Carnicom Institute Research

2000 - Part 2

Acknowledgements

Mission Statement:

Carnicom Institute is a non-profit organization working solely for the benefit of humanity. Our goal is to provide the public with beneficial and responsible information through scientific, educational,environmental, and health research for the public welfare. The Institute has devoted significant effort to the important issues of geoengineering and bioengineering.

Disclaimer:

The Carnicom Institute is a non-profit health and environmental educational and research organization serving the public welfare. CI is not a clinic and does not perform any medical diagnosis, medical treatment, or prescription of therapy. We do not advocate any proprietary products, protocols, or therapies. All studies conducted by the Institute are for research purposes only. Our purpose is to provide information and education to the public.

License:

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Jul
The Spirit of Independence by Diane Harvey
Jul 4, 2000

The Spirit of Independence
by
Diane Harvey
merak@sedona.net

Are you celebrating the memory of the great moment in human history which was our nation's Independence Day? Conscious celebration powerfully reconnects us directly to the original energy of independence itself. Yet this very reconnecting immediately brings into stark relief the actual situation we are in here and now: the near-wholesale loss of all meaningful freedom in daily life. What kind of Independence Day is this?

The tide is flowing strongly against that energy which is the genuine spirit of independence. Whatever it is we might wish to do to assert our uniquely creative spirits, it will most likely be immediately obstructed. The high and wide stone walls of the Nameless Interconnected Directorate are closing in, and closing down the dangerous spirit of independence. We may celebrate the idea of freedom, but the grim truth is that our freedom is now an almost meaningless abstraction, reduced to a celebration of beautiful words in history books and high dreams of past glory. We are a nation of the quietly enslaved now, invisibly chained to the Shadow Power which is devouring our energy, our money, our hearts, our minds, and our souls. Where is our independence today? What are we celebrating?

Independence means the practical opportunity to earn a living through our own intelligent activity, rather than as a nameless numbered biped in a multinational corporate Ubershark. Independence means the opportunity to educate our children according to the compelling natural voice of our own conscience, rather than that of current nightmarish popular opinion. Independence means to be able to actually choose and vote for our elected officials, rather than be forced to accept the present criminal syndicate of wholly-owned corporate puppet-people. Independence means the opportunity to eat and drink substances untampered with by hidden venomous corporate byproducts and oughtright toxic waste. Independence means the freedom to live without being spied on through invisible means, by invisible groups, for invisible purposes. Independence means informed consent of a concerned and enlightened citizenry, rather than secret government experiments perpetrated on an unknowing and deliberately weakened populace.
Independence means the opportunity to innocently think our own thoughts and feel our own feelings, rather than be silently subject to subliminal electromagnetic and chemical psychological entrainment. Independence means the opportunity to seek health, as we understand the meaning of this for ourselves, rather than be coerced and kidnapped outright into the lunatic corporate pharmaceutical-medical straight-jacket. Independence means to be allowed to exist in all our multifarious multileveled multicolored individualities, rather than being forced deeper and deeper into the mindless, heartless, bottomless pit of uniformity. Independence is not a historical right. It is not an abstraction, or a concept. It is either what we are free to try, free to live in here and now, or it is nothing at all. The spirit of independence is not the memory of that spirit.

How free are we to live outside a system which vehemently and effectively opposes the very nature of independence? Are we free to live out our dreams of creating beautiful and useful objects, arts, inventions, and new ways of living? Are we free to pursue the very best that is within us? That would be the practical result of a truely free society, composed of independent individuals. Most of us are not free

to do anything except earn a half-a-living, as best we can, within the strict confines of the dark Shadow. The other half of our living we are forced to pay directly into the gaping maw which digests it in order to further enslave us. Of course we are all still perfectly free to starve, out of sight under a bush, in the dust. Elsewhere, any genuine independence is very hard to come by. We have left, as a nation, only negative freedoms and negative independence. We seem outwardly to make choices, to move about, to be actually living. Our chains are now invisible, and this is the worst condition of all. We are still free to imagine we are free.

Have we then, as a nation, irrevocably traded the spirit of freedom for the noxious intoxicating vapors of spurious security? Have we forever renounced the use of our minds, in exchange for the puny inanities of puerile entertainments? Have we now bartered the very souls of our children for the right to work sixty hours a week, to make more money, to pay more taxes, to buy ever more shamefully pointless stuff? Have we exchanged the friendly confidences of our own souls, for the right to ignore the death of the spirit of independence? These are questions we cannot answer, except for ourselves. If we are willing, we can envision all those lives, throughout history, who gave themselves unselfishly in order that the spirit of independence might live on. Can we feel the weight of those endless countless individual sacrifices, and have the courage to measure this against what we have done with the gift of their lives? Painfully conscious of all that was, and is, yet devoid of sentimentality, can we allow our hearts to fully accept this realization? Can we let our minds range tenderly backward over the innumerable lives and deaths spent for this, the last vestige of freedom?

We can pray that we may have the spiritual fortitude to bear knowing what has become of our freedom in our own nation. Because surely our only response to these facts must be to move heaven and earth to rekindle this spiritual fire of independence within ourselves. And then, to rededicate this flame, which can exist only within a willing human being, to the future of this country. For all our tears and regrets are sterile if we do not act to regain our lost freedom. We are united with the past we revere soley through the use we make of the rest of our existence here. Only by our personal willingness to feed that fire with the fuel of our own comfortable lives, will we ever again in all honesty be able to celebrate a living Independence Day.

“But when a long train of abuses and usupations, pursuing inevitably the same object evinces a design to reduce them under absolute Despotism, it is their right, it is their duty, to throw off such Government, and to provide new Guards for their future security.” The Declaration of Independence of the Thirteen Colonies in Congress, July 4, 1776

Diane Harvey
merak@sedona.net
July 4 2000

SEN. LUGAR RECENT REPLY

Jul 10, 2000

SENATOR LUGAR REPLIES
The following reply to the protest letter available on www.carnicom.com has been recently been received by a citizen.
This letter posted with permission on July 10 2000.
The letter is also available from the source at :
http://www.terrehauteweb.com/lugarsletter.html

Dear Mr. ######,

Thank you for writing to me to express your concern about airborne condensation trails (contrails) and reports of possible chemical spraying that create lines in the sky. I appreciate knowing your concern on this issue.

I have contacted the relevant government agencies, including the Department of Defense (DOD), the National Air and Space Administration (NASA), the Enviromental Protection Agency (EPA), the Federal Aviation Administration (FAA) and the National Oceanographic and Atmospheric Administration (NOAA) with your concerns. Each of the agencies verified that contrails occur quite naturally in the wake of aircraft, as they have done since World War II when aircraft began to fly at higher altitudes.

I also asked my Legislative Assistant for Military and Veterans Affairs to research this issue further. He is a former naval avaitor with over 2000 hours of flight time and has significant training in meteorology and physics.

The trails seen behind aircraft are formed by condensation. This is caused by the same physical principles that cause us to see our breath or car exhaust on a cold day. As a aircraft climbs, it will encounter temperatures approximately five degrees colder every one thousand feet (this is called the lapse rate). Most aircraft operate at altitudes above 30,000 (approximately six miles), where temperatures are well below the freezing level even on the most seasonal of days.

For engine exhaust contrails to form, it is necesary for the aircraft to fly through very cold air, usually about minus forty degrees farenheit. The exhausted moisture and heat saturate the air and condensation takes place almost immediately. The length of time for which a contrail will be visible depends upon the relative humidity of the surrounding air. If low, the contrail may not form or will disappear very quicky. In humid air, contrails can persist for many hours and have been known to trigger the formation of a thin overcast of cirrus clouds.

As many have pointed out, another cause of why contrails might appear peculiar in appearance is the patter in which they appear in the sky. Air traffic flows on “highways in the sky,” referred to as airways. Just like roads on a map, airways intersect at airfields or navigational checkpoints that are represented on navigational charts and defined by a lattitude and longitude or by a range and bearing to an airport beacon. Therefore, contrails will often appear in parallel or criss-crossed.

Finally, reoprts on the Internet and elsewhere claim links to a myriad of illnesses and injuries; however, no data exists to back up these claims. The FAA, NOAA and the EPA, as

well as professors in universities around the country have examined these claims only to find out that they were made by disreputable sources, who upon challenge have provided no evidence or back up data.

I hope this information is of interest to you. Thank you again, for bringing your concerns to my attention.

Sincerely

Richard G. Lugar
United States Senator
RGL/pgp

PILOT'S FORUM : PPRUNE PILOTS FORUM

Jul 19, 2000

PPRUNE PILOTS FORUM
The following message is posted by Clifford E Carnicom
on the message board attached to www.carnicom.com
at : http://pub8.ezboard.com/fchemtrailschemtrails.html
and is followed by 26 replies as of 07/19/2000

Preliminary Review

The conditions of posting in this forum are well established. In addition, any individuals in the future positively associated with the pilot's forum in England that promoted the earlier hoax on this issue and that violated United States federal law (Electronics Communications Privacy Act) will be removed. Fraud, or any association with a source that promotes it, will not be tolerated on this board.

The public can review the historical records of posting of that pilot's forum at:
Professional Pilots Rumor Network (PPRUNE)
The posts of greatest relevance are entitled:
Chemtrail Lads at it Again – Pilot Attack
Chemtrail Site – Banned!
You Have to read this!!!- Chemtrails trash

That forum is historically responsible for perpetrating fraud, and the peer atmosphere of jest remains visible throughout recent postings. Additional false or misleading graphics (unidentified aircraft panel) have recently been submitted both privately and through this message board. Multiple logins have occurred. Stated actions of deception and impersonation exist. ANYONE associated with fraud, OR A FRAUDULENT SOURCE, will not be given the privilege of posting on this message board.

It has also been stated that any member of that forum will be considered on an individual basis for permission to post on the condition of submitting identifying information to me as outlined below.

A preliminary review of recent postings on this forum has been conducted. The following anonymous parties are removed from participation on this message board:

Chemical Brother
Jigsawblue – Jigsawgreen
Ceili
Polluter
HugMonster
ESG
BomberHarris
CaptChaos
Nugpot
Amazed
Thankyouall
Growler101

VictorAirhead
uk_flyer
Youwho234
WYSIWYG
vmc2
machbuster
ehwatezedoing

If any readers note that participants of this board are associated with the following forum:
Professional Pilots Rumor Network (PPRUNE)

http://www.pprune.org/cgibin/forumdisplay.cgi?action=topics&forum=Rumours+|AMP|+News&number=1

please notify the message board publicly and/or me privately at info@carnicominstitute.org

The record of previous postings by these individuals in most cases will be left on the board as public notice. Other parties may be subject to removal upon further evaluation. Any party that has been removed that wishes to be given further consideration for posting will be required to send an email to info@carnicominstitute.org stating their full name, address, telephone number, pprune user name, internet service provider and a statement of rationale for permission to post. I reserve the right of judgement in all such cases.

Parties removed in the future will not necessarily be identified. The condition of correspondence by email to me remains regardless of whether public notice of removal is given or not.

For those that apparently do not understand what has been stated above, it will be repeated:

“The conditions of posting in this forum are well established. In addition, any individuals in the future positively associated with the pilot’s forum in England that promoted the earlier hoax on this issue and that violated United States federal law (Electronics Communications Privacy Act) will be removed. Fraud, or any association with a source that promotes it, will not be tolerated on this board.”

Honest, civil and professional discourse remains welcome as always, subject to the above conditions.

Clifford E Carnicom
Last Edit 07/19/00

CONTRADICTIONS

Jul 20, 2000

CONTRADICTIONS
The following are two recent posts by Clifford E Carnicom on the message board attached to www.carnicom.com:

A Contradiction:

Conditions in Santa Fe NM yesterday July 20 2000:

Clear blue sky early hours of the morning. Introduce heavy aircraft spray activity during morning hours, resulting in subsequent classic formation of extensive cirrus – cirrostratus – and cirrocumulus 'appearing' cloud decks. The now expected, formerly unusual, ring aroung the sun also developed, due to microscopic hexagonal crystals of uniform size existing in the atmosphere, the appearance of which also was directly associated with aircraft activity.

In Albuquerque, at flight level, immediately visible to the south:

Relative humidity at 35,000ft. MSL at 0500 (5am) 32%
Relative humidity at 35,000ft. MSL at 1700 (5pm) 41%

Relative humidity interpolated at 1030 observation time is 36%.

U.S. Naval Postgraduate School in Monterey CA and Vincent Schaefer, inventor of cloud seeding in 1946, both affirm that cloud formation is not expected to even begin below relative humidities of 70%. That case itself is considered unusual, exemplified with the introduction of hygroscopic nuclei, such as salts in the atmosphere along the coast. Persistent contrails stated by numerous sources to have the potential to exist only in conditions of near saturation to saturation. Comments regarding relative humidity with respect to ice are always welcome.

Conditions today in Santa Fe NM July 21, 2000.

Clear sky overhead, no significant observed aircraft activity.
No ring around the sun.
Relative humidity at 35,000 MSL at 0500 is 36%

Those interested in additional meteorological aspects

of this issue may be interested in listening to the recent interview with Jeff Rense linked on carnicom.com

Clifford E Carnicom
July 21 2000

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The Contradiction Remains:

The following reference summary on:

www.mmm.ucar.edu/asr97/science_high.html

brings to four the number of references that repeatedly and consistently state that cloud formation (specifically cirrus cloud formation at flight altitude in this case) is not expected to occur with relative humidities (with respect to water, per conventional and standard measurement) of less than 70%. And yet repeatedly since the early part of 1999 such formation of cirrus – cirro-stratus – and cirrocumulus cloud decks are observed forming repeatedly as a direct result of aircraft activity in conditions of extreme low humidity in the southwest desert. It is noted that the source stated here is from both NASA and NOAA researchers.

The four sources that are completely consistent are now:

The United States Naval Postgraduate School
Atmosphere, by Vincent Schaefer, inventor of cloud seeding
Meteorology, The Atmosphere and the Science of Weather, by Joseph M. Moran
Referenced NASA – NOAA study below.

Variance from these expectations, i.e., repeated, extended and sustained cirrus, cirro-stratus, and cirro-cumulus formation under conditions of extreme low humidity (avg. 30%, range 10%-60% predominant) in Santa Fe NM as a direct result of aircraft activity is most reasonably explained with an alteration in traditional modeling techniques. Such an alteration would reasonably consider the effects of the deliberate introduction of aerosol particles within that extreme low-humidity environment at flight elevations.

The relationship between relative humidity with respect

to both water and ice is understood, and does not affect the conclusions reached herein.

****

“Andrew Heymsfield, Larry Miloshevich, and Steven Aulenbach, along with Glen Sachse (NASA Langley) and Sam Oltmans (NOAA) found that the relative humidities with respect to water which are required to form ice crystals in cirrus clouds decline from almost 100% near 40 degrees C to 75 or 80% from -55 to -65 degrees C. This is consistent with their earlier measurements and the notion of homogeneous nucleation of solution droplets. But it is noteworthy that high relative humidities, approaching 90%, were measured in clear air at -52 degrees C off the coast of California and relative humidities approaching 100% were observed in orographic wave clouds between -62 and -65 degrees C. These results indicate that very high relative humidities can build up at low temperatures in instances with high vertical velocities and possibly with depletion of cloud condensation nuclei, thus retarding the formation of ice crystals. These regions provide conditions highly favorable for contrail formation by aircraft.”

Posted by Clifford E Carnicom
August 4 2000

Re: The Contradiction Remains
_____

Now five sources:

“Data from a wave cloud at temperatures below -60 C showed that nucleation of ice began at approximately 80% relative humidity with respect to water (~125-130 % saturation with respect to ice), consistent with earlier observations of Heymsfield and Larry Miloshevich in wave clouds at temperatures of -55 C.”

www.mmm.ucar.edu/asr96/part_h.html

Clifford E Carnicom
Edited September 9 2000

Now six sources:

Heymsfield, A.J., L.M. Miloshevich, C. Twohy, G. Sachse, and S. OLTMANS.

Upper-tropospheric relative humidity observations and implications for cirrus ice nucleation.

Geophysical Research Letters

25(9):1343-1346 (1998).

