

# About OMICS Group

**OMICS Group International is an amalgamation of Open Access publications and worldwide international science conferences and events. Established in the year 2007 with the sole aim of making the information on Sciences and technology 'Open Access', OMICS Group publishes 400 online open access scholarly journals in all aspects of Science, Engineering, Management and Technology journals. OMICS Group has been instrumental in taking the knowledge on Science & technology to the doorsteps of ordinary men and women. Research Scholars, Students, Libraries, Educational Institutions, Research centers and the industry are main stakeholders that benefitted greatly from this knowledge dissemination. OMICS Group also organizes 300 International conferences annually across the globe, where knowledge transfer takes place through debates, round table discussions, poster presentations, workshops, symposia and exhibitions.**

# About OMICS Group Conferences

**OMICS Group International is a pioneer and leading science event organizer, which publishes around 400 open access journals and conducts over 300 Medical, Clinical, Engineering, Life Sciences, Pharma scientific conferences all over the globe annually with the support of more than 1000 scientific associations and 30,000 editorial board members and 3.5 million followers to its credit.**

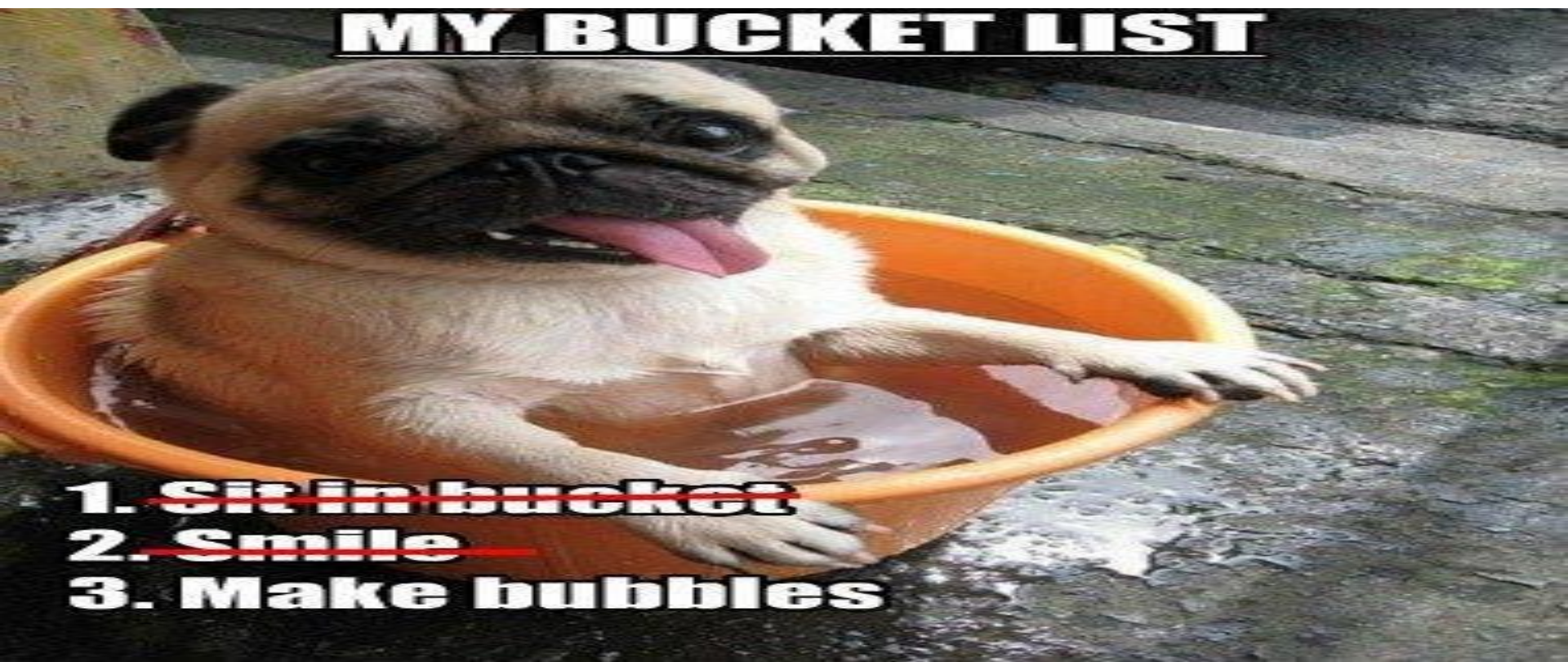
**OMICS Group has organized 500 conferences, workshops and national symposiums across the major cities including San Francisco, Las Vegas, San Antonio, Omaha, Orlando, Raleigh, Santa Clara, Chicago, Philadelphia, Baltimore, United Kingdom, Valencia, Dubai, Beijing, Hyderabad, Bengaluru and Mumbai.**

A vibrant display of colorful fireworks exploding in a dark night sky. The fireworks are in various colors including red, green, blue, purple, yellow, and orange, creating a spectacular light show. The background is a deep, dark blue/black, making the bright colors of the fireworks stand out prominently.

**The Particle Universe**  
**Edwin Zong**

# My bucket list

- What is the explosion/big bang made of?
- What is the “bomb” made of?
- What is the dark matter made of?
- Is it possible for matter/energy to stay in one physical state forever? If not, how does it manifest itself in our universe?



## **MY BUCKET LIST**

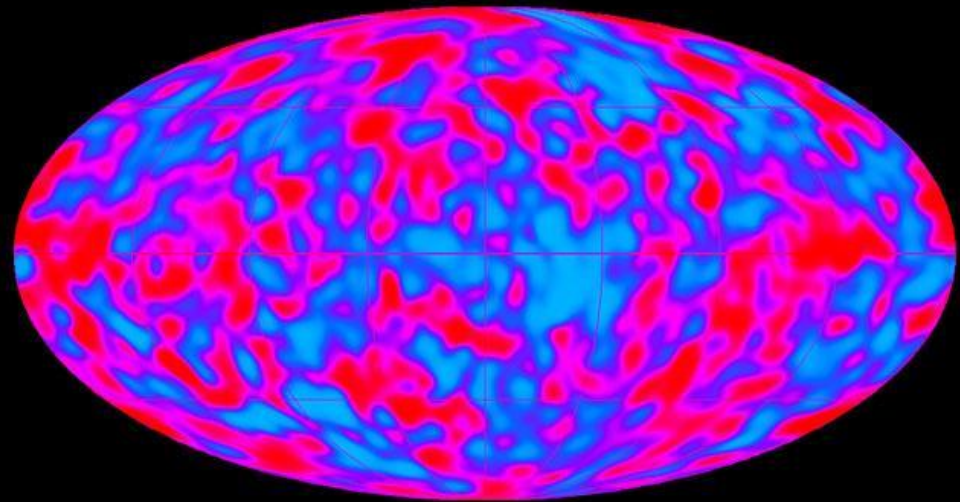
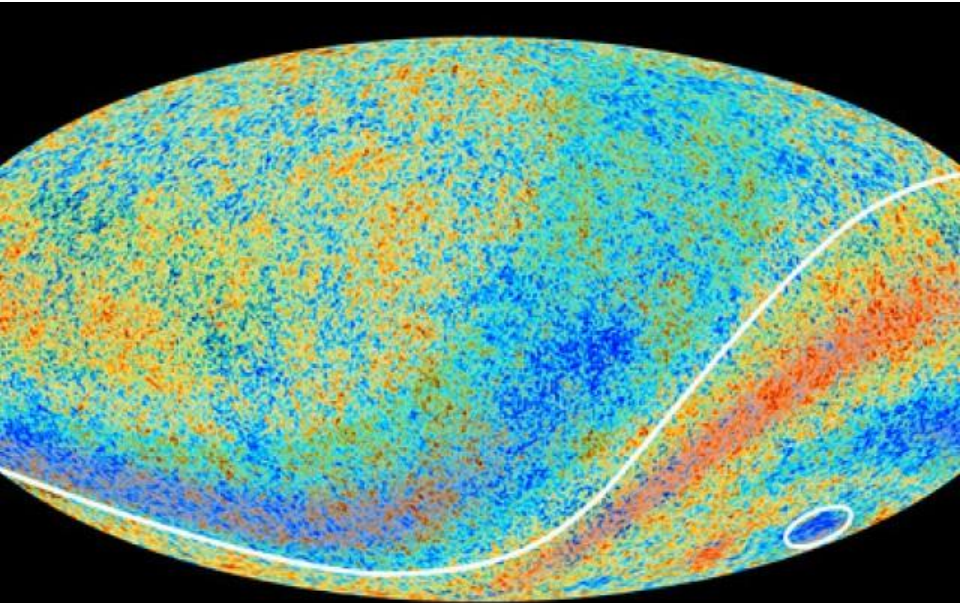
- ~~1. Sit in bucket~~
- ~~2. Smile~~
- ~~3. Make bubbles~~

