

Quantum Communications in Space

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Abstract

The paradigm shift that Quantum Communications represent vs. classical counterpart allows envisaging the global application of Quantum Information protocols as the cryptographic key distribution as well as of the use of the qubits as a probe for fundamental tests of Quantum Mechanics and Gravity on a scale beyond terrestrial limits. We shall describe the basic ideas, techniques and applications of the Quantum Communications and Technologies to long distances, on the surface of the Earth as well as from the Earth to an orbiting terminal in Space.