

# The Decoded secrets of the black holes

A black hole or a cold **Nucleus of the Recycled Neutrons (NRN)** is a densest **UltraDenseNucleus** of the recycled neutrons, useless matter to the exploded stars. This is an extraordinary matter and has the nuclear density. They are most massive singular and mainly alone objects in the universe. Formed after explosion of the host stars, they exert so much gravitational force that only light can escape their pull. NRN can gravitate matter in the binary systems from the twin old star to form micro-quasar. Some scientists argue that about mysterious voids and huge gravitation of the void point even micro voids up to ~0.1 mm. Such scientific fairy-tales are reasons for the crisis in the cosmology and prevent development of the Astronomy and Cosmology and other sciences. Void has no density. Black NRNs are the cold and invisible densest bodies in the universe and each cold NRN has the nuclear density. It has proved that, the driver super massive NRN of the Milky Way has a mass  $M_{NRN} \gg 2.8 (+/- 0.3) \times 10^6 M_{SUN}$ . In reality the central super massive NRN has a mass hundreds of billion times that the Sun. The central NRN has the enough mass and gravitation to capture stellar and planetary remains. Thus it has enough protons and other nuclides, to form strong magnetic field. Gravitated masses produce thin crystal layer around the NRN formed by compressed planetary elements. Thus if super-massive or dwarf nuclei are formed by Recycled Neutrons and indicate strong dipolar magnetic field appear to be a proof that connected to their ferromagnetic elements dispersed and mixed by surface. Ferromagnetic elements are dispersed not so deep by surface of a NRN and are formed by remains of the dead full explosion or after gravitation other remains from the space. Repulsion between neutrons is already proved in the pulsars. Only huge gravitation prevents demolishing of the pulsars. Pulsation or oscillation of the balance around the pulsar is formed by powerful forces, between gravitational attraction and repulsive interactions of the enormous amount neutrons. Each pulsar is a naked core of the exploded star and has a cooling evolution to form white, red, brown, black dwarfs. Super-massive central NRN of the Milky Way is formed by super-massive pulsar of the exploded super-massive precursor star of course.

Repulsion between neutrons is a main driving force into debris of the UDN or SDN which has already formed the Eagle Nebula. Debris of the UDNs are not the stable bodies. Smaller gravitation forces can not prevent rapid demolition and inflation of the matter from the debris due to powerful repulsive interactions between the neutrons. The Eagle nebula is a greatest proof of the powerful inflation and neutron repulsion event formed by debris of the UDN or SDN.

[http://en.wikipedia.org/wiki/Eagle\\_Nebula](http://en.wikipedia.org/wiki/Eagle_Nebula) [http://en.wikipedia.org/wiki/File:Eagle\\_nebula\\_pillars.jpg](http://en.wikipedia.org/wiki/File:Eagle_nebula_pillars.jpg) The Eagle nebula appears to be a nuclear and molecular remnant of the exploded core debris and formed after multi-stage separation and powerful inflation event. Thus debris of the UDNs or SDNs are not stable bodies and undergo rapid separation and inflation.

Neutron star, white gnome, brown dwarf, black dwarf, etc. are the evolution stages from fiery pulsar to the cold NRNs. The infinite universe proves that the thermal evolution is a permanent part of the evolution in the recycling and renewing of the Universe. We have very many proofs about the cooling evolutions and recycling events in the universe. After a billion years no one human from the Earth or from the other planets will show the Crab pulsar. I'm sure that the mammals' kingdom will escape many asteroid impacts and global geological geo-catastrophes. It means the Crab pulsar or SDN of the recycled neutrons will be disappeared for the human's telescopes. Of course the cooled NRN (died pulsar) will continue orbiting the galaxy. The modern white dwarf or gnome would not be seen after a billion years as well. The fiery super dense nucleus of the Crab will become UDN-black and cold Nucleus of the Recycled Neutrons and invisible even for the infrared telescopes. NRN is a sleeping matter. Fiery SDN or cold UDN of the recycled neutrons can capture a wandering planet, nebula or matter of the neighbour old carbon star due to inflation. The feeding event (gravitated matter) can awake each NRN to become active. NRN can demolish the gravitated matter in the nuclear and thermonuclear reactions. Each star has in the shell abundance of the light, heavy, and super-heavy nuclei and admixtures but old stars have the catastrophic abundances of the planetary elements. This is an important reason for the formation of the micro-quasars. Spectrum of the micro-quasar is a proof about the violent mixing of the highly radioactive nuclear clouds that produces shocked forbidden lines in the spectrum of the quasars. Captured matter in the ultra dense volume begins rapid interactions on the NRN surface (ultra-short-

