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## [Have You Noticed All The Airplane Exhaust Pollution In The \(GeoEngineered\) Sky Lately?](#)

**What it is:** Cloud Seeding, Weather Modification, Solar Radiation Management (SRM) GeoEngineering is defined as planetary-scale environmental engineering of our atmosphere, our weather, the oceans, and the Earth itself. The methods, or schemes, that may be used now without public oversight or consent, prior public notification or State oversight, are staggering in number and scope.

[More](#)



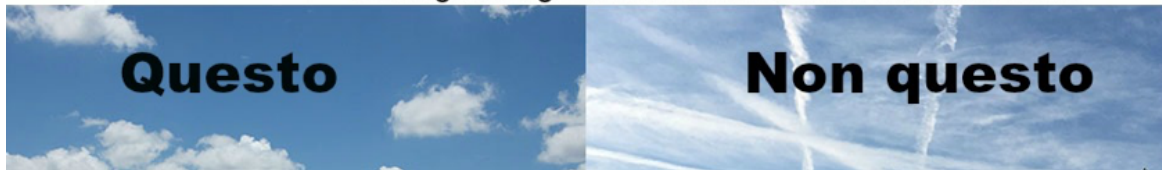
*Some jets release cloud seeding aerosols that form artificial man-made “clouds,” in a method of climate manipulation known as Solar Radiation Management GeoEngineering (SRMG)*

## Even the Vatican is discussing GeoEngineering?

“Faith communities, with their values-based approach, as well as philosophers, social scientists and lawyers, will have to enter into the debate. Imagine, in the not-distant future, that one single State started the dispersal of aerosols in the atmosphere as a means of solar radiation management.”

**ZERØ** GEOENGINEERING.COM

GeoEngineering = Cambiamenti climatici creati dall'uomo



**WEATHER AND CLIMATE MODIFICATION**

# WEATHER AND CLIMATE MODIFICATION

Report of the

**SPECIAL COMMISSION ON  
WEATHER MODIFICATION**

**NATIONAL SCIENCE FOUNDATION**

**Did you Know?** Several USA states had a ban on cloud seeding in the 1960's: **Maryland, West Virginia, and Pennsylvania.**

It was also in Pennsylvania that one of the first laws was passed with the intent of curbing possible harm to nature by changing the weather. In discussing the bill which became the 1967 Pennsylvania law, one of its sponsors in the House of Representatives stated: “Cloud seeding involves silver iodide, and silver iodide, Mr. Speaker, is highly poisonous. AgI used in seeding falls everywhere, on trees, on vegetation, roofs, people, and in its synergistic action joins with motor exhaust to become lead iodide. Uncontrolled automatic cloud seeding then takes place, and the area for hundreds of miles suffers inversions and drastically modified weather conditions, not to mention total pollution and toxic effects upon all fauna and flora. Pine trees, for example, are especially susceptible; they store these poisons in cold weather and release them into the atmosphere in warm weather. Dry ice, CO<sub>2</sub>, also used in seeding, is equally dangerous, disrupting the entire ecology of the planet.”

**Cloud Seeding Weather Modification & Solar Radiation Management (SRM) GeoEngineering efforts are based on the intentional release of chemical aerosols by aircraft and other means, in an attempt to influence the weather and manipulate Earth’s climate.**

**There should be ZERO  
GeoEngineering!**

**ALL the issues related to environmental & human health and safety associated with air pollution, remain relevant for GeoEngineering (GE), Weather Modification, cloud-seeding and other intentional pollution-generating**



**United States Patent** [19]

[11] E

**Re. 29,142**

**Papee et al.**

[45] Reissued Feb. 22, 1977

[54] COMBUSTIBLE COMPOSITIONS FOR GENERATING AEROSOLS, PARTICULARLY SUITABLE FOR CLOUD MODIFICATION AND WEATHER CONTROL AND AEROSOLIZATION PROCESS	2,409,201 10/1946 Finkelstein et al. .... 252/305 X
	2,614,083 10/1952 Bailar, Jr. et al. .... 252/305 X
	2,633,455 3/1953 Finkelstein et al. .... 252/305 X
	3,044,911 7/1962 Fritzen ..... 149/43 X
	3,120,459 2/1964 Coates et al. .... 149/43 X
	3,257,801 6/1966 Martinez et al. .... 149/43 X

[75] Inventors: **Henry M. Papee; Alberto C. Montefinale; Gianna L. Petriconi**, all of Rome, Italy; **Tadeusz W. Zawadzky**, Ottawa, Canada

*Primary Examiner*—Richard D. Lovering  
*Attorney, Agent, or Firm*—George H. Riches and Associates

[73] Assignee: **Consiglio Nazionale delle Ricerche**, Rome, Italy

[22] Filed: **May 22, 1973**

[21] Appl. No.: **362,680**

**Related U.S. Patent Documents**

Reissue of:  
[64] Patent No.: **3,630,950**  
Issued: **Dec. 28, 1971**  
Appl. No.: **777,581**  
Filed: **Nov. 21, 1968**

U.S. Applications:  
[63] Continuation-in-part of Ser. No. 742,956, June 19, 1968, abandoned, which is a continuation of Ser. No. 444,923, March 22, 1965, abandoned, which is a continuation-in-part of Ser. No. 392,809, Aug. 28, 1964, abandoned.

[52] U.S. Cl. .... **252/305; 149/43; 239/2 R; 252/186; 252/187 R; 252/188.3 R; 252/319**

[51] Int. Cl.<sup>3</sup> .... **A01G 15/00; C09K 3/30; E01H 13/00**

[58] Field of Search ..... **252/305, 319, 186; 149/43; 239/2 R, 2 S**

[56] **References Cited**

**UNITED STATES PATENTS**

2,232,728 2/1941 Pleasants ..... 252/319 X

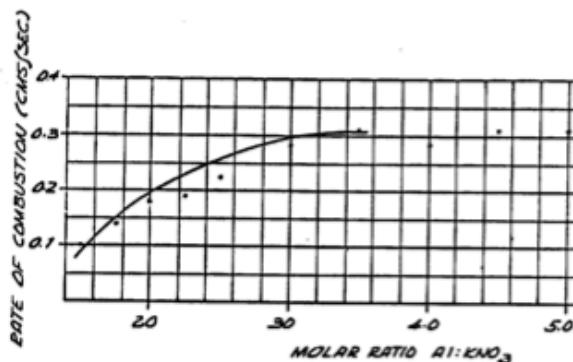
[57] **ABSTRACT**

A combustible composition for generating aerosols for the control and modification of weather conditions consisting of a readily oxidizable substance selected from the group consisting of aluminum, magnesium, alkali-metals and alkaline earth metals; an oxidizing agent selected from the groups consisting of:

- (a) sulphur and sulphur yielding compounds; and
- (b) organic and inorganic nitrates, alkali-metal and ammonium chlorates and perchlorates;

the molar ratio of the oxidizable substance to the oxidizing agent being between 1.5:1 and 3.5:1 and a stable hygroscopic solid which does not directly participate in the combustion process of the combustible composition, said hygroscopic solid being present in an amount up to 40% of the total weight of the combustible composition, the oxidizable substance, the oxidizing agent and the hygroscopic substance having a particle size in the range of from -140 to +270 mesh, and a primer initiating the combustion of said composition whereby during combustion, a finely dispersed aerosol smoke consisting of moderately hygroscopic condensation nuclei, and a non-hygroscopic gas are simultaneously evolved, said gas acting to disperse said nuclei.

