Greatest Overlooked Idea of Modern Astronomy - Stars Cooling Down and Becoming Planets

(Stellar Metamorphosis)

AMRINDER SINGH

Amrinder.email@gmail.com

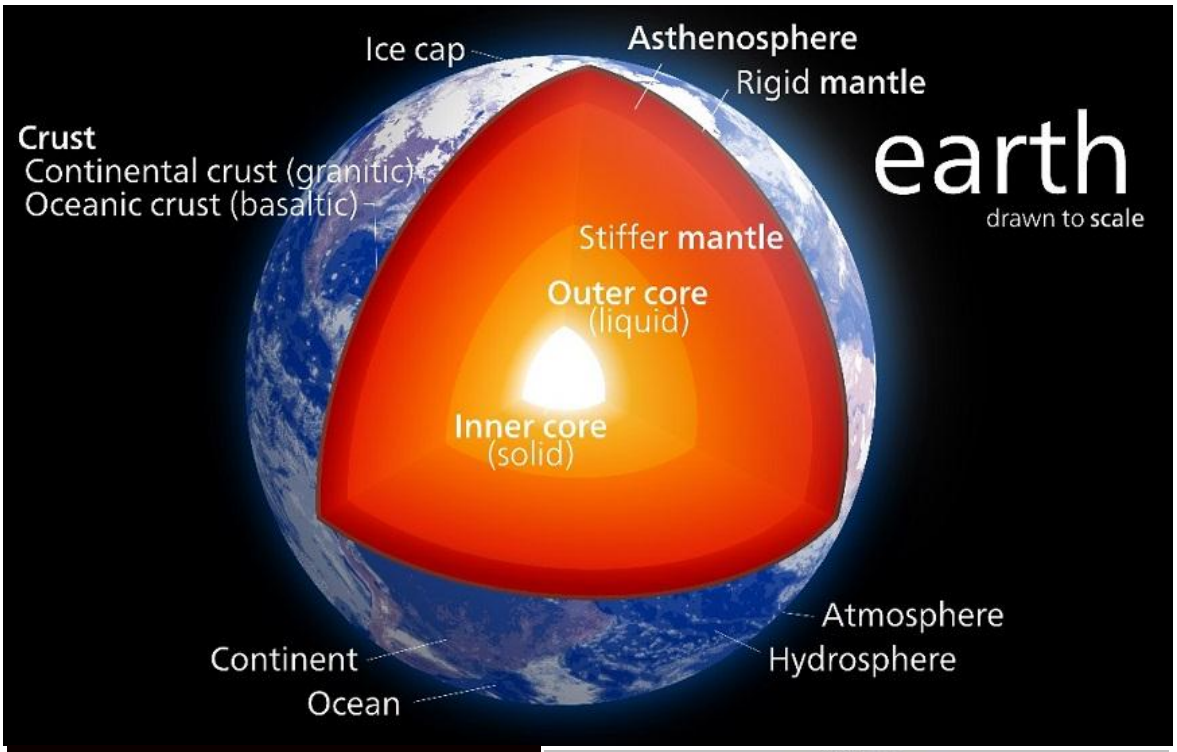
26th October 2015

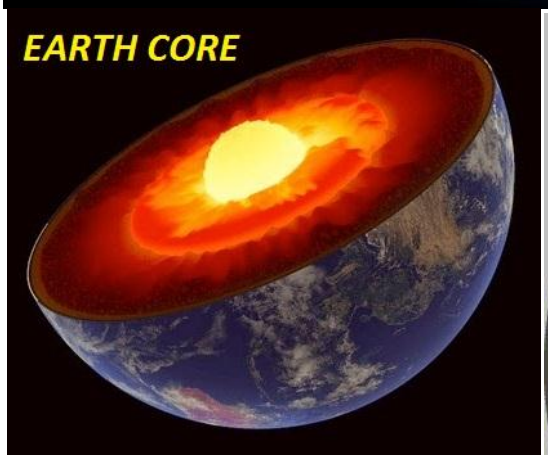
Sydney, Australia

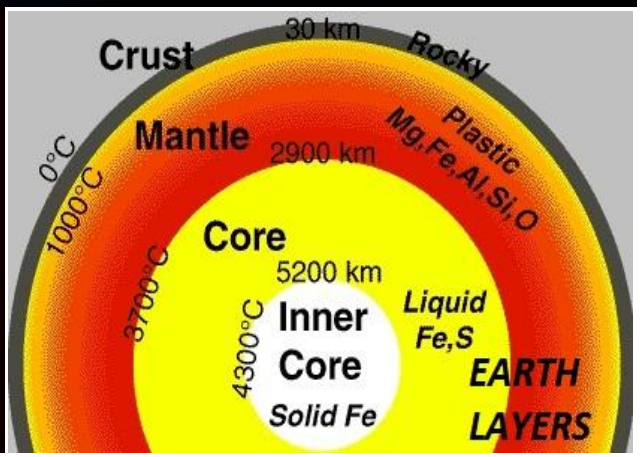
Abstract

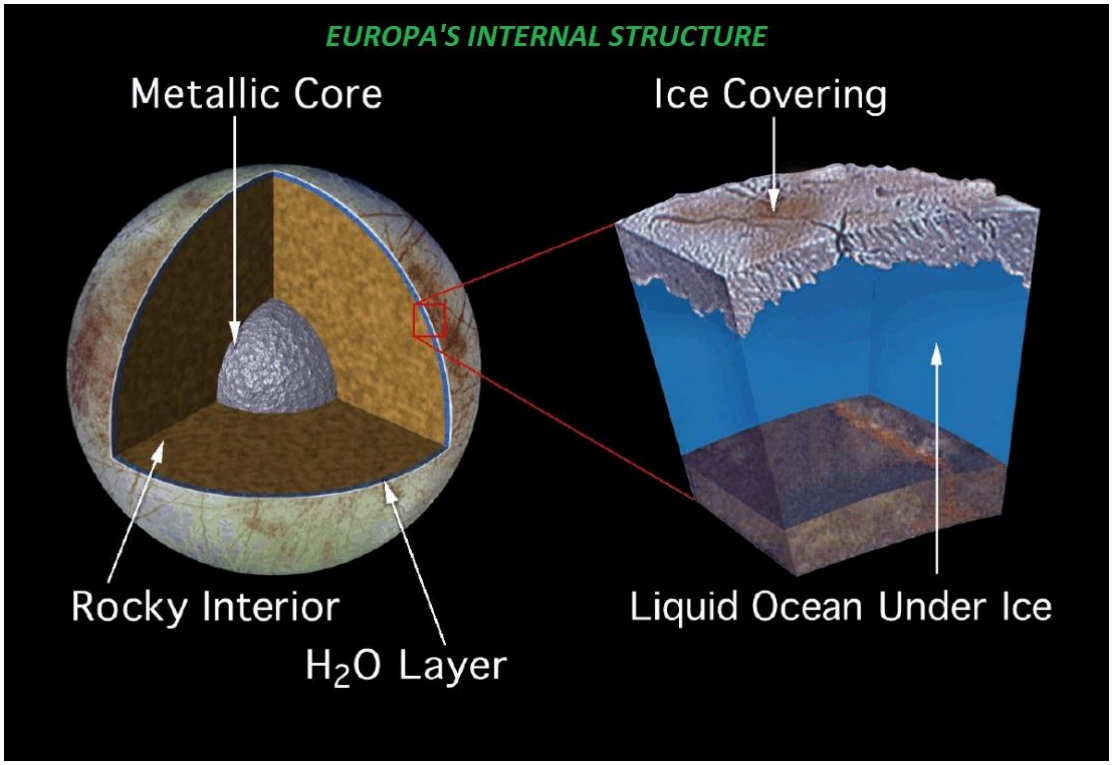
Modern astronomy proposes its planet formation theory with highly questionable assumptions as the basis for formation of planets (in the form of accretion disk model of protoplanetary disks). It also proposes models (again using questionable assumptions) for the stars nearing the end of their lives (which share similar internal structure to all the planets in existence) to end in either explosions (supernovae) or becoming Black holes, Neutron stars or Dwarf stars. Another more rational explanation on how planets form has been provided first by Anthony Abruzzo expanding on Descartes's original Idea of stars transforming to become planets by a series of papers followed