Title:	Model dependent cosmological parameter fitting
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Abstract:	Currently, the universe is undergoing an accelerated expansion. Many cosmologists believe that Dark Energy is responsible for this accelerated expansion. Since the nature of Dark Energy is unknown, one approach to understanding Dark Energy is the phenomenological approach based on determining its parameters with observations. In this thesis, we study different cosmological models (for Dark Energy) and how they perform when matched with observations.In the thesis, we have used the latest Type Ia supernova(SN Ia) data-set, Pantheon, the largest available SN Ia sample, to constrain the cosmological parameters for various parameterizations of Dark Energy. To break the degeneracy of Hubble parame- ters, we have also used Baryon Acoustic Oscillations along with Hubble data. We have employed Bayesian analysis (MCMC sampling) for parameter estimation to constrain the nature of Dark Energy.
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