European Physical Society
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Dear Editor(s)

We herewith submit a paper titled “Revisiting the admissibility of non-contextual hidden variable models in quantum mechanics” authored by Arvind, Kishor Bharti and me.

In this work we propose a new (to the best of our knowledge) *non-contextual* hidden variable model which helps clarify the limitations of a well-established notion in the foundations of quantum mechanics, that of *contextuality*. Contextual hidden variable models on the other hand are already known but these are in stark contrast with our new model and hence novel.

Notions in foundations of quantum mechanics tend to have implications to quantum information processing and quantum cryptography. In the recent years, a strong connection was made between contextuality and the power of a certain model of quantum computing. Bell's theorem, developed to test if a certain class of HV models can be consistent with QM, has now become the cornerstone of modern cryptography, quantum key distribution. The Bell-Kochen-Specker Theorem, which leads to the contextuality argument, has also found applications in the same. Understanding the notion of contextuality and its implications better is therefore likely to stimulate further research. Our work contributes towards this older direction which has witnessed a renewed interest.

Sincerely

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