# The mechanical talk



# Neutrino is the Immediate product of Gamma Ray Photon!

- Neutrino “annihilate” Neutrino  $\rightarrow$  Gamma ray!
  - Photon hit Proton  $\rightarrow$  pion/charged particle  $\rightarrow$  Muon/Neutrino
  - Neutral pions  $\rightarrow$  Gamma ray!
  - # 1 unbinding raw material is PHOTON!
  - # 1 coupled/structured raw material is Neutrino!
- IceCube : Neutrino Cosmos v.s Gamma ray telescopes



# The photon

- Photons are electromagnetic/radiation power
- Photons are carriers
- The carrier (e.g. the dirt power this toddler holds) is not a void



# Photon can be slowed Down!

- 1999, Lene Hau, a Harvard University physicist led a team to conduct an experiment at the Rowland Institute for Science
- They decreased a light beam speed “20 million-fold down” from 186,282 miles a second to a 38 miles an hour.
- "In this odd state of matter, light takes on a more human dimension; **you can almost touch it**" says Hau.  
**Can Neutrinos be slowed down?**





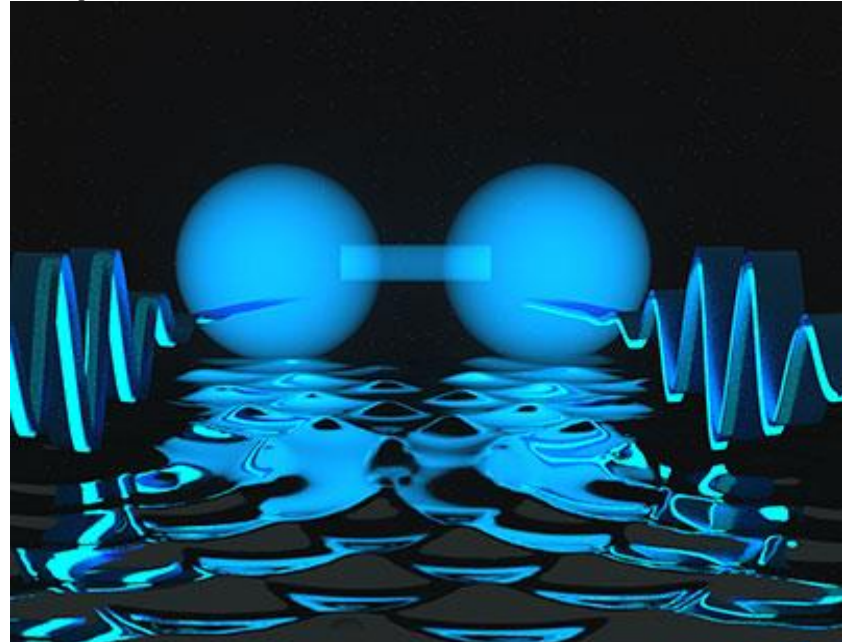
# The photon Bonding

- The photon bonding/coupling has recently been accomplished in an inorganic lab
- A remarkable discovery called The Rydberg blockade by coaxing photons into bonding together to form “molecules” – a state of matter by a group led by Harvard Professor of Physics Mikhail Lukin and MIT Professor of Physics Vladan Vuletic.



# The photon Bonding

- When a light photon is not paired, it possesses pure kinetic energy/radiation power with little gravitational effect (e.g. a solar ray!)
- If it is paired e.g. photon bonding or photosynthesis, it possesses positional energy/gravitation (e.g. the solar ray captured inside an apple).



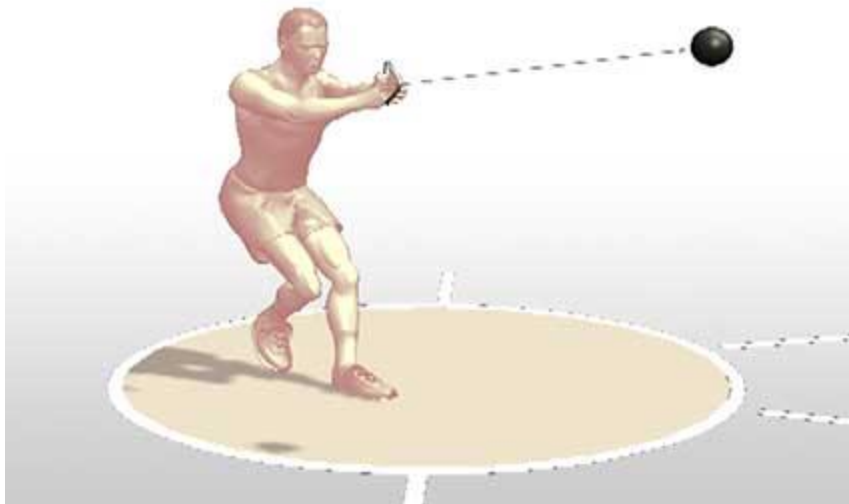
# 3 Bonding Possibilities

- The Neutral or “**Even Bonding**” of photons
- The  $-$  or  $+$  charged = Polarized or “**Non-Evenly Bonding**” of photons, **which is heavier or massive on one end than the other end!**
- The left-handed man is not “Anti-Human” compared to the Right-handed man!



