



Seminar, Department of Physical Sciences, Bose Institute, Kolkata

Long distance entanglement sharing with optical hybrid states

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Abstract: Sharing high quality entanglement over long distance forms the core of secured communication and developing sustainable quantum network. While the traditional approaches with discrete-variable (DV) and continuous-variable (CV) systems offer their unique set of advantages, their practical implementation within the telecommunication setup suffer from various limitations. Here we propose a novel approach, by using optical hybrid states, that promise a viable alternative without posing a serious restrictions. We further quantify the achievable entanglement in the context of quantum key distribution. The efficacy of our proposal is well elaborated in terms of the reasonable secured key rate over an intercity separation.

Date/time: October 25, 2024 (Friday) at 04:00 PM

Venue: Physics Seminar Room (204, second floor, UAC, BI)