Abstract:

Relative humidity (RH) measurements acquired in orographic wave cloud and cirrus environments are used to investigate the temperature-dependent RH required to nucleate ice crystals in the upper troposphere, Rh-nuc(T). High ice-supersaturations in clear air–conducive to the maintenance of aircraft contrails yet below Rh-nuc and therefore insufficient for cirrus formation–are not uncommon. Earlier findings are supported that Rh-nuc in midlatitude, continental environments decreases from water-saturation at temperatures above -39°C to 75% RH at -55°C. Uncertainty in determining Rh-nuc below -55°C results in part from size detection limitations of the microphysical instrumentation but analysis of data from the SUCCESS experiment indicates that Rh-nuc below -55° C is between 70 and 88%. A small amount of data acquired off-shore suggests the possibility that Rh-nuc may also depend on properties of the aerosols.

http://www.cmdl.noaa.gov/publications/data/1998.html

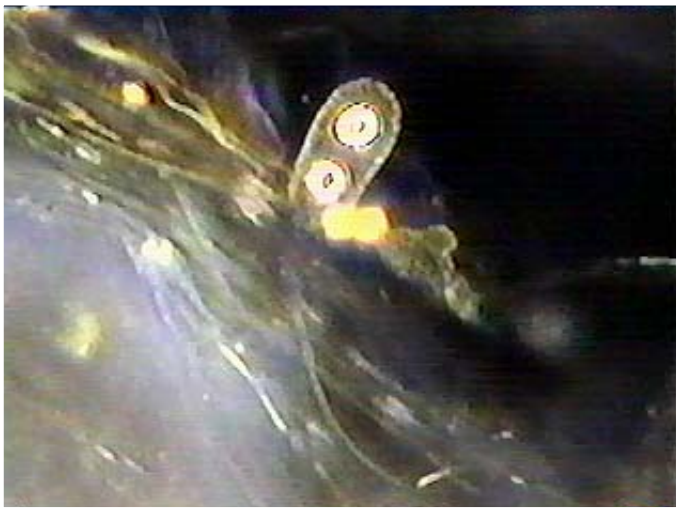
Referred to and posted by C.E. Carnicom Oct 9 2000

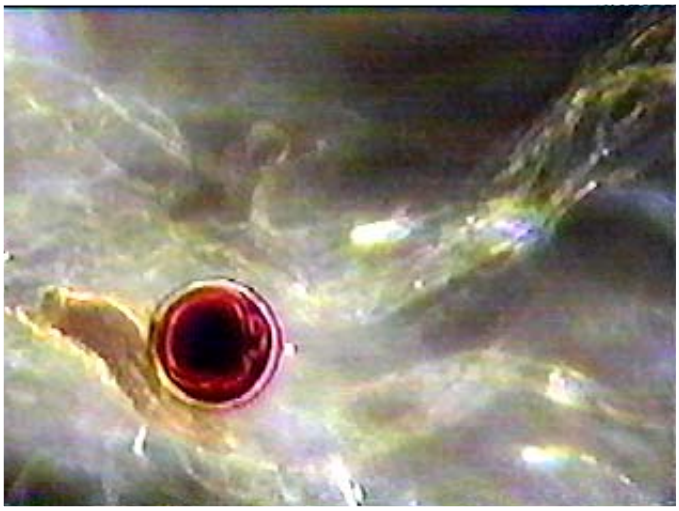
ADDITIONAL BIOLOGICAL COMPONENTS IDENTIFIED

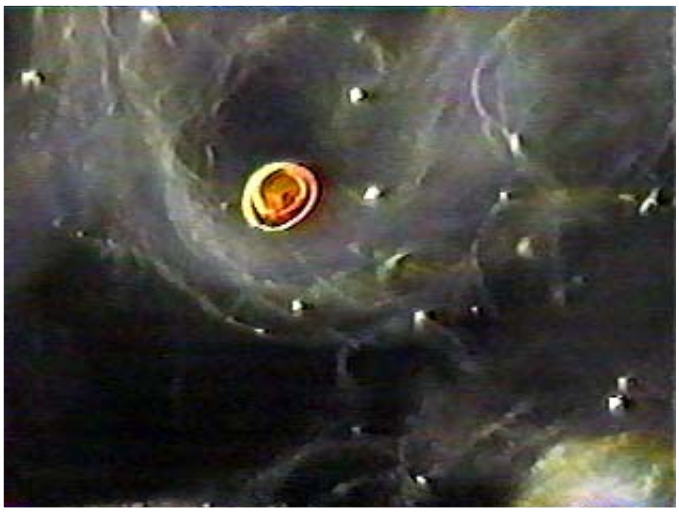
Jul 21, 2000

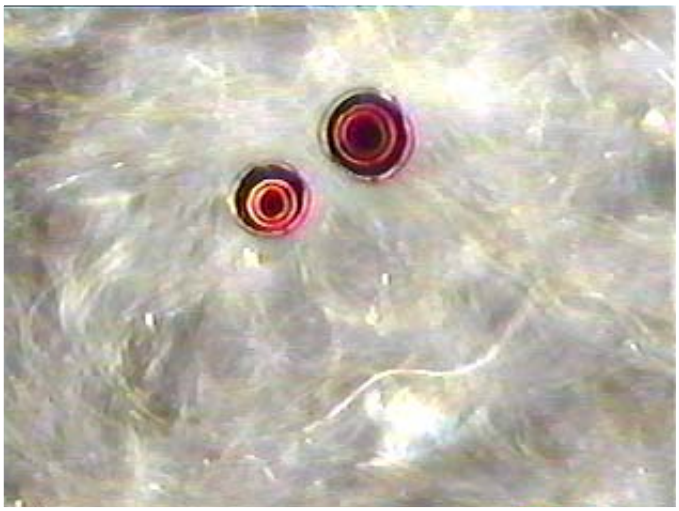
ADDITIONAL
BIOLOGICAL COMPONENTS
IDENTIFIED
Second Microscopy Session
Posted July 21 2000

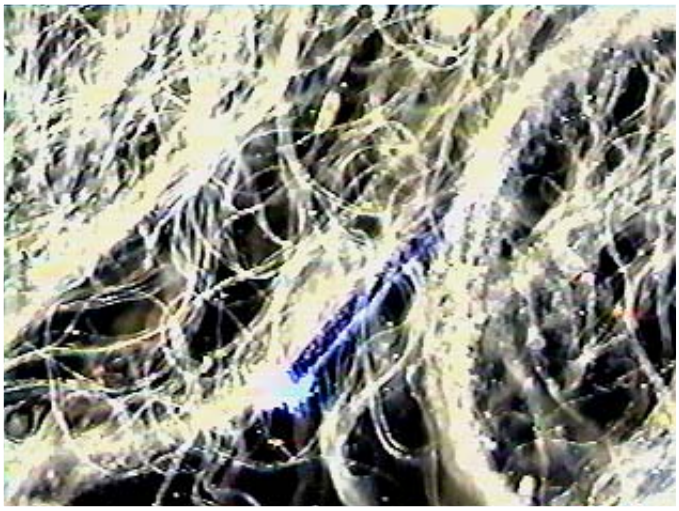
The following stills are taken from a second microscopy video session. I was not a witness to this recording, and no further descriptions are available at this time. If further descriptions are provided by the source, they will be posted. All information indicates that the conditions of observation for these slides are identical to those which have been specified earlier at https://carnicominstitute.org/wp/biological-components-identified/. This session is anticipated to have occurred slightly prior to those events witnessed by myself on May 11 2000. These components are found within a portion of the same ground sample material that has been sent by certified mail to Carol M. Browner, Administrator of the United States Environmental Protection Agency. Carol M. Browner was presented with this information over 6 months ago, and she refuses to identify the material within this sample to date.

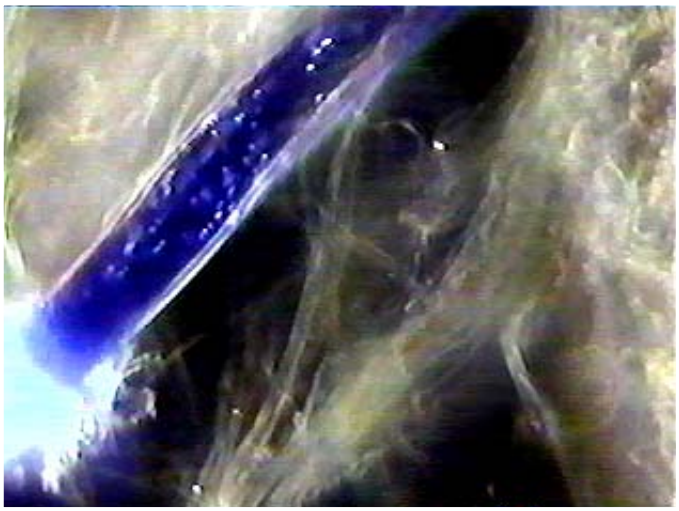


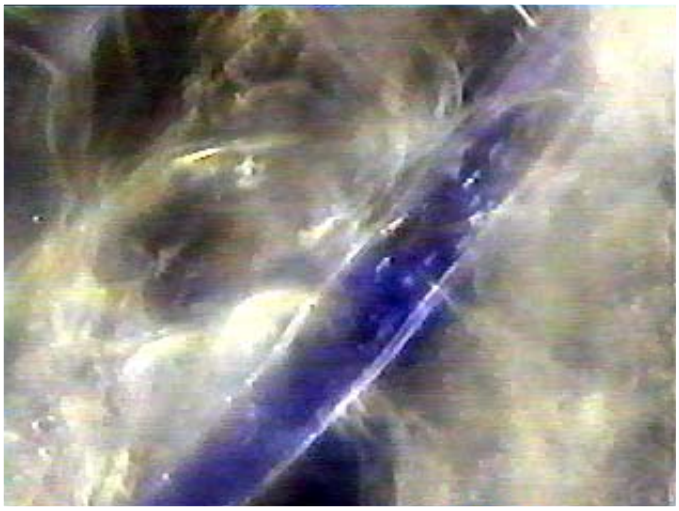










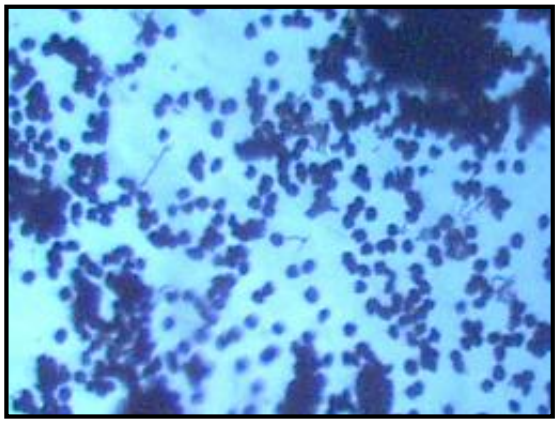


Clifford E Carnicom
July 21 2000

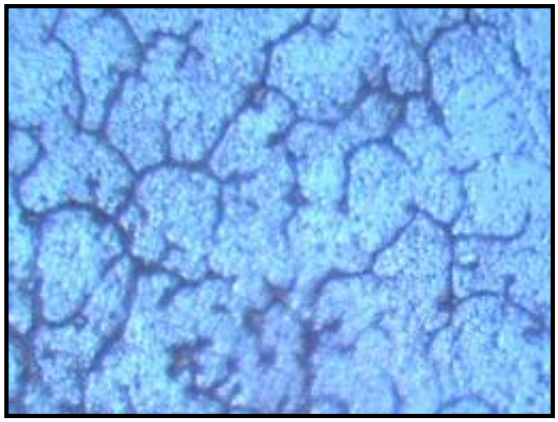
Aug
SAMPLES REQUIRE IDENTIFICATION
Aug 9, 2000

SAMPLES REQUIRE IDENTIFICATION
Posted by Clifford E Carnicom
August 9 2000

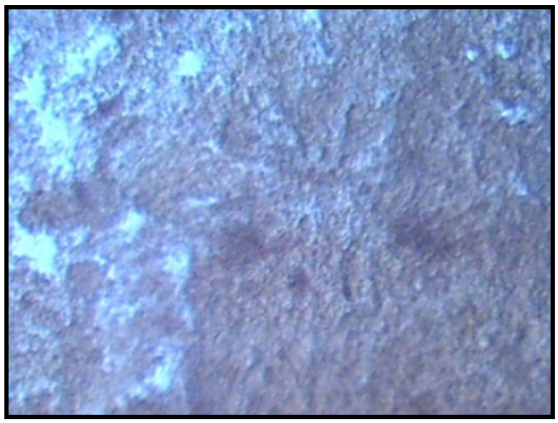
Each of the following samples requires identification. Those with further knowledge in microbiology or mycology are encouraged to respond. If any readers believe that they are able to identify the following materials, please respond with email to info@carnicominstitute.org or post a public message on the message board. Thank you.



Sample Number 1 : Missouri Report
“Found this on 5 different locations on our 1 acre area after a jet ‘took’ the roof loose.”
Further Description Available Here



Sample Number 2 : Santa Fe Rain Water
Rain Water held in storage for approximately 6 weeks.
Further Description Available Here



Sample Number 3 : Albuquerque
Sample reported on ground on two separate occasions.
Further Description Available Here

Clifford E Carnicom
August 9 2000

SAMPLES REQUIRE IDENTIFICATION (detail 1)

Aug 9, 2000

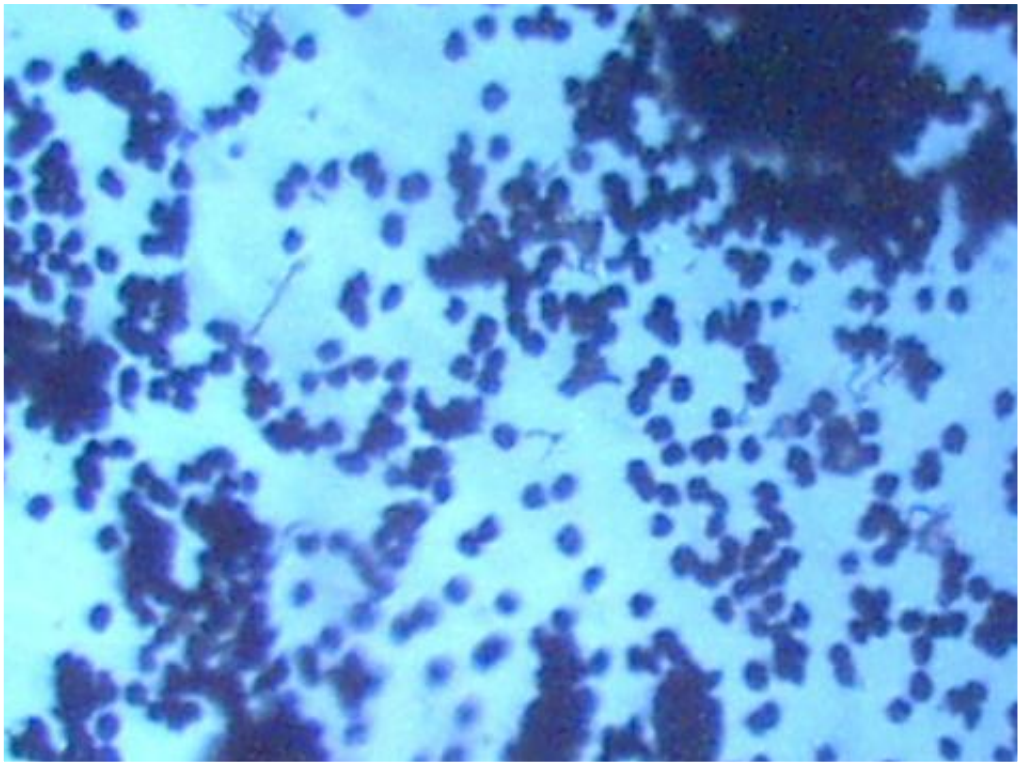
SAMPLES REQUIRE IDENTIFICATION
Posted by Clifford E Carnicom
August 9 2000

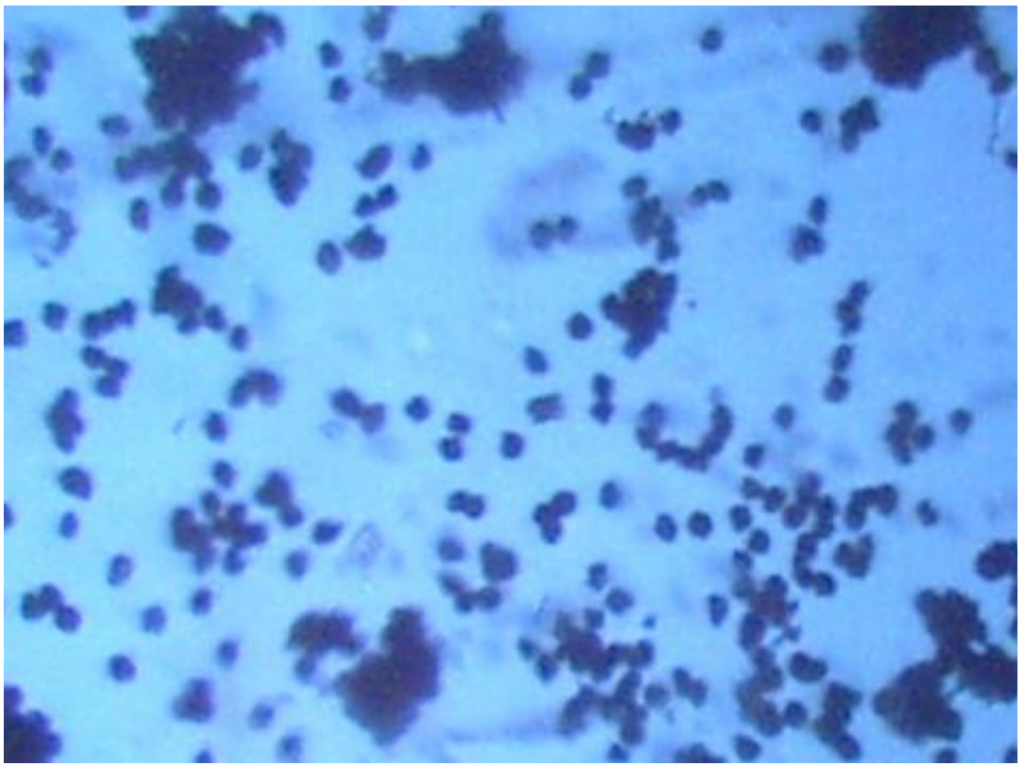
The following sample requires identification. Those with further knowledge in microbiology are encouraged to respond. If any readers believe that they are able to identify the following materials, please respond with email to info@carnicominstitute.org or post a public message on the message board. Thank you.

Sample Number 1 : Missouri Report

The following message was received along with the physical sample:

“Found this on 5 different locations on our 1 acre area after a jet ‘took’ the roof loose. Hope you can find out what it is. Grass died.”





The objects are shown at a magnification of approximately 480. The material is of dark brown color, and is of a powder form. Microscopic evaluation shows the material to be composed entirely of uniform spherical cellular structures. The cells measure an average of approximately 7 microns in diameter. Although there is a blue cast to the microphotographs shown, the material itself is dark brown to black. The best estimate that I am able to make of this material thus far is that it appears to be in the class of fungal or bacterial spores. Any further identifying information from the readership is appreciated.

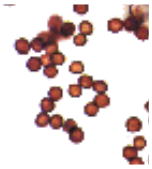
The above two photographs show views of the material in the original container in which it was received. The container is filled with dried vegetation coated with the dark powder, and the material on the bottom of the container is the powder by itself. The material also has an extremely offensive odor. There is also the possibility that contact with this material leads to fatique, but this last observation remains to be verified. No confirmation is available at this time that the material originated from either the air or the ground; the only information currently available is the statement from the sender that is posted above.

Clifford E Carnicom
August 9 2000

The closest match with research thus far has been obtained from the following web site:

http://pollenuk.worc.ac.uk/Aero/FUNGI/basidio.htm

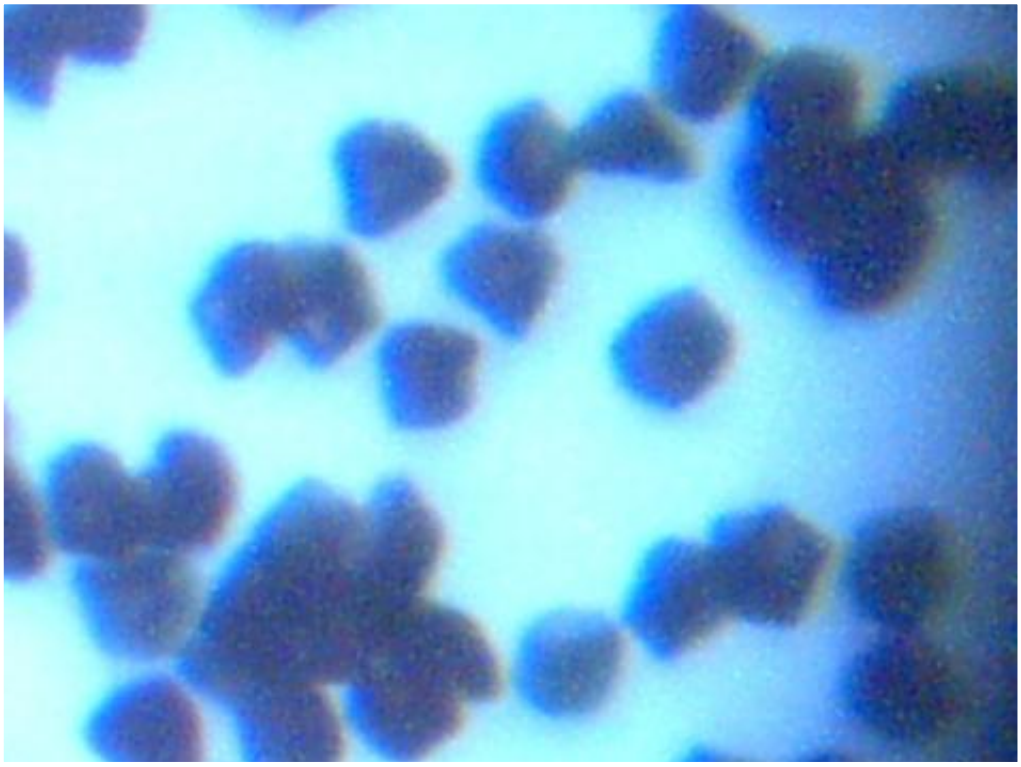
which posts the following image and description. A general match both visually and with size is occurring with this particular order of fungal spores. Results of other researchers remains welcome.

