

Gabriel's Trumpet

Part 4 – The Veil of All the Years

*“Oh, I had a dream
It seemed I stood alone
And the veil of all the years
Goes sinking from my eyes like a stone”*
Nostradamus by Al Stewart

Recall from part 2, that in 1965, the US scientist J.O. Fletcher, outlined the three basic approaches to warming the planet:

“Three basic approaches have been proposed (Fletcher, 1965): (1) influencing the surface reflectivity of the ice to cause more absorption of solar heat; (2) large-scale modification of Arctic cloud conditions by seeding; (3) increasing the inflow of warm Atlantic water into the Arctic Ocean.”
Emphasis mine

We have outlined how the first approach may have been implemented under the mask of industrial emissions. Now we shall examine the evidence for the second.

In this paper written in 1969 by Fletcher for the **Rand Corporation**, Fletcher discusses **modification of cloud cover over the North Polar Basin by Cloud Seeding**. The intent of such an operation is quite clearly for **causing a warming to melt the Arctic ice**.

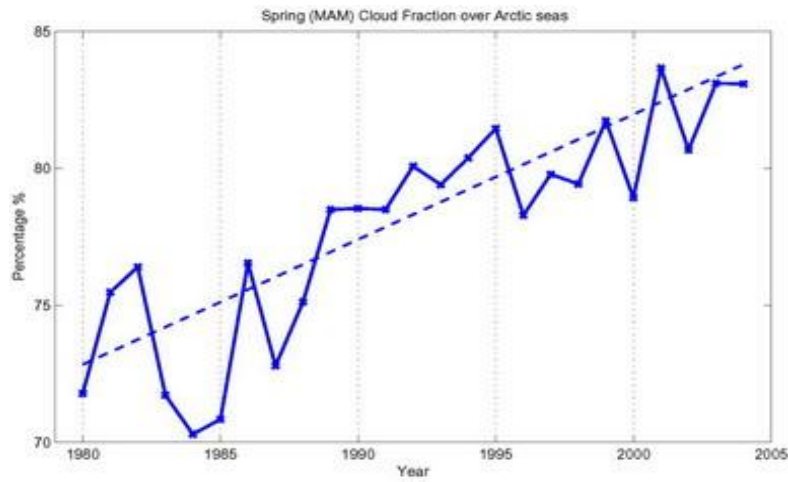
*“Still another form of growing pollution, and one whose possible effects have received little study, is the creation of **cirrus cloudiness** (vapour trails) by the exhaust products of **high-flying aircraft**.”* Emphasis mine

*“It has for example been noted that the **creation** or dissipation of **high cloudiness** has an enormous influence on the heat budget of the atmosphere and of the surface. It is estimated that it would **take only sixty C-5 aircraft to deliver 1kg per km² per day over the entire Arctic Basin (10 to the 7 km²)**. Thus, it is a large but **not impossible task to seed such enormous areas**.”*
Emphasis mine

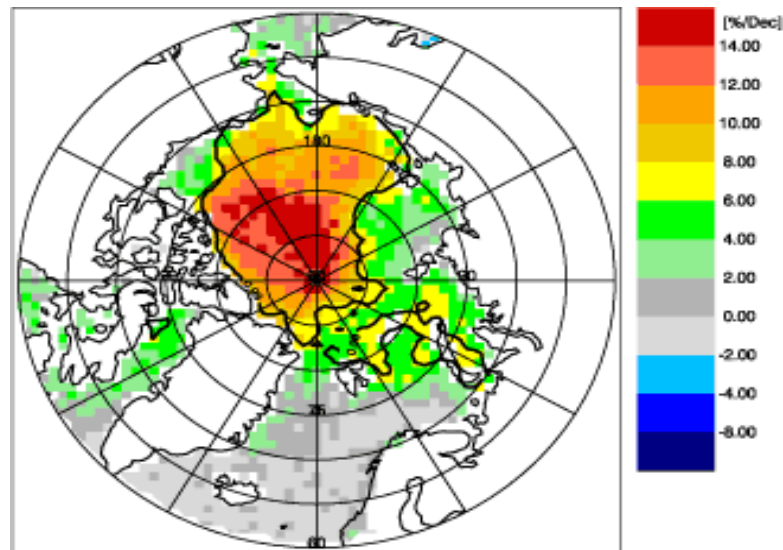
*“These numbers demonstrate not only the **enormous thermal leverage that might be exercised by influencing mean cloudiness**, but also the **range of influence that might be possible, depending on cloud type, height, and its influence on the regional heat budget**.”* Emphasis mine

Managing Climatic Resources

Has there been an increase in Arctic cloud cover since the 1970's?



