Non-decoupling of heavy scalars in cosmology

Hardeman, A.R.

Author: Hardeman, Sjoerd Reimer
Title: Non-decoupling of heavy scalars in cosmology
Date: 2012-06-08

Non-decoupling of heavy scalars in cosmology

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van Rector Magnificus prof. mr P. F. van der Heijden,
volgens besluit van het College voor Promoties
te verdedigen op vrijdag 8 juni 2012
klokke 12:00

door

Sjoerd Reimer Hardeman

geboren te Hengelo (Overijsel), Nederland in 1982

Promotiecommissie

Promotor:	prof. dr. A. Achúcarro
Co-Promotor:	dr. K. E. Schalm
Overige leden:	prof. dr. J. W. van Holten
	dr. D. Roest
	prof. dr. J. M. van Ruitenbeek
	dr. B. J. W. van Tent

Casimir PhD Series, Delft-Leiden, 2011-3
ISBN 978-90-8593-092-1

The background image is the Hubble ultra deep field, an image of an estimated 10,000 galaxies in the constellation Fornax. These galaxies were formed from the density perturbations that were created during inflation and are best studied from the cosmic microwave background radiation. The image of this radiation is used as a background for the letters on the cover. Finally, a curved inflaton trajectory is depicted, which will make features in the power spectrum that might be possible to study using late time cosmology.

‘Lieve hart mijn boek is af, mijn boek is af!’ - Multatuli

Contents