## How to make the Elements

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Now that we understand how gravity works, and how antigravity works (see www.MauriceCotterell.com), we can understand how to make helium; the first of the 'complex' atoms that contains electrons, protons, and neutrons. We can then apply the same understanding to how to make each, and all, of the other 118 'complex' elements.

#### **Abstract: How to make Helium**

The three types of Hydrogen

	electrons	protons	neutrons
Hydrogen (protium)	1	1	
Deuterium	1	1	1
Tritium	1	1	2

Helium contains 2 electrons, 2 protons and 2 neutrons and, as such, is the first of the 'complex' atoms [containing electrons, protons and neutrons] in the periodic table. Conventional understanding proposes that helium is made during the 'solar proton-proton' chain reaction. But this imagines that electrons are electrical particles, when in fact they are only electric for 50% of the time and magnetic for 50% of the time.

# Conclusion

Once the magnetic moments of the electron and the neutron-negative particles are implicitly recognised, it becomes clear how helium is made by the collision of two deuterium atoms. Hence, helium may be made inside particle accelerators; as may each of the elements—including gold, and the rare earth elements.

#### The Fusion of Atoms

### definitions:

Electric field is the electric component of electromagnetic radiation [infrared electromagnetic radiation [heat] emitted from stars. Electric field is sucked-into all atoms by the 'atomic electron-proton expansion-compression oscillatory mechanism' [FutureScience figure 16e].

Electric charge is the quantity of electric field held between a proton (or a group of protons) and an orbiting electron, or group of electrons [FutureScience figure 16e].

Electric current. An electric field, applied across a cascade of atoms (e.g. a length of copper wire) forces orbiting electrons away from individual atoms, creating positive ions that attract non-domiciled electrons from the supply-side of the electric field to create coherent electron flow (electric current) [FutureScience figure 35].

Magnetic field is the magnetic component of electromagnetic radiation emitted from stars. Magnetic field is also generated by an electron cutting through an electric field [FutureScience figure 16e] as a result of the atomic electron-proton expansion-compression oscillatory mechanism [i.e. atoms suck-in electric field. Orbiting electrons slice through the field and produce magnetism]. Magnetic field is also the magnetic component of electromagnetic radiation produced by the neutron-negative particle (inside a spiked neutron) cutting through the electric field inside all 'complex' atoms [FutureScience figures 37 and 38]. Moreover, the surplus of neutrons, together with the electron architecture of certain elements (iron, cobalt, nickel and neodymium-iron-boron), allows the magnetic fields generated by individual atoms to aggregate into a coherent unified magnetic field known as 'permanent magnetism'.

Atoms containing only 1 proton are referred to as 'Hydrogen'. As mentioned in the Abstract, there are three types of hydrogen; atoms with 1 electron and 1 proton figure 1(ai) are named *Protium*. Atoms with 1 electron, 1 proton and 1 neutron are named Deuterium (heavy hydrogen), and atoms with 1 electron 1 proton and 2 neutrons (figure 1(ci) are named *Tritium*. Each of these have different electromagnetic properties (as shown by figures 1(bii) – (biii) and 1(cii) – (ciii)).

Complex atoms are comprised of electrons, protons and neutrons, hence all atoms (except protium) can be said to be made from atoms of deuterium. Deuterium, then, should be seen as 'normal-type' hydrogen, with protium and tritium seen as 'variant isotopes'.

### How Protons and Neutrons accrete into atomic nuclei

A proton will repel a neutron-positive charge and figures 1(bii) and (biii) shows how the neutron-negative electron-magnet inside a captured neutron behaves like a miniature electron-magnet and orbits a proton, hence, a neutron can orbit a proton without touching the proton. The neutron-negative, in this case (deuterium), behaves as an electron orbiting in a first 'virtual' orbital shell. The positive proton will still have a propensity to attract any passing free negative electron, but because a captured negative electron cannot orbit the proton in the same orbital plane as the neutron-negative electron-magnet [for reasons given in *FutureScience* figure 29] the orbital planes of the electron and neutron-negative will be displaced by 90°, as shown in figure 1(bii). Hence, deuterium cannot radiate *helically polarised* electromagnetic energy (gravity waves).