Time series of seasonally averaged cloud fraction over the arctic seas in spring (March, April, May). Provided by Axel J. Schweiger.



Spatial distribution of trends in cloud cover over twenty years. Provided by Axel J. Schweiger.

Eastman and Warren have also revealed such an increase:

*“Significant trends are present in Arctic cloudiness over the ocean and land. The trends are not uniform over the Arctic, but large regions displaying similar trends are common. Arctic clouds are changing differently over the land and ocean, but overall **the trend from 1971 through 2007 shows a slight increase in total cloud cover during all seasons.** Emphasis mine*

This has enhanced the warming of the Arctic:

*“Overall, relationships between ice, temperature, and clouds indicate that **cloud changes in recent decades may enhance the warming of the Arctic and may be acting to accelerate the decline of Arctic sea ice.**” Emphasis mine*

Eastman and Warren eliminate sulphates as culprits for the increasing trend:

*“Correlations with temperature and sea ice extent are strongest during spring and autumn when the cloud longwave effect dominates. **It is shown that low clouds have a strong positive relationship with temperature during these seasons.** However, **the trend of Arctic aerosols has gone in the opposite direction, as Quinn et al. (2007) have observed with the decreasing sulfate aerosols since the mid-1990s at surface stations in the Arctic.** Emphasis mine*

Interannual Variations of Arctic Cloud Types in Relation to Sea Ice

Eastman and Warren mention Arctic aerosols because they were shown by NASA scientists in 2009 to have accounted for 45 percent or more of the warming that has occurred in the Arctic during the previous three decades.

They identified two types, **sulphates** and **black carbon**, as playing a critical role.

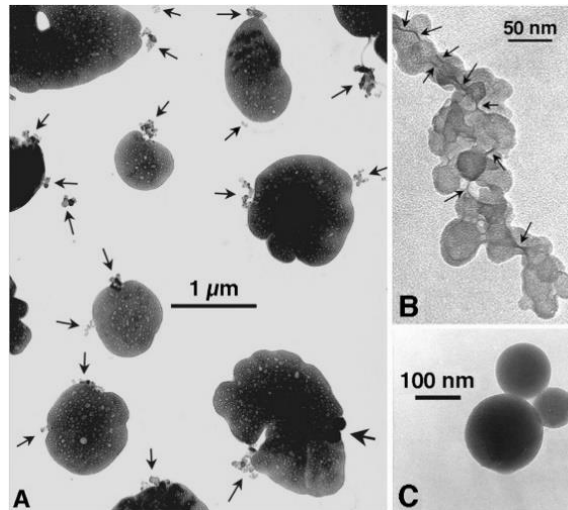


Figure 1.
Pósfai et al.: Soot and sulfate aerosol...

“Researchers used an electron microscope to capture these images of black carbon attached to sulfate particles. The spherical structures in image A are sulfates; the arrows point to smaller chains of black carbon. Black carbon is shown in detail in image B. Image C shows fly ash, a product of coal-combustion, that’s often found in association with black carbon. While black carbon absorbs radiation and contributes to warming, sulfates reflect it and tend to cool Earth. Credit: Peter Buseck, Arizona State University”

Aerosols may drive a significant portion of global warming.

Sulphates (A) are said to have a **net cooling effect** on climate through scattering solar radiation. This is the reason why scientists such as David Keith and earlier, Mikhail Budyko, recommended they should be emplaced into the stratosphere. However, this effect is **less pronounced the higher the latitude** due to decreased solar radiation. Yet, sulphates **also play a significant role in lower cloud formation** and for the same reason, sunlight being weak in the Arctic, **clouds exert a net warming effect**, trapping heat that makes its way there.

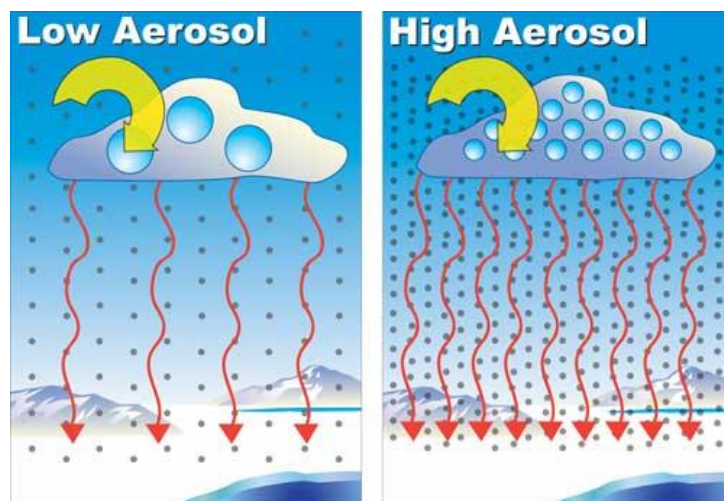
As covered in part 3, **black carbon (B)** particles absorb solar radiation, **accelerate ice melt** and **enhance convection and precipitation**.

