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*Quantum Cryptography With Many Users*

The laws of quantum mechanics allow for quantum cryptography, i.e. the distribution of a secret random key between two parties. When generalising this idea to the situation where more than two parties want to establish a common secret key, one can use certain multipartite entangled states as a resource. In the security analysis for this multi-user scheme some intricate new features arise and will be discussed. Finally, it is shown that our protocol for multipartite quantum cryptography offers a speed-up in certain quantum networks with bottlenecks.