**11 Claims, 8 Drawing Figures**

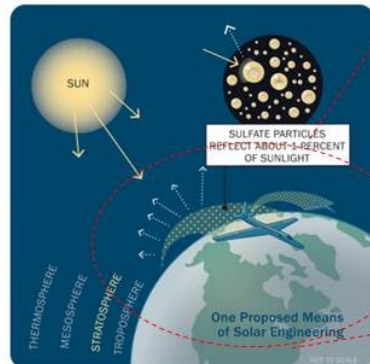


[Link To Patent](#)

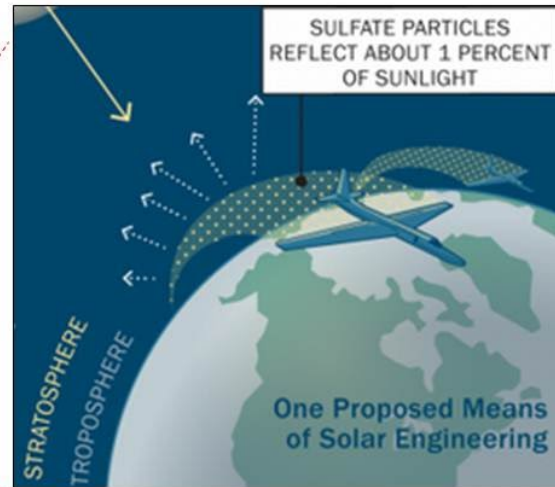
FEATURES

## Buffering the Sun

David Keith and the question of climate engineering



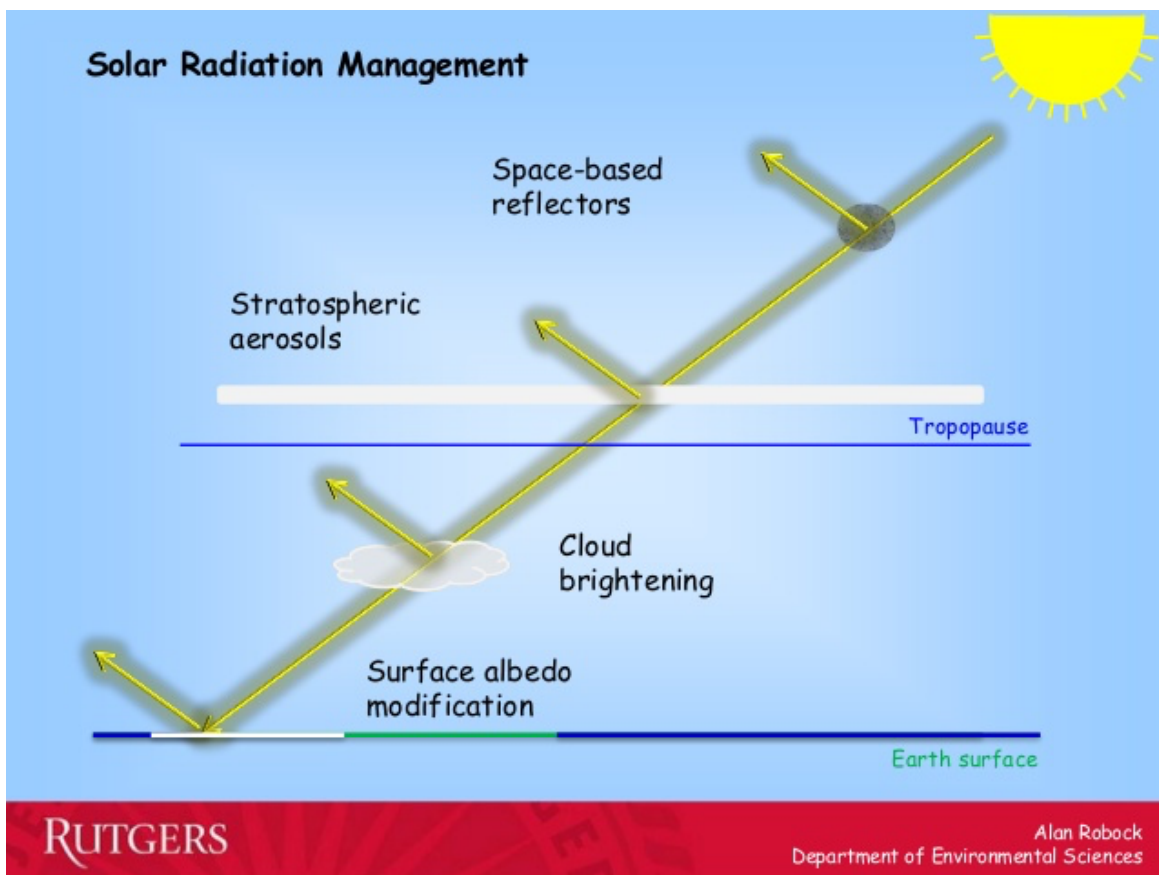
Graphic by FRANK BIRCH



“One suggestion, inspired by sulfur-spewing volcanoes, involves modifying a fleet of jets to spray sulfates into the stratosphere, where they would combine with water vapor to form aerosols. Dispersed by winds, these particles would cover the globe with a haze that would reflect roughly 1 percent of solar radiation away from Earth.”

## Harvard Professor David Keith Explains Solar GeoEngineering:

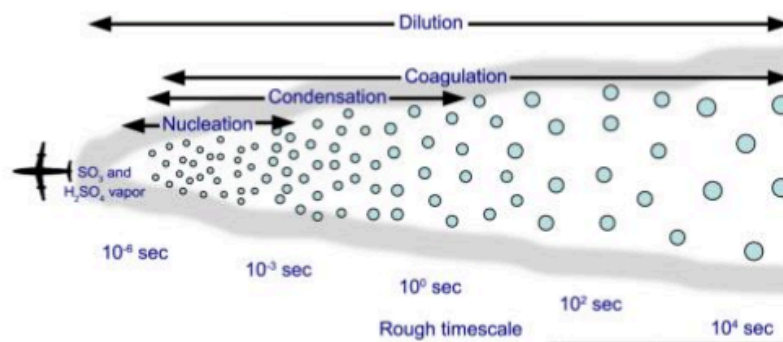
“...involves modifying a fleet of jets to spray sulfates into the stratosphere where they would combine with water vapor to form aerosols. Dispersed by winds, these particles would cover the globe with a haze...”



