

Guess about the equations in the form of gravity

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Abstract: By analogy with Maxwell's equations in electromagnetic form, we can find a group of equations in gravitational form that looks very interesting.

Key words: Charge, magnetic monopole, Maxwell equations, gravitational constant.

Maxwell's equations in electromagnetic form are equivalent to,

$$(\mathbf{E}) = \frac{1}{(4\pi)(\epsilon_0)(\mathbf{r})^2} * (\varphi_{\mathbf{B}}) = -\frac{(2\pi)(\mathbf{i})(\varphi_{\mathbf{E}})^3}{(4\pi)^2(\mathbf{R}_{\infty})^2(\varphi_{\mathbf{B}})^3(\mathbf{r})^2} * (\varphi_{\mathbf{B}}) ,$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{E}) = \frac{1}{(\epsilon_0)} * (\varphi_{\mathbf{B}}) , \\ 2, (\nabla \times \mathbf{E}) = -\frac{\partial \mathbf{B}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{B}) = 0 , \\ 4, (\nabla \times \mathbf{B}) = (\mu_0) * (\mathbf{J}_{\mathbf{E}}) + \frac{1}{(\mathbf{c})^2} * \frac{\partial \mathbf{E}}{\partial t} , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{E}) = \frac{1}{(\epsilon_0)} * (\varphi_{\mathbf{B}}) , \\ 2, (\nabla \times \mathbf{E}) = -\frac{1}{(\epsilon_0)} * (\mathbf{J}_{\mathbf{B}}) - \frac{\partial \mathbf{B}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{B}) = -(\mu_0) * (\varphi_{\mathbf{E}}) , \\ 4, (\nabla \times \mathbf{B}) = (\mu_0) * (\mathbf{J}_{\mathbf{E}}) + \frac{1}{(\mathbf{c})^2} * \frac{\partial \mathbf{E}}{\partial t} , \\ 5, (\mathbf{i}) * (\mathbf{E}) = (\mathbf{c}) * (\mathbf{B}) , (\mathbf{i}) * (\mathbf{J}_{\mathbf{E}}) = (\mathbf{c}) * (\mathbf{J}_{\mathbf{B}}) , (\mathbf{i}) * (\varphi_{\mathbf{E}}) = (\mathbf{c}) * (\varphi_{\mathbf{B}}) , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{E}) = -\frac{(2\pi)(\mathbf{i})(\varphi_{\mathbf{E}})^3}{(4\pi)(\mathbf{R}_{\infty})^2(\varphi_{\mathbf{B}})^3} * (\varphi_{\mathbf{B}}) , \\ 2, (\nabla \times \mathbf{E}) = \frac{(2\pi)(\mathbf{i})(\varphi_{\mathbf{E}})^3}{(4\pi)(\mathbf{R}_{\infty})^2(\varphi_{\mathbf{B}})^3} * (\mathbf{J}_{\mathbf{B}}) - \frac{\partial \mathbf{B}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{B}) = -\frac{(2\pi)(\mathbf{i})(\varphi_{\mathbf{E}})}{(4\pi)(\mathbf{R}_{\infty})^2(\varphi_{\mathbf{B}})} * (\varphi_{\mathbf{E}}) , \\ 4, (\nabla \times \mathbf{B}) = \frac{(2\pi)(\mathbf{i})(\varphi_{\mathbf{E}})}{(4\pi)(\mathbf{R}_{\infty})^2(\varphi_{\mathbf{B}})} * (\mathbf{J}_{\mathbf{E}}) - \frac{(\varphi_{\mathbf{B}})^2}{(\varphi_{\mathbf{E}})^2} * \frac{\partial \mathbf{E}}{\partial t} , \\ 5, (\mathbf{i}) * (\mathbf{E}) = (\mathbf{c}) * (\mathbf{B}) , (\mathbf{i}) * (\mathbf{J}_{\mathbf{E}}) = (\mathbf{c}) * (\mathbf{J}_{\mathbf{B}}) , (\mathbf{i}) * (\varphi_{\mathbf{E}}) = (\mathbf{c}) * (\varphi_{\mathbf{B}}) , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{E}) = \frac{(\mathbf{i})}{(\varepsilon_0)(\mathbf{c})} * (\varphi_E) , \\ 2, (\nabla \times \mathbf{E}) = -\frac{(\mathbf{i})}{(\varepsilon_0)(\mathbf{c})} * (\mathbf{J}_E) - \frac{(\mathbf{i})}{(\mathbf{c})} * \frac{\partial \mathbf{E}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{B}) = \frac{(\mathbf{i})}{(\varepsilon_0)(\mathbf{c})} * (\varphi_B) , \\ 4, (\nabla \times \mathbf{B}) = -\frac{(\mathbf{i})}{(\varepsilon_0)(\mathbf{c})} * (\mathbf{J}_B) - \frac{(\mathbf{i})}{(\mathbf{c})} * \frac{\partial \mathbf{B}}{\partial t} , \\ 5, (\mathbf{i}) * (\mathbf{E}) = (\mathbf{c}) * (\mathbf{B}) , (\mathbf{i}) * (\mathbf{J}_E) = (\mathbf{c}) * (\mathbf{J}_B) , (\mathbf{i}) * (\varphi_E) = (\mathbf{c}) * (\varphi_B) , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{E}) = \frac{(2\pi)(\mathbf{i})}{(4\pi)(\mathbf{R}_\infty)^2} * (\varphi_E) , \\ 2, (\nabla \times \mathbf{E}) = -\frac{(2\pi)(\mathbf{i})}{(4\pi)(\mathbf{R}_\infty)^2} * (\mathbf{J}_E) - \frac{(\varphi_B)}{(\varphi_E)} * \frac{\partial \mathbf{E}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{B}) = \frac{(2\pi)(\mathbf{i})}{(4\pi)(\mathbf{R}_\infty)^2} * (\varphi_B) , \\ 4, (\nabla \times \mathbf{B}) = -\frac{(2\pi)(\mathbf{i})}{(4\pi)(\mathbf{R}_\infty)^2} * (\mathbf{J}_B) - \frac{(\varphi_B)}{(\varphi_E)} * \frac{\partial \mathbf{B}}{\partial t} , \\ 5, (\mathbf{i}) * (\mathbf{E}) = (\mathbf{c}) * (\mathbf{B}) , (\mathbf{i}) * (\mathbf{J}_E) = (\mathbf{c}) * (\mathbf{J}_B) , (\mathbf{i}) * (\varphi_E) = (\mathbf{c}) * (\varphi_B) , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, \partial^\alpha \partial_\alpha \mathbf{A}_\beta = -\frac{(\mathbf{i})}{(\varepsilon_0)(\mathbf{c})} \mathbf{J}_\beta , \\ 2, \partial^\alpha \mathbf{A}_\alpha = 0 , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, \partial^\alpha \partial_\alpha \mathbf{A}_\beta = -\frac{(2\pi)(\mathbf{i})}{(4\pi)(\mathbf{R}_\infty)^2} \mathbf{J}_\beta , \\ 2, \partial^\alpha \mathbf{A}_\alpha = \frac{(2\pi)(\mathbf{i})(\mathbf{i})^2(\varphi_E)^2}{(4\pi)(\mathbf{R}_\infty)^2(\varphi_B)^2} \mathbf{J}_\alpha , \end{array} \right.$$

