

# Principle of Formation of Magnetic Field of Iron

Anatoli Bedritsky

## **Abstract.**

This article discovers physical phenomena which occur at the formation of the magnetic field of iron and the reason of an attraction and pushing away of two constant magnets.

Given article is a part of "Real theoretical physics", which I have done on basis of existence of an ether".

## **1 Action of Magnetic Field on Proton Orbits of Atoms of Iron**

The electric current cannot create a magnetic field of such strength as the constant magnets. Therefore, the orbital electrons of atoms also cannot create the magnetic field of magnetized iron. The magnetic field of magnetized iron can be created only by rotated protons of atoms of iron. But this magnetic field can be created only in case, if greater amount of protons have the magnetic fields in identical direction than in opposite direction.

The atom of iron consists of a nucleus, which consists of 30 neutrons and 2 protons. Around of a nucleus 24 orbital protons on three orbits are moving. The first proton orbit consist of 8 protons, the second orbit consist of 14 protons and the third orbit consist of 2 protons. On the first orbit around of the nucleus move two orbital electrons, which have an attraction directly to the nucleus. Other orbital electrons also move around of the nucleus, but everyone electron is attracted to the nucleus through one of orbital protons. Thus above everyone orbital proton, one orbital electron moves synchronously.

Crystals of iron have a cubic volumetric-aligned lattice. The cell of a crystal of iron consists of eight angular atoms, which are forming a cube, and of one central atom. The angular atoms are general for the nearby cells

of a crystal. The orbital protons have a attraction not only to the nucleus of their atom, but also to the nucleuses of the nearby atoms. Therefore the proton and electron orbits located in a plane which are passing through the nucleuses of the nearby atoms, but not between them.

As orbital protons of atom have the left direction of rotation, and orbital electrons have the right direction of rotation, their magnetic fields are directed counter, but due to that that the strength of magnetic field of protons is much more than the strength of magnetic field of electrons, then the general magnetic field of separate atom has a great strength. But the orbital protons of next atoms of a crystal have a miscellaneous and opposite direction of orbital motion, therefore the magnetic fields of these atoms have opposite direction and are mutually destroyed. In amorphous bodies the molecules are located miscellaneous in the relation to each other and consequently the general magnetic field also is not formed.

If iron to place in a magnetic field, then the proton orbits and the electronic orbits of the central atoms deviate in a direction of a magnetic field and will have identical orientation. In this case the magnetic field, formed by orbital protons of the central atoms will have an identical direction, forming the general magnetic field of iron. If to remove the iron from the magnetic field, then the orbits of the central atoms will not be located equally and due to that the general magnetic field will disappear.

The iron body having a constant magnetic field represent itself a constant magnet. The constant magnets are made of a special alloy of iron with additives of other element. This iron in a magnetic field gets a magnetic properties which remain after an exit of iron from the magnetic field.

On fig. ?? above is shown the connection of atoms in a crystal of iron before action of a magnetic field on this iron, and on fig. below is shown the connection of atoms in a crystal of iron after action on him of a magnetic field.

Apparently, at action of a magnetic field on iron, the orbits with protons and electrons of central atoms turn on 90 degrees and they are established by on a new diagonal of the cubic cell. But the orbits of angular atoms of the cubic cell do not turn, because the orbital protons of angular atoms have stable position. Stability of position of orbits is formed due to that that on a way of orbital motion of protons is formed rarefied ether, and also it occurs due to that that other possible positions of orbital are occupied by orbits of the next atoms.