bombardment). The NRN surface becomes fiery. Interaction of the neutrons to the gravitated matter increases volume of the NRN. New radioactive volume formed by radiative zone and mixing of the highly radioactive clouds changes its colour and spectrum as well.

What would happen if you were to fall into a NRN? As you approach the black UDN will die in the middle way by huge acceleration and gravitation. Hit of the compressed spacecraft to the NRN creates temporary nuclear and thermonuclear reactions and thermonuclear and nuclear wind from the UDN. You can form small red or white dot on the “landing” place and temporary nuclear clouds around. Last stage would be a temporary nuclear rain formed by spacecraft’s and your exploded nuclides.

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|          | <b>Class</b>                       | <b>Cosmogeological interpretation</b>                  | <b>Mass</b>                                    | <b>Size</b>                                   |
|----------|------------------------------------|--|--|---|
| <b>1</b> | <b>Super-massive BH</b>            | <b>Remnant super massive NRN of the precursor star</b> | $\sim 10^5 - 10^9 M_{\text{Sun}}$              | $\sim 0.001 - 10 \text{ AU}$                  |
| <b>2</b> | <b>Intermediate-mass BH</b>        | <b>Remnant NRN of the Hyper giant stars</b>            | $\sim 10^3 M_{\text{Sun}}$                     | $\sim R_{\text{Earth}} - R_{\text{Jupiter}}$  |
| <b>3</b> | <b>Giant Stellar-mass black BH</b> | <b>Remnant NRN of the giant stars</b>                  | $100 \div 10 M_{\text{Sun}}$                   | $R_{\text{Earth}}$                            |
| <b>4</b> | <b>Small Stellar-mass black BH</b> | <b>Remnant NRN of the small stars</b>                  | $\sim 1/10 - 10 M_{\text{Sun}}$                | $10 \div 20 \text{ km}$                       |
| <b>5</b> | <b>Micro (primordial) BH</b>       | <b>Proposed by wrong theories</b>                      | <b>up to <math>\sim M_{\text{Moon}}</math></b> | <b>up to <math>\sim 0.1 \text{ mm}</math></b> |

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**1.** Video link: [-http://www.astro.virginia.edu/class/whittle/astr553/Topic14/M1\\_MW\\_nuc.mpg](http://www.astro.virginia.edu/class/whittle/astr553/Topic14/M1_MW_nuc.mpg) Super-massive remnant of the NRN is already discovered in the centre of Milky Way. Each centre of the old spiral galaxy or globular clusters has a Super-massive NRN. All old galaxies and globular clusters have an abundance of the old red stars. It means that the super massive precursor star long ago finished star-forming activity and has already formed as a super-massive NRN in the centre.

**2.** Intermediate-mass NRN are remnants of the Hyper giant stars. Usually larger star exhausts own energy resources faster. Each mass of the NRN closely depended to the exploded host star after the carbon stage. Each Red carbon Star that has reached the end of the life is a last evolution phase for the stars. Abundance of the thermonuclear wind within the radiative zone produces abundance of the lightest elements (**H; He**) on the visible surface. Abundance of the triply alpha processes within the radiative zone produces abundance of the Carbon on the visible surface. This is a clue for the Carbon Stars.

**3.** Of course a giant stellar-mass NRNs are remnants of the different giant stars. Dependence of the naked NRN masses to the host star is a same value, but even the largest red dwarf has only about 10% of the Sun’s luminosity. Remnant naked core of a giant star has a cooling evolution with formation black UDN of the recycled neutrons as well.

