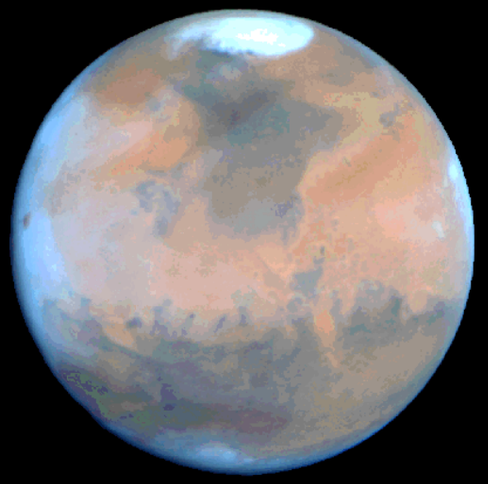
Terrestrial Planets II:

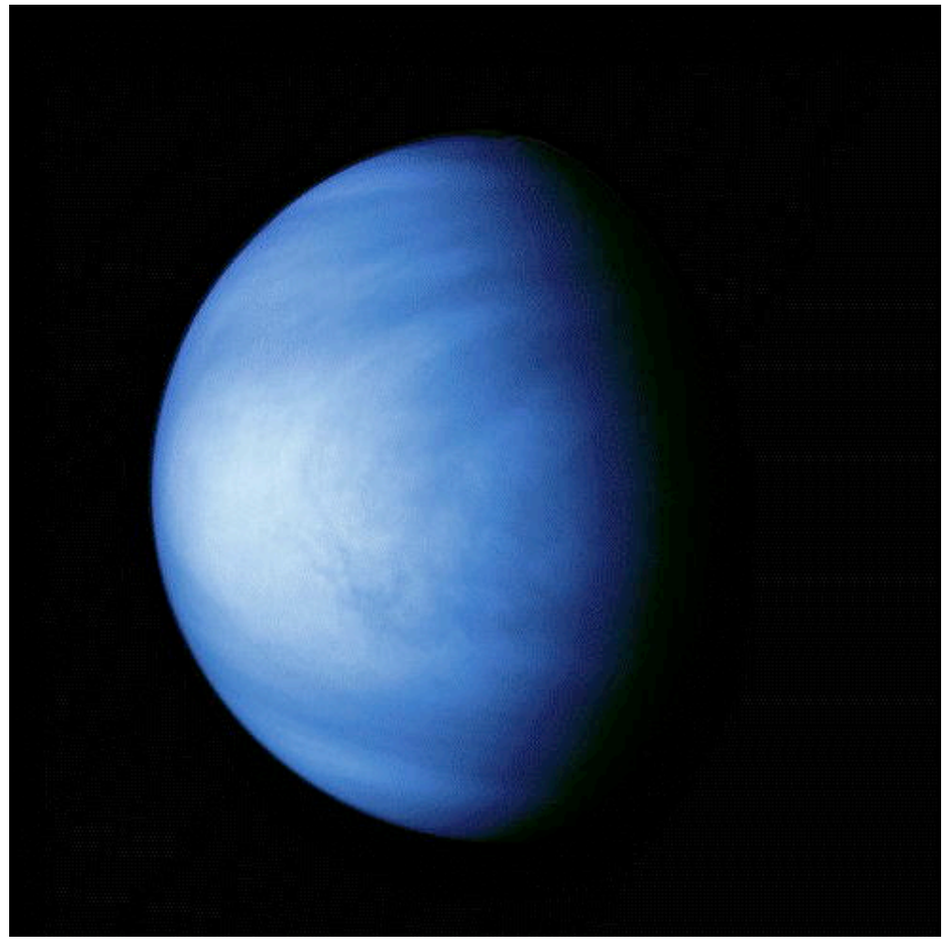
Venus and Mars



Venus

Distance to the Sun = 0.72 AU
Radius =6,050km =0.95 Radius-of-Earth
Surface temperature = 900F
Pressure of atmosphere = 98 atm

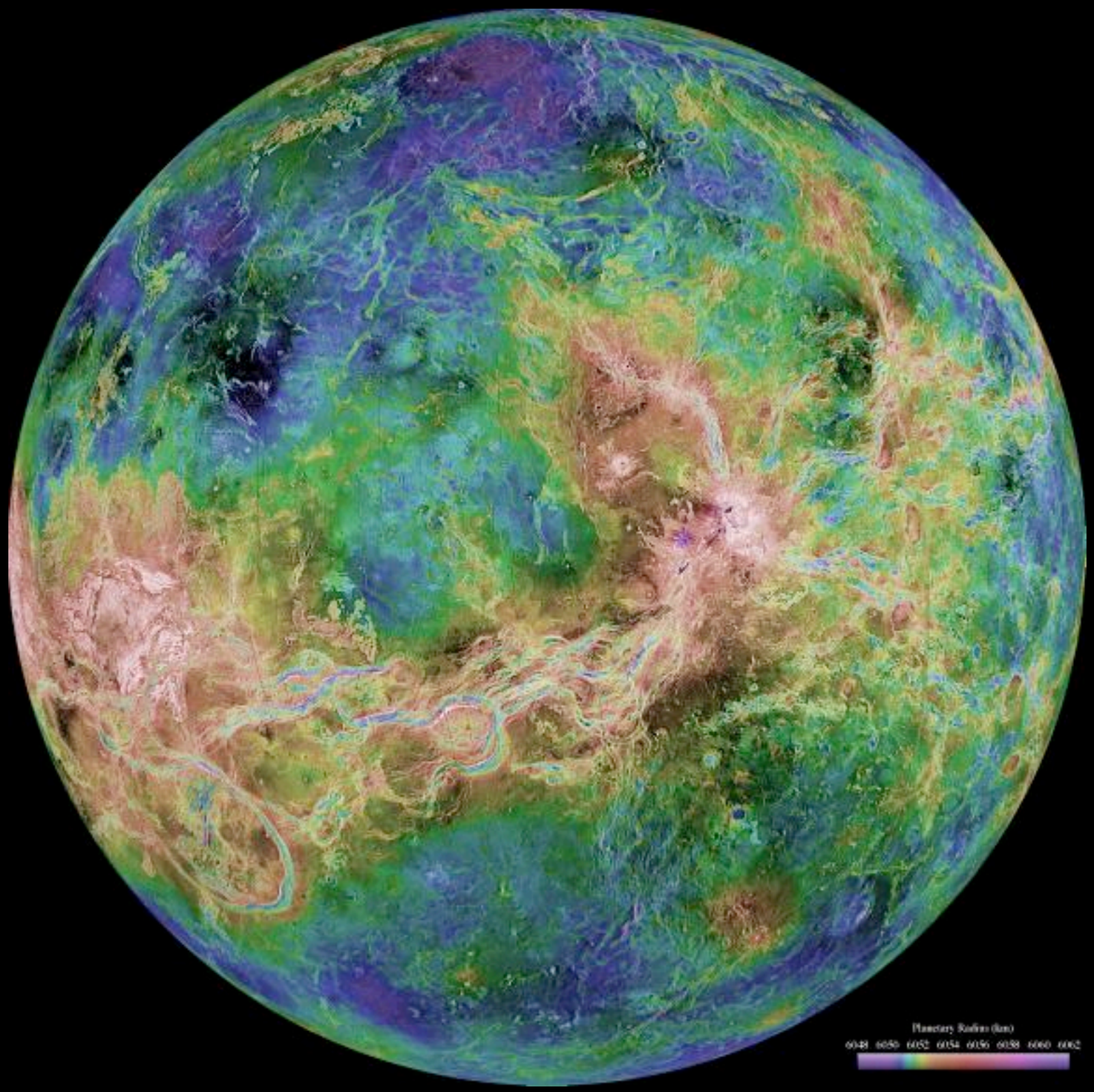


In mass and density, Venus is nearly the Earth's twin. Venus' atmosphere is very thick and opaque. The atmosphere is about 95% carbon dioxide. Other components are also present: Nitrogen, water vapor, sulfuric acid

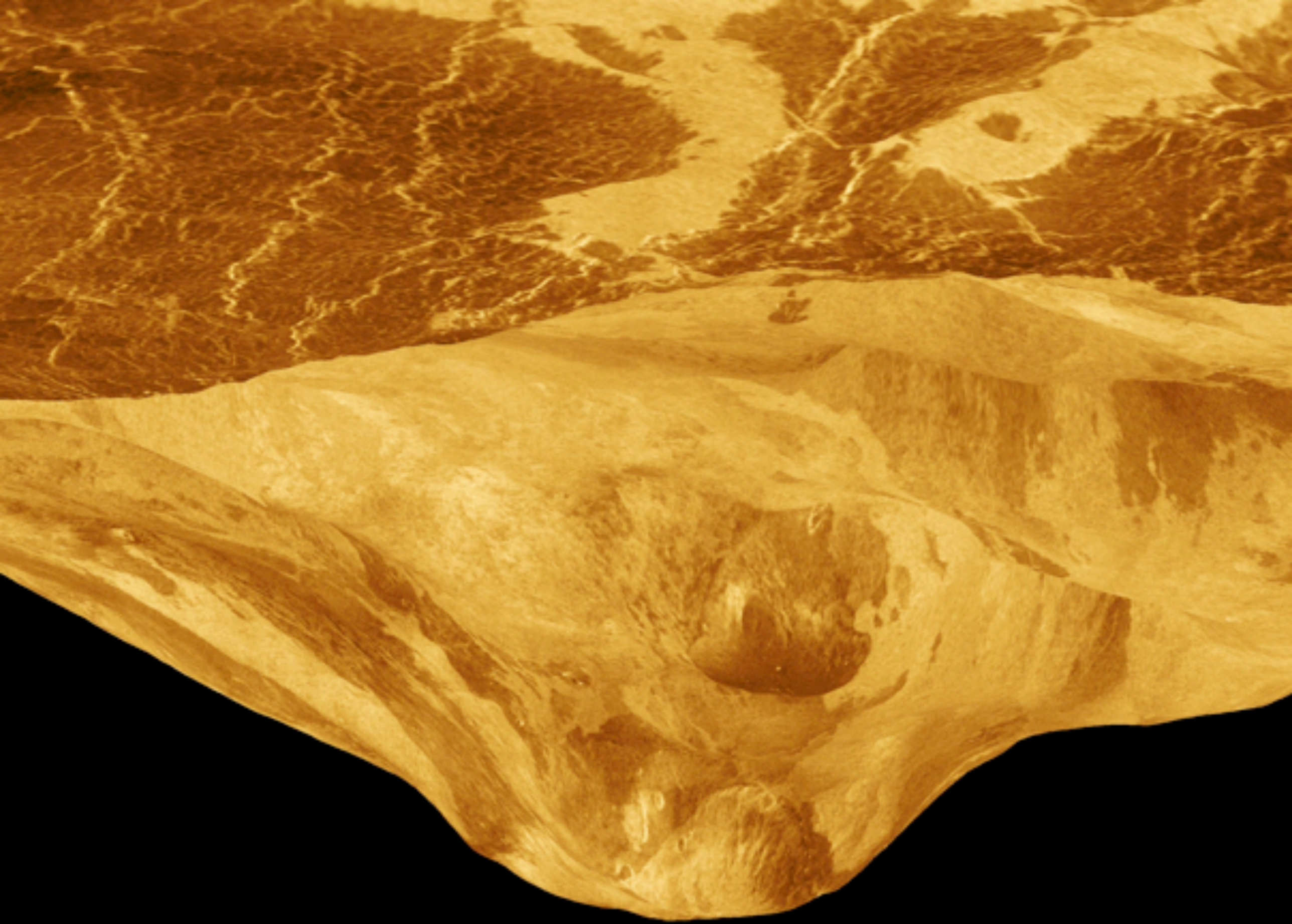
Heat is trapped near the planet's surface by a runaway Greenhouse Effect, that produces a surface temperature of nearly 470C.

