Dmitry Kronberg

Title: Generalized discrimination between symmetric coherent states for eavesdropping in quantum cryptography

Abstract:

Symmetric coherent states are of interest in quantum cryptography, since for such states there is an upper bound for unambiguous state discrimination (USD) probability, which is used to resist USD attack. But it is not completely clear what an eavesdropper can do for shorter channel length, when USD attack is not available. We consider the task of generalized discrimination between symmetric coherent states and construct an operation which enlarges the information content of the states with xed failure probability. We apply this transformation to develop a zero-error eavesdropping strategy for quantum cryptography on symmetric coherent states.