

Mercury

Basic data:

Radius is 0.38 of Earth's

Mass is 0.06 of Earth's

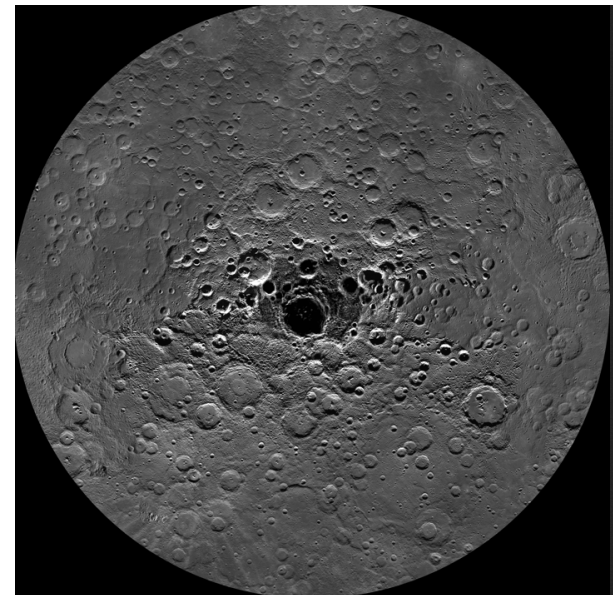
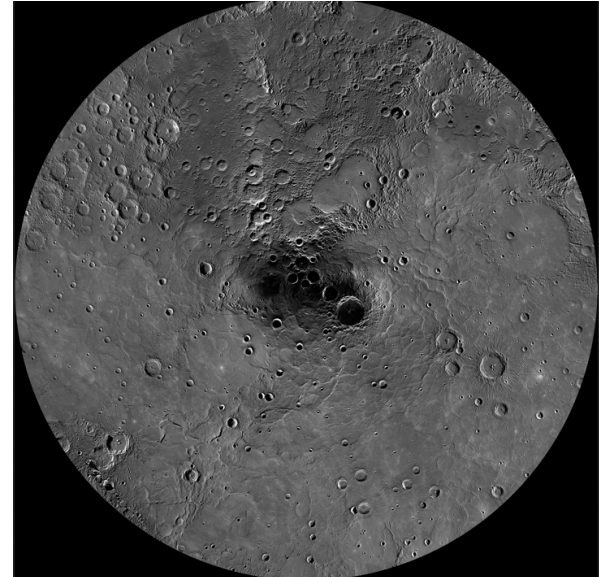
Orbit has $e=0.2$, $a=0.39\text{AU}$

Orbital period 88 days

Rotation period of Mercury
is $2/3$ of this: 58.7 days

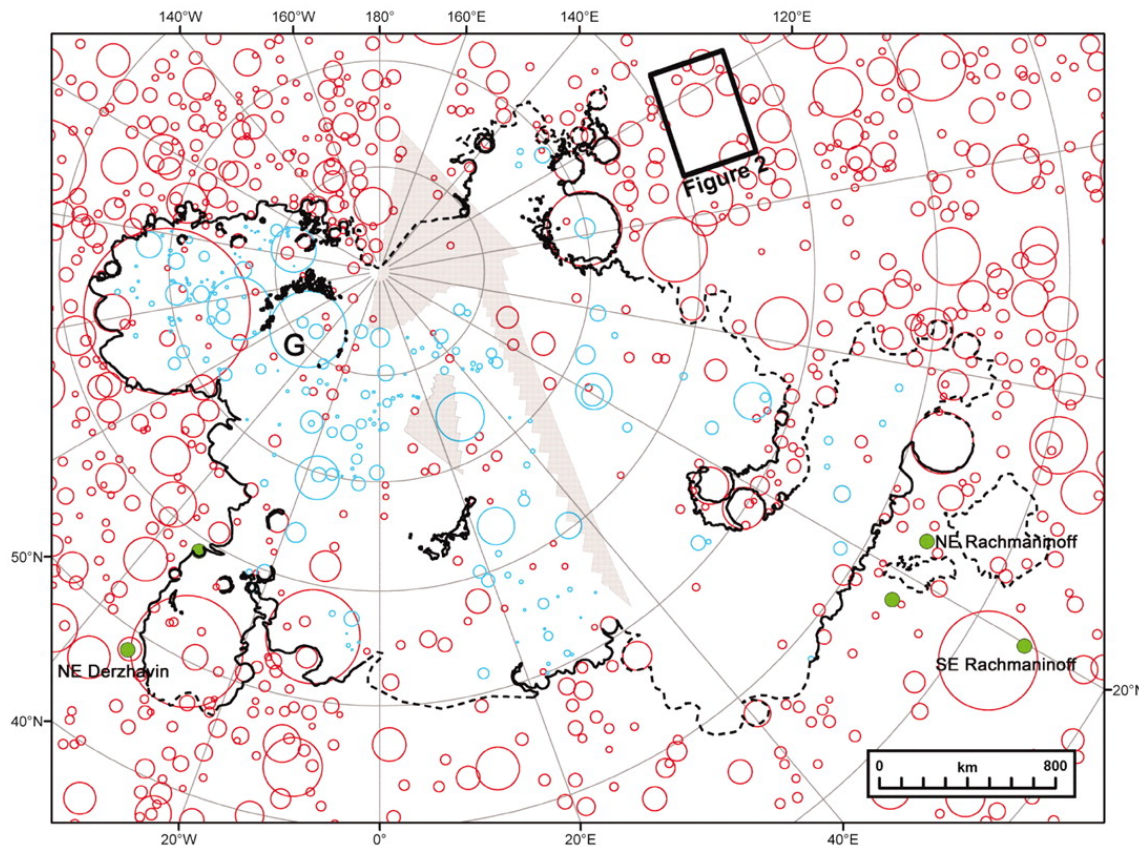
Atmosphere is effectively absent,
but recently water and organic
deposits have been found in north
pole craters where sunlight never
reaches

