

# Cosmology

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Return to ancient concept of colliding  
atoms provides the answers to our  
questions

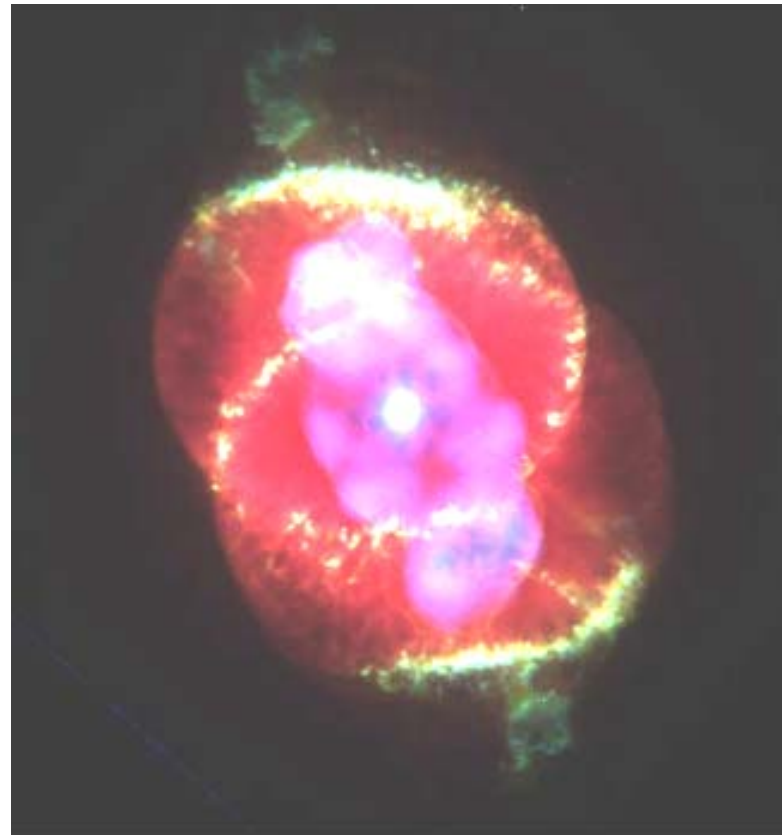
# What's out there?

- Key Question: What causes the Hubble redshift?
- Direction change in collisions IS the loss of energy of photon during progression!
- GR described space-time deformation AND photon energy loss are the same!



# Photon and massive particles

- In collision representation the photons are (mostly) two collision systems with a mass-equivalent photon at the top
- The massive particles contain an *ALWAYS* present system of collisions
- The photons move on the spontaneous collisions
- The particles multiply the spontaneous collisions within their boundary



# Mass-equivalent photon

$$P_{c0} = \frac{2}{3} \times \frac{m_0 \times c^2}{H_d} = G \times h \times \nu_0 = \frac{2}{3} \times \frac{h \times \nu_0}{H_d}$$

Gravitational deformation power of mass-equivalent photon equals to its conservation power and equals to the '0-point energy generation rate' of the background substance

# Background Substance Density

$$\rho_{nu} = \frac{3 \times 1.6605655 \times 10^{-27}}{3.65625 \times \pi \times (1.42 \times 10^{-15})^3} = 1.5146667 \times 10^{17} \text{ [kg/m}^3\text{]}$$

$$m_f = \frac{3}{32} \times (3 \times 2^9)^2$$

$$\rho_0 = \frac{\rho_{nu}}{m_f} = 6.848 \times 10^{11} \text{ [kg/m}^3\text{]}$$

# Hubble wavelength doubling time constant

$$H_d = \frac{2}{3} \times 2^{14} \times \frac{M_e \times c_0^2}{\rho_{nu} \times G_0 \times h} = 4.234 \text{ Gyr}$$

$$z = 2^{\frac{t}{H_d}} - 1$$

**Use of New Hubble  
constant:**

$$t = 4,234 * \ln(z+1)/\ln(2)$$

**NGC1232  $v=1776$  km/s**

**$t= 36$  mly**

**NGC1232A  $v=6552$  km/s**

**$t= 132$  mly**

**NGC1232?  $V=28,000$   
km/s**

**$t=545$  mly**

**All three galaxies are  
about the same size as the  
Milky Way!**



Spiral Galaxy NGC 1232 - VLT UT 1 + FORS1

# Properties of Background Substance

$$N_{sc} = \frac{27 A_0}{m_e} = \frac{27 * 6.848 \times 10^{+11}}{9.10938188 \times 10^{-31}} = 2.03 \times 10^{+43} [\text{collision}]$$