**4.** Of course stellar-mass NRNs are the remnants of the small main sequence stars. Dependence of the naked NRN masses to the host star is a same value. Red dwarfs stars, appear to be very low mass stars with no more than 40% of the mass of the Sun. Consequently they have the relatively low temperatures in their cores and energy is generated at a slow rate through nuclear fusion of hydrogen into helium produce triply alpha processes. Low P/N ratio produces triply alpha processes without Magnetic confinements. High P/N ratio produces thermonuclear reactions in the ultra dense volume but high magnetic intensity at the magnetic poles of the core prevents thermonuclear reactions and produces triply alpha processes. Thus these old red stars emit little light, sometimes as little as 1/10,000th that of the Sun. What about remnant UDN of the red dwarf stars. Smaller star exhausts own energy slowly and creates smaller

(dwarf) remnant UDN after the explosion. According to the scientific data existence of a stars as little as 1/10th that of the Sun is an impossible event. It means that the existence of the NRN as little as 1/10th that of the Sun impossible as well. Main masses of the stars are concentrated in the super-dense core ( 98%). The astronomers find that the dip seen in the light curve of the star known as [OGLE-TR-122](#) is caused by a very small stellar companion, eclipsing this solar-like star once every 7.3 days. This companion is 96 times heavier than planet Jupiter but only 16% larger. It is the first time that direct observations demonstrate that stars less massive than 1/10th of the solar mass are of nearly the same size as giant planets. This fact will obviously have to be taken into account during the current search for transiting exo-planets.

5. I don't want to refer fairy-tales which are produced by wrong theories.

A common sense interpretation of the facts suggests that a super-intellect would connect Physics, as well as Chemistry and Astronomy and Geology and that there are no blind forces worth speaking about the universe but there are hidden forces as well. The observational confirmations from the facts seem to me so overwhelming as to put this conclusion almost beyond question.

### The Hertzsprung-Russell diagram

[http://en.wikipedia.org/wiki/Hertzsprung-Russell diagram](http://en.wikipedia.org/wiki/Hertzsprung-Russell_diagram)

Proton-neutron (P/N) ratio is a clue for the Hertzsprung-Russell diagram. There is easy to understand that the color of a star is not depended to own mass. The diagram is a strong evidence.

-Most of the stars occupy the region in the diagram along the line called [main sequence](#). It means embryonic stars are average-sized stars mainly. During billions of years of evolution stars are [fusing hydrogen](#) in their cores; neutron emission is an important source of the energy for the young stars. Decreasing and disappearance of the neutron emission changes colors of the stars and their masses. Proton-neutron ratio is changes as well. Replacement of the hydrogen-fusion by alpha proceses all over the core decreases the shell temperature for billions of years. Color is changing from the blue to the red as well as spectrum.

-[Cepheid variables](#) reside in the upper section of the [instability strip](#). Its [instability](#) closely connected to the abundance of the heavy and super-heavy elements in the shell. Reason is a movement through the nebula (nuclear and molecular remnant of the exploded stars). [Variable](#) luminosity is closely connected to the density of a nebula. In the young stars H - fusion generates 5÷35%; neutron emission generates 90÷55%; (NR) Nuclear Reactions (explosions) in the interior of the spots generate approximately 10% luminosity at the maximal activity stage, NR 10%. In the pulsating [variable stars](#) NR ratio can be increased rapidly from the 10% to 100%; and 1000% ... etc. I think that the connection of the rapid variation brightness to the huge nuclear explosions in the interior of the shell is a plausible explanation.

[http://en.wikipedia.org/wiki/Instability strip](http://en.wikipedia.org/wiki/Instability_strip) Each star can become [instable moving through the nebula](#). Only dwarfs are not instable. Usually white, red, brown dwarfs are the star-like bodies but they are ultra dense recycled nucleuses, remnant core of the small exploded stars and intermediate phase from fiery dwarf pulsar to the cold and invisible black UDN. NRN is a refrigerated zone of the ultra density. Usually UDN is covered by thin layer of the nuclides and molecular crystals (remnant of the nuclear explosion or gravitated and recycled masses after explosion). Sometimes these nuclear and molecular masses are mixed in the upper layer and impossible to detect in the spectrum.

