



PRELIMINARY PROGRAMME

Tuesday, 7 October 2025			
08:15	08:45	Shuttle Bus from Heraklion (Sampionara Bastion) to FORTH	
08:45	09:15	Registration & Coffee	
09:15	09:30	Welcome & Opening Addresses	Josef Aschbacher ESA Director General
			Kyriaki Minoglou Head of ESA Optics, Robotics & Life Sciences Division
			Vassilis Charmandaris Chairman, Board of Directors, FORTH
Session 1			
Chair: Kyriaki Minoglou — Head of the Optics, Robotics & Life Sciences Division ESA			
09:30	09:45	ESA Quantum Technology Cross Cutting Initiative	Eric Wille ESA
09:45	10:00	Homodyne-based CV QRNG receiver module for the SPOQC mission	Vinod Nagaraja Rao University Of York
10:00	10:15	Poled Fiber Phase Modulators	João Manoel Barbosa Pereira RISE
10:15	10:30	Feasibility of entanglement-based QKD protocols with practical sources	Vladislav Usenko Palacký University Olomouc
10:30	10:45	Quantum Pulse Gating for Noise Reduction in Classical and Quantum Space Optical Communications	Konrad Banaszek Quantum Optical Technologies
10:45	11:00	Sub nanosecond time-gated superconducting nanowire single-photon detectors (SNSPDs) for safe communication	Antonio Guardiani Single Quantum
11:00	11:30	Coffee Break	
Session 2			
Chair: Eric Wille — Head of the Optoelectronics Section ESA			
11:30	12:00	Keynote — EuroQCI Update	Laurent Olislager Policy Officer, Quantum Technologies European Commission Harald Hauschildt Optical and Quantum Programme Off. Connectivity & Secure Comm. ESA
12:00	12:15	Update on TNO's Quantum Satcom Roadmap activities	Bob Dirks TNO
12:15	12:30	HOGS: a case study in quantum communications interoperability	Cameron Simmons Heriot-Watt University
12:30	12:45	Free-Space Optical Communications at Institute of Astrophysics of the Canary Islands	Diego Ayala IAC - Canary Islands
12:45	13:00	Quantum Communication in Italy: Perspectives and Developments in the Space context	Mario Siciliani De Cumis ASI
13:00	13:15	EAGLE-1: Design and Testing of the High Speed QKD Transmitter for Europe's First QKD System	Gabriela Calistro Rivera DLR
13:15	13:30	A holistic PKI approach based on merging Quantum Key Distribution with Post Quantum Cryptography	Dimitris Syridis NKUA
13:30	14:30	Lunch Break + FORTH Guided Tour	
Session 3			
Chair: Dimitrios Papazoglou — Co-PI of the Space Optics Group FORTH			
14:30	14:45	Quantum Artificial Intelligence EUMESTAT Impact Use Case: Initial Analysis	Gianni Casonato EUMESTAT
14:45	15:00	Space based QKD from Proof of Concept to Operational Commercial Systems	Alfonso Tello Hispasat
15:00	15:15	Sunlight and the single atom - a photodetector for fundamental physics and daylight communications	Laura Zarraoa ICFO
15:15	15:30	Integrated Photonic Platform for Space-Qualified Quantum Random Number Generation	Matteo Rossetto OHB
15:30	15:45	Quantum-Limited Coherent Beam Combination for Deep-Space Optical Communication	Antoni Mikos-Nuszkiewicz University Of Warsaw
15:45	16:00	Enabling Quantum Communication in Space: From Design to Space Qualification of the Italian QKD Mission	Cristian Giuseppe Carosella Thales Alenia Space Italia
16:00	16:15	Daylight QKD enabled by hyper- and high-dimensional entanglement	Martin Bohmann qtlabs
16:15	16:30	From Lab to Orbit: Interference-Engineered Entanglement for Scalable Quantum Communication	Rana Sebak Fraunhofer IOF
