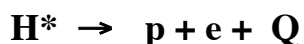


## NEUTRONS ARE DECAYING EXCITED HYDROGEN ATOMS



### HYDROGEN ATOMS ARE DESTABILIZED DURING DECOMPOSITION OF THE ATOM

- *Unstable neutrons are not components of the atoms*
- *All atoms are made up of hydrogen that comprises magnetically coupled proton and electron*
- **The discoverer of the decaying neutron was Robson in 1950 and not Chadwick**

**Johann Marinsek**

See also the articles:

- Stellar Hydrogen Fusion Does Not Work According to Supernatural Proton-Proton- or CNO Cycle
- Neutrinos are Stopgaps of Inherently Flawed Quantum Mechanics

#### Introduction



The concept of a neutron was the life-belt or sheet anchor for quantum atomic theory. If for an element with atomic number  $Z$ , this number represents both the quantity of protons in the nucleus and the number of extranuclear electrons then the nucleus must incorporate chargeless particles because the mass number  $A$  is greater than  $Z$ . Take for example beryllium:  $Z = 4$ ,  $A = 9$ ;  $A - Z = 5$ : the nucleus should consist of 4 protons and of uncharged particles that are responsible for the remaining mass-quantity 5 of the nucleus. So it was conjectured that 5 so-called neutrons are embedded in the nucleus.

Another question for the possibility of the existence of such a nucleus was the problem that the positively charged protons repel each other. The neutron was again the life belt: the claim is that neutrons and protons are bound together by a hypothesized strong nuclear force — mere words! Why the 2 protons and 2 neutrons of the He-nucleus bind together especially tightly and the 4 protons and 4 neutrons of beryllium-8 do not remain unexplained. How do we get neutrons?

Quantum mechanics states:

If the nucleus has too many neutrons the nucleus is unstable and decays. In nuclear fission a large atom splits into two smaller nuclei, losing several chargeless minor *fragments called neutrons*. Such fragments also occurred when fast  $\alpha$ -particles collided with a beryllium-9 atom.

Quantum mechanics does not discriminate between stable building blocks of the atom and minor fragments of the atom after decomposition. What has been before decomposition a stable component may undergo a destabilization during the process of fission or bombardment of the atom.

I argue that this distinction must be done. In the atom there are no such things as unstable neutrons possible.

As I showed in other articles also the distinction between a nucleus and extranuclear electrons is untenable.

Imagine the atom as cluster of hydrogen atoms. For example helium does not consist of a nucleus of 2 protons and 2 neutrons that is surrounded by 2 electrons. Instead of

this model imagine 4 magnetically coupled hydrogen atoms, which represent an oscillator. The hydrogen atom itself consists of a proton and an electron that are magnetically coupled.

Obviously, hydrogen atoms as building blocks are stable components. In some processes of decomposition like fission or bombardment of the atom some hydrogen atoms undergo damage.

What was referred to so far as neutrons are such excited hydrogen atoms that are decaying.

The occurring excitation may be different for different hydrogen atoms. Therefore neutrons don't decay at the same time. The speed of these decays depends on the nature of excitation and of changing environment.

The *half-life* of neutrons show that after some minutes only a part of them decayed into protons and electrons. The so-called  $\beta$ -radiation consists of released electrons. Because of the different destabilizations of the hydrogen atoms the  $\beta$ -radiation occurs not with the same energy for every defective hydrogen atom.

There is no neutrino necessary to explain the neutron decay. See the article *The Neutrino is a Stopgap of Inherently Flawed Quantum Mechanics (QM)*.

## **CHADWICK DID NOT DISCOVER THE NEUTRON**

### **AND DID NOT PROVE THAT NEUTRONS ARE CONSTITUENTS OF NUCLEI**

In 1932 it was known that beryllium and boron when bombarded by  $\alpha$ -particles of decaying polonium, they emit a radiation with a great penetration power. Chadwick assumed that the collision behaviour of the particles of this radiation could be explained best when the emitted particles have *mass 1 and charge 0, or neutrons*. But it must be kept in mind what Rutherford meant by neutron. Chadwick himself declared in his *The Existence of a Neutron* [chb]:

*The neutron Hypothesis.*

*... we suppose that the radiation ... consists of particles of mass very nearly equal to that of proton... In order to explain the great penetrating power of the radiation we must further assume that the particle has no net charge. We may suppose it to consist of a proton and an electron in close combination, the "neutron" discussed by Rutherford in his Bakerian Lecture of 1920.*

And remember, for Rutherford this neutron was a nuclear H-atom! The contemporary notion of the neutron implies its decay. The decay products are the proton, the electron and last the neutrino (for the supporters of Pauli).

