

Global weather control using nuclear reactors on geographic poles

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Abstract

Geographic north and south poles are key points in global atmospheric dynamics. Taking chaos theory into account, any large perturbation in the local atmospheric velocity field at the geographic poles, has the potential of effecting weather patterns all over the globe. Generating thermal upcurrents in the atmosphere at the geographic poles using heat from nuclear reactor, opens up the possibility of benign global weather control - and a globally temperate climate.

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1 Introduction

Humans have been controlling water flow on rivers - for the purposes of irrigation and electricity generation. Control of flow of large masses of air, would be the next logical step in evolution of interaction between humans and their environment. After all, it is precipitation originating from humid air, which ultimately leads to formation of rivers. Inequitable precipitation leads to droughts in some areas and floods and storms in other areas. Directly heating earth's atmosphere by nuclear reactors, to create artificial low pressure regions, to modify local weather patterns, e.g., pulling in moist air over oceans into interior arid regions to increase precipitation - has been discussed in [1]. Application of this concept to - (1) control of hurricane trajectory and intensity; and (2) irrigation of arid areas close to coasts by creating artificial tropical cyclones over near by seas - has been discussed in [2]. The Acronym ANHISHA, standing for -

"Application of Nuclear Heat Injection System for Heating Atmosphere"

has been introduced in [2], and will be used in this paper. In a continuation of these ideas, this paper, considers the scenario of heating atmosphere of north and south geographic poles - using nuclear reactors - with the motive of a benign global climate control, and a temperate global climate.

North and South geographic poles are two key points of convergence of earth's atmospheric velocity field - akin to a lens focusing suns rays. This is evinced by large atmospheric velocity vectors near the geographic poles - of which the jet streams with velocities ranging from 200-300 kilometers per hour, are an example. A large perturbation in local pressure and velocity, applied at these points will back-propagate all over the global atmosphere. Such a controlled heating of the polar atmospheres, - with a power of about 10 Giga Watts (equivalent to 10 large nuclear reactors), - will induce a strong thermal upcurrent, at what are in all probability the most critical points of earth's global atmospheric circulation system.

This paper considers -

1. Formation of a Core Polar Mini-Cell (CPMC)" using ANHISHA,
2. Butterfly effect on the poles due to perturbation induced by ANHISHA,

3. Phase space of earth's atmosphere and emergence of a controllable global temperate climate, and
4. Command and control scenario for this concept.

Present day Global Circulation Models (GCM) (for instance [4]) and weather codes are sophisticated enough to model effect of such a perturbation, which is essentially a boundary condition at the geographic poles.

2 Creating the "Core Polar Mini-Cell (CPMC)" using ANHISHA

Atmospheric circulation in each of the earth's hemispheres is described by three cells -

1. the Hadley cell,
2. the mid-latitude cell, and
3. the polar cell.

While their boundaries vary with seasons, the basic structure is stable. Heating the polar atmosphere with nuclear reactors located at the poles, will generate a strong thermal upcurrent centered at the poles. This will be in opposition to the natural down current at the pole. This antropogenic thermal upcurrent will create a 4th mini-cell, centered at the poles which will be refered to as the "Core Polar Mini-Cell (CPMC)".

3 Butterflies on poles

The title of this sub-section perhaps conveys to the reader, an image of beautiful women (butterflies) doing pole dancing. However, it pertains to what is metaphorically called the Butterfly effect - originating in the atmosphere over geographic poles due to ANHISHA, and its effect cascading all over the global atmosphere. Philip Merilees coined the phrase -

" Does the flap of a butterfly's wings in Brazil set off a tornado in Texas? "

In this scenario, the miniscule energy input into the atmosphere by flapping of wings of a butterfly, is evolving into a re-arrangement of atmospheric energy distribution - leading to the storm in New York. Role of chaos theory to earth's atmosphere has been discussed in [3].

3.1 Controlling storms at high latitudes

North polar vortex is a large, sustained, storm, centered above the north pole. It forms during the winter in the northern hemisphere, and its breakdown spawns off storms in the higher latitudes of the northern hemisphere. Heating of north polar atmosphere by nuclear reactors will provide a core which will stabilize the natural structure of the north polar vortex. A similar scenario can be effected at the south pole.

4 Temperate global climate

The weather across the globe splits into three zones - hot, temperate and cold. This three fold division, corresponds to the three cells of earth's atmospheric circulation. This division is primarily due to the spherical shape and rotation of earth, and confinement of the yearly polar movement of sun, between the tropic of Cancer, and the tropic of Capricorn. What effect would the 4th polar mini-cell have on the temperature distribution across the globe? The effect we are looking for is-

"A significant increase in the area of the temperate zone, and corresponding decrease in the area of hot and cold zones"

We aim for a controlled process which would lead to a re-arrangement of distribution of kinetic, gravitational and thermal energy of the atmosphere, to achieve this effect.

Consider the phase space of earth's atmosphere. Construct a three dimensional grid spanning across earth's atmosphere. Quantities such as temperature, pressure, density, humidity, aerosol distribution, - can be defined on each point of this grid. Alternatively, they can be defined for a point within each cell of this grid. The smaller the grid, the more accurate would be the description. Phase space of earth's atmosphere would have a dimension equal to number of grid points (or grid cells) multiplied by the number of pertinent

physical quantities at each point. A given state of the earth's atmosphere, than would be represented as a point in this abstract phase space. This point would be at a minima of a certain potential - which would consist of terms corresponding to solar energy input, earth's rotation, viscous damping, etc. . Ergo, the present state of earth's atmosphere (ignoring or averaging the yearly, diurnal variations) is at a local minima of this potential.

Question is whether this minima is unique, or whether there exist more than one such minimas. Further, can the present atmosphere can be perturbed to go into another local minima. What would be the minima corresponding to the desired globally temperate climate? The thesis being built up within this paper is that perturbation of polar atmosphere, using heat from nuclear reactors, would be sufficient to move state of earth's atmosphere, from one local minima, to another (see figure 4).

5 Playing by the ear - Music of "Weather Report"

"Weather Report " was a Jazz band of 1970s-80s - whose music was marked by collective improvisation, by all the band members. This is in contrast to the usual, jazz performances, in which a soloist dominates, with the other instruments playing the role of accompaniments. Until the industrialization, dynamics of earth's atmosphere and global weather, was determined by nature - with the humans playing a comparatively minor role. The global weather control scenario being presented in this paper, aims to promote humans to the status of an equal performer - alongside nature - creating the improvised jazz music of "the benign global weather control". ANHISHA on poles may also be regarded as accupresure on Gaia [5].

References

- [1] Modgil, M. S. : *Large scale weather control using nuclear reactors*, (2002), arXiv:physics/0210008
- [2] Modgil, M. S. : *Climate control using nuclear energy*, (2008), arXiv:0801.0320 .

- [3] Selvam, A. M. : *Nonlinear Dynamics and Chaos: Applications in Atmospheric Sciences*, (2010), arXiv:1006.4554
- [4] Hamilton, K.: *High resolution global modeling of the atmospheric circulation*, *Advances in Atmospheric Sciences*, **23**, p842-856 (2006).
- [5] Lovelock, James : *Gaia: A New Look at Life on Earth*, Oxford: Oxford University Press, (2000).