## GeoEngineering Benefits and Risks: Sunblock with Consequences

We're finding (proposed) GeoEngineering Footprints including H<sub>2</sub>SO<sub>4</sub> in the rain and snow samples being professionally analyzed from the USA and Internationally.

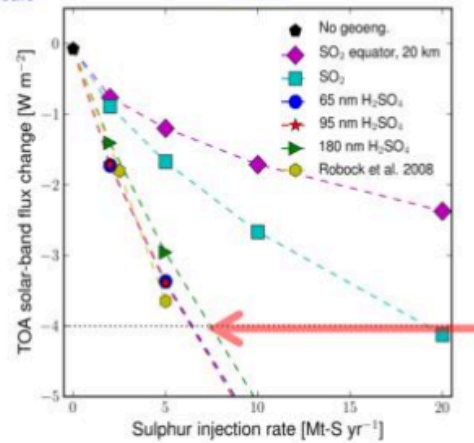
## Partial solution: add $H_2SO_4$ directly in a aircraft plume



Direct  $H_2SO_4$  injection can make small particles with well controlled sized distribution.

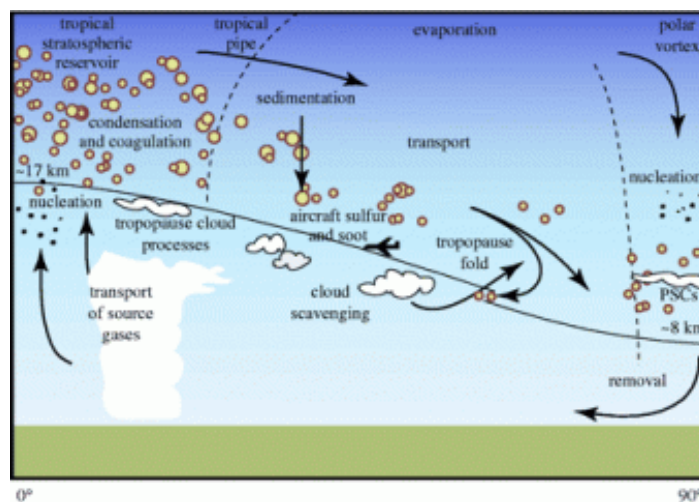
→ Much more effective.

Efficient formation of stratospheric aerosol for climate  
Engineering by emission of condensable vapor from aircraft,  
Pierce, Weisenstein, Heckendorn, Peter and Keith, *GRL*, 2010



14

## Efficient formation of stratospheric aerosol for climate engineering by emission of condensible vapor from aircraft



*An overview of geoengineering of climate using stratospheric sulphate aerosols*

# RESEARCH THE GEOENGINEERING ACT OF 2017



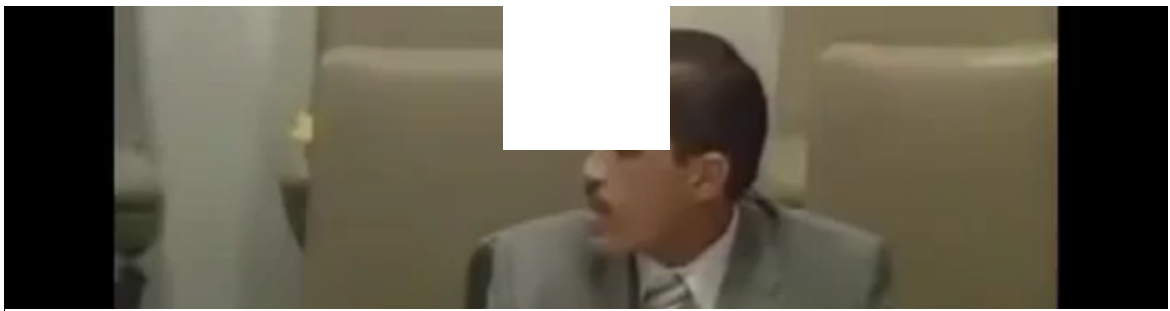
**CONTACT US TO START ADVOCATING FOR STRONG ANTI-  
GE LAWS WHERE YOU ARE**

**Keep Chris Haskell, Sign Avenger, out of Prison!**



**Say NO to GeoEngineering!**





00:00

16:49



**LET THE SUN SHINE IN**  
**ROBIN**  
**DOWNS**  
**DISTRICT-101 HAMPDEN NEWBURGH**  
**WWW.ZERO5G.COM**  
**WWW.ZEROGEOENGINEERING.COM**



# LET THE SUN SHINE IN – ELECT ROBIN DOWNS 2018!

ZEROGEOENGINEERING / Maine, USA

## GeoMIP

We are carrying out standard experiments with the new GCMs being run as part of CMIP5 using identical global warming and geoengineering scenarios, to see whether our results are robust.

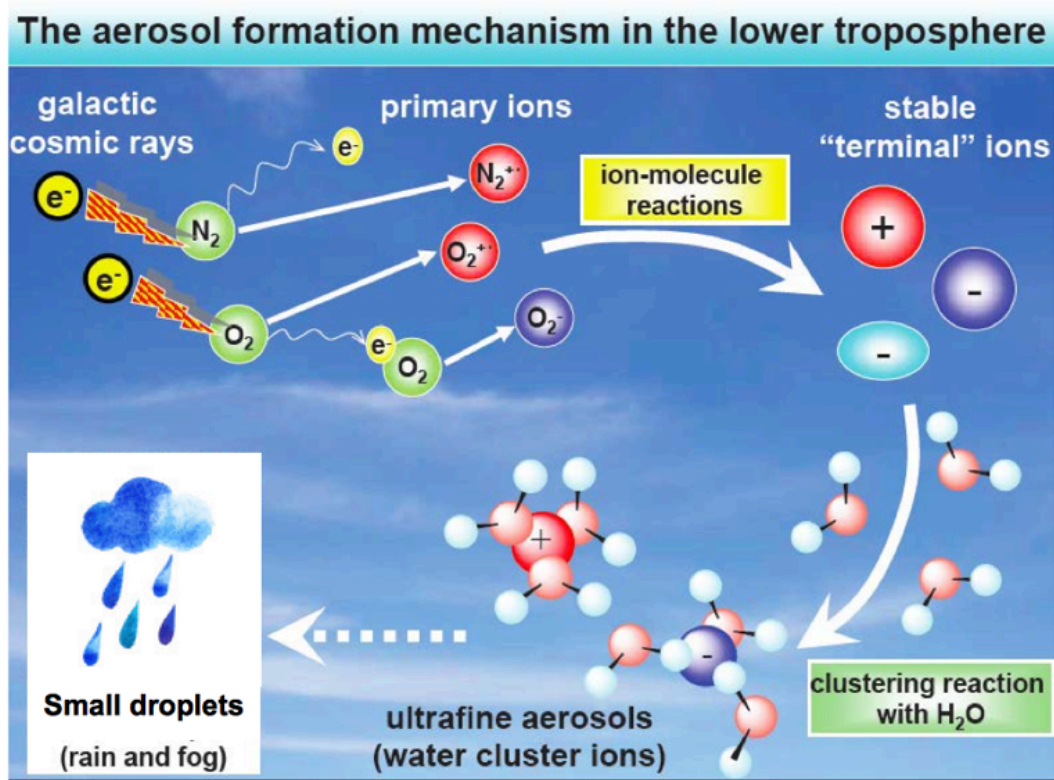
For example, how will the hydrological cycle respond to stratospheric geoengineering? Will there be a significant reduction of Asian monsoon precipitation? How will ozone and UV change?

