Title:	Reconstructing the Inflaton Potential from the CMB Anisotropies
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Abstract:	The observed CMB sky is statistically correlated at scales larger than the largest causally connected length scale at the time of recombination- a paradox termed the 'horizon prob- lem'. The inflationary paradigm provides a solution to this problem by proposing a period of exponential expansion in the early universe driven by a scalar field that rolls down slowly on a potential. In this work, we discuss a procedure for reconstructing this potential from the primordial scalar power spectrum deduced from CMB observations. We present our results for the reconstructed potential and discuss the limitations of the reconstruction pro- cedure. We also discuss the implications of the reconstructed potential for the tensor power spectrum and the energy scale of inflation.
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