## PHYSICS DEPARTMENT COLLOQUIUM

## "From Black Holes to Dark Energy, using the Eyes of Texas"

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**Abstract**: The nature of dark energy and the roles of black holes and dark matter have been and will continue to be major outstanding issues for understanding our universe. I will summarize initial results and prospect for three major observing campaigns regarding each of these issues. HETDEX is our large dark energy program that is recently starting taking data. The main focus is to measure any evolution of dark energy. It is a 4-year observing campaign. I will present the initial analysis and demonstrate we are on our way to making the most precise measure of the universe expansion rate.

