

Optical, quantum and satcom opportunities at ESA  
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ESA's ScyLight (Secure and Laser communication technology) is a program which supports the research, development, and evolution of optical and quantum communication technologies, and provides flight opportunities for their in-orbit verification. The presentation will provide context for the Agency's approach on optical and quantum communication technologies, and highlight ongoing activities in the field.

These are motivated by optical communications revolutionizing satellite communications. Aside from promising unprecedented transmission rates, data security and resilience, they are already becoming a reality and driving national and commercial needs today. As the demand for more and more satellite services increases, the traditional satcom radio-frequency bands are experiencing bottlenecks. Optical communication terminals alleviate these - they can have much higher data rates, can be lighter, consume less power and offer more accuracy and security than radio. In parallel, the Agency is also engaging in preparing satcom stakeholders for future quantum technologies, which will also be highlighted as part of this presentation.