

# Antimatter Bomb

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## Abstract

Current scientific antimatter knowledge is incomplete. Without full knowledge it's not possible to invent antimatter based applications, including the application handled in this paper, antimatter bomb. Word bomb combined with nuclear phenomena has an enormous stigma, so even talking about the theoretical aspects (scope of this paper) of antimatter bomb sounds horrible, not to mention designing and constructing such a thing. Why would we even need antimatter bomb?

Without antimatter based bomb we, as the mankind, are helpless in front of a possible devastating asteroid impact. No other means are capable of generating enough destructive power to wipe out an asteroid. Many dangerous asteroids cruising in space are not known to astronomers today hence no early warnings possibility. Especially in case of these surprising asteroids, antimatter bomb is the only way to prevent imminent disaster.

As in case of every technology there is a potential for misusing antimatter bomb. The greatest threat is intentional or accidental large enough annihilation chain reaction which could lead to a total annihilation of our planet. Probability and prevention of such unfortunate event requires additional research.

## Background

Every particle is spinning in classical sense as described in TOEBI (Theory of Everything by Illusion [1]). By combining spinning elementary particles we get composite particles (Atom Model and Relativity [2]) which behave a bit differently due to their structure. Never the less, stable composite particles (protons and neutrons) can be annihilated back to elementary particles without currently used methods of putting matter and antimatter together (Antimatter [3]).

According to TOEBI, all particles are so called Majorana particles, meaning that particle is its own antiparticle. Due to multiple reasons mainstream particle physics has missed this fact entirely. Most confusing fact is that we don't experience for example multiple proton annihilation on a daily basis, hence proton can't be its own antiparticle, right? Wrong, it can be in two ways. The first way is when we shoot protons with high enough energy into a matter, after collision, there is a chance that we have generated an antiproton. In reality, we haven't

generated a new particle, we have just increased proton spin frequency up to  $\approx 1.5$  times the original frequency and due to magnetic field separation some of those excited protons are interpreted as antiprotons. Due to increased spin frequency, contact with nonexcited protons or neutrons causes excited proton and its contacting partner to annihilate.

The second way is achieved with minuscule amount of money compared to the first one. The trick is to manipulate a bunch of protons in two solid hydrogen lattices into a certain spin configuration and put those lattices together. As easy as this might sound, the technical requirements (e.g. accuracy in every step) are (probably) so high that they prevent illegitimate usage of the following theoretical blueprint.

## Solid Hydrogen

The most abundant element in our Universe is hydrogen. In that light, it's kind of exciting that by using hydrogen it's possible to create powerful bombs, ordinary hydrogen bombs as well as future antimatter bombs. If we have hydrogen gas those hydrogen atoms are in form of diatomic hydrogen molecules. In normal room temperature, approximately 1/4 are in para-hydrogen form and the rest in ortho-hydrogen form. We can generate solid hydrogen where the majority of diatomic molecules are in ortho-hydrogen form, which means that spins of those two protons are parallel. In TOEBI, we can denote such a spin configuration as in the picture below.

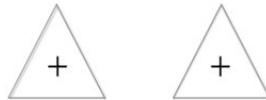


Figure 1: Ortho-hydrogen, Binding Electrons Omitted

Triangle form comes from the fact that proton consists of three electrons, so each corner presents an electron. Due to gravitational interaction, those triangles are “standing” on two bottom electrons. Plus (or minus) signs present spinning direction of those proton electrons, which is the same for all those three electrons. Minus means clockwise and plus counter clockwise, binding electrons are omitted.

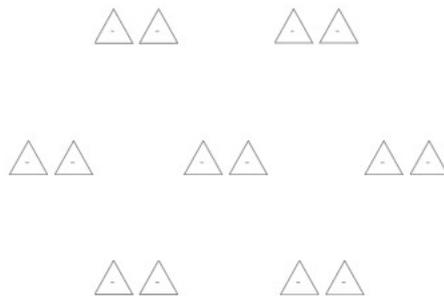


Figure 2: Ortho-hydrogen Lattice Crystal

Due to nuclear interaction between neighboring protons solid ortho-hydrogen lattice crystals have well ordered spin configuration. Presented configuration goes through a solid hydrogen block lattice by lattice.

## The Method

The beauty of using solid hydrogen as a basis for antimatter bomb presents itself in many ways. Especially one significant property of solid hydrogen makes it an ideal material, a proton in the lattice has its neighboring protons. At first, one might think that it would be an insignificant property, but it's not. The significance comes obvious when we try collide protons when their spins are transverse and anti-parallel (The Anomalous  $A_{NN}$  Spin-Spin Correlation [4]), there won't be any proton annihilation. Why is that? Even though the setup is pretty much identical to the one presented in this paper. Solid hydrogen is the answer. Neighboring protons prevent contacting protons from changing their spin orientation before it's too late. Desired lattice configuration before putting the lattices together is described in the picture below.