16:30	17:00	Coffee Break	
Session 4			
Chair: Bruno Leone — Optoelectronics Section ESA			
17:00	17:15	Modelling of Satellite-Based Quantum Key Distribution	Davide Orsucci DLR
17:15	17:30	Developments in Satellite-based Quantum Communication	Johannes Pseiner qtlabs
17:30	17:45	Optimised In-Orbit and Ground Management of Quantum-Safe Keys	Antonia Tsili Eulambia Advanced Technologies
17:45	18:00	Energetic Analysis of Emerging Quantum Communication Protocols	Raja Yehia ICFO
18:00	18:15	Time-bin entanglement for loophole-free Bell tests	Kannan Vijayadharan University Of Padova
18:15	18:55	Keynote — Are Wave Functions Real?	Jacob Barandes Harvard University
18:55	21:00	Welcome Reception	
21:00	21:30	Shuttle Bus from FORTH to Heraklion (Sampionara Bastion)	

Wednesday, 8 October 2025			
08:15	08:45	Shuttle Bus from Heraklion (Sampionara Bastion) to FORTH	
08:45	09:00	Coffee	
Session 1			
Chair: Luigi D'Arcio — QKDSat Project ESA			
09:00	09:30	Keynote — Enabling Global Quantum Networks: The Role of TII and ADQOGS in the MENA Region	Sana Amairi Pyka TII
09:30	09:45	Space-based links for the quantum internet	Maria Gieysztor Startova UMK
09:45	10:00	Towards long-range free-space quantum communication with drones and high-altitude platforms	Christoph Wildfeuer FHNW
10:00	10:15	QKDSat - Satellite Enabled Quantum Safe Networks	Alexander Pickston Honeywell Aerospace
10:15	10:30	Free-space model for a balloon-based quantum network	Ilektra Karakosta-Amarantidou ICFO
10:30	10:45	Sub-30 ps Time Tagging for Quantum Networking and Photon-Efficient Data Channels	Arturs Aboltins Eventech
10:45	11:15	Coffee Break	
Session 2			
Chair: Jorge Ferreras Fuertes — Ground Segment Section, Directorate of Connectivity & Secure Comms ESA			
11:15	11:30	Quantum Sensing and Space: Distribution and Applications	Natalie Pearson Craft Prospect
11:30	11:45	Quantum Space and Terrestrial Architecture Research (QuSTAR)	Luca Mazzarella TNO
11:45	12:00	The KiQqer Demonstrator Roadmap	Gustavo Castro Do Amaral TNO
12:00	12:15	Sat-DQC - A feasibility study of distributed quantum computing enabled via satellite communication	Lukas Pausch DLR
12:15	12:30	Rydberg Detectors for Advanced RF Payloads (RYDAR)	Tommaso Catuogno Thales Alenia Space
12:30	12:45	Rydberg-atom quantum radiometer for Earth observations	Michał Parniak University Of Warsaw
12:45	13:45	Lunch Break + FORTH Guided Tour	
Session 3			
Chair: Rok Dittrich — GNSS/Galileo Evolution Implementation Office ESA			
13:45	14:15	Keynote — Interferometry with Bose-Einstein Condensates for inertial sensing	Sven Abend IQO Hannover
14:15	14:30	Ultra-stable optical breadboard technologies for space-based quantum sensors	Wolf von Klitzing FORTH
14:30	14:45	Single-beam grating-chip 3D and 1D optical lattices	Aidan Arnold University Of Strathclyde
14:45	15:00	Optical Vapor Cell Iodine Frequency References for Space and Terrestrial Applications	Johannes Scherzer DLR
15:00	15:15	Grating Magneto-Optical Trap Enabled Cold-Atom Platforms	Oliver Burrow University Of Strathclyde
15:15	15:45	Coffee Break	
Session 4			
Chair: Wolf von Klitzing — PI of the BEC and Matter Waves Group FORTH			
15:45	16:15	Keynote — Probing gravity with atom interferometry: from terrestrial experiments to space-based platforms	Samuel Lellouch University Of Birmingham