According to Chadwick the mass of the neutron *lies between 1.005 and 1.008*.

The purpose of his efforts was the confirmation of his mentor's (Rutherford) nuclear model of the atom:

*Although there is certain evidence for the emission of neutrons only in two cases of nuclear transformation, we must nevertheless suppose that the neutron is a common constituent of atomic nuclei. We may then proceed to build up nuclei out of  $\alpha$ -particles, neutrons and protons and we are able to avoid the presence of uncombined electrons in the nucleus.*

Chadwick had not even clarified the nature of the emitted particles after the artificial disintegration of boron and beryllium. His conclusion that these neutrons are the common constituents of all nuclei is untenable.

Likewise untenable is Rutherford's conceptual atomic fission into nucleus and extranuclear electrons that Chadwick adopted without a careful consideration.

Chadwick's formulas are a bit confusing:

$\text{Be}^9 + \text{He}^4 + \text{kin. Energy of } \alpha = \text{C}^{12} + \text{n}^1 + \text{k.E of n}^1$

Is  $\text{He}^4$  the  $\alpha$ -particle? Then he wrote: the  $\text{Be}^9$  nucleus consists of 2  $\alpha$ -particles + 1 proton + 1 electron...

(Chadwick is a Nobel Laureate *for the discovery of the neutron*. [cha])

### **ARE ROBSON'S NEUTRON DECAY EXPERIMENTS A CONFIRMATION OF THE NUCLEAR ATOMIC MODEL?**

The discoverer of the decaying neutron was Robson in 1950 [rob].

Rutherford's neutron was stable and quasi identical with a hydrogen atom. Robson showed that the neutron has a null net charge, but is not stable. The decay products are a proton and an electron.

There are two *species* of neutrons:

(a) The fission neutron, it arises after an artificial disintegration (bombardment with  $\alpha$ -particles) of an atom (Be, B) and

(b) The decay neutron, it is a product of naturally decaying (unstable) atoms.

I conjecture therefore that the neutron is either an excited H-atom of a fission process or a defective H-atom of decaying atoms.

If atoms are structured H-associations, then it is also possible that some imperfect H-atoms are incorporated in the heavier elements. Think of crystal defects – nature is not perfect! But the occurrence of imperfect building blocks is the exception, not the rule!!

Most unstable atoms are unstable due to unstable arrangements of their hydrogen or  $\alpha$  components and not due to a surplus of unstable neutrons in the nuclei.

Robson's outcomes cannot be

(a) A confirmation for the nuclear atomic model because a hydrogen cluster atomic model could also have fission or decay neutrons.

(b) Considering a nucleus model, Robson's results are no crucial experiment that stable nuclei are build up according to a natural law by protons and neutrons. (For lighter elements the proton: neutron ratio is 1:1, for the heavier elements there is no law! The number of neutrons becomes arbitrarily determined – to fit the data.)

### **FALLACIOUS AND CONTRADICTING CALCULATIONS**

#### **OF NEUTRON INERTIAL MASS**

- *QM predicts more than one magnitude for the mass of a neutron*
- *A neutron cannot have inertial mass because the mass spectrograph can measure only masses of ions.*

#### **Different neutron masses calculable according to mass spectrometry results**

Masses of He-4 and He-3 are 4.002604 and 3.016030, respectively. He-4 has one neutron more than He-3. According to quantum mechanics (QM) the difference of their masses

$\Delta m = m_n = 0.986574$  should be the mass of this surplus neutron.