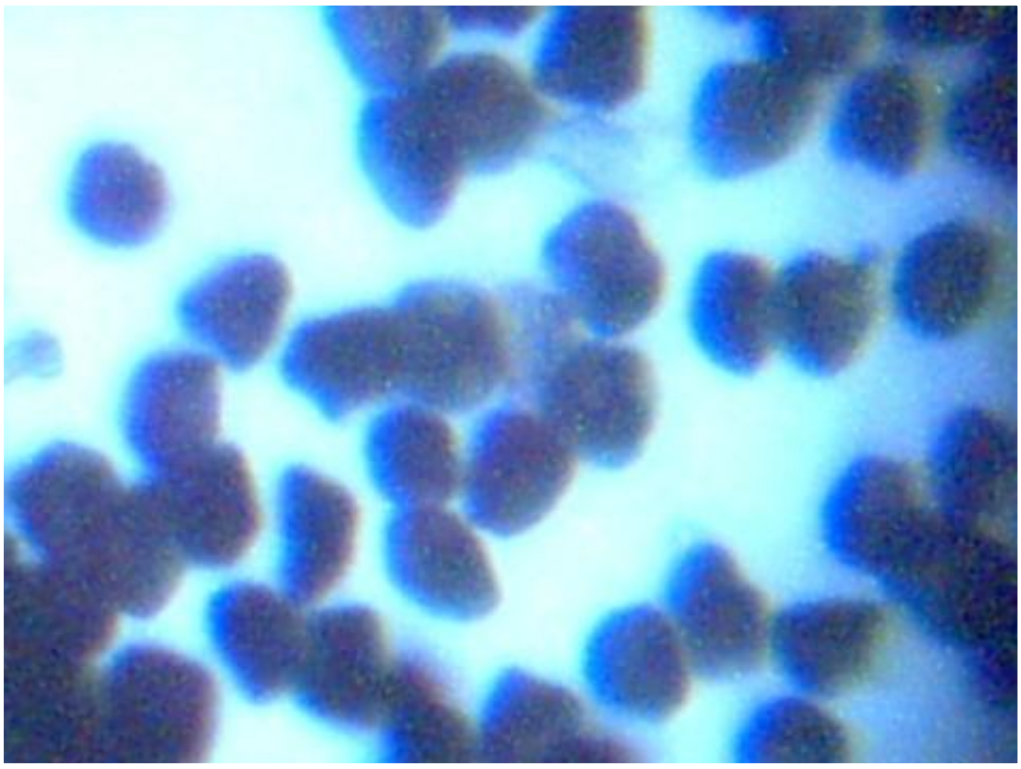


“Smuts (Order Ustilaginales)
The class Ustomycetes is represented by a single order, the Ustilaginales. The members of this order can produce a yeast-like unicellular stage. The vast majority of the members of Ustilaginales are plant parasites. These fungi are called smut fungi and number around 850 species which form dark spore masses on host plants, such as grasses and cereal crops. Smuts can be found on many grasses, especially on Johnson grass when it first flowers. Spores of Ustilago (illustrated) and Tilletia are frequently seen.
Their spore size ranges from 5 to 10 micrometres (microns).”

Posted August 10 2000 by Clifford E Carnicom:

The following microphotographs are now presented at a magnification at approximately 2400x. Although any detail of the images is lost at this point, these photographs do reveal the irregular shape of the objects at high magnification. The degree to which the Order Ustilaginales is spherical remains an open question from the image that is available for comparison.





Magnification Approximately 2400x
Measured Size of Unidentified Objects : Approximately 7 microns
(Approximately 1/10 the width of a human hair)

POSTED BY CLIFFORD E CARNICOM ON AUGUST 12 2000:

The following message apparently authored by a Jay Reynolds was relayed to me by email on August 12 2000:

“In 1996, Karnal bunt of wheat, caused by the SMUT fungus Tilletia indica, resulted in the quarantine of 1.7 million
acres of wheat including the entire state of Arizona, and portions of NEW MEXICO and Texas. USDA called this outbreak an “extraordinary emergency”. Even one spore of this SMUT was enough to restrict all movement of possibly infected material from these areas. Economic damage resulted and was eventually compensated by US taxpayers.

Karnal Bunt is a heterothallic SMUT fungus belonging to the order USTILAGINALIS. The black, globose to
subglobose teliospores are the part of the pathogen that give this group of organisms the designation SMUTS.
These spores are known to remain viable for 2-5 years.

Regulations pertaining to the quarantine on Karnal Bunt SMUT is contained in LAW

in the Code of Federal Regulations, 7 CFR 301.89-1 through 301.89-14, which should be carefully studied by
Carnicom and anyone else who attempts interstate transport of material which could be infected with SMUT
organisms and spores.

Such transportation could be a violation of Federal and State laws, and be to the detriment of farmers
everywhere.

I urge Carnicom to have the spores that he claims were sent to him immediately identified by his State
department of Agriculture who are very able to identify the spores he has in his posession.

Unfortunately, his policy of censorship negates the possibility that I can direct this information to him personally,
if someone is able, please pass it along.

http://www.carnicom.com/mo1.htm”

My response by email to the party that relayed the above information is as follows:

Thanks for this info. I do not keep track of Jay Reynolds or his activity in any way, so this is helpful information. I most likely will indeed post this on my site, and take the advice of requesting further identification beyond my public appeal. One might think the state or federal authorities should have an interest in contacting me if my initial identification is indeed correct.

Identification of and locating the source of the material are the primary goals, regardless of how that is accomplished.

Clifford E Carnicom
August 12 2000

SAMPLES REQUIRE IDENTIFICATION (detail 2)

Aug 9, 2000

SAMPLES REQUIRE IDENTIFICATION
Posted by Clifford E Carnicom
August 9 2000

The following sample requires identification. Those with further knowledge in microbiology are encouraged to respond. If any readers believe that they are able to identify the following materials, please respond with email to info@carnicominstitute.org or post a public message on the message board. Thank you.

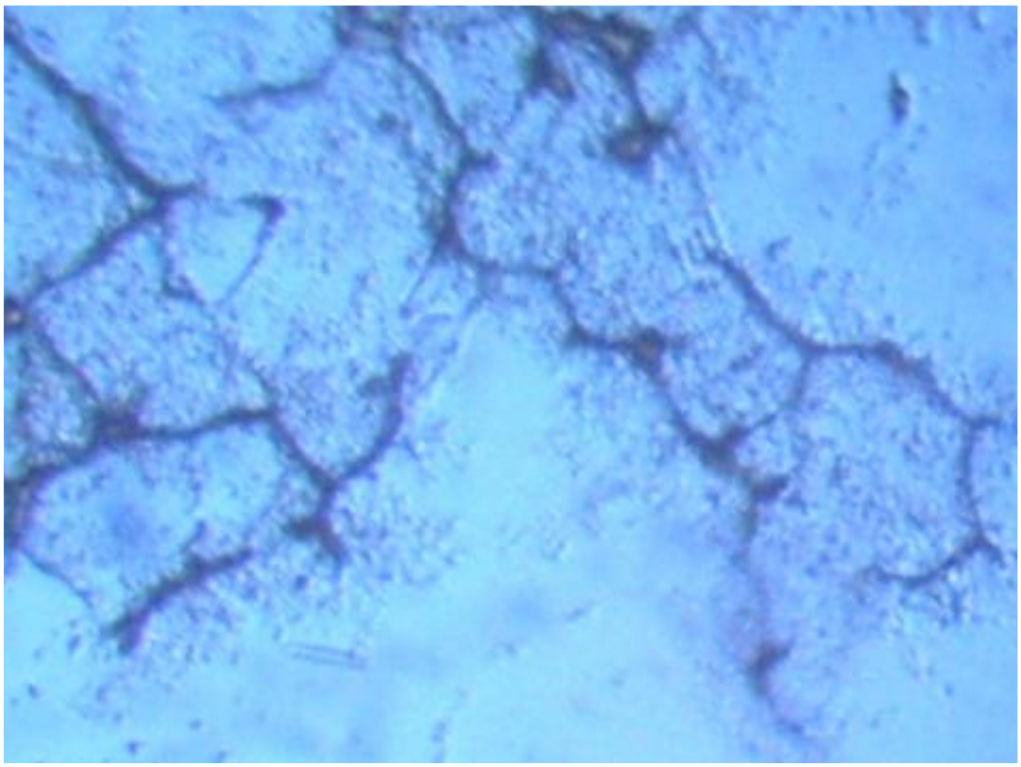
Sample Number 2 : Santa Fe Rain Water

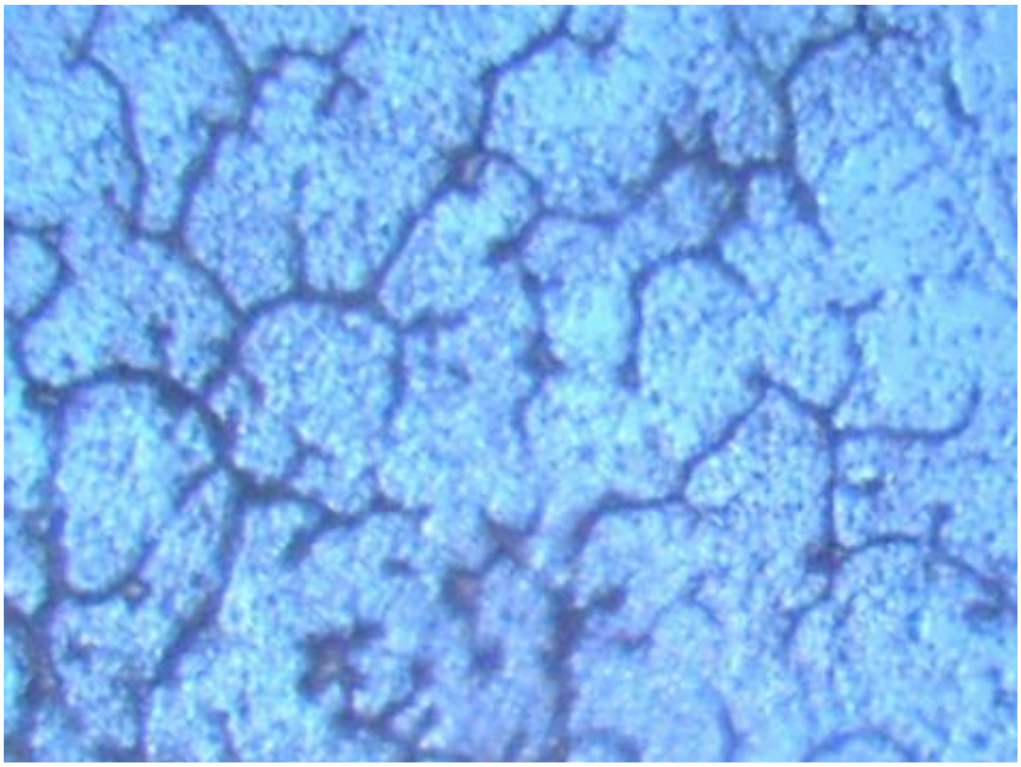
Original Rainwater Collected June 26 2000
In storage approximately 6 weeks.

A fibrous appearing material is now visible within the rainwater samples that were collected on June 26 and June 27 2000 in Santa Fe NM. This is a part of the same water sample analyzed on https://carnicominstitute.org/wp/samples-require-identification/, and in which pine pollen was identified. The photograph above shows the original jar which has remained sealed and in sunlight for the six week period. The jar was shaken to disturb the fibers which appear in suspension in the photograph above.

The microphotographs below show the fibrous-appearing material after it has dried upon a microscope slide. Drying of the material leads to a dendritic type structure as is seen below. The magnification level is insufficient to show that the smallest particles which compose this material are of extremely small size, estimated at one micron in diameter or less.

Both samples of rain water collected in two separate jars show the appearance of this same material, however the sample of June 26 shows a greater amount of the fibrous-appearing material.





Magnification Approx. 480x

Clifford E Carnicom
August 9 2000

SAMPLES REQUIRE IDENTIFICATION (detail 3)

Aug 9, 2000

SAMPLES REQUIRE IDENTIFICATION
Posted by Clifford E Carnicom
August 9 2000

The following sample requires identification. Those with further knowledge in mycology or microbiology are encouraged to respond. If any readers believe that they are able to identify the following materials, please respond with email to info@carnicominstitute.org or post a public message on the message board. Thank you.

The following message was received by email on August 17 2000:

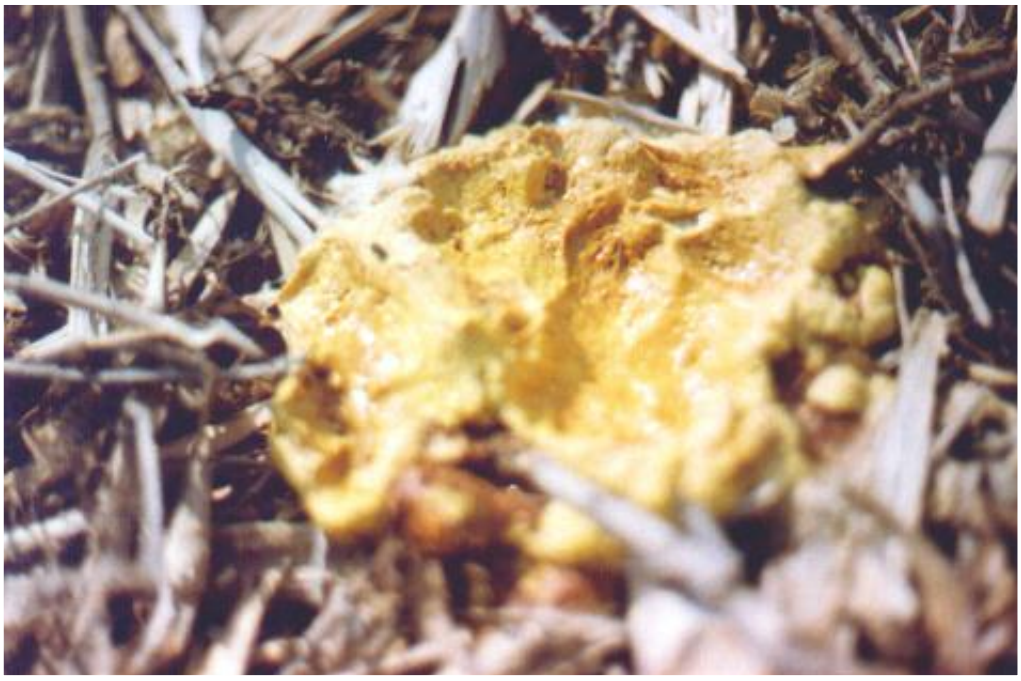
“Clifford,
I believe this is a form of Slime Mold that seems to thrive in bark mulch. I live in New Jersey and have seen this in all my mulched beds for the first time this summer. We did have an unusual amount of rain and lack of sunshine this summer, which may contribute to this mold’s abundance. If you did a web search on “slime mold” there is a lot of info about it. It has been described as looking like dog vomit when it is in the “blooming” stage.

David from NJ”

Sample Number 3 : Albuquerque

The following three photographs show a certain material which has appeared twice within approximately two weeks at essentially the same location (separation of approximately 3 feet in horizontal distance on the ground). This is an area of a backyard that has been mulched with bark. All appearances are that this material has originated from the ground and at this time no association whatsoever is made with aerial activity. Nevertheless, it will he helpful to have this material identified by someone with knowledge. The material is described of being of a ‘chocolate mousse’ texture, and the foam like nature of the material is shown in photograph number 3 of this series when a portion of the material was removed for collection. The Environmental Protection Agency of Albuquerque (apparently city division) has received a portion of this material and thus far apparently has treated the subject of identification in a jestful manner. The three photographs shown in the series below were taken immediately prior to collection. An identical sample of this material appeared approximately two weeks ago at almost the exact same location, however, the collection process was contaminated to where that sample is generally unusable. The most likely explanation at this point appears to be a fungus of some sort, however, I am unfamiliar with any material of this form or that thrives in the desert environment of Albuquerque NM.

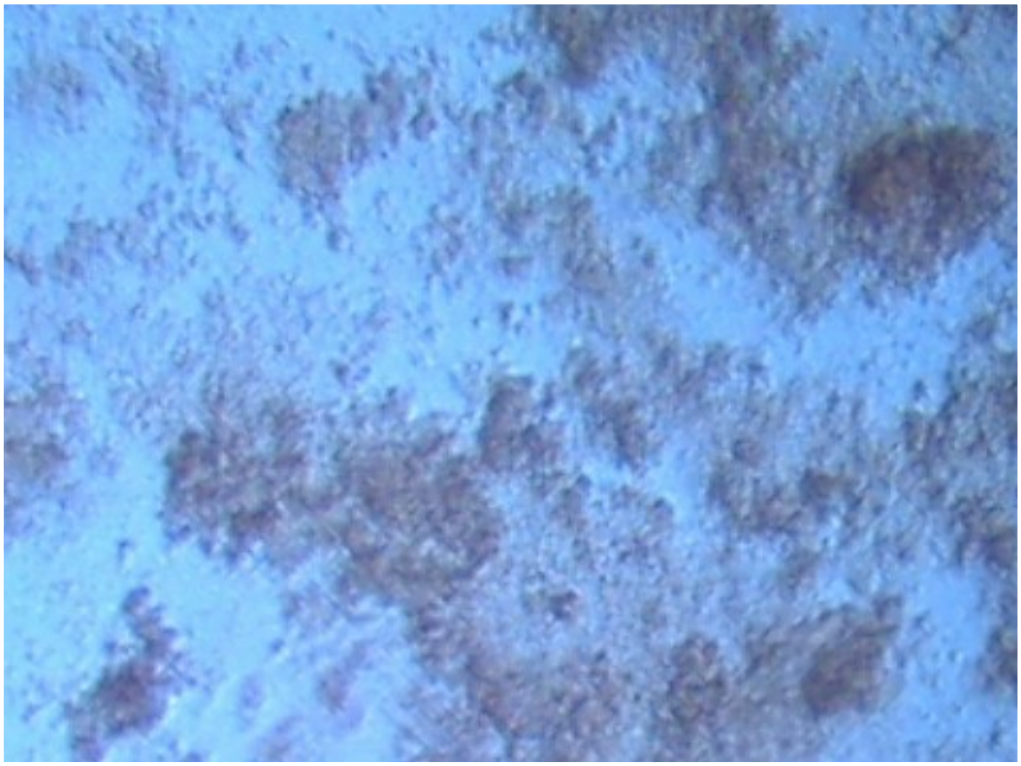
Original material undisturbed at ground level.

