

Large Scale Structure And Dark Matter In Evolution Of The Universe //

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By

Anne Marie Nzioki

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Anne Marie

SUPERVISOR

Prof Joseph. O. Malo

for Prof J.O. Malo

(C.O.D.)

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for Prof J.O. Malo

DEPARTMENT OF PHYSICS
UNIVERSITY OF NAIROBI

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Department of Physics, University of Nairobi.

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Abstract

The Friedmann model is discussed to provide for the cosmological parameters of the universe. Also discussed is the thermal history of the universe in terms of its content in view of obtaining foundation for the chapters to come. The origin of the large-scale structure in the Universe, in view of linear perturbation theory to obtain the differential equations for perturbations is discussed. Inflation model is also presented and its application to structure formation focusing on the theory of origin and growth and the cosmological perturbations. The measurements of the Cosmic Microwave Background Radiation (CMBR) are presented to provide constrain on the spectrum of the initial perturbations and the parameters of the cosmological models (in this case the standard model and the inflation model). Cosmic strings are looked into briefly as possible source of cosmological perturbations. Large structure formation and content is reviewed and finally, dark matter and the possibilities of its nature are also discussed to provide a more complete view on structure formation. The results of observations are compared to theoretical predictions in the reviews.