

Session Program

6–11 Jul 2025



EPS-HEP 2025

T15 (Quantum technologies in HEP (special topic 2025))

PALAIS DU PHARO, Marseille, France

Wednesday 9 July

08:30

T15 (Quantum technologies in HEP (special topic 2025))

Session | Location: Palais du Pharo, Salle 92

08:30–08:47 **Quantum sensor R&D for particle physics: the DRD5 collaboration**

Speaker
Michael Doser

08:47–09:04 **A TES for ALPS II and other dark matter searches**

Speaker
Jose Alejandro Rubiera Gimeno

09:21–09:38 **Quantum noise reduction in gravitatonnal wave detectors**

Speaker
Jean-Pierre Zendri

09:38–09:55 **Local basis truncation for Quantum Field Theories**

Speaker
Peter Majcen

09:55–10:12 **1 Particle - 1 Qubit: Particle Physics Data Encoding for Quantum Machine Learning**

Speaker
Mr Aritra Bal

10:12–10:29 **A general approach to quantum integration of cross sections in high-energy physics**

Speaker
Ifan Williams

10:30

Friday 11 July

08:30

T15 (Quantum technologies in HEP (special topic 2025))

Session | Location: Palais du Pharo, Salle 92

08:30–08:47 Quantum Computing for Track Reconstruction at LHCb

Speaker
Miriam Lucio Martinez

08:47–09:04
Group Invariance in Quantum Fidelity Kernels for Vector Boson Scattering Identification at the LHC

Speaker
Väinö Mehtola

09:04–09:21 Quantum Diffusion Models for HEP

Speaker
Amir Azzam

09:21–09:38 Variational Quantum Eigensolver for (2+1)-Dimensional QED at Finite Density

Speaker
Emil Otis Rosanowski

09:38–09:55
Simulating Meson Scattering in (1+1)D \mathbb{Z}_2 Lattice Gauge Theory: Efficient Operator Construction and Quantum Circuit Implementation

Speaker
Yahui Chai

09:55–10:12 Hamiltonian approach to Parton Distribution Functions in the Schwinger model

Speaker
Manuel Schneider

10:12–10:29
Dynamics of an Electric Flux String Across the Roughening Region in a (2+1)D Lattice Gauge Theory

Speaker
Francesco Di Marcantonio

10:30