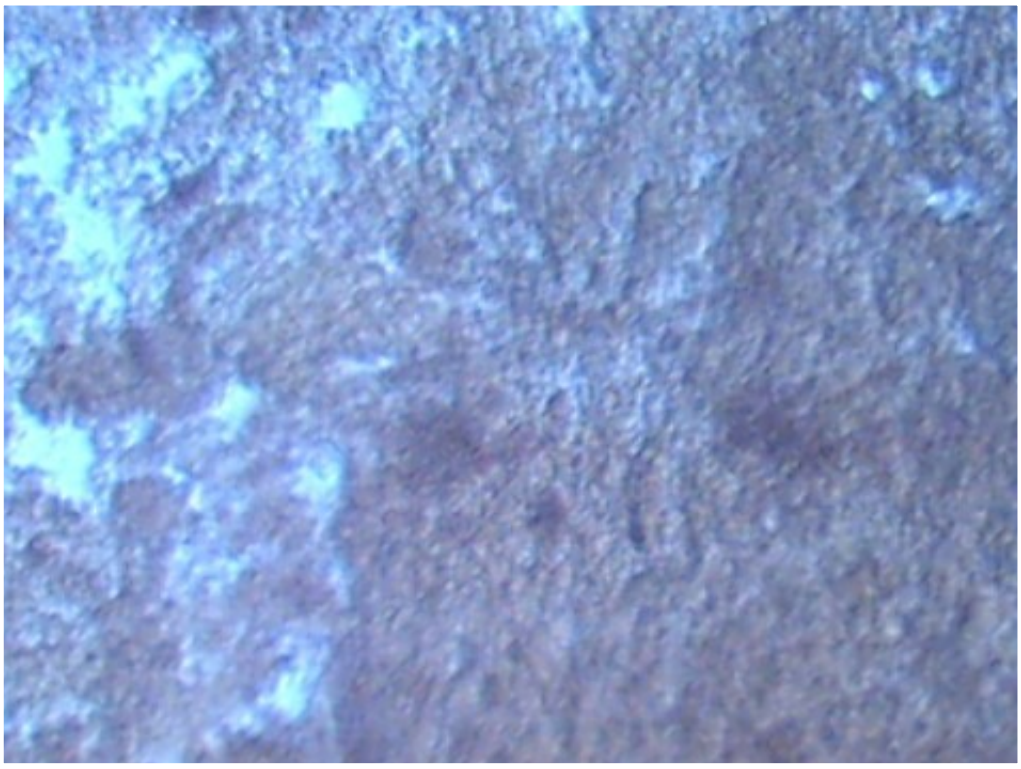


Material after disturbance during collection.

Original material undisturbed at ground level.

The following two microphotographs show the appearance of the material described above at approximately 480x magnification. There is little definite structure to the material at this level of magnification, and the individual cells or components appear to be extremely small, estimated at 1 micron or less.





Magnification approx. 480x.

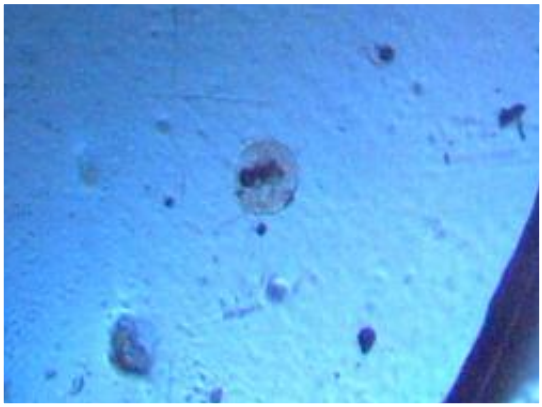
Clifford E Carnicom
August 9 2000

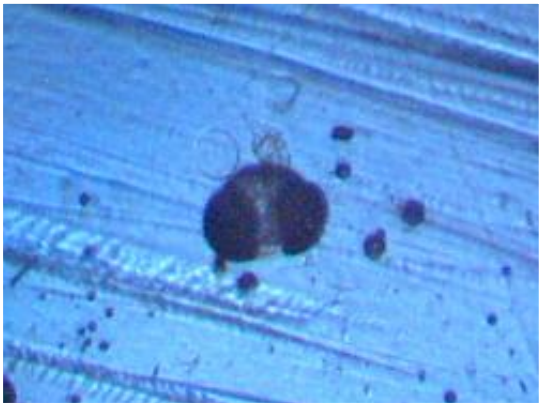
GEL UNDER MICROSCOPE

Aug 16, 2000

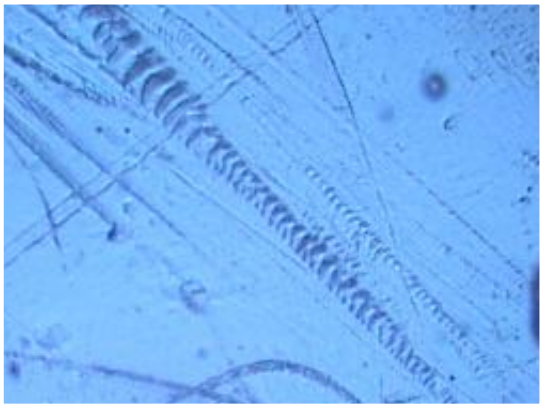
GEL UNDER MICROSCOPE
AUGUST 16 2000

The following presentation relates to and is dependent upon the web page entitled Gel Fallout Reports as available on www.carnicom.com:





Unidentified Cell Type- 45microns / Pine Pollen -50 microns



Ribbed Linear Form of Gel
480x

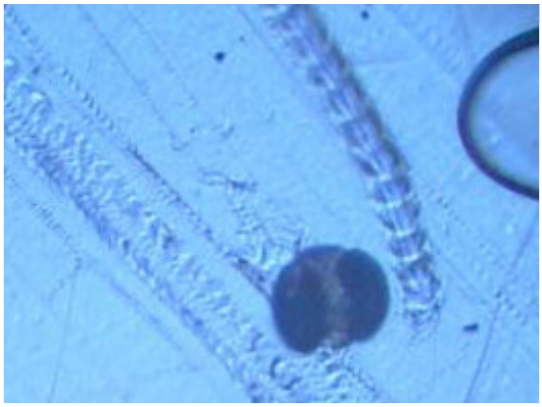
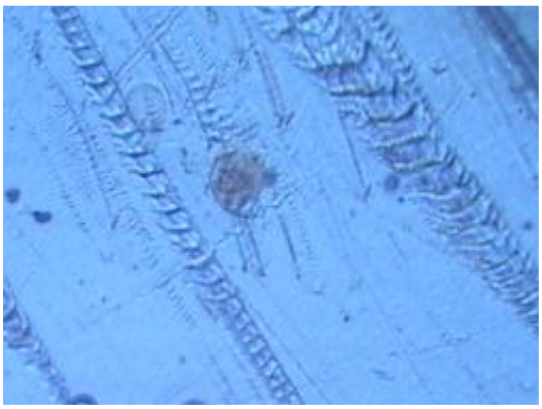
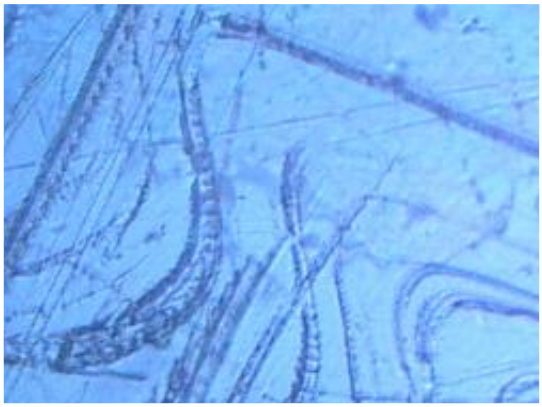
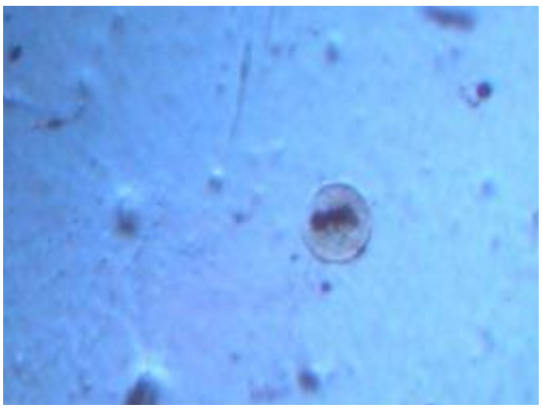
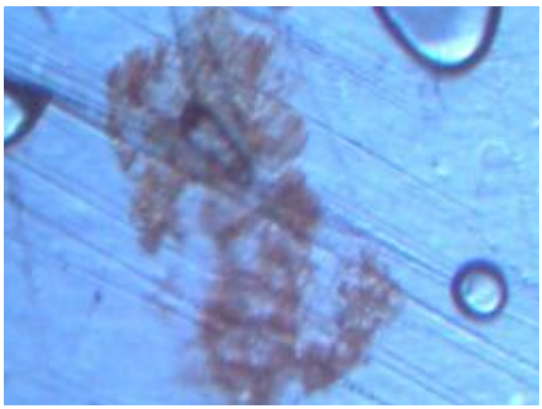
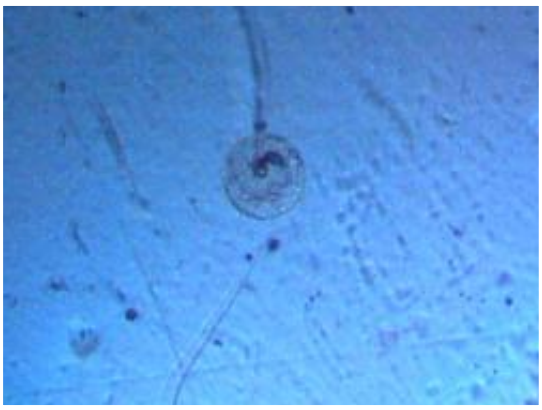
A portion of the gel sample reported on that page has now been observed under the microscope. The material as received appears as a transparent gel which lined the plastic bag in which it was contained. The material available for viewing was limited, and was not in any solid opaque form. The decision was made to use the clear plastic bag itself, lined with the gel material, as the cover slip for the microscope slide. The material is adhesive in nature, and allows for contact with the glass slide. Magnification shown is 480x.

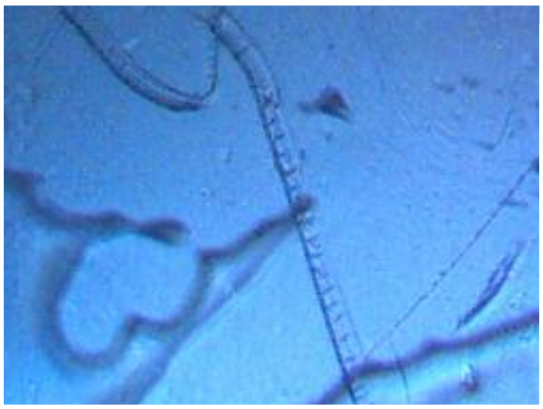
There are three re-occurring forms or objects that occur uniformly across gel samples which were observed within three separate slides that were prepared:

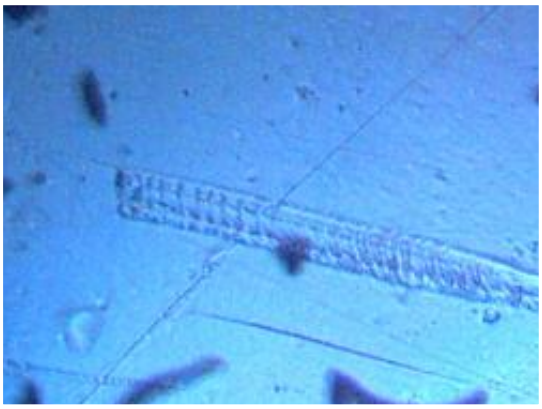
1. Unidentified Circular Cell (approx. 45 microns in diameter)
2. Pine Pollen, identical in appearance to that identified in Santa Fe rainwater analysis June 26-27

2000 (measured previously at approximately 50 microns in diameter)
3. Geometrically, often tapering, ribbed linear forms, apparently produced from the gel material itself as it lines the plastic surface of the plastic bag. (Variable dimension)

Following are additional images taken from this microscope session:





480x

An attempt has been made to seek identification of the particular species of pine pollen that is shown with an inquiry to the University of Arizona. The following reply was received:

“Sorry, pine identification is very difficult even with the critical features showing. The illustrations you have sent cannot be used for identification.”

Within my own investigation of attempting identification of the species shown, the best match occurring thus far is Pinus Elliotii, also known as Jack Pine, Slash Pine, Pitch Pine, Southern Pine. This species of interest grows in the Southeast portion of the United States. This attempt at identification is based upon the following websites: http://scrl.usda.gov/scrl/apmru/imms/pollen/light_micrographs/pinaceae/Pinus%20elliotii2.html and http://www.streetside.com/plants/floridata/ref/p/pinus_e.htm

It is of interest that one of the samples showing pollen grains comes from rainwater in Santa Fe NM, and the other sample comes from a gel fallout sample collected in California in the Sacramento region.

Clifford E Carnicom
August 16 2000

"ORANGE MARKER" QUESTION

Aug 17, 2000

“ORANGE MARKER” QUESTION
AUGUST 17 2000

Over the course of several months, many individuals that participate within the message board attached to www.carnicom.com have become aware of the following unusual event. Under ultra-violet light (i.e., blacklight), there are bright fluorescent orange spots on the face of the observer, and especially so in the nasal area. It is reported commonly that the orange spots are difficult, if not impossible to remove, through normal cleansing. The appearance of these bright orange spots, visible only under ultra-violet radiation, was confirmed by myself several months ago. More recently, one participant, by the name of “Moose”, has recorded that the material can be extracted by a forced squeeze of the skin surrounding the orange spots. The extended curiosity of this particular researcher is appreciated, and I have been able to easily confirm his results. As he states, the fluorescent material extends beneath the surface of the skin layer, and apparently the nasal oils are permeated at depth with the unusual color.

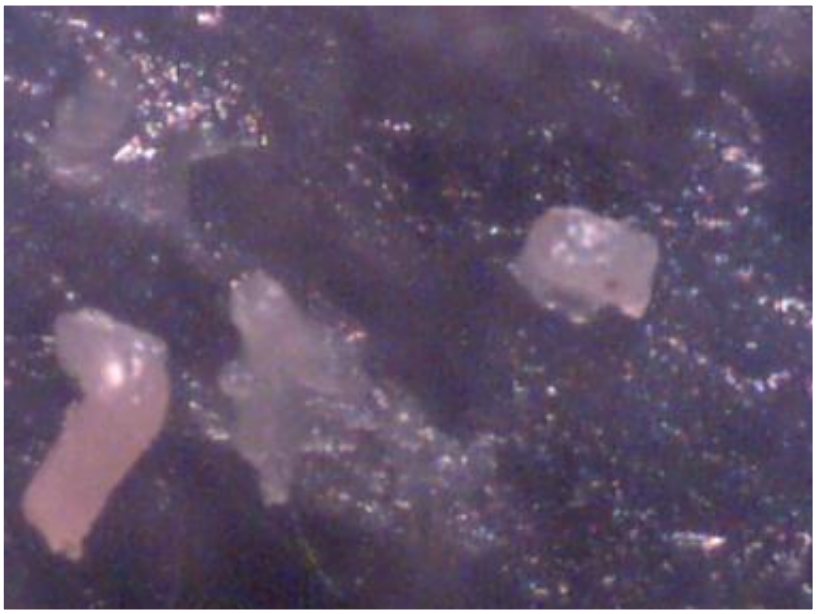
It has been suggested by many of these observers that this unnaturally bright fluorescent orange color may be a biological marker of some sort. I am not aware of any historical record of bright fluorescent orange spots on the facial area of the human species. As such, the question of a biological marker being used without an individual’s knowledge presents itself as a reasonable claim to investigate.

Two micro-photographs of this extracted material will be presented on this page. The materials shown are oils of the nasal area removed as described above. Magnification of the images is at 60x. An image is also presented under the microscope under ultra-violet light. The ultra-violet light available for microscopy is insufficiently bright to reveal the bright orange color of the material, however, the fluorescent nature of it can be seen. The bright orange color is easily visible to the naked eye under ultra-violet light. While it is understood that these micro-photographs may not be especially visually appealing, they are presented in the broader context of the goal aimed at the scientific explanation of the observations recorded.

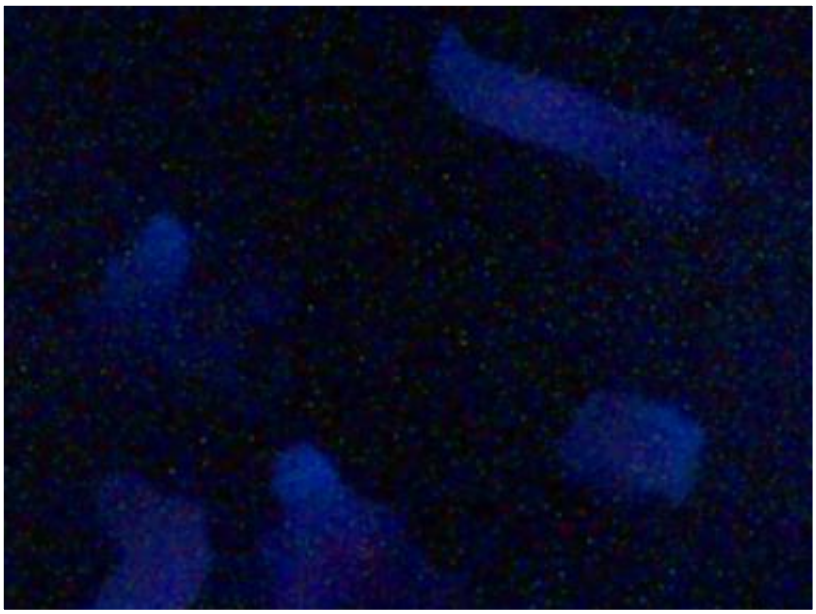
It would be beneficial for anyone with adequate knowledge in the health professions to explain what is being recorded by numerous observers that have had the motivation to investigate this phenomenon. It would also be helpful for anyone with laboratory resources to identify the source of the bright orange color that is commonly being reported and observed. Any comments regarding this research question can be posted publicly on the message board attached to www.carnicom.com, or email can be sent to info@carnicominstitute.org.

