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Mini-Review

Prevention of Tornadoes

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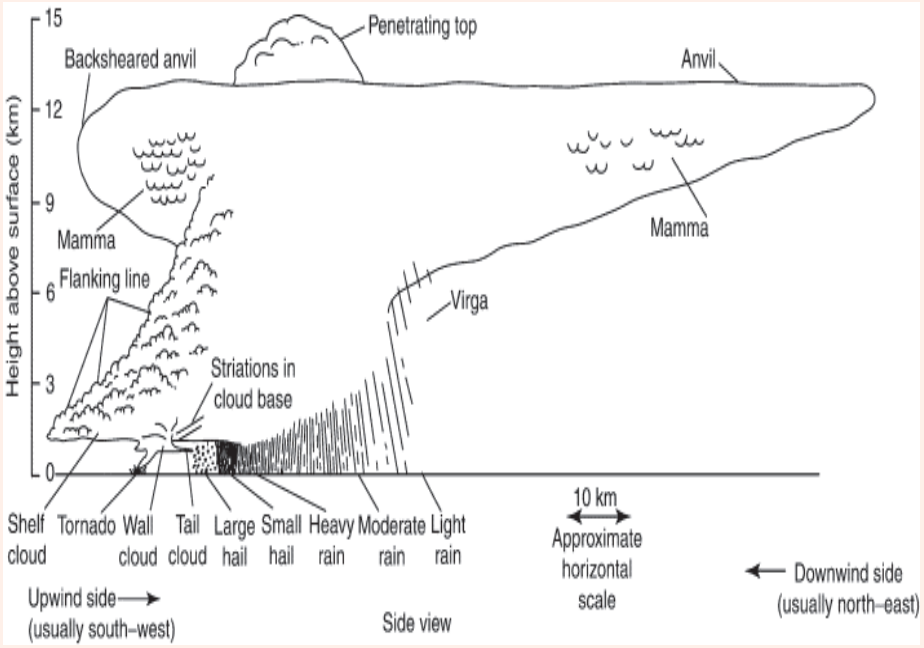
Abstract

For decades, environmentalists and weather scientists have publicized the impending crisis caused by the accumulation of "greenhouse gases" in the global environment. The greater destructive forces of storms such as increasing strength of recent hurricanes has provided confirmation of the effects of Climate Change. The ability to counteract these changes has been a slow process which is predicted to cost trillions of dollars and environmental attempts to deal with climate change, e.g., wind farms and development of solar energy. There is one environmental event that annually cost lives and great loss of property that can be interdicted by present technology. In the present report, methods are proposed for preventing tornado occurrences based on new insights into tornado formation.

Introduction

Anatomy of a thunderstorm

It is well known that tornadoes develop at the tail end of the thunderstorm as a vortex descending from the wall cloud. Although this is a rain free area two important factors will determine tornado development. While a wide array of surface temperatures and dew points can produce a tornado, when the surface area is very warm and moist with a large dew point depression (the difference between the temperature and dew point), the conditions for vortex formation is optimal. This leads to a higher cloud base making it less conducive for the vortex to reach from the clouds to the ground. The profile of the thunderstorm also reveals that the wall cloud can be overflown at relatively low levels (10K-15K feet) allowing a "water bomber" to deliver its payload over the wall cloud thereby disrupting the vortex formation. If the water bombing of the vortex is a potential method for its dissipation, how does one explain the well-known "rain wrapped tornado" observation? It should be noted that the developed mature tornado, as it moves into the area of heavy rain would not be in danger of dissipation since its intensity has increased by orders of magnitude. The proposal presented in the attached video (*https://www.youtube.com/watch?v=PjsMJtEiQQ4*) is both a laboratory demonstration and a field trial animation based on attacking the earliest stages of tornadic development at which time the potential tornado is at its weakest and most vulnerable condition.



https://www.youtube.com/watch?v=PjsMJtEiQQ4

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2. Benjamin S (2014) Attacking the Vortex 2014 720P.