Now we have established that levels of these aerosols, products of coal and oil combustion, have **decreased** in the Arctic north of 70° latitude since the 1990’s, eliminating industrial emissions as suspects. We have also confirmed the **increase of black carbon** due to **gas flaring** and **wildfires within** the Arctic circle but south of 71° latitude, in alignment with schemes to alter the climate.

This leaves the neglected aerosol, **fly ash** (C), also a product of combustion. It is often found in association with black carbon, ash being the inorganic, mineralised component left behind after the carbonaceous material has been burned away. Note its **spherical** structure. It is an **excellent cloud seed** for both lower and upper clouds and of **particular importance** as will be revealed in due course.

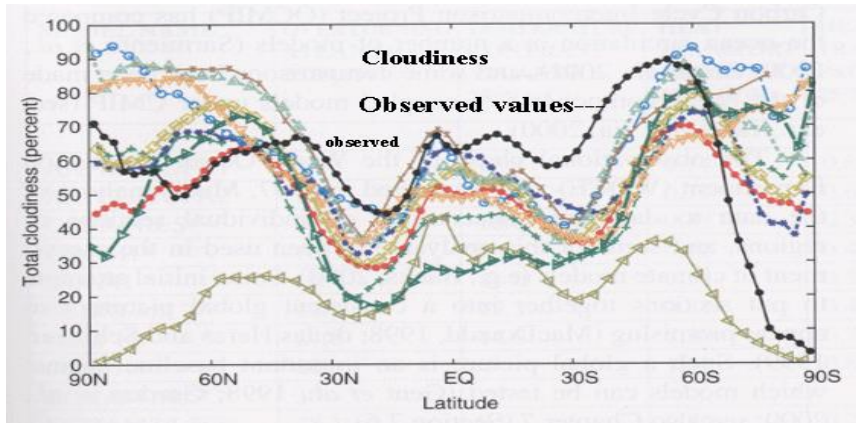
Vogelmann and Lubin have determined that increased aerosol levels lead to a corresponding increase in clouds and change the nature of those clouds to enhance their warming properties.

*“Using data from the DOE ARM Climate Research Facility in Barrow, Alaska, Vogelmann and Lubin determined that **enhanced aerosol amounts can make clouds emit more thermal energy to the surface.** In an aerosol-cloud process, **increased aerosol concentrations cause the cloud droplets to become smaller and, within clouds of fixed water amounts, more abundant.** Vogelmann and Lubin discovered that this process makes many clouds more opaque and emit more thermal energy to the surface, by an average of 3.4 watts per square meter, **which is comparable to that by increased greenhouse gases.**”* Emphasis mine.



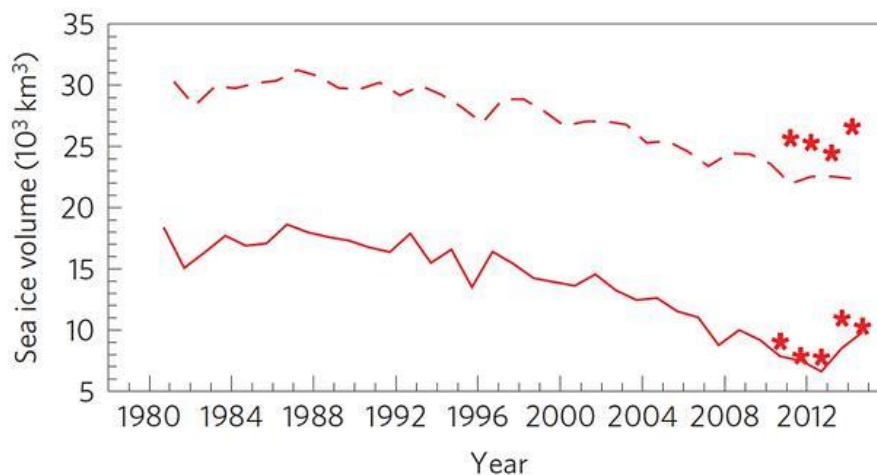
A climatologically significant aerosol longwave indirect effect in the Arctic

Recall that from **1975 to 2016**, although global temperatures increased by **0.75 °C on average**, at the North Pole, they **increased by 3.07°C**, whilst at the South pole, **they only rose by 0.65°C**, slightly less than at the equator. When we couple this with observed cloud cover at both poles we see that in the Arctic, **60° - 90° N**, the IPCC reported in 2001, for **actual observed values**, average year-round cloud cover was about **70%** whilst, curiously, in the Antarctic it was about **3%**.



