

Title: Practical Measurement Device Independent Quantum Key Distribution with Decoy State Method

Abstract: Quantum key distribution provides unconditional security by the law of physics. However, as practical devices have some certain flaws, the security of the practical system is not entirely valid. An adversary can take advantage of imperfect detectors to obtain large part of the secret key, so-called “side channel attack”. Recently, a practical approach —measurement-device-independent quantum key distribution(MDIQKD) has been proposed to overcome this obstacle. In particular, with the decoy state method, MDIQKD can also solve the photon number splitting(PNS) attack. Here we introduced the MDIQKD, decoy state method and simple security proof.