Then, by analogy, and considering the relationship between gravity and electromagnetism, the equations in the form of gravity can have,

$$(\mathbf{D}) = \frac{(\mathbf{G}_N)}{(\mathbf{r})^2} * (\varphi_C) = \frac{(4\pi)(\mathbf{a}_0)^2(\mathbf{i})(\varphi_D)(2\pi)}{(\mathbf{r})^2(\varphi_C)} * (\varphi_C) ,$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{D}) = \frac{(4\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i}) (\varphi_D) (2\pi)}{(\varphi_C)} * (\varphi_C) , \\ 2, (\nabla \times \mathbf{D}) = -\frac{\partial \mathbf{C}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{C}) = \mathbf{0} , \\ 4, (\nabla \times \mathbf{C}) = \frac{(4\pi)^2 (\mathbf{a}_0)^2 (\varphi_C) (2\pi)}{(\mathbf{i}) (\varphi_D)} * (\mathbf{J}_D) + \frac{1}{(c)^2} * \frac{\partial \mathbf{D}}{\partial t} , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{D}) = \frac{(4\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i}) (\varphi_D) (2\pi)}{(\varphi_C)} * (\varphi_C) , \\ 2, (\nabla \times \mathbf{D}) = -\frac{(4\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i}) (\varphi_D) (2\pi)}{(\varphi_C)} * (\mathbf{J}_C) - \frac{\partial \mathbf{C}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{C}) = -\frac{(4\pi)^2 (\mathbf{a}_0)^2 (\varphi_C) (2\pi)}{(\mathbf{i}) (\varphi_D)} * (\varphi_D) , \\ 4, (\nabla \times \mathbf{C}) = \frac{(4\pi)^2 (\mathbf{a}_0)^2 (\varphi_C) (2\pi)}{(\mathbf{i}) (\varphi_D)} * (\mathbf{J}_D) + \frac{1}{(c)^2} * \frac{\partial \mathbf{D}}{\partial t} , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, (\nabla \cdot \mathbf{D}) = (4\pi)^2 (\mathbf{a}_0)^2 (2\pi) (\mathbf{i}) * (\varphi_D) , \\ 2, (\nabla \times \mathbf{D}) = -(4\pi)^2 (\mathbf{a}_0)^2 (2\pi) (\mathbf{i}) * (\mathbf{J}_D) - \frac{(\mathbf{i})}{(c)} * \frac{\partial \mathbf{D}}{\partial t} , \\ 3, (\nabla \cdot \mathbf{C}) = (4\pi)^2 (\mathbf{a}_0)^2 (2\pi) (\mathbf{i}) * (\varphi_C) , \\ 4, (\nabla \times \mathbf{C}) = -(4\pi)^2 (\mathbf{a}_0)^2 (2\pi) (\mathbf{i}) * (\mathbf{J}_C) - \frac{(\mathbf{i})}{(c)} * \frac{\partial \mathbf{C}}{\partial t} , \\ 5, (\mathbf{i}) * (\mathbf{D}) = (c) * (\mathbf{C}) , (\mathbf{i}) * (\mathbf{J}_D) = (c) * (\mathbf{J}_C) , (\mathbf{i}) * (\varphi_D) = (c) * (\varphi_C) , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, \partial^\gamma \partial_\gamma \mathbf{A}_\delta = -\frac{(4\pi)^2 (2\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i})}{(2\pi)} \mathbf{J}_\delta , \\ 2, \partial^\gamma \mathbf{A}_\gamma = \mathbf{0} , \end{array} \right.$$

$$\Rightarrow \left\{ \begin{array}{l} 1, \partial^\gamma \partial_\gamma \mathbf{A}_\delta = -\frac{(4\pi)^2 (2\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i})}{(2\pi)} \mathbf{J}_\delta , \\ 2, \partial^\gamma \mathbf{A}_\gamma = (\mathbf{i}) \frac{(4\pi)^2 (2\pi)^2 (\mathbf{a}_0)^2 (\mathbf{i})^2 (\varphi_D)^2}{(2\pi) (\varphi_C)^2} \mathbf{J}_\gamma , \end{array} \right.$$

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