# The mass

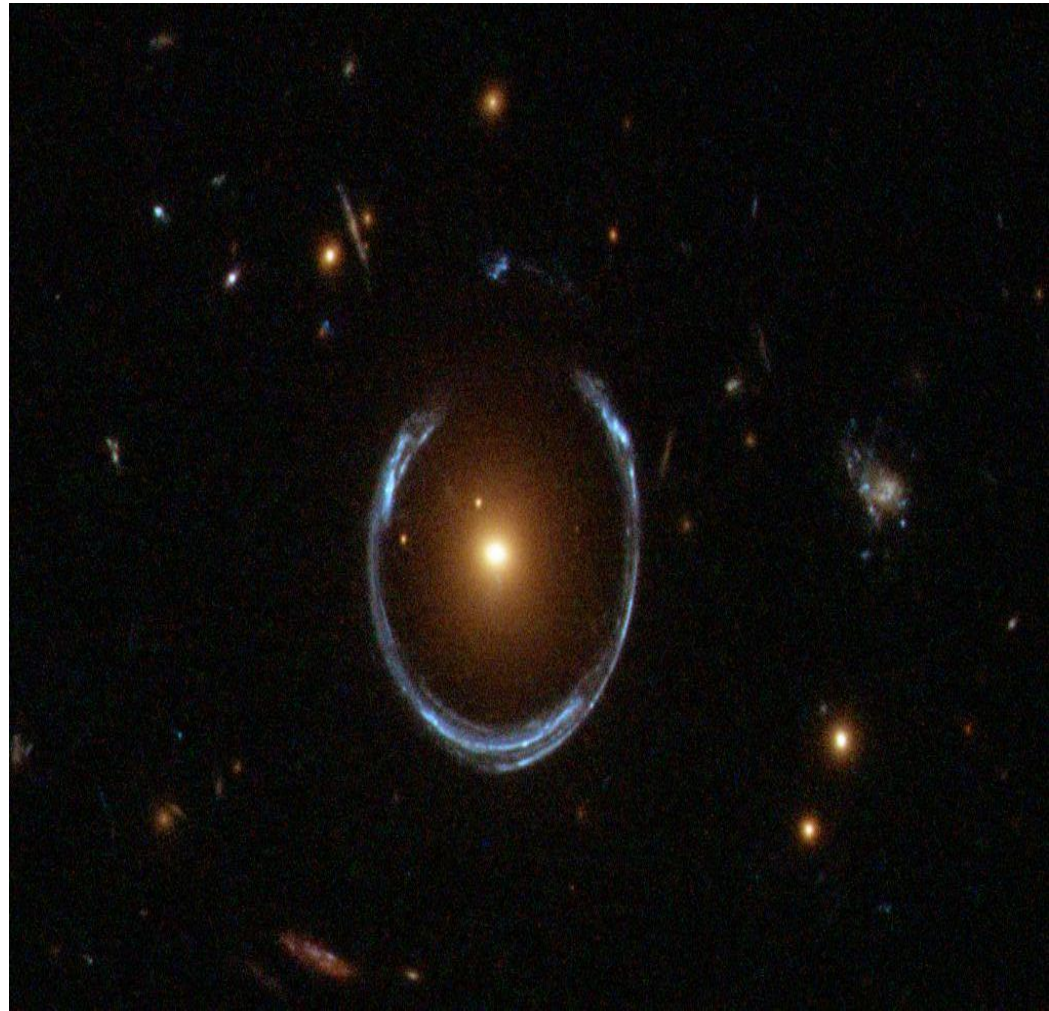
- The physical body (non-void) which is related to the force required to accelerate it
- It is related to its “inertia”, and it is essential to Newton's laws of motion.



# The light

- Light Polarization
- Gravity Lensing Effects
- Light is Mass

QX3 Polarized Light Digital Image



# The photon is Mass!



# The mass of a photon

- An upper limit has been inferred through satellite measurements of planetary magnetic fields: The Charge Composition Explorer spacecraft indicates an upper limit of  $6 \times 10^{-16}$  eV with high certainty. The improved new limit is  $7 \times 10^{-17}$  eV by Roderic Lakes in a laboratory experiment
- The Compton wavelength of a “particle” is equivalent to the wavelength of a photon whose energy is the same as the “rest”-mass energy of the “particle”. The  $m$  is the **photon mass**!  $C$  is the speed of light!  $h$ : Planck's constant



$$\lambda = \frac{h}{mc}$$

# The physical existence of a Photon

- The energy carrier has a physical existence that can be inferred by a nuclear force: At distances less than 0.7 fm (fm, or  $1.0 \times 10^{-15}$  metres), the nuclear force becomes repulsive. This repulsive component is caused by the physical size of photons!





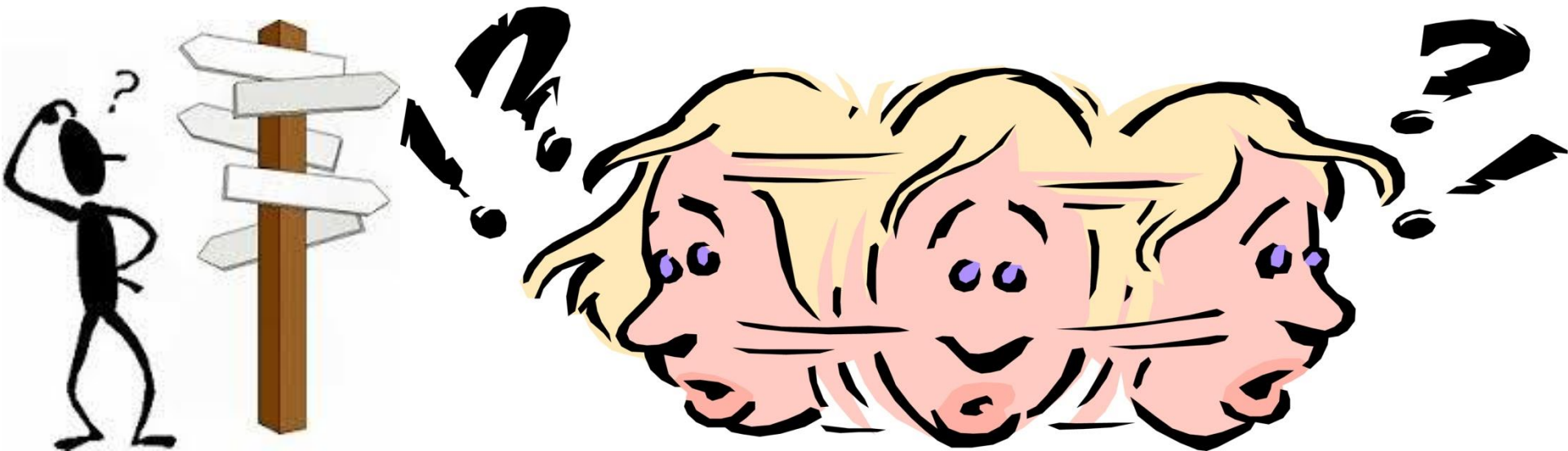
# The Unification of Mass and Force!

- The photon is the force/son of the majesty
- The photon is the carrier/father
- The photon is the majesty/holy spirit
- Does it sound familiar?



# The “rest” mass

- No particle can be in the state of “rest”
- The mass of different state is original and an “absolute” with Newtonian “certainty”.
- The insertion of “rest mass” fundamentally “shaketivitize” the Newtonian physics and lands many bright minds in a world of “uncertainty”.
- To assign a number value e.g. zero to a fabricated concept of “rest mass” further confuses people

