Abstract Submitted
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Rapid Throughout of an MeV Ultrafast Electron Diffraction Instrument System[1] MARIANA FAZIO, Department of Electrical and Computer Engineering, University of New Mexico, S. BIEDRON, Department of Electrical and Computer Engineering and Department of Mechanical Engineering, University of New Mexico, D. KIRBY, D. MONK, M. MARTNEZ-RAMN, S. SOSA, Department of Electrical and Computer Engineering, University of New Mexico, D. MARTINS, M. PAPKA, Argonne National Laboratory, M. BABZIEN, K. BROWN, M. PALMER, J. TAO, Brookhaven National Laboratory, A. HURD, J. CHEN, R. PRASANKUMAR, J. SARRAO, C. SWEENEY, Los Alamos National Laboratory — MeV ultrafast electron diffraction is a powerful structural measurement technique for novel characterization of matter. We investigate the demonstration of realtime or near-realtime data processing enabled by data science/machine learning/artificial intelligence in conjunctions with high-performance computing to facilitate automated operation, data acquisition and processing.

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