

## The Invalid Nature of Humphreys' White Hole as well as Certain Other Creationary Cosmologies.

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June 1996. Revised 4 AUG 2014.)

### Scriptural Inconsistency

Creationary cosmologies such as Humphreys' reverse the actual intent of Genesis 1. As stated there the actual star creation processes are of little significance "*he made* the stars also," "He also made the stars." The Scriptures seem to consider this a type of "after-thought" statement. Such models as Humphreys' emphasize star creation and minimize the creationary power of God relative to all else. This is the opposite of the intent of Genesis 1. To imply that other major creationary events are the result of a star formation cosmology is totally inconsistent with the message being presented by God in Genesis 1. Since a factual and detailed day-four cosmology for star creation will probable remain unknown to humanity, knowledge as to the "correct" one is Biblically of little importance.

A correct Genesis 1 creationary science scenario is one that maximizes the creationary power of God and follows the exact step-by-step creation-day statements. Even if the below technical problem is eliminated from Humphreys', it and all other cosmologies with the same intent and the following day-four error should not be accepted. A strict creationary cosmology should have a builtin provision that human beings, as originally created, would not die and they would live in this form on the original Earth. There was "no hunger, no struggle for existence, no suffering, and certainly no death of animal or human life anywhere in God's perfect creation (plant 'life,' created as food for men and animals, does not 'die' in the Biblical sense)" (Morris, 1998). The GGU-model allows for such a cosmology. It is **not dependent upon a specific cosmology** and it upholds this requirement (Herrmann, 2014).

See Herrmann 2013 and 2008 for slightly different common 1600 - 1300 BC understandings for the terms and phrases presented in Genesis 1:1 -2:1.

### A Technical Error

It appears that Humphreys' (1994) model may fail to achieve the goals claimed, at the least, in one instance. Indeed, a direct contradiction is obtained. In this note, the

cosmological constant “ $\Lambda$ ” is briefly investigated. Humphreys uses the approximating Schwarzschild configuration, the vacuum solution, and the classical Schwarzschild surface (i.e. event horizon) throughout his discussions, especially relative to the geometry exterior to such surfaces. Due to the dust-like properties of matter interior to the event horizon and due to a comparatively large cosmological constant, the collapse scenario for the dust-like (particle-like) material would be overcome and the material would escape through the event horizon and give a white hole effect. (However, this scenario does not appear to have all of the actual white hole properties.) He states, “I suggest that the event horizon reached earth early in the morning of the fourth day.” (Humphreys, 1994, p. 126) The earth here is a type of “water-world” that has stayed “coherently together.” (Humphreys, 1994, p. 124) The event horizon also remains approximately in that position the entire “fourth day.” Using this extreme approximation for matter behavior, that matter behaves as if it were “dust,” as it passes through the collapsing event horizon, Humphreys states, relative to the spherical event horizon surface, that

outside the sphere, the metric has to be the same as the Schwarzschild metric, eq. (13). (1994, p. 114)

Humphreys mentions (1994, p. 120) that the Klein metric that implies his results would actually need to be altered to include the cosmological constant. However, this would also be the case for the Schwarzschild exterior metric as well. Such a modification is known; it is the “modified Schwarzschild metric.” (Herrmann, 1993, p. 80) Assuming that the earth has its present mass, consider the modified Schwarzschild solution where the significant expression is

$$1 - 2GM/(c^2r) - (1/3)\Lambda r^2.$$

[Note: Although it is not necessary for this analysis, the  $\Lambda$  in this expression is written as  $\Lambda/c^2$  in Herrmann (1994).]

The location of the event horizon is obtained by setting this expression to zero. For the earth, a simple calculation, using  $6.67 \times 10^8$  cm as the radius of earth and .889 cm as the value for  $2GM/c^2$  yields  $\Lambda = 7.39 \times 10^{-18}/\text{cm}^2$ . Based upon Humphreys’ Schwarzschild exterior geometry, this value appears, at the least, to be required during the entire day four and, probably, through day six so that the event horizon (Schwarzschild surface) remains approximately at the earth’s surface. But, Humphreys states that  $\Lambda$  is set at a large value on day two of his creation model in order to produce a “rapid, inflationary expansion of space”. (1994, p. 124) As shown in the paper by Moles (1991), as cited by Humphreys, the above value for  $\Lambda$  does not appear to be the large value Humphreys is suggesting for his expansion model.

More significantly, however, if this calculated  $\Lambda$  and the estimated mass of the universe are inserted into this expression and this is the value of  $\Lambda$  prior to the collapse of the event horizon as required by Humphreys' model, then the event horizon about the bounded universe would not exist. Indeed, the solution of the cubic equation yields a negative and two complex values for  $r$ . The same type of result is obtained even if we reduce considerably the estimated mass of the universe. Further, any increase in such a mass or an increase in  $\Lambda$  will always lead to this same conclusion. Thus, assuming that there is an event horizon at the earth's surface that is produced by the collapse of an event horizon at the outer boundary yields, for this metric, a cosmological constant that when applied to the entire universe does not yield the required event horizon at the outer boundary. Event horizons are produced for simple variations for the parameters for this metric but they appear contradictory if they are considered as constants over the entire cosmos. (Including a term for "charge," in the above, will not significantly affect these results.)

This all signifies that an additional analysis is required for the exterior geometry and its relation to the cosmological constant using the proper metrics that describe the gravitational fields. More attention should be given to the cosmological constant, its relation to solutions to the Hilbert-Einstein equations, and how under such a circumstance an appropriate  $\Lambda$  produces the required expansion and satisfies, at the least, the two necessary event horizon requirements.

A GGU-model interpretation (Herrmann, 2008) maximizes the creationary power of God, follows that exact Genesis 1 scenario and the Rapid-Formation Model portion eliminates the so-called starlight-and-time problem for **any star forming cosmology**.

### Note

All calculations, using MAPLE V, can be found in the maple worksheet at <http://www.raherrmann.com/hump.mws>

### References

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