Kravitz, Ben, Alan Robock, Olivier Boucher, Hauke Schmidt, Karl Taylor, Georgiy Stenchikov, and Michael Schulz, 2011: The Geoengineering Model Intercomparison Project (GeoMIP). *Atmospheric Science Letters*, **12**, 162-167, doi:10.1002/asl.316.

GeoMIP is a CMIP Coordinated Experiment,  
as part of the Climate Model  
Intercomparison Project 5 (CMIP5).

RUTGERS





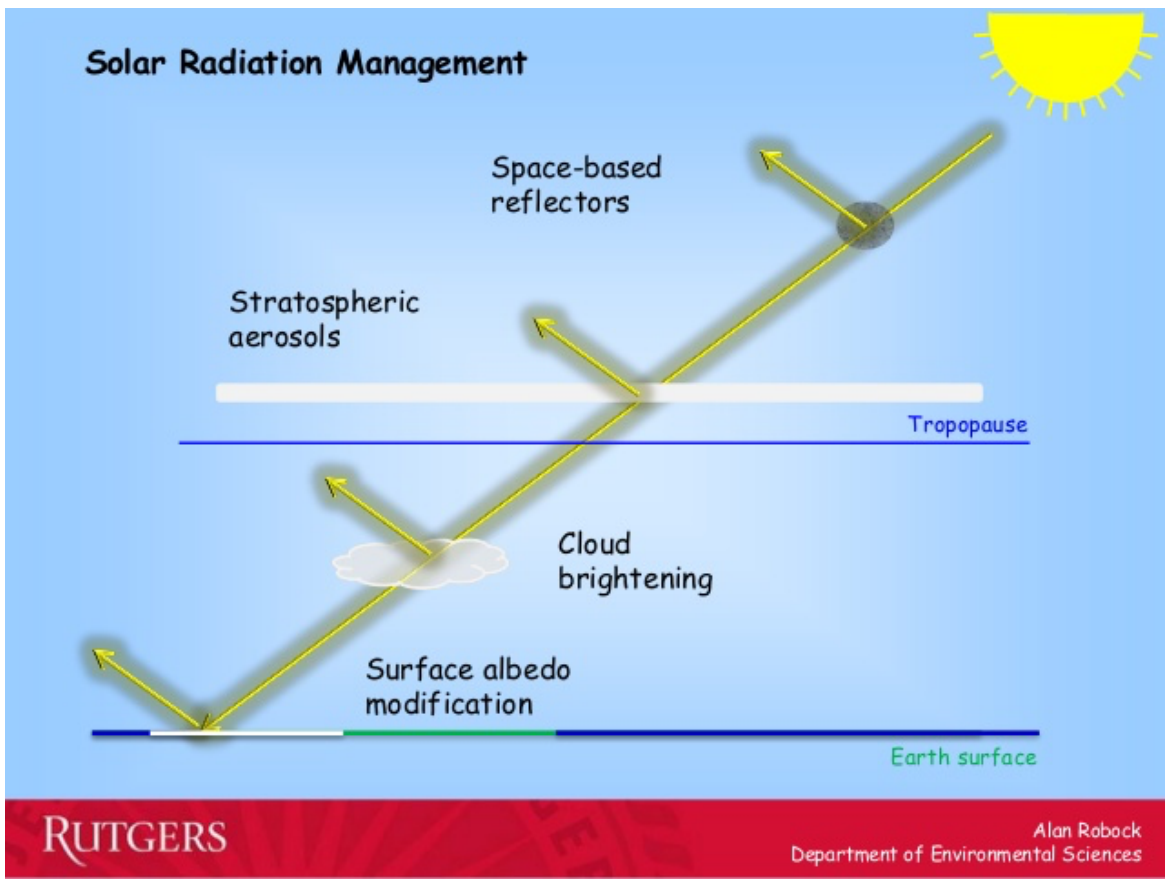
3/6/2015

6

## The aerosol formation mechanism in the lower troposphere

**It's not just climate change.**

**GeoEngineering Benefits and Risks: Sunblock with Consequences**



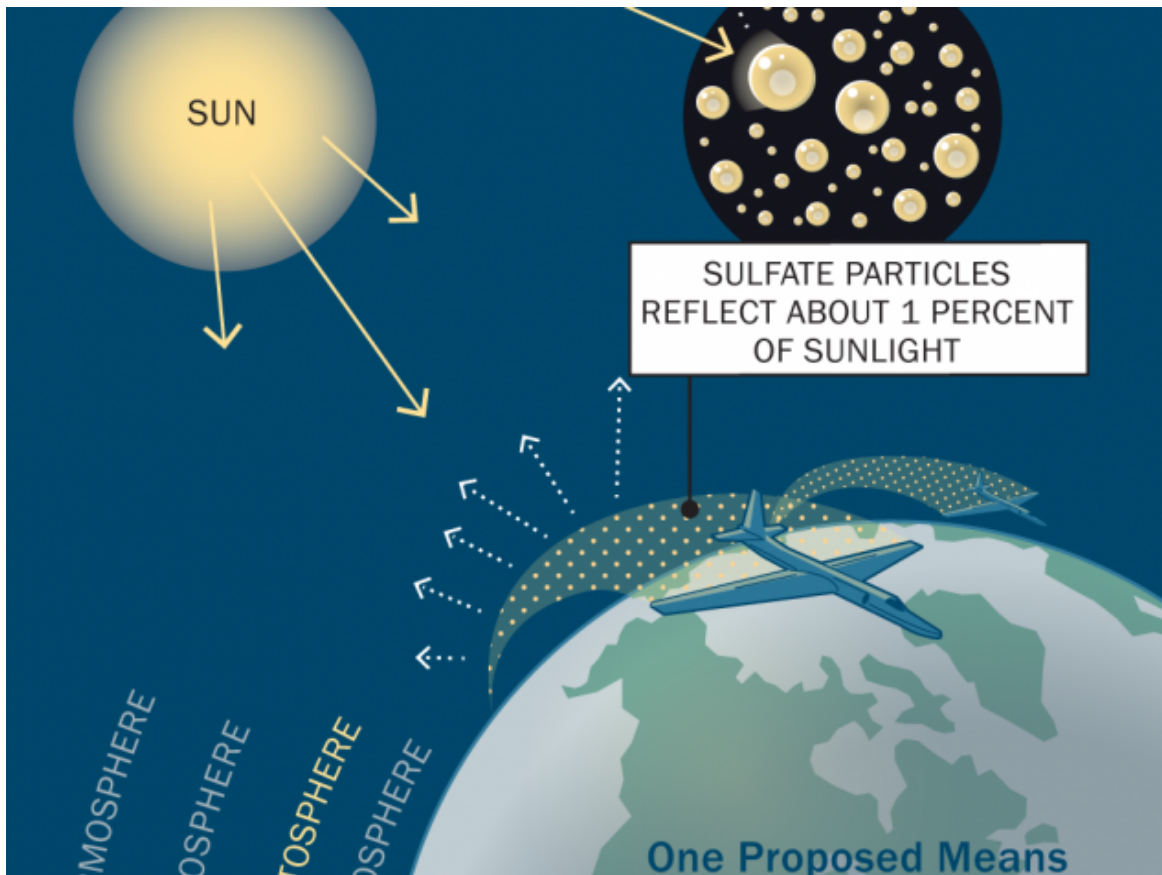
**It's climate engineering.**



### How could we use airplanes to loft gas to the stratosphere?

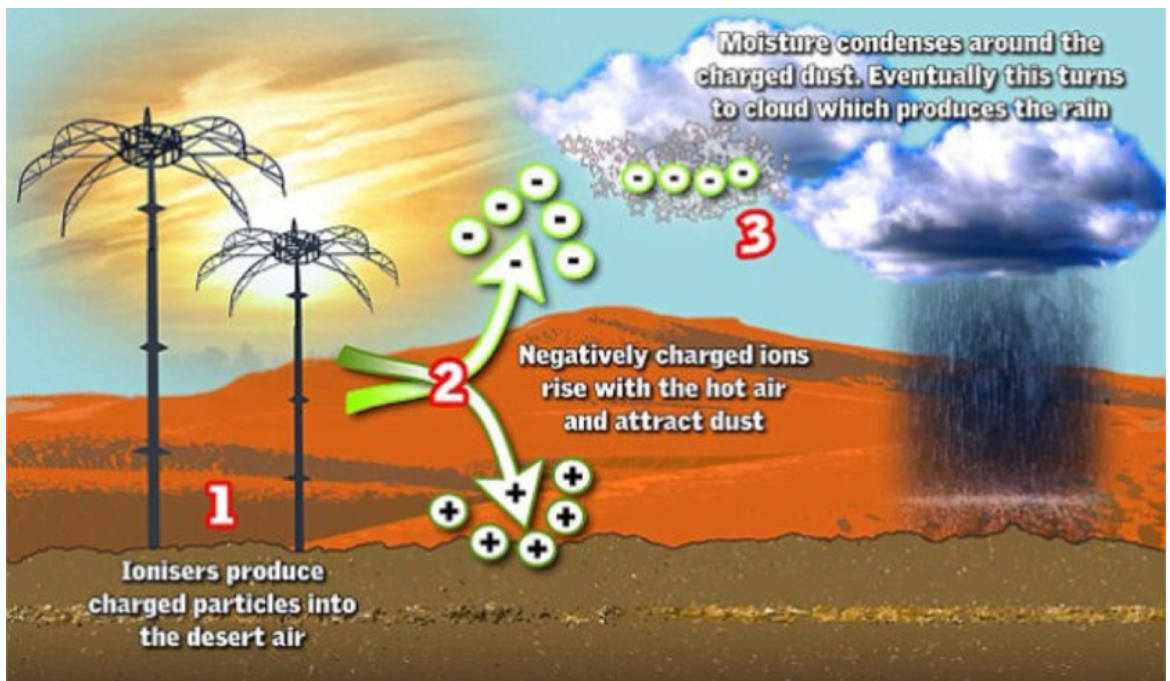
- Put S back into the jet fuel.  
But, except for the Arctic, planes do not routinely fly that high.
- Have tanker aircraft carry it to the stratosphere.  
But they can only get into the stratosphere in the Arctic.
- Have fighter planes carry it to the stratosphere.  
But you would need many more planes.
- Have tanker aircraft carry it to the upper troposphere and have fighter jets carry it the rest of the way.
