

## The ttH Process Entity Formed Before the Big Bang With E8 Symmetry Is Observable

George R, Briggs

**Abstract:** Some of the massless fermibosonic entity fundamental to E8 symmetry universe theory failed to develop its fully massless character (i.e. the ttH process entity) during the prior unbroken E8 symmetry epoch before the big bang and can now be observed.

The ttH process entity (see ref. 1) appears to be one in which the bosonic H component exhibits negative intrinsic energy ( $-mc^2$ ). This is expected if the entity was formed in an unbroken E8 symmetry epoch, such as we had prior to the big bang. Once formed, the negative energy character remains even after the symmetry is broken by U(1), (our epoch) and if the net energy for the entity is zero, it is unobservable. This condition I have called fermibosonic and it is fundamental to my theory of the universe in bringing in the mass of the previous universe, both fermionic and bosonic, into the new universe.

The H component of the ttH process entity has spin 0. According to my theory, a ttZ process entity also exists having a spin 1 for the bosonic component. The spin 0 type leads to spiral galaxies, while the spin 1 type leads to early giant black holes. The two new entities complete the entity requirements for the universe, and one of these has now been found, albeit of incomplete form.

The question also arises of where antimatter was generated. It cannot have been in the unbroken E8 symmetry epoch, since it not allowed then, and the ttH process does not have any either. It must have been generated when the spin 0 fermiboson entity was disrupted by the giant black holes. It was annihilated again when this material moved out into the bulge region of the spiral galaxy, leaving the outer arms with no antimatter. The spin 1 fermiboson entity formed giant black holes directly and no antimatter was involved.

1. CERNcourier, Latest ATLAS results on the Higgs boson, p.1, Apr. 27, (2015)