The analogue for C-13 ( $m = 13.003354$ ) and C-12 ( $m = 12.$ ) yields  $m_n = 1.003354!$

Doing the same procedure for H-3 ( $m = 3.016049$ ) and H-2 ( $m = 2.014101$ ) we get:

$m_n = 1.001948$

The last example concerns the masses of H-2 and H-1

H-2 has one neutron more than H-1, so the difference of measured masses should yield the neutron mass:

$$m_n = m(\text{H-2}) - m(\text{H-1}) = 1.006\,276\,746\,30(71) \text{ u}$$

By simply adding one neutron we get different masses when we change the isotope. Obviously,

- There is no unique calculable inertial mass of a neutron.
- inertial mass is not an additive property. A look at the table of atomic masses yields additional empirical evidence for the non-additivity of inertial masses.

QM and relativity theory conceive inertial mass as an intrinsic property, which depends on velocity. Increasing kinetic energy is allegedly convertible into also increasing mass and *vice versa*. This means that inertial mass has the property of additivity. It was shown that this is not the case. Therefore it is faulty to add masses of proton and electron in order to get the mass of H.

### **Non-additivity of inertial mass simply explained**

Take a truck with air drag “1,00”. Take a truck trailer with air drag 1,33. If we couple truck and trailer the air drag is less than  $(1,00 + 1,33) = 2,33$  due to a *shielding effect*. Therefore air drags of the vehicle components cannot be added in order to get the air drag for the composite vehicle. Inertial masses from mass spectrometry represent nothing other than drags of the all-pervading intergalactic medium that makes possible all electromagnetic phenomena.

### **Different contradicting neutron masses also calculable according to different nuclear reactions**

With the mass/energy or energy/mass conversion according to  $E = \Delta mc^2$  for many existing nuclear reactions we get another set of different neutron masses. Neutron mass calculations based on nuclear processes that produce neutrons

	Mass of n in AMU
1) ${}_2\text{Li}^7 + \alpha = {}_5\text{B}^{10} + \text{n}$	1.005706
2) ${}_4\text{Be}^9 + \alpha = {}_6\text{C}^{12} + \text{n}$	1.014785
3) ${}_5\text{B}^{11} + \alpha = {}_7\text{N}^{14} + \text{n}$	1.008601
4) ${}_7\text{N}^{14} + \alpha = {}_9\text{F}^{17} + \text{n}$	1.003582
5) ${}_9\text{F}^{19} + \alpha = {}_{11}\text{Na}^{22} + \text{n}$	1.006569
6) ${}_{11}\text{Na}^{23} + \alpha = {}_{13}\text{Al}^{26} + \text{n}$	1.005481
7) ${}_{12}\text{Mg}^{24} + \alpha = {}_{14}\text{Si}^{27} + \text{n}$	1.000938
8) ${}_{13}\text{Al}^{27} + \alpha = {}_{15}\text{P}^{30} + \text{n}$	1.005826
9) ${}_{15}\text{P}^{31} + \alpha = {}_{17}\text{Cl}^{34} + \text{n}$	1.002603
10) ${}_{18}\text{Ar}^{20} + \alpha = {}_{20}\text{Ca}^{23} + \text{n}$	1.006223

There are at least 10 known reactions that produce neutrons.

Please see Clarence Dulaney's Physics Page. What is a "Neutron"  
<http://mywebpage.netscape.com/clarencedulaney>

According to  $E = \Delta mc^2$  the energies  $Q$  (for example gamma rays) are converted into masses. Then it is impossible that for the calculated masses we get one and the same value which coincides with the official neutron mass  $m_n = 1.008\ 664\ 916\ 37(82)$  which one obtains from the arbitrarily chosen process  $n + H-1 = H-2 + \gamma$  (2.2 MeV) that we have to consider next:

**Another neutron mass according to the reaction  $n + H-1 = H-2 + \gamma$  (2.2 MeV)**

Recipe: Convert the  $\gamma$  ray produced in the reaction

$n + H-1 = H-2 + \gamma$  (2.2 MeV) into mass.

The known H-2 – H-1 mass difference combined with the mass equivalence

$m_\gamma$  of 2.2 MeV yields the "official" mass for the neutron:

$$m_n = m(H-2) - m(H-1) + m_\gamma = 1.006\ 276\ 746\ 30(71)\ u + 0.002\ 388\ 170\ 07(42)\ u \\ = 1.008\ 664\ 916\ 37(82)$$

Obviously, the calculated value of the neutron mass  $m_n = 1.008\ 664\ 916\ 37(82)$  is the official accepted one.