by a comprehensive explanation by Jeffery Wollynski in the form of his Stellar Metamorphosis theory. Stellar Metamorphosis theory provides detailed explanation of the actual mechanics of how this process takes place step by step. Some additional observations are offered in this paper on the mechanism of the process of planet formation by Stellar Metamorphosis as well as some new ideas on the question of why planets stay at similar temperature ranges over millions of years despite continuously cooling during the evolution/propagation of life and observations on the comparison of relative mass of a star at the start of its life versus when it is cooled to a solid planet like structure.

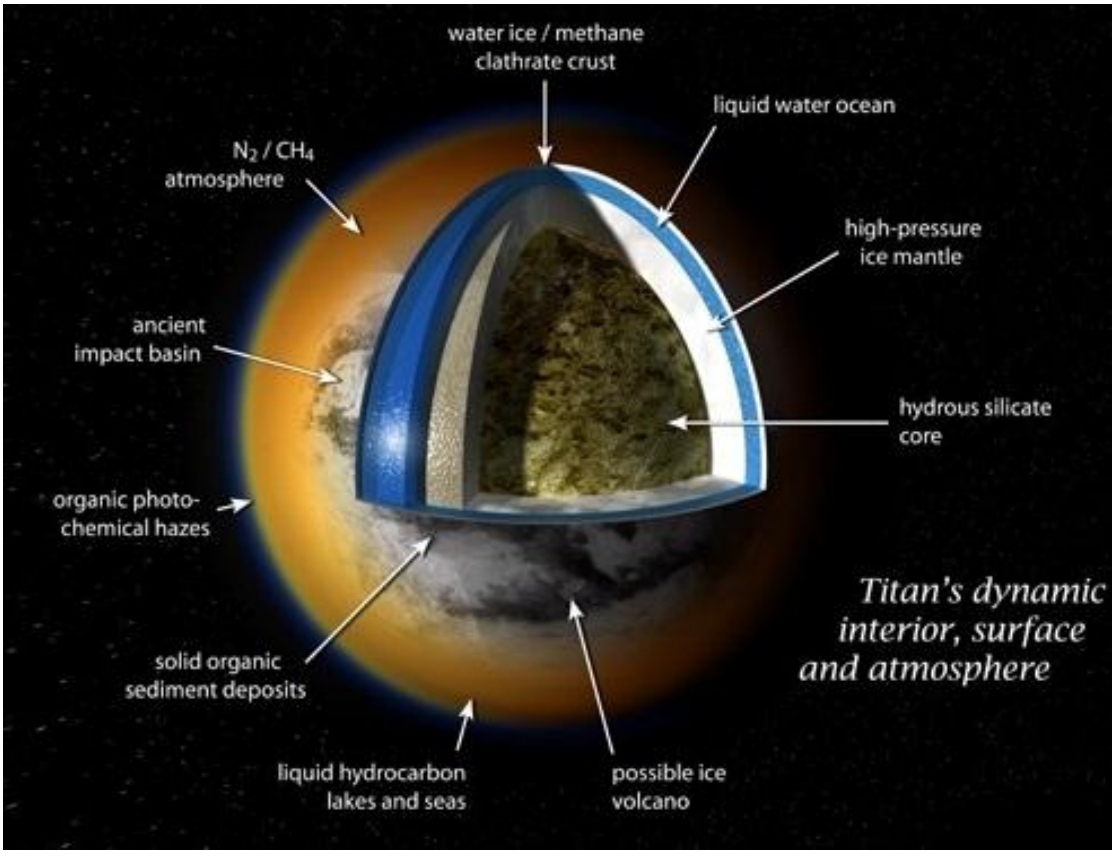
I will start by comparing what we currently know about the internal structures and compositions of planets and planet like bodies with the compositions of stars nearing their ends (including theories regarding their end phases). All of this is currently accepted observations by the mainstream astronomers.