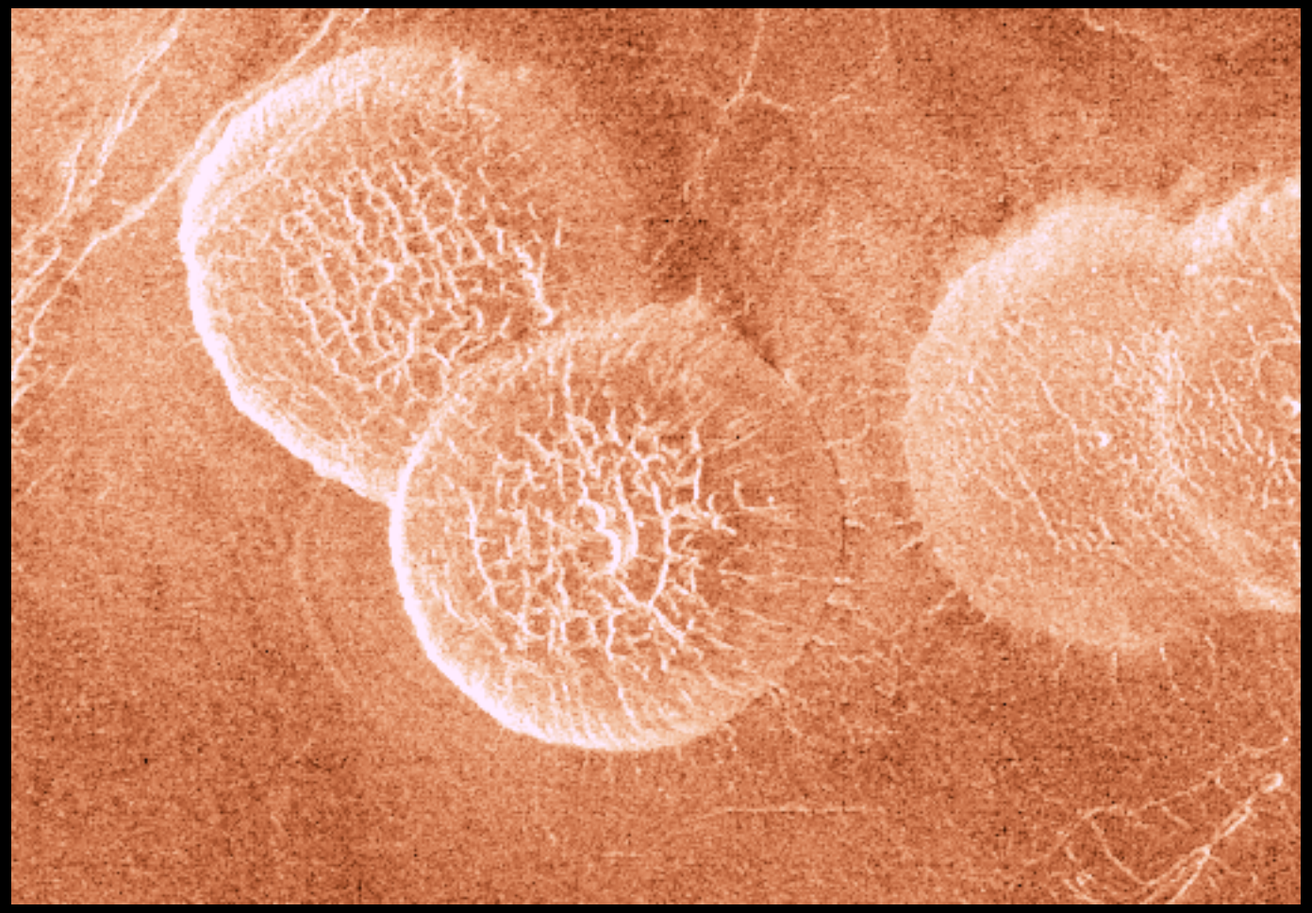
The planet has been imaged from orbit using the Magellan radar mapping system. The surface was photographed by the Russian Venera spacecraft.