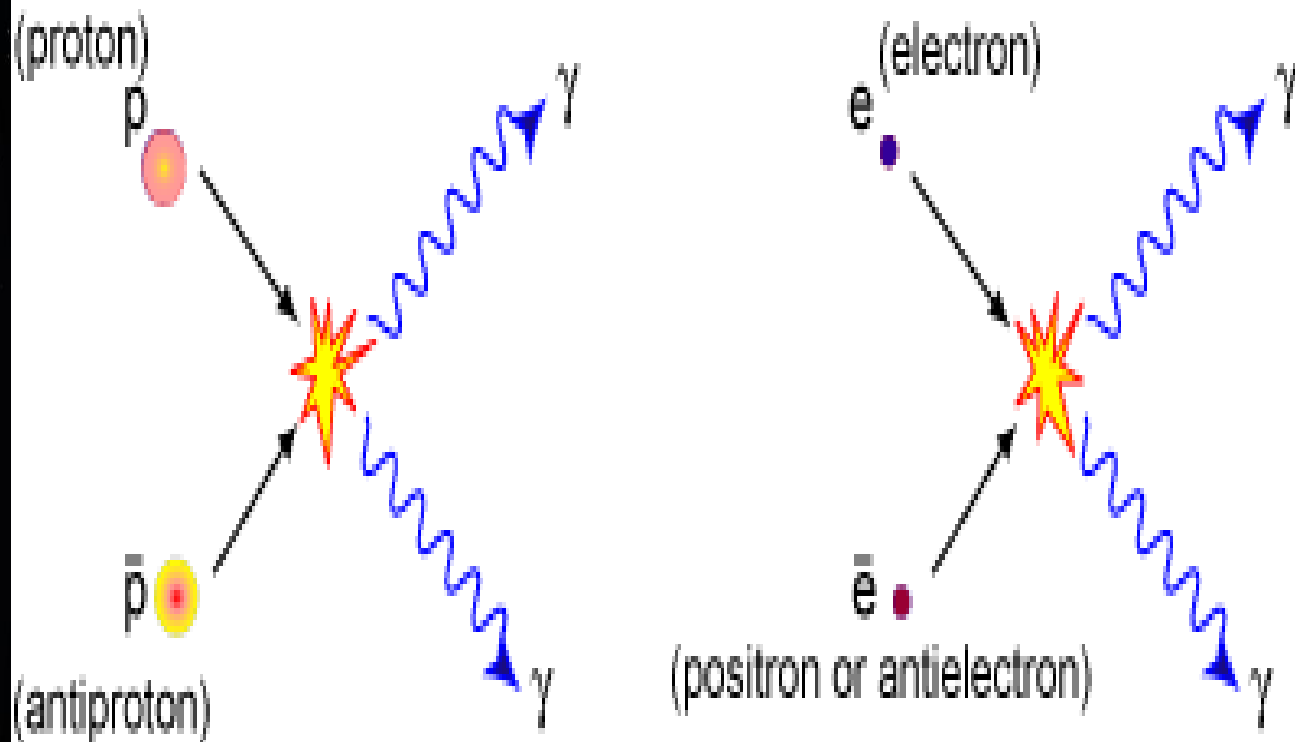


# “Annihilation” → Photons

- Neutron Star →  $\beta$  decay → neutrinos +  $e^-$  or  $e^+$  →  $\gamma$  photons + X-ray activities

i. Proton - Antiproton Annihilation

ii. Electron - Positron Annihilation



In each case the particle and its antiparticle annihilate each other, releasing a pair of high-energy gamma photons

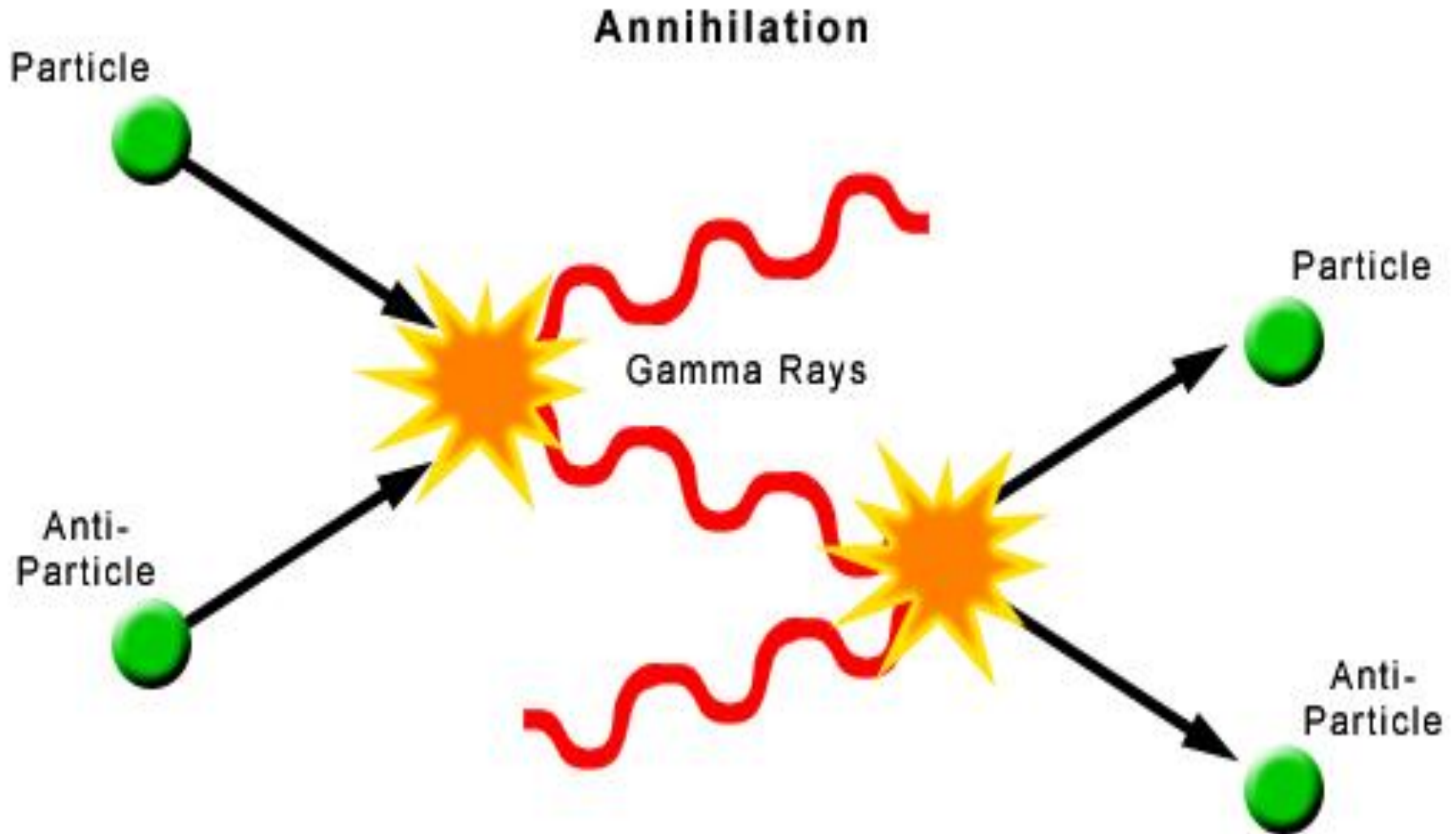
# “Antimatter/Antiparticles”

- The Particles ( $\alpha$ ! &  $\beta$ ) and “anti” particles ( $\alpha$  &  $\beta$ ) → Gamma rays! Neutrinos etc.
- The reverse of “Said Annihilation” → Turn lights into us!



# “Beyond a reasonable doubt”

- Photon  $\rightarrow$  Neutrino,  $\alpha$  &  $\beta$  particles  $\rightarrow$  nucleus



# The frozen space

- **The neutrino background** is still present today, with about 56 electron neutrinos, 56 electron “anti”-neutrinos, 56 “muon” neutrinos per cubic centimeter, for a total of 337 neutrinos per cubic centimeter in the Universe. (45%)
  - **The photons** of the CMBR are slightly more numerous with 411 photons/cc. (55%)
- \*[Astro.ucla.edu/](http://Astro.ucla.edu/) Edward L wright/neutrinos



# Neutrino

- $\beta^-$  decay  $^{14}\text{C}_6^+ \rightarrow ^{14}\text{N}_7^+ + e^- + \nu_e(-?)$
- $\beta^+$  decay  $^{23}\text{Mg}_{12}^+ \rightarrow ^{23}\text{Na}_{11}^+ + e^+ + \nu_e$
- Inverse  $\beta$  decay  $\nu_e(-?) + p \rightarrow n + e^-$



# The dark matter is Neutrino!

- $e^- + e^+ \rightarrow \gamma + \gamma$ . The electron ( $e^-$ ) and a positron ( $e^+$ ) are the decay products from neutron thru double beta decay
- The neutrinos are the #1 structured masses in cosmos!
- The “dark matter” is estimated to constitute 84.5% of the total matter in the universe

$e^-$   
electron

$\mu^-$   
muon

$\tau^-$   
tau

$$Q = -e$$

$\nu_e$   
electron  
neutrino

$\nu_\mu$   
muon  
neutrino

$\nu_\tau$   
tau  
neutrino

$$Q = 0$$

1<sup>st</sup> gen.

