

The Principle of Atmospheric Thinning and Chthonian Planets

Jeffrey J. Wolynski

Jeffrey.wolynski@yahoo.com

June 18, 2017

Cocoa, FL 32922

Abstract: Chthonian planets as previous gas giants are observed all over the galaxy, regardless if their evidence for existence is hypothetical inside of the dogma. They are not hypothetical objects in stellar metamorphosis, because they are observed and can be directly experimented on. Explanation is provided.

A Chthonian planet is a class of hypothetical celestial objects resulting from the stripping away of a gas giant's hydrogen and helium atmosphere and outer layers, which is called hydrodynamic escape. Such atmospheric stripping is a likely result of proximity to a star. The remaining rocky or metallic core would resemble a terrestrial planet in many respects. Below are screen shots of the belief that they are hypothetical objects, and that they are not observed. This is done to clarify that the dogma does not understand nature.

Chthonian planet

From Wikipedia, the free encyclopedia

Chthonian planets (/ˈkθoʊniən/, sometimes 'cthonian') are a hypothetical class of celestial objects resulting from the stripping away of a gas giant's hydrogen and helium atmosphere and outer layers, which is called hydrodynamic escape. Such atmospheric stripping is a likely result of proximity to a star. The remaining rocky or metallic core would resemble a terrestrial planet in many respects.^[1]

Evaporation rate of hot Jupiters and formation of Chthonian planets

G. Hébrard, A. Lecavelier des Étangs, A. Vidal-Madjar, J.-M. Désert, R. Ferlet (IAP)

(Submitted on 15 Dec 2003)

Among the hundred of known extrasolar planets, about 15% are closer than 0.1 AU from their parent stars. But there are extremely few detections of planets orbiting in less than 3 days. At this limit the planet HD209458b has been found to have an extended upper atmosphere of escaping hydrogen. This suggests that the so-called hot Jupiters which are close to their parent stars could evaporate. Here we estimate the evaporation rate of hydrogen from extrasolar planets in the star vicinity. With high exospheric temperatures, and owing to the tidal forces, planets evaporate through a geometrical blow-off. This may explain the absence of Jupiter mass planets below a critical distance from the stars. Below this critical distance, we infer the existence of a new class of planets made of the residual central core of former hot Jupiters, which we propose to call the "Chthonian" planets.

Comments: To be published in the proceedings of the XIXth IAP Colloquium "Extrasolar Planets, Today And Tomorrow", 2 pages

Subjects: **Astrophysics (astro-ph)**

Cite as: arXiv:astro-ph/0312384

(or arXiv:astro-ph/0312384v1 for this version)

All rocky "planets" are Chthonian planets. They all lose their atmospheres according to the Principle of Atmospheric Thinning proposed by the General Theory of Stellar Metamorphosis. <http://vixra.org/pdf/1605.0308v1.pdf> They are not hypothetical. The reason why they are hypothetical in the dogma is because they all have to be close to a hotter host and they can't know if a rocky planet that orbits close had a large hydrogen atmosphere. They also assume that only the current host could have ripped away the atmosphere. This is false. A Chthonian planet could have had a variety of objects ripping away at it, at much different orbital distances, in different arrangements, such as two hosts or even three. If anything, the Chthonian would have its atmosphere ripped away faster by being closer, but that does not mean it will always orbit that host, nor does it mean it has always orbited that one and only host. It also does not mean it formed next to it, nor does it mean it formed even in orbit around

the host. All of those assumptions are false in stellar metamorphosis. All Chthonians are evolved stars, they had evolutionary paths much greater than their hosts. The diagram that show this is presented below. We can even determine their history by studying their current compositions and evaporation histories by looking at their sizes and the sizes of their iron/nickel cores inside of stellar metamorphosis theory. This is impossible to do in the dogma because they believe all objects formed in disks, while violating the conservation of angular momentum. Not only that, but the entire class of Chthonian can be disregarded, as it proposes that there is a separate “class” of objects. The question remains, if all rocky planets are Chthonians, and it is THE path of stellar evolution, then no such class of object distinct from the others even really exists. Therefore the class “Chthonian” is not even needed. They are just referring to highly evolved stars. All of them.