Turn of orbits of central atoms is possible due to that what the orbits of the central atom has an identical opportunity of location on all diagonals

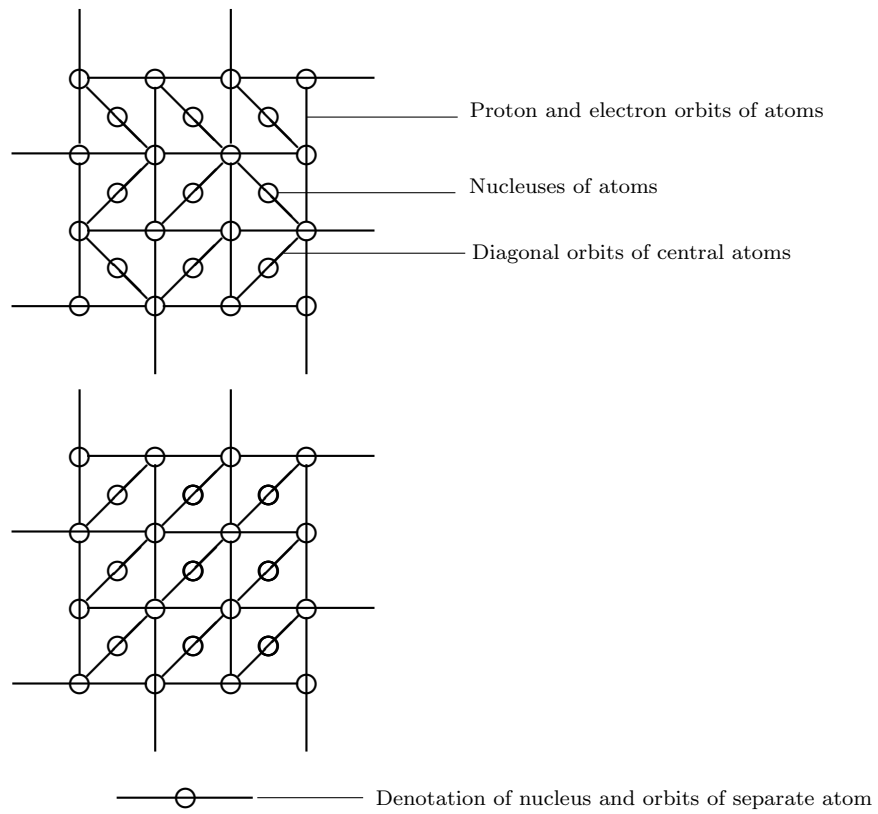


Figure 1: Connection of atoms in a crystal of iron.

of a cubic cell. Turn of orbits of the central atoms occurs due to the action of a magnetic field on the rotated orbital protons. An axis of rotation of orbital protons is the line of their orbital motion.

Apparently, as a result of action of a magnetic field on iron, the orbits of the central atoms of cells of a crystal are established in parallel with an identical direction of motion, due to that the orbital protons of these orbits are forming a magnetic field which is not compensated. If iron to not keep in the certain position during action on him a magnetic field, this iron will rotate.

## 2 Interaction of Magnets

If two magnets are in a magnetic field each of other, then the ovalmats of the magnetic field of each magnet gets on the rotating sphere of protons of another magnet. As a result of it, the protons which have a identical direction of orbital motion and rotation, are moving together with the all body under action of magnetic field, if this field is directed perpendicularly to axes of rotation of these orbital protons. The magnetic fields move the magnets to one another or repulses one from the other depending on the location of their proton orbits, which are forming the magnetic field. Because at magnetization of iron the orbits of protons of the central atom can be directed in two crossed planes, then the magnetized iron can have one pair or two pairs of magnetic poles. If we bring a magnet closer to a unmagnetized iron, then this iron is attracted to the magnet as this iron is magnetized in magnetic field of the constant magnet.

If an electric current passes through a solenoid, this solenoid creates a weak magnetic field, but if inside of this solenoid we place a iron core, then the strength of a magnetic field on the ends of the solenoid considerably increases. It occurs because the metal core becomes magnetized, and the magnetic diclons of its atoms create a magnetic field which has much a greater strength than the electric field created by the electric current.

## Conclusions

1. The magnetic field of magnetized iron represents the magnetic field formed by orbital protons of central atoms of cells of crystals of iron. Under action of external magnetic field, the orbit of these protons is turned in a

direction of its magnetic field, and due to that these protons form magnetic fields in identical direction.

2. The Attraction of one constant magnet with another constant magnet and the pushing away of one constant magnet from another constant magnet occurs because of the action of the magnetic field of one constant magnet on the magnetic dipoles of another constant magnet.