The observations described and recorded can be investigated by naked eye observation from anyone with access to ultra-violet light (e.,g. a blacklight). Please also refer to the numerous posts on this subject by many interested parties on the message board attached to www.carnicom.com, especially under the Physical Samples Research forum topic.

The microphotographs referred to above now follow:



Extracted Oils from Nasal Region
Visible Light – 60x
Appears Bright Orange Under Ultra-Violet Light



Extracted Oils from Nasal Region
Ultra Violet Light – 60x
Luminance Sufficient Only to Demonstrate Florescence
Appears Bright Orange To Naked Eye

Clifford E Carnicom
August 17 2000

AN APPROXIMATION

Aug 22, 2000

AN APPROXIMATION
Posted on the message board by Clifford E Carnicom
AUGUST 22 2000

The following is a first pass at an approximation to the logistics of a seed or spray operation, with at least an initial consideration given to the factors of volume of air involved, seeding concentration, particle size, weight and size limitations of aircraft, number of aircraft required, and the amount of time involved. As any errors of significance are found, please do not hesitate to note them and the subsequent revisions and re-considerations can be made. All figures are given in approximate forms. The primary objective here is to determine the feasibility of an operation as commonly is observed across the country, and initial results indicate the logistics of such an operation are quite feasible.

1. Assume a volume of the sky is to be seeded with micron size hygroscopic (water-seeking) nuclei. This example picks a volume of 200 miles long by 200 miles wide by 1 mile thick. Lets' also assume the job needs to be done in a couple of hours.

2. The volume of air involved is then 200*5280*200*5280*5280 = 5.8879E15 cu.ft.

3. Assume that we wish to seed this volume at a concentration of 30 particles per liter. Vincent Schaefer, in references to early cloud seeding projects, mentions an introductory range of 10-50 particles per liter are desirable. Let us use the average of this range.

4. So the number of particles that need to be introduced is 5.8879E15 cu.ft. * (28.3168 liters/cu.ft) * (30 particles/liter) = 5.00E18 particles at the micron size.

5. Let's assume a plane travels at 500mph (733ft./sec.) Next question is how wide a swath of air would a plane have to seed to finish the job in 2 hours. This can be set up as:

5.8879E15cu.ft / (n * X * (733ft./sec) * 5280ft.) = 7200 sec. (2hours)

where n would be the number of aircraft, and X the width of seeding by an individual aircraft.

6. X here solves at 211295ft, or approx. 40 miles wide, assuming n=1 for the time being. So if one aircraft could seed an area 40 miles wide, the job would be done with one aircraft. But as this does not seem reasonable, and also does not fit the observations which are commonly reported, let's assume an equivalent configuration of 8 aircraft seeding spaced 5 miles apart horizontally . Or 10 aircraft at 4 miles apart horizontally, etc., could be used.
The set of 8 aircraft will satisfy reasonable conditions of conformance to observations for the time being.

7. At this point we have a configuration which will seed the volume of atmosphere under consideration by a reasonable number of aircraft in a specified time at a certain concentration of a certain size.

8. We can verify the number of particles being delivered by each aircraft by the following:

9. Each plane needs to seed : (211295 ft. / 8 aircraft) * 733ft. * 5280ft./sec. = 1.022E11 cu.ft./sec with (5.00E18 particles / 8 aircraft) = 6.25E17 particles per aircraft and 6.25E17 particles / 7200sec. = 8.68E13 particles/sec. per aircraft.

10. And for the final concentration of seeding, (8.68E13 particles/sec.) / (1.022E11cu.ft./sec) = 850 particles / cu. ft. / sec. and 850 particles/cu.ft./sec with 28.32 liters/cu.ft = 30 particles / liter as is desired.

11. Steps 8, 9, 10 only serve to verify the seeding concentration is in order.

12. Now we need to give consideration to the weight of the material being carried, and whether it also remains feasible. If we have a system that is capable of transforming solid material to micron size seeding material, we will need: 5.00E18 particles / (1E18 particles/cu.meter) = 5.00 cu. meters.

13. With 8 aircraft, this is 5.00 cu. meters / 8 aircraft = .625 cu. meters /aircraft. or .625 cu. meters * (35.31 cu. ft. /cu. meter) = 22.1 cu. ft. of material per plane. This is equal to a block of material 2.81 ft. on a side. Feasible for size.

14. For weight, let's pick the element of barium to work with. Reasons for this choice are under consideration and will be discussed further at a later time. The density of barium is 3.5gm/cu.cm or 3500kg/cu.meter. So in our example, .625cu.meter * (3500kg/cu.meter) = 2188 kg. Since 1 kg. = 2.2lbs, the weight in a familiar system is 4812 lbs. of barium.

15. And now since Barium occurs naturally in a couple of forms, and since I currently have a greater interest in barium carbonate, and since the elemental barium is 70% of the atomic weight of barium carbonate, lets jump the weight of material required to 4812 / .7 = 6875 lbs. of barium carbonate or, 3.44 tons per plane. Since aircraft easily are carrying 150 folks at 160lbs/folk = 24000lbs = 12 tons, weight requirements also do not seem to be a major problem.

In summary, an operation that seeds the sky with micron sized hygroscopic (water-seeking) nuclei involving 8 aircraft within a 200 mile by 200 mile by 1 mile high volume of our skies in a 2 hour period at a concentration of 30 particles /liter seems quite feasible, and is in accordance with repeated observations of same over the past 1 1/2 years across the country. Although not intended at this stage to be an exhaustive study, reasonable consideration has been given to constraints of air volume, concentration levels, particle size, weight and size limitations of aircraft, number of aircraft employed, and the amount of time required to conduct the operation. Any significant errors discovered will be corrected as this scenario is reviewed by the readership.

Clifford E Carnicom
August 22 2000

Note: The following exchange between a user by the name of Skylooker and myself subsequently occurred on the message board on August 23 2000, and may be useful in regards to the statements above:

"Are you on the level???????

"You can't squeeze rain from a cirrus cloud cover", especially if it is an artificial,water,absorbent,expanding,aerosol cloud cover. Seeding is most effective within the cummulus cloud context and is predisposed towards precipitation, not towards the opposite end of the

spectrum.>>>>>>>CHIEF SKYLOOKER”

Re: An Approximation

Skylooker,

I appreciate the distinction, and this may be an issue of semantics more than reality. There is no mention of precipitation or the intent of creating it within this scenario, and all indications are that exactly the opposite phenomenon of extraction of moisture is taking place. Hence the repeated emphasis upon the use of hygroscopic. The term seeding is used only in the generic sense of a “source or germ” – for a catalytic process. Extraction and diverting of moisture may well be germane, but there is no assumption or mention of an intent to induce immediate precipitation in the model above. I will assume that the point and question at this time is one of semantics.. regards,

Clifford E Carnicom

USAF LT. COL. GIBSON EXTENDS LIE TO REP. FAZIO

Aug 23, 2000

USAF LT. COL. GIBSON EXTENDS LIE TO REP. FAZIO

PETER A. DeFAZIO
4th District, Oregon

RESOURCES COMMITTEE
Subcommittee
FISHERIES CONSERVATION, WILDLIFE AND OCEANS

TRANSPORTATION AND INFRASTRUCTURE
Subcommittee
AVIATION
COAST GUARD AND MARITIME, Ranking

PLEASE RESPOND TO:
☐ 2134 Rayburn House Office Bldg. Washington, DC 20515-3704 (202) 225-6416
☒ 151 West 7th Ave. #420 Eugene, OR 97401-2669 (541) 465-6732 1-800-944-9603
☐ P.O. Box 1167 Coos Bay, OR 97420-0311 (541) 269-2609
☐ P.O. Box 2480 Roseburg, OR 97470-0611 (541) 440-3523
☐ Peter.DeFazio@mail.house.gov

Congress of the United States
House of Representatives
September 14, 2000

[redacted]

I have enclosed copies of the information I received in response to my inquiry on your behalf about "chemtrails."

Sincerely,

PETER DeFAZIO
Member of Congress

PAD:PJW
Enclosures

DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Secretary

The Honorable Peter DeFazio
United States Representative
151 West 7th Ave. #400
Eugene OR 97401-2649

23 AUG 2000

Dear Mr. DeFazio

This responds to your inquiry on behalf of your constituent, [redacted] who is concerned about "chemtrails" over the Portland area.

The term "chemtrail" is a hoax that began circulating approximately three years ago which asserts the government is involved in a joint federal program of covert spraying of the public. The "chemtrails" are most often described as "unusual contrails or contrail patterns" seen coming from military and civilian aircraft. The "chemtrail" hoax has been investigated and refuted by many established and accredited universities, scientific organizations, and major media publications.

There has been an increase in the number of contrails observed due to the significant civil aviation growth in the past decade, and the patterns observed are directly correlated to the grid pattern formed by aircraft flying north/south and east/west routes designated by the Federal Aviation Administration (FAA). The FAA manages the National Airspace System (NAS) and controls both civilian and military aircraft using the NAS. The National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) are the agencies charged with conducting atmospheric and climate experiments and are investigating the effects of contrail formation and dissipation on the climate.

Aircraft and their engines can produce a variety of condensation patterns ("contrails"), exhaust plumes, and vapor trails. Furthermore, the Air Force performs missions during which, exhaust is released into the atmosphere. The exhaust emissions produced by aircraft and space launch vehicles can produce contrails that look very similar to clouds which can last for only a few seconds or as long as several hours. Vapor trails are formed only under certain atmospheric conditions and create a visible atmospheric wake similar to a boat propeller in water and usually dissipate very rapidly.

Contrails consist of ice particles that form or nucleate around the small soot or aerosol particles in the exhaust gases. The contrails are formed when the relative humidity increases because of the mixing of warm and moist exhaust gas with colder and less humid ambient air of the atmosphere. Contrails become visible roughly about a wingspan distance behind the aircraft. Contrails can be formed by propeller or jet turbine powered aircraft.

The contrails formed by the exhaust at high altitude are typically white and very similar to cirrus clouds. As the exhaust gases expand and mix with the atmosphere, the contrail diffuses and spreads. At sunsets, these contrails can be visibly eye-catching and striking as they reflect the blue, yellow, and red spectrum of the reflected sunlight. Due to horizontal wind shear and a minimum

vertical wind component, contrails tend to become wider and remain thin. It is very difficult to distinguish aged contrails from cirrus clouds.

A different type of contrail or condensation trail is caused when a wing surface or winglet causes a cavitation of air in very humid conditions. This results in a unique vapor trail that is not formed due to exhaust gases

Aerial spraying for pest or weed control and fire suppression is the only Air Force activities that involve aircraft intentionally spraying chemical compounds (insecticides, herbicides, fire retardants, oil dispersants). The only unit in the Air Force capable of aerial spray operations to control disease-carrying pests and insects is the Air Force Reserve Command's (AFRC) 910th Airlift Wing, Youngstown-Warren Air Reserve Station, Ohio. The aerial spray mission uses four specially configured C-130 Hercules turboprop aircraft. Aerial spraying enables large parcels of land or water to be treated safely, quickly, accurately, and cheaply. This is the only fixed wing aerial-spray capability in the Department of Defense. Although the Department of Defense initiates most of the unit's missions, its services are also requested by local, state, and other federal agencies and coordinated with the Center for Disease Control. The most common missions flown are for mosquito, sand flea and weed control. Several states have also requested support to combat grasshoppers and locusts.

For a number of years commercial companies have been involved in cloud seeding and fire suppression measures. Cloud seeding requires the release of chemicals in the atmosphere in an effort to have water crystals attach themselves and become heavy enough to produce rain. The Air Force does not have a cloud seeding capability. The Air Force's policy is to observe and forecast the weather to support military operations. The Air Force is not conducting any weather modification experiments or programs and has no plans to do so in the future.

In short, there is no such thing as a "chemtrail" -- the actual contrails are safe and are a natural phenomenon. They pose no health hazard of any kind. We thank you for this opportunity to address your concerns and trust you find this information helpful.

Sincerely

MICHAEL K. GIBSON, Lt Col, USAF
Deputy Chief, Congressional Inquiry Division
Office of Legislative Liaison

Sep

RAINFALL pH TEST REPORTS

Sep 1, 2000

RAINFALL
pH TEST REPORTS
Measurements taken by involved citizens across the country.
Posted by Clifford E Carnicom
September 2000

1990 Difference Statistics:	**1999 Difference Statistics:**
Number of Observations: 87	**Number of Observations: 87**
Average of Differences : 1.41	**Average of Differences : 1.37**
Sample Standard Deviation of Differences: 0.72	**Sample Standard Deviation of Differences: 0.72**
t Statistic: 18.3	**t Statistic: 17.7**
Significance Level: 99.999%+	**Significance Level: 99.999%+**

Wilcoxon's Signed Rank Non-Parametric Test also indicates the pH differences from 2000 with respect to 1999 data to be significant at the 99.9999%+ level. (n=24)

Significant differences from the baseline indicate significant changes in atmospheric chemistry that have occurred since the baseline values were recorded. Significant positive differences indicate a much higher presence of hydroxide ions (OH-) than is expected. Significant differences, as found, warrant a formal investigation into the magnitude and origin of recent changes in atmospheric chemistry.

Date (2000)	N	Location	1990 pH	12000 9Measured pH 99p	**1990 Difference**	1999 Difference
Jun 26	1	NM	5.1	56.6.0	1.5	1.6
Jun 27						

HALO MEASUREMENTS: INDEX OF REFRACTION (Edited May 29 2013)

Sep 1, 2000

HALO MEASUREMENTS:
INDEX OF REFRACTION
Clifford E Carnicom
September 1 2000
Edited May 24 2013
Edited May 29 2013
(See Below)

Halo Measurements – Index of Refraction

A method has been developed to determine the index of refraction of the materials in the sky that produce the halos that are now commonly observed as a direct result of aircraft activity in our skies. Correspondingly, the angle of the halo can also be determined from this method. The significance of this method is that the chemical and physical nature of ice, as well as historic measurements, establish what the index of refraction and the halo angular measurement are expected to be. If measurements indicate a deviation from that result, it informs us that the materials forming the aircraft-generated halos, cirrus and cirro-stratus cloud decks are no longer composed solely of ice as is often claimed.

The measurements do indicate such a deviation. Initial halo measurements suggest that the hexagonal prisms of uniform size and associated cirrus and cirro-stratus cloud decks are not composed solely of ice as is usually claimed. These measurements and results are preliminary, and will be either refuted or confirmed by further observations in the future.

The method is as follows:

The index of refraction can be determined by:

n = sin ½ (A+D) / sin ½ A

where
n = index of refraction
D = minimum angle of deviation of a prism
A = refracting angle of a prism

In the case of ice, n = 1.310 in the middle of the visible light spectrum. In the case of water, n = 1.330. In the case of a hexagonal prism, which most often is the type of prism that forms the now commonly observed halos, A = 60 degrees. (360deg. / 6)

The angle D can then be solved for as:

D = 2 [arcsin(nsin1/2A)]-A

or D = 21deg. 50min. 30”sec.

This value agrees extraordinarily well with observed historic measurements of the halo phenomenon. In fact, halo measurements are sometimes used as a form of calibration for

angular measurements. Two reliable sources confirm this expected value:

1. Vincent Schaefer, inventor of cloud seeding in 1946, states the expected measurement as 21deg. 51min.

2. M. Minnaert, The Nature of Light and Colour in the Open Air, states the best measurements as being 21deg. 50min.

These two sources, as well as their combined average, agree with all expected results of both physics and chemistry.

A method to measure the halo angle videogrammetrically has been established. This method is as follows:

1. The equivalent focal length of the video camera used has been determined by field calibration at 167mm producing a captured image size of 105mm(10.5cm) along the horizontal (long) axis. The expected error (sample standard deviation) of this focal length determination is +/- 3mm.

2. The angle of view of the captured image along the long axis is therefore: Angle of view = 2arctan(5.25cm/16.70cm) = 34.9033deg.

3. Captured images were doubled to size at 21.00cm along the x axis. Measurements were taken from 3 separate captured images from the inside of the visible ring to the center of the sun. Images were taken in a negative view to filter sunlight and provide a more definite point of measurement. Measurements were 127mm, 128mm, and 129mm respectively. The average of these measurements is 128mm and the sample standard deviation is 0.8mm.

**4. The angular view of the observed halo is therefore (12.80cm/21.00cmm) 34.9033deg = 21deg. 16min. which deviates from the expected value of 21deg. 50min. This is the first indication by this method that suggests the refractive material of the prisms that produce the halos is not commensurate with the expected value associated with ice. The index of refraction associated with this
angular measurement is 1.302.**

5. It is now equally important to evaluate the expected error of the method which has been developed.

6. The angle of view of the halo, from the videogrammetric method developed is: D = (d / 21cm) * 2arctan(5.25/f) where d = the measured axis from the center of the sun to the inside ring of the halo as imaged on the captured video still. f = the equivalent calibrated focal length of the camera in cm.

**7. Applying the law of propagation of variances, the
expected error in A is:
deltaD = sqr[((2arctan(5.25cm/f))/21cm)^2 * deltad^2 + ((2(5.25)d)/21f(1+(5.25^2/f^2)))^2 * deltaf^2]**

where

deltaD = the expected error in the angle of the halo as determined by this method.

deltad = the expected error in the image measurement
(.08cm)
deltaf = the expected error in the equivalent calibrated
focal length (3mm)

This leads to an expected error in the angle of the measured halo at 0deg 10min.

**8. A statistical test can then be applied to these results to determine if the measured halo departs significantly from the results expected by "normal" atmospheric
chemistry and physics.**

9. The t statistic can be computed as:

**t = (sqr(n) (21deg.50min – 21deg 16min)) / .167deg
or
t = 3.39**

With a sample size of 3 measurements, the results are statistically significant at the 90% level.