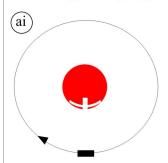
A deuterium atom may be joined by another neutron, (figure 1(ci) - (ciii), to form tritium. In this case, the magnetic moments of the two neutron-negatives attract to form a stable pair either-side of the proton. The neutron electron-magnets maintain a constant azimuth as they orbit the proton (they do not 'topple' as they orbit). The positive proton will still have a propensity to attract any passing free negative electron but because a captured negative electron cannot orbit the proton in the same orbital plane as the neutron-negative electron-magnet the orbital planes of the electron and neutron-negatives will be displaced by  $90^{\circ}$ , as shown in figure 1(cii) and (ciii) and, hence, tritium cannot radiate helically polarised electromagnetic energy (gravity waves).

#### How 2 deuterium atoms fuse together to form Helium

Figure 2 shows the conditions required to make 2 deuterium atoms fuse together to make 1 helium atom. Fusion can take place only when the particles are positioned in the way shown, with a magnetic-chance of 1 in 8. It is important to note that each neutron-negative electron-magnet magnetic field is locked-together magnetically with each of the electron-magnet magnetic fields. Because of this the neutron electron-magnets topple with the orbiting electronmagnets. Helium, like protium, thus radiates *helically polarised* gravity waves.

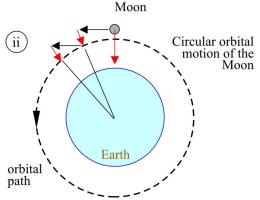
### The Electromagnetic properties of Hydrogen

### the three types of hydrogen

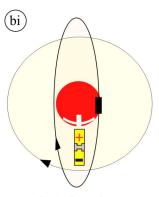


protium atom (normal earth-type hydrogen)

a) Hydrogen, the simplest of atoms, contains only 1 proton which is orbited by 1 electron. The electron is attracted to the positive proton but does not crash into the atom—for the same reason that the Moon does not crash into the Earth (right)

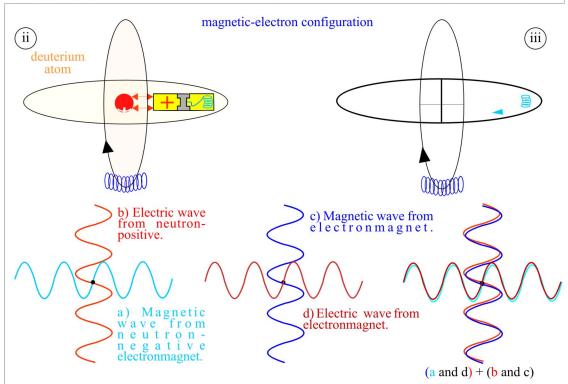


Newton reasoned that the Moon is continually falling towards the Earth with the same force and acceleration as a falling apple. At the same time, it is moving away from the Earth in its journey through space. The resulting motion captures the Moon in Earth's orbit (shown by the broken circular line).

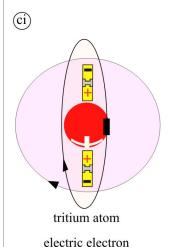


deuterium atom (heavy hydrogen)