North hemisphere



South hemisphere from MESSENGER

Lots of craters BUT evidence of volcanic activity from MESSENGER:



**Smooth plains
at high northern
latitudes**

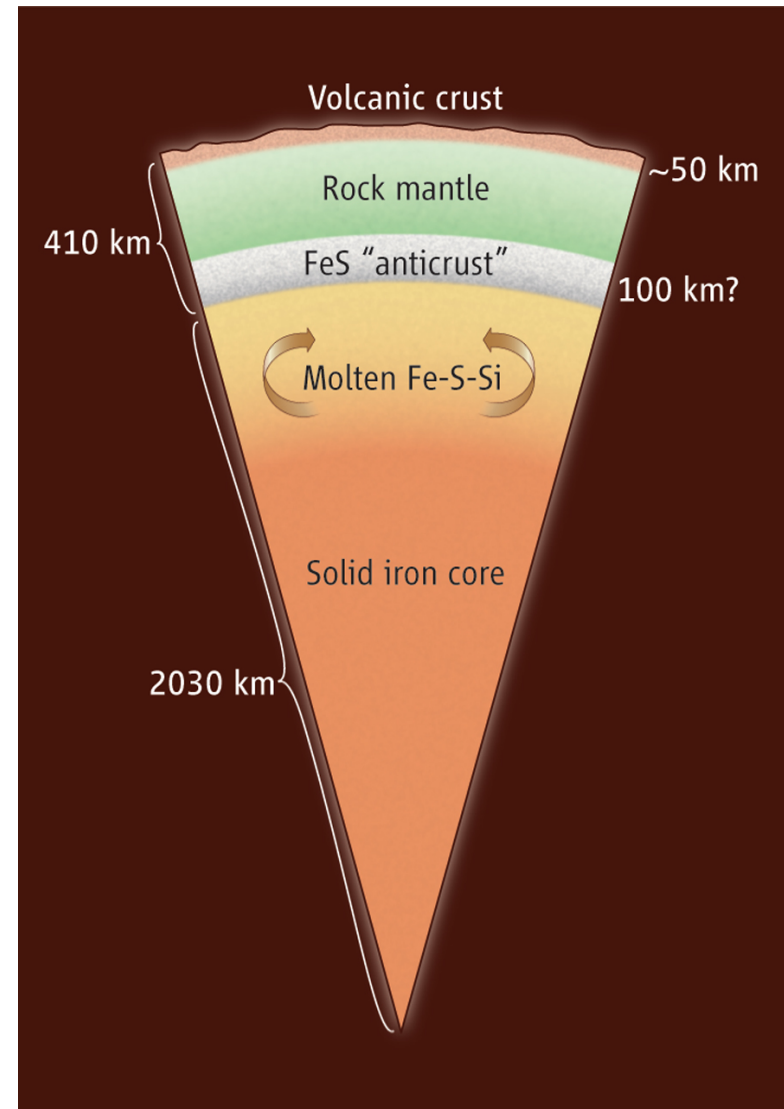
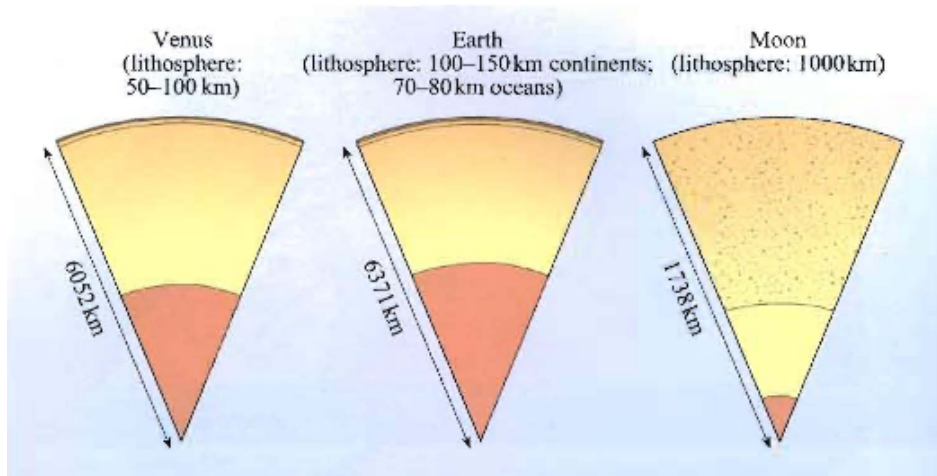
Red circles: craters
Blue circles:
'ghost' craters
covered by
volcanic outflows



Once internal compression is taken into account, larger density than Earth

Recent mapping by CWRU's Steve Hauck has shown that it has a much smaller mantle and larger core than other terrestrial planets

Mercury has a magnetic field due to motions in molten core



W B McKinnon Science 2012