The methods developed and described within this article indicate that current atmospheric conditions, with regard to atmospheric halos and their relation to the index of refraction of the physical materials in the skies, are potentially statistically significantly different than the expected norms as determined both by historical measurement and from the expected results of both chemical and physical properties of the atmosphere. This study provides a further basis for direct analysis and sampling of the aerosol particles that are repeatedly observed and directly associated with unidentified aircraft operations across the country since early 1999. These results add to the basis for investigation established earlier by relative humidity studies in the Santa Fe, NM region.

Any errors in this study will be corrected if and as they are discovered.

**Clifford E Carnicom
September 1 2000**

Edit May 29 2013:

I have revisited the computations and method of this paper in a more thorough sense with consideration of the comments below. My conclusions from that review are as follows:

1. The method outlined above remains as a viable approach to the remote determination of significant deviations in the index of refraction of ice crystal halo formations.

2. One physical error and one numerical error existed in my original computations ; I also find two differences (one physical, one in error analysis approach) in the numerical values within the method outlined below by the reviewer. The net effect of all errors and approaches considered is a statistical wash, and no direct conclusions can be drawn in either case. I am in complete agreement that the index of refraction for the red portion of the spectrum is more appropriate to use vs. the middle of the visible spectrum and I record this as an error of generality on my part using textbook models. My numerical error was a lack of radian to degree conversion during one portion of the error analysis for the problem.

My contest with the reviewer approach below will include a non-referenced specific wavelength-index of refraction combination and a lack of use of the law of propagation of variances (squared terms) in the error analysis.

3. The simple remedy to the above situation is to simply collect more data and measurements, as is mentioned within the edit of May 24 2013 by CEC. Continuation of discussion on this limited data set will be equivalently limited at this point. Acquisition of additional data is available to all parties and, if circumstances permit, I may repeat the methods here in the future.

My revisions to this paper would now include the following adjustments:

I will use an index of refraction for the red portion of the spectrum as 1.306 *vs. 1.3072 per the reviewer. My source for this is : The 22^{o} Halo from the Physics and Astronomy Division of Georgia State University. This wll lead to a theoretical value of the halo angle as 21 deg 32.2 min. vs. the photogrametrically measured value of 21 deg 16 min. leading to a deviation of 16 min (vs. an original deviation computed as 34 min. Numerous sources, including the one above, list a suitable value for the red portion of the visible spectrum of 660 nm (+/- 4nm).

The corrected error analysis from my side leads to a standard error of 24 min (my previous value was 10 min of arc) of arc vs the differential approach of 29.5 min from the reviewer below. The z-score associated with my value will be .666 leading to a probability significance of 49%. This value is statistically degraded compared to the original result and it leads to the statistical wash mentioned above.

Additional work on this particular data set will be of insufficient academic and physical interest. My appreciation is extended to the review of the article and with the advances in camera technology, I hope that others will collect additional data and pursue the method. The original deviation as determined remains of interest and of potential significance; additional data trials will be required to determine any statistical conclusions.

Sincerly,

Clifford E Carnicom
May 29 2013

_____
Edit May 24 2013:

The following comments have been received on May 20, 2013 and they are presented to the public through this site as an adjunct to the original paper. My time for reviewing this paper from 2001 is limited, and my response will be brief at this time and will follow the submission presented below: CEC

* * * * *

“Dear Mr Carnicom,

I’m currently reading your article “HALO MEASUREMENTS: INDEX OF REFRACTION” at http://www.carnicominstitute.org/articles/halo1.htm. I greatly appreciate your work, but the paper contains some important errors.

1. The angular dimensions of a 22-deg. halo are calculated with A = 360 deg/6 (hexagonal prism) and n = 1.31.

D = 2 [arcsin(nsin1/2A)]-A or D = 21deg. 50min. 30”sec.

The equations are correct, but the result is valid only for the middle of the visible spectrum. Later the distance at the photos between the center of the sun and inner part of halo ring is measured. This means that n refraction index should be changed to 1.3072 (the middle of red part of the visible spectrum). The D angle now becomes 21 deg. 37 min. 37.77 sec.

2. There should be a mistake in the calculations of the absolute error in D = (d / 21cm) * 2arctan(5.25/f) with errors of deltad = 0.08 cm and deltaf = 0.3 cm**.** We’ll use the Lagrange formula for obtaining this result:

Partial derivatives (D in degrees):

a) for d: f(d) = d/21*2*arctg(5.25/16.7) = 1.662061807*d. The partial derivative is 1.662061807 and the part of absolute error 1.662061807*0.08 = 0.1329649446 (degrees).
b) for f: f(f) = 12.8/21*2*arctg(5.25/f) = 1.219047619*arctg(5.25/f). The partial derivative in radians is -20479954636/(3199992912*f^2+88199804637) (computed with http://www.numberempire.com/). Substituting f = 16.7 gives us -0.0208842 (the absolute value is 0.0208842) and the absolute error = 0.0208842*0.3 = 6.26526e-3. In degrees this is 0.3589729556.

Total error is 0.1329649446+0.3589729556 = 0.4919379 (degrees) = 0 deg. 29 min. 30.98 sec.

The real value of D is 21 deg. 16 min. +- 0 deg. 29 min. 30.98 sec. The precomputed value of 21 deg. 37 min. 37.77 sec is within the error margin.

3. There’s no account for lens aberration and low resolution the photographs.

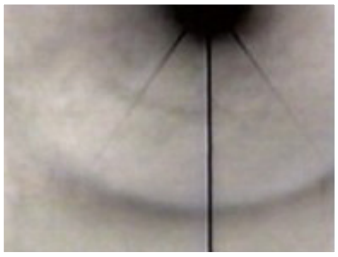
These errors can significantly alter the final result.

Sorry for my bad English.

Looking forward to hearing from you,"
[Name withheld pending permission – CEC]

I may visit this paper again as time permits. In the interim, however, my brief response is as follows:

It seems to me that the conclusions presented immediately above are entirely sensible and correct, and that the primary conclusion of the original paper is indeed false. It is of interest that the original image that the work was based on apparently is not within this original document. I have found one image that may have been the inspiration for the project to begin with:



This particular image is of such low resolution is that it only can serve as a reference thumbnail for the project design. Looking back at this image, paper, and memories from more than a decade ago, it strikes me that the measurement was taken from the inside of the ring since that is where a sharp delineation in the ring begins. This, from the analysis above, may simply be inadequate and mispresentative of the spectrum. I will assume that this is the case at this point. The primary value of this paper, therefore, would seem to be the offering of a potential method to remotely investigate the composition of crystalline halos in the atmosphere. This value may still exist, but the topic will need to be revisited. My suggestion at this point for those interested in the method and case is to acquire new imagery of much higher resolution, as it should be readily available to us with improved cameras. The methods can then be reapplied to determine if it is viable or not. Error analysis will remain as a significant consideration, as it is expressed in the original paper as well as by the current reviewer. It is quite possible that even if such atmospheric differences exist that the angular difference detections could be on the order of seconds as opposed to minutes of arc. Differences of interest may or may not be detectable; the problem will have to be reexamined. Thirty minutes of arc is a relatively gross measurement to begin with, and I am sure that this may be one of the clues that the original measurement simply may be flawed with respect to the reference point. I will keep it as a prospect to acquire new imagery of higher resolution over future months and years, and see if the project might be revisited. Others, as always, are invited to pursue the problem themselves. At the current time I am involved in a rather complex project with significant health implications and my time for research and writing remains highly limited. In the interim, my many thanks to the individual that took the time to visit the paper a decade after its presentation. I can only hope and assume that this process of more extended review of the research will eventually take place; this is as it should be and as it needs to be. Pursuit of truth is independent of any particular researcher; my hope is that more of us will choose to become involved in that path as we understand the implications of the issues before us. Thanks again,

Clifford E Carnicom
May 24 2013

A CASE FOR TESTING

Sep 3, 2000

A CASE FOR TESTING
Clifford E Carnicom
September 3 2000

A case for the environmental testing of barium and barium compounds now exists. This case is developed from the following sequences of events and reasoning:

1. Meteorological study.
2. An anonymous source of information stated to be reliable.
3. Chemistry analysis.
4. pH testing of rainwaters.
5. Physical sample collected in association with aircraft activity.
6. Testing of chemical hypothesis.
7. Solubility and equilibrium considerations.
8. Environmental testing : water, air, soil.

Each of these topics will now be discussed in greater detail.

1. Meteorological Study:

A reasonable case can be made, based upon meteorological considerations and observations, that an aerosol particle, especially of a salt nature, is regularly being introduced into the atmosphere as a direct result of the unidentified aircraft operations under consideration. The premise for this case begins with the meteorological studies of relative humidity at flight altitude begun in August of 1999 in Santa Fe, NM and continuing through the middle of the current year.
These studies show the repeated and regular appearance of cirrus, cirro-stratus and cirro-cumulus cloud deck formations as a direct result of aircraft operations under conditions of extremely low relative humidity (avg. 30%). Historic meteorological observations coupled with reliable sources demonstrate that such cloud formations are not to be expected, except under the most unusual of conditions, unless the relative humidity (with respect to water, per convention and standard measurement) is greater than 70%. This contradiction is of the greatest significance, and the rapid, recent and extreme variation in environmental conditions and activity must be both explained and accounted for. Observations, on a continuous and sustained basis since the beginning of 1999, show aircraft as the source of the materials, having been clearly photographed, observed, and documented leaving persistent and continuous trails of an unidentified substance which transforms itself into the “cloud” formations under the stated conditions

of extreme low relative humidity. The reliable sources referred to include Vincent Schaefer, inventor of cloud seeding in 1946, the United States Naval Postgraduate School in Monterey, CA, the contemporary textbook “Meteorology”, by Joseph M. Moran, and a recent study by both NOAA and NASA. Please refer to the relative humidity studies elsewhere on this site for further information on this topic.

In seeking an explanation for this variation, it is helpful to begin the consideration with the “unusual case” of cloud formation at relative humidity levels as low as 70%. It is stated by Schaefer and others that the most likely occurrence of such cloud formations is best exemplified along the coastline, where microscopic salt particles, or cloud nuclei, frequently exist. Such water-seeking nuclei are referred to as hygroscopic. Therefore, it is observed that the introduction of hygroscopic nuclei can alter the process of cloud formation to some degree, although it is seldom to never expected to be effective under relative humidity levels less than 70%. Most cloud formation, of any type, is the result of nuclei processes.

Next, it is beneficial to consider the models for cloud formation, especially cirrus cloud formation, to identify the most prominent variables that should be considered. Once such model is presented by Paul J. Demott, at the Department of Atmospheric Science at Colorado State University. This model deals specifically with laboratory studies of cirrus cloud processes. Although any laboratory model is by necessity a simplification of nature, it remains useful. The primary variables of the model are temperature, relative humidity, and aerosol size. Special attention should be given to this last variable mentioned.

Analysis of this model also results in an important conclusion: The smaller the size of the nuclei in the atmosphere , the greater the rate of cirrus cloud formation.

The objective at this stage of the analysis is to identify what process can be responsible for altering the tenets of conventional meteorology, and what will provide for repeated cloud formations under conditions of extremely low relative humidity. The suggestions given as a result of the above analysis are twofold: First, it is expected and anticipated that the material in question delivered from the aircraft is likely of a salt nature, and second, that it is of an extremely small size.

It is also observed that precipitation seldom accompanies the cirrus cloud formations that result from the aircraft delivery, and yet it is a fact that the “clouds” do form. Therefore, the expectation at this stage is that we are seeking a salt

material, presumed to be extremely small (.e.g., micron, or sub-micron level quite possible), and that it possesses strong dessicating, or drying, properties. This latter quality would explain the apparent contradiction between the frequent appearance of “clouds” and the associated drought that we find the country to be currently undergoing. In short, the introduction of massive amounts of hygroscopic aerosols is suspected as being one of the major constituents of this program.

2. An anonymous source of information stated to be reliable:

Information has been offered to the public by an anonymous source in the earlier portion of the year 2000. This source is simply stated to be reliable to the highest order, and it is stated that the identity of the source must be protected. This source states that the material being delivered by aircraft is composed of barium salts, and that it is being used in connection with advanced radar studies. No further information on this aspect of the research is available at this time.

3. Chemistry analysis:

If we postulate that the source of information referenced above is indeed reliable, it is worthwhile to investigate the implications of combining the information that has been presented. It is at least noteworthy to recognize that two independent sources each make the case of a salt material being used.

The next stage of this analysis requires an investigation into barium and barium compounds. I am not a chemist by profession, but the following information has been acquired:

Barium occurs naturally in two primary forms, barium carbonate (BaCo3) and barium sulfate (BaSO4). The material is mined from the earth in these forms. Barium carbonate is commonly known as witherite, and significant deposits occur in both the United States and China. There are many other compounds of barium that can be developed chemically, but this analysis will start with the simplest case of that which can be mined in abundance and economically from the earth. Of these two forms of naturally occurring barium, greater attention has been devoted to barium carbonate for the following reasons:

1. If barium carbonate is subjected to significant heat, the combustion process results in the production of barium oxide and carbon dioxide. It should be mentioned that in all attempts to determine the actual source of emissions from the aircraft, even under telephoto conditions, the engines have never been eliminated from consideration and remain suspect. The fact that

other delivery mechanisms have been observed and recorded does nothing to interfere with this claim.

2. Barium oxide is a whitish powder.

3. Barium oxide absorbs water, and is used as a dessicant for that reason.

4. Barium oxide induces respiratory distress, especially bronchitis.

5. Barium sulfate does not possess these same properties, and is consequently of less interest at this time.

The first of 5 chemical reactions will therefore be presented. As I do not make any claim to being a chemist, any errors found quantitatively or in basic concept to these reactions will be appreciated.

$BaCO_3 \rightarrow (heat) \rightarrow BaO + CO_2$

The interesting properties of barium oxide (BaO) have been mentioned. They are especially interesting because they begin to satisfy the circumstances of meteorological observations and science, feasible methods of delivery, economics, and formation, consistent chemical attributes, correlation with observed patterns of dehydration in the atmosphere, conformal in appearance, and satisfies at least in part the observed and reported health affects upon the population.

It is not adequate to stop the investigation at this point. It is now necessary to devote more attention to the chemistry of barium oxide, and to learn what is expected if it were released into or formed within the atmosphere. I offer the following chemical equations as original work, which will be helpful to confirm or refute by anyone with further knowledge on this subject:

Barium oxide combines with water very aggressively. I have the reaction as:

$BaO + 9H_2O \rightarrow Ba(OH)_2 * 8H_2O$

The resulting compound from this reaction is termed barium hydrate, or barium hydroxide, octahydate. Barium hydrate exists as a whitish powder or crystal form.

This reaction explains why barium oxide is used commercially as a dessicating, or drying agent. It would therefore be expected to extract the moisture out of the air. If produced at a

sufficiently small size, this reaction goes a long way to explain the observed alterations in cloud formation under conditions of extremely low relative humidity. It would also be consistent with the laboratory model for cirrus cloud formation mentioned earlier, as well as with the anonymous declaration of barium salts. Barium oxide is indeed considered to be a salt, and it possesses a relatively high degree of solubility.

4. pH testing of rainwaters:

If we accept the previous set of events to be from a reasonable scenario, it is worthwhile to further attempt to validate the ideas. One such method that can be used to assist in the process is the pH testing of rainwaters, i.e., the testing for acidity and alkalinity. This method is suggested because of the presence of the hydroxides in the reaction above, which indicates an expected alkalinity that presumably would affect the rainwaters.

Rainwater samples have been collected on 5 different occasions in the southern Santa Fe, NM area, and they have been tested for pH. It should be mentioned that collectable rainwater in the location mentioned has been an extremely rare event since before October of 1999 to the present day. Extreme drought is now characteristic of this location, and the city of Santa Fe itself is under the next to highest level of water restrictions that can be imposed under law. As such, collection and ph testing of rainwater by interested readers is both welcomed and encouraged. This can be accomplished relatively easily and inexpensively with pH test kits available at aquarium or pet stores.

The results of this testing are as follows:
June 26 : 6.6
June 27 : 6.6
Aug 17 : 6.2
Aug 18 : 6.3
Aug 19 : 6.6

The average of these tests is 6.46, with a sample standard deviation of 0.19. The pH scale ranges from 1 to 14, with 1 being extremely acidic and 14 being extremely alkaline. Distilled water has a pH of 7.0.

The results show that the rainwater samples above are slightly acidic. These results have caused me some surprise, as my expectation was that the rainwater should test on the alkaline side of the scale because of the presence of the hydroxides if the original hypothesis involving barium carbonate is correct.

At this point, the question was approached in a more open

manner, and the question was rephrased in the following form: What is the pH of rainwater EXPECTED to be?

The inquiry has resulted in some level of surprise. Two sources have been located in the research on this question thus far, one of them being a professor at the University of Hawaii. A question was posed to the professor in almost exactly the same form that it arose within my work, and this was:
Why is the rainwater at a low pH, such as 5.5 to 6.5, when the rivers and lakewaters are showing a pH at or greater than 7.0, i.e, acidic rainwaters and alkaline groundwaters? The answer was given that it is actually normal for rainwater to have a pH of between 5.6 and 5.8. In other words, an acidic quality to rainwater at this level is expected. This was stated to occur because of the combination of rainwater with carbon dioxide in the atmosphere, forming carbonic acid through a perfectly normal and natural process. Both sources found stated the pH of rainwater is expected to be at this level, i.e, 5.6-5.8. Acid rain was stated to be in the class when the pH is less than 5.0. The conclusion from this investigation, albeit a surprise to myself, is that rainwater is naturally somewhat acidic.

Considering the results obtained from local rainwater samples with a pH of 6.5, the new information above now casts a different and more congruent interpretation. The rainwater tested locally does show a result which is relatively more alkaline than the expected values, if the two sources are presumed to be correct. An explanation for the relatively more alkaline nature is best explained with the presence of hydroxides (OH) as supposed in the original hypothesis which led to the test in the first place.

The results at this stage, therefore, continue to be consistent, albeit in a surprising manner with respect to pH testing. This is one reason that it will be helpful for other readers to investigate the local pH testing of rainwaters across the country, and to continue to verify the baseline acidic nature which has been stated by the two sources.

5. Physical sample collected in association with aircraft activity:

Another stage of testing of the barium carbonate – barium oxide – barium hydrate hypothesis offered will involve the collection of physical samples if and when they are available. Reports of a whitish powder have occurred intermittently throughout the last two years in association with the aircraft activity, and have been reported on the message forum. With a single exception, samples of material of this nature have not been received by myself.

One sample has been received in August of 2000 which satisfies the criteria of being a whitish powder. It was collected in Denver CO on the surface of an automobile after aircraft were observed emitting continuous trails which subsequently developed into the common cloud decks. The amount of material collected was incredibly minute, and exists as a whitish powder or dust. The amount of material available raised the question as to whether or not microscopic examination was even possible.