- Could you have a tanker tow a glider with a hose to loft the exit nozzle into the stratosphere?

## Buffering the Sun – Harvard Magazine



**Microwave radiation emitted by specialized ionizing towers is central to some GeoEngineering weather & climate interference methods, but devastating to biological life on Earth.**





## Human Intervention In the Earth's Climate





**Global  
Governance  
Futures**

ROBERT BOSCH FOUNDATION  
MULTILATERAL DIALOGUES

# Human Intervention in the Earth's Climate: The Governance of Geoengineering in 2025+

MASAHIKO HARAGUCHI  
RONGKUN LIU  
JASDEEP RANDHAWA  
SUSANNE SALZ  
STEFAN SCHÄFER  
MUDIT SHARMA  
SUSAN CHAN SHIFFLETT  
AKIKO SUZUKI  
YING YUAN

MAY 2015

Supported by

Robert Bosch **Stiftung**

GGF Partners

GPPI



Tokyo  
Foundation  
for  
Environment  
and  
Human  
Development



Keio University



ASHOKA  
UNIVERSITY

BROOKINGS





**FEDERAL WEATHER ENTERPRISE**  
**FY 2019 BUDGET**

# THE FEDERAL WEATHER ENTERPRISE

*Fiscal Year 2019  
Budget and  
Coordination  
Report*

JFK talking about controlling the weather in 1961.

