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From: <dan.onischuk@gmail.com>
Date: Sat 03 Oct 2015 5:31 PM
To: "The White House" <info@mail.whitehouse.gov>
Cc: <health-science@washpost.com>; <opinion@nytimes.com>; <letters@nytimes.com>; <inytletters@nytimes.com>; <news@chron.com>; <adriscoll@miamiherald.com>; <haveyoursay@bbc.co.uk>; "Megan (NBCUniversal) Kopf" <megan.kopf@nbcuni.com>; "Erin (NBCUniversal) Miller" <erin.miller@nbcuni.com>; <dana.bartholomew@dailynews.com>; <letters@theaustralian.com.au>; <online@theaustralian.com.au>
Subject: Revised> Proposal to Control Climate Change

PS2 – In addition to mitigating global warming, my proposed method could also be used to prevent Hurricanes by lowering ocean temperatures at the formation sites & could also be used to reduce power used in Southern States during hottest months. It could also help to reduce the loss of arable land to deserts.

If a sheet 10 sq meters is only 0.01 mm thick, then coverage for 1,000,000 sq km would require launching a payoload size 3m x 3m x 1m which should easily fit most rockets or space shuttle.

Note: this is only a temp relief to buy more time for world policies to adjust to the reality of global warming. We lost over 30 years denying the reality. Here's hoping that scientists find that this can give us a better chance – I accept ridicule rather than never speaking up at all.

dan onischuk www.securevote.biz www.parkfoto.com/Research.php

From: dan.onischuk@gmail.com
Sent: Tue 29 Sep 2015 7:27 PM
To: hjsmith@aaas.org ; jyeston@aaas.org ; iosborne@science-int.co.uk ; ksmith@science-int.co.uk ; jstajic@aaas.org
Subject: Revised> Proposal to Control Climate Change

revised – use double-side reflective mylar cut into small pieces (eg 1 cm or 1/4 inch) so as to allow for meteors, signals, etc. pass-through. (Think of 3 ring binder paper-hole confetti.)
an area of 2000 x 1000 km would require about 0.02 cu km of lightweight mylar 0.01 mm thick substrate with a few microns of reflective coating.
Controlling incident energy is penultimate, as cosmic rays tend to seed cloud formation, which is beyond our control.

The ultimate imperative issue may well be controlling ocean acidity by artificial introduction of carbonate molecules to sustain food chain sea life.
https://en.wikipedia.org/wiki/Ocean_acidification
dan

From: dan.onischuk@gmail.com
Sent: Wed 23 Sep 2015 10:45 PM
To: hjsmith@aaas.org ; jyeston@aaas.org ; iosborne@science-int.co.uk ; ksmith@science-int.co.uk ; jstajic@aaas.org
Subject: Proposal to Control Climate Change

I recently posted this off the cuff idea – please feel free to poke holes ....

Perhaps the quickest, most inexpensive solution to global warming is to cut down on incoming sunlight by creating an artificial cloud of nickel particles in geosynch or mid earth orbit above the dayside equator. Nickel can later be shaped or coalesced and removed by magnets.

The disk method (BBC 2007 – see also Arthur C Clarke novels Firstborn, Sunstorm) would require a framework and controls = extra mass and costs. My equatorial geosync particle cloud method could be less costly, and more simple to deploy and to adjust albedo by adding / gathering particles and shaping the cloud with dispersal jets (crop-dusting) and nearby pilot & shape control magnets.

How this would interact with the Van Allen belts or heliosphere is not known and there may be prior experiments or simulations by NASA or others to validate or refute this theory.

This seems rather obvious to me, (so it may have already been submitted before) but then so did my world first discovery of the most probable birthdate of Christ (www.parkfoto.com/Projects.php).

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NATURE | NEWS

Climate scientists ponder spraying diamond dust in the sky to cool planet

Solid particles of diamond or alumina might be safer than sulphate droplets as a way to redirect the Sun's energy, calculations suggest.

Andy Extance

26 October 2015

NASA

Injecting materials in the stratosphere is seen a desperate but feasible 'geoengineering' measure to counter the effects of global warming.

Climate scientists have thought up plenty of futuristic ways to cool the planet, but an analysis published on 26 October[1] examines what may be their wildest idea yet: spraying tiny diamonds high into the atmosphere.

Researchers have for years discussed the merits of pumping water-based sulphate spray into the sky to reflect and scatter the Sun's energy — essentially, mimicking the cooling caused by volcanic eruptions. Like most kinds of geoengineering, the idea is highly controversial and so far untested.

How cities can beat the heat

But if anyone does try this 'solar-radiation management', then it may be safer to use dusts of solid, nanometre-sized particles, suggests a team of scientists from Harvard University in Cambridge, Massachusetts. In a paper published in *Atmospheric Chemistry and Physics*[1], they calculate that nanoparticles of diamond or alumina (aluminium oxide) could be more effective and less environmentally damaging than sulphates. And although diamond dust is expensive, it is not completely out of the question, the researchers argue.