Global view: Volcanoes and lava flows

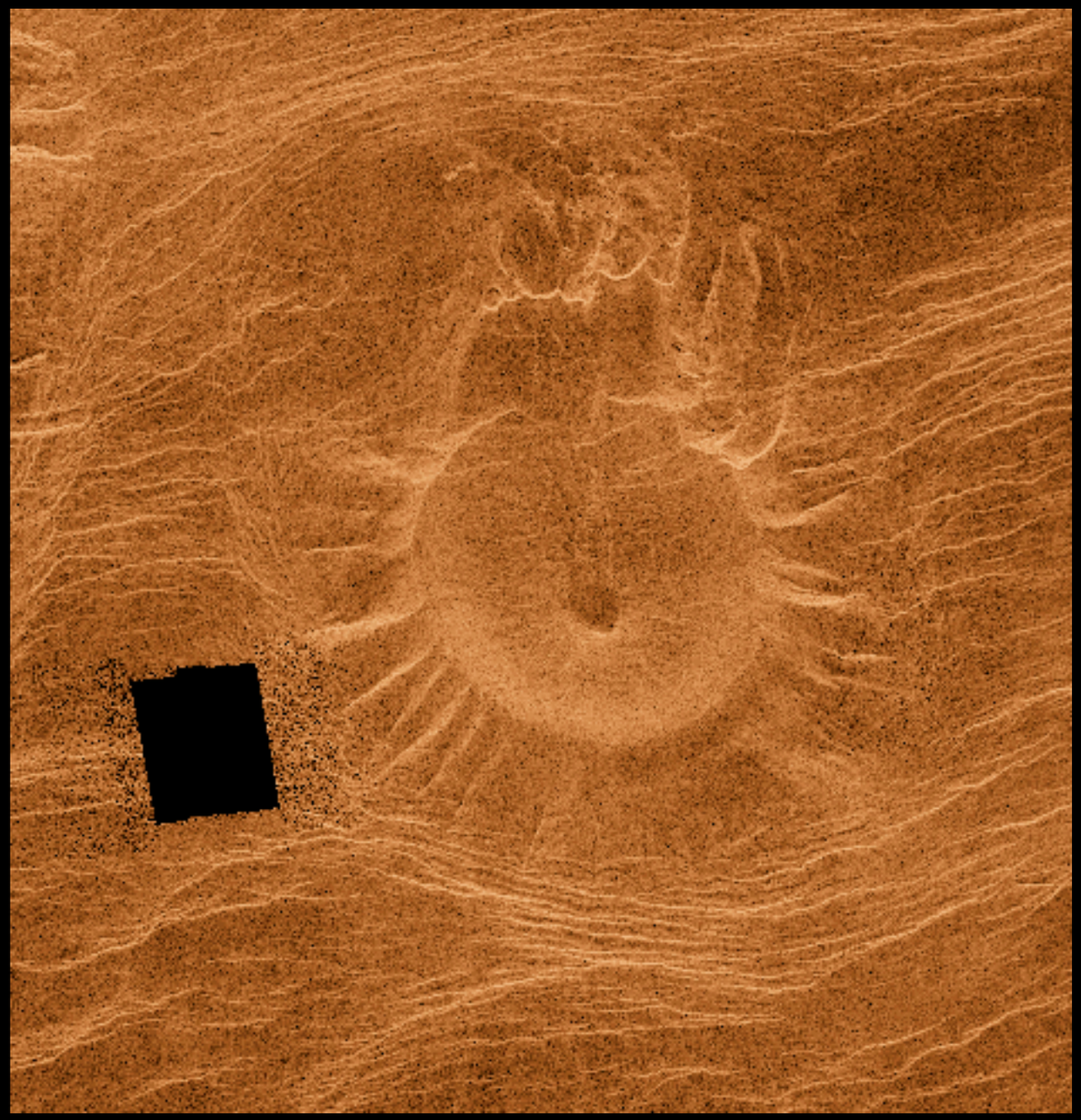


Volcano Gula Mons





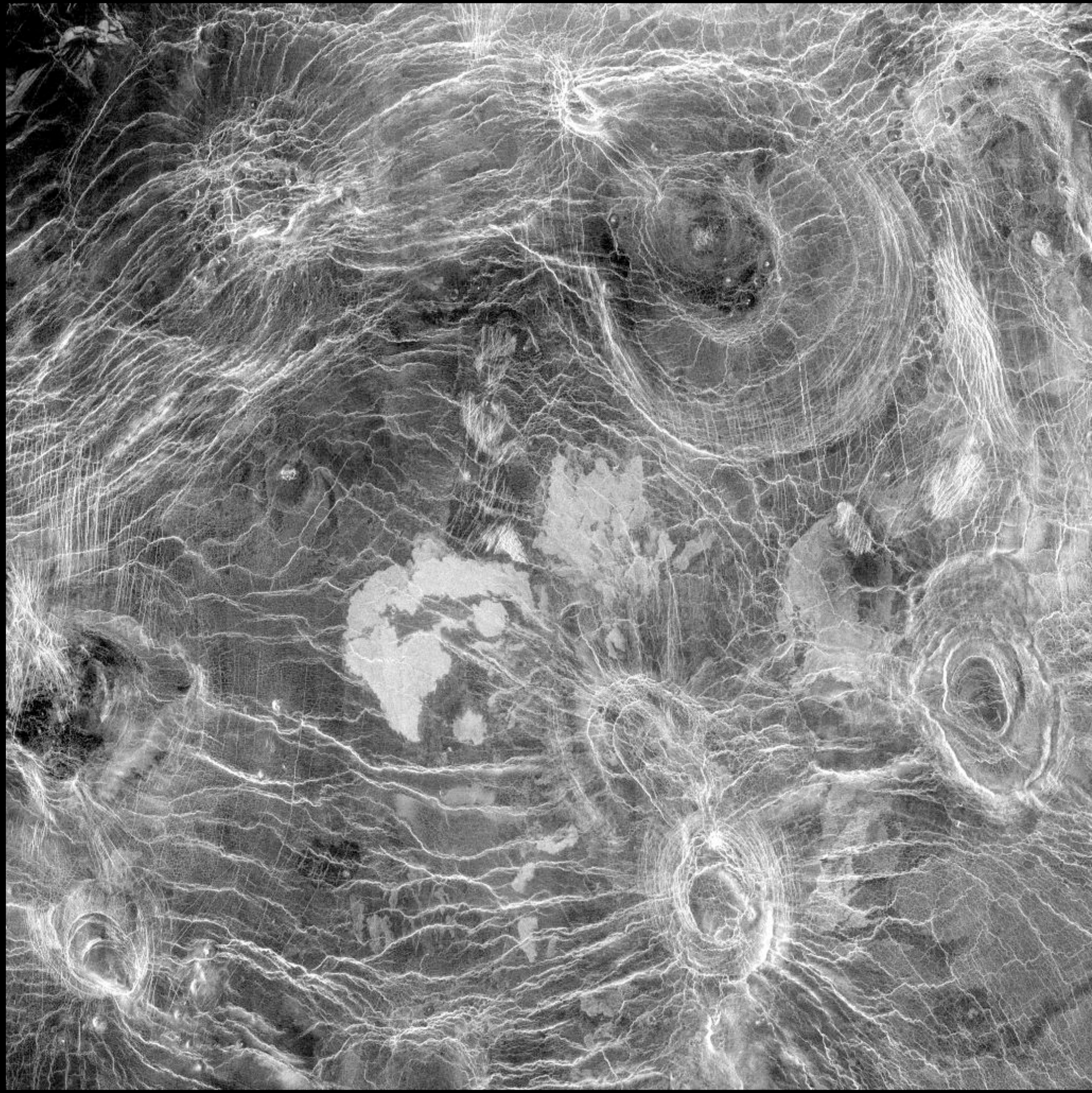
Pancake Volcanoes

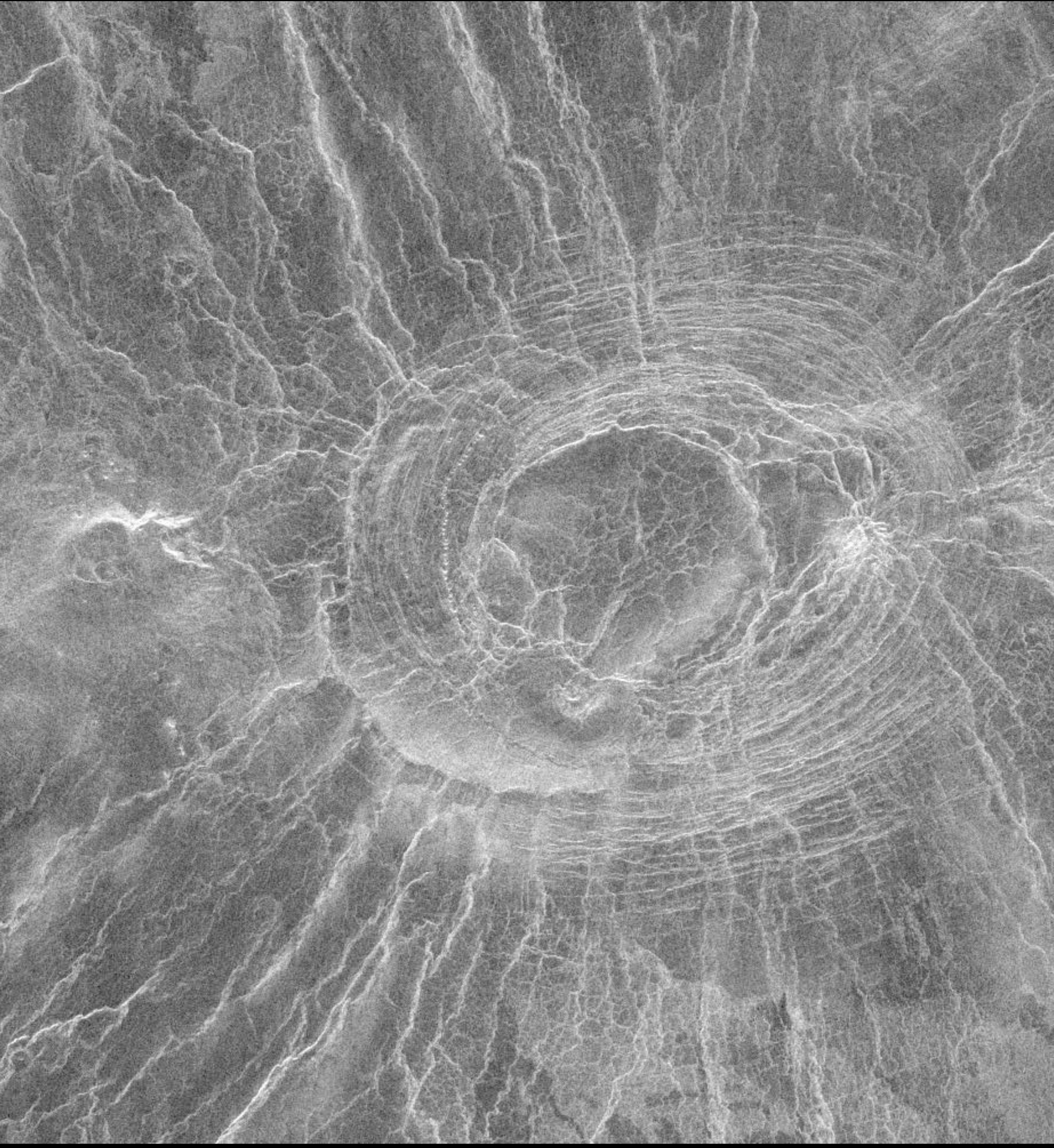


"Tick" Volcano

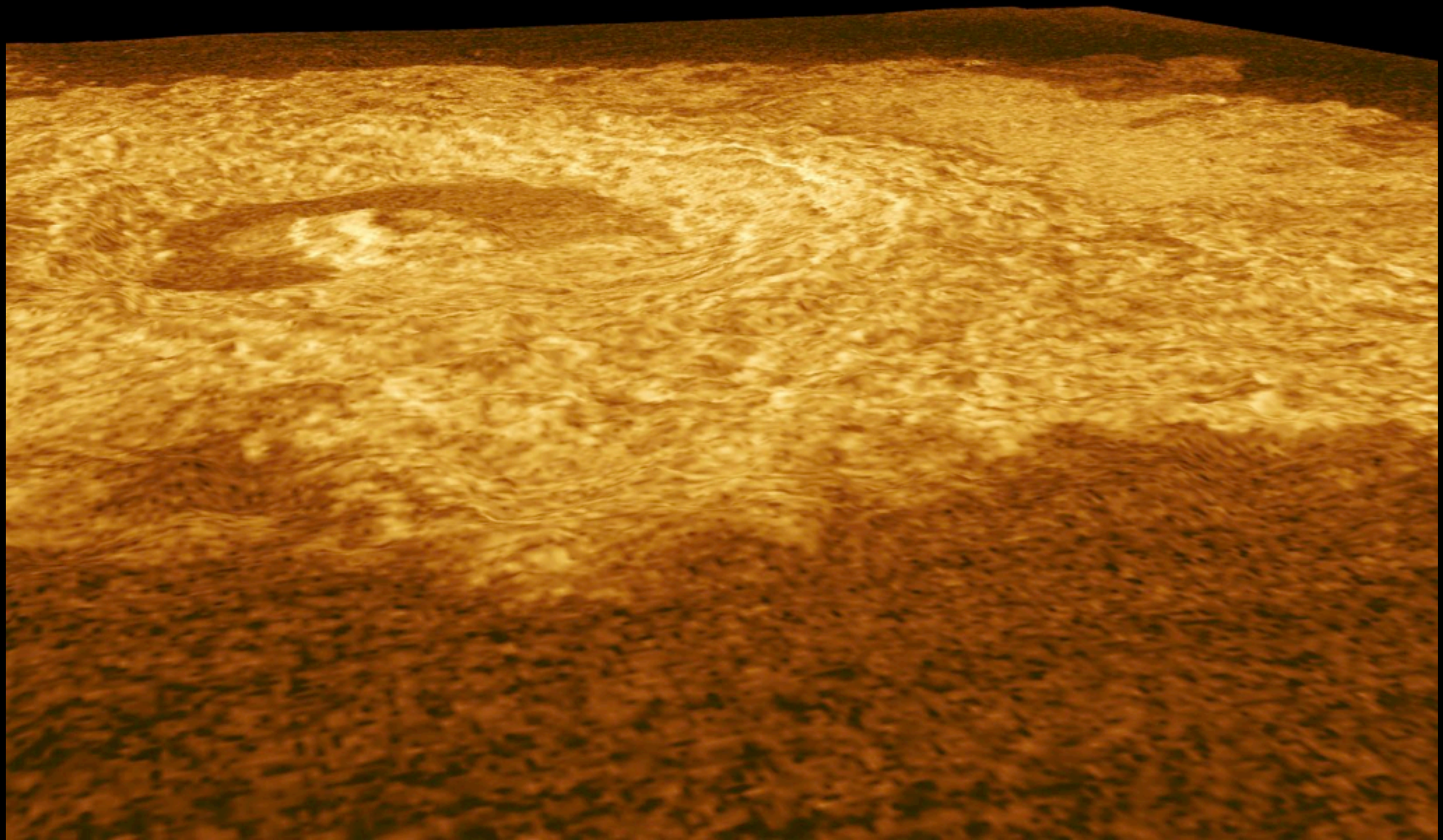
Corona Latona

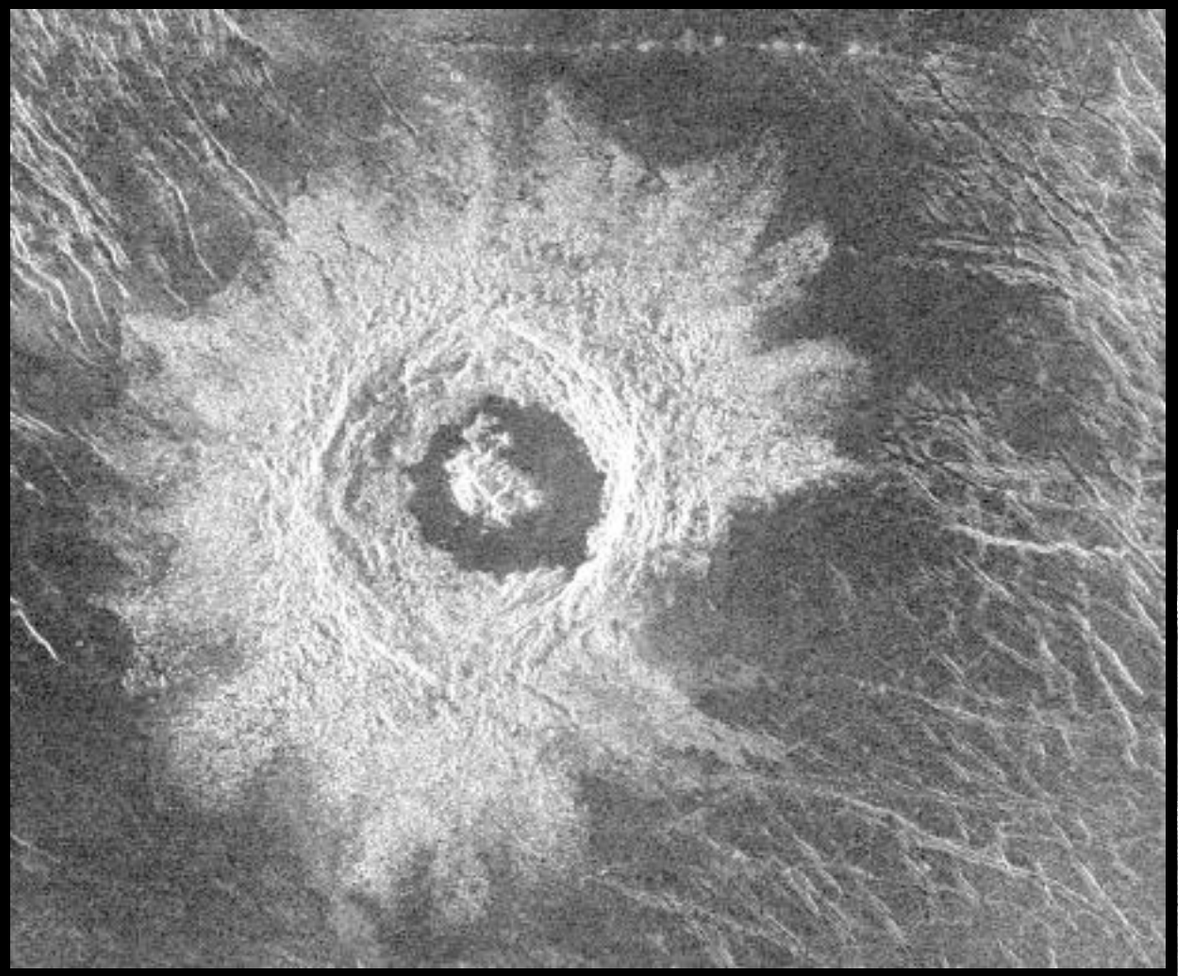
Corona

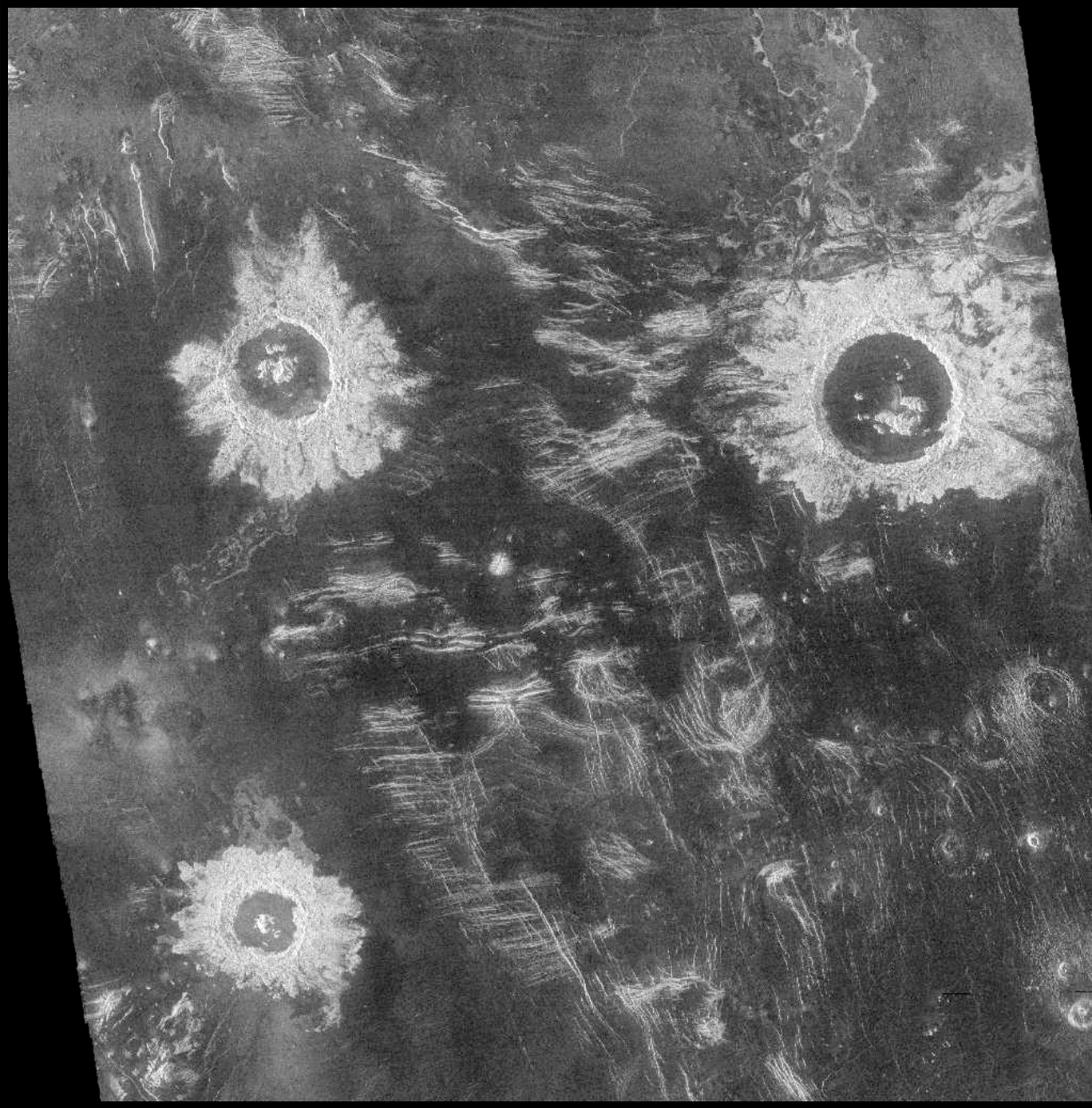




