

# Photon's Births And Deaths

**Wei-Xiong Huang**

**April 24, 2014**

**Abstract: UHT make atomic decomposition into photons. Photon slowdown become low speed photon. ULT make micro speed photons aggregated into atom.**

**Nuclear star make atoms decomposed into photons, jet out distant space. Photon deceleration become low speed photon. Low speed photon deceleration become micro speed photon. Micro speed photons aggregation into atom. Atoms gathered into cosmic dust. Cosmic dust gathered into celestial body. Celestial body eventually integrated into nuclear star.**

**Photon, low speed photon, micro speed photon, is three different motion speed substance. Atomic=>Photon=>Low speed photon=>Micro speed photon=>Atom. Three motion morphology substance cycles alternating converting, maintain universe density homeostasis.**

**Key words: Atom, Photon, Low speed photon, Micro speed photon, Microcosmic substance**

## **0. Foreword**

**Cosmic dust All over universe. Gravitation make cosmic dust gathered into celestial body. Dust specific gravity is inversely proportional to distance between dust and celestial body center. Same specific gravity dust are distributed in same radius ball layer. If, there is only gravitation. Then the, cosmic matter will ultimately cohesion into a high density celestial body. Was lucky, there were gravitation opponent, atomic spin kinetic energy. Atomic spin kinetic energy and gravitation confrontation creating a colorful universe.**

## **1. UHT Make Atomic Decomposition Into Photons**

**Temperature is atoms hit each other indicators. Temperature is proportional to hit each other intensity and frequency.**

**In ultra high density confined space, ultra high density make atomic squeezing each other. Squeezing each other make partially atoms spin kinetic energy into straight line kinetic energy. Atoms straight line kinetic energy make atoms collide with each other.**

**Atoms collide with each other make atoms crushing.**

**Atoms collide with each other make temperature rise. Temperature rise make thermal**

expansion force is increased.

When atomic fragmentation mass equivalent photon mass, when atomic fragmentation straight line speed reach light speed, when thermal expansion force is greater than confined space pressure, atomic fragmentation became jet out photons.

Let  $m$  is photon mass. Let  $C$  is light speed. Let  $E$  is photons straight line kinetic energy. Then,

$$E=m \cdot C^2/2.$$

Thus, atomic fission become photon can release huge energy.

In sum, in ultra high density confined space, UHT make atomic decomposition into photons. Thus, release enormous energy.

Celestial body center is a ultra high density confined space. Celestial body center UHT make atomic decomposition into photons, thus release enormous energy.

Celestial body center temperature is proportional to celestial body center pressure. Celestial body center pressure is proportional to celestial body center density. Celestial body center density is proportional to celestial body mass. So, celestial body center temperature is proportional to celestial body mass.

Light source brightness is proportional to light source beam frequency. Light source beam frequency is proportional to light source temperature. So, celestial body brightness is proportional to celestial body center temperature.

In sum, celestial body brightness and beam frequency are proportional to celestial body mass.

## **Example 1. Celestial Body Mass And Beam Frequency**

Milky Way center nuclear star jet out gamma photons. Sun do not jet out gamma photons, jet out ultraviolet photons. Earth do not jet out ultraviolet photons, jet out infrared photons.

Celestial body center jet out photons, reduce celestial body center temperature, reduce celestial body mass. Celestial body absorb substance, Increase celestial body mass, elevate celestial body center temperature.

Set in unit time, celestial body jet out photons mass is  $A$ , celestial body absorb substance mass is  $B$ .

$A > B$ , then, celestial body mass, center temperature, jet out photon frequency,  $A$ , are become smaller.

$A = B$ , then, celestial body mass, center temperature, jet out photon frequency,  $A$ , are

unchanged.

$A < B$ , then, celestial body mass, center temperature, jet out photon frequency, A, are become larger.

A and B size and ratio are widely vary, forming qianzibaitai celestial body.

Nuclear fusion and nuclear fission are each other inverse process. Already do know, nuclear fission release energy. So sure, nuclear fusion absorb energy.

