Symmetric Autocompensating Quantum Key Distribution
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abstract We present quantum key distribution schemes which are autocompensating (require no alignment) and symmetric (Alice and Bob receive photons from a central source) for both polarization and time-bin qubits. The primary benefit of the symmetric configuration is that both Alice and Bob may have passive setups (neither Alice nor Bob is required to make active changes for each run of the protocol). We show that both the polarization and the time-bin schemes may be implemented with existing technology. The new schemes are related to previously described schemes by the concept of advanced waves.