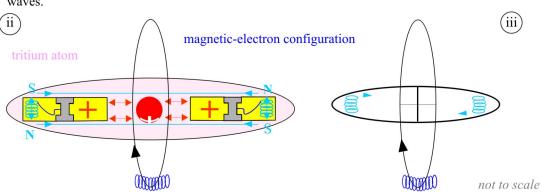
electric electron configuration



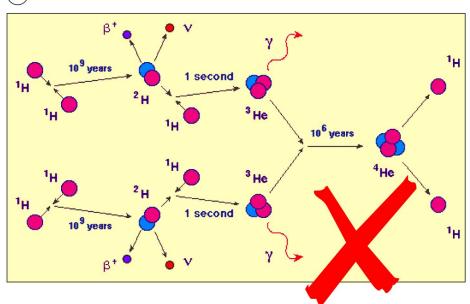
(FutureScience (figure 29) showed how the first two orbital shells are offset by 90°. In this case, the neutron-negative occupies the first orbital 'radius'. The electronmagnet orbit must therefore be offset by 90°, as shown. Because of this, the electric wave from the neutron-positive is in phases with the magnetic wave from the orbiting electronmagnet and vice versa and the two electromagnetic waves (biii) radiate from the atom. Hence, deuterium cannot radiate *helically polarised* gravity waves.



configuration

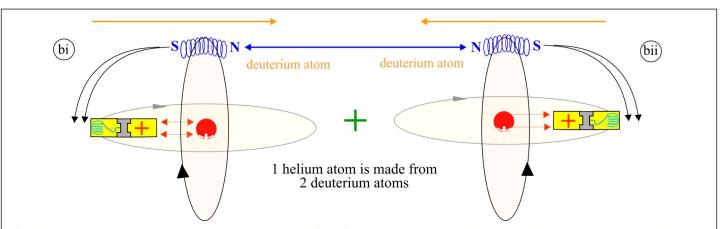


The two neutron-negative electronmagnet fields are attracted magnetically and thus form a stable union as they spin around the proton. The plane of the electronmagnet, as with deuterium, is offset by 90°. The electromagnetic gravity waves from the neutron electronmagnets and electrons thus cancel. Tritium, therefore, does not radiate gravity waves.

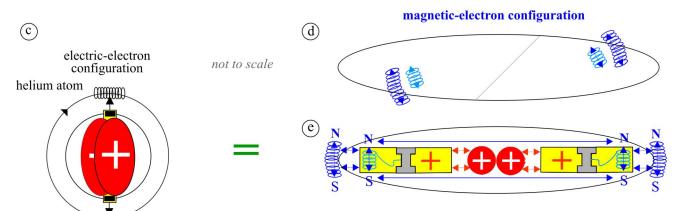


Physicists believe that the proton-proton chain-reaction (*left*) explains how helium is made, inside stars. They imagine this because they believe the atom is electrical, when it is, in fact, electrical, for only half of the time and magnetic for half of the time. By ignoring the magnetic properties of the atom they ignore 50% of the available information, which explains why they cannot understand how helium is actually made. They also cannot understand why hydrogen and helium are the most effective of elements, when used for super-cooling. How is helium actually made? And, what makes liquid hydrogen, and helium, so cold?

How 2 deuterium atoms fuse together to form 1 Helium atom



Two deuterium atoms colliding, as shown, will fuse together; the opposing magnetic fields of the electronmagnets causes them to bounce-off each other, into the plane of the orbiting neutron-negative electronmagnets, where they are captured by the magnetic moments of the neutron-negatives. The magnetic moments of each electronmagnet locks-together with each of the orbiting neutronnegative electronmagnets, in the same orbital plane, to form helium.



At 0° and 180° the electrons are electric and negatively charged. The protons are, hence, stretched between the electrons. The neutronnegative electric charges help repel the orbiting electrons and prevent them from crashing into the protons.

Because the electronmagnets share the same orbital plane as the neutron-negative electronmagnets, they drag the neutron-negative electronmagnets along with them as they topple and orbit the nucleus. All of the magnetic moments are thus coupled-together. Hence, the gravity waves from the neutron-negative electronmagnets and those from the electronmagnets are in phase. Only helium and protium are electrically and geometrically symmetrical, allowing them to spin axially and autonomously and radiate gravity waves—they both [autonomously] suck-in ambient heat and re-radiate the energy as gravity waves. That's why liquid hydrogen (protium) and helium are the most effective and efficient super-cooling elements.

### **BIBLIOGRAPHY**

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