See for details the following NIST citation where the gamma ray represents the neutron binding energy in deuterium:

[www.physics.nist.gov/TechAct.98/Div842/div842h.html](http://www.physics.nist.gov/TechAct.98/Div842/div842h.html)

*NIST physics laboratory research program/technical activities 1998 nistir 6268*

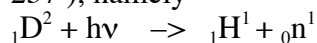
*Atomic physics division/technical highlights*

*More Precise Value of the Neutron Mass. The absolute wavelength of the gamma-ray produced in the reaction  $n+pd+$  (2.2 MeV) was measured with a relative uncertainty of  $2 \times 10^{-7}$  using the NIST ILL GAMS4 crystal diffraction facility at the Institut Laue-Langevin in Grenoble, France.*

*This wavelength measurement, expressed in energy units and corrected for recoil, is the binding energy of the neutron in deuterium. Previous crystal diffraction measurement of the deuteron binding energy has an uncertainty 5 times larger than this new result.*

*The neutron mass follows directly from the reaction expressed in atomic mass units:  $m(n) = m(^2H) - m(^1H) + S(d)$  where  $S(d)$  is the separation energy of the neutron in deuterium. The uncertainties of the atomic mass difference,  $m(^2H) - m(^1H)$ , and the new determination of  $S(d)$  are  $0.71 \times 10^{-9}\ u$  and  $0.42 \times 10^{-9}\ u$ , respectively, where  $u$  is unified atomic mass unit. The new, more precise value for the neutron mass,  $m(n) = 1.008\ 664\ 916\ 37(82)\ u$ , has an uncertainty which is 2.5 times smaller than the previous best value. [E. Kessler and M.S. Dewey (Div 846)]*

The *physicsportal* of *Nature* (Nature Publishing Group 2006) in its *lookingback* heading made plain that the current determination of the mass of the neutron uses the same nuclear reaction that Chadwick and Goldhaber introduced in 1934 (*Nature* 134, 237), namely



"... By determining the  $\gamma$ -ray energy required to disintegrate the deuteron, Chadwick and Goldhaber were able to constrain the binding energy of the deuteron, and hence the neutron mass."

Nowhere is an explanation available why this is the right inertial mass and why the different masses of the known other nuclear reactions are not the right ones!

## Conclusion

Neutron inertial mass is neither conceivable nor calculable and measurable because  
1<sup>th</sup> inertial mass is not an additive property and  
2<sup>nd</sup> radiation energy cannot be converted into inertial mass. See the article Refutation of Rest Energy  $E = mc^2$ .  
3<sup>rd</sup> nuclear reactions yield different inertial masses of neutron  
4<sup>th</sup> Mass spectrographs work for ions only and can therefore not measure an inertial mass of the neutral neutron!

There is no *rationale* for the existence of instable neutrons as building blocks of atoms. Instead of neutrons and protons in the nuclei and extra nuclear electron shells hydrogen atoms are the building blocks of atoms. But these hydrogen atoms are not part of a nucleus. Every element represents a specific structure of hydrogen atoms. There is no distinction between nucleus and electron shell. A disintegrating atom produces excited H-atoms or “neutrons”. The observed neutrons are nothing other than decaying hydrogen atoms.

## Gravitational mass of neutrons

Russell Gilmartin at Fermi National Accelerator Laboratory [gil] gave an answer to the question

*What are experiments confirming an existence of gravitational mass of „elementary“ particles?*

and listed some references on that topic. [koe] [sch] [wit]

This arises an old question: is there a numerical equivalence between the gravitational mass and the inertial mass?

To determine the gravitational mass  $m_g$  of neutrons, one can compare the free fall acceleration of the neutron  $a_n$  with the acceleration  $g$  of macroscopic test masses.

$$m_g g = m_j a_n$$

$m_g / m_j = a_n / g = 1.00011(17)$ , where  $m_j = 1.008\,664\,916\,37(82)$  is the standard neutron inertial mass that results from an arbitrarily selected nuclear reaction, see above.

Koester (1965) reported this result, see also Green [gree]. Note that this experiment shows a numerical equivalence of the gravitational mass only with one of the many possible different inertial masses of neutrons that result from different nuclear reactions. Therefore the “uncertainty” of all calculated neutron inertial mass magnitudes is the problem for QM.