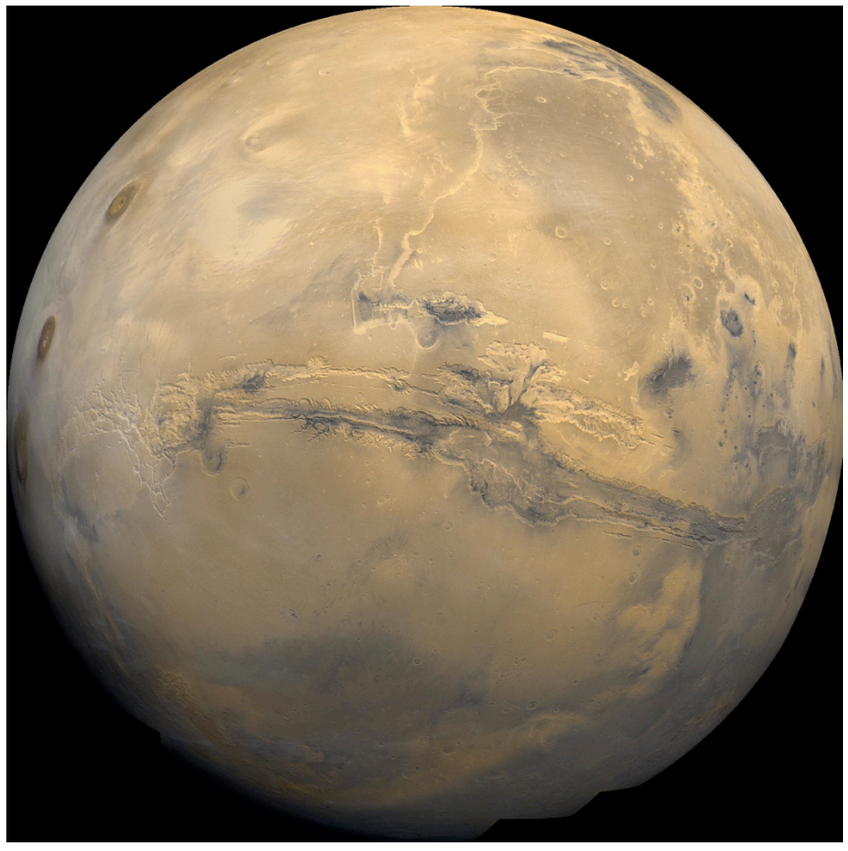
Impact Crater





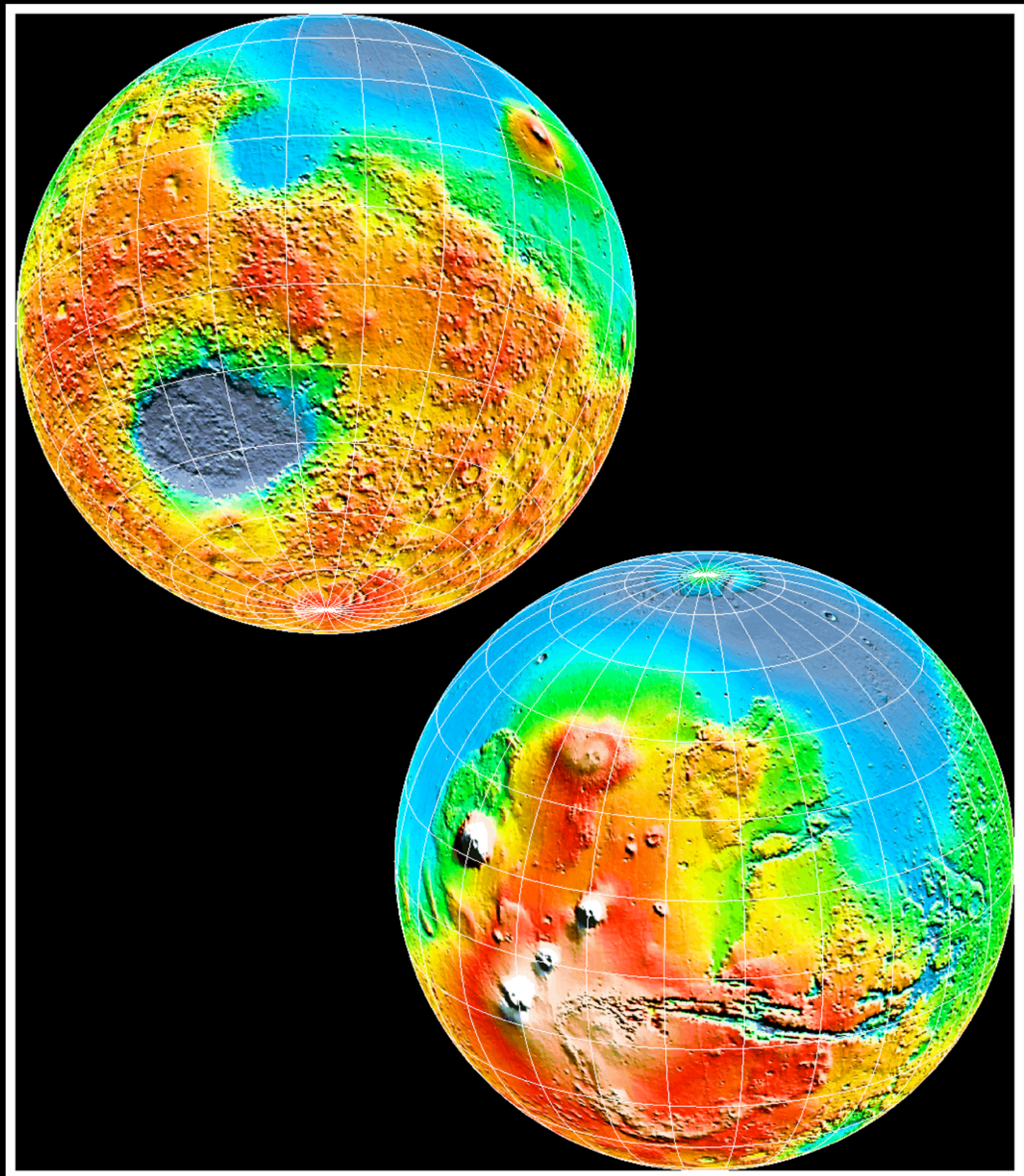


Mars

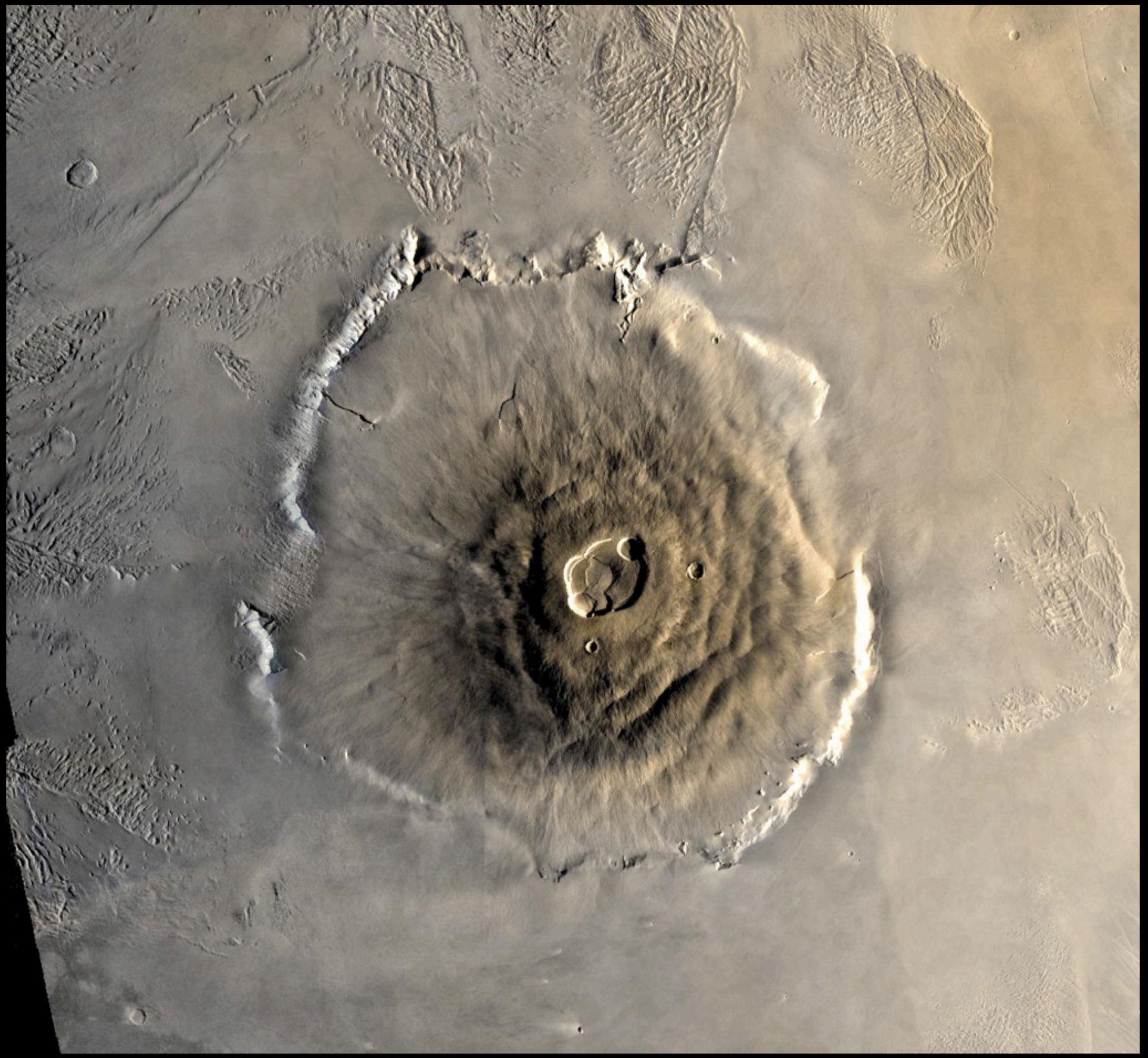


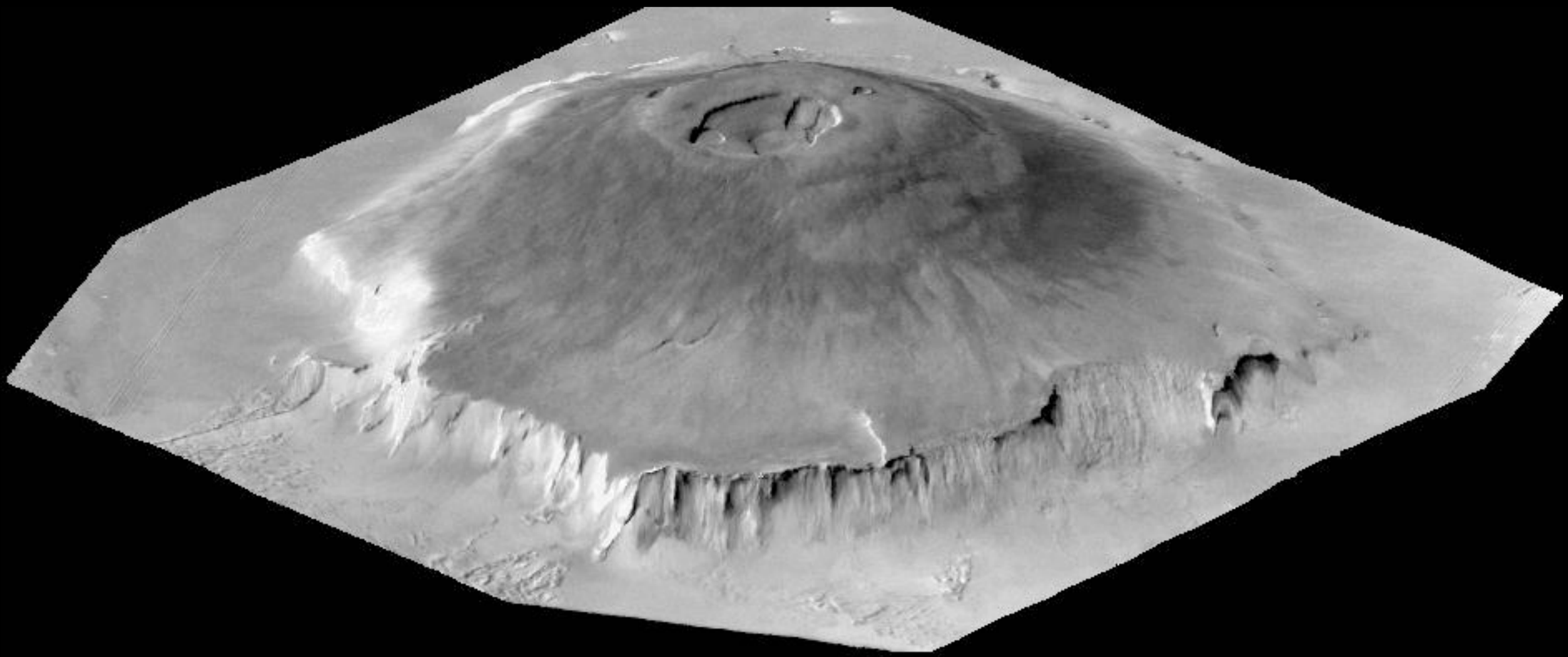
Distance to the Sun = 1.52 AU
Radius =3390 km = 0.53 Radius-of-Earth
Mass =0.11 Mass-of-Earth
Period of rotation = 24.6 hrs
Orbital period = 687 days