2<sup>nd</sup> gen.

3<sup>rd</sup> gen.



# The infrastructure of Black Hole

- A black hole is very cold - below 2.7 kelvin
- The “Cold” temperature freezes lights and mass that enter black hole!
- The black hole “chilling” with plasma



# The myth buster

- The  $\gamma$  ray burst is  $e^- + e^+ \rightarrow \gamma$  ray! (predominantly)
- The big bang is  $\nu_e^- + \nu_e \rightarrow \gamma$  ray! (predominantly)



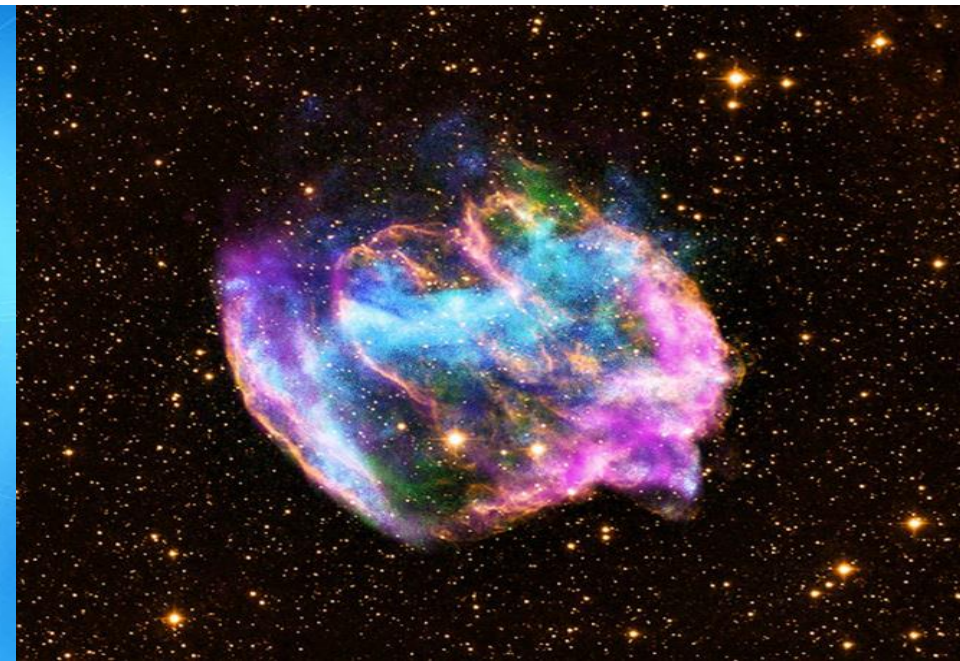
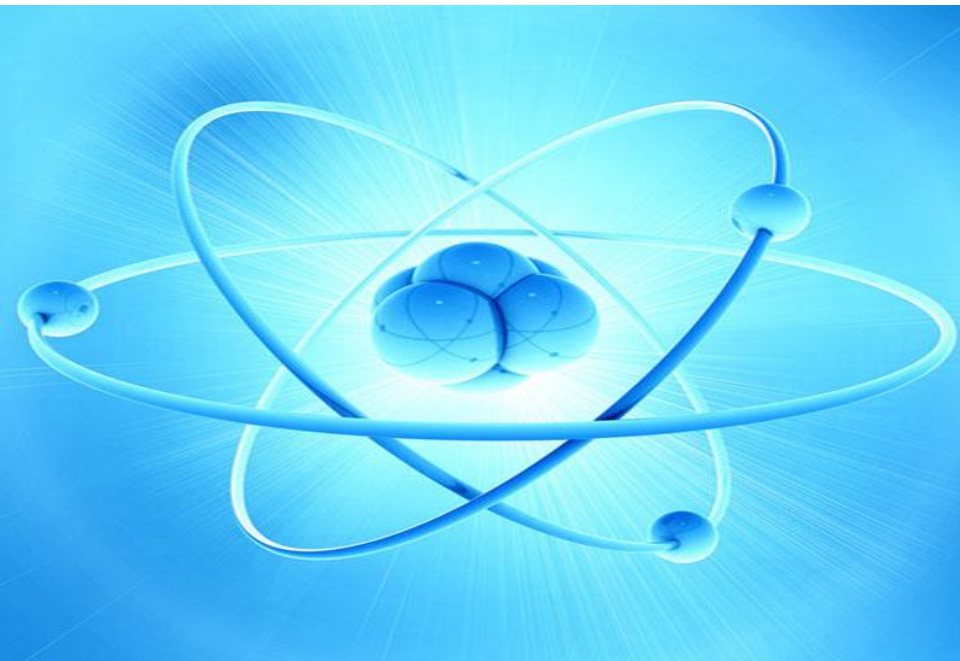
# The “Hot” hole vs “cold” hole

- Without electric magnetic power, everything collapse into a black hole – extraordinary cold!
- The Galactic nucleus or black hole is just a “cold” hole!!
- With electric magnetic power, everything inflates e.g. nucleus
- The strong and weak nuclear force are “Captured” electric magnetic power – directly from a big bang and supernova!  
Our atom nucleus is just a “hot” hole!!
- **2** basic forces – Electric magnetic power and Gravity!



# The **atom nucleus** vs **Galactic nucleus**

- The **atom nucleus** is a “**hot**” hole! The dark matter inside our hot nucleus is super active, demanding extraordinary bonding power/nuclear force that is captured directly from a big bang or supernova!
- The **black hole** is a “**cold**” hole! The big bang ray is “frozen” in the cold deep space which makes emulsion possible: congregate photons – **Galactic nucleus**/gravity generating!



## 2-Particle Mode

- The **neutrinos** are similar to the electron, with 1 difference: neutrinos **do not carry electric charge** - “**evenly bonding**” photons!
- The  $-$  or  $+$  charged = **Polarized** or “**Non-Evenly Bonding**” of photons, which is heavier or massive on one end than the other end!
- “2” particle table which are photon and Neutrino!
- The reverse of “Said Annihilation” : **Gamma rays!**  
**Neutrinos** → The Particles ( $\alpha!$  &  $\beta$ ) and “anti” particles ( $\alpha$  &  $\beta$ ) or Electron/Proton/Neutron

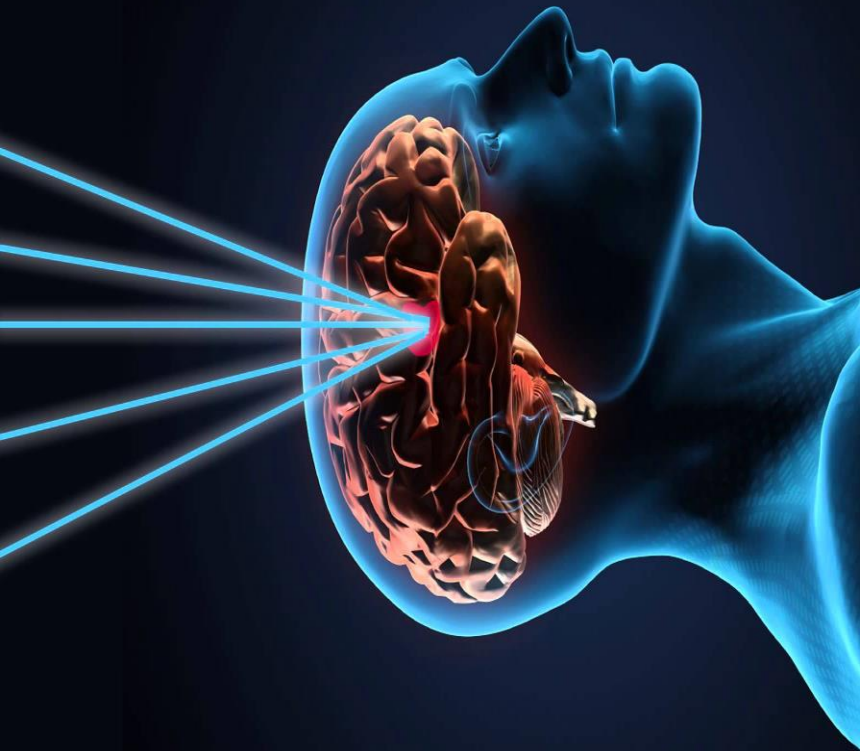
# “Single” or “Taken”

