## **Spacetime Rainbow and Gravitational Waves**

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## Abstract: an introduction and appreciation of spacetime rainbow

## Main viewpoints and conclusions:

Spacetime rainbow or called Quantum gravity's rainbow, which one and with graceful even pregnant meaning idea has been proposed by physicists,<sup>[1][2]</sup> if it would been observed, should in microwaves and belongs to 300MHz~300GHz.

Same time, one approach to observe and detect the gravitational waves is by the change of the distribution pattern of cosmic microwave radiation background in special area, perhaps there will be appearing strong variations and turbulent of the spacetime rainbow.



Image 1

Image 2

Image 3

## References

- [1] *Physicists posit quantum gravity's rainbow* http://phys.org/news/2016-01-physicists-posit-quantum-gravity-rainbow.html
- [2] Much like white light, spacetime is also composed of a certain rainbow http://www.sciencedaily.com/releases/2016/01/160114113514.htm
- [3] The source of image 1 http://physicsworld.com/cws/article/news/2016/jan/21/are-gravitational-waves-be ing-redshifted-away-by-the-cosmological-constant
- [4] The source of image 2

https://www.newscientist.com/article/dn28754-new-rumours-that-gravitational-wa ves-have-finally-been-detected/

[5] The source of image 3

http://www.esa.int/spaceinimages/Images/2015/02/Polarisation\_of\_the\_Cosmic\_ Microwave\_Background\_full\_sky\_and\_details