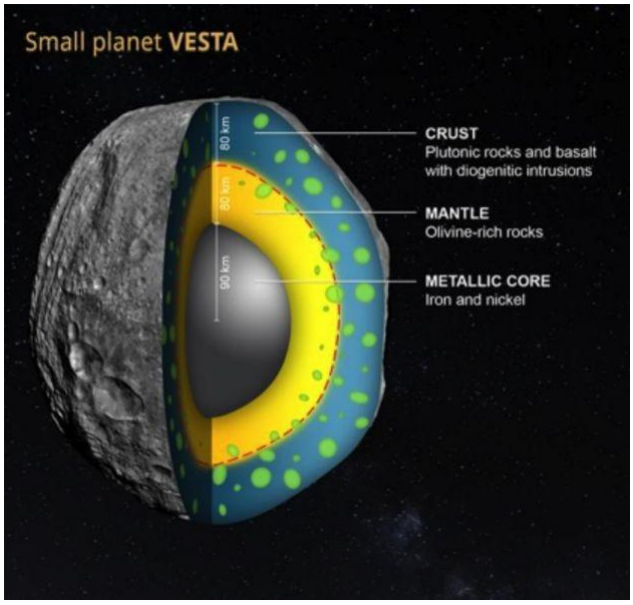


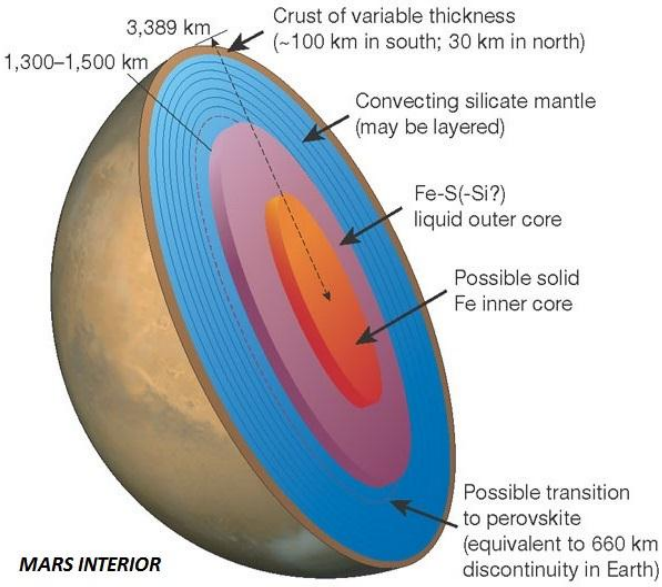


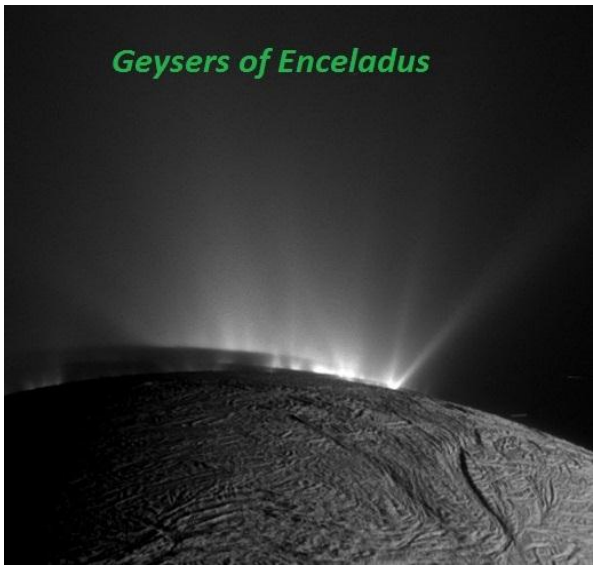


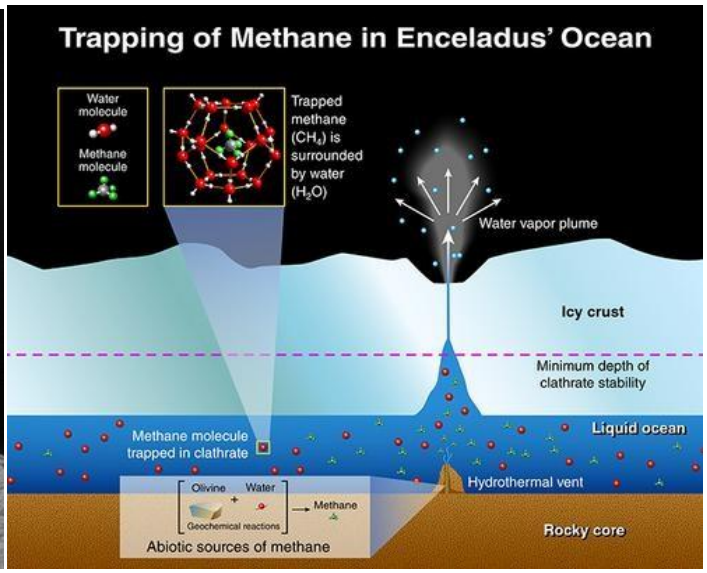

EUROPA'S INTERNAL STRUCTURE
Metallic Core
Ice Covering
Rocky Interior
H_2O Layer
Liquid Ocean Under Ice

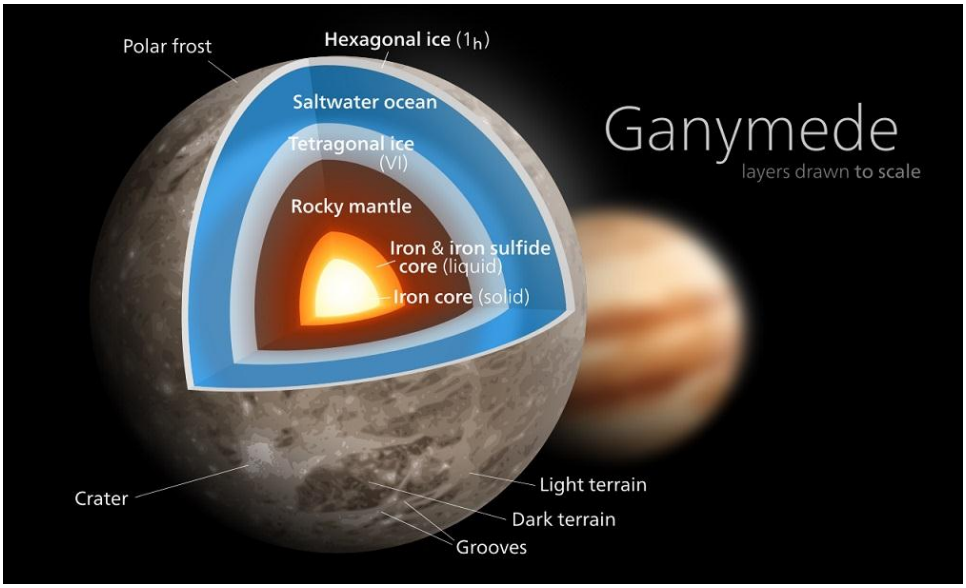

water ice / methane clathrate crust
liquid water ocean
N_2 / CH_4 atmosphere
high-pressure ice mantle
ancient impact basin
hydrous silicate core
organic photo-chemical hazes
solid organic sediment deposits
liquid hydrocarbon lakes and seas
possible ice volcano
Titan's dynamic interior, surface and atmosphere


Small planet VESTA
80 km
80 km
90 km
CRUST
Plutonic rocks and basalt with diogenitic intrusions
MANTLE
Olivine-rich rocks
METALLIC CORE
Iron and nickel

