

Modification of Heisenberg uncertainty relation and a new version of Energy- time uncertainty

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Formulae for time derivative of the operator's mean value, which was formulated in our [1-2] works, is used for modification of Heisenberg uncertainty relation. It is shown that Heisenberg uncertainty relation in spherical coordinates needs to be modified, when the commutator between two operators is a number. We obtained a new version of Energy-time uncertainty, which can change known interpretations and may have very important physical results.

References

- [1] A.Khelashvili and T.Nadareishvili. Physics of Particles and Nuclei. Vol 51,p107-121(2020)
- [2] A.Khelashvili and T.Nadareishvili. Arxiv: 1912.04842(2019)