There is no equivalence of gravitational and inertial mass of the neutron possible.

The solution of the problem is simple: There is no inertial mass of the neutron (because it is not a ion) and we don't need it.

What's the use of mass spectrometry? To determine the elements and their isotopes! Besides this, different masses for isobars allow the conclusion that their aufbau is different.

For example Li-3, He-3 and H-3 have different masses, which means they have different drag coefficients due to different shapes. The big drag coefficient of Li-3 signifies a structure that is not “smooth”.

By the way, because we don't know the physics of gravitation we cannot hypothesize an ontological identity of inertial and gravitational mass.

That the atomic binding energy is due to a conversion of mass defect into energy is a myth. The binding forces are due to magnetic coupling. This a causal explanation.

*The neutrino stopgap*

**Does the neutron comprise proton, electron and neutrino?**

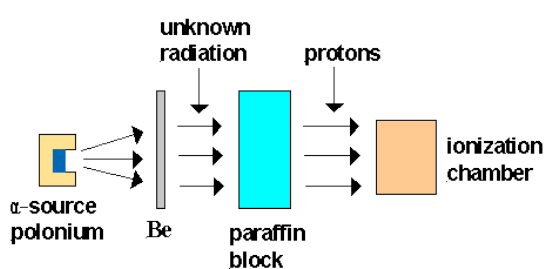
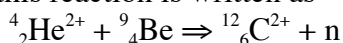
*No! See the article*

*The Neutrino is a Stopgap of Inherently Flawed Quantum Mechanics*

## ***FROM WHERE THE NEUTRONS COME***

In 1930 Becker and Bothe find after bombarding beryllium-9 with  $\alpha$ -particles a radiation produced that seems to be uncharged because it was very penetrating.

Now this reaction is written as



**Schematic of the Joliot's Experiment**

The Joliot's performed an experiment to show the nature of the unknown radiation. The image is from a physics course of Bob Emery [em]. The Joliot's found that the unknown radiation did not eject protons from metals. It was shown that the unknown radiation penetrated for example lead without scattering. This is an empirical evidence that most of the radiation

consists of neutral particles and that the mass of the particles is too small in order to knock out the heavy atoms. But the unknown radiation did knock protons out of paraffin, which contains hydrogen atoms. This is an indication that the magnitude of the mass of the particles coincides with the mass of the pushed atoms.

The method producing neutrons by bombarding Be with  $\alpha$ -particles was never causally explained in terms of quantum mechanics. If the nucleus of  ${}^9_4\text{Be}$  consists of 4 protons and 5 neutrons then the  $\alpha$ -particle that gets into the nucleus adds 2 protons and 2 neutrons. In order to change  ${}^9_4\text{Be}$  into  ${}^{12}_6\text{C}$ , which has 6 protons and 6 neutrons, one neutron must abandon the bombarded nucleus. Why is the Be nucleus with its 4 p and 5 n stable whereas a nucleus with 6p and 7n is not? It is a mere assertion! The second question concerns the whereabouts of the 4 Be-electrons: the  $\alpha$ -bombardment destroys the electronic [He]  $2s^2$ -structure of Be.  ${}^{12}_6\text{C}^{2+}$  has a [He]  $2s^2$  structure. Textbooks don't explain how this structure was re-erected. The occurrence of the ionized (?) carbon electronic structure has no rationale.

Here I give you an explanation of the beryllium-carbon transmutation in terms of a hydrogen cluster model of the elements. Helium is made up of 4 H, Be is made up of 9 H. After bombarding Be with He the bulk consists of 13 H, which is an odd number. It is impossible to incorporate one hydrogen into the stable carbon configuration of 12 hydrogen atoms. Therefore it drifts away. Repulsive forces that act on the hydrogen atom are the cause for excitations: some hydrogen atoms are no longer stable and decay into a proton and an electron. *In praxi* high energetic natural  $\alpha$ -particles from decaying polonium serve as bombarding particles. The unusually penetrating radiation that was produced suggests that this radiation consists of uncharged particles. In 1932 the Joliot's showed that when this radiation was directed on paraffin or hydrogen-

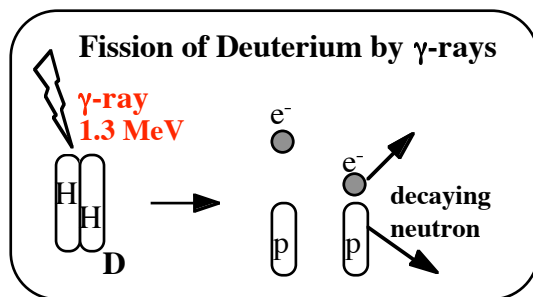
containing material, protons were ejected. What is the origin of these protons? There are three possibilities.

