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NEUTRONS ARE DECAYING EXCITED HYDROGEN ATOMS
H* → p + e + Q

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 lifebelt 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 lifebelt: 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 are attached especially tightly and the 4 protons and 4 neutrons of beryllium-8 are not remains unexplained. How do we get neutrons?

Quantum mechanics states:
If the nucleus has to 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 α-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 β-radiation consists of released electrons. Because of the different destabilizations of the hydrogen atoms the β-radiation does not occur 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 α-particles of decaying polonium, emit a radiation with a great penetrating 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 are 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's) 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 α-

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.
Equally 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:
$^{9}Be + {}^{4}He$ + kin. Energy of $\alpha = {}^{12}C + {}^{1}n$ + k.E of ^{1}n
Is ^{4}He the α-particle? Then he wrote: the Be^{9} nucleus consists of 2 α-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 α-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 α 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 NEUTRON MASS VALUES

- **Different contradicting neutron masses calculable according to different nuclear reactions**

With the mass/energy or energy/mass conversion according to $E = \Delta mc^2$
we get set of different neutron masses according to a variety of existing nuclear reactions.

Neutron mass calculations based on nuclear processes that produce neutrons are for example:

1: Mg-24 + α => Si-27 + n + Q
2: Be-8 + α => C-11 + n + Q
3: etc.

According to $E = \Delta mc^2$ the energies Q (for example gamma rays) are converted into masses.
There are at least 10 known reactions that produce neutrons and therefore we get many different values for the neutron mass!

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

Neutron mass according to the reaction n + H-1 = H-2 + γ (2.2 MeV)

Recipe: Convert the γ ray produced in the reaction
n + H-1 = H-2 + γ (2.2 MeV) into mass.
The known H-2 – H-1 mass difference combined with the mass equivalence m_γ of 2.2 MeV yields the "official" mass for the neutron:

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

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
NIST physics laboratory research programm/tecnical 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 2×10^{-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 0.71×10^{-9} u and 0.42×10^{-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
$^2D + h\nu \rightarrow H + n$
"…By determining the γ-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 mass and why the different masses of the known other nuclear reactions are not the right ones!

Mass lists deliver neutron masses near the truth

Because of the lack of electric charge, neutron mass cannot be determined by mass spectrometers via times of fligth . But by comparison we get the following values. There are isotopes that differ from each other only by one neutron.
Example O-18 and O-17. „Mass“ values for these isotopes are not correct, but the differences of the masses come closer to the value of the neutron mass.
See the following table, values are rounded. According to these results one can argue that the **neutron mass m_n = 1.000**
and that calculated neutron masses due to nuclear reactions are false.

Isotope mass differences	**= neutron mass C = 12.00 scale**	**= neutron mass O = 16.00 scale**
O-18 – O-17	**1.000 03**	
Li-7 – Li-6	1.000 09	1.0012
Mg-25 – Mg-24	1.000 8	1.0011
Ca-43 – Ca-42	1.000 15	
U-235 – U-234	1.003	1.0122
He-4 – He-3	0.986 6	0.9869

Conclusion

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 else than decaying hydrogen atoms.

Neutrons are decaying hydrogens’ and have therefore mass”1”. Quantum mechanics and relativity physics show confusion in attempts to calculate neutron mass. The result is also that neutron mass has many values…
The mass number A of the elements, of isotopes and molecules represents their mass, which is an additive quantity.

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 acceleration of the free fall 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.

The solution is simple: There are no neutrons as elementary particles. <Neutrons are decaying hydrogen atoms and therefore they have mass "1". See below…

The neutrino stopgap

Does the neutron comprise proton, electron <u>and</u> neutrino?

No! See the article

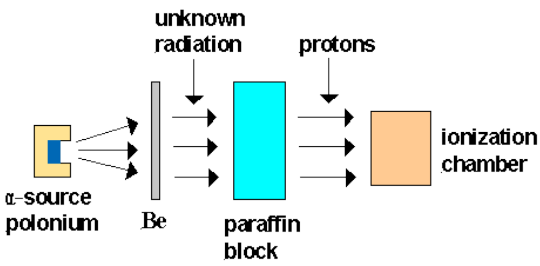
The Neutrino is a Stopgap of Inherently Flawed Quantum Mechanics

WHERE DO THE NEUTRONS COME FROM?

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

Now this reaction is written as

$$^{4}He^{2+} + {}^{9}Be \Rightarrow {}^{12}C^{2+} + n$$



Schematic of the Joliots' 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 the heavy atoms. But the unknown radiation did knock protons out of paraffin, which contains hydrogen atoms out. 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 α-particles has never been explained causally in terms of quantum mechanics. If the nucleus of $^{9}_{4}Be$ consists of 4 protons and 5 neutrons then the α-particle that gets into the nucleus adds 2 protons and 2 neutrons. In order to change ^{9}Be into ^{12}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 α-bombardment destroys the electronic [He] $2s^2$-structure of Be. $^{12}C^{2+}$ 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.