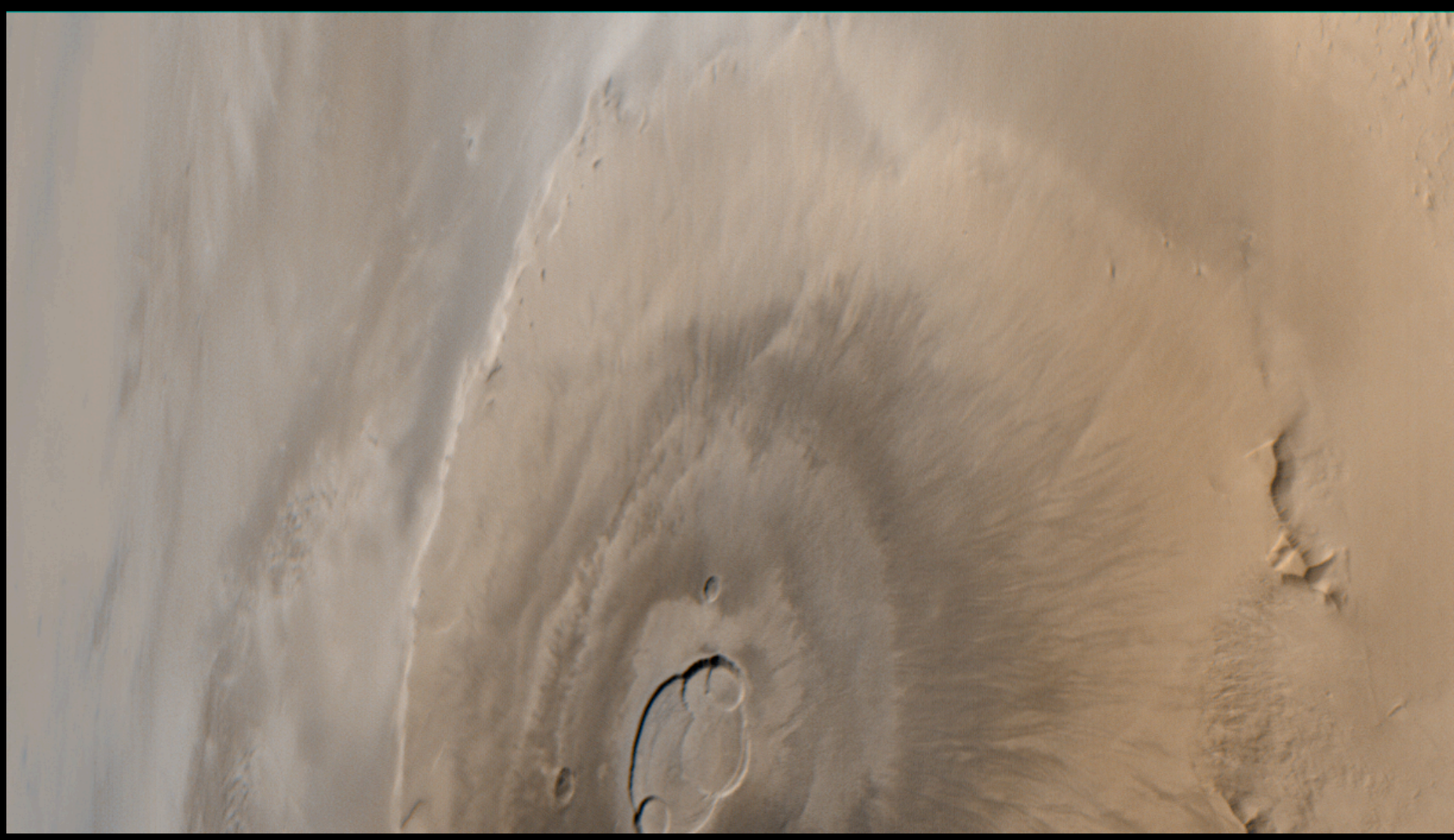
Density = 4 g/cm^3
Atmosphere: 95% CO_2, few % of N and Ar
Temperature: from -220F to 60F



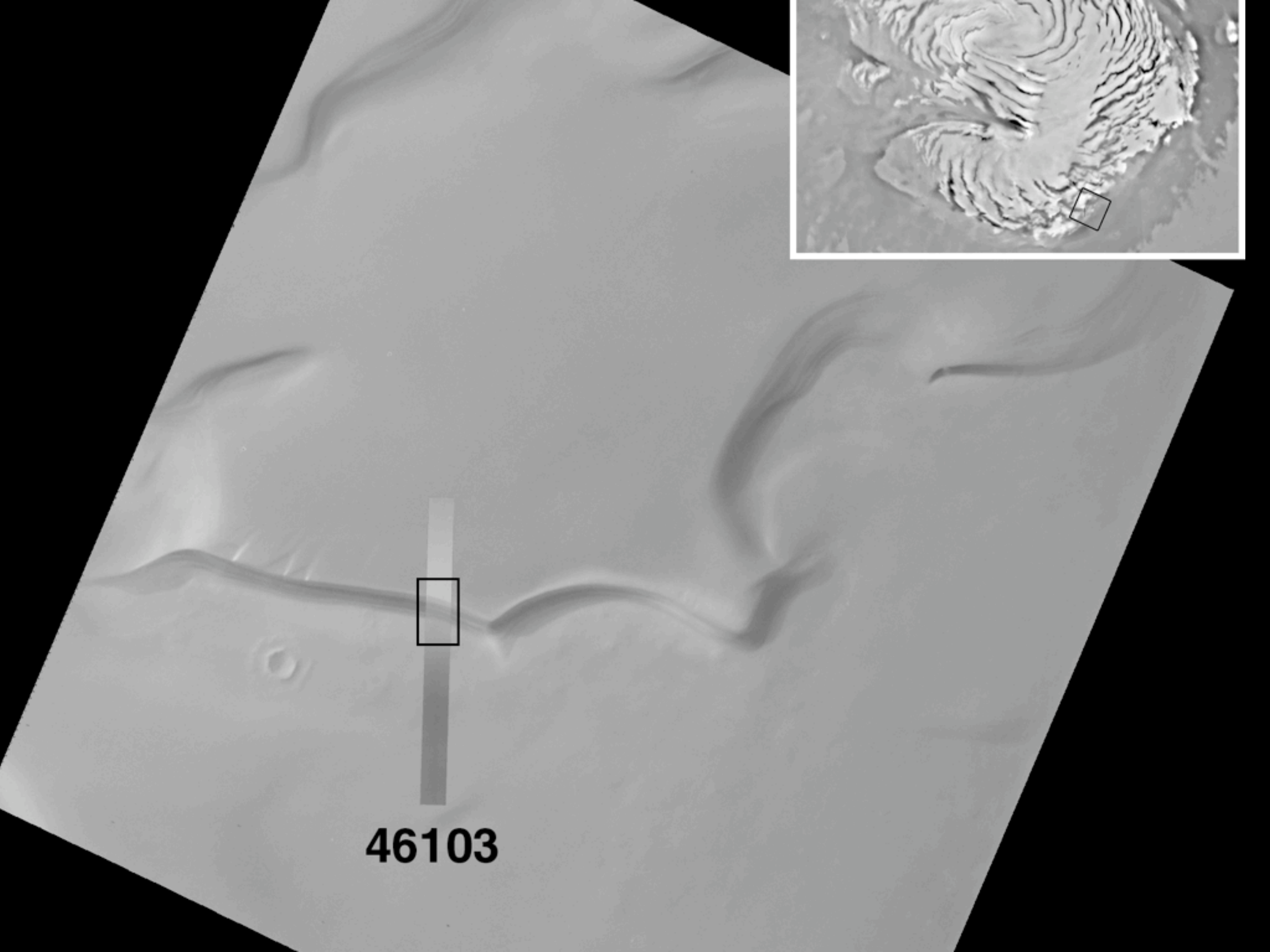
Olympus Mons: the largest volcano in the Solar System