Source: IPCC, Third Assessment Report: Climate Change, 2001

Whilst cloud cover has increased, Arctic ice volume has declined, slightly from 1980 and drastically since 1996.



PIOMAS model Arctic sea ice volume for autumn 1980–2014 (solid line) and spring 1981–2014 (dashed line). CryoSat-2 volume estimates (red stars) are plotted for 2010–2014.

Source: Nature Geoscience; Tilling et al. (2015).

Further indications that Fletcher's project became a reality are alluded to in another paper written in **1970** by **Wallace Murcray**.

On The Possibility Of Weather Modification By Aircraft Contrails

He observed that contrails were becoming more frequent and might have an effect on the **underlying heat economy**. He linked this observation to **projects for modifying the climate** discussed by Fletcher in the 60s and speculated that they were **already underway**.

*“The writer himself has seen instances in which a **single contrail seemed to grow until it became an overcast covering the whole sky**. If the contrail were indeed responsible, which is by no means certain, this would constitute definite proof that contrails are capable of a significant effect on local weather, and **even possibly on global climate**, if such occurrences are **widespread and frequent**.”*

*“The possible consequences of this are considerable, in fact, it seems probable that one of the projects for **modifying the global climate** discussed by Fletcher (1965), namely **modification of the cloud cover over the polar basin by cloud seeding, is already underway**, although the scale is still more modest than he envisioned.”* Emphasis mine

If all this sounds familiar, it's because it is.

Modification of cloud cover by means of aircraft dispensing aerosols which cause artificial cirrus clouds to blanket the sky.

We know what they are referring to.

Those ubiquitous trails that expand and [blot out our skies from horizon to horizon](#).

Seeds of No Doubt

What some claim to be **chemtrails**, and others claim to be **persisting, spreading contrails**, have the common factor of originating from **particulates emitted from the jet** that act as ice nuclei and **seeds for human-induced cirrus clouds**. As confirmed by atmospheric scientist, **Jasper Kirkby**:

“...these are clouds which are seeded by jets dumping aerosols into the upper atmosphere.”

They are **evidence** that large regions of the atmosphere, prior to aircraft emissions, lack sufficient aerosols to form clouds.

What does NASA say about how contrails are really formed?

“Contrails are clouds formed when water vapor condenses and freezes around **small particles (aerosols)** that exist in aircraft exhaust.”

Contrails are **artificially induced cirrus clouds**. Like cirrus clouds they form from **ice nucleating on small particles at around 10km, cruise altitude**. These particles, known as **ice nuclei**, play an **essential** role in contrail formation. The core of each ice crystal is thus, **not ice**. Claiming that contrails “are essentially ice” is false and disingenuous, as it leaves out the **essential** role of these tiny seeds, without which, **contrails, contrail cirrus and aviation-induced clouds would simply not occur**.

Dane Wigington, who refers to these formations as neither chemtrails nor contrails, prefers the term **Particulate Trail**. This is accurate as it is based on our understanding of how these artificial clouds arise.

The phenomena featuring in voluminous photographic evidence and causing concern on the part of the public are referred to by NASA as **Persistent Spreading Contrails**. Such evidence in such global profusion **falsifies the notion that they only form “occasionally” when the atmospheric conditions are “just right”**

As the name implies, these spread out, covering a large area, thousands of square kilometres, and **affect the climate**. In fact, spreading is an **inaccurate** term, as the ice nuclei entrain further atmospheric ice from the point of origin and **grow in size**. The resulting cirrus formations contain many thousands of times the amount of atmospheric water vapour compared to the relatively insignificant water vapour produced by the jet engines. They do not merely merge with pre-existing cirrus clouds, they **generate entirely new, artificial, cirrus cloud formations of vast proportions**.

Related phenomena, **aviation-induced cirrus clouds**, occur when particulates are released from aircraft, without visible trails, and later entrain water vapour from the atmosphere to form cirrus formations.

*“Aviation-induced cirrus can occur through two different pathways: **via contrails spreading out and by injection of aerosols into the upper troposphere to provide ice nuclei that may subsequently form cirrus clouds** [[Lee et al., 2009](#)].”*

In fact, the initial line-shaped trail, with water contributed from both the jet engine and the atmosphere, is not in itself necessary for aviation-induced clouds to occur. It is the injection of aerosols, **ice nuclei**, that is the **key** factor.

