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Title:	Detecting genuine multipartite entanglement in steering scenarios
Authors:	Jebaratnam, C. (/jspui/browse?type=author&value=Jebaratnam%2C+C.)
Keywords:	Einstein-Podolsky-Rosen (EPR) Multipartite entanglement Steering scenarios Bell nonlocality
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Citation:	Physical Review A, 93(5).
Abstract:	Einstein-Podolsky-Rosen (EPR) steering is a form of quantum nonlocality which is intermediate between entanglement and Bell nonlocality. EPR steering is a resource for quantum key distribution that is device independent on only one side in that it certifies bipartite entanglement when one party's device is not characterized while the other party's device is fully characterized. In this work, we introduce two types of genuine tripartite EPR steering, and derive two steering inequalities to detect them. In a semi-device-independent scenario where only the dimensions of two parties are assumed, the correlations which violate one of these inequalities also certify genuine tripartite entanglement. It is known that Alice can demonstrate bipartite EPR steering to Bob if and only if her measurement settings are incompatible. We demonstrate that quantum correlations can also detect tripartite EPR steering from Alice to Bob and Charlie, even if Charlie's measurement settings are compatible.
URI:	https://journals.aps.org/pra/abstract/10.1103/PhysRevA.93.052311 (https://journals.aps.org/pra/abstract/10.1103/PhysRevA.93.052311) http://hdl.handle.net/123456789/2393 (http://hdl.handle.net/123456789/2393)
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