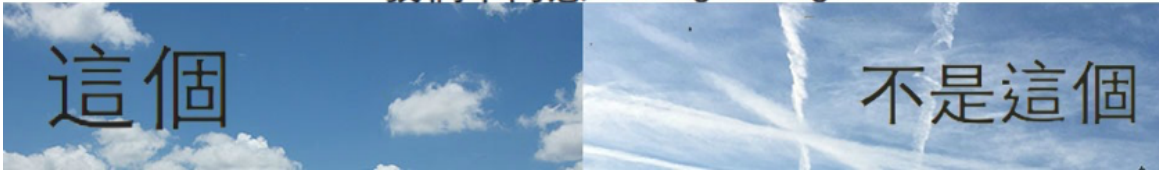


**[Link to JFK talking about controlling the weather in 1961.](#)**

Lyndon Johnson control the weather, to control the world ! 1962



**[Link to Lyndon Johnson, control the weather to control the world! 1962](#)**



[Link to Patent: System for facilitating cloud formation and cloud precipitation](#)

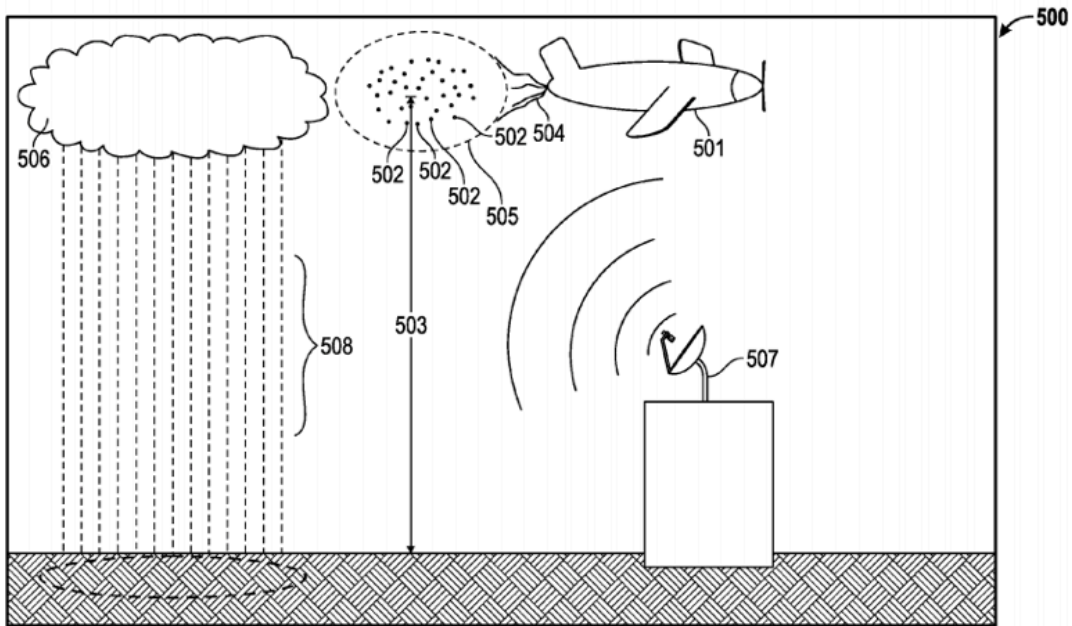


FIG. 5

[Link To Patent: Method for weather modification and vapor generator for weather modification](#)



(Regis Duvignau/Reuters)

صفر الهندسة الجيولوجية

مشكلة = GeoEngineering

مناخية خطيرة



هذه

ليس هذا

**ZERO** GEOENGINEERING.COM







ZERO  $\theta$  GEOENGINEERING.COM



זה

לא זה



GeoEngineering היא  
בעיה אקלימית רצינית





ESTA



NO ESTA



## WEATHER MODIFICATION GEOENGINEERING MAP



Geoengineering: A Half-Century of Earth System Experimentation							
CO <sub>2</sub> = carbon dioxide, FeSO <sub>4</sub> = iron sulfate, ha = hectare, M = million (1,000,000), m = meter, m <sup>2</sup> = square meter, mi <sup>2</sup> = square miles, MW = megawatt, N = nitrogen, NO <sub>2</sub> = nitrogen dioxide, NO <sub>x</sub> = nitrogen oxide, O <sub>2</sub> = oxygen, PO <sub>4</sub> = phosphate, R&D = research & development, SO <sub>2</sub> = sulfure dioxide, t = tonne (1,000 kg)							
Geographic Information			Description		Participants		
Continent	State	Scale	Year	Type	Sponsor	Further Information	Sources
Africa	Algeria	1 Mt/a of CO <sub>2</sub> has been captured since 2004. 1M t/year of CO <sub>2</sub> are currently being captured and re-injected	2004 - ongoing (2012)	CCS	Statoil-Hydro and Sonatrach	BP (operator). Project name: In Salah. Located in Krecbba. Onshore gas field with CO <sub>2</sub> injection into saline formation below the reservoir. Project proponents seek to provide assurance that secure geological storage of CO <sub>2</sub> can be verified as being cost effective. Short-term monitoring has been proposed as an option for providing long-term cost assurances and to demonstrate that industrial-scale geological storage of CO <sub>2</sub> is a viable greenhouse gas-mitigating alternative. Precedents relating to the regulation and verification of the geological storage of CO <sub>2</sub> (to allow the eligibility for greenhouse gas credits) are also being sought.	Global CCS Institute, <a href="http://www.globalccsinstitute.com/projects/12361">http://www.globalccsinstitute.com/projects/12361</a>
S-America	Antigua		1984	Increased Precipitation		Name: Antigua Cloud Seeding Project, carried out by Weather Modification Inc., with Aircraft for Cloud Seeding.	<a href="http://www.nawdinc.com/AVxmod.pdf">http://www.nawdinc.com/AVxmod.pdf</a>
S-America	Argentina	R&D to produce Biodiesel and other products from algae	Ongoing in 2012 (since ?)	Algae schemes		Private company "Oil Fox": Trials to extract oil from freshwater & brackish water algae to produce Biodiesel, Bioethanol, and proteins from animal and human consumption. Gas emitted from a thermal power station is used for algae cultures to improve productivity and to reduce emissions.	<a href="http://en.wikipedia.org/wiki/List_of_algal_fuel_producers">http://en.wikipedia.org/wiki/List_of_algal_fuel_producers</a> ; <a href="http://www.oilfox.com.ar/ingles/index.htm">http://www.oilfox.com.ar/ingles/index.htm</a>
S-America	Argentina	2 projects in the Province of Mendoza, >5,000 km <sup>2</sup>	1978 - 1993, 1998 - 2004	Increased Precipitation & Reduced Precipitation	See Weather Modification Data for details, please.	See Weather Modification Data for details, please.	WMO 1993 + 1994 + 2002 + 1984 and other sources. See Weather Modification Data for details, please.