They disperse and entrain water from the surrounding atmosphere to grow to cover areas that have been recorded as large as **50,000 square kilometres**.

In **1968**, **Reid A. Bryson**, a professor of Meteorology, claimed that jet aircraft contrails had **increased cirrus cloud cover by 5% to 10%** in the regions where jets had been operating.

He estimated that if the day came when 300 supersonic transports were in the air at one time, the region of operation of most SST's "*might easily be 100% covered with cirrus clouds.*"

[Man Making Earth A Bad Place To Live, Professor Says](#)

In the **1970's** the problem of the unburned and partially burned hydrocarbons from jets was in the forefront of the public mind. This was resolved in the **80's**, when the **High Bypass Turbofan Engine** began to be phased in, the transition being completed around **1995**. This pumped in extra air to the engine which ran more efficiently as a result, not dumping unburned smoky fuel. These engines were now **90%** efficient as compared with the earlier designs which were less than **20%** efficient. As result, far less fuel was required to fly from one destination to another. By implication, presumably far fewer particulates of the kind that led to contrail cirrus were emitted.

If we assume a roughly **five-fold** increase in efficiency, then we can also assume a corresponding reduction in extra aviation induced cirrus cloud coverage from **5-10%** to **1-2%** in the regions where jets were operating.

However, **since 1970**, air traffic has increased by around **ten-fold**, this assumed extra cirrus cloud coverage should have also increased to around **10%-20%** in the regions where jets operate.

Olivier Boucher [found a correlation](#) between air traffic corridors, specifically the spatial distribution of aviation fuel consumption and the increase in cirrus cloud cover.

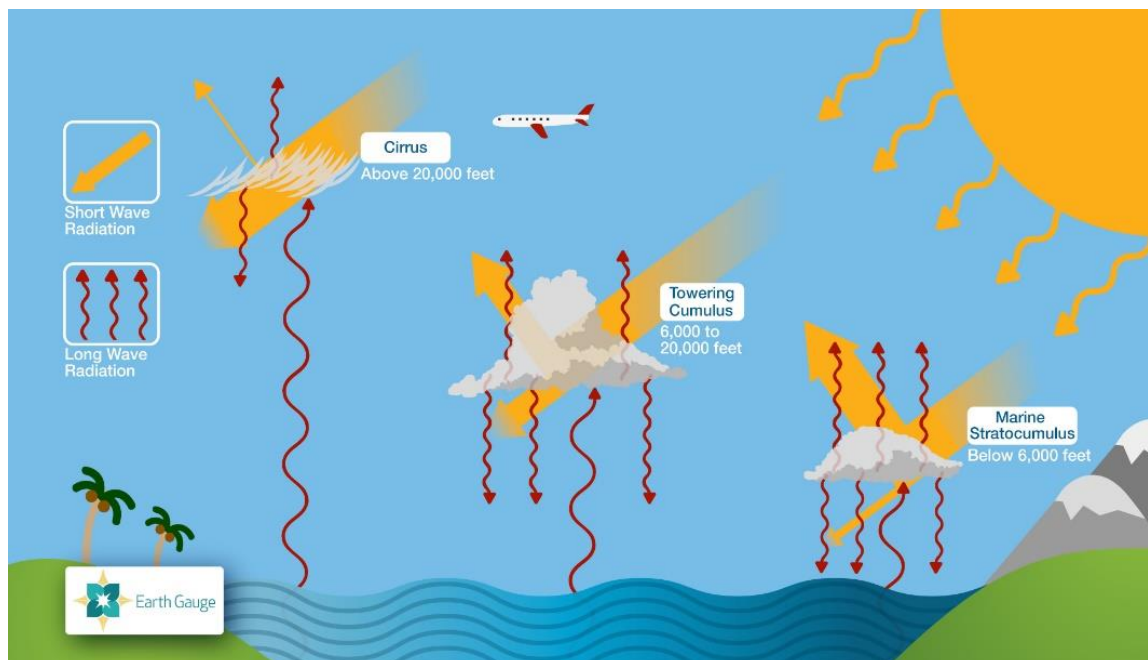
Over the **ten-year period** under study, with an average annual growth of **3.2% in total fuel consumption**, he found cirrus frequency **increased globally** on average by **1.1%** and **3.5%** for land and ocean, respectively, with **regional average increases of 2.9% to 4.6% over the principal flight corridors**.

This matches well with the [HIRS polar orbiting satellite data](#) reported by **Wylie and Menzel** which found that, in the regions 60°N to 60°S, cirrus clouds had **increased globally** by **1.95%** on average, **per decade**.

