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# Genuine multipartite nonlocality with collective postselection strategies

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In the certification of (genuine multipartite) nonlocality, measured data are often postselected to purify the nonlocal features of the data. However, if this postselection requires communication between the measurement parties, it can potentially create fake correlations that mimic nonlocal features via the postselection bias. Here, we show that certain postselection strategies that require partial communication between the parties, are valid to certify the presence of genuine multipartite nonlocality between all parties. The results are proven by the use of causal diagrams and the no-signalling principle. Finally, the results are applied to an optical setup to demonstrate the creation of genuine three-partite nonlocality from independent photon sources.

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