Einstein Curvature Tensor
And
Density Tensor of Quantum Space

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Abstract

Quantization of the cosmic space allows introduction of density of cosmic space. Medium that has granular structure can also have density. More mass is in a given volume of quantum space, less space is dense. In General Theory of Relativity gravity is generated by change of curvature of cosmic space, here by change of density. The basis for curvature of space is its density. Einstein curvature tensor in a form $1/G$ is Density tensor of quantum space.

Key words: quantum space, gravity, curvature of quantum space, density of quantum space

Introduction

Idea here is that quantum space has its density. More mass is present in a given volume of quantum space, less space is dense and more space is curved (1). In quantum space physical time is run of clocks; time is not part of space, quantum space itself is timeless (2).

Einstein Curvature Tensor and Density Tensor of Quantum Space

Einstein curvature tensor G is in relation with Density tensor D of quantum space by equation:

$$D = \frac{1}{G} = \frac{c^4}{8\pi G * T}$$ wich becomes in geometrized units $$D = \frac{1}{8\pi T}$$

Conclusions

Curvature of space has it physical basis in its density. Change of curvature of quantum space corresponds to the change of density of quantum space that generates gravitational force. With introduction of density of quantum space “action on distance” is resolved. Dynamics between mass and density of space generates gravity motion.

References:

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