Over **4 decades** that's around an **8% global increase in cirrus cloud cover**. Over the principal flight corridors, this would constitute an increase from around **11.6%-18.4%**.

In the regions 60°N to 60°S, **lower clouds have a net-cooling effect**, this being less pronounced the further one moves towards the poles, until **over the Arctic they have a net-warming effect**.

Upper clouds have a net-warming effect, this being more pronounced the further one moves towards the poles.



How clouds affect earth's temperature

It follows then, that a relatively small change in the distribution and frequency of cloud types can cause a significant shift in global temperature as suggested by Fletcher in the 60's.

Boucher goes on to estimate the forcing that would result from these changes:

“Experiment measurements of the net change in radiation associated with high thin clouds suggest a 0.2 W m^{-2} per 1% of condensation trail or high-level cloudiness

I therefore estimate that the trend in cirrus amount over the continental regions of high air traffic (2.9% as discussed above) would correspond locally to an additional cloud radiative forcing of about 0.7 W m^{-2} ”

In the same vein, an **8% global increase in cirrus cloud cover over 4 decades** would result in a global forcing of **1.6 W m^{-2}** . Given that the forcing from **increases in CO₂ from 1979** (1.027 W m^{-2} at 383ppm) **to 2014** (1.909 W m^{-2} at 481ppm) amount to **0.882 W m^{-2}** , it is clear that **aviation-induced cloud cover is a game-changing factor for the climate.**

The Real Cold War

After hints were leaked in **1971**, of **Project Popeye**, a cloud-seeding campaign to increase rainfall over the Ho Chi Minh trail in order to bog down enemy troops, the US ostensibly cut its budget for weather warfare.

In **1978**, the Environmental Modification Treaty was brought into effect after being signed by 51 countries in **1977** and **1978**, to limit environmental modification to peaceful, non-military purposes.

Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques

What if this treaty, effectively between the US and USSR, was really about thrashing out the **joint project to melt the polar icecap** and turn the Arctic Ocean into a warm water lake, modifying the climate to one more congenial to the northern temperate zones? Ironically, this project would, in effect, **constitute a long-term covert act of war against the poorer countries situated closer to the equator** and, through the dislocations to global agriculture, the **poor of the world.**

The Link in the Chain

We attain a glimpse of an overt intention to induce warming in this paper published in **1983**.

Effects of Artificial and Natural Cirrus Near the Ground on Temperatures Clouds

*“Abstract. The effects of thin to moderately thick cirrus clouds on daytime air temperature rise or nighttime air temperature fall near the ground can be approximated as linearly proportional to the change in solar heating, or nocturnal radiative cooling, of the surface, produced by the clouds. It is estimated that a **uniform overcast of cirrus with a thickness comparable to an***

average aircraft contrail will reduce daytime heating by 10 to 20% and nighttime cooling by up to 50% compared to the heating and cooling that would have occurred in cloudless conditions.” Emphasis mine

“Recently it has been shown that under some circumstances it may be cost-effective to stimulate artificially the formation of cirrus clouds in clear ice-supersaturated air in order to reduce nocturnal cooling in urban areas during the cold season (Detwiler and Cho,1982)” Emphasis mine

“Clouds could also be used to moderate temperatures in agricultural areas when extremely hot or cold conditions present problems. Changes in both surface temperatures and evapotranspiration may result if cloud cover is altered.” Emphasis mine

“Cloud-cover modification techniques have received little attention in the past from weather modification researchers compared to the attention given to the development of precipitation enhancement and hail suppression techniques.” Emphasis mine

“Changnon (1981) has speculated that aircraft contrails already may be inadvertently moderating temperatures in portions of the mid-western United States. Here, we will be concerned with the production of cirrus clouds in clear, or mostly clear, air by seeding with ice-forming nucleants.” Emphasis mine

As hinted at in the paper above, the application of weather modification had been, at least officially, geared towards the development of precipitation enhancement and hail suppression techniques in the form of cloud seeding, which entered the realms of accepted science in 1946. One application of cloud seeding, that of **cloud-cover modification**, receives less attention but is of the utmost relevance to this study. This application is the **link in the chain** that draws together cloud seeding for “*localized precipitation influences*” with the geoengineering proposals outlined in 1962 by Harry Wexler for “... **planetary-scale manipulation of the Earth’s shortwave and longwave radiation budget.**”

After this period, the picture becomes darker, the signal of intentional climate modification is all but wiped out by the hysterical noise of the semi-factual, carbon dioxide driven cover story. We are left with traces of such an intent, left behind unintentionally and we have to raise our powers of deduction to a higher pitch.

