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► Coming Up : Inside Out - London: Friday January 12, 2007

Contrails

With two major international airports and airplanes flying overhead day and night, it's no surprise that London has one of the busiest flight paths anywhere in the world.

What might surprise you, though, is that those zigzag white lines across the sky, or contrails, as they're known, might be having an adverse effect on London's weather.

Inside Out investigates contrails and whether they could be bad for the capital's climate.

Look to the skies

London is one of the busiest flight paths in the world so it is no surprise that its skies are criss-crossed with airplane condensation trails.

Contrails, or condensation trails, are cloud-like plumes of condensed water vapour which look like the tail of a kite in the wake of an airplane.

They occur when a plane reaches high altitudes, usually above 25,000 feet, where the sub-zero temperature freezes water droplets and other engine emissions before they have chance to evaporate.

Kerosene and other aviation fuels are hydrocarbons and are made up of carbon and hydrogen atoms.

When burned, the carbon combines with oxygen from the air to produce CO₂, and the hydrogen combines with oxygen to produce water vapour (H₂O).

For every gallon of fuel burned around a gallon of water is produced and emerges into a cold environment.

This is then condensed into tiny ice droplets which form the white trails you see when an airplane crosses the sky.

Contrails can spread and dissipate in as little as half an hour.

However, some trails are more persistent and remain in the sky long after the airplane has passed and up to a day later.

Globally the effects of contrails seem small but locally the effects



Controversial contrails - bad for the environment?

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The local effects of contrails are cause for concern

could be much greater.

Once these vapour trails have formed they can spread out into thin layers of cirrus clouds that can affect the climate, effectively leaving a blanket of cirrus clouds over London's sky.

Vapour trails

The first studies on contrails were recorded after World War One when airplanes were able to reach higher altitudes for the first time.

In fact pilots used to try and use contrails to track down enemy aircraft.

But this didn't always work as the strong winds which exist at high altitudes often blew them in different directions from where they originated.

Scientists have long believed that these vapour trails spread out into large, thin layers of cirrus clouds which alter the climate.

Short of grounding all aircraft, there's no way to measure the difference between an empty sky and one with air traffic passing through.

Climate change?

However, scientists in America were given a chance to look at the effects of no aircraft in the days following 9/11.

FAA local airports grounded all commercial flights nationwide for three whole days.

A striking observation revealed that with a ban on airplanes there were no contrails, the sky remained clear and daytime weather warmed up.

With the global warming debate raging on, we're all aware of the differences climate change can make to our environment if temperatures change by as little as a degree.

So what should be done about this and how serious a problem might this be to London's environment?

Links relating to this story:

[BBC News - Fly lower to cut climate impact](#)

[BBC - Inside Out - East - Contrails](#)

[BBC - Climate change](#)

[The National Contrail Network](#)

[BBC News - Telescopes 'worthless' by 2050](#)

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Contrails

Contrails can only form at altitudes of over 25,000 feet and in temperatures of less than minus 40 degrees Celsius.

They can grow to several kilometres in width and two to four hundred metres in height.

The highest percentages of contrail cover occur over Europe and America.

Contrails account for 3.5% of all human activities influencing climate.

Flying aircraft just 6,000 feet below the current flight paths would reduce contrail production by 47%.



What should be done about contrails?

Uganda

If you take a green mortgage with The Co-operative Bank, a percentage of your mortgage will go towards carbon offsetting in the Kibale rain forest of Uganda, organised by a company called Climate Care.

Carbon offsetting is said to counter carbon emissions from modern living by planting trees.



Uganda - we investigate the truth behind the Co-op promise

But 12 years on the reality is very different.

There is little evidence to show how effective carbon offsetting is and the jobs villagers were offered are not what was expected.

Karl Mercer travels to Uganda to investigate the truth behind the Co-op promise.

Hayez Squad

Gull wing doors, 2000 watt speakers, internal LED lights, dual exhaust, custom body.

Sound like your style?

Meet the Hayez squad, the innovative fresh and distinctive car modifiers, whose aim is to pimp your exterior, because as Naz Muzammil, manager of Top Gear mechanics in Hayes says, "it's all about the look".



Pimp my ride - a modified black cab that literally dances

Top Gear Hayes has won various awards for their distinctive style and this modifying heaven is the brain child of engineer and owner, PJ Ullah.

Check out a modified black cab with hydraulics that literally dances, and a modified civic with 2000 watt speakers.

Contrails - your comments

Contrail or Chemtrail?

What's the difference? Do a google video search on Chemtrails and look for aerosol crimes...

A contrail will dissipate in a relatively short period of time depending on conditions. A contrail will not usually have anti gravity orbs associated with them.

A chemtrail will not dissipate and will persist for quite some time from 4-12 hours depending on what type of trail it is and what it is for.

If you put your video camera on a tripod and film one of the big X's, or a wide trail you will notice that when you upload it to your

computer (at the highest resolution possible) and view it frame by frame, you will more often than not find some little white orbs flying in and out of the trails.

These orbs are quicker than they eye usually and this technique will let you see that these are in fact no ordinary "contrails" at all.

Glenn Brown

You asked for pictures of a winter scene, but could not resist sending these pictures of a really weird coloured sky taken last summer.

I have no explanation of the strange almost "nicotine stained" colour.

I thought that these may be of interest to you.

Richard, Walthamstow, London



Richard Dunn's nicotine stained sky photograph

Your programme was very interesting in that it omitted showing the consistent PATTERN of trails.