16:15	16:30	Development of space-qualified lasers for quantum interferometry missions	Aurélien Eloy Exail
16:30	16:45	Quantum gravimetry – society benefits of satellite, airborne and in-situ applications	Rene Forsberg DTU Space
16:45	17:00	Cold Atom Interferometry for Thermospheric Drag Measurements	Tristan Valenzuela RAL Space
17:00	17:15	Measurements of mmWaves facilitated by Rydberg atoms oriented for space applications	Sebastian Borówka University Of Warsaw
17:15	17:30	Quantum Rydberg Antenna	Mateusz Mazelanik University Of Warsaw
17:30	18:40	FORTH – SKINAKAS OBSERVATORY (bus transfer)	
18:40	19:40	SKINAKAS GUIDED TOUR	
19:40	20:10	SKINAKAS OBSERVATORY – ARODAMOS RESTAURANT (bus transfer)	
20:10	22:10	DINNER AT ARODAMOS	
22:10	23:10	ARODAMOS – HERAKLION CITY CENTER (bus transfer)	

Thursday, 9 October 2025			
08:15	08:45	Shuttle Bus from Heraklion (Sampionara Bastion) to FORTH	
08:45	09:00	Coffee	
Session 1			
Chair: Olivier Carraz — Optoelectronics Section ESA			
09:00	09:30	Keynote — Quantum Technologies in Space Exploration	Lisa Woerner / presented by Carsten Klempt DLR
09:30	09:45	NV-centre and CVD Diamond-based Quantum Sensors for Space Applications	Marco Braibanti ESA
09:45	10:00	Development of a modular vacuum system for quantum sensors in Space	Jens Grosse ZARM
10:00	10:15	Development of instrument modules for Space-based quantum gravimetry	Maïke Lachmann Airbus D&S
10:15	10:30	Quantum Sensing in Space for Fundamental Physics and Earth Observation	Naceur Gaaloul IQO Hannover
10:30	10:45	Frequency-Combs for Optical Clocks in Space	Matthias Lezius Menlo Systems
10:45	11:30	Coffee Break	
Session 2			
Co-Chair: Gabriele Meoni — Φ -lab / Advanced Concepts & Studies Office ESA			
Co-Chair: Jose Pizarro — AI and Data Science Section ESA			
11:30	11:30	Keynote — Quantum Gravity Gradiometer Pathfinder Mission Overview - CANCELLED	Parminder Ghuman NASA
11:30	11:45	Quantum Memory Prototype for Space	Verena Velthaus DLR
11:45	12:00	Data storage on Mars – Combining DNA data storage and the quantum version of DNA-alignment	Koen Bertels Qsentinel
12:00	12:15	Ultra-low power Cryo-CMOS technology for quantum and space	Mika Prunnila SemiQon
12:15	12:30	Fiber Technologies for Quantum Industry	Felix Passmann NKT Photonics
12:30	12:45	Signature of Memorandum of Intent between ESA and FORTH	
12:45	13:45	Lunch Break + FORTH Guided Tour	
Session 3			
Co-Chair: Jose Pizarro — AI and Data Science Section ESA			
Co-Chair: Gabriele Meoni — Φ -lab / Advanced Concepts & Studies Office ESA			
13:45	14:15	Keynote — Hacking at The Quantum Frontier	Victoria Kumaran Quantum Village
14:15	14:30	Quantum computing 4EO: The ESA Φ -lab initiatives	Gabriele Meoni ESA
14:30	14:45	Quantum Diffusion Models in Earth Observation	Silvia Ullo University Of Sannio
14:45	15:00	Quantum computing for Earth Observation: Readiness, Challenges, Approaches	Giorgio Panichi University Of Milan
15:00	15:15	Quantum-Classical Hybrid Models for Satellite Image Processing	Aikaterini Mandilara Eulambia Advanced Technologies Ltd
15:15	15:30	Gaussian Boson Sampling for Earth Observations	Piotr Gawron KP Labs
15:30	15:35	Closing Remarks	Kyriaki Minoglou Head of the Optics, Robotics & Life Sciences Division ESA
15:35	16:30	Good Bye - Networking	
16:30	17:00	Shuttle Bus from FORTH to Heraklion City / Heraklion Airport	