So, large mass celestial body released huge energy, not from celestial body surface hydrogen fusion into helium nuclear fusion, but from celestial body center atomic fission into photons nuclear fission.

## **Example 2. Fermi Bubbles**

There is a mass very huge star in Milky Way disk center, known as Milky Way "nuclear star".

In all directions, nuclear star center thermal expansion force are equal. In all directions, nuclear star center pressure force are symmetrical. Spins axis directions pressure is least. So, from nuclear star center, via spins axis both ends, jet out substance mass are equal.

From nuclear star center, via spins axis both ends, jet out substance formed swirl in nuclear star internal. Thus, lead to nuclear star spin.

Nuclear star spins speed is proportional to nuclear star jet out substances mass, is proportional to nuclear star center temperature, is proportional to nuclear star mass.

Nuclear star equatorial plane gravitation is inversely proportional to nuclear star spins speed, is inversely proportional to nuclear star center temperature, is inversely proportional to nuclear star mass.

Due to the rotation, nuclear star chengbian round. Equatorial radius is maximum. Rotation axis radius is minimum. Equatorial radius and rotation axis radius length ratio is proportional to rotation speed.

Symmetry Milky Way plane center the two Fermi bubbles proved. Gamma photons are not from Milky Way nucleus star surface, but from Milky Way nucleus star center.

Milky Way nuclear star surface did not occur hydrogen fusion into helium nuclear fusion. Milky Way nuclear star center occurred atomic fission into photons nuclear fission, and along spin axis outward jet gamma photons.

## **Example 3. Solar Corona High Temperature**

**Observations found. Photosphere and sun center distance nearest, the temperature is  $5.7 \times 10^3 \sim 4.1 \times 10^3$  K. Chromosphere and sun center distance little far, the temperature is  $4.1 \times 10^3 \sim 2 \times 10^4$  K. Transition layer and sun center distance farther, the temperature is  $2 \times 10^4 \text{K} \sim 1 \times 10^6 \text{K}$ . Coronal and sun center distance furthest, the temperature is  $1 \times 10^6 \sim 2 \times 10^7 \text{K}$ .**

**If, sun's surface occurred hydrogen fusion into helium nuclear fusion. Then, solar atmosphere inner layer temperature will be higher than outer layer temperature. This is clearly inconsistent with the observed results.**

**Only, sun center occurred atomic fission into photons nuclear fission, high temperature substances along spin axis, from sun center directly reach solar corona layer, leads to solar corona layer temperature drastically rise. Will be able, show the observed temperature distribution.**

**So, sun surface did not occur hydrogen fusion into helium nuclear fusion. sun center occurred atomic fission into photons nuclear fission, and along the spin axis outward jet high temperature substances.**

## **2. Photon Slowdown Become Low Speed Photon**

**Photon collision such that photon straight line kinetic energy into spins kinetic energy, become low speed photon. low speed photons straight line speed is about 3Km/sec. low speed photons straight line kinetic energy is about photons  $1/10^{10}$ . low speed photons spins kinetic energy is about photons  $10^{10}$  times.**

**Due to, low speed photons speed, mass, charge, magnetic force, are very small. So, low speed photons can not be measured, become invisible invisible dark matter.**

**low speed photons filled all universe space. Like air conduction sonic, low speed photons conduction electromagnetic waves. Like the air fluctuations formed sonic, low speed photons fluctuations formed electromagnetic waves.**

**Photons pass through space, photons electromagnetic force make low speed photons fluctuations, formed electromagnetic waves. Electromagnetic waves frequency is equal to photon frequency. Electromagnetic waves amplitude is proportional to photon electromagnetic force. Thus, photons motion presented wave particle duality.**

**Alternating electromagnetic field, high temperatures, friction, can make atoms collide with each other. Atomic surroundings filled low speed photons. Atoms collide with each other make around low speed photons collide with each other. Collide with each other make low speed**

photon spin kinetic energy into straight line kinetic energy, and become jet out photon.

