

Department of Energy, Office of Science, Office of High Energy Physics
Awards from *FY 2018 Research Opportunities in High Energy Physics* FOA

Title	PI	Institution	Location
Cosmic Signatures of Fundamental Physics	Albrecht, Andreas	University of California, Davis	Davis, CA
Proposal to Study the Properties and Interactions of Elementary Particles Funding Years FY 2018-2020	Amidei, Dante	University of Michigan	Ann Arbor, MI
Fundamental Beam Physics for Advanced Accelerators	Antonsen, Thomas	University of Maryland	College Park, MD
Advanced Transfer Map Methods for Particle Beam Dynamics: Theory, Applications, and Education	Berz, Martin	Michigan State University	East Lansing, MI
Detector Instrumentation, Energy Reconstruction and Data Analysis in the DUNE and NOvA Neutrino Experiments	Bian, Jianming	University of California, Irvine	Irvine, CA
Neutrino Physics and DUNE Single-Phase LArTPC	Bromberg, Carl	Michigan State University	East Lansing, MI
Theoretical and Experimental Studies in Particle Physics and Cosmology	Buckley, James	Washington University	St. Louis, MO

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Experimental Challenges in Probing Dark Energy through Weak Lensing with the Large Synoptic Survey Telescope	Burchat, Patricia	Stanford University	Palo Alto, CA
Dark Matter Searches with the LUX-ZEPLIN Experiment at Penn State University	Carmona Benitez, Maria	Pennsylvania State University	University Park, PA
Improving Dark Energy Constraints Using Low-Redshift Large-Scale Structures	Clowe, Douglas	Ohio University	Athens, OH
The University of Virginia Experimental High Energy Physics at the Energy Frontier	Cox, Bradley	University of Virginia	Charlottesville, VA
INTENSITY FRONTIER STUDIES with HEAVY QUARKS AND LEPTONS at the UNIVERSITY OF MISSISSIPPI	Cremaldi, Lucien	University of Mississippi	University, MS
Elementary Particle Physics and High Energy Phenomena	Cumalat, John	University of Colorado	Boulder, CO
University of Pennsylvania Theoretical Program	Cvetic, Mirjam	University of Pennsylvania	Philadelphia, PA

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Physics from Cosmic Surveys	Dodelson, Scott	Carnegie Mellon University	Pittsburgh, PA
Probing the Intensity Frontier with NOvA and Mu2e	Dukes, Edmond	University of Virginia	Charlottesville, VA
Exploring New Physics on Cosmological Scales	Dvorkin, Cora	Harvard College	Cambridge, MA
Pursuing Dark Energy with Large Galaxy Redshift Surveys: Baryon Acoustic Oscillations and Beyond	Eisenstein, Daniel	Harvard College	Cambridge, MA
Quantum Finite Elements for Nonperturbative Quantum Field Theory on Curved Manifolds	Fleming, George	Yale University	New Haven, CT
High Energy Physics at Tufts University	Gallagher, Hugh	Tufts University	Medford, MA
Probing the Muon Anomalous Magnetic Moment with Fermilab E989	Gibbons, Lawrence	Cornell University	Ithaca, NY
Light Relics of the Early Universe	Green, Daniel	University of California - UCSD	La Jolla, CA
Measurement of Coherent Elastic Neutrino-Nucleus Scattering with Germanium Detectors at the SNS	Green, Matthew	North Carolina State University	Raleigh, NC

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Support for the LZ dark matter experiment at the University of Maryland	Hall, Carter	University of Maryland	College Park, MD
The Black Hole Interior in AdS/CFT and Beyond	Harlow, Daniel	Massachusetts Institute of Technology	Cambridge, MA
Internal Calibration of the LZ Dark Matter Experiment	Hertel, Scott	University of Massachusetts Amherst	Hadley, MA
High energy physics tools for precision neutrino interactions	Hill, Richard	University of Kentucky	Lexington, KY
Theories and Constraints for Massive Higher Spins	Hinterbichler, Kurt	Case Western Reserve University	Cleveland, OH
Numerical Codes for the DESC-LSST Analysis Pipeline: Core Cosmology Library Standard Modules and Beyond Λ CDM Modules	Ishak-Boushaki, Mustapha	University of Texas at Dallas	Richardson, TX
The Underlying Science for Realizing High Critical Current Density in (Ba/Sr)Fe ₂ As ₂ Fe-based Superconductor Wires.	Kametani, Fumitake	Florida State University	Tallahassee, FL
Elementary Particle Interactions	Kamyshkov, Yuri	University of Tennessee	Knoxville, TN
Participation in Intensity Frontier Neutrino Physics	Kaplan, Daniel	Illinois Institute of Technology	Chicago, IL

