



Contribution ID: 177

Type: **Talk**

## Self-testing of quantum states using symmetric local hidden state model

*Saturday, 5 September 2020 11:00 (25 minutes)*

We introduce a symmetric local hidden state (slhs) model in a scenario, where two spacially separated parties receive quantum states from an unknown source. We derive an inequality based on the model. A completely new form of nonlocality emerges from the resource theoretic point of view. The inequality singles out a larger set of quantum correlated states than what is predicted by the local hidden variable (lhv) model or the existing lhs model. We propose an experiment to show the experimental violation of the inequality. We also show that the maximal violation of the inequality can be used to self-test the Bell state and measurement bases, leading to complete device-independence.

### Is this abstract from experiment?

No

### Internet talk

Yes

### Name of experiment and experimental site

N/A

### Is the speaker for that presentation defined?

Yes

### Details

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