Department of Energy Announces $71 Million for Research on Quantum Information Science Enabled Discoveries in High Energy Physics

Announcement Number: *DE-FOA-0003354* *List Posted:* *1/15/2025*

Selection for award negotiations is not a commitment by DOE to issue an award or provide funding.

Principal Investigator	Title	Institution	City	State	ZIP Code
McRae, Corey Rae	Accelerating high mass axion searches using Kinetic Inductance Traveling Wave Parametric Amplifiers	UC Boulder	Boulder	CO	80303-1058
Harlow, Daniel	Algebras and complexity in quantum gravity and field theory	MIT	Cambridge	MA	02139-4307
Kim, Young Jin	Breakthrough Axion Dark Matter Search with Optical Quantum Sensors	LANL	Los Alamos	NM	87545-0600
Davis, Emily	Cavity-mediated interactions with ensembles of solid-state spins for entanglement-enhanced detection of dark matter	NYU	New York City	NY	10012-2331
Chou, Aaron	Developing Quantum 2.0 Resources for Dark Matter Searches	Fermilab	Batavia	IL	60510-5011
Winslow, Lindley	Development of Large Area SNSPD Systems: Dark Matter Pathfinder Experiments and Beyond	MIT	Cambridge	MA	02139-4307
Schleier-Smith, Monika	Holographic Quantum Simulation with Atoms and Photons: from Entanglement to Non-Euclidean Geometry.	Stanford	Stanford	CA	94305-8445
Carena Lopez, Marcela	Intersections of QIS and Theoretical Particle Physics	Fermilab	Batavia	IL	60510-5011
Khatiwada, Rakshya	Low mass Dark Matter detection with Sapphire substrate qubits	IIT	Chicago	IL	60616-3717
Quinn, Adam	Quandarum: Qubit Non-Destructive Skipper Readout for Precision Magnetometry	Fermilab	Batavia	IL	60510-5011
Irwin, Kent	Quantum Sensors for Sub-μeV Axions	SLAC	Stanford	CA	94305-7015
Preskill, John	Quantum information and spacetime geometry	Caltech	Pasadena	CA	91125-0001
Benjamin, Nathan	Quantum Information of Black Holes in AdS/CFT	USC	Los Angeles	CA	90089-4304
Wang, Gensheng	Quantum Magnonics for Spin-dependent BSM Physics	ANL	Lemont	IL	60439-4803
Sudhir, Vivishek	Quantum measurement and control of milligram masses for gravity experiments	MIT	Cambridge	MA	02139-4307
McCuller, Lee	Quantum Optimal Stochastic-Signal Searches: Seeding "Post-Squeezing" Quantum Metrology for Fundamental Physics.	Caltech	Pasadena	CA	91125-0001
Arguelles Delgado, Carlos	Quantum-Enhanced Data Analysis for High-Energy Physics: Leveraging NISQ Algorithms for Efficient Data Compression and Machine Learning Applications	Harvard	Cambridge	MA	02138-5369
Kurinsky, Noah	Qubit-Based Readout for Rare Event Searches	SLAC	Stanford	CA	94305-7015
Moore, David	Searching for sterile neutrinos using quantum optomechanical sensors	Yale	New Haven	CT	06520-8327
Maruyama, Reina	Toward High-Mass Axion Searches with Plasma Haloscopes	Yale	New Haven	CT	06520-8327
Bousso, Raphael	The Geometry and Flow of Quantum Information: From Quantum Technology to Quantum Gravity	UC Berkeley	Berkeley	CA	94710-1749
Lentz, Erik	The Very Entangled Bose Array eXperiment (VEBAX): A Pathfinder for Multi-mode Quantum Enhancement of Arrayed Cavity Axion Haloscopes	PNNL	Richland	WA	99354-1793
Lamm, Henry	Toward Lattice QCD on Quantum Computers	Fermilab	Batavia	IL	60510-5011

Cotler, Jordan	Emergent Phenomena in Quantum Dynamics: From Chaos to Spacetime	Harvard	Cambridge	MA	02138-5369
Fong, Kin Chung	WIdeband graphene-based aXion dARk matter quantum Detector (WIXARD)	Northeastern	Boston	MA	02115-5005