Abstract for an Invited Paper for the APR07 Meeting of The American Physical Society

Upcoming Ground-based Surveys Designed to Constrain the Nature of the Dark Energy.

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Ground-based astronomical measurements currently provide some of the most direct constraints on the nature of the dark energy. I will briefly review the basic techniques currently being used (Type Ia supernovae, baryon acoustic oscillations...) and promising approaches being developed for the future (all-sky weak lensing, galaxy cluster abundances...). I will also describe upcoming ground-based surveys (PanSTARRS, LSST, DES...) that will contribute to our understanding of the nature of the dark energy.