Title:	The International School for Advanced Studies (SISSA), find out more Reconstructing the dark energy potential
Authors:	Sangwan, A. (/jspui/browse?type=author&value=Sangwan%2C+A.) Mukherjee, A. (/jspui/browse?type=author&value=Mukherjee%2C+A.) Jassal, H.K. (/jspui/browse?type=author&value=Jassal%2C+H.K.)
Keywords:	Baryon acoustic oscillations Dark energy theory Supernova type Ia-standard candles
Issue Date:	2018
Publisher:	Institute of Physics Publishing
Citation:	Journal of Cosmology and Astroparticle Physics, 2018(1)
Abstract:	Dark energy equation of state can be effectively described by that of a barotropic fluid. The barotropic fluid model describes the background evolution and the functional form of the equation of state parameter is well constrained by the observations. Equally viable explanations of dark energy are via scalar field models, both canonical and non-canonical; these scalar field models being low energy descriptions of an underlying high energy theory. In this paper, we attempt to reconcile the two approaches to dark energy by way of reconstructing the evolution of the scalar field potential. For this analysis, we consider canonical quintessence scalar field and the phantom field for this reconstruction. We attempt to understand the analytical or semi-analytical forms of scalar field potentials corresponding to typical well behaved parameterisations of dark energy using the constraints from recent observations
URI:	https://iopscience.iop.org/article/10.1088/1475-7516/2018/01/018 (https://iopscience.iop.org/article/10.1088/1475-7516/2018/01/018) http://hdl.handle.net/123456789/2186 (http://hdl.handle.net/123456789/2186)
Appears in Collections:	Research Articles (/jspui/handle/123456789/9)

Files in This Item:

File	Description	Size	Format	
Need to add pdf.odt (/jspui/bitstream/123456789/2186/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text	View/Open (/jspui/bitstream/12345

Show full item record (/jspui/handle/123456789/2186?mode=full)
(/jspui/handle/123456789/2186/statistics)