- **Light** is “decouple or **single**” photon : ready for **mingle** as single! e.g. light polarization etc.
- The **neutrino** is “coupled/bundled or **taken**” photons : **not available** e.g. Weakly Interacting Massive Particle or **wimp**



# Photon and Neutrino

- **Photon Engineering** – Communication/ optical computing, Artificial big bang ray
- **Neutrino Engineering** – Surgery or surgical alike operations/Turn target of interest into dark matter



# Controlled Collapse of chilling light effects

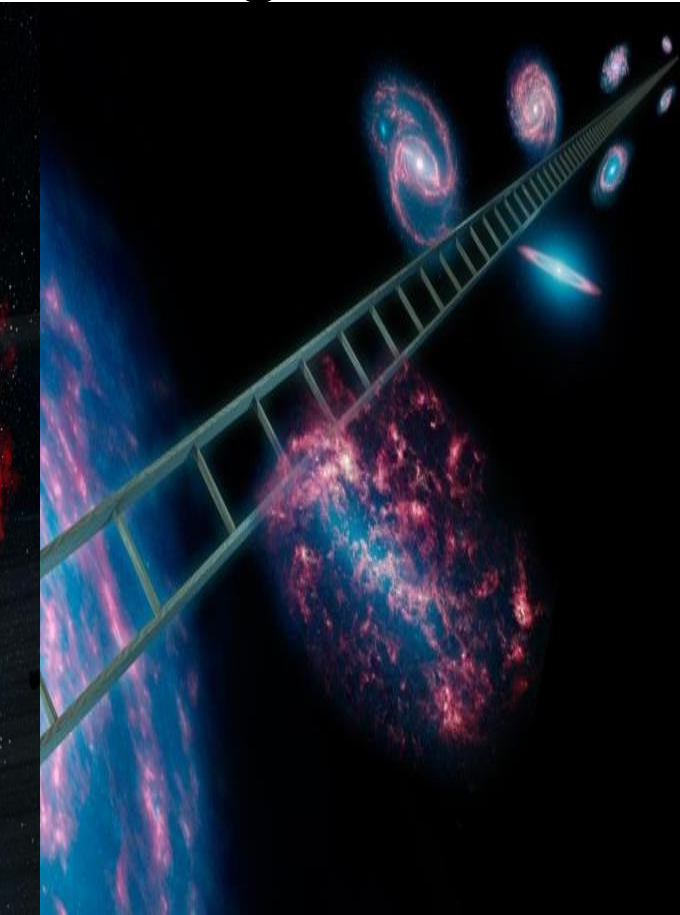
- Laser cooling refers to a number of techniques in which atomic and molecular samples are cooled down to near absolute zero through the interaction with one or more laser fields\* The Nobel Prize in Physics 1997
- Once the interactions are increased beyond a defined value, the condensates collapse and **rapidly lose 25-40%** in atom number\*





# Laser Neutrino Annihilation Synergistic Applicator©®

- Bloodless Surgery & Non-chemical antibiotics
- The most persuasive tool for peace talk
- Local Cosmos Reconstructive Engineering



The Gravity → The matter loves to  
“crunch” together!

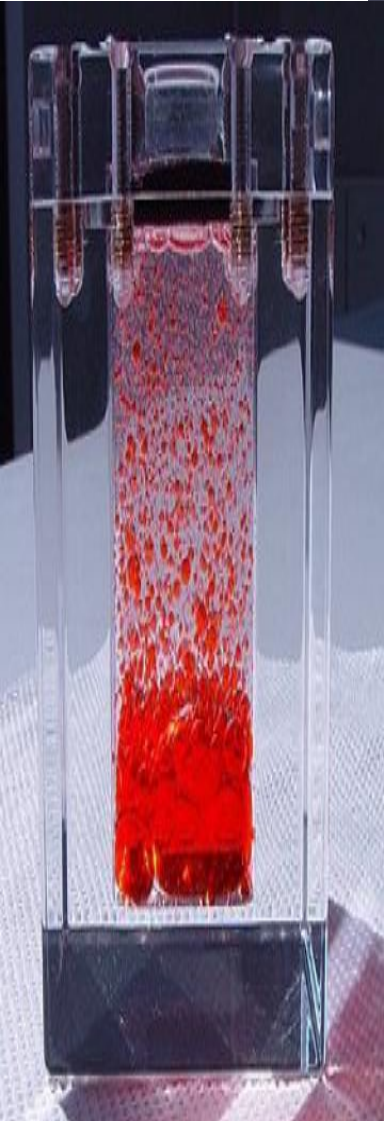


# The Gravity

- There are 2 basic forces: the gravity & the electromagnetic power/radiation
- The gravity is “crunching/orbiting” power
- The single orbiting power unifies matter & particles, because particles possess orbiting power/gravity when they are coupled (e.g. a photon!)
- The gravity leads to the big “crunch” → dark matter!
- The big “crunch” → The bang → The Kinetic energy!

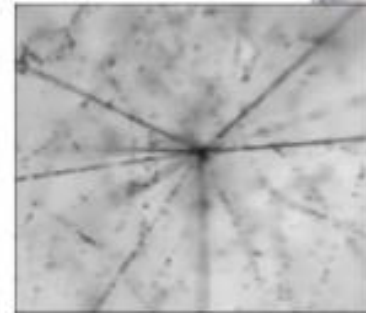
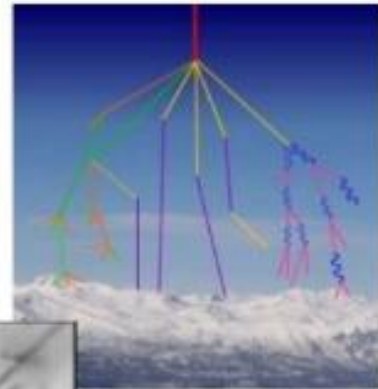
# Emulsion-A form of Gravity

- The “crunch” is preferable based on similarity
- Emulsion occurs ubiquitously!



## Nuclear Emulsion Applications

- Medical Application with Nuclear Emulsions(Proton Radiography).
- Emulsion Hybrid Telescope for Cosmic Gamma-Ray Observation.
- Cosmic-Ray Muon Radiography of Volcanos with ECC.
- Radiation Monitoring around Accelerator.
- The Detection of Dark Matter.
- Application to Neutrino Experiments.
- Muon Monitoring at Muon Pit at J-PARC.
- Electron/Pion Separation.
- OPERA Experiment.



# The Universe Inflation and Focal “Collapse”/Focal “Crunch”

- The initial universe’s inflation is powered by a big bang’s photons
- The secondary inflation of galaxies is fueled by their star’s photons.
- The focal collapse is due to the fact that their stars run out of fuel, which subsequently ages galaxies to their dwarf stage/senior citizen, which are mostly made of dark matter along with fewer stars.

