

Time and Antimatter

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Convention would have you believe that antiparticles somehow travel in reverse/negative time. Does this make sense? Does it jive with what we observe?

Let's think about four particles:
neutron and antineutron
 ${}^8\text{Be}$ and anti- ${}^8\text{Be}$

Free neutrons decay in about 14.7 minutes.
 ${}^8\text{Be}$ nuclei decay in about 10^{-16} seconds.

If antiparticles travel backwards in time, free antineutrons and anti- ${}^8\text{Be}$ nuclei should never decay! As soon as you see/form one, it should either stay together forever XOR *instantly* disassociate. As of writing, we have not created anti- ${}^8\text{Be}$ to observe. However, we have observed antineutrons which would seem to indicate they don't instantly disassociate. That leaves two only possibilities about time and antimatter:

1. antimatter affects time *exactly the same* as matter
XOR
2. antimatter speeds it up (explained below)

For reasons explained in other essays, 1 jives with {antimatter and matter are attracted to each other gravitationally} – and – 2 jives with {repulsion} .. In a balanced curvature creation event, there are equal number of primordial black-holes, primordial antimatter black-holes, hydrogen, anti-hydrogen, deuterium, and anti-deuterium produced. This is it; no more no less. This is the *only* scenario that makes *any* sense .. With that in mind, what option makes more sense as to what we observe today? 1 XOR 2?

If 1, PBHs and PABHs would have combined and dominated the early universe. Galaxies made up of both matter and antimatter would have formed – half and half – and our own Milky Way would be half antimatter. We don't observe that.

That leaves option 2: *antimatter speeds up time*. This implies some interesting consequences:

1. PABHs should evaporate much more quickly than PBHs
2. in rare direct collisions between them, PABHs should dominate (I call them 'cosmic vacuum cleaners')
3. anti-galaxies and galaxies would evolve at different rates (maybe most/all the anti-galaxies are dead?)
4. anti-stars would age and die much faster (are there any left?)

So what we need to do is make intensive study of free antineutrons and anti-⁸Be. Finish the experiments at CERN regarding anti-hydrogen atoms in free-fall. Then we can have a better understanding of the *fundamental* question:
what happened to all the antimatter?