The Refractory Principle of Planet Formation

Jeffrey J. Wolynski Jeffrey.wolynski@yahoo.com February 23, 2016 Cocoa, FL 32922

Abstract: It is provided a simple principle of planet formation in light of needing refractory material to melt iron and nickel into alloy in any amount. These alloys are called taenite and kamacite.

Refractory material is material that retains its strength at high temperature. Being that iron and nickel are found on the ground as meteorites which came from outside the Earth, we can reason that somewhere in outer space there are objects which can contain the heat required to melt down iron and nickel in incredibly large amounts. To contain the heat to melt down an iron/nickel chunk the size of an aircraft carrier means you need a huge crucible that has a very high refractory value, something the size of a small moon. Not only that, but to contain the heat required to melt down iron/nickel in the amounts present in Mercury and/or Earth, you would need a crucible the size of a star. All this being said, to form iron/nickel alloys in large amounts the nebular hypothesis does not provide anything to contain the heat to melt down and contained, it does so with the star itself. The stars collect iron/nickel melts it down, vaporizes and then ionizes it so that it can form pure spherical structures in their interiors made from iron/nickel alloy. As the star cools and dies, the iron/nickel stays in the central regions because it is the heaviest/most stable material, and other molecules and elements then layer on top of the iron/nickel continuing the process of planet formation/stellar evolution.