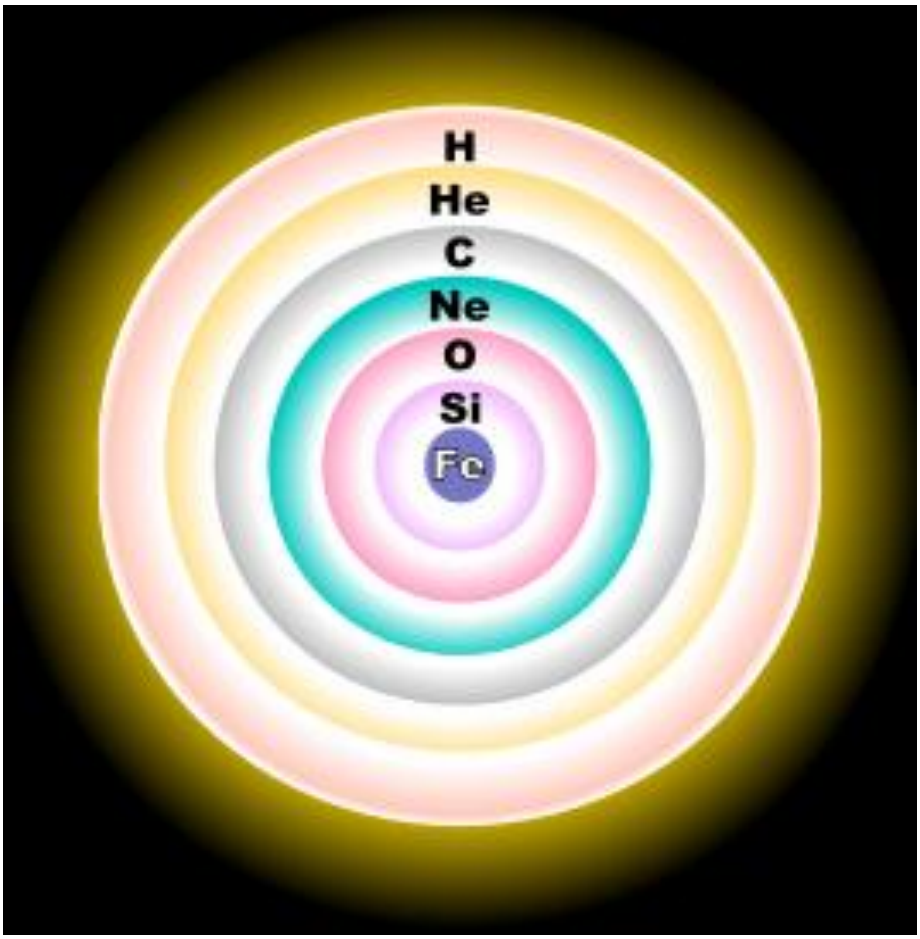

3,389 km
1,300–1,500 km
Crust of variable thickness
(~100 km in south; 30 km in north)
Convecting silicate mantle
(may be layered)
Fe-S(-Si?)
liquid outer core
Possible solid
Fe inner core
Possible transition
to perovskite
(equivalent to 660 km
discontinuity in Earth)
MARS INTERIOR

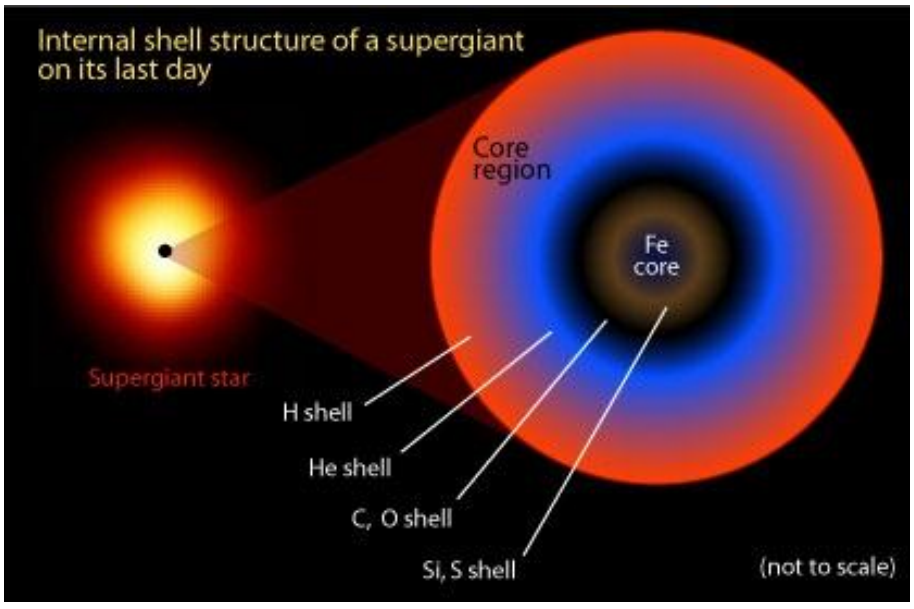

Geysers of Enceladus


Trapping of Methane in Enceladus' Ocean
Water molecule
Methane molecule
Trapped methane (CH_4) is surrounded by water (H_2O)
Water vapor plume
Icy crust
Minimum depth of clathrate stability
Liquid ocean
Methane molecule trapped in clathrate
Hydrothermal vent
Olivine
Water
Methane
Geochemical reactions
Abiotic sources of methane
Rocky core