Atoms absorb corresponding atomic spectrum photon, make photon straight line speed convert into spins speed, become corresponding atomic spectrum low speed photon. Atoms around overflowing corresponding atomic spectrum low speed photon. Atoms collide with each other, make low speed photon collide with each other. low speed photon collide with each other, make low speed photon spins speed convert into straight line speed, become corresponding atomic spectra photon.

### **Example 4. Temperature And Photon's Frequency**

Combustion make low speed photon spin kinetic energy into straight line kinetic energy, and become jet out photon. The light source temperature higher, the ejected photon frequency higher.

## **3. ULT Make Micro Speed Photons Aggregated Into Atom**

Nuclear star jet out photons have four inertia.

1. Ejection inertia. Perpendicular to photon spins axis. Parallel to nuclear star spins axis.
2. Centrifugal inertia. Perpendicular to photon spins axis. Perpendicular to nuclear star spins axis.

Ejection inertia and centrifugal inertia cooperation, make photon motion trajectory and nuclear star spins axis form an angle. Angle size is inversely proportional to photon spins speed.

3. Tangent inertia. Parallel to photon spins axis. Perpendicular to nuclear star spins axis.

Tangent inertia and nuclear star attractive force cooperation, make photon revolve nuclear star spins axis revolution. Photon revolution and nuclear star spins are same direction.

4. Spins inertia. Spins axis is perpendicular to nuclear star spins axis. Spins direction pointing nuclear star spins axis.

Photon spins make the photon trajectories bend. After a long time and space, departure from nuclear star center, via spins axis both ends, jet out the two groups photon finally reunited, and collide with each other, become low speed photons.

In ULT environment, collision such that low speed photon straight line speed lower, spins speed higher, become micro speed photon. Micro speed photon straight line speed is about 3cm/sec. Micro speed photon straight line kinetic energy is about photon  $1/10^{20}$ . Micro speed photon spins kinetic energy is about photon  $10^{20}$  times.

Micro speed photons magnetic force make micro speed photons aggregated into electron.

Aggregated into an electron takes about  $10^5$  micro speed photons. Electron and micro speed photons polymerization into proton, neutron. Aggregated into a proton or neutron takes about  $10^{10}$  micro speed photons. Small mass atom and micro speed photons aggregated into larger mass atom.

So, vast dark cold universe depths is atomic birthplace. Atom aggregated into cosmic dust. Cosmic dust gathered into planets, stars, galaxies.

### **Example 5. Stellar Age**

Astronomer Maria Krugman's research shows, Milky Way inner rings stellar older, outer rings stellar younger. Milky Way stellar age is inversely proportional to distance between stellar and Milky Way center.

Earth age nearly 4.8 billion years. Which projected, 4.8 billion years ago from Milky Way nuclear star center jet out photons evolution aggregation form Earth. When Earth 10.8 billion years old, Earth integrated into Milky Way nucleus star.

### **Example 6. Photoelectric Effect**

Photoconductive effect and photovoltaic effect have proved, photon deceleration become low speed photon, then aggregated into electron.

### **Example 7. Nitrogen 14 And Carbon 14**

Proton absorb photons, charging become larger mass neutron. Neutron emitted photons, discharge become smaller mass proton.

Nitrogen 14 absorb photons, charging become larger mass carbon 14. Carbon 14 emitted photons, discharge become smaller mass nitrogen 14.

## **4. Epilogue**

Nuclear star make atoms decomposed into photons, jet out distant space. Photon deceleration become low speed photon. Low speed photon deceleration become micro speed photon. Micro speed photons aggregation into atom. Atoms gathered into cosmic dust. Cosmic dust gathered into celestial body. Celestial body eventually integrated into nuclear star.

Photon, low speed photon, micro speed photon, is three different motion speed substance. Photon is light speed motion microcosmic substance. Low speed photon is low speed motion microcosmic substance. Micro speed photon is micro speed motion microcosmic substance.

**Atoms is micro speed photons polyme.**

**Atomic=>Photon=>Low speed photon=>Micro speed photon=>Atom. Three motion morphology substance cycles alternating converting, maintain universe density homeostasis.**