These are not the single plane trail shown in the programme, but crosses and curved paths which are nor representative of airline flights.

I live in North London and have been following these patterns since November 2005 and they are always the same.

Today, Sunday January 14th at 10 am, there were seven planes making trails. The sky was criss-crossed with trails. Two planes were flying parallel to each other, others were crossing over an existing trail.

I cannot believe that these are commercial flights, as on some days there are no flights at all, other days there are flights all day.

There are those who call them "chemtrails" and if "chemtrails over London" is tapped into the Internet, there are plenty of photographs to see, which confirms my description.

There is a total silence as to the origin of these trails. I hope your programme will initiate discussion into the "pollution of the skies" and come up with some answers.

Brian Godfrey, North London

Normal Contrails last for only a minute or two, usually less.

The ones that last for hours and spread out are not normal contrails, they are known as chemtrails, often containing barium, aluminium, and pathological mixes; viruses, bacteria, mycoplasma... and many think are the cause of Morgellons disease.

Please stop the disinfo, contrails do not last for a half an hour or more.

Craig Robinson

We have lived in Biggin Hill since 1964 when only small local aircraft were in the skies.

Some years later a guidance radio beacon was installed on the local

airfield for use by commercial aircraft.

Since then the number of aircraft overhead has increased considerably.

Over the last five years the number of aircraft criss crossing overhead has increased tenfold to a point that when we wake up on a sunny morning the sky is clear, by mid morning the skies are littered with contrails.

By early afternoon they have formed into light clouds that obscure the sun.

During 9/11 and the BA strike there was such a marked difference, the skies were clear all day and so very blue.

The effect on the local environment is very noticeable, how long will it be before it effects us world wide.

Dave and Irene Fairhurst

I feel that it is essential that everyone see for themselves the strange lines in the sky that are obscuring our deep blue skies in a matter of hours.

This issue needs to be brought to the public's attention and I hope that the public will look up and see what NASA, in their October 2005 newsletter, refers to as persistent jet contrails making man-made clouds that exacerbate global warming and change our climate.

These jet plumes persist for long periods of time making man-made clouds that change our climate according to NASA.

I have now observed black as well as white persistent contrails, white haze formed by these jet contrails, various types of skywriting by jets, jets leaving stop and go trails, X's, and much more.

This is definitely not normal and I invite the public to look up and watch our skies.

Not only does the sky get covered, or blitzed by jets leaving persistent contrails in a matter of hours, small rainbows appeared on either side of the sun.

Here you have a world-wide, government-sponsored chemtrail spray program going on for over five years, and yet no media is covering it?

What I do know is that in areas that are being covered by these persistent contrails, large amounts of barium and aluminium are showing up in water and soil samples.

Aluminium is known to cause Alzheimer's disease and barium is a cancer-causing agent.

There are other materials currently used in atmospheric testing as well.

Our atmosphere was doing just fine when Nature took its course, but manmade's course is disrupting our atmosphere, and Earth's and all living species biorthyms.

And when you disrupt the normal flow, for every action their is an opposite reaction.

There is an emerging knowledge of atmospheric dysfunctions. There is also an emerging knowledge of an increasing energy of electric and magnetic fields which in reality are really one energy because neither can work in any capacity without the other.

But our atmosphere is filling up with electromagnetic/ electrostatic energy fields.

Energy fields amassing like this are the cause of what is actually happening to induce our cells dysfunctions.

The atmosphere itself is being manipulated for one thing, to attempt to harness energy resources.

But this masses of electromagneti energy being produced over our heads on a daily basis HAS A UNDENIABLY NEED OF ADDITIONAL ELECTROMAGNETIC ENERGY TO BE CONTINUALLY ADDED TO IT.

The disruption of Earth's energy (ley) lines may be related to the electroconductive properties of the Chemtrail aerosols.

Or the Chemtrails' chemicals may serve as an energy-reflective barrier to help shape and intensify weaponized energetic beams from HAARP and other scalar weapons engineering systems, which may be being used to disrupt Earth's natural flow-lines of energy, and at any rate clearly do so when powered up.

Every day, hundreds of millions of people suffer from chronic respiratory diseases.

Currently 300 million people have asthma, 80 million people have moderate to severe chronic obstructive pulmonary disease (COPD) while millions of others suffer from mild COPD, allergic rhinitis and other often-undiagnosed chronic respiratory diseases.

The World Health Organization (WHO) estimates that in 2005, some four million people died of chronic respiratory diseases.

Deaths will increase by a staggering 30% in the next 10 years, if urgent action is not taken.

The Global Alliance against Chronic Respiratory Diseases was formed to help stop this global epidemic.

My concern is that the health, climate, water, soil, air quality, and the lives of the people are being impacted by these events.

I would like to know who is responsible for leaving these persistent jet contrails that change our climate.

Research indicates that the activity observed may violate a 1978 UN treaty that the United States (and UK?) signed against artificial weather modification, as well as various laws and regulations.

I am interested in protecting our climate and human health from man-made clouds and the resulting climate change.

I surely do not want to see this happen without public knowledge, agriculture oversight, and public debate.

This is a great example of just how out of touch the media and therefore the "people" are with what's going on in the 'real world' of

science, technology and Big-Brother.

This subject seems worthy of an 'exposé', that is if we're still allowed to know such things. Until then, start looking up.

L. Woolford

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