

# Multi-User Quantum Key Distribution with 148 Times Improvement in Key Rate

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We present an enhanced quantum network communication protocol, building upon the standard MDI-QKD framework. This method achieves a 148 times improvement in the key rate and effectively mitigates quantum bit error rate from asymmetric channels. We demonstrate the new protocol in the laboratory and its progress towards commercial viability. Our aim is to develop practical quantum communication solutions for diverse users across various locations.

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