

TERRAFORMING APPLICATION OF PROJECTED POLAROIDs TO MINIMIZE ELECTROMAGNETIC RADIATIONS

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Abstract

Terraforming aims at altering the environmental conditions of a planet or a body in space, and help it sustain life by developing indigenous species. The application of polaroid crystals to minimize the harmful effects of the electromagnetic radiations, such as UV rays and Infrared rays from the sun, will help in providing a suitable environment for any ecosystem to develop and sustain life in planets such as Mars. The basic principle of polarization of light similar to our sunglasses is being employed in this technology.

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INTRODUCTION

Terraforming which literally translates to “earth-like” is a hypothetical process of deliberately modifying a planet or a body’s atmosphere, ecology, temperature or surface topography. Terraforming still maybe a combination of science fiction and actual science , but there are various technological solutions to achieve terraforming . To increase the core temperature of the planet , the amount of Carbon Dioxide has to be increased which can be reached through the means of greenhouse gas emission systems , this in turn will thicken the atmosphere of Mars and provide with suitable temperature . The main focus of this research paper lies on creating a radiation safe atmospheric system using polaroid to minimize the harmful electromagnetic waves .

Keywords : Teraforming , Polaroid , Mars

Polaroid¹

The crystallographic axis of a polaroid only allows the waves at the same angle of that of the axis to pass through the crystal and hence eliminating the unwanted amount of EM Waves.

A combination of Polaroids can be used to eliminate all unnecessary and harmful waves by making the incident radiations pass through a series of polarizing sheets or polarizer.

Methodology

A network of inter connected polarizing sheets enveloping the planet can be engineered to minimize the harmful radiation of EM waves. Though at present the economic and technological resources required to do so are far beyond that which any government or institution is willing to allocate to it. The long timescales and practicality of terraforming are the subject of debate.

References

McKay, C.P., O.B. Toon, and J.F. Kasting. "Making Mars habitable." *Nature*. Vol. 352, No. 6335 (1991): 489-496.

.A. P. BRUCKNER ET AL.: "Feasibility studies of the extraction of water vapor from the Martian atmosphere by adsorption in zeolite 3A", ISRU II TECHNICAL INTERCHANGE MEETING, 18 April 2000 (2000-04-18) - 19 November 1997 (1997-11-19), Houston, Texas [US]

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