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Dark Energy Experiments: The Road Ahead¹ JEFFREY NEWMAN, University of Pittsburgh and PITT PACC

The nature of Dark Energy is currently being investigated by a number of ongoing experiments, including the Dark Energy Survey discussed in the preceding talk. In order to better probe this frontier physics, a variety of new projects will begin operations over the next decade. These experiments will utilize multiple methods both to test whether the explanation for cosmic acceleration is consistent with General Relativity and to constrain the properties of Dark Energy if it is the cause of the Universe's accelerating expansion. In this talk, I will give a broad overview of the new instruments and telescopes now being designed that should revolutionize our understanding of Dark Energy in the next two decades. I will focus most on the LSST and MS-DESI projects, which are currently advancing through the U.S. Department of Energy's Critical Decision process.

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