## Geoengineering: A Half-Century of Earth System Experimentation

**ZERO** GEOENGINEERING.COM

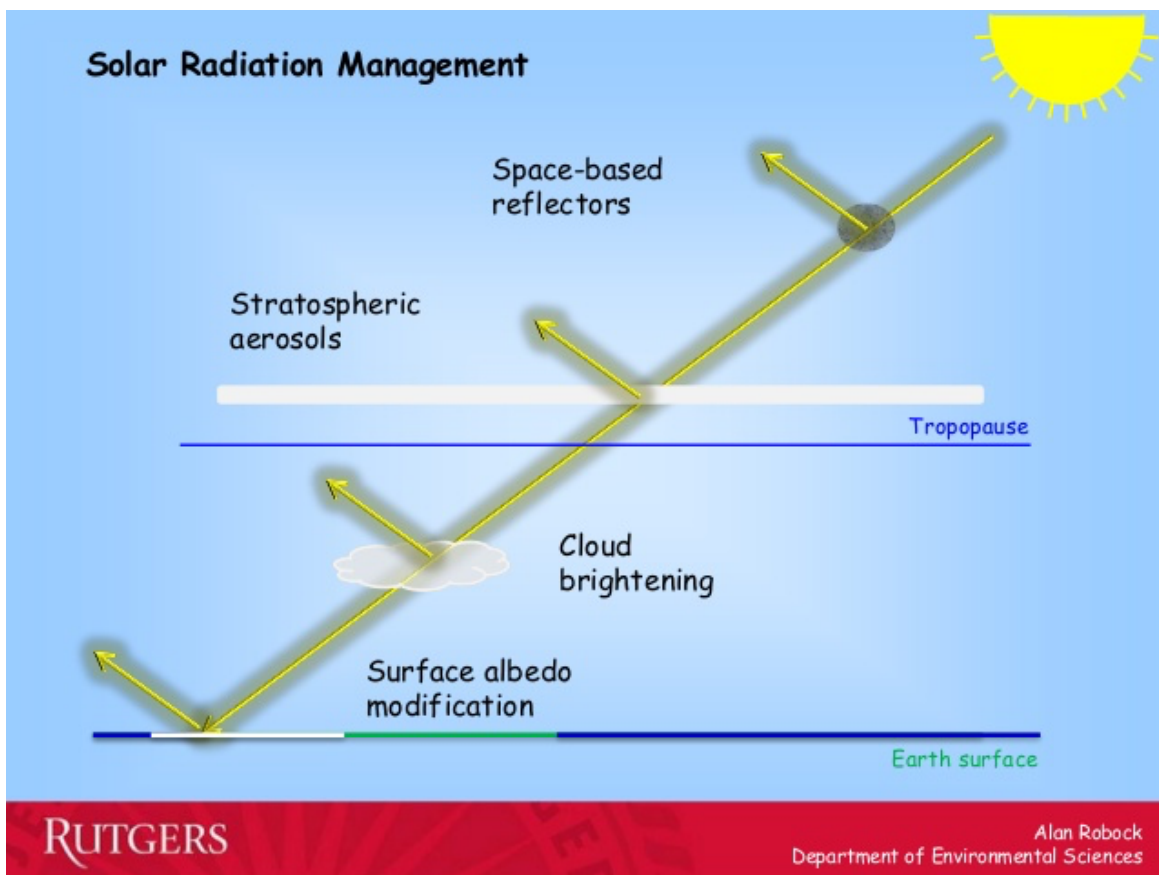
Мы не соглашаемся с GEOENGINEERING!



ЭТО НЕ ЭТО



**Solar Radiation Management is NOT a democratic activity.**



**Facts, not fear.**

**Solving climate problems starts by  
analyzing and eliminating  
pollution-generators at the source.**



**ZERØ** GEOENGINEERING.COM

Geo-Engineering = Changement climatique d'origine humaine



**GeoEngineering Is A SERIOUS CLIMATE PROBLEM.**



**ZERØ** GEOENGINEERING.COM

BECAUSE DELIBERATE HUMAN INTERVENTION IN THE EARTH'S WEATHER AND CLIMATE SYSTEMS IS A WAR ON NATURE.



**WE DO NOT  
CONSENT**

**Say NO to GeoEngineering!!**

**THERE IS NOT A SINGLE STUDY  
THAT PROVES GEOENGINEERING  
IS SAFE.**

**ZERØ GEOENGINEERING.COM**

**Es ist nicht der Klimawandel. Es ist Climate Engineering!**





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**Lab No:** 18D0003  
**Reported:** 04/18/18  
**Phone:** NA

**Project:** GENERAL TESTING  
**Description:** AUGUSTAANLAPE / MANNHEIM GERMANY  
**Matrix:** Water  
**Lab ID:** 18D0003-01  
**Sampled:** 03/08/18 05:00  
**Received:** 03/30/18 09:43

**Metals - Total**

Analyte	Units	Results	Qualifier	MDL	RL	Method	Analyzed	Prepared	Batch
Aluminum	ug/l	20.2		1.5	5.0	EPA 200.8	04/12/18	04/11/18	B8D1045
Barium	"	1.4		0.1	0.5	"	"	"	"
Strontium	"	1.3		0.1	0.5	"	"	"	"
Sulfur	"	257		20	100	EPA 200.7	04/13/18	04/12/18	B8D1127

**Notes and Definitions**

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to the analyte concentration being greater than 4 times the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the detection limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- < Less than reporting limit
- ≤ Less than or equal to reporting limit
- > Greater than reporting limit
- ≥ Greater than or equal to reporting limit
- MDL Method Detection Limit
- RL/ML Minimum Level of Quantitation
- MCL/AL Maximum Contaminant Level/Action Level
- mg/kg Results reported as wet weight
- TTLIC Total Threshold Limit Concentration
- STLC Soluble Threshold Limit Concentration
- TCLP Toxicity Characteristic Leachate Procedure
- Note 1 Received Temperature - according to EPA guidelines, samples for most chemistry methods should be held at ≤6 degrees C after collection, including during transportation, unless the time from sampling to delivery is <2 hours. Regulating agencies may invalidate results if temperature requirements are not met.
- Note 2 According to 40 CFR Part 136 Table II, the following tests should be analyzed in the field within 15 minutes of sampling: pH, chlorine, dissolved oxygen, and sulfite.

Approved By  
Basic Laboratory Inc  
California ELAP Cert #1677 and #2718

*Mannheim, Germany Rain March 8, 2018*

**Deliberate human manipulation of the Earth's weather and climate systems is environmental warfare,**

**NOT a democratic, healthy, or benevolent activity.**

## **Take Action Now to Ban GeoEngineering in Your State / Nation!**

### **Recently Posted Articles:**

---

## **DoD News Briefing: Secretary of Defense William S. Cohen**



April 28, 1997 “Others are engaging even in an eco- type of terrorism whereby they can alter the climate, set off earthquakes, volcanoes remotely through the use of electromagnetic waves. So there are plenty of ingenious minds out there that ... [More ...](#)

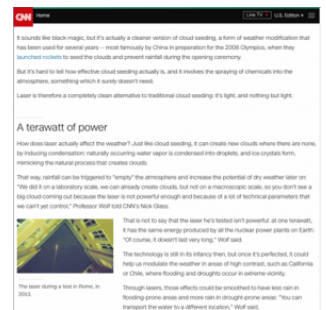
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## **The man who wants to control the weather with**