$$\bar{\alpha}_0 = \sqrt[3]{V_{\text{collision}}} = 3.666 \times 10^{-15} [\text{m}] = 3.666 \text{ [}.$$

$$\bar{t}_0 = \frac{\bar{\alpha}_0}{c} = 1.222 \times 10^{-23} [\text{s}]$$

# Mass effects the properties

$$a_{sc}(R, m) = \frac{a_0}{\left(1 - \frac{Gm}{c^2 R}\right)^2} \quad c(R, m) = c_0 \left(1 - \frac{Gm}{c^2 R}\right)$$

$$G(R, m) = G_0 \left(1 - \frac{Gm}{c^2 R}\right)^2 \quad H_\alpha(R, m) = H_{\alpha 0} \left(1 - \frac{Gm}{c^2 R}\right)^2$$

$$M = \frac{3.65625}{3} \mathcal{M}^3 221,184 \frac{a_{v0}}{(1 - z_g)^2} \quad \text{Neutron star mass vs radius}$$

# Fundamental Parameters

- Reflect energy loss at transition from mass

$$E = mc^2(1-k^2) \quad \text{Bohr radius:} \quad a_0 = 2\pi \frac{1}{1-k^2} r_\gamma$$

$$\text{where} \quad r_\gamma = \frac{27h}{8m_e c}$$

$$k = \frac{1}{6 + \frac{1}{124 - \frac{1}{27}}}$$

$$\alpha = \frac{2(1-k^2)}{27\pi^2}$$

$$e^2 = \frac{4(1-k^2)}{27\pi^2} * c * \epsilon_0 * h$$

$$R_\infty = \frac{(1-k^2)^2}{27\pi^4 * 4r_\gamma}$$

## GR described effects from collision structure

$$\varphi = \frac{Gm}{c^2 r}$$

$$l' = l(1 - \varphi)^{2/3}$$

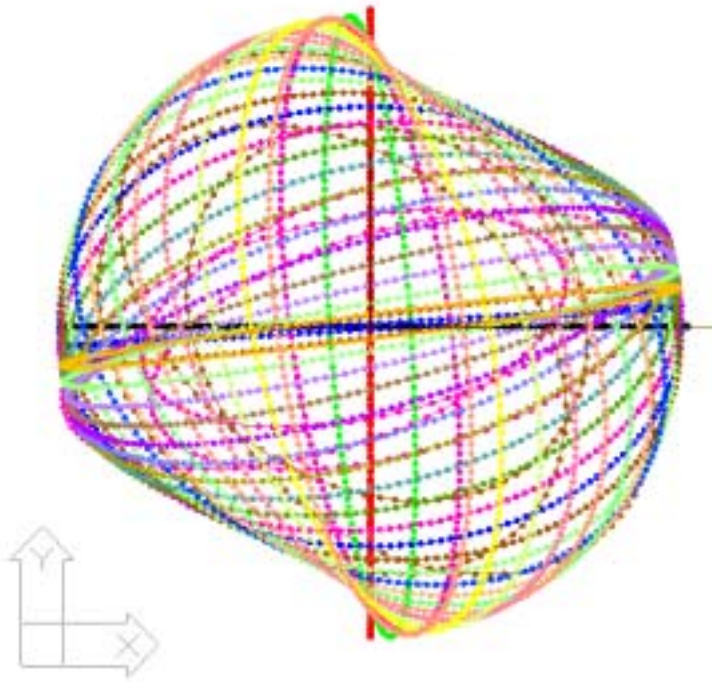
$$t' = t(1 - \varphi)^{-1/3}$$

$$z_{gr} = \varphi$$

$$c' = c(1 - \varphi)$$

- They do not equal to earlier expectations, but close to them
- Length contraction
- Time dilation
- Gravitational redshift  
ALWAYS equal to gravitational potential and represents a Doppler effect from empty space light propagation speed

# Nuclear Shape from Collisions



- Collisions in  $3 \cdot 2^i$  polygons rotated and tilted,  $5 < i < 11$  shells contain the element
- Electron rest-mass = 27 collisions always present
- neutron - 6 shells + 13 chains of 96 collisions
- proton - 6 shells + 6 chains of 192 + 27 charge related

# Galactic shape – sign of flows

- Collision cosmology works with no big bang
- No ‘non-baryonic’ dark matter and no dark energy
- The galactic velocities are caused by G change
- The Shapiro-effect represents the light propagation velocity change
- Super-massive galactic centers form from neutron stars, similarly to nuclei of atoms, but replacing each collision with a whole neutron star