

Re: Galaxies and antimatter

Source: <http://sci.tech-archive.net/Archive/sci.physics/2005-05/msg03149.html>

- *From:* Sam Wormley <swormley1@xxxxxxxxxx>
 - *Date:* Mon, 23 May 2005 14:04:43 GMT
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Ray Johnstone wrote:

On Mon, 23 May 2005 03:36:06 GMT, Sam Wormley <swormley1@xxxxxxxxxx> wrote:

Ray Johnstone wrote:

What is the evidence that other galaxies are made of matter rather than antimatter?

Physics FAQ --

<http://math.ucr.edu/home/baez/physics/ParticleAndNuclear/baryogenesis.html>

Thanks, but what I don't follow (from your quoted URL) is

Essentially, causality prevents the separation of large chunks of antimatter from matter fast enough to prevent their mutual annihilation in the early universe.

Based on observation (no signature of annihilation energies expected with "large chunk" of antimatter), and observed asymmetry in particle decay times for matter and antimatter, it is a reasonable assumption that almost all the matter occurring in the Big Bang was annihilated early on. What we see about us is the matter that was "left over" after those annihilations.