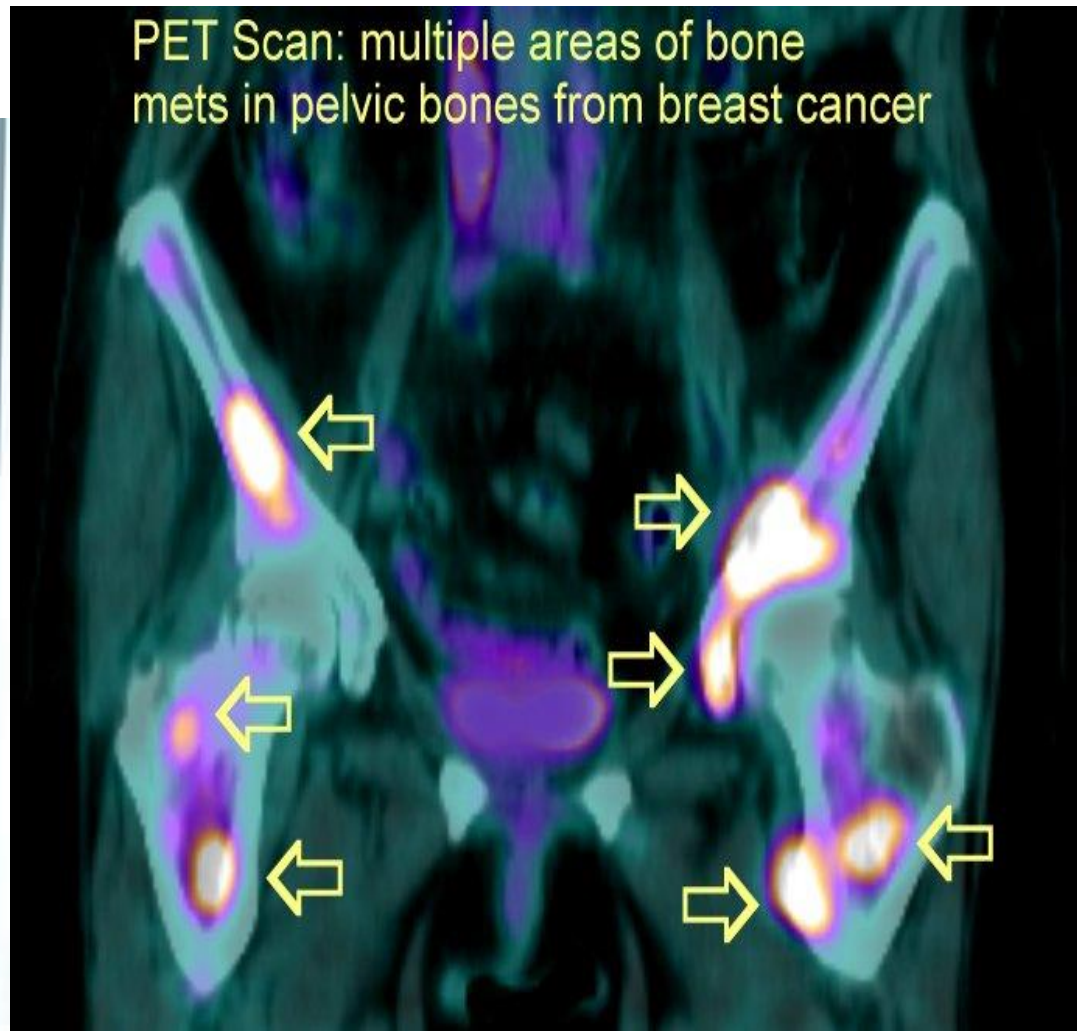
# The Universe Inflation & focal Crunch

- The big bang & star's radiation → inflation
- The loss of radiation → The big “crunch” of matter/the pre-big bang dark matter
- The **Destiny** of kinetic energy → The positional energy
- The **Destiny** of positional energy → the kinetic energy
- The **Destiny** of a single photon → The paired/bundled photons
- The **Destiny** of a paired/bundled photons → the single photon



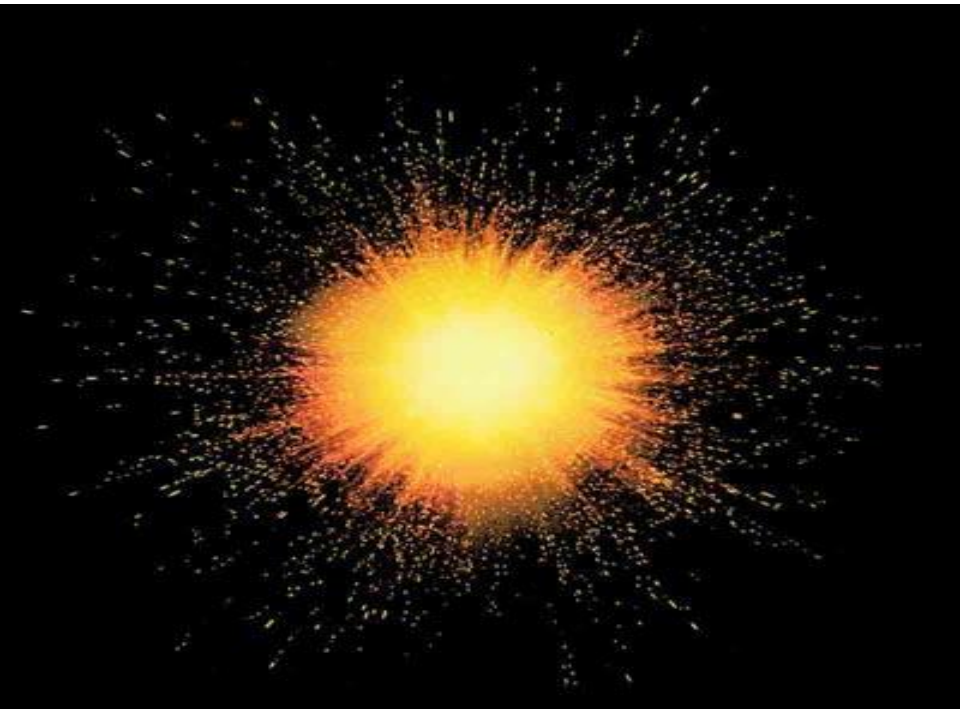
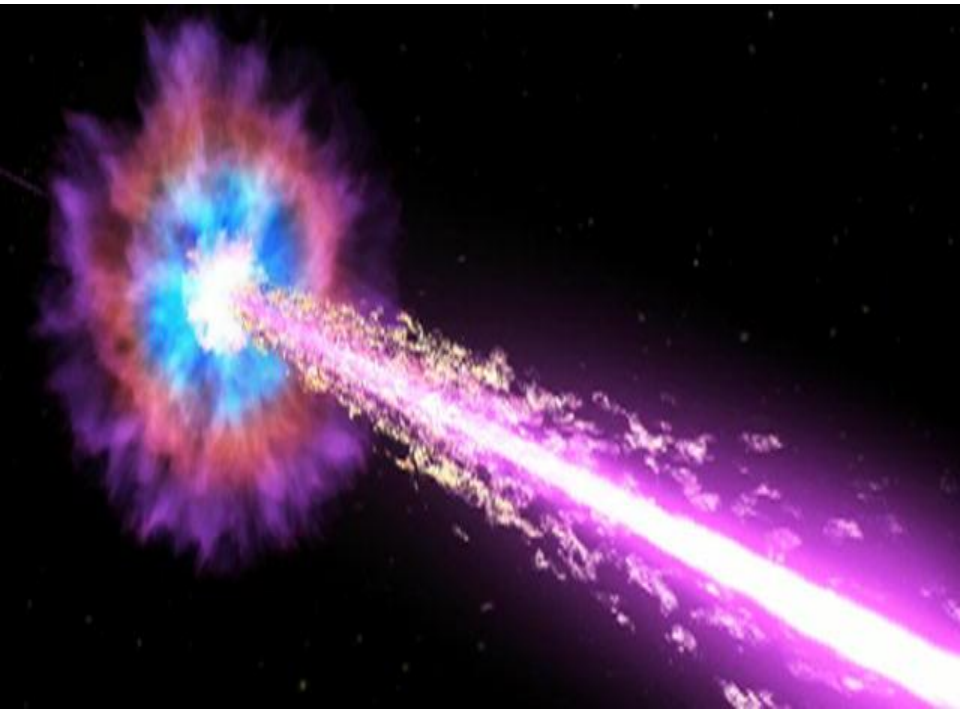
# Pet-Scan