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Particle Physics Research Program	Karchin, Paul	Wayne State University	Detroit, MI
Materials Science of the Interstitial Doping Process	Kelley, Michael	Virginia Tech	Blacksburg, VA
Explorations in Theoretical High Energy Physics	Kephart, Thomas	Vanderbilt University	Nashville, TN
Searches for Lepton Flavor and Lepton Number Violating Processes with Mu2e	Kolomensky, Yury	University of California, Berkeley	Berkeley, CA
Theoretical Investigations in Particle Physics	Kribs, Graham	University of Oregon	Eugene, OR
Research in Elementary Particle Physics	Kutter, Thomas	Louisiana State University	Baton Rouge, LA
UA'(1): The search for low-mass dark matter in liquid xenon	Lang, Rafael	Purdue University	West Lafayette, IN
Raising Superconducting Cavity Gradients	Liepe, Matthias	Cornell University	Ithaca, NY
Deciphering Dark Matter in the Milky Way	Lin, Tongyan	University of California - UCSD	La Jolla, CA
Exploring novel technologies for particle tracking in gas TPCs	Loomba, Dinesh	University of New Mexico	Albuquerque, NM
Mu2e at the City University of New York	Lynch, Kevin	City University of New York	Jamaica, NY

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The SuperCDMS Program at Texas A&M University	Mahapatra, Rupak	Texas A&M University	College Station, TX
Princeton University High Energy Physics Research	Marlow, Daniel	Princeton University	Princeton, NJ
Searching for Dark Matter Interactions with the LZ Experiment	McKinsey, Daniel	University of California, Berkeley	Berkeley, CA
Sub-Kelvin High Mass CCD Detectors For Dark Matter and Neutrino Searches	Mirabolfathi, Nader	Texas A&M University	College Station, TX
Particle Physics and Cosmology Research	Morii, Masahiro	Harvard College	Cambridge, MA
EBOSS AND DESI: LSS CATALOGS, TARGETING AND SPECTROSCOPIC CONTAMINANTS	Myers, Adam	University of Wyoming	Laramie, WY
Experimental Research at the Energy Frontier in High Energy Physics	Neubauer, Mark	University of Illinois at Urbana-Champaign	Champaign, IL
An Experimental and Theoretical High Energy Physics Program	Neumeister, Norbert	Purdue University	West Lafayette, IN
Performance of scintillation detectors based on quantum dots in a semiconductor matrix	Oktayabrsky, Serge	SUNY Polytechnic Institute	Albany, NY

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Precision Photon Detection for Future Neutrino and Dark Matter Experiments	Orebi Gann, Gabriel	University of California, Berkeley	Berkeley, CA
Research and Development of High-Sensitivity UV Solid-State Photon-Counting Devices for High-Energy Physics and Related Fields	Otte, Nepomuk	Georgia Institute of Technology	Atlanta, GA
Particle Physics, Astrophysics and Cosmology at the University of Pittsburgh	Paolone, Vittorio	University of Pittsburgh	Pittsburgh, PA
Neutrino and Flavor Physics at the Intensity Frontier	Petti, Roberto	University of South Carolina	Columbia, SC
Phase-space tailoring and cooling of charged-particle beams for energy- and intensity-frontier applications	Piot, Philippe	Northern Illinois University	DeKalb, IL
The Mu2e Experiment	Prebys, Eric	University of California, Davis	Davis, CA
Testing Non-Flat, Dynamical Dark Energy, Inflation Models	Ratra, Bharat	Kansas State University	Manhattan, KS
Research in High Energy Physics	Ritchie, Jack	University of Texas at Austin	Austin, TX

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Experimental Particle-Astrophysics at the University of Washington	Rosenberg, Leslie	University of Washington	Seattle, WA
Science Reach of the SuperCDMS SNOLAB Experiment	Saab, Tarek	University of Florida	Gainesville, FL
Direct Detection of Dark Matter and CEvNS at The University of South Dakota	Sander, Joel	University of South Dakota	Vermillion, SD
Theoretical Studies in Dark Energy and Dark Matter	Scherrer, Robert	Vanderbilt University	Nashville, TN
Underground Physics at SURF and Beyond	Schnee, Richard	South Dakota School of Mines & Technology	Rapid City, SD
Collider Physics	Seidel, Sally	University of New Mexico	Albuquerque, NM
High Performance High-Field Superconducting Wires for Next Generation Accelerators	Selvamanickam, Venkat	University of Houston	Houston, TX
New Physics from the Neutrino Portal: Early Universe Implications and Detection Prospects	Shoemaker, Ian	University of South Dakota	Vermillion, SD

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Experimental Physics Investigations using the ATLAS Detector at the LHC and From Colliders to Cosmology in the LHC Era	Skubic, Patrick	University of Oklahoma,	Norman, OK
Dark Matter Searches, From LUX to LZ	Szydagis, Matthew	University at Albany, SUNY	Albany, NY
Proposal to Explore the Fundamental Constituents of the Universe Funding Years FY 2018-2020	Tarle, Gregory	University of Michigan	Ann Arbor, MI
Ultimate Precision on $\sin^2 \theta_{23}$ with the NuMI experiments	Thomas, Jennifer	University of Wisconsin-Madison	Madison, WI
Theoretical Research at the High Energy Frontier: Cosmology and Beyond.	Vachaspati, Tanmay	Arizona State University	Tempe, AZ
Development of high-temperature superconducting cables for accelerator magnets	van der Laan, Daniel	University of Colorado	Boulder, CO
High Energy Physics Research at the University of Pennsylvania	Williams, Hugh	University of Pennsylvania	Philadelphia, PA
High Energy Physics at the Energy and Theoretical Frontiers	Wimpenny, Stephen	University of California, Riverside	Riverside, CA

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Research Accomplishments and Goals of the Theoretical High Energy Physics Group	Wise, Mark	California Institute of Technology	Pasadena, CA