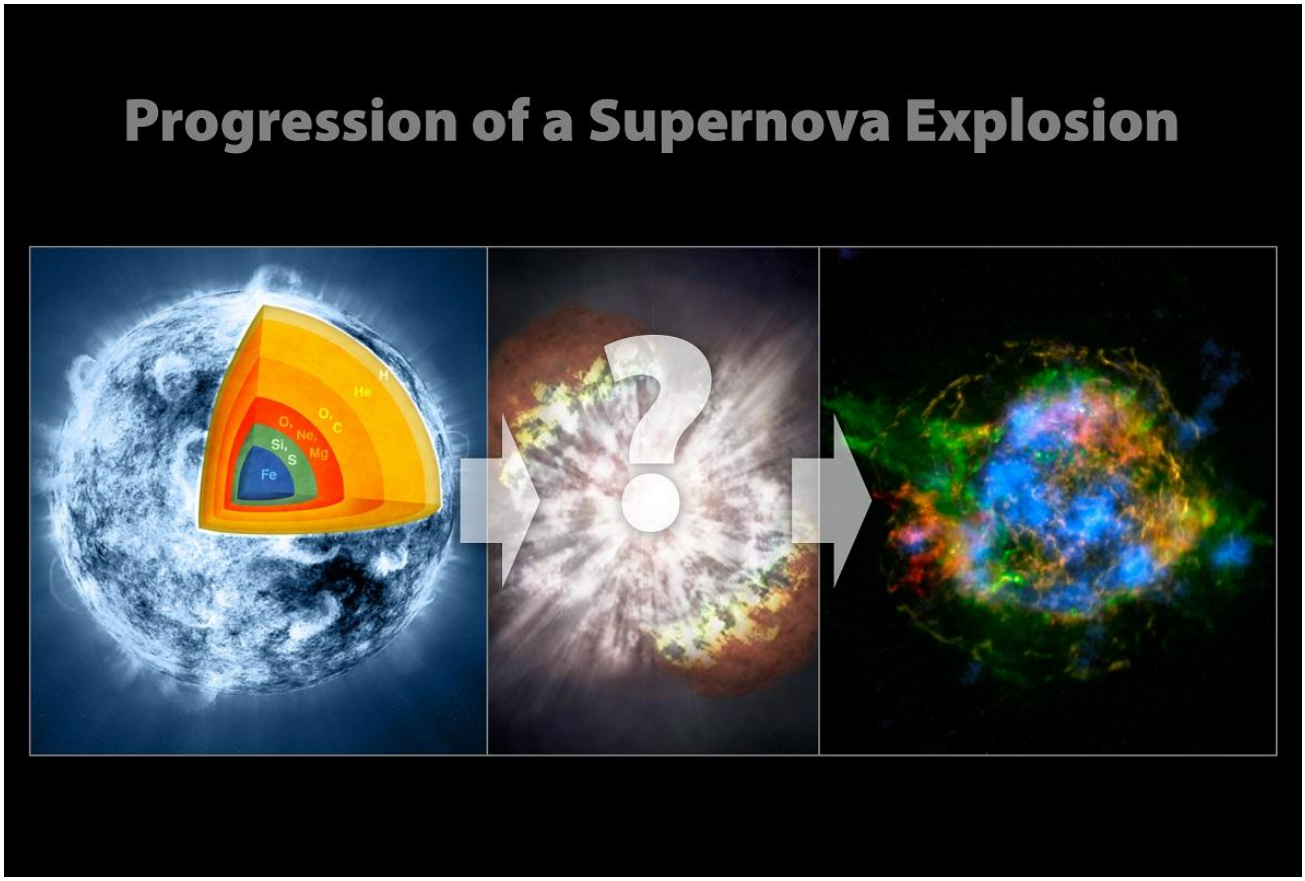

Polar frost
Hexagonal ice (1_h)
Saltwater ocean
Tetragonal ice (VI)
Rocky mantle
Iron & iron sulfide core (liquid)
Iron core (solid)
Ganymede
layers drawn to scale
Crater
Light terrain
Dark terrain
Grooves

Picture showing the internal structures of stars nearing the end of their life's as per accepted mainstream astronomy theories.

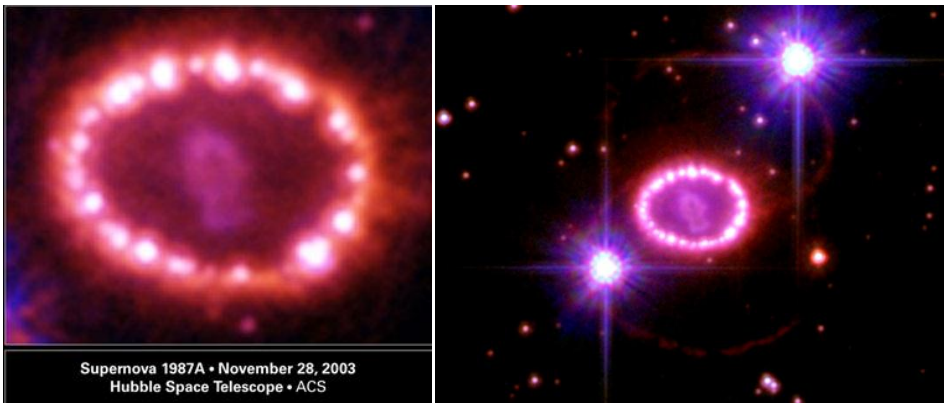


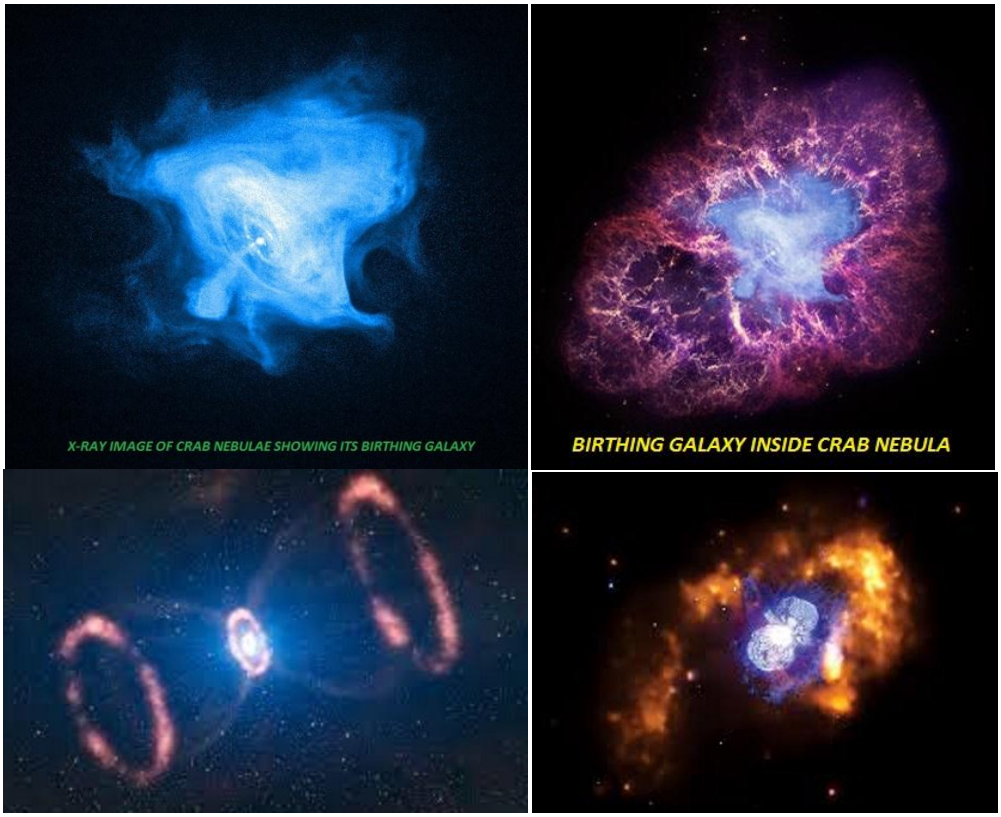


Now this is what the mainstream astronomers thinks happens to it in a supernova



And what they show us as evidence of supernova explosions in close-up photos of Hubble telescope are birthing galaxies (seed galaxies), some of them still showing the shockwaves of electromagnetic process of their formation, and trailing behind on both sides. An explosion in a normal sense wouldn't have this signature but theoretical solutions have been invented to account for this kind of explosions.