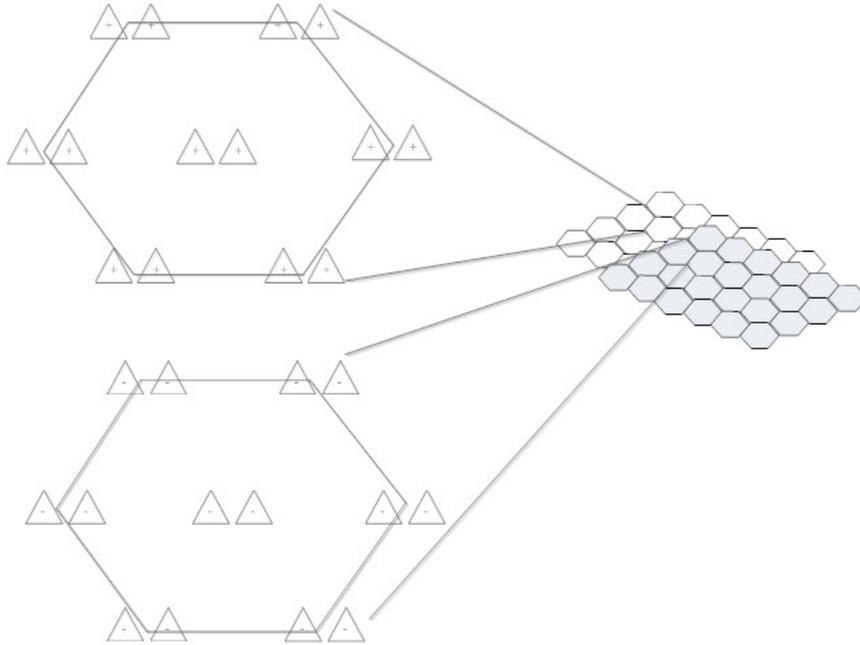


Figure 3: Solid Ortho-Hydrogen Lattices

What would happen when we put those lattices together in the ideal manner where all protons touch their counterparts at the same time? According to TOEBI, when two protons contact in described manner they manage to get so close to each other that (lattice) matching proton electrons interact, change their spinning orientation and create three new electron pairs, currently interpreted as three pions. Described chain of the events can be called effectively as proton annihilation, even though the annihilation mechanism differs from the conventional proton annihilation (proton-antiproton, the first way to annihilate protons).

Generated first generation pions are ejected in every direction from the contacting, annihilated, lattices. Protons in following lattices are hit (interacted) by these ejected particles and due to collisions change their spinning orientation (axis) parallel to the annihilated lattices. After that (due to geometry), heavy simultaneous particle flux hits it from both sides and proton can't "protect" itself from breaking up (non conventional proton annihilation). Annihilation process goes on at least as long as there is hydrogen provided protons available in a small volume, for example like in those used solid hydrogen blocks.

If we managed to annihilate two mono-layers of solid hydrogen  $1 \text{ cm}^2$  each, released energy would equal to 114 grams of TNT and if we managed to annihilate two solid hydrogen cubes  $1 \text{ cm}^3$  each, released energy would equal to 3.7 kT of TNT. In comparison, Little Boy released 16 kT. Generated initial blast could be used as is or for example as an ignition for thermonuclear explosions [5].

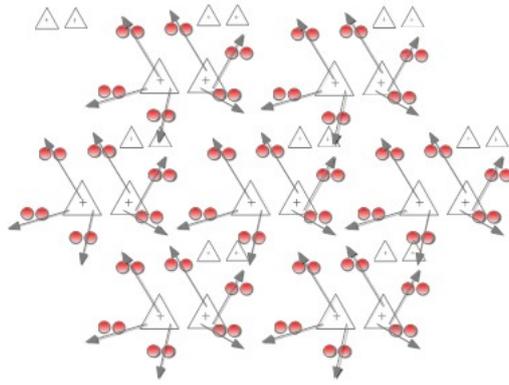


Figure 4: First Generation Pions (a pair of red dots denote a pion)

## Discussion

Presented theoretical blueprint for antimatter bomb deserves attention from theoretical and experimental particle physicists. Underlying theoretical platform (TOEBI) doesn't conflict with the observations made from our Universe, quite contrary, it can explain currently artificial concepts like dark matter and dark force.

Proof of concept based on this paper should be done under extremely secure conditions capable of preventing out of control annihilation chain reactions.

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