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Gravitational Interaction of Two Galactic Black Holes after Collision of Two Galaxies

Key words: Galactic black holes, collision, gravitational power of the attraction, centrifugal power, hyperspace-energy of the universe, speed of the light.

Annotation: Calculation of interaction of two galactic black holes at collision of galaxies we conduct on a basis not the classical theory of gravitation with reference to strong gravitational fields. Not the classical gravitational theory allows constructing the equation of gravitational force of interaction of two galactic black holes that allows calculating the minimum distance and a maximum velocity of coming together of two facing galaxies.

$$\boxed{\mathbb{G}_{\star\mathbf{nos}} = \frac{2\pi\sigma \cdot r_\mu \cdot Ç^4_{\mu\star}}{\frac{1}{\mathbb{N}_{os}} \cdot E_\mu \cdot \frac{Ç^2_{\mu\star}}{Ç^2_\star}}}$$

→ where:

- $\mathbb{G}_{\star\mathbf{nos}}$ → gravitational constant of the galactic black holes
- $r_\mu = \beta_\gamma^{\frac{2}{5}};$ → radius of the action eta – muons interacting black holes;
- $Ç_{\mu\star} \cdot T_\star = r_\mu; \quad Ç_{\mu\star} = \frac{r_\mu}{T_\star} = \frac{r_\mu}{\frac{1}{Ç_\star}} = \frac{Ç_0}{\beta_\gamma^5} \cdot \beta_\gamma^{\frac{2}{5}} = \frac{Ç_0}{\beta_\gamma^{23/5}};$
- $\beta_{\gamma\star} \cdot r_\mu = 1; \quad \beta_{\gamma\star} = \frac{1}{r_\mu} = \frac{1}{\beta_\gamma^{2/5}};$ → speed and energy eta – muons interaction of the black holes;
- $E_{\mu nos} = \frac{1}{\mathbb{N}_{os}} \cdot E_\mu = \frac{1}{\mathbb{N}_{os} \cdot \beta_\gamma^{51/5}} = M_{\mu nos} \cdot Ç^2_\star;$
- $E_{\mathbb{G}nos} = \frac{1}{\mathbb{N}_{os}} \cdot E_\mu \cdot \frac{Ç^2_{\mu\star}}{Ç^2_\star} = M_{\mu nos} \cdot Ç^2_{\mu\star};$ где $M_{\mu nos}$ → gravitational mass of the galactic black hole in own hyperspace – energy;

$$\mathbb{G}_{\star nos} = \frac{2\pi\sigma \cdot r_\mu \cdot Ç^4_{\mu\star}}{\frac{1}{\mathbb{N}_{os}} \cdot E_\mu \cdot \frac{Ç^2_{\mu\star}}{Ç^2_\star}} = \frac{\frac{2\pi\sigma}{\beta_{\gamma\star}} \cdot Ç^4_{\mu\star}}{\mathbb{N}_{\star nos} \cdot \beta_{\gamma\star}} = \frac{2\pi\sigma}{\mathbb{N}_{\star nos}} \cdot \frac{Ç^4_{\mu\star}}{\beta^2_{\gamma\star}} = \Upsilon^2_{\star nos} \cdot \frac{Ç^4_{\mu\star}}{\beta^2_{\gamma\star}}; \quad \boxed{\Upsilon^2_{\star nos} = \mathbb{G}_{\star nos} \cdot \frac{\beta^2_{\gamma\star}}{Ç^4_{\mu\star}}}$$

$\Upsilon^2_{\star nos}$ → gravitational moment of the energy of the interaction of the galactic black holes;

$$\mathbb{G}_{\star nos} = 2\pi\sigma \cdot \mathbb{N}_{os} \cdot \frac{r_\mu}{E_\mu} \cdot Ç^2_{\mu\star} \cdot Ç^2_\star = \frac{2\pi\sigma \cdot \mathbb{N}_{os} \cdot Ç^4_0}{\beta_\gamma^{43/5}} = 10^{432.4707705} \frac{\text{см}^3}{\text{sec}^2 \cdot \text{gr}};$$

$$\Upsilon^2_{\star_{nos}} = 2\pi\sigma \cdot \mathbb{N}_{os} \cdot \beta^9_\gamma = 10^{-326.164343} erg \cdot см;$$

Gravitational power of the attraction two galactic black holes:

$$F_{\star_{nos}} = 2 \cdot \frac{\mathbb{G}_{\star_{nos}} \cdot M^2_{\mu nos}}{r^2_\mu} = \frac{4\pi\sigma}{r_\mu} \cdot \frac{1}{\mathbb{N}_{os}} \cdot E_\mu \cdot \frac{Ç^2_{\mu\star}}{Ç^2_\star} = \frac{4\pi\sigma}{\mathbb{N}_{os} \cdot \beta_\gamma^{49/5}} = 10^{359.2833466} dyne;$$