If we compare the above so called “supernova explosions” with the below image of *Galaxy NGC 1097 from NASA's Spitzer Space Telescope* we will immediately recognise that the core engine of galaxy share the same structure as the birthing galaxies above consisting of a ring of hot plasma rotating around its centre and creating strong electromagnetic forces in the process as explained in my *viXra paper “A New Explanation on the Workings of Central Core Regions of Galaxies and Observations on the Nature of Fundamental Particles of Nature”* http://vixra.org/abs/1510.0513

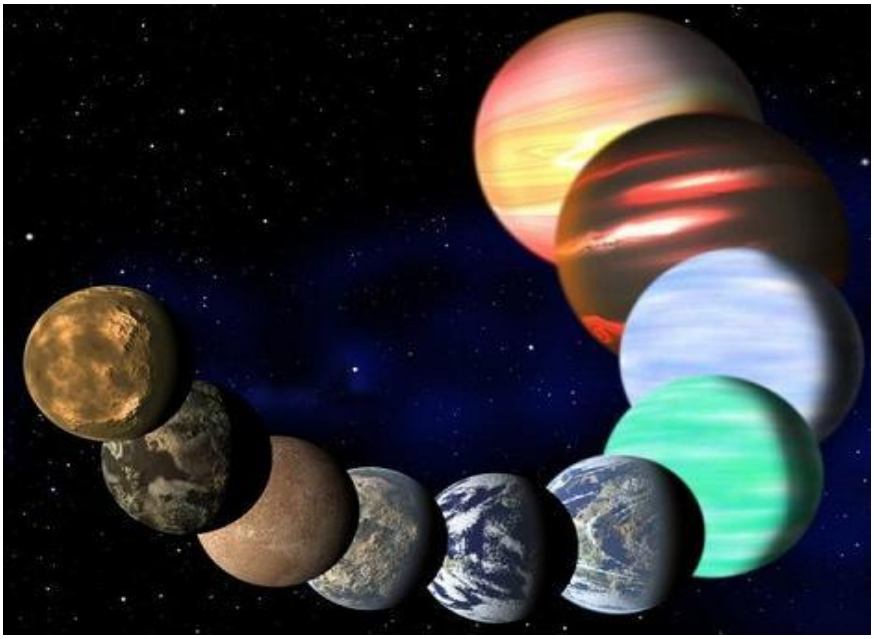
Above image from NASA's Spitzer Space Telescope of Galaxy NGC1097

In other cases of star's having different masses, they are hypothised to transform themselves into (depending upon their mass) a black hole, a neutron star or a dwarf star upon the end of their lives(these entities are assumed to exist based purely upon theoretical and mathematical model predictions).

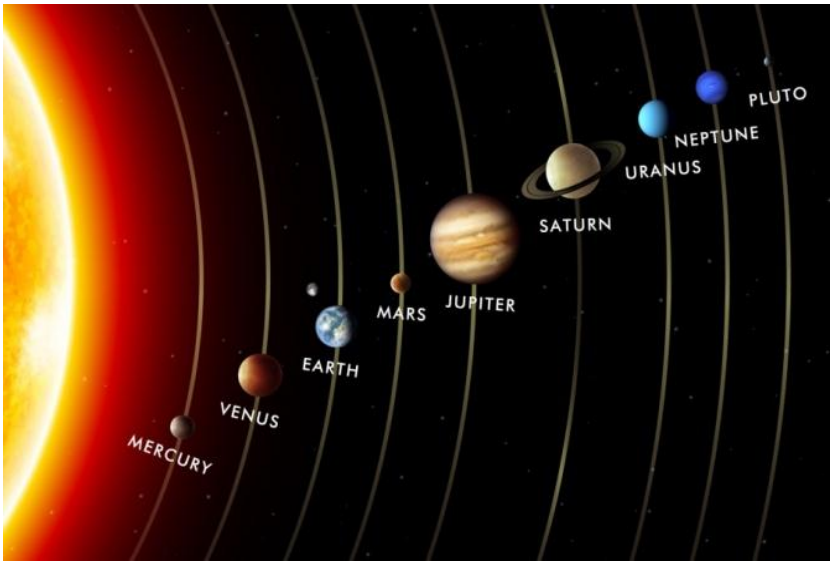
And then mainstream astronomers have to invent the hypothesis of accretion disk model of protoplanetary disks in order to explain the formation of planets and this hypothesis is laden with many questionable assumptions and invented mathematical/theoretical concepts in order to plug many holes of its inconsistencies. Jeffery Wolynski in his paper *"Main Concepts for Explaining Star Evolution (Planet Formation) According to the General Theory of Stellar Metamorphosis"* thoroughly debunks the basic assumptions of protoplanetary model and the readers are advised to go through that paper in order to get the full understanding of the shortcomings of protoplanetary model.

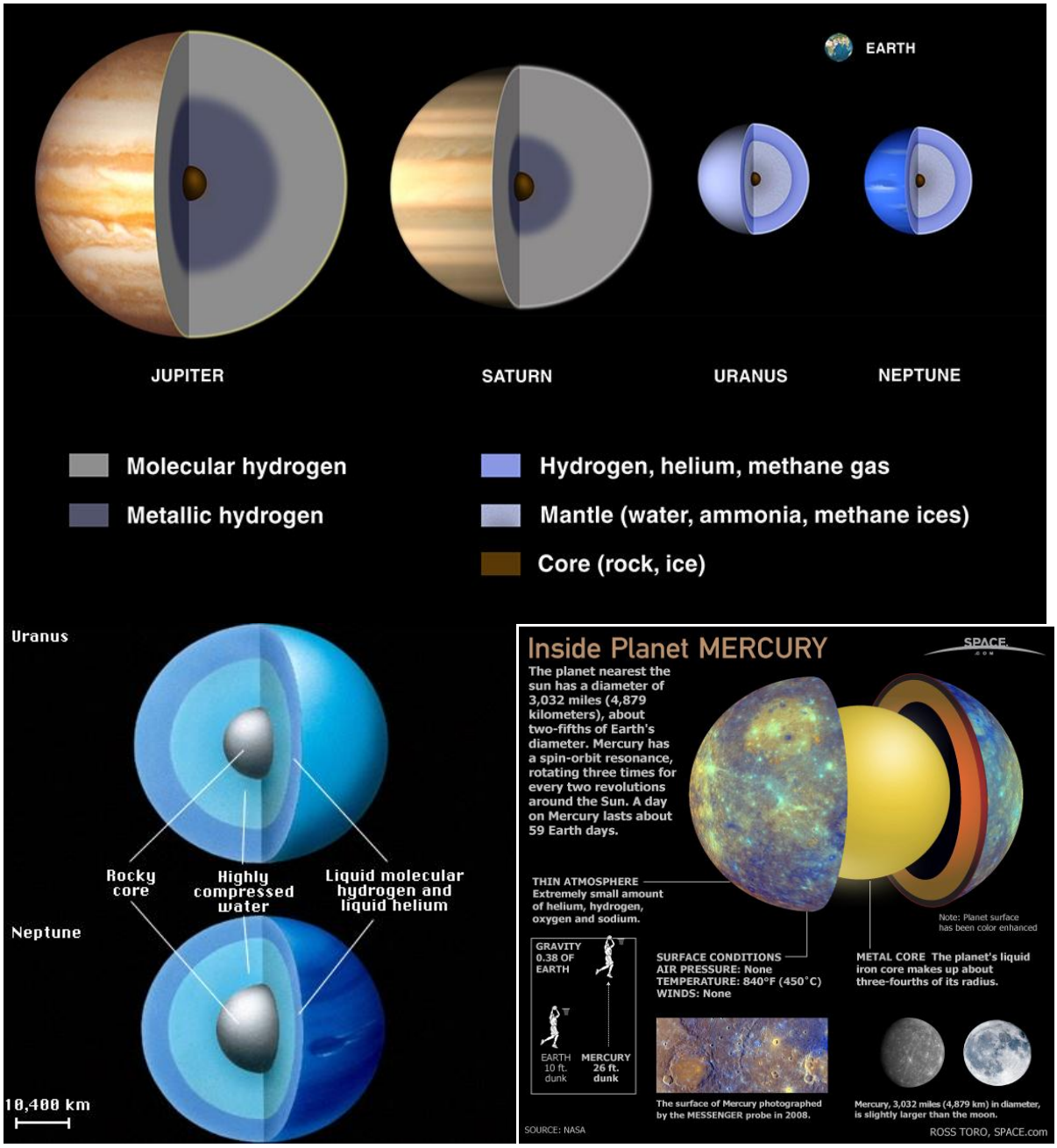
It would have been much simpler and rational for astronomers to link the evolution of stars with formation of planetary bodies in order to explain the observed facts of nature. But this would require a major overhaul of mainstream accepted theories about Big Bang, expanding universe and the age of the universe as the process of star's cooling to become planets will take much longer than the currently accepted age of the universe at 13.7 billion years. This change when accepted will revolutionise the field of astronomy and we will be able to rationally explain most the observable universe without invoking assumption laden theoretical & mathematical explanations (Theoretical concepts like dark matter, dark energy, singularity, worm holes etc won't be required to explain the observable universe then). Astronomy would take a giant leap forward.