6. Testing of chemical hypothesis:

A microscopic chemical test of the sample referred to above has been conducted. This test was quite difficult to perform because of the extremely limited amount of material available, and the results remain in need of substantiation or refutation.

If indeed there is the unusual presence of a barium compound in our atmosphere, particularly barium hydrate, it would be valuable to have a chemical test to help define it's existence. The following chemical reactions are offered (again, if errors are found, please notify me):

$Ba(OH)2*8H2O + 2\ HCL \rightarrow BaCl2 + H2(gas) + 9H2O$

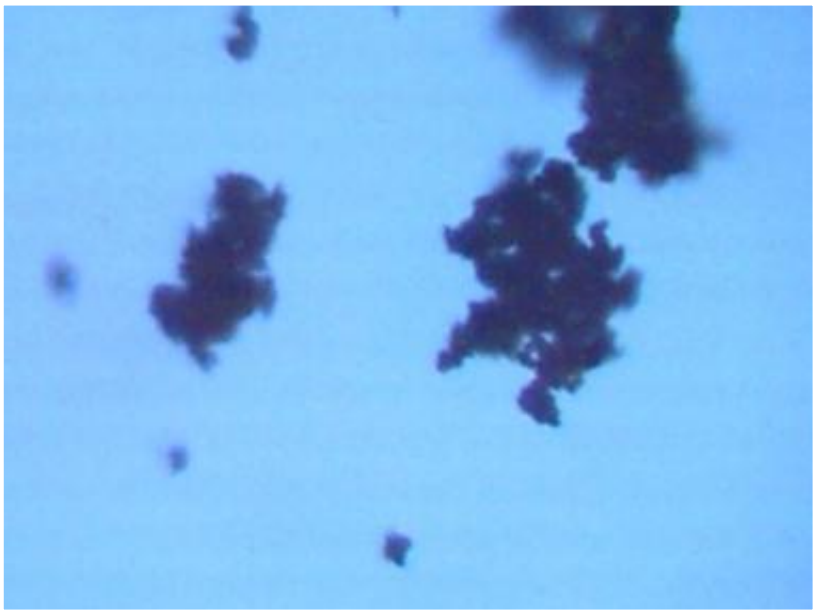
$Ba(OH)2*8H2O + H2SO4 \rightarrow BaSO4 + H2(gas) + 9H2O$

My research indicates that barium hydrate, if combined with hydrochloric acid, will form barium chloride, which in turn is highly soluble in water. Barium hydrate, if combined with sulfuric acid, will precipitate barium sulfate, a generally insoluble crystal. These results are expressed with the two equations above.

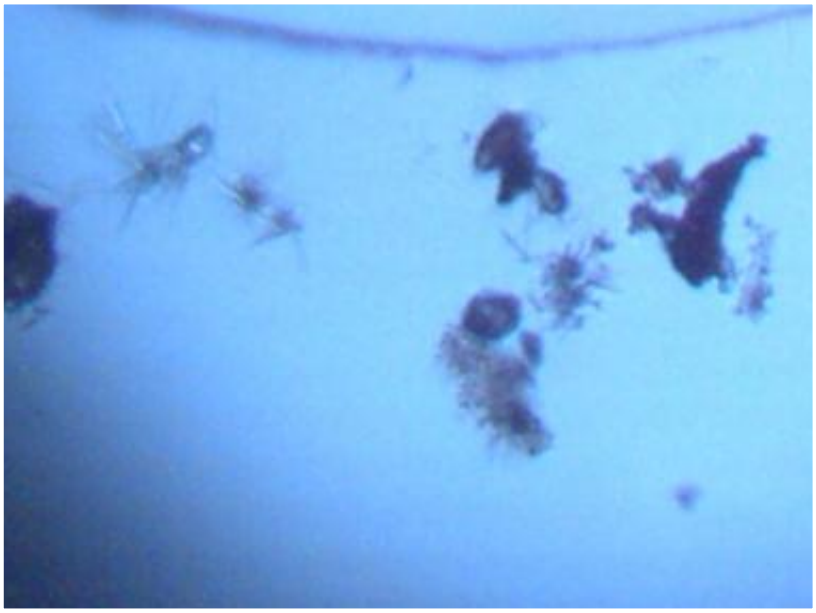
Such a test has been conducted with the powdered sample received. The results would be less ambiguous if more materials were available for testing, but as it was, the amount available for each test resided on the sharp end of a needle.

Three trials were performed. Observations in all cases were out of necessity completed under the microscope due to the extreme scarcity of the material being analyzed. In each trial, the whitish powder immediately dissolved in the hydrochloric acid as hypothesized. In each trial, the whitish powder subjected to sulfuric acid did result in crystal formations. These crystals were photographed under the microscope and will be presented on the web page of this article. The amount of material available for testing was a critical factor, and the need remains to continue this testing as the occasion permits. The results of these tests appear to be consistent with the original hypothesis that is presented, i.e. barium salts or compounds may now have

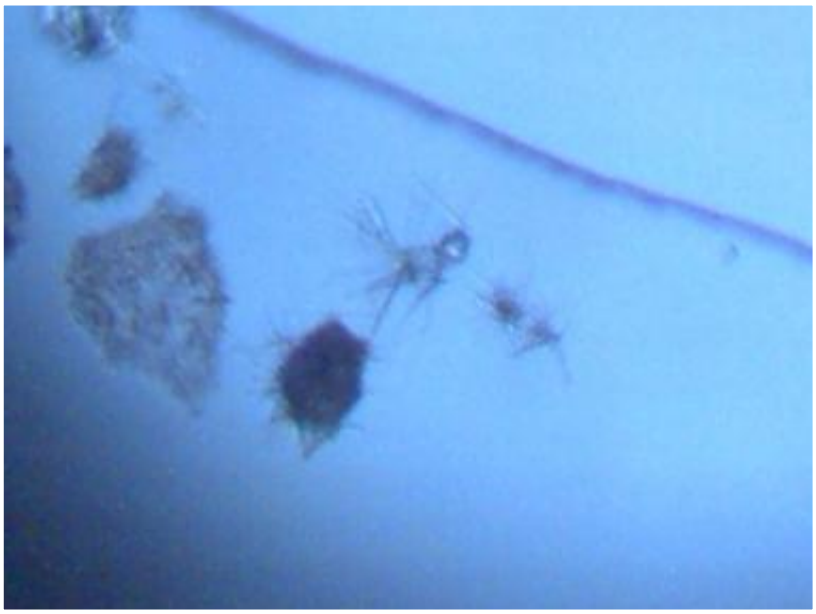
an unusual presence in our environment as a result of aircraft aerosol operations.



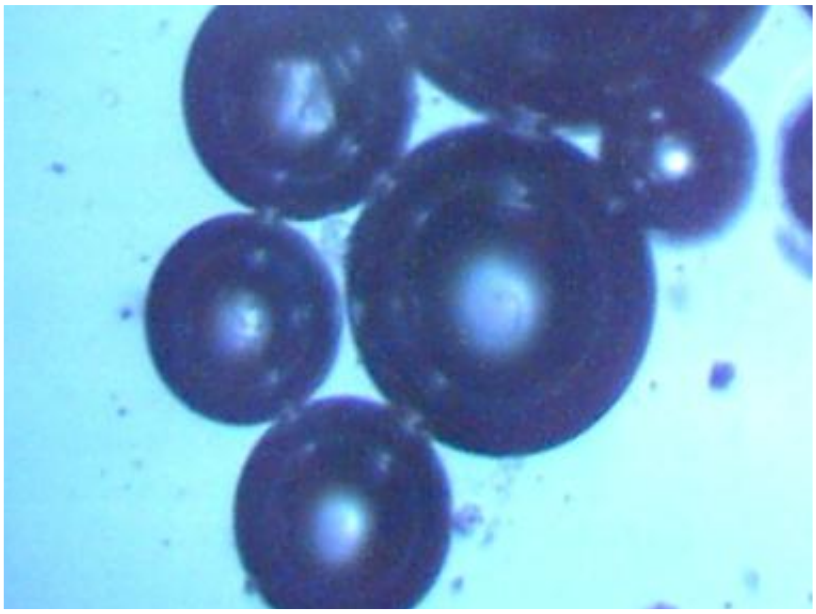
Original White Powder Sample 480x



White powder subjected to sulfuric acid 480x
Crystal formations apparent



**White powder subjected to sulfuric acid 480x
Crystal formations apparent**



**White powder subjected to hydrochloric acid 480x
Dissolves immediately, air bubbles remain.**

7. Solubility and equilibrium considerations

There are additional relevant properties of barium compounds, and the earth alkali elements, of which barium is a member. The capacity of barium oxide and barium hydroxide to absorb water appears to be rather striking. Consulting a table of solubility of salts in water, barium oxide is listed most definitely as a soluble salt. Furthermore, when ranked with 60 other salt forms by the solubility constant, barium oxide ranks as number one and as the most soluble within those listed. The solubility

constant for barium oxide is stated as .0614; this number outranks the other listings in the table by a factor of hundreds to thousands to multiples of thousands.

In addition, an intriguing reference has been found that describes the ability of certain salt forms to absorb water under varying conditions of relative humidity. Although the specific case of barium hydrate has not been identified as of yet, there does appear to be the case of certain salts absorbing moisture under relative humidity conditions as low as 30%. The specific case referred to identifies a hydrate form of strontium chloride at 0deg C. This salt form under these conditions will absorb moisture under relative humidity conditions of 27%. In addition, strontium is within the same elemental group as barium, the earth alkali series. These findings further substantiate the consideration of barium salts being used in a dessicating aerosol form, supporting the observations of “cloud” formation under conditions of extreme low humidity. Attempts will be made in the future to specifically define the moisture absorption capacities of barium salt forms with respect to relative humidity, but the above example demonstrates the feasibility of atmospheric modifications as have been observed.

[The following information is predictive in nature, and is not intended for the casual reader. It attempts to predict the equilibrium constant of the hydrate reaction involved:

If the salt form in question does indeed absorb moisture at relative humidities of 30% or greater at temperatures of -50deg C. (flight altitude), then the pressure of the water vapor within the hydrate form should equal approximately .0143torr. This is based upon the following:

Pressure of water vapor at -50deg C. is .0477torr (1mb = .750062torr) Therefore:

P(H2O) / .0477torr = .30
P(H2O) = .0143 torr
P(H20) = 1.882E-5 atmospheres

If the hydrate form is indeed barium hydrate [Ba(OH)2*8H2O]:
Kp (equilibrium constant in atmospheres) = (1.882E-5)^8 = 1.57E-38 atm. at -50deg C.

An important question to now answer is: What is the equilibrium constant, in atmospheres, of the barium hydrate equation that has been hypothesized within this discussion? If reasonable agreement from the actual equilibrium barium hydate chemical reaction with the above calculation is found, then an adequate explanation for the observations recorded has been found. Any assistance from those knowledgeable in the determination of this constant for the reaction specified is appreciated.]

8. Environmental testing : water, soil, air:

A logical case has been developed within this article to substantiate the need for environmental testing of barium or barium compounds in our water, air and soil. This case does not exclude considerations given to additional tests for different compounds or materials in the future. This case does not eliminate the need to evaluate other forms of physical material associated with aircraft operations, such as the sub-micron fibers or gel samples received and reported. This case does not exclude the need for further identification of certain biological components identified within the fibrous materials mentioned previously.

This case does establish a reasonable requirement and need to test for barium or barium compounds within our environment based upon a logical set of events, reasoning, and tests. Barium is subject to rather stringent environmental restrictions on the amount permitted in the water supply, e.g.., 2ppm. This case is dependent upon considerations arising from the science of meteorology, information sources that are consistent with observation reports, physics, pH testing and chemistry.

It is recommended that the readership pursue this testing at a serious and professional level, and that the results be disclosed to the public at the earliest convenience. Any errors or revisions in this report will be made as circumstances require or dictate.

Appreciation is extended to numerous participants on the message forum that have both initiated and contributed significantly to this research topic.

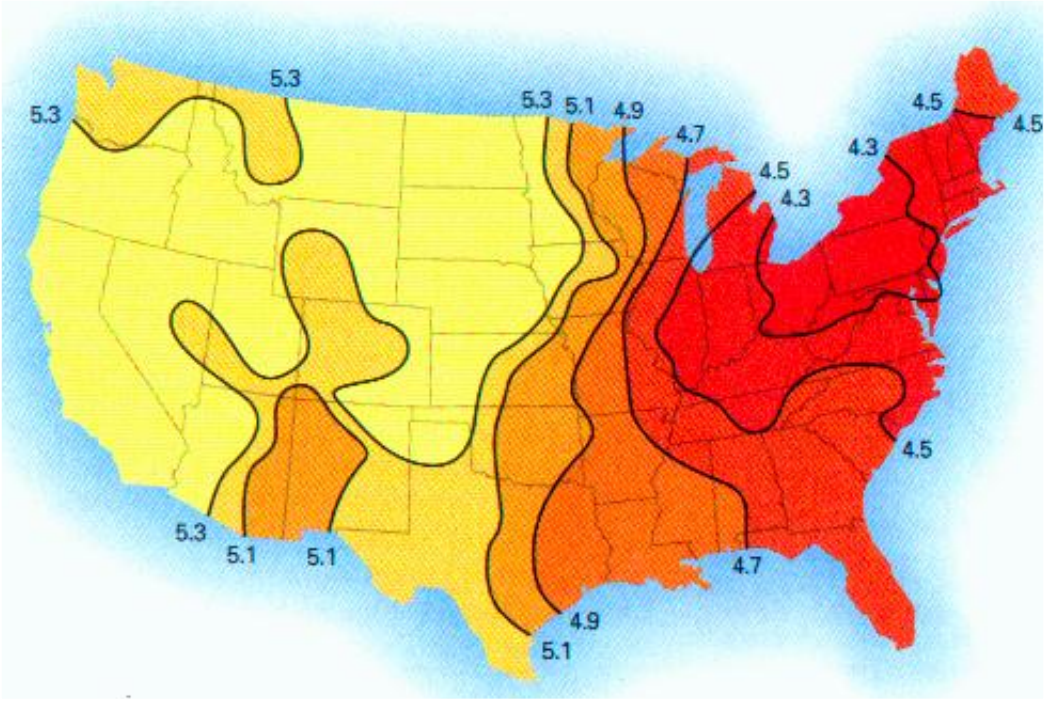
Clifford E Carnicom

pH TEST ALERT

Sep 7, 2000

pH TEST ALERT
Clifford E Carnicom
September 7 2000

Indications that significant alterations in atmospheric chemistry may have occurred as a result of aerosol operations are now more strongly confirmed. There is a need for citizens across the country to conduct pH tests of local rainwater; this can be accomplished both easily and inexpensively. For those unfamiliar with pH values, this is a scale of acidity and alkalinity. The scale ranges from 1 to 14, with 1.0 being extremely acidic and 14.0 being extremely alkaline. Pure water has a pH value of 7.0 It has been confirmed by a most reliable source that the pH of rainwater is expected to be at 5.6 or less.



Lines of equal pH in the United States 1990
from Atmosphere, Climate and Change by Graedel and Crutzen 1997
(“*The levels below 5.0 east of the Mississippi River are the result of anthropogenic [man-made] emissions of sulfur and nitrogen oxides*.“)

Additional Baseline Information Available 1997
Additional Map Available 1999

Measured values in the Santa Fe area of several samples average at 6.5. The difference of these samples from the expected norm is statistically significant at the 99.9% level. It is important for other parties to verify or refute these observations that have been made. pH testing of rainwater has now become an important tool in identifying important changes that have recently occurred within the chemistry of our atmosphere, and tests from other locations are needed.

In addition to the two sources identified within a previous article that have established a baseline value for rainwater pH, the following source has now confirmed the stated value of approximately 5.6.

In the book entitled Atmosphere, Climate and Change, by Thomas Graedel and Paul Crutzen (winner of the 1995 Nobel Prize for chemistry), it is stated within this Scientific American publication that “The single most important chemical species in clouds is the hydrogen ion (H+), whose concentration can be indicated by specifying the solution’s acidity, or pH value.”

In addition, it is confirmed that the acidic nature of rainwater results from the combination of the water with carbon dioxide, forming carbonic acid, which is acidic. The gas concentration of CO2 produces atmospheric droplets of pH approximately 5.6. In fact, most rain is expected to have a pH of less than 5.6, due to combinations with both natural and man-made nitrogen and sulfur compounds.

The results of the initial local testing in southern Santa Fe are as follows:

June 26 : 6.6
June 27 : 6.6
Aug 17 : 6.2
Aug 18 : 6.3
Aug 19 : 6.6

The average of these tests is 6.46, with a sample standard deviation of 0.19. Collectable rainwater has become an extremely rare commodity in southern Santa Fe, NM since October of 1999, as a result of the serious drought in this area. Values of 6.5 indicate a much higher level of hydroxide ions (OH-) in the atmosphere than are expected. Please also refer to A Case For Testing within this web site for more information on this aspect.

The chart above shows what the pH values across the country were in 1990. Significant deviations from these values indicate that a significant alteration in atmospheric chemistry has likely taken place.

pH test kits can be purchased inexpensively at most aquarium, pet or department stores. A specific product that has been used is manufactured by Aquarium Pharmaceuticals called “Deluxe pH Test Kit”. This test kit will measure pH values from 6.0 to 7.6 incrementally. Values equal to, greater than or less than the extremes can be inferred if the end of the scale is reached.

Readers are highly encouraged to conduct such pH tests with local rainwaters, and to post the results on the message board attached to this web site. Test results can also be sent directly to info@carnicominstitute.org. It is important to state the location or state that the test was conducted within, due to the variability which is shown in the graphic above. The test results will be used to add to the information and research databases that are being developed on this issue.

