An island at which body size shrinks

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Abstract

This article was motived by the evidence provided by and article published in Science for the claim that the bodies of hominins, humans and even elephants have shrunk as they have arrived to the island of Flores belonging to Indonesia. It has been found that the interbreeding of modern humans with pygmies living at Flores is not the reason for the shrinking as one might think. In this article a TGD inspired explanation for the shrinking as being due to a local reduction of gravitational Planck constant at Flores is considered as a mechanism reducing quantum gravitational Compton length assignable to the gravitational part of the magnetic body of organism in turn inducing the reduction of the size of the biological bodies.

I encountered in Facebook an article claiming that the bodies of animals shrink at the island of Flores belonging to Indonesia (see http://tinyurl.com/ycluutnql). This news is not Dog's days news (Dog's days news is a direct translation from the finnish synonym for fake news).

Both animals and humans really are claimed to have shrinked in size. The bodies of both hominins (predecessors of humans, humans, ane even elephants) have shrinked at Flores.

1. In 2003, researchers discovered in a mountain cave in the island of Flores fossils of tiny, humanlike individual. It had chimp sized brain and was 90 cm tall. Several villages at the area are inhabited by people with average body height about 1.45 meters.

2. Could the small size of the recent humans at Flores be due to interbreeding between modern humans with Homo Florensiensis (HF) occurred long time ago? The hypothesis could be tested by studying the DNA of HF. Since the estimate age of fossils of HF was 10,000 years, researchers hoped that they could find some DNA to HF. DNA was not found but researchers realized that if HF as interbreeded with humans, this DNA could show itself in DNA of modern humans at Flores. It was found that this DNA can be identified but differs insignificantly from that of modern humans. It was also found that the age of the fossils was about 60,000 years.

3. Therefore it seems that the interbreeding did not cause the reduction in size. The study also showed that at least twice in the ancient history of humans and their relatives arrived as Flores and then grew shorter [I1] (see http://tinyurl.com/y9th5zne). This happened also for elephants that arrived to Flores at twice.

This looks really weird! Weirdness in this proportion allows some totally irresponsible speculation.

1. The hierarchy of Planck constants $h_{eff} = nh_0$ ($h = 6h_0$ is a good guess [L2, L4, L1]) assigned with dark matter as phases of ordinary matter and responsible for macroscopic quantum coherence is central in TGD inspired biology. Quantum scales are proportional to or its power (h_{eff}^2 for atoms, h_{eff} for Compton length, and $h_{eff}^{1/2}$ for cyclotron states).

2. The value of gravitational Planck constant h_{gr} ($= h_{eff}$) at the flux tubes mediating gravitational interaction could determine the size scale of the animals. Could one consider a local anomaly in which the value of h_{gr} is reduced and leads to a shrinkage of also body size?

3. h_{gr} is of form $\hbar_{gr} = GM_D m/v_0$, where v_0 a velocity parameter [K1, K2] [L3] (see `http://tinyurl.com/y8xhvwt2`, `http://tinyurl.com/yaattlzm`, and `http://tinyurl.com/y8vnyppq`). M_D is a large dark mass of order 10^{-4} times the mass of Earth. Gravitational Compton length $\Lambda_{gr} = h_{gr}/m = GM/v_0$ for a particle with mass m. $\Lambda_{gr} = h_{gr}/m$ does not depend on the mass of the particle - this conforms with Equivalence Principle. The estimate of [L3] gives $\Lambda_{gr} = 2\pi GM_D/v_0 = 2.9 \times r_S(E)$, where the Schwartshild radius of Earth is $r_S(E) = 2GM_E = .9$ mm. This gives $\Lambda_{gr} = 2.6$ mm, which corresponds to p-adic length scale $L(k = 187)$. Brain contains neuron blobs with this size scale. The size scale of organism is expected to be some not too large multiple of this scale.

   Could one think that v_0 at Flores is larger than normally and reduces the value of Λ_{gr} so that the size for the gravitational part of the magnetic body of any organism shrinks, and that this gradually leads to a reduction of the size of the biological body. Second possibility is that the value of dark mass M_D is at Flores smaller than elsewhere: one would have a dark analogy of ordinary local gravitational anomaly. The reduction of h_{gr} should be rather large so that the first option looks more plausible.

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