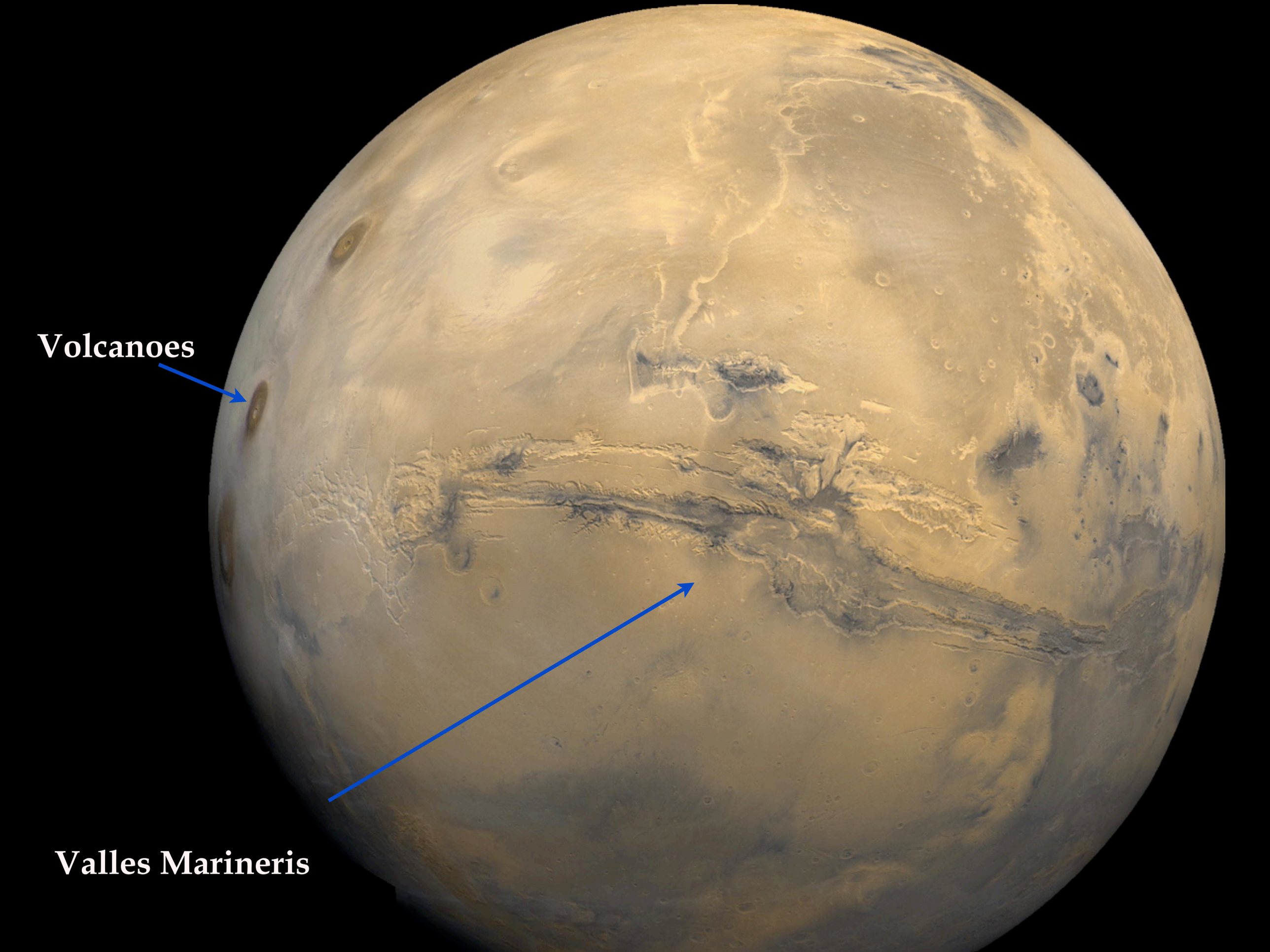


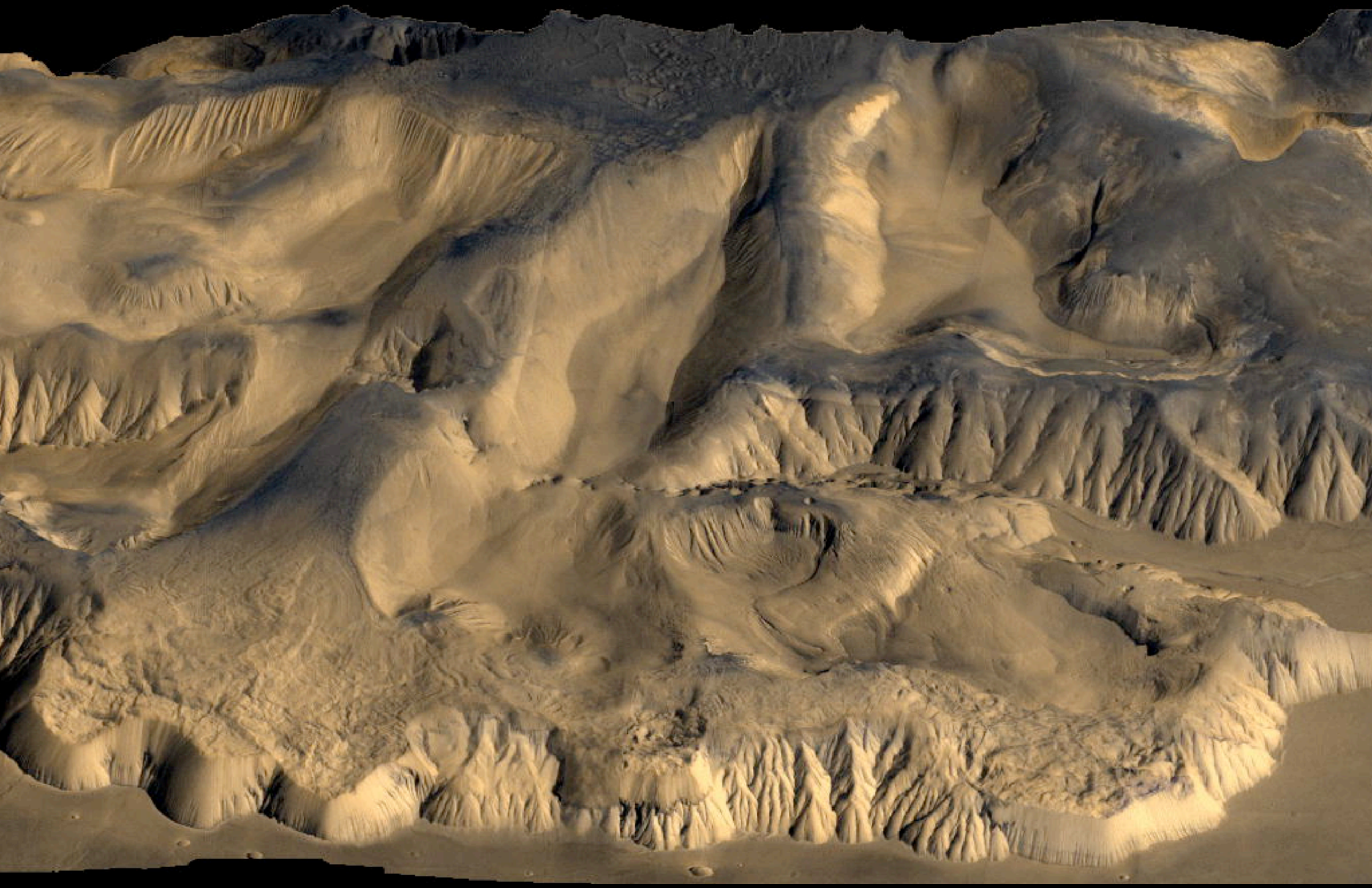


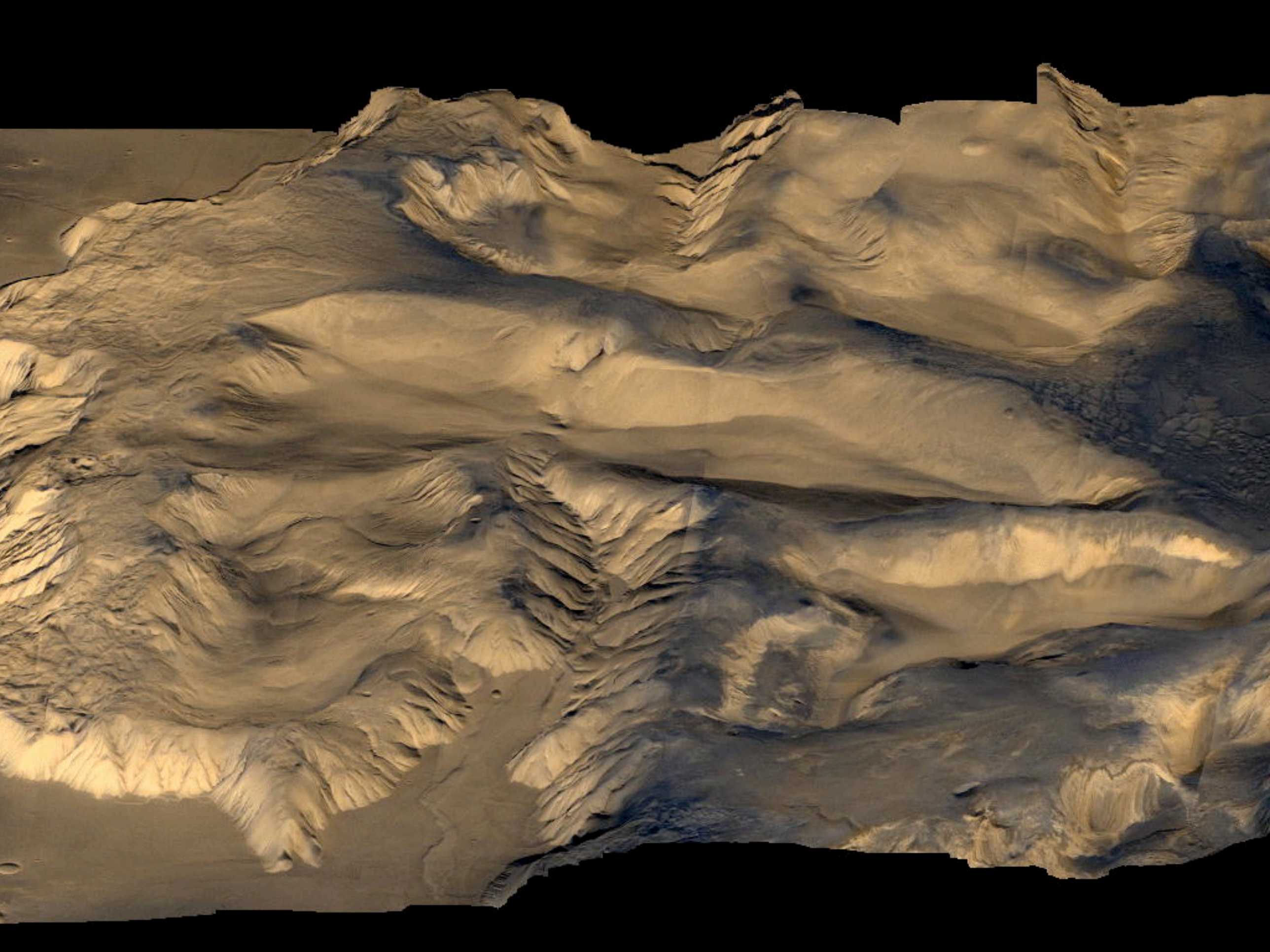


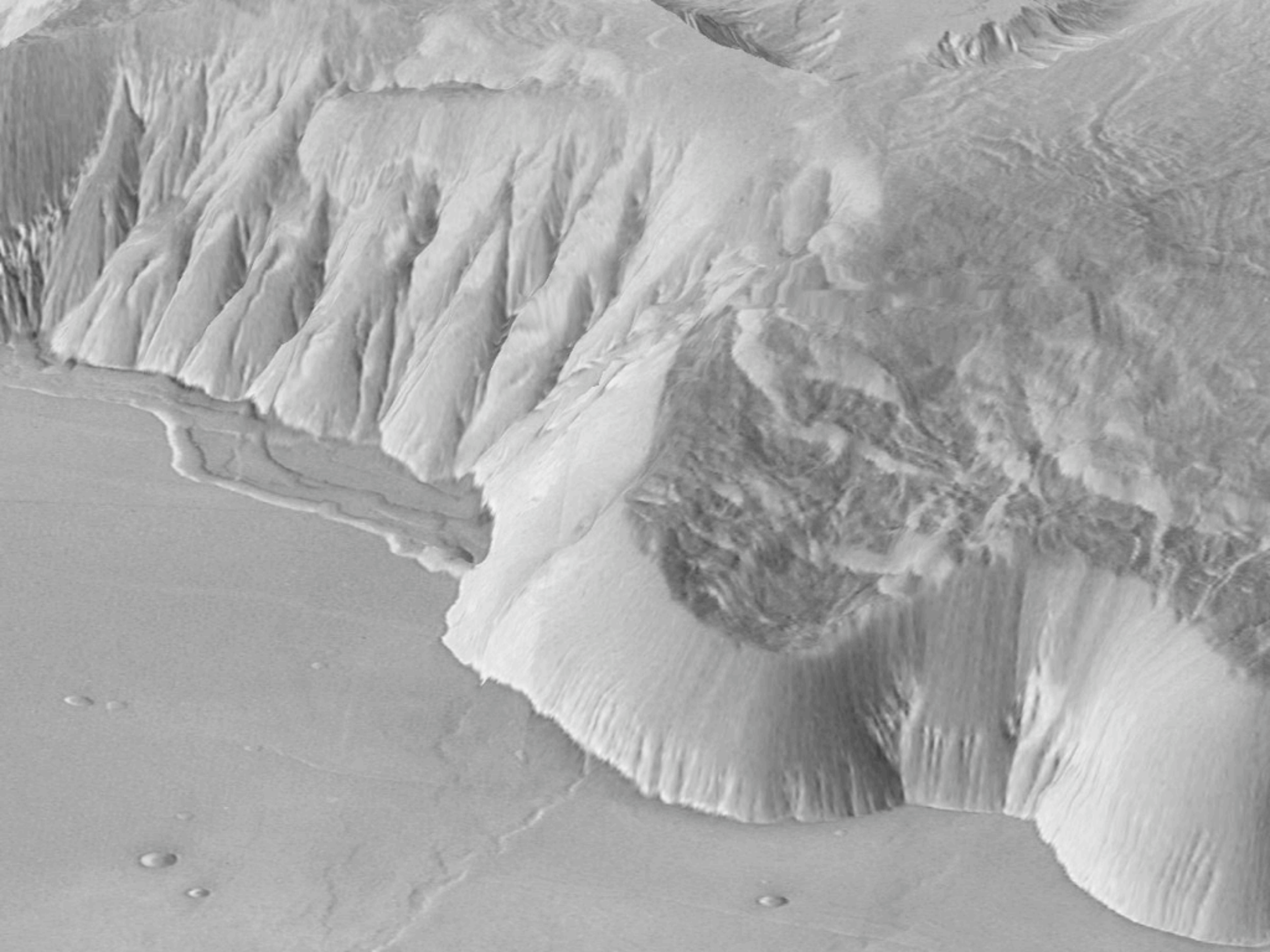
Polar caps: ice