1: The excited hydrogen that fell on the paraffin decayed into proton and electron before the impact. In this case the proton passes through the paraffin. 2: The decay of the hydrogen occurs in the paraffin layer. 3: penetrating hydrogen atoms or protons hit the hydrogen atoms of the paraffin layer and produce a secondary proton radiation.

By the way: why is  $^9\text{Be}$  very poisonous? The outermost shell of the electronic configuration cannot be the cause because other elements with an outermost shell like a  $2s^2$ -structure are not poisonous. When a chemical element is a certain configuration of hydrogen atoms then the elements have different surfaces. A surface with sharp points can destroy the lungs...

## THE NEUTRON IS A DECOMPOSITION PRODUCT

### IT IS AN EXCITED HYDROGEN ATOM THAT DECAYS



Neutrons have the typical feature of decomposition products: For example during the fission of heavy unstable elements neutrons occur as decay products. Or when high-energy  $\gamma$ -radiation demolish deuterium, the demolished building blocks of deuterium can be observed, namely protons, electrons and so-called neutrons that decay soon into protons

and neutrons.

I propose an alternative model of the neutron: It is an excited hydrogen and therefore unstable. The fission process may cause the excitation. During naturally decaying elements hydrogen atoms are also excited.

There are no indications that unstable neutrons are the building blocks of elements like helium, carbon, oxygen etc. It is likewise unreasonable the unstable neutrons should serve as building blocks of all elements!

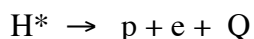
Neutrons are decay products of unstable heavy atoms like uranium or they are decomposition pieces when for example  $\gamma$ -rays demolish deuterium atoms or when  $\alpha$ -particles bombard beryllium.

Quantum mechanics pp-cycles in the sun were theorized in order to construct the helium nucleus that was supposed to be made up of 2 protons and 2 neutrons. There is no empirical evidence for the creation of a neutron in the proposed proton-proton reaction.

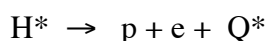
The neutron fulfils an ontological requirement. Because in the current atomic theory all elements have a nucleus with  $(A - Z)$  neutrons (where  $A$  is the atomic mass number and  $Z$  is the atomic number), He-4 for example has to have  $4 - 2 = 2$  neutrons. Therefore the pp-cycle in the sun has to produce neutrons. It is the desired final theoretical nucleus that determined the transubstantiation of the supposed initial protons. Even in decomposition processes of elements neutrons have to occur as a by-product in order to save the atomic model with  $(A - Z)$  nuclear neutrons.

## Objections to the theory that neutrons are decaying hydrogen atoms that undergo excitations during decomposition of atoms

Recall that the ionizing energy of hydrogen is only 13,6 eV whereas it has been found by experiment that the emitted  $\beta^-$  particle of the process



has less energy  $Q$  than 0.272 MeV. The released energy  $Q$  is not constant because the excitation of  $H^*$  is not constant. So we could write:



where  $Q^*$  means that the amount of released energy depends on  $H^*$ .

Both, hydrogen and neutron comprise a proton and an electron. So, why the decomposition of a neutron releases energy that is three orders of magnitude greater than the ionization energy of H, respectively?

There is one fundamental difference between the two decompositions:

Ionization usually is a resonance-induced process. Remember the break down of the Tacoma Bridge where small wind forces with the right resonance frequency could destroy the bridge. But also thermal ionization (it works via collisions) is explainable for weak forces only because the electron is an exposed one. Collisions may also work step by step: when the induced vibrations reach the resonance frequency the atom fissions...

Now compare the ongoing process when atoms decay of fission: During the fission process a hydrogen atom can be tortured, therefore strong forces are induced.