"Our paper is really geared towards removing the mindset that it has to be sulphate that's used to do solar radiation management," says Debra Weisenstein, an atmospheric modelling expert at Harvard and one of the study's authors.

Sulphate's side-effects

Other researchers have proposed spraying solid dusts before[2]. But the latest study is the first to model the particles' effects in detail, Weisenstein says, by examining how they interact — both physically and chemically — with different substances in the atmosphere, and making the comparison with sulphates.

In the atmosphere, sulphates lead to the production of sulphuric acid, which damages the ozone layer. By absorbing certain wavelengths of light, they also heat up the lower stratosphere; that in turn could affect air-circulation patterns and climate. Sulphates would also diffuse light, an

effect that could boost plant growth but would lower the power output of solar panels[3].

Climate tinkerers thrash out a plan

Alumina and diamond dust both lead to fewer problems, says Weisenstein. "You could have significantly less impact on ozone, less heating of the stratosphere and less of an increase in diffuse light at Earth's surface," she says. That is because alumina and diamond do not result in the production of sulphuric acid, and they scatter and absorb particular wavelengths of light in a different way.

Besides analysing environmental effects, the paper also shows that, pound for pound, alumina dust would achieve a similar cooling effect to that of sulphate sprays — but that diamond dust would be at least 50% more effective.

Diamonds in the sky

Of course, spraying diamond dust into the sky would ring up a hefty bill. Diamond dust is less expensive than cut gemstones: tiny synthetic diamond particles are now available at less than US$100 per kilogram, the Harvard researchers note. But based on their paper's results, offsetting just a few percent of the energy trapped by human-emitted greenhouse gases would take hundreds of thousands of tonnes of dust annually. Although the Harvard researchers stress that they didn't do a detailed cost analysis, at current prices that would still require billions of dollars each year.

Research on climate engineering: We must start now

However, Weisenstein is adamant that the ultimate cost would be lower. "Once this can be scaled up to make the right quantities, you assume the price is going to drop," she says. "Trying to estimate based on how much diamond costs currently is not particularly useful."

And David Keith, a climate scientist also at Harvard and another of the paper's authors, says he does not think even today's costs would be prohibitive. By 2065, he says, with 10 billion people on the planet, the cost might be on the order of $5 per person to pump up some 450,000 tons of diamond dust.

Still, the Harvard team is focusing on alumina right now, Weisenstein says, because it's easier to make and its chemical behaviour has been better studied.

The scientists warn, however, that both alumina and diamond nanoparticles carry unknown risks. Sulphates are reasonably well understood, thanks to research on volcanoes. By contrast, the chemistry of the solid particles — such as how their surfaces catalyse chemical reactions — is not as clear, although the Harvard researchers are doing lab tests to remedy that.

The study "strongly suggests" that such solid dusts could significantly lower some of the risks associated with sulphates, says Matthew Watson, a volcanologist at the University of Bristol, UK, who was the principal investigator on one cancelled small-scale geoengineering experiment, the Stratospheric Particle Injection for Climate Engineering project, or SPICE. But he suspects that the unknown risks and lack of any natural analogue will make solid dusts even less popular with the public than are sulphate sprays.

Nature | doi:10.1038/nature.2015.18634

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dan onischuk - a few seconds ago
My original ideas to control incident solar energy & global warming was to send into orbit small pieces (not nano particles) "space confetti" of reflective mylar or metal. I agree with enviro-impact concerns and bio-degradable paper (wood, corn, rice) should probably be used instead. Note: Sept 2015 I submitted emails to various news magazines the idea of "space-confetti" to reflect sunlight which was also posted in facebook groups Geo-Engineering & Climate Alert. It is annoying to have people continually take credit for my original ideas. www.parkfoto.com/Research.php
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Veronica Roach - 6 hours ago
Geo-engineering is already happening - has been for a long time !
Please see : http://www.geoengineeringwatch...
read - don't just criticize !!
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Chris Exley - 10 hours ago
It is totally naive to think that you can fill our atmosphere with 'alumina' nanoparticles without devastating consequences for the planet, including humans.
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Don Bailey - 18 hours ago
Does the earth contain hundreds of thousands of tonnes of diamonds? How many tonnes are in inventory? How many tonnes are recoverable per year? What impacts would result from mining such quantities?
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W. F. Zimmerman - 19 hours ago
What could possibly go wrong: how would this plan prevent enterprising entrepreneurs from "harvesting" the atmospheric diamond dust and repurposing it for "bling" or industrial applications?

While this may seem unlikely, people steal, enslave, and kill for substances that are less than $100/kg, and with likely still 1B people with incomes under $100/year by the time SRM is implemented, a source of diamond dust which does not need to be manufactured and is available throughout the world seems like it's bound to inspire some eager unofficial entrepreneurs ...
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