On the Mechanics of the process of a cooling star



As the star cools to planet stage its plasma has mostly recombined to form the elements (consequently it no longer shines). It has mostly differentiated molten material at its core and its outer layers mostly contains gaseous material like Hydrogen,Helium,oxygen,nitrogen etc. and there is turbulence related phenomenon in these gaseous layers(e.g. Jupiter's Red spot). As it cools further chemical reactions (mainly exothermic) are taking place starting to produce molecules like methane, water, ammonia and other chemicals in its interior. Jupiter might be a good example of this stage of a star and its different coloured bands probably represent different chemicals being produced.



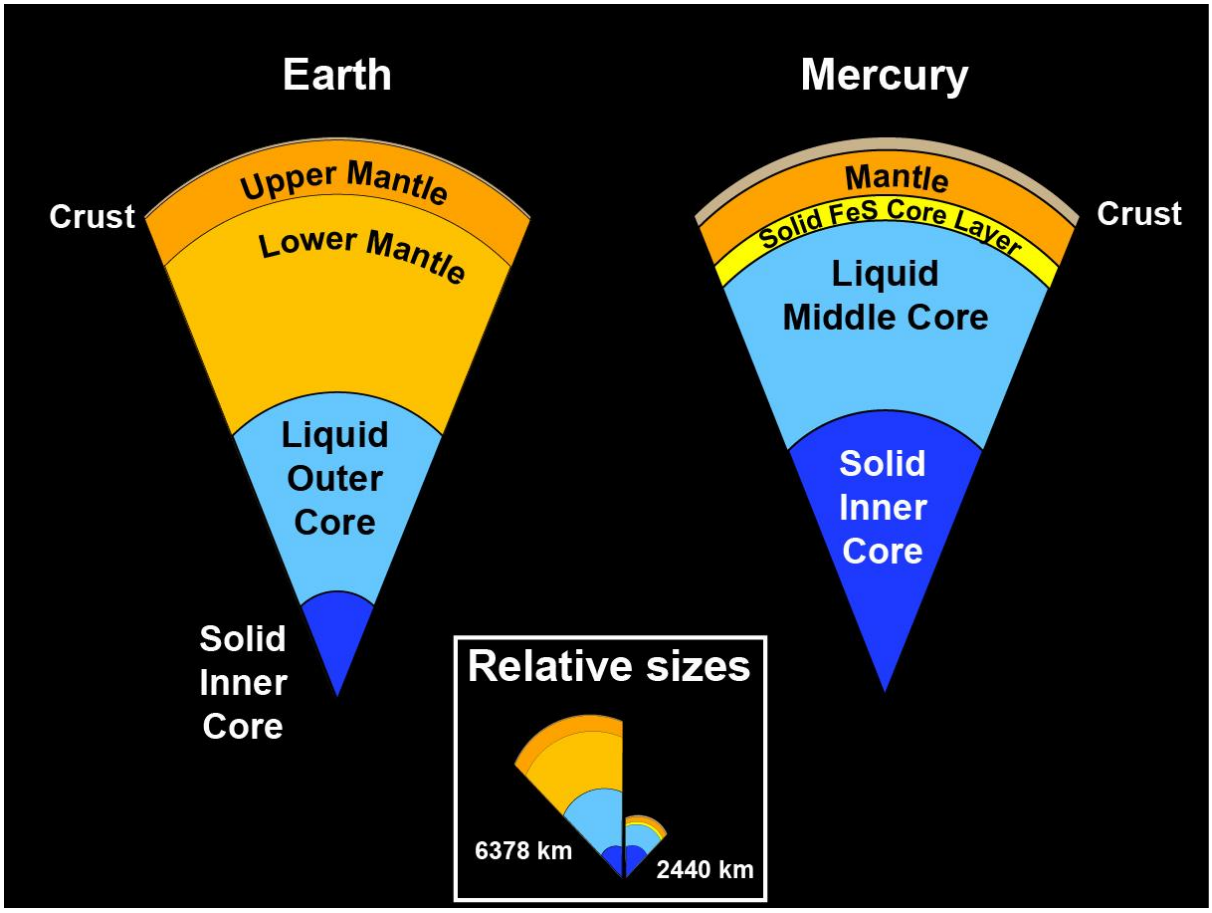


As it continues to cool (e.g. the processes that Neptune and Uranus are undergoing at present) it stratify by having gases getting condensed to form liquids(water, methane etc.) in the outer most layers of the solid core resulting in cooling and formation of the crust. Some of the chemicals of outer layers will get mixed with inner layers as turbulence levels are extreme and will get trapped as it cools and solidifies. The increase of temp\pressure in trapped layers will further change the chemistry of many molecules - formation of long chained hydrocarbon molecules from trapped methane being an example. As the star/planet cools further it loses its thick layer of atmosphere slowly. As it continues to lose its

gases (Hydrogen, Helium, Methane) its atmosphere starts thinning and also evaporation causes loss of surface liquids by this process. There was more water on earth in earlier phases than now and the earth's water constantly recirculates through its atmosphere via evaporation. During this cooling process life forming amino acid molecules are being produced in the cooling planet as shown by Miller –Urey experiment. These amino acids will evolve to form some type of self-replicating molecules (Life) kick-starting the process of life which we still have to fully understand in regards to its mechanism. At some stage the cooling planet would resemble like our planet forging life on the surface if it was lucky enough to be orbiting another star within habitable zone during that process.

