

Abstract Submitted
for the CAL09 Meeting of
The American Physical Society

A Different Reason Why Black Holes are Black NOHA S. FARGHAL — Although it is true that black holes appear to be black on the outside due to the fact that the escape velocity from the event horizon is even higher than that of light, black holes may be black on the inside as well. A recent paper by Zach Adams (2009) presents a new model which provides evidence of gravitons actually being a result of a fusion of 2 photons, which manifests in 4-D space. In fact, the duality between gravitons and photons has been suggested in earlier works as well. Falling Photon Experiment shows that as photons approach a massive body, their energies increase, and their wavelengths decrease. Photon-graviton conversions occur when the wavelengths of photons decrease to Planck's length. As a result, the photons approaching the event horizon of a black hole may gain energy enough for photon pairs to fuse and become gravitons. Therefore, as we will discuss in this work, there exists a probability that photons cannot survive within the event horizon of a black hole. It is true that nothing can escape a black hole, which is the reason why it looks black on the outside, but also the possibility that photons may not be able to survive on a black hole means that black holes may be black on the inside as well.

Noha S. Farghal

Date submitted: 10 Sep 2009

Electronic form version 1.4