

**University of Wisconsin-Milwaukee**

**Dept. of Physics  
COLLOQUIUM**

*Measuring Cosmic Expansion with the  
Dark Energy Spectroscopic Instrument*

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**3:30 PM (start)      KIRC 1150**

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Since the first observations of the accelerating expansion of the universe at the end of the 1990s, astronomers and physicists have struggled to understand dark energy, a mysterious repulsive force that drives the acceleration. A number of models of dark energy exist. The simplest (the cosmological constant), assumes dark energy is non-interacting and is the same everywhere in space and time. Different models predict subtly different features in the large-scale structure of the universe. We are now entering an era of new photometric and spectroscopic surveys which can discriminate different models of dark energy with unprecedented precision.

In this talk, I will present the latest results from the Dark Energy Spectroscopic Instrument (DESI), a fiber-fed, robotically-actuated galaxy redshift survey that has been in operation at Kitt Peak National Observatory since mid-2021. In April 2024, the DESI Collaboration released its results from the first year of data taking. I will describe the performance of DESI, summarize the first year of data and our cosmological analyses, and present prospects for future results.