However if the cooling planet was not orbiting another star during its cooling process, It will continue to shed gases until only solid layer remains on top (which could be frozen gas like methane as well). If a star cools without orbiting another shining star it will cool to a stage where all its gases are frozen and will remain in this stage (but it still is getting eroded at the surface very slowly by asteroid/meteor bombardment) until it gets captured by another star in its orbit through gravity which will kick-start the evaporation of its gases and liquids forming an atmosphere again.

(Note - This process raises another interesting question namely would life evolve if this capture\kick-start of atmosphere takes place while the iron\nickel core of the planet was frozen losing its magnetic field. life forms on earth highly immune to radiation exist and they would have the capacity to evolve in a high radiation environment. Saturn's moon Titan in an interesting example –As per Cassini spacecraft's data it has atmosphere made of mainly Nitrogen gas with Methane/Ethane clouds and also liquid oceans of methane/ethane on the surface of Titan, its weather system consisting of possible clouds/rains of methane and ethane in its atmosphere, its without magnetic field It also have further layers of water below methane\ethane followed by solid silicates – It would be interesting to speculate on what would happen to it if it gets captured by a another star in a habitable orbit.)



The appearance of life on a planet will be followed by its extinction as the habitable atmosphere as well as surface liquids are lost slowly and also the iron core is solidifying slowly reducing its magnetic field. After the loss of its atmosphere its erosion of top layer by bombardment with meteors will accelerate and continue. Planets like mercury have iron core the size of earth but its diameter has been reduced greatly by this process of erosion over possibly hundreds of billions of years. It will eventually grind itself out by this process of erosion or will collide with other objects producing dust, asteroids and other objects that we find in space. Fragments of its core material after collision events etc becoming space debris would explain why we find asteroids made of perfect crystalline Fe/Ni materials which we otherwise cannot account for as these objects cannot form by themselves in space in that configuration in isolation. Later all this scattered debris materials will become part of recirculating material getting converted back to Hydrogen and Helium gas in radio galaxies completing its lifecycle and kick-starting another cycle of galaxy formation in the gas clouds so formed. *(Refer to my viXra paper "A New Explanation on the Workings of Central Core Regions of Galaxies and Observations on the Nature of Fundamental Particles of Nature" for a detailed explanation of this process* http://vixra.org/abs/1510.0513 *)*

On the question of why planets stay at similar temperature ranges over millions of years despite continuously cooling during the evolution and propagation of life periods.

This is due to following four reasons mainly.

One... The process of cooling of stars to form planets is a very long process (relative to life forming time scales) that it is difficult to even imagine in human timescales. This process will likely take many-many (10's~100's) billions of years to complete. Here we are disregarding the 13.7billion yrs. big bang time scale completely as it is highly erroneous.

Two... In the initial phases of life formation on a planet, the surface contains liquid water + methane and condensation of water vapour and methane gases is taking place in the atmosphere releasing heat as it is an exothermic phase transition. This condensation process will go on for many millions of years counteracting the cooling effects of interior surface and giving life formation processes stable temperatures. Uranus and Neptune are most likely in the beginning of this phase.

Three... After the condensation of water vapour to liquid the whole planet is covered in thick layer of liquid water, cooling and solidifying its crust and it then acts as an insulator for further heat loss from the interior of the planet. Therefore it prolongs the time of cooling substantially by slowing it down.

Four... The many processes of molecule formation, crystallisation, and solidification taking place inside the core of the planet are exothermic resulting in the release of heat. This heat is getting transferred to the water layer above and will counteract the cooling effect of evaporation on top layer of water and will result in an extended period where temperatures variation will be minimal resulting in propagation of life for hundreds of millions of years.

Observation on the comparison of relative mass of a star at the start of its life versus when it is cooled to a solid planet like structure

This is based on the following observations.

One.... As the star comes into existence via Z-Pinch mechanism its mostly a ball of ionised Hydrogen\Helium plasma, which immediately starts cooling by recombination of plasma at its outer surface causing it to shine by releasing energy. It will be a simple reaction of release of energy by plasma recombination and will convert back into Hydrogen and Helium gas which will escape continuously into space (some of it as solar wind).

Two.... What we observe is that the composition of young stars is mainly Hydrogen/Helium plasma whereas the composition of most cooled stars (planets) consists of (e.g. earth) mainly Iron, oxygen, silicon, magnesium, nickel, sulphur and smaller quantities of other elements.

Three.... There is very little Hydrogen and Helium present in elemental form in the solid cooled stars like Earth\Mars etc and whatever fraction is there is mostly combined with other elements e.g. water, hydrocarbons etc.

Four.... The gases gets continuously released into the vacuum of surrounding space slowly as the stars cools. Planets like Jupiter, Saturn, Uranus, Neptune would continue to lose their gases like H, He, Methane into the surrounding space and at some stage will be left with just the solid cores with thin layers of atmospheres like earth, Mars etc.

We can reasonably conclude from these observations that the large chunk of the material that the star started its life with is largely released back into space in the form of escaped gases of Hydrogen and Helium mainly and what remains is just the cinder of its solid materials synthesised by fusion reactions (fusion process on sun explained in my paper ***viXra:1510.0472*** *)* forming its core by the end of its life. The solid core material remaining will be a small fraction of the total mass that the star originally started its life with.

References

[1] Wolynski, Jeffrey (2012). ***Stellar Metamorphosis: An Alternative for the Star Sciences***. http://vixra.org/pdf/1303.0157vC.pdf.

[2] Wolynski, Jeffrey , ***Main Concepts for Explaining Star Evolution (Planet Formation) According to the General Theory of Stellar Metamorphosis*** http://vixra.org/pdf/1506.0156v3.pdf

[3] Abruzzo, Anthony (2008). ***Are Planets the End Products Rather than the By-Products of Stellar Evolution?.*** *The General Science Journal*

http://gsjournal.net/Science-Journals/Research%20Papers-Astrophysics/Download/1160.

[4] ***A New Explanation on the Workings of Central Core Regions of Galaxies and Observations on the Nature of Fundamental Particles of Nature***

viXra:1510.0513 submitted on 2015-10-31 04:38:56,

Authors: Amrinder Singh Category: Astrophysics

[5] ***New Theory of Nuclear Fusion Processes in Sun and other Stars***

viXra:1510.0472 replaced on 2015-10-29 18:51:05,

Authors: Amrinder Singh Category: Astrophysics

[6] ***Hill HG, Nuth JA (2003). "The catalytic potential of cosmic dust: implications for prebiotic chemistry in the solar nebula and other protoplanetary systems"***. Astrobiology 3 (2): 291–304.Bibcode:2003AsBio...3..291H. doi:10.1089/153110703769016389.PMID 14577878.

(Miller–Urey experiment)