In Plane Sight

We can now postulate that the **commercial airline industry**, operating at precisely the altitudes where cirrus form, has been used as a **major delivery mechanism in the troposphere for the aerosols required for artificial cirrus enhancement**.

To supplement these jets in recent times, drones have most probably been used. In fact, modern commercial jet planes can now be controlled remotely to the extent that one with no pilot and empty of passengers, is basically a drone. Orchestrated under this guise of commercial air traffic, aircraft of commercial, military and undisclosed origin are **emplacing particulate matter, as yet undisclosed**, into the upper troposphere and lower stratosphere for the purpose of **seeding vast artificial cirrus cloud and polar stratospheric cloud formations**.

If this were to be a clandestine operation, then using commercial jets would be the most effective way of concealment – **in plane sight**.

Indeed, this is the strategy employed by certain spy planes.

Ghost Riders



*“NATO operates a fleet of **modified Boeing 707 Airborne Warning & Control System (AWACS) aircraft equipped with long-range radar and passive sensors capable of detecting air and surface contacts over long distances.**”* Emphasis mine



NATO Airborne Early Warning

These jets operate in both the upper troposphere where commercial aircraft cruise, and, conveniently obscured by the cirrus cloud cover they provide, in the stratosphere.

What indications do we have that this would be an orchestrated and clandestine campaign?

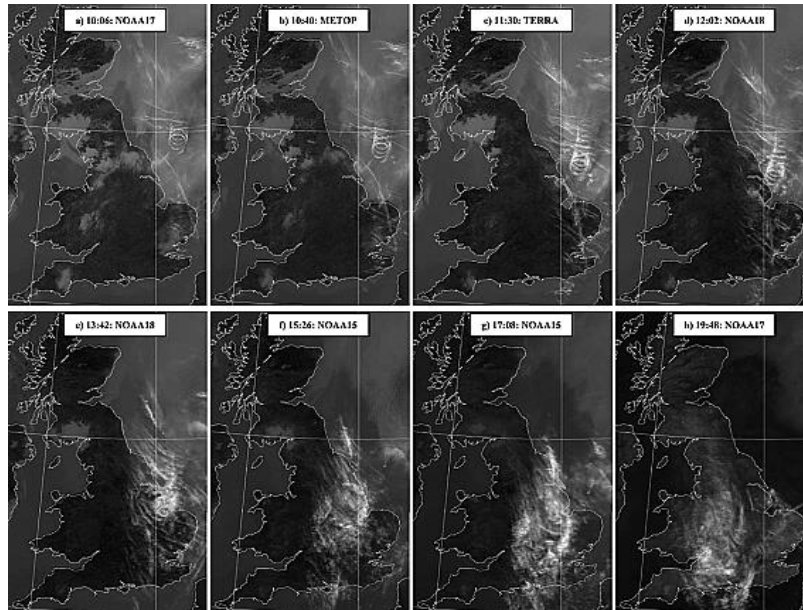
We would be looking for:

- Trails that exhibit irregular flight paths that circle around and seem to have no fixed destination. This would be to maximize coverage and supplement and fine tune the coverage already caused by commercial air traffic.
- Aircraft of non-commercial origin leaving behind such trails.

One particular study carried out in 2009, of [a single contrail event morphing into a vast cirrus cloud covering 50,000km² at its peak](#), has such features.

“The radiative forcing due to a distinct pattern of persistent contrails that form into contrail-induced cirrus near and over the UK is investigated in detail for a single case study during March 2009.

The development of the contrail-induced cirrus is tracked using a number of high-resolution polar orbiting and lower-resolution geostationary satellite instruments and is found to persist for a period of around 18 h, and at its peak, it covers over 50,000 km².”



Evolution of the Contrails Into Cirrus

*“A **distinct coil-shaped contrail evolving into cirrus** (hereafter CCC) that is thought to have originated from maneuvers performed by an **Airborne Warning and Control System (AWACS) aircraft** was observed in satellite imagery during March 2009 ([Figure 1](#))”*

We have a very curious, **coil-shaped** contrail that originates from a **military** aircraft, identified as an **Airborne Warning and Control System (AWACS)**.

*“The cause of the difference in the microphysical properties of the CCC is not investigated here but could be **due to the higher concentration of ice nuclei emitted owing to circling nature of the aircraft flight pattern** or the lower estimated air speed of the AWACS operations (estimated from the time taken to complete one complete circle of radius 20 km as around 440 km h^{-1}) compared to aircraft operating at faster cruising speeds.”*

We gain an insight into why such a curious flight pattern has been chosen. **It is to concentrate the maximum number of aerosols into a given region of the upper troposphere.**

What about the effects of the contrail cirrus on the underlying heat economy?