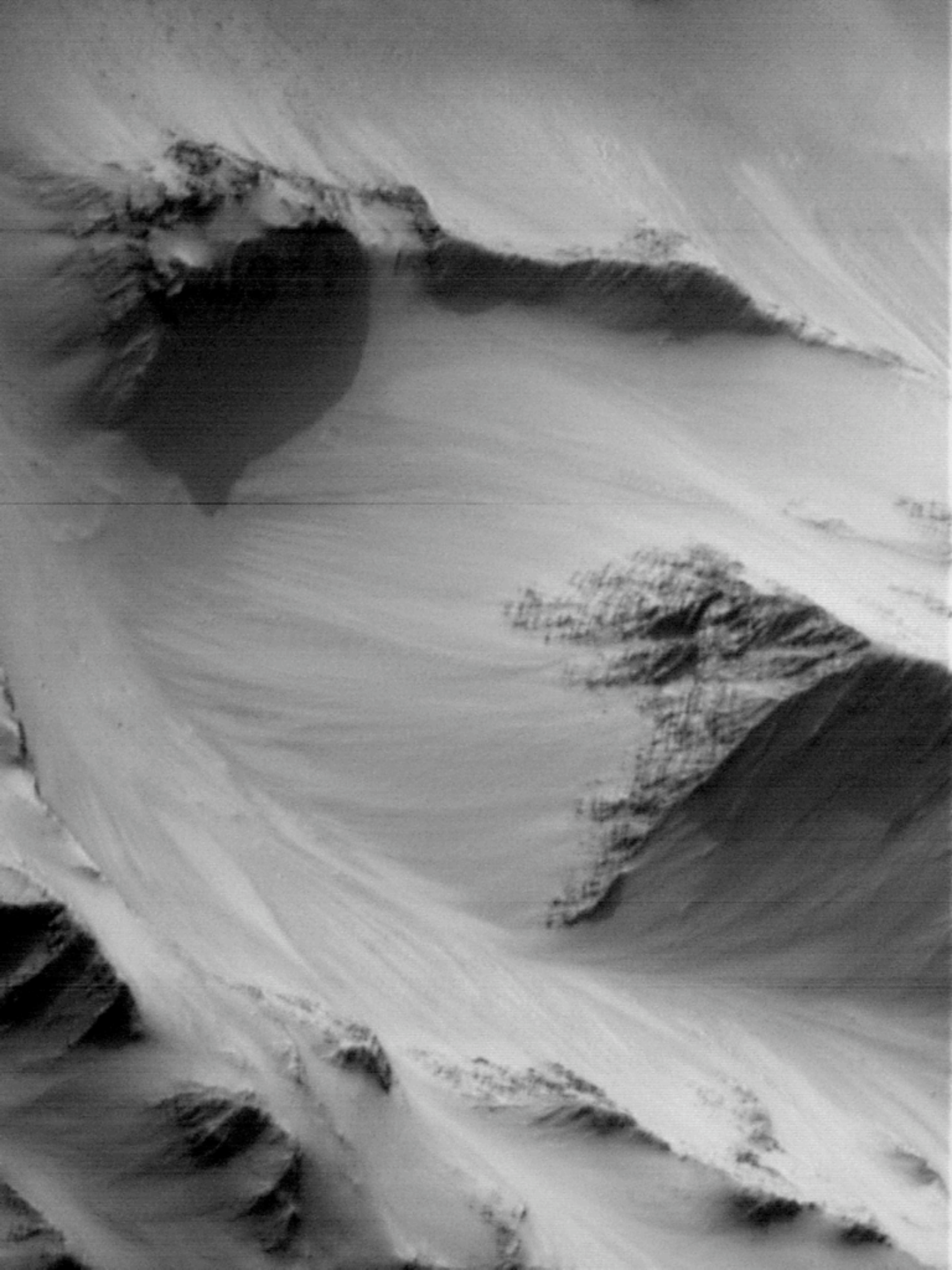

46103

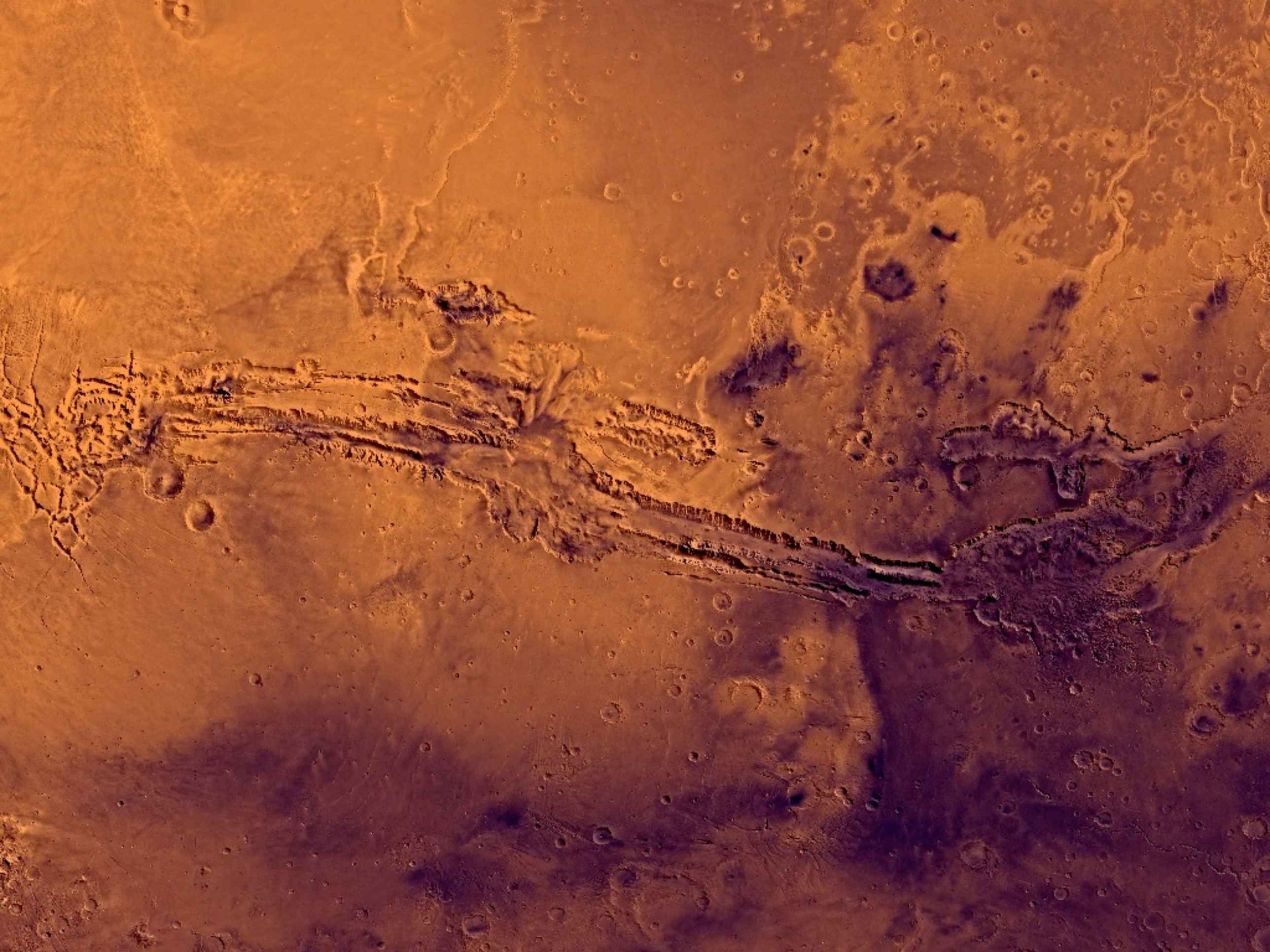

Volcanoes
Valles Marineris



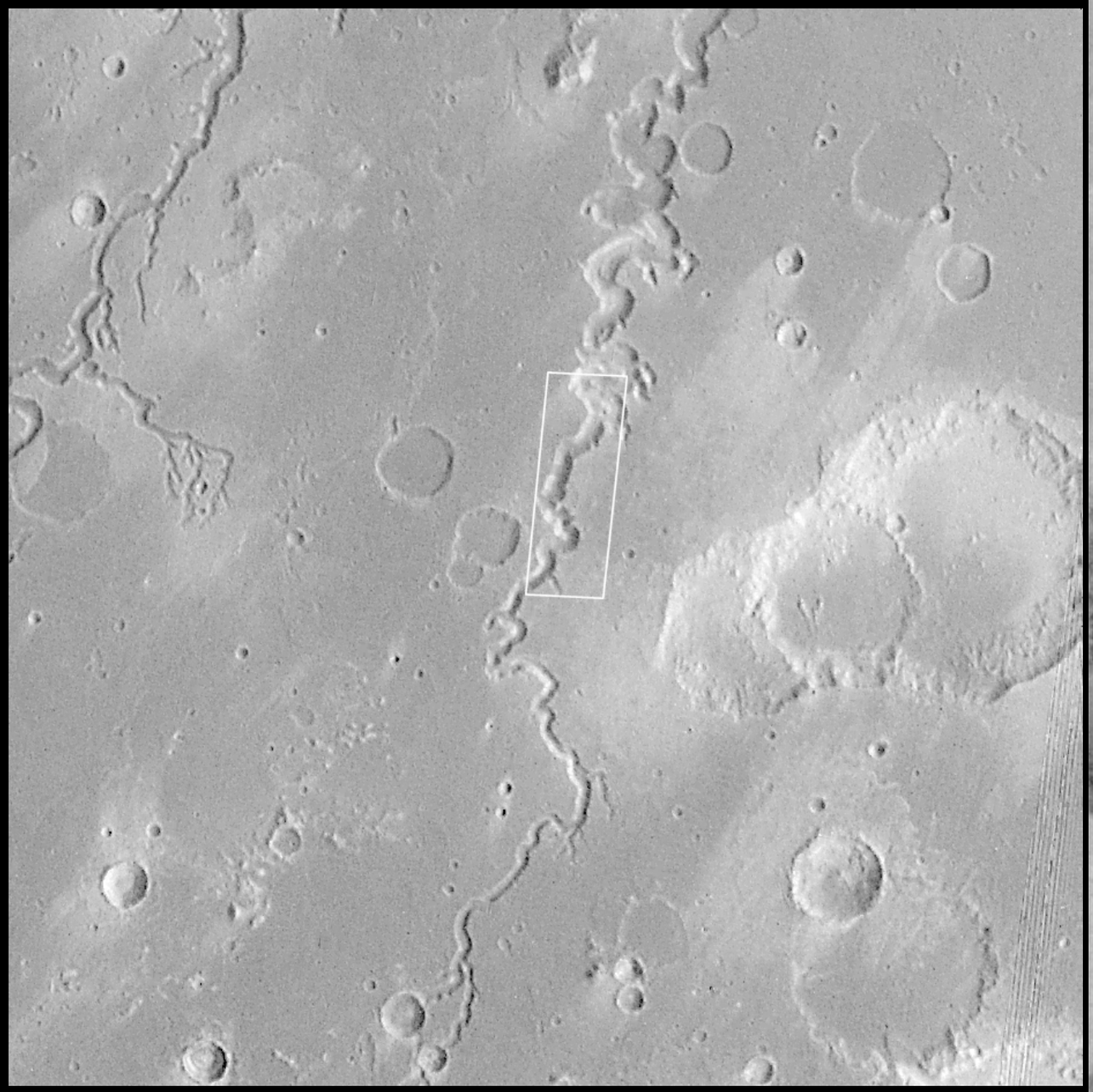


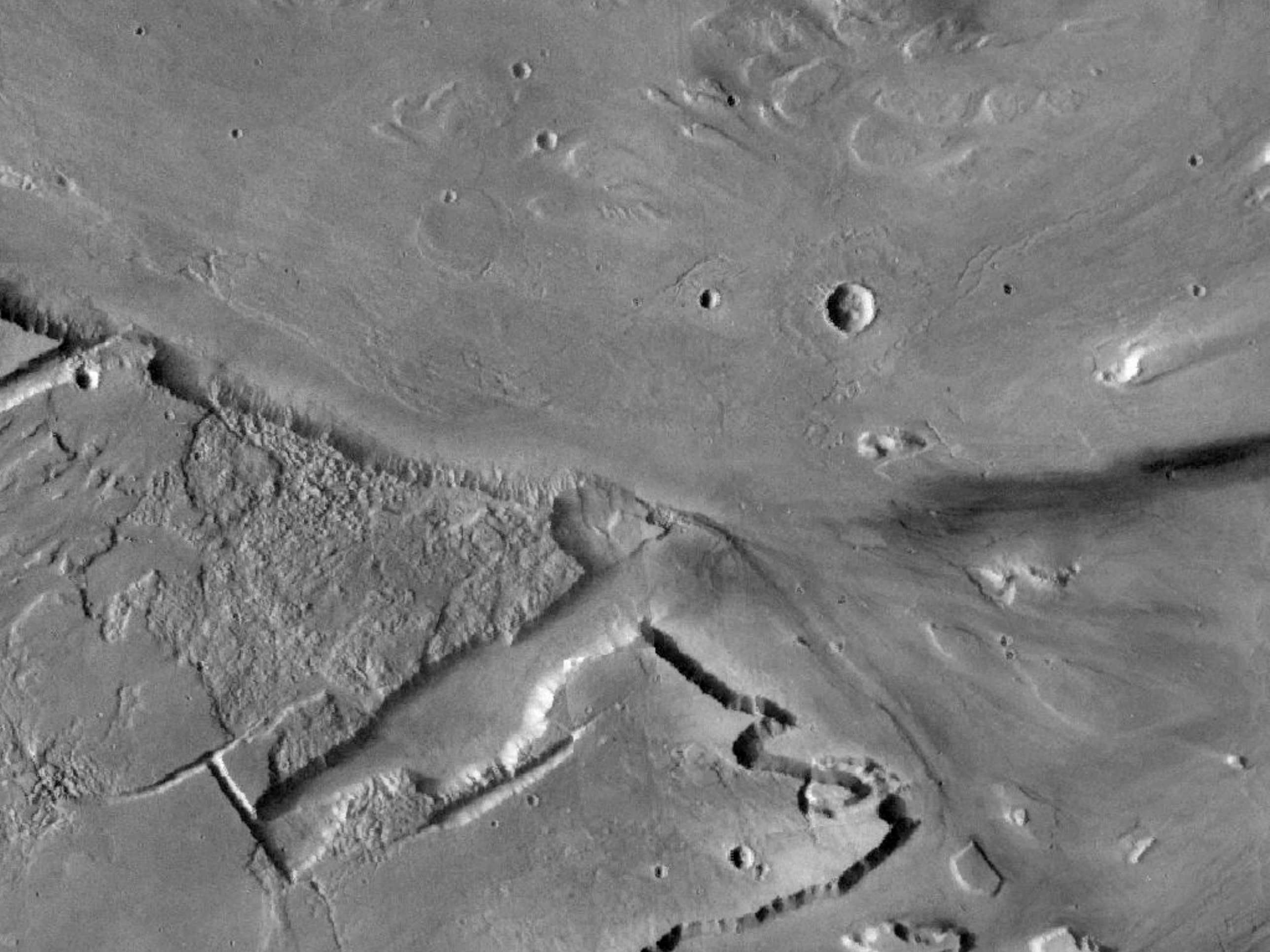