### CREATION OF NEUTRONS BY ELECTRON CAPTURES IMPOSSIBLE

The potassium-argon, or K-Ar, age dating technique is based on the decay of radioactive K-40 to Ar-40. K-40 atoms decay by electron capture to Ar-40.

How does it work?

Textbooks explain electron capture simply: *A parent nucleus may capture one of its orbital electrons and emit a neutrino. Most commonly, it is a K-shell electron, which is captured, and this is referred to as K-capture.*

Is this possible within the Bohr atomic model?

$^{40}_{19}\text{K}$  has a nucleus with 19 protons and 21 neutrons. Its shells are 2, 8, 8, 1 or  $[\text{Ar}]4s^1$ . The  $^{40}_{19}\text{K}$  nucleus is surrounded by 19 electrons.  $^{40}_{18}\text{Ar}$  has a nucleus with 18 protons and 22 neutrons. Its shells are

2, 8, 8 therefore only 18 electrons surround the nucleus. This makes Ar chemically very different from K. Ar is a noble gas, whereas K is a metal. Ar is inert, K is very reactive.

For the quantum mechanics alchemy process



the outermost electron of  $^{40}_{19}\text{K}$  must be captured in order to gain the  $^{40}_{18}\text{Ar}$  electron structure. But the capture of the outermost electron seems to be impossible; therefore the capture of an electron of the innermost K-shell was invented.

The electron of the K-shell is drawn into the nucleus where it combines with a proton, forming a neutron and a neutrino. The neutrino is ejected from the atom's nucleus. The neutrino was invented to fulfill conservation of momentum and energy in terms of quantum physics!

Because of the electron capture in the K-shell there is an electron vacancy. An electron from the outer energy shell moves to fill the vacancy in the K-shell. A new vacancy exists there and the process of vacancy filling goes on. This is the cause for a cascade of electrons. The result is the argon atom. The story does not explain why a proton draws an electron from the K-shell into the core. Why do protons not capture all electrons?  
Does the electron cascade not disturb the dynamic stability of the electron shell?

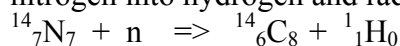
Summary: Creation of neutrons by electron captures and electron cascades is an implausible story without any empirical evidence. There is also no empirical evidence for the existence of 19 extra nuclear electrons and 19 protons in the nucleus for the potassium atom.

The instable neutrons as stabilized components of the nucleus are figments; therefore the creation of neutrons by electron capture is science fiction. If there are no neutrons and extra nuclear electrons as building blocks of the atoms then the highly unlikely electron capture must not occur.

In terms of the hydrogen cluster theory of atoms both  $^{40}\text{K}$  and  $^{40}\text{Ar}$  consists of 40 hydrogen atoms but have different configurations. So the change from  $^{40}\text{K}$  to  $^{40}\text{Ar}$  is only a change to a more stable configuration. The mass of Ar is 39,962383 whereas the mass of K is 39,963998. This indicates that the Ar atom is more compact and stable than K.

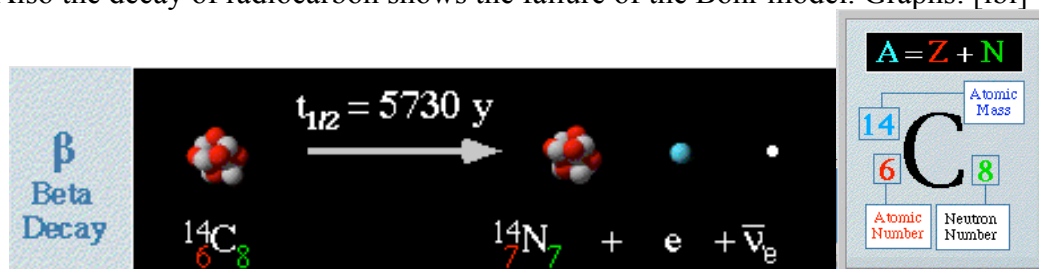
**NEUTRONS IN THE ATMOSPHERE ARE  
DECAY PRODUCTS DUE TO COSMIC RAYS  
Quantum mechanics formulas cannot describe generation  
and disintegration of radiocarbons**

Cosmic rays in the atmosphere disintegrate hydrogen and other atoms. Decay products are neutrons. These thermic neutrons disintegrate nitrogen and transmute the nitrogen into hydrogen and radioactive  $^{14}\text{C}$ . The transmutation formula is:



Let us assume here that the neutron can be incorporated into the nitrogen nucleus. Then one proton of nitrogen must (why?) abandon the nucleus and capture the outermost electron of the nitrogen shell in order to build up hydrogen... Nobody has calculated these processes; nobody has observed something that could be an indication of this transmutation.

