QUTECHSPACE

Quantum technology components for space communication

PROJECT SUMMARY

The goal of QuTechSpace is to push the development of key components for space quantum communication and to facilitate standardization of the technology.
The technology development will be accompanied by facilitating the standardization process of space quantum communication technologies and systems through active involvement in standardization bodies. By including European entities ranging from academics over new space companies and quantum technology developers to large system integrators, the joint European ecosystem will be included in the process and together we will work towards the joint goal of reaching European sovereignty in space quantum technologies.

QuTechSpace will also take into account developments in the field of space quantum communication. The technology development will be completed through testing in relevant environment, reaching TRL 6.
QuTechSpace will conclude by giving an outlook and recommendations for future developments and implementations of quantum-communication systems.

PROJECT GOAL

Provide the EU's QKD initiatives with reliable, exclusively European-produced high-end QKD systems ready for space deployment.

PROJECT DURATION

January 2024 - October 2026

IMPACT

- Support the EU space policy and the EU initiative to establish the Union Secure Connectivity Programme and foster the development of ultra-secure EU services based on or using space systems.
- Ensure the EU sovereignty and non-dependence for the development of capacities leading to the availability of ultra-secure services based on Quantum Key Distribution (QKD).
- Enhance the TRL of the critical components necessary to build QKD space systems and foster the development of the associated QKD standards.
- Wider impacts: Open strategic autonomy in developing, deploying and using global space-based infrastructures, services applications and data, including by reinforcing European independent capacity to access space, securing the autonomy of supply for critical technologies and equipment, and fostering the EU's space sector competitiveness.

PROJECT PARTNERS

qtlabs Quantum Technology Laboratories

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Universidad Politécnica de Madrid

OHB

DEMCON | FOCAL

AIRBUS DEFENCE & SPACE

ALTER TECHNOLOGY

qtgroup Quantum Technologies Group

Universidad de Vigo

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