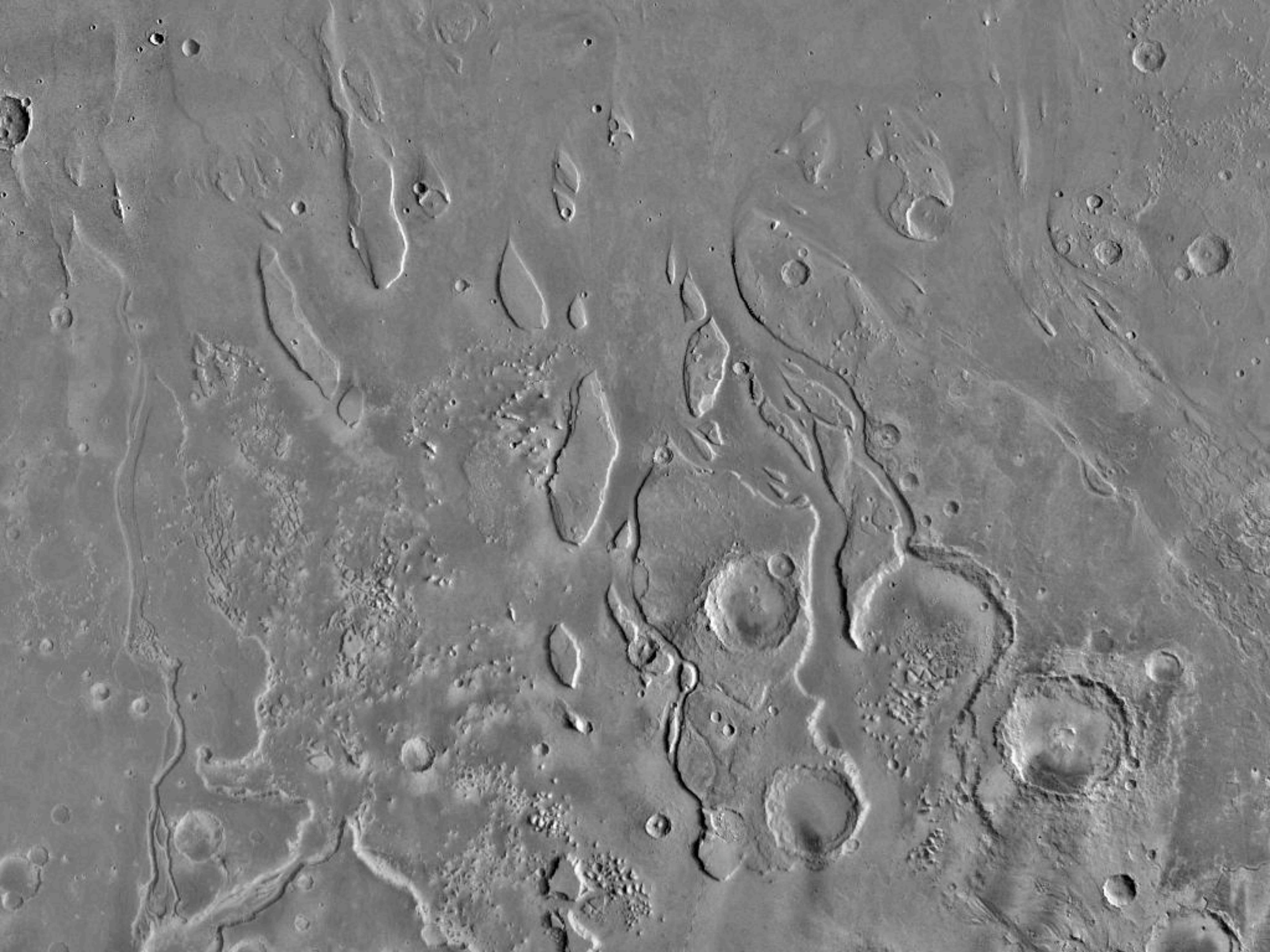


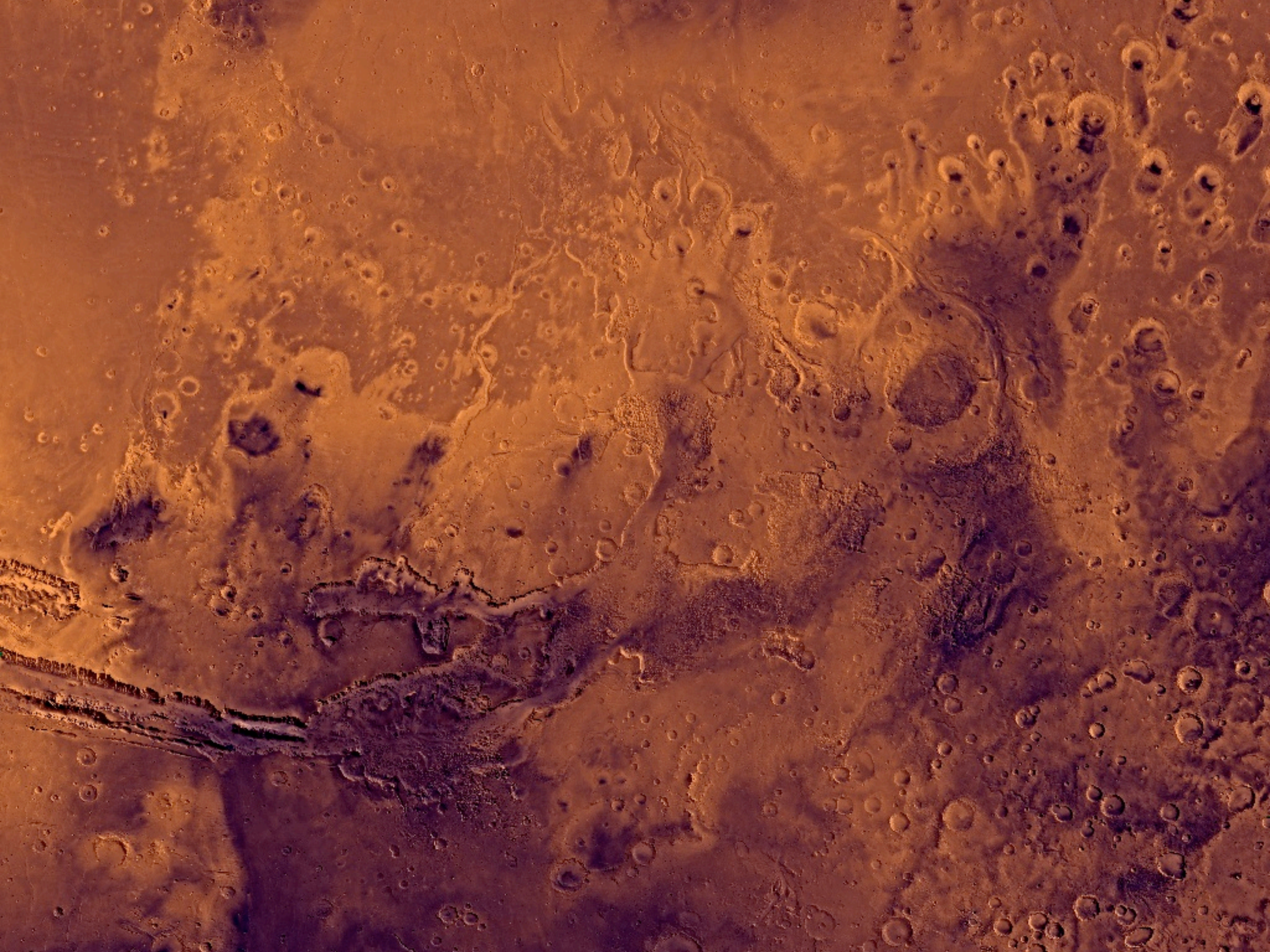


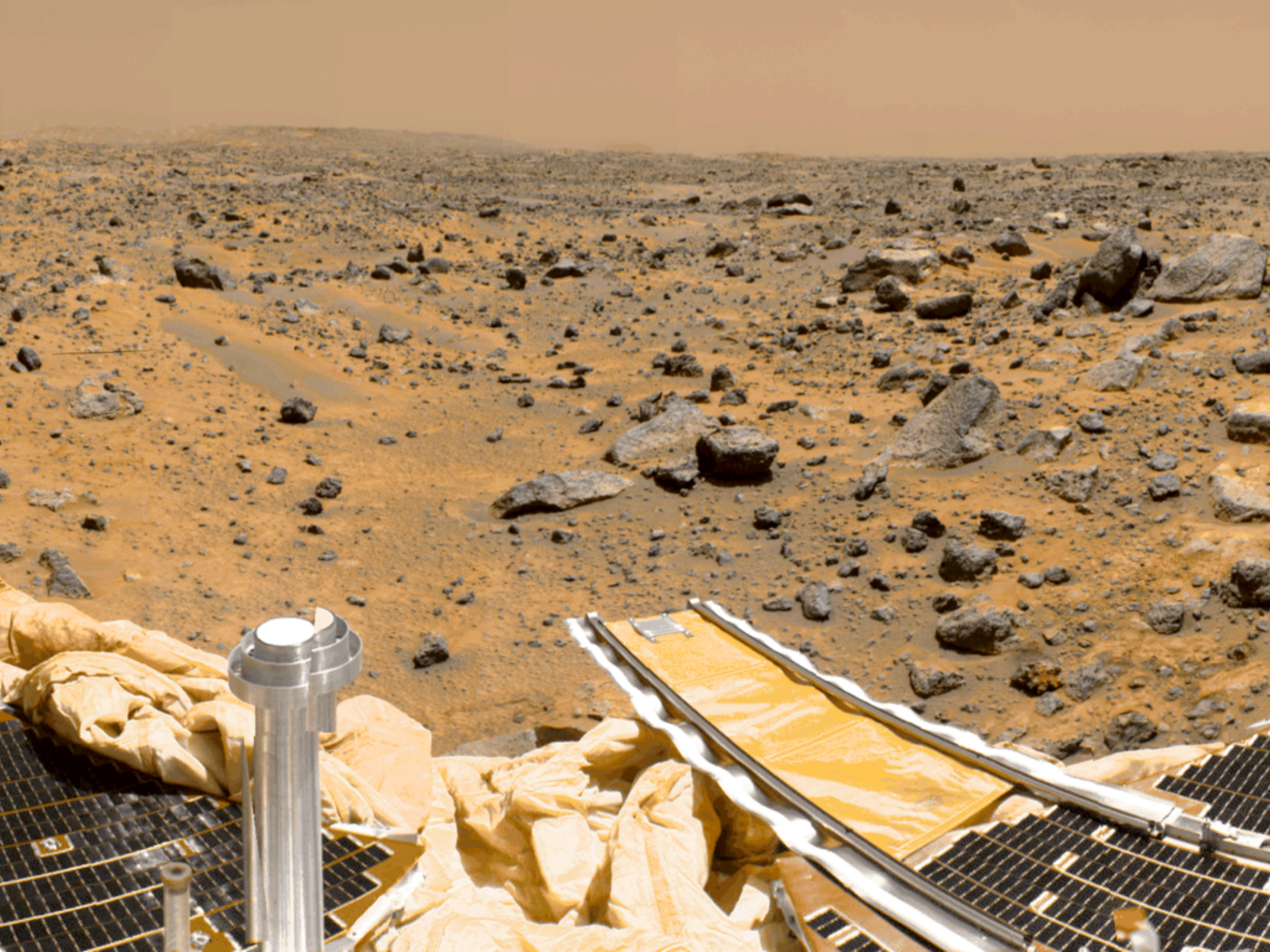
Canyons and dry river beds

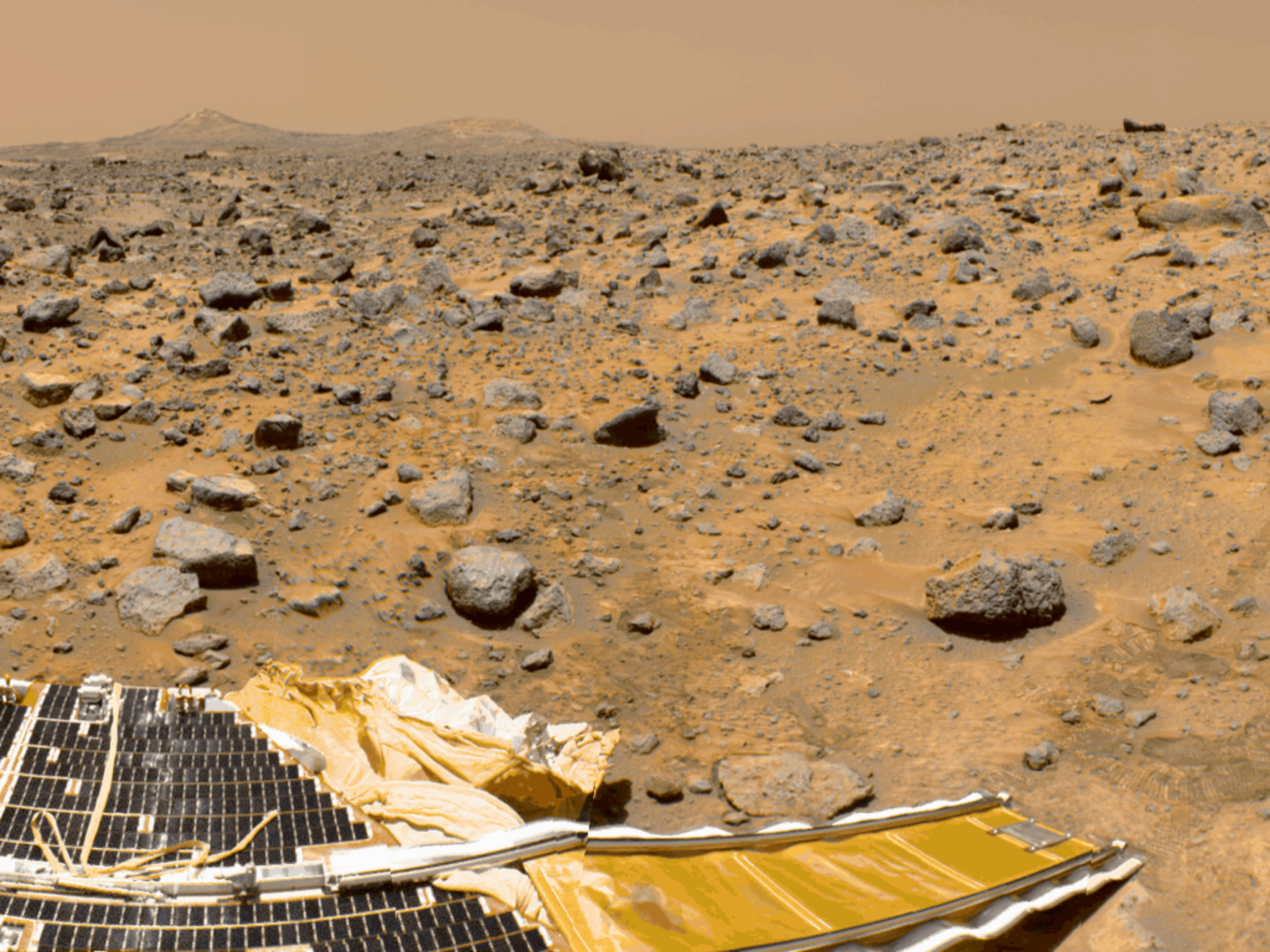













EETA79001
1 cm