

## **Space Plasma Physics Applied: Global Climate Change**

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I will discuss a “practical” application of plasma physics that will be of interest for the man on the street. A new idea links solar/solar wind plasma phenomena, Earth magnetospheric plasma instabilities, coherent ion and electron cyclotron waves, relativistic electron pitch angle transport and deep penetration of energy into the atmosphere through the generation of bremsstrahlung X-rays and gamma rays. A number of possible scenarios will be presented that could lead to global climate change. This review has recently been published in the literature (Tsurutani et al., *J. Geophys. Res.*, 2016).