- The PET scan detects pairs of gamma ray photons emitted indirectly by a positron-emitting radionuclide (tracer), which is introduced into the body such as FDG
- $e^{-} + e^{+} \rightarrow \gamma + \gamma$



# $\gamma$ – ray

- $e^- + e^+ \rightarrow \gamma + \gamma$ . The electron ( $e^-$ ) and a positron ( $e^+$ ) are the ionized clouds surrounded black hole. This is the recipe for gammy ray burst!
- The interchange of proton and neutron will release **electron and neutrino**.
- $\nu_e^- + \nu_e \rightarrow \gamma$  ray! (predominantly)
- **That is a recipe for a big bang!**





The big bang is  $\gamma$  – ray!



The mother of our big bang-the big “crunch” of  
matters/dark matters!

- The Zion of our galaxies (Zolaxy)



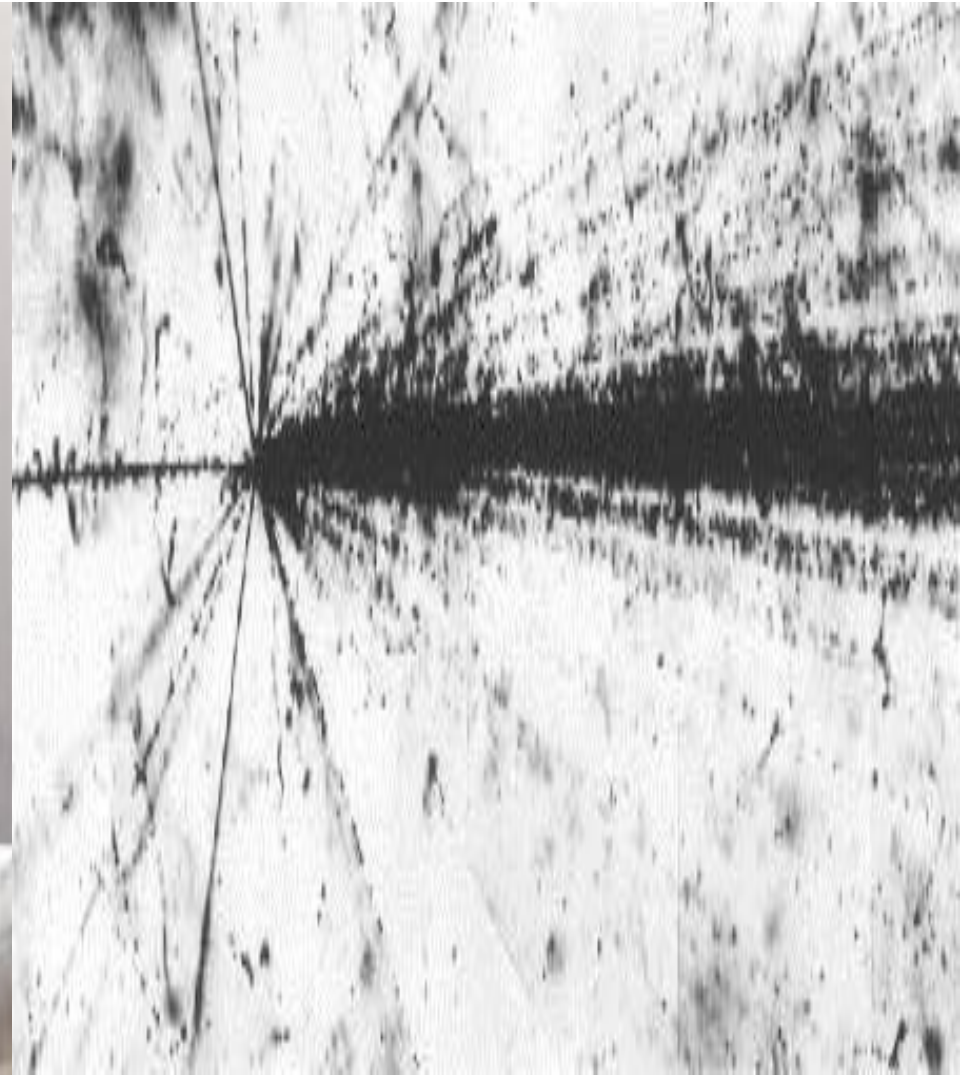
# The “dark matter”

- 27% “dark matter”, 68% “dark” energy and 5% normal matter source\* NASA
- Neutrinos (They are Mass!) – dark matter/black hole
- Cosmic Rays/photons (They are Mass!)



# The “dark energy”

- The Emulsion power in Space!
- The energy associated with “dark matter”



$$E=MC^2$$

- The universe is an enclosed system where nothing exists outside.
- Given the open space within, **the little “loss or gain” of mass/energy in space happens continuously which is “absolute” with Newtonian “Certainty” !**
- The changing of mass/energy will lead to the changing of velocity (Colorful or WOW effects)
- **The velocity or “time-scaled” process is the result from such said mass/energy’s changing; it is not the other way around!**
- **How and where we look at “time-scaled” process is “irreverestic” to the “loss or gain” of mass/energy**
- The space is just a void



# The fountain of **certainty**

- The loss/gain of mass/energy in a void/space is **ABSOLUTE!**  
e.g. in our universe.
- The velocity or “time-scaled” process is the result from such said mass/energy’s changing; it is not the other way around!
- The **artificial time** is **irrelevant** to mass/energy changing.
- **No particle** can exist in the **state of “rest”**.
- The mass in different state is “absolute” with Newtonian “certainty”.
- The insertion of “**rest mass**” fundamentally “**shaketivitize**” the **Newtonian physics** and lands many bright minds in a fantasy world of “**uncertainty**”.
- To **assign** a **number** value e.g. **zero** to a **fabricated concept** of “rest mass” further **drowns** everyone who is near to it.



# The Mass/Energy Evolution

- $E_{\text{bigbang}} = E_{\text{kinetic energy}} + E_{\text{positional energy}}$
- The **Destiny** of **kinetic** energy  $\rightarrow$  **positional** energy; the **Destiny** of **positional** energy  $\rightarrow$  **kinetic** energy.
- The **Destiny** of a **single** photon  $\rightarrow$  "**marry**" another photon; the **Destiny** of "**married**" photons  $\rightarrow$  **separated** from its partner.
- The big bang's **Photons (emulsion/bonding)**  $\rightarrow$  **neutrino & electron**  $\rightarrow$  **protons & neutrons/primordial nucleons formation**
- The "initial" /or unstable nucleus's decay  $\rightarrow$  **dark matter/neutrino**  $\rightarrow$   **$\beta$  decay**  $\rightarrow$  **electric activities/x-rays and  $\lambda$  ray bursts**

# You

- The radiation/photon → dark matter/neutrino → visible matter/inorganic matter → organic matter → you → collapse → pre big bang dark mass/neutrino → big bang → → → you again!





The mechanism of our universe is ridiculously simple!

- As John Wheeler once said, "Some principle uniquely right and uniquely simple must, when one knows it, be also so obvious that it is clear that the universe is built, and must be built, in such and such a way and that it could not possibly be otherwise."



Our beautiful universe!- [r4b.us](http://r4b.us)

