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Joint measurement of non-classical correlations

We have experimentally performed joint measurements of the four polarization orientations that maximally violate a Bell's inequality. The joint statistical distributions directly obtained with the joint measurements depend on the measurement uncertainty trade-off between the two complementary polarizations measured for each photon. Our experimental results show that the Cirel'son bound is the limit beyond which the measurement uncertainties would not be sufficient to keep the outcome statistics positive.

Presenter: Mr MATSUYAMA, Kengo (Hiroshima university) **Session Classification:** Beers and Posters