Also the decay of radiocarbon shows the failure of the Bohr model. Graphs: [lbl]



One neutron of carbon should change its identity to be a proton of nitrogen. This

requires that the electron of the 8<sup>th</sup> neutron of carbon leaves the carbon nucleus. But here are six protons that withhold the electron! Even if the electron can escape in order to explain the beta decay the Bohr model is a failure: carbon has 6 extra nuclear electrons whereas nitrogen has 7! So, there is one missing electron in order to arrange the complete shell structure of nitrogen.

### THE HALF-LIFE OF NEUTRONS, HIDDEN QUARKS

What was referred to as decaying neutron is in reality a decaying hydrogen atom. The occurring excitation of the hydrogen is the cause for the decay and may be different for different hydrogen atoms. Therefore neutrons don't decay at the same time. The speed of these decays depends on the nature of excitations and of changing environment. After some minutes only a part of the neutrons decayed. Robson [rob] reported in 1950 a minimum half-life of 9 minutes.

How neutron lifetime experiments can be performed? At the National Institute of Standards and Technology (NIST) in the USA the IUCF Weak Interactions Group explains the beam method [iucf]:

*The (n) beam is directed through a device known as a Penning trap, which produces very strong electric and magnetic fields. While passing through the trap, there is a finite probability that some of the neutrons will decay. The proton that results from this decay is trapped inside the electric and magnetic fields produced by the trap, and can be counted later. The number of trapped protons depends on the number of protons that pass through the trap, the velocity of the neutrons as they pass through the trap and of neutron lifetime...*

In order to measure the neutron half-life the decays should occur in an electromagnetically neutral environment. If the coupling of proton and electron in a hydrogen atom is of electromagnetic nature then strong electric and magnetic fields can harm these couplings. Think at electrolysis and magnetolysis (Ehrenhaft). (A *weak force* hypothesis is not necessary; it is assumed that all forces are of electromagnetic origin.)

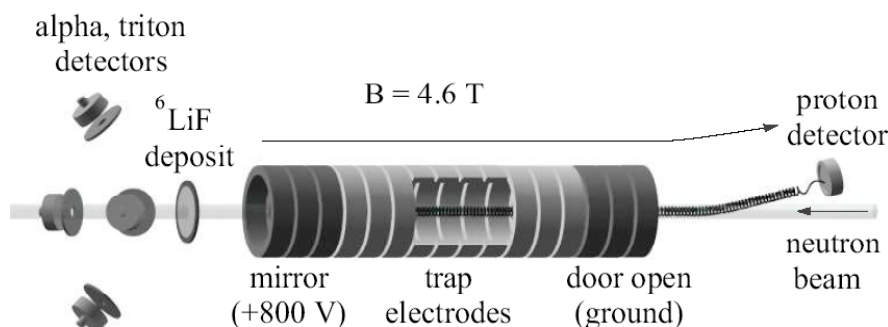


Image from Dewey [dew]

But for the prevailing *Standard Model* the neutron is not composed of a proton and of an electron! The IUCF group explains the composition of a neutron:

*... the neutron is composed of three quarks, one Up quark and two Down quarks (UDD). The weak force is responsible for converting one of the D quarks into a U*

*quark, thus turning the neutron into a proton. A third particle, known as W boson is emitted as a result of the conversion process. This W boson promptly decays into an electron and an electron-antineutrino. Since the W boson does not last long enough to be directly measured during this process, it is only the proton, electron and antineutrino that are observed when a neutron decays...*

Obviously, the quarks are *hidden variables*...  
Remember the spin crisis in QM...

## **Impossible neutron formation in the sun**

Concerning the question of neutron creation in the sun see the article:  
Stellar Hydrogen Fusion Does Not Work According to Supernatural  
Proton-Proton- or CNO Cycle  
Only God could transubstantiate protons into neutrons

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