# lasers

7 March 2016 CNN Swiss Professor Jean-Pierre Wolf is pioneering the use of lasers to affect the weather [Link To Article ...](#)

[More ...](#)



# Texas Weather Modification Law

Harvesting the Texas Skies in 2018 – A Summary of Rain Enhancement (Cloud Seeding) Operations in Texas Each of the cloud seeding projects uses specially-equipped aircraft designed to place seeding materials (in the form of pyrotechnic devices, or flares, ... [More ...](#)



# Weather Modification

Conflict on Practicability of Weather Control 19 October 1953 CG Press New Federal Commission on Weather Modification By authorizing appointment of a new federal commission on weather modification at its 1953 session, ... [More ...](#)



# THE QUEENSLAND CLOUD SEEDING RESEARCH PROGRAM

January 2012 This comprehensive set of observational platforms was



designed to improve the physical understanding of the effects of both ambient aerosols and seeding material on precipitation formation in southeast Queensland clouds. [Link To Article HERE](#) & [Tessendorf\\_BAMS2012 ...](#)

[More ...](#)

### THE QUEENSLAND CLOUD SEEDING RESEARCH PROGRAM

By Anna A. Thompson, Robert F. Boehm, Catherine Whittle, David W. Wilson, Graham A. Rowell, Rita D. Ryznar, James R. Potts, Scott J. Curran, Peter B. Beaton, Bruce T. Eaton, Thomas O'Brien, Michael Williamson, Robert Smith, Christian Wehler, John S. Young, Tim J. McFarlane, Robert E. Stewart, Peter A. Alpert, Louise Warren, Victor T. Schemm, Phyllis Couss, Marissa C. Stone, Anne-Marie P. Couss, K. B. Beaton, M. T. Tully, Linda Tully, and David McFarlane

An innovative approach to studying the effects of cloud seeding on precipitation is to focus on understanding the nature or variability of precipitation and the microphysical responses to seeding.

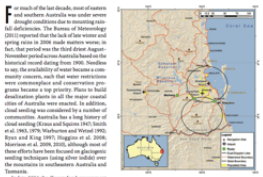
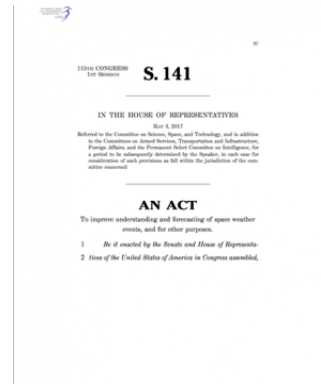


FIG. 1. Map of southeast Queensland region targeted for the QCRP. Red dots and associated numbers and numbers in the 3P boxes identify major and regional sites are marked in each Queensland 3P box.

# S. 141 “Space Weather Research and Forecasting Act”

115TH CONGRESS 1ST SESSION IN THE HOUSE OF REPRESENTATIVES  
MAY 3, 2017 [Link To Document ...](#)

[More ...](#)



# 2016-2018 OCEAN LEADERSHIP LEGISLATIVE TRACKER – 115th CONGRESS

Updated 7/5/2018 [Science Funding Link To Document ...](#)

[More ...](#)

# The UK government’s view on geo-engineering

May 2018 Geo-engineering is the deliberate large-scale intervention in the Earth's natural systems Link To Report ...

[More ...](#)

**The UK government's view on geo-engineering**

**What is geo-engineering?**

Geo-engineering (sometimes called 'climate engineering') proposals to counter climate change are attracting growing attention, yet the scientific evidence base to inform a rational debate on their potential merits or risks is currently limited.

Geo-engineering is the deliberate large-scale intervention in the Earth's natural systems to counteract human-caused climate change. A range of different geo-engineering techniques has been proposed, in two broad categories:

- those to remove greenhouse gases directly from the atmosphere (greenhouse gas removal technologies, or GDR), such as afforestation, bioenergy with carbon capture and storage, direct air capture and storage, marine fertilisation;
- those to reflect some of the Sun's energy that reaches Earth back into space (solar radiation management, or SRM), such as brightening of marine clouds, injection of aerosols into the stratosphere). While these would be likely to reduce the Earth's temperature, they would not reverse ocean acidification (ocean CO2).

The priority is, and must be, to tackle the root cause of climate change by reducing emissions of greenhouse gases from human activities and adapting to those impacts that are unavoidable. Mitigation of climate change, by reducing emissions and protecting natural carbon sinks, remains the main focus of our efforts to increase our chances of avoiding dangerous climate change.

**Research, development and deployment**

The Climate Change Act 2008 requires the UK to reduce greenhouse gas emissions by at least 80 per cent on 1990 levels by 2050. As the UK approaches 2050, its remaining emissions will likely be in the sectors where it is the most difficult to cut them.

**Greenhouse Gas Removal**

GDR technologies are likely to have an important role to play in offsetting these emissions. Further, the Paris Agreement includes an aim of achieving net zero global greenhouse gas emissions in the second half of the century. As indicated in the

# STRATOSPHERIC AEROSOL INJECTION (TECHNOLOGY FACTSHEET)

11 June 2018 GEOENGINEERING MONITOR Because of the unequal global impacts and its potential to be weaponized, SRM carries unsurmountable challenges for governance and should be banned. Link To Article MEDIA ADVISORY: NEW FACT SHEETS REVEAL ...

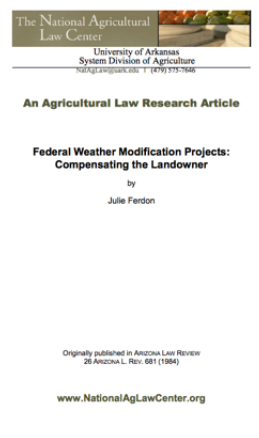
[More ...](#)



# Federal Weather Modification Projects: Compensating the Landowner

Originally published in Arizona Law Review (1984) Link To Report ...

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# Playing God: Ward County, North Dakota ceases cloud seeding for the year, debate continues in Bowman County



By Traci Eatherton July 26, 2017 Tri-State Livestock News Cloud seeding, or weather modification, is believed to change the amount or type of precipitation that falls from clouds, by dispersing chemicals into the air that serve as cloud condensation ... [More ...](#)

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## Meteorological applications of radar

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**Abstract**  
Radar has been used by meteorologists for 30 years or so but it is only during the latter half of this period that the full measure of its versatility has come to be recognized. Operationally important techniques have been or are being developed to identify and track severe storms, to provide warning of tornadoes, to measure and forecast rainfall quantitatively, and to measure winds, turbulence and wind shear. At the same time research meteorologists are using specialised radar techniques to investigate many poorly understood aspects of atmospheric behaviour. This review highlights the strengths and limitations of radar as a tool for observing the atmosphere and attempts to provide a balanced view of its many applications in meteorology.