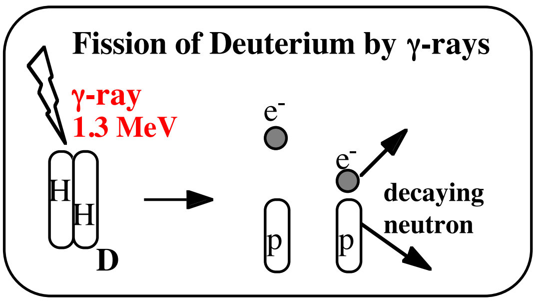
Here I give you an explanation of the beryllium-carbon transmutation in terms of a hydrogen cluster model of the elements. Helium is made up of 4 H, Be is made up of

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 α-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}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 γ–radiation demolishes 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 the natural decay of 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 equally unreasonable that 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 γ-rays demolish deuterium atoms or when α-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 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 <u>has to have</u> 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 β^- particle of the process

$H^* \rightarrow p + e + Q$

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:

$H^* \rightarrow p + e + Q^*$

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

Both, hydrogen and neutron comprise a proton and an electron. So, why does the decomposition of a neutron release 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}K has a nucleus with 19 protons and 21 neutrons. Its shells are 2, 8, 8, 1 or [Ar]$4s^1$. The ^{40}K nucleus is surrounded by 19 electrons. ^{40}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

$$\mathbf{{}^{40}_{19}K \Rightarrow {}^{40}_{18}Ar + neutrino}$$

the outermost electron of ${}^{40}_{19}K$ must be captured in order to gain the ${}^{40}_{18}Ar$ 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 nucleus of the atom. 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?

<u>Summary:</u>
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 does not have to occur.

In terms of the hydrogen cluster theory of atoms both ${}^{40}K$ and ${}^{40}Ar$ consists of 40 hydrogen atoms but have different configurations.
So the change from ${}^{40}K$ to ${}^{40}Ar$ is only a change to a more stable configuration. The mass or 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

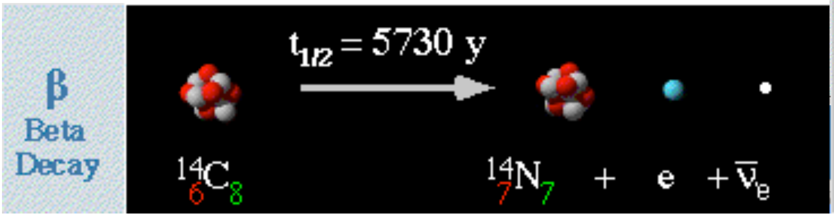
Cosmic rays in the atmosphere disintegrate hydrogen and other atoms. Decay products are neutrons. These thermic neutrons disintegrate nitrogen and transmute the nitrogen into hydrogen and radioactive ${}^{14}C$. The transmutation formula is:

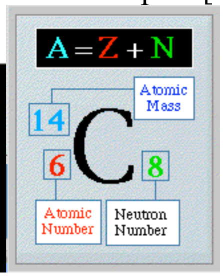
$${}^{14}N + n \Rightarrow {}^{14}C_8 + {}^{1}H$$

Let us assume here that the neutron can be incorporated into the nitrogen nucleus. Then one proton of nitrogen must (why?) leave 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 also 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 8th 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.

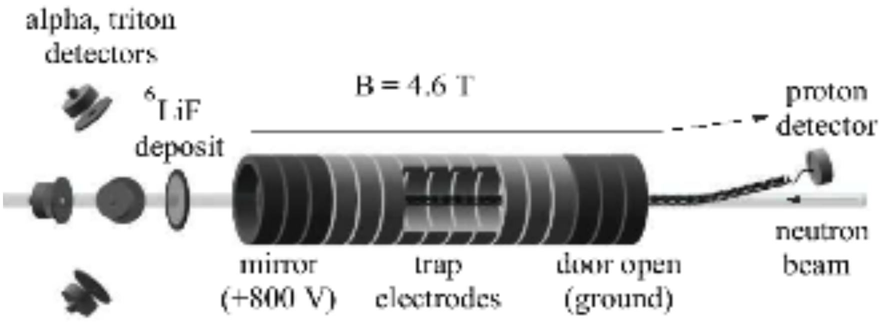
THE HALF-LIFE OF NEUTRONS, HIDDEN QUARKS

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 of 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

———————————————————————————————

... there is no such thing as a neutron in the nucleus...

Arguments of Borghi, Monti, Dulaney, Marinsek

[mon] Monti, Roberto A., Fundamental Problems of Natural Science and Engineering,The Proceedings of the St. Petersburg Conference. St. Petersburg 2000. According to Monti, in 1940 “Don Carlo Borghi makes the assumption again that the neutron is a peculiar "bound state" of the hydrogen atom.

1950-1955 D. C. Borghi planned an experiment to synthesize neutrons starting from a cold hydrogen plasma. Expelled from the University of Milan, he moves to the Vatican. With the money he is given -under the counter- by De Gasperi, he starts his experiments in a Roman laboratory. Borghi succeeds where Harkins failed: "cold" synthesis of the neutron shows that the neutron really is "the sum of a proton and an electron". De Gasperi's death marks the end of Borghi's financial support.

He emigrates to Brazil in order to continue his experiments. In Recife he founds the Center for Nuclear Energy."

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