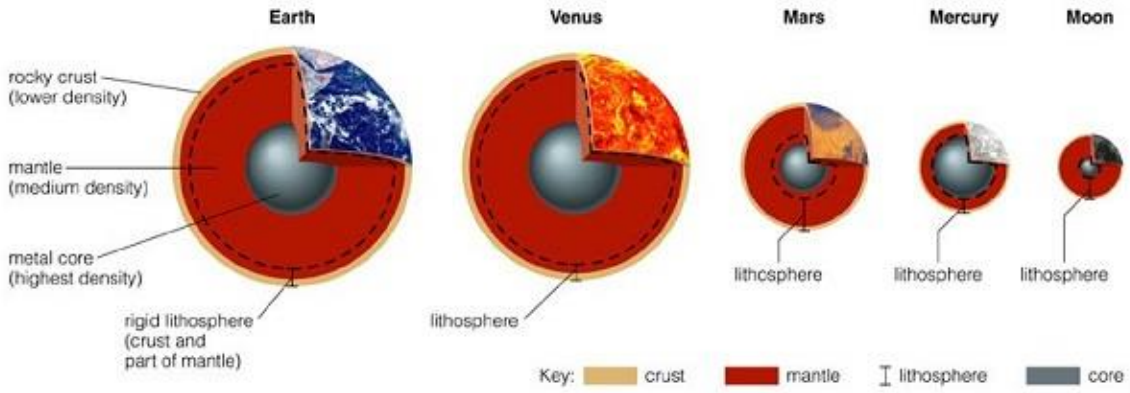
# Homogeneous Nucleation of Iron/Nickel Vapor During Early Stellar Evolution and the Principle of Differentiation

Jeffrey J. Wolynski
jeffrey.wolynski@yahoo.com
Dec. 3, 2015
Cocoa, FL 32922

Abstract: It is hypothesized that stars undergo homogeneous nucleation (crystal growth in similar patterns) of iron/nickel vapor during early stellar evolution. The evidence is provided in meteorites and inside of all ancient stars which possess these iron/nickel crystal cores.

According to stellar metamorphosis, all stars form their iron/nickel cores first in their interiors as they begin evolving. Since they are very hot, the iron/nickel must also be very hot and most likely vaporized. This vaporized iron/nickel will eventually collect in the interior and form a core, building the central regions of the star so that it may then layer other types of minerals/rocks and compounds. The formation of a core in this manner allows for the formation of Thompson structures we have evidence for in meteorites, consisting of pure iron/nickel alloy. The rate at which this material cools can be calculated by determining the rate at which iron/nickel vapor can cool and crystallize into cores the size of small moons. A small diagram is provided below of these ancient stellar cores. This understanding also brings to light a new principle of astrophysics/geophysics called the principle of differentiation. It states that the more central regions of stars cooled and formed first, with younger portions being the outermost regions. This means that radiometrically dating the crust will only set a lower limit on the Earth's and other more evolved stars' age. A video of this principle is also provided: https://www.youtube.com/watch?v=0EhaprphYWA


Earth
Venus
Mars
Mercury
Moon
rocky crust
(lower density)
mantle
(medium density)
metal core
(highest density)
rigid lithosphere
(crust and
part of mantle)
lithosphere
lithcsphere
lithosphere
lithosphere
Key:
crust
mantle
lithosphere
core