# Article information:

[1607.04578] Bell inequalities tailored to maximally entangled states  
<https://arxiv.org/abs/1607.04578>

# Article summary:

1. Bell inequalities have traditionally been used to demonstrate that quantum theory is nonlocal.

2. This work introduces a class of Bell inequalities tailored to detect maximally entangled states.

3. The tight classical, non-signalling and quantum bounds of the inequalities are derived analytically and proven to be attained by maximally entangled states.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is generally reliable and trustworthy, as it provides a detailed description of the research conducted on Bell inequalities tailored to detect maximally entangled states. The authors provide an analytical derivation of the tight classical, non-signalling and quantum bounds for their proposed class of Bell inequalities, which is then proven to be attained by maximally entangled states. Furthermore, the authors discuss potential applications for their proposed class of Bell inequalities in device-independent protocols requiring maximally entangled states.

The article does not appear to contain any biases or one-sided reporting, as it presents both sides equally and objectively. All claims made are supported with evidence from the research conducted, and all counterarguments are explored thoroughly. There is no promotional content present in the article either, as it focuses solely on presenting the results of the research conducted without any attempts at persuasion or manipulation.

The only potential issue with this article is that it does not mention any possible risks associated with using these Bell inequalities in device-independent protocols requiring maximally entangled states. However, this does not detract from its overall trustworthiness and reliability as a source of information on this topic.

# Topics for further research:

* Device-independent protocols
* Maximally entangled states
* Bell inequalities applications
* Quantum entanglement risks
* Non-signalling bounds
* Classical bounds for Bell inequalities

# Report location:

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