EPIC Online Technology Meeting on Single Photon Sources and Detectors



Mr. Benjamin Pages **Head of Space BU for QT**

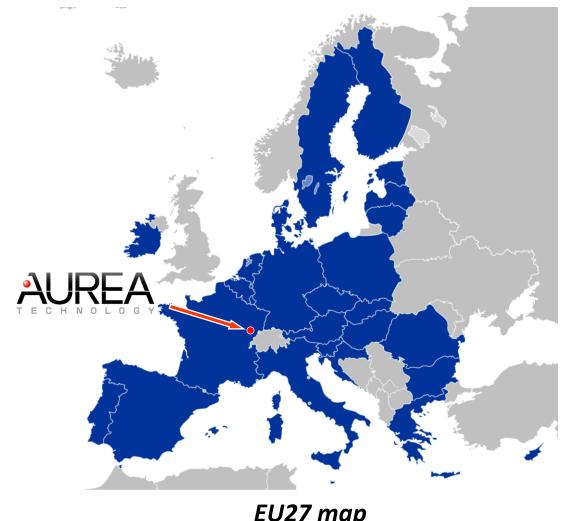
Webinar 21st March 2022





About AUREA Technology

- **Independant French SME founded in 2010**
- 100% EU27 company (France)
- **Key building-blocks for Quantum Communication**
- >300 customers worldwide
- Strong R&D (> 50% PhD in Quantum Tech.)
- SPIE Prism Awards 2020 & 2021 Finalist



EU27 map



Leading provider of Quantum Optical Instruments

Expertise

Key building-blocks for Quantum applications:

Photon generation, photon detection, fast timing electronics



Photon Generation Entangled Photon Sources



Photon Counters



Timing Electronics Time Correlation



AUREA Technology structure

Structure

European Projects



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Space BU for QT



Mr. Benjamin Pagès

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EURO-QCI





Expertise



Photon Source

- Entangled Photon Source
- Photon Source Characterization and qualification
- Telecom wavelength

Quantum link Transmission

- Quantum Key Distribution optical transmission
- Quantum optical transmission
 Characterization and qualification
- Encoding & decoding building blocks

Single Photon Detector

- Geiger-mode Single Photon Counting Avalanche Photodiode (SPAD) at room temperature
- Improved InGaAs SPAD (GHz High QE)
- Single Photon Counting Characterization and qualification
- Telecom Wavelength



EURO-QCI: Space Segment

Quantum Space Project

- High performance Entangled Photon Source Demonstration Model (SAGA)
- Space based Entangled Photon Source
- 100% EU Technology
- Quantum communication link at 1550 nm
- Objectives:
 - Generation rate > 1 GHz: over achieved
 - Transmission Key Rate > 10 bits/s : over achieved
 - LEO & GEO scenario











What we are looking for

AUREA Technology is looking for partnerships and new customers interested in ground & space optical quantum technologies!

Core technologies :

Photon Sources, Photon Detectors, QKD building blocks



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THANK YOU!

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