[http://en.wikipedia.org/wiki/Helium fusion](http://en.wikipedia.org/wiki/Helium_fusion) The fusion of helium-4 nuclei ([alpha particles](#)) is known as the [triple-alpha process](#) beginning before star explosion all over the UDN. [http://en.wikipedia.org/wiki/Helium fusion](http://en.wikipedia.org/wiki/Helium_fusion) insignificant P/N ration means that the star has deficit of the protons (fuel). Eventually it causes replacement of the triply alpha processes by violent nuclear syntheses reactions around the whole core and catastrophic abundance of the super heavy nucleuses within super

dense volume produces powerful explosion. Nuclear synthesis reactions rapidly create enormous amount super-heavy nucleuses around core. Truly that is the explosion reason of the old stars. Star luminosity can be increased hundreds of billions of times rapidly.

<http://www.cosmogeology.ge/chapter-28.htm> Strong evidence on stellar evolution secrets.

There had never been any normal and formal acceptable scientific definition on “black hole”. Scientific knowledge is progressing to understand the term a “black hole”. The old astronomical definition of a BH is unacceptable. That is wrong. Before IAU (International Astronomical Union) will publish separate resolution about a black hole, I want to help. New fiery remnant nucleus of the exploded star is a pulsar. It mainly consists of recycled neutrons (99,99%) and is an extraordinary matter Super Dense Nucleus (SDN). In reality a Black hole is not a "HOLE". This is a cooled pulsar - UDN and has a nuclear density.

1. NRNs have the different sizes and are the cold, black and invisible remnants of the different exploded stars within globular clusters, dwarf galaxies, spiral galaxy branches and elliptical galaxies and in the inter-galaxy medium. The centers of the elliptical galaxies like the merger galaxies are violent recycling places that produce quasars.
2. **SuperMassiveNucleuses of the RecycledNeutrons** are in the centre of the old spiral galaxies and globular clusters. In the centre of the young galaxy is an active nucleus (super massive precursor star). After eruption almost all stars it can die as a star. **SMNRN** in the centre of the old spiral galaxy is a remnant of the exploded super massive precursor star.
3. The event after joining and gravitational demolition of the two or few spiral galaxies, planetary-sized black holes and stars gravitated by central **SMNRN** produce quasars. Hit between quasars forms partially big bangs and inflation of the proto-matter for the future spiral galaxies. Survived galactic masses are triggered in the inter-galaxy medium and appear to be wandering independently.

<http://www.neutronrepulsion.ge/Researches/45.pdf> Quasar is a space body. It has own super massive ultra-dense core formed by recycled matter and surrounded by huge and violent nuclear clouds. Violent mixing of the nuclear clouds produces shocked forbidden lines in the spectrum of all quasars.

[http://www.nasa.gov/mission\\_pages/chandra/multimedia/photo10-009.html](http://www.nasa.gov/mission_pages/chandra/multimedia/photo10-009.html) At last NASA came to the truth but Unacceptable that the “super-massive black hole is inside the quasar”.

[http://chandra.harvard.edu/photo/2007/3c438/3c438\\_radio.jpg](http://chandra.harvard.edu/photo/2007/3c438/3c438_radio.jpg) the axial nuclear explosions after hit of the quasars appear to be a powerful neutron emission in the universe and formed by the recycled and demolished masses of the old galaxies.

The ten hypervelocity stars are discovered to the Milky Way nucleus. Of course nearest stars to the huge ultra-dense nucleus are the young stars and have the hyper-velocities around  $V = 1500$  km/s. They are young stars formed by precursor star in the centre of the Milky Way. How I wanted to discovery in the galaxy centre precursor star, but found its remnant only that is an invisible and huge concentration of the recycled neutrons **99.999999%**. Precursor star of the Milky Way and source of the hundreds of billions of stars has died.

There are two different merges in the universe:

1. Cyclonic merging - produces elliptical galaxies like the **M87** and cluster galaxies.
2. Axial merging (hit) - produces spiral galaxies by recycled and injected masses.