

# Quantum Elements Exploring New Digital Twin Simulation Approach for Achieving Results on Rigetti Computing Hardware

LOS ANGELES, CA, UNITED STATES, April 21, 2026

/EINPresswire.com/ -- [Quantum Elements](#), a quantum software start-up based in Los Angeles, today announced it is exploring advanced digital-twin simulation techniques to eventually achieve practical computational results in research conducted on systems from Rigetti Computing, a pioneer in full-stack quantum-classical computing.

Through this research, Quantum Elements will run high-fidelity dynamic simulations using its AI-native digital-twin platform to model qubit and gate behavior across multiple error channels—including single-qubit gates, two-qubit gates, readout, and reset operations. The simulation results will be used to explore how digital-twin-based modeling might complement Rigetti’s existing approaches to benchmarking and characterizing next-generation quantum processors.



“We are excited to work with Rigetti to evaluate how advanced simulation tools may help accelerate the broader industry’s understanding of noise sources and error behavior in superconducting quantum systems,” said Izhar Medalsy, CEO of Quantum Elements. “Rigetti’s commitment to responsible, rigorous advancement of quantum hardware makes them an ideal collaborator as we explore the potential impact of digital-twin workflows.”

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*Izhar Medalsy, CEO of  
Quantum Elements*

Early experimentation using Quantum Elements’ platform has shown encouraging indicators, and the companies expect to share updates as validated, reproducible results become available.

“Rigetti is committed to partnering with organizations across the ecosystem to advance real, measurable progress toward quantum utility,” said David Rivas, CTO of Rigetti. “We look forward to working with Quantum Elements as they explore how their simulation technology could support research on noise modeling and performance characterization.”

Quantum Elements’ platform is currently available on a limited trial basis, with broader commercial availability planned as the company expands its partner ecosystem. To learn more, visit [quantumelements.ai](https://quantumelements.ai).

## About Quantum Elements

Founded in 2023 in Los Angeles, Quantum Elements seeks to transform the quantum computing industry by making the path to real-world commercial applications more efficient and cost-effective through its proprietary, AI-native software stack and world-leading quantum Digital Twins.

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