

Preface

Climate changes are being explained by various scientists based on the observational data of last 200 years. Most of the statistical scientific data were not able to answer satisfactorily the erratic behavior of climate. Earth is a tiny part of the Universe and it is linked with the changes of Sun and other celestial bodies. We are continuously facing the changes in the climate due to changes in the Sun and in the intensity of cosmic rays and other collateral changes imposed on the Earth. It has been observed that these changes are taking place before any episodic changes on the Earth. An attempt is made here to simulate the climate change based on the abrupt changes in the atmosphere and geosphere of the earth during solar eclipse. In view of variable Star and Sun the concept of monitoring cosmic ray intensity on Earth has been developed. During solar maximum cosmic rays from the Sun are received in abundance on the Earth. However, it has been observed in various occasion that Sun shows low activities during extragalactic cosmic shower (Forbush effect). An attempt has been made to correlate the changes in the environment of the Earth with the changes in the Sun and extragalactic cosmic rays. Continuous monitoring of the cosmic ray data in different latitude and altitude has already been started across the world with the collaboration of NASA (USA), AOARD (Japan), CRD (Armenia), and JNU (India). This work was initiated in International Heliophysical Year 2007 to correlate the climate change with cosmic ray variables and satellites operating in between Sun and Earth. This book may encourage other researchers across the world who can together be able to identify the missing link to solve the unsolved issues of climate change.

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