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**Title: Eavesdropping strategy for Coherent One-Way protocol based on soft filtering operation**

**Abstract:**

In quantum key distribution, the goal of legitimate users (Alice and Bob) is to generate a secret key without any assumption on technological and computational limitation of the eavesdropper (Eve). Coherent One-Way quantum cryptography protocol is of high interest since it can be implemented in a relatively simple way. Two well-known attacks for coherent states-based QKD protocols are beam splitting attack and unambiguous state discrimination attack. We are constructing a new eavesdropping strategy based on probabilistic information extraction also called soft filtering. This attack is a sort of generalization for these two basic attack strategies.