Centrifugal power, acting on each of galactic black holes is in size and opposite action on direction gravitational power:

$$F_{\star_{nos}} =; 2 \cdot M_{\mu nos} \cdot \frac{dÇ_{\mu\star}}{dT_\star} = 2 \cdot M_{\mu nos} \cdot Ç_{\mu\star} \cdot \frac{d\varphi_\star}{dT_\star} = 2 \cdot M_{\mu nos} \cdot Ç_{\mu\star} \cdot \omega_\star ;$$

$$\boxed{\omega_\star = \frac{d\varphi_\star}{dT_\star} = \frac{2\pi\sigma}{T_\star} = \frac{2\pi\sigma}{1/Ç_\star} = \frac{2\pi\sigma}{r_\mu/Ç_{\mu\star}}}$$

$$F_{\star_{nos}} = 2 \cdot M_{\mu nos} \cdot Ç_{\mu\star} \cdot \frac{2\pi\sigma}{r_\mu/Ç_{\mu\star}} = \frac{4\pi\sigma}{r_\mu} \cdot M_{\mu nos} \cdot Ç^2_{\mu\star} = \frac{4\pi\sigma}{r_\mu} \cdot \frac{1}{\mathbb{N}_{os}} \cdot E_\mu \cdot \frac{Ç^2_{\mu\star}}{Ç^2_\star} = \frac{4\pi\sigma}{\mathbb{N}_{os} \cdot \beta_\gamma^{49/5}};$$

If matter with energy in hyperspace-energy of the universe falls into gravitational trap of the galactic black holes with gigantic power gets sucked into her centre, fission on eta-muons $\rightarrow \beta_{\gamma_\star}$. Not a single eta-muon can not abandon its. We shall prove it:

$$2 \cdot \mathbb{G}_{\star_{nos}} \cdot M_{\mu nos} \cdot m_{\gamma\star} \cdot \left(\frac{1}{r_\mu} - \frac{1}{r}\right) = \beta_{\gamma\star}; \ \rightarrow \ 4\pi\sigma \cdot r_\mu \cdot \left(\frac{1}{r_\mu} - \frac{1}{r}\right) = 1; \ \ 1 - \frac{r_\mu}{r} = \frac{1}{4\pi\sigma}; \ \ r = \frac{r_\mu}{1 - \frac{1}{4\pi\sigma}};$$

$$r = \beta_\gamma^{2/5} \cdot 1.020840313;$$

Gravitational attraction or rapprochement two galaxies:

$$\mathbb{G} = \frac{2\pi\gamma \cdot r_{nop} \cdot Ç^2_0 \cdot C^2_0}{\frac{1}{\mathbb{N}_{op}} \cdot E_\mu \cdot \frac{Ç^2_{nop}}{Ç^2_\star}}; \ \ E_{\mu nop} = \frac{1}{\mathbb{N}_{op}} \cdot E_\mu \cdot \frac{Ç^2_{nop}}{Ç^2_\star} = \frac{2\pi\gamma r_{nop} Ç^2_0 C^2_0}{\mathbb{G}}; \ \ M_{\mu nop} = \frac{E_{\mu nop}}{Ç^2_0} = \frac{2\pi\gamma r_{nop} C^2_0}{\mathbb{G}};$$

$$M_{\mu nop} = \frac{2\pi\gamma r_{nop} C^2_0}{\mathbb{G}} = 9.019939421 \cdot 10^{46} gr; \rightarrow \left[\begin{matrix}\text{gravitational mass of the galactic black hole} \\ \text{in space -- energy of the galaxy}\end{matrix}\right]$$

Gravitational power of the mutual attraction of the galaxies:

$$F_{\star_{nop}} = 2 \cdot \frac{\mathbb{G} \cdot M^2_{\mu nop}}{r^2}; \rightarrow \ 2 \cdot \int F_{\star_{nop}} \cdot dr = \Delta\left(M_{\mu nop} \cdot V^2_c\right); \rightarrow$$

$$\frac{2 \cdot \mathbb{G} \cdot M^2_{\mu nop}}{r} \sim M_{\mu nop} \cdot V^2_c; \ \ \frac{2 \cdot \mathbb{G} \cdot M_{\mu nop}}{r} \sim V^2_c; \ \rightarrow \ \frac{4\pi\gamma r_{nop} C^2_0}{r} \sim V^2_c; \ \ \frac{4\pi\gamma r_{nop}}{r} \sim \frac{V^2_c}{C^2_0};$$

$$V_c = C_0; \rightarrow r \sim 4\pi\gamma r_{nop} = 1.357339948 \cdot 10^{19} \text{см};$$

At rapprochement of the galaxies comparatively their centre-black holes, on distance $r \sim 4\pi\gamma r_{nop}$, their speeds of the rapprochement reach speed of the light!