*“As expected, **the net radiative effect** is a relatively small residual of the much stronger but opposing SW and LW effects, **locally totaling around 10 W m^{-2} during daylight hours and 30 W m^{-2} during nighttime.**”*

“We can also estimate the distance flown by the AWACS aircraft (10 complete circles of 40 km diameter $\sim 1250 \text{ km}$) and the distance flown by the entire civil aviation fleet ($3.3 \times 10^{10} \text{ km}$, on an annual basis [[Eyers et al., 2004](#)]). If we

consider the best estimate for the global mean radiative forcing due to persistent contrails to be 10 mW m^{-2} , then the entire civil fleet contributes a radiative forcing per kilometer due to persistent contrail formation of around $3 \times 10^{-13} \text{ W m}^{-2} \text{ km}^{-1}$. The AWACS aircraft exerts a global annual mean forcing of approximately $2 \mu\text{W m}^{-2}$ for a distance traveled of 1250 km leading to a radiative forcing per kilometer due to contrail-induced cirrus of $1.6 \times 10^{-9} \text{ W m}^{-2} \text{ km}^{-1}$; this is over 5000 times greater indicating that aviation operations that generate contrail-induced cirrus could exert a disproportionately high radiative forcing and hence warming of the climate system.”

There you have it, an artificial cirrus cloud generated by a **single** aircraft covered the south of England and warmed the surface to a degree **5000 times greater (in $\text{W m}^{-2} \text{ km}^{-1}$) than recent estimates of the average persistent contrail radiative forcing from the entire fleet.**

This means that either the recent estimates of contrail radiative forcing are vastly underestimated or AWACS emit a far greater quantity of particulates, or both.

Behold a Black Horse

Peculiar configurations, similar in nature to the coil-shaped contrail described above, have been observed over war-torn Syria as documented by [Dane Wigington](#). Are they to **concentrate the maximum number of aerosols into a given region of the upper troposphere?** The region here being a rogue state.



Hama, Syria (1/21/17). Photo source: Bassel Keilani

Is it not curious that **extreme drought factored heavily into the uprising in Syria?**

*"Drawing one of the strongest links yet between **global warming and human conflict**, researchers said Monday that **an extreme drought in Syria between 2006 and 2009** was most likely due to **climate change**, and that **the drought was a factor in the violent uprising that began there in 2011.**"* Emphasis mine

[Researchers Link Syrian Conflict to a Drought Made Worse by Climate Change](#)

The vast, artificial cirrus cloud formations not only intensify the already oppressive heat but also disrupt precipitation. The third horseman is abroad, reminding us that this is a **Military/Industrial Complex**:

*"Many in the military including former US defence secretary Chuck Hagel have described **climate change as a so-called "threat multiplier"** for **terrorism, exacerbating poverty, disease, migration, and conflict**, and leading to the **Pentagon adding extreme weather to its war games strategy.**"* Emphasis mine

[Is the US military at odds with Trump administration over climate policy?](#)

Solar Radiation MISmanagement

In part 1, we arrived at the conclusion that one of the major forms of geoengineering to mitigate global warming, Solar Radiation Management, could not work unless it were carried out at altitudes in the stratosphere where even military aircraft do not fly.

We also learned **Clifford Carnicom's** take on the origins of the anti-geoengineering movement in **1998**:

"The journalistic rise of the geoengineering issue began, to my best recollection, in the last few weeks of the year 1998. A certain Canadian journalist came to prominence quite rapidly on a nationally syndicated radio show, with coined language and defined agendas to let the world know that something very different and important was to affect the world."

The Canadian journalist in question was **William Thomas**. Although the term "chemtrail" had been used by the military previously, it was he that brought the term to public prominence.

Clifford also expressed his misgivings on the somewhat hasty leap to the conclusion that the purpose of clandestine geoengineering was for mitigating global warming:

“Check your internet history books, but you will find that a global and covert operation of unprecedented scale was, by use of a curious combination of implication and certainty, for the purpose of “reducing global warming.””

“What the public was ‘given’, therefore, was an unsubstantiated agenda, ill-defined language of popular attraction, and a host of ready-made and supported ‘detractors’ that raised a commotion, provided distraction and dispute; all of these set the stage to successfully avoid journalistic integrity, scientific investigation, and accountability by public representatives. The obstacles were all provided at little cost, but at great expense to the needs and interests of the public.”

[A Clash of Evidence: The Realities of Solar Radiation Management \(SRM\)](#)



The Conjurer - Hieronymus Bosch

Credit - Encyclopedia Britannica

In part 5 we shall examine the evidence that far from being made of silver, the ongoing clandestine geoengineering is one of lead.

