NATURAL RADIATION FLOWS AND PRIVATE PARAMETERS

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Abstract. *All living organisms develop under the constant influence of natural radiation, and radiation plays an important role in the vital activity of living organisms. The natural background of radiation (the amount of radiation in nature) is an integral factor of the environment, such as gravity and electromagnetic fields. In addition, the quantitative value of radiation varies significantly in different parts of the world.*

Keywords: *Natural radiation background, radionuclide, uranium, radon, cosmogenic radionuclides, emanation.*

Galactic space rays interstellar from the environment when passed harvest will be Theirs average age 10^6-10^7 year Such long process different from sources coming space of rays to interfere possibility gives, of this as a result radiation isotropic will be Cosmic rays Earth atmosphere enter, own contained light element nuclei and protons land atmosphere the air atoms nuclei with will collide and slows down. As a result primary space rays almost the sea to the level reached doesn't go However, this collisions land to the surface reached going collision from energy come next nuclear changes cascade because of secondary space radiation cause emits [2].

Natural radiation background land on the surface and in the depths, in the atmosphere, all alive of beings in organisms and in plants spread out is radiation space rays under the influence of and land of the shell radionuclides by is created . Natural radiation sources by created of radiation less part space to the rays right will come. Primary and secondary space radiations from each other are different.

Primary space radiation-interstellar from space straight away land atmosphere entering high energetic particles is the flow. Primary space of radiations most of them our in our galaxy star explosions and very new of the stars appear to be on time of matter eruption and radiation as a result appear will be Such galactic space

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of particles energy the sun flashes as a result appear to be of particles from energy much high will be [1,2,6-9]. Contains according to such of radiation almost 90% - ini protons, about 7 % α- particles, about 1 % neutrons , photons , electrons and light element nuclei organize does [1].

Sea 45 km above sea level space rays basically primary from the rays organize finds 20-25 km high secondary space of rays maximum intensity observed, secondary space rays energy of height decline with decreases and the sea level to a minimum is enough Tall mountainous regions population of space of rays to the greatest effect subject to will be [3] .

Theirs each in one initial radionuclide and final decay product (usually of lead stable of isotopes one) exists will be Har all three in the family decay from products one gas (from radon isotopes one) is called emanation. Emanation in the air , in the water and in the soil significant amount decay of products to existence take will come . Uranium-radium in the family initial nuclide ^{238}U, final decay product ^{206}Pb and emanation of radon ^{222}Rn isotope belongs.

Cosmic of rays intensity of the earth magnet area is also affected does North and southern poles the equator regions than more radiation takes Sea level medium in widths space of rays equivalent dose 4-5 km high space of rays about 10 % organize does Contemporary of airplanes height in flights space radiation the sea from the level one how many ten even high will be (Fig. 1). But, from the sound fast flying on airplanes flight during of speed significant difference because of passenger less to radiation subject to will be [4].

Earth of the shell radionuclides are both terrestrial and cosmogenic come exit can On the ground face giving natural radionuclides radioactive to families belongs to radionuclides and DI Mendeleev elements periodic of the system medium part of the elements to radionuclides is divided. Everything being in nature three radioactive family available: uranium-radium thorium and actinium [5]. of families each one radionuclides the chain harvest does then it is a nuclide of the previous one decay to the product becomes [6].

Thorium of the family initial nuclear ^{232}Th, final decay product ^{208}Pb and emanation thoron $^{220\ to}$ the Rn isotope belongs to will be Actinium of the family initial nuclear ^{235}U, final decay product ^{207}Pb and emanation action ^{119}Rn isotope belongs to will be Radon is his radioactive decay products with together population by land over radiation from sources removable annual individual equivalent radiation of the dose to about ¾ and all natural radiation from sources received dose by half right will come . Radon radioactive effect its α- radioactivity and radioactive volatile didn't happen decay products - Po, Bi and Pb with depends they are very difficulty with from the body is issued. breath get for biological dangerous isotope ^{218}Po is his decay product a- active isotopes and decay last product is lead [7].

But medicine and bolneology (bolneology this of cardiology one department of mineral waters come exit and physicist chemical properties , patients treatment and prevention in order to external and internal in use apply methods , of them to use medical instructions teaches), nerve and heart blood vein systems , breathing get and food digestion to do bodies , support movement system , gynecological diseases and metabolic diseases in the treatment of radon air , radon water and mud baths as well the air inhalation and emanation radon is wide in form used [8].

DI Mendeleev elements periodic of the system medium such as: 40 ^{K} , ^{48}Ca, ^{87}Rb, ^{96}Zr, ^{115}In, ^{138}La, ^{142}Ce, ^{144}Nd, ^{149}Nd, ^{147}Sm, ^{176}Lu radionuclides on our planet happen has been primary radiations harvest 12 elements that do own into takes [9].

Cosmogenic radionuclides basically space of radiation the atmosphere organize doer atoms nuclei with mutually effect as a result harvest will be Cosmogenic of radionuclides small one part space of radiation of the earth on the surface located atomic nuclei with mutually under the influence of harvest will be In general in fact , cosmogenic radionuclides emits radiation natural radiation sources to radiations irrelevant contribution they add On the ground background radiation level basically two radioactive family: earth of the shell natural

radionuclides ^{40}K, ^{97}Rb and uranium-radium-thorium at the expense of is formed . of these elements concentration different in places changed stands and therefore for on the ground background radiation the level also changes. This is the population point sands rich in thorium on located in Iran radium- rich springs flowing Ramser city in the area 400 mSv per year until radiation level note done [10].

Summary by doing in other words , radiation in nature occurring different radioactive of the elements harvest to be radiations and space rays under the influence of harvest will be Radiation everyone in the place in air , water , soil and in the mountains there is will be Radiation of the earth different in places differently will be , so places there is radiation very high will be Cosmic rays under the influence of radiation harvest to be to the equator relatively at the poles stronger will be , that is space rays to the equator relatively to the poles more falls However natural of radiation space rays in effect harvest to be not worth it part organize.

On the ground so places they have of the earth radiation level background from radiation much high will be Such from places one of Brazil Pocos de Caldas city nearby is located is there radiation level average 800 barabar from the indicator high and 250 mSv per year to enough.

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