Sincerely,

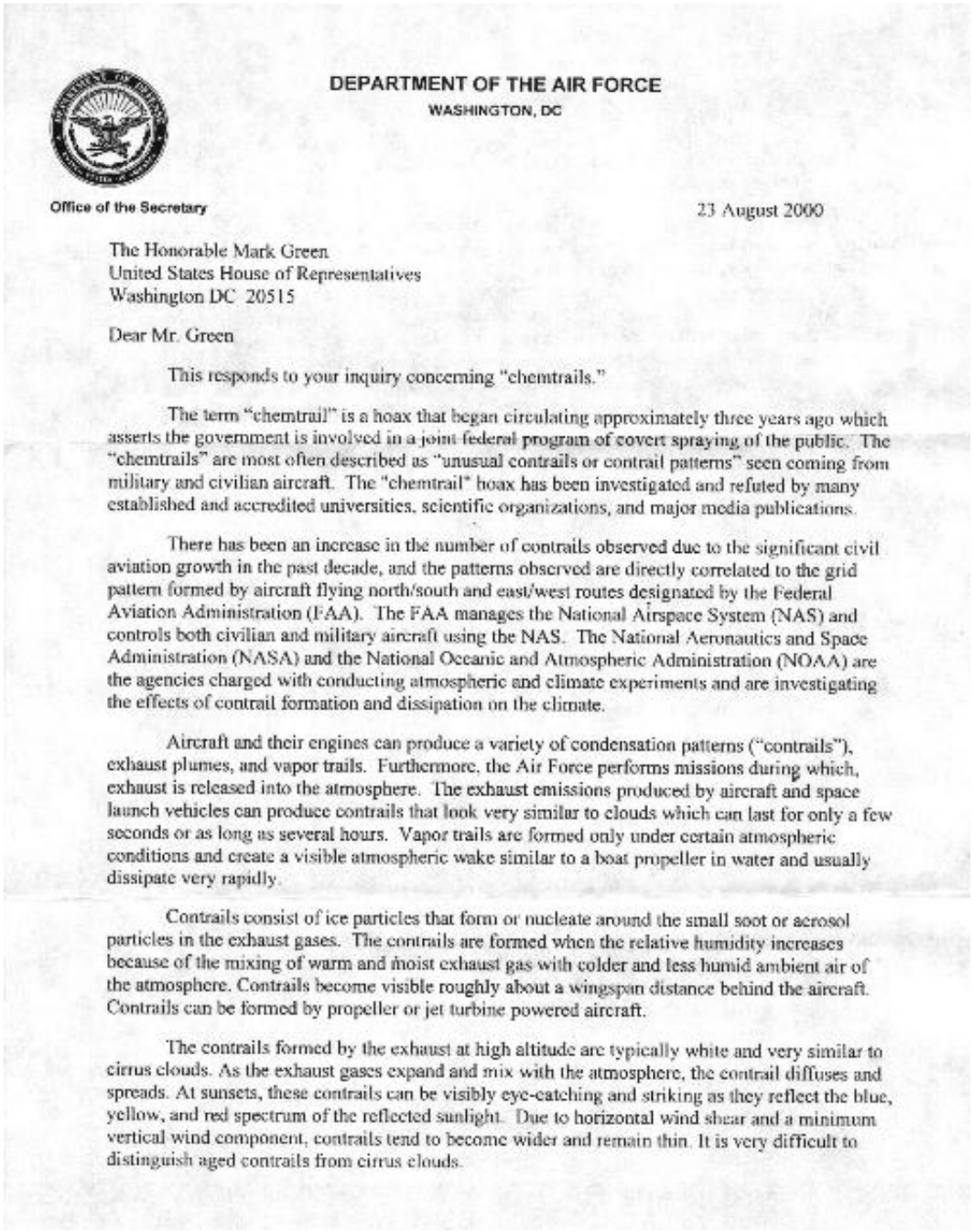
Clifford E Carnicom
September 7 2000

AIR FORCE LIES TO AMERICA
Sep 11, 2000

AIR FORCE LIES TO AMERICA

This letter authored by Michael K. Gibson, Lt. Col., USAF
This document received by email on September 11 2000
Posted by Clifford E Carnicom
September 11 2000

“hoax (n.)- An act intended to deceive or trick.”
“lie (n) – 1. A false statement deliberately presented as true.
(v) 2. To convey a false image or impression.”
The American Heritage Dictionary, 3rd Edition, 1994.



DEPARTMENT OF THE AIR FORCE
WASHINGTON, DC

Office of the Secretary

23 August 2000

The Honorable Mark Green
United States House of Representatives
Washington DC 20515

Dear Mr. Green

This responds to your inquiry concerning "chemtrails."

The term "chemtrail" is a hoax that began circulating approximately three years ago which asserts the government is involved in a joint federal program of covert spraying of the public. The "chemtrails" are most often described as "unusual contrails or contrail patterns" seen coming from military and civilian aircraft. The "chemtrail" hoax has been investigated and refuted by many established and accredited universities, scientific organizations, and major media publications.

There has been an increase in the number of contrails observed due to the significant civil aviation growth in the past decade, and the patterns observed are directly correlated to the grid pattern formed by aircraft flying north/south and east/west routes designated by the Federal Aviation Administration (FAA). The FAA manages the National Airspace System (NAS) and controls both civilian and military aircraft using the NAS. The National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) are the agencies charged with conducting atmospheric and climate experiments and are investigating the effects of contrail formation and dissipation on the climate.

Aircraft and their engines can produce a variety of condensation patterns ("contrails"), exhaust plumes, and vapor trails. Furthermore, the Air Force performs missions during which, exhaust is released into the atmosphere. The exhaust emissions produced by aircraft and space launch vehicles can produce contrails that look very similar to clouds which can last for only a few seconds or as long as several hours. Vapor trails are formed only under certain atmospheric conditions and create a visible atmospheric wake similar to a boat propeller in water and usually dissipate very rapidly.

Contrails consist of ice particles that form or nucleate around the small soot or aerosol particles in the exhaust gases. The contrails are formed when the relative humidity increases because of the mixing of warm and moist exhaust gas with colder and less humid ambient air of the atmosphere. Contrails become visible roughly about a wingspan distance behind the aircraft. Contrails can be formed by propeller or jet turbine powered aircraft.

The contrails formed by the exhaust at high altitude are typically white and very similar to cirrus clouds. As the exhaust gases expand and mix with the atmosphere, the contrail diffuses and spreads. At sunsets, these contrails can be visibly eye-catching and striking as they reflect the blue, yellow, and red spectrum of the reflected sunlight. Due to horizontal wind shear and a minimum vertical wind component, contrails tend to become wider and remain thin. It is very difficult to distinguish aged contrails from cirrus clouds.

A different type of contrail or condensation trail is caused when a wing surface or winglet causes a cavitation of air in very humid conditions. This results in a unique vapor trail that is not formed due to exhaust gases.

Aerial spraying for pest or weed control and fire suppression is the only Air Force activities that involve aircraft intentionally spraying chemical compounds (insecticides, herbicides, fire retardants, oil dispersants). The only unit in the Air Force capable of aerial spray operations to control disease-carrying pests and insects is the Air Force Reserve Command's (AFRC) 910th Airlift Wing, Youngstown-Warren Air Reserve Station, Ohio. The aerial spray mission uses four specially configured C-130 Hercules turboprop aircraft. Aerial spraying enables large parcels of land or water to be treated safely, quickly, accurately, and cheaply. This is the only fixed wing aerial-spray capability in the Department of Defense. Although the Department of Defense initiates most of the unit's missions, its services are also requested by local, state, and other federal agencies and coordinated with the Center for Disease Control. The most common missions flown are for mosquito, sand flea and weed control. Several states have also requested support to combat grasshoppers and locusts.

For a number of years commercial companies have been involved in cloud seeding and fire suppression measures. Cloud seeding requires the release of chemicals in the atmosphere in an effort to have water crystals attach themselves and become heavy enough to produce rain. The Air Force does not have a cloud seeding capability. The Air Force's policy is to observe and forecast the weather to support military operations. The Air Force is not conducting any weather modification experiments or programs and has no plans to do so in the future.

In short, there is no such thing as a "chemtrail"--the actual contrails are safe and are a natural phenomenon. They pose no health hazard of any kind. We thank you for this opportunity to address your concerns and trust you find this information helpful.

Sincerely

MICHAEL K. GIBSON, Lt Col, USAF
Deputy Chief, Congressional Inquiry Division
Office of Legislative Liaison

A RESPONSE TO LT. COL. MICHAEL GIBSON USAF

Sep 13, 2000

A RESPONSE TO
LT. COL. MICHAEL GIBSON
USAF
Authored by Diane Harvey
This document received by email on September 13 2000
Posted by Clifford E Carnicom
September 13 2000

Subject:

To: Michael K. Gibson, Lt.Col, USAF

Deputy Chief, Congressional Inquiry Division

Office of Legislative Liaison

Dear Col. Gibson:

This responds to your “response” to Representative Mark Green concerning chemtrails. I have of course removed your quotation marks from the word “chemtrails” and put them where they belong: around the word “response”. Your ludicrous reply to sincere citizens’ demands for an explanation is receiving precisely the quality and quantity of outrage it so richly deserves. There are tens of thousands of us who have perforce been obliged to educate ourselves, in depth and at tedious length, in regard to this relatively new phenomenon overhead. We’ve done our homework, collected our research, and published our increasing encyclopedias of evidence. We are not amused with your infantile “ice crystals” taradiddle.

My father, like you, was a colonel in the USAF. He was physically courageous, deeply honorable and intellectually scrupulous. He never told lies, and neither do his children, who were patriotic little career Air Force brats. He thought of his service career, strange to say, as keeping the world safe for…well, what exactly was it he kept the world safe for, Col. Gibson? Oh yes: Democracy. Does this word ring any bells? I’m sure you’ve heard of it- the old “of the people, by the people, and for the people” kind of thing? Are you quite comfortable, morally speaking then, with your present function in our threadbare but still supposedly democratic society? Are you proud of yourself, sitting around churning out insultingly childish, barefaced lies to the American public? Who do you imagine is soothed by your serving up such an abysmally unintelligent piece of droning fluff? We are concerned, Colonel, and we are correct: your patronizingly meaningless letter is just one bit of proof that something is terribly wrong. And we can only be disgusted that the USAF, having done it’s duty to help destroy Communism, seems now to be doing its part to destroy democracy as well.

Furthermore, Colonel Gibson, if you are “only following orders”, and feel you absolutely must tell outrageous lies to the public, then at least let them be reasonably scientifically sophisticated and intellectually edible. Since you lack the courage and honor required of honesty and a decent response, at least give us worthier puffs of smoke and a bit of razzle-dazzle mirror-work. Don’t bother your pretty little head trying to palm off pathetic imitations of Contrails 101 on a segment

of the population which is highly informed. The purple dinosaur level of your letter to Mr. Green entirely fails to entertain us. You will need to command a far higher order of drivel altogether for that.

You may choose to treat us as imbeciles, but this merely degrades you personally, and your department, and the USAF, and this government. I am not a liar, Colonel Gibson, and neither am I subject to inane delusional states. The countless other perfectly sane citizens of this country who are observing and reporting the factual proliferation of chemtrails are also not going to be content to be spoken to in such a shamefully dismissive manner. We know precisely who is hoaxing who, and we are hardly going to be quelled by such a fatuous and pathetic attempt at a reply. You have not heard the last from us, Colonel Gibson. If I were you, I'd give the matter of chemtrails some serious thought. As long as they are present in our daily lives, we are going to be present in yours, and in the offices of our elected officials.

Sincerely,

Diane Harvey

merak@sedona.net

cc: The Honorable Mark Green

United States House of Representatives

Washington DC 20515

EIGHT CONDITIONS

Sep 17, 2000

EIGHT CONDITIONS
Clifford E Carnicom
September 17 2000

The following are conditions that are expected to be satisfied in identifying certain particles or compounds regularly emitted into the atmosphere from recorded aircraft aerosol operations since the beginning of 1999. This set of conditions is not intended to encompass all phases of the operations, and they do not exclude further consideration given to materials of a fibrous or gel-like nature, along with biological components that have been identified within received samples. These conditions will be revised as circumstances, information or research requires.

1. The material of concern is most likely a salt, since salts are the most effective cloud condensation nuclei, and most of them absorb moisture starting at relative humidities of 70% or greater.

2. The salt form that is being searched for absorbs water at relative humidities as low as 30%, due to repeated observations of this occurrence in the southwest U.S. high desert regions. That such salts do exist is evidenced by such examples as strontium chloride, a salt form which will absorb water at relative humidities as low as 27%. Special attention should be given to elements in the same group (Group IIA) of the periodic table of the elements for this same characteristic. Examples of the elements included within this group are magnesium, calcium, and barium.

3. The salt form is expected to form a hydroxide when combined with moisture in the atmosphere, due to recent pH testing which indicates a higher alkaline level than is expected. At this stage of the investigation, the results are statistically significant. Additional pH test results are urgently needed from across the country to confirm or to refute this hypothesis.

It is emphasized once again that:

“The single most important chemical species in clouds and precipitation is the hydrogen ion (H+), whose concentration can be indicated by specifying the solution’s acidity, or pH value. You may recall from high school chemistry that the pH scale ranges from 0 to 14, low pH values indicating high acidity (high concentrations of H+) and high pH values indicating high alkalinity (low concentrations of H+)”

from Atmosphere, Climate, and Change by Graedel and Crutzen, Scientific American, 1997.

4. The salt form is expected to be highly soluble.

5. The salt form(s) is expected to be white in color, both before and after the hydration occurs, and is expected to be of a powder or crystalline nature.

6. The reaction involving hydration is expected to be exothermic in nature, releasing heat to the surroundings.

7. The salt form is expected to have commercial applications for dessication, or drying.

8. The pressure of the water vapor within the hydrated compound at equilibrium at -50deg C. is expected to be approximately .0143 torr, based upon the assumption of moisture at a relative humidity level of approximately 30%.

Additional notes:

1. It remains the case that the linked set of compounds that includes barium oxide, barium hydroxide and barium hydrate, appear thus far to satisfy the conditions stated above.

2. An anonymous, but stated to be reliable source, has stated that barium salts are used within the aerosol operations.

3. In consideration of item 2 of the conditions stated above, there are four prominent salt forms that occur within Group IIA of the periodic table of the elements:

Salt Solubility Constant

$MgOH_2$ 5.61E-12
$CaOH_2$ 4.86E-6
$SrOH_2$ 6.40E-3
$BaOH_2$ 1.30E-2

The solubility of $BaOH_2$ stands as unique amongst the group, especially when compared with the absorption properties of strontium chloride referenced above. The metallic nature of the elements increase from the top toward the bottom of the list.

Based upon the results above, an urgent need exists for environmental trace metal testing and pH testing of rainwaters in order to confirm or refute the hypotheses which are presented.

Clifford E Carnicom
September 17 2000
Authored at Lake Heron, NM

Please also refer to:

A Case For Testing
pH Test Alert
pH Test Results

CONTRAIL PHYSICS

Sep 17, 2000

CONTRAIL PHYSICS
Clifford E Carnicom
September 17 2000

A preliminary model has been developed to estimate the length of time that is required for a contrail to dissipate. It is assumed within this discussion that the contrail is composed of water vapor (per historical definition). The model developed agrees extremely well with the historical behavior and observation of contrails. The model is not intended to encompass all variables that may be in effect, but it does model reasonably well the expected behavior of water at flight altitudes. Any errors will be corrected if and as they are brought to my attention. It will be noted that this model is not a function of relative humidity, as no basis from thermodynamics has yet been established for it's inclusion. Any model based upon the premise of "mixing" as the primary mechanism for dissipation requires quantification to receive consideration. Cloud formation and the introduction of aerosol particles to assist in their formation is an entirely different discussion which is to be examined separately. The conclusions that result from the study of this model are several:

1. Contrails composed of water vapor routinely dissipate, as the physics and chemistry of this model will demonstrate. As a separate and distinct set of events, clouds may form if temperature, relative humidity, and aerosol conditions are favorable to their development. If "contrails" by appearance transform into "clouds", it can be concluded that the material of composition is not water vapor.

2.The conditions under consideration show that the ice crystals within a contrail can warm to the melting point and subsequently melt with the heat provided by solar radiation.

3. As demonstrated both by historical observation and this model, the time expected for contrail dissipation is relatively short, e.g., 2 minutes or less. This assumes the contrail is composed essentially of water vapor, per the classic definition (condensed trail).

4. The rate of contrail dissipation is highly dependent upon the the size of the ice crystal particles and the amount of solar radiation. Dependence upon relative humidity is not evident. 'Cloud' formation from aircraft, should it occur, is dependent primarily upon the temperature, the relative humidity, and the type and size of aerosol particles(nuclei) that are introduced.

The basic form of the contrail dissipation model, based upon the chemistry, mathematics and physics of thermodynamics is as follows:

time for dissipation = (mass of water crystal * (Q + heat of fusion)) / power

where Q is the amount of heat required to increase the temperature of a substance (ice).

or

t(sec) = (m (kg) * Ht(kj/kg)) / P(watts)

where t is the time required for contrail dissipation(transformation), in seconds, m is the mass of the ice crystal in kilograms, Ht is the heat of transformation of ice in kilojoules per kilogram, and P is the power applied to the system in watts.

Calculating the internal energy, or enthalpy, of water vapor often involves several phase changes, as water varies between solid, liquid and vapor under varying conditions of temperature and pressure. In the case of a contrail composed of water vapor, the heat of transformation will consist of two phases. The first is the amount of heat required to raise the temperature of the ice crystal at a sub-zero temperature to 0 deg. C., which will be designated as Q in the present case. The second segment of heat required will be that which melts the ice crystal to a liquid form. The primary processes involved in contrail formation therefore appear to involve:

1. The emission of water vapor from the aircraft.
2. The freezing of the water vapor at sub-zero temperatures into ice crystals.
3. The warming of the ice crystals to the melting point through solar radiation.
4. The melting of the ice crystal with solar radiation to where the water vapor once again no longer is visible. This returns the water to the state from which it was emitted from the engine.

Let us now quantify the components of this model with elements that are typical or representative of the conditions of contrail formation:

Mass:

Assume that we have a cubed particle size (nucleated ice crystal) of dimension d on a side, measured in microns(designate as u). Given also that the density of ice is .917gm/cm3, the mass of the particle is:

mass=(d(u) * (1E-6m/u))^3 * (1E6cm3/m3) * (.917gm/cm3) * (1E-3kg/cm3)

or

mass = (d^3 * 9.17E-16 cm3 gm kg m3) / (m3 cm3 gm)

Q + Heat of Fusion:

Q is equal to the amount of heat required to increase the temperature of the ice crystal from the ambient temperature to 0 deg. C. The specific heat of ice is given as 4.21 kJ/(kg C) at 0 deg. C. The specific heat varies only slightly with respect to temperature and pressure, and this value will therefore be used. J refers to joules of energy.

The heat of fusion of ice is 335kJ/kg. It requires this amount of energy to melt ice.

Therefore, the amount of heat required to transform the ice crystal is:

dQ + heat of fusion = 4.21 kJ/(kg C) * dT + 355kJ/kg

where dQ is the amount of heat entering the ice crystal, the heat of fusion is the amount of heat required to melt the ice crystal, and dT is the temperature change from the ambient air to 0 deg. in Celsius.

The model now becomes:

t(sec) = (d^3 * (9.17E-16)cm^3 gm kg m^3 * ((((4.21kJ/kg)*dT)/(kg C)) + 355kj/kg)) / P * (m^3 cm^3 gm)

Power (P):

The energy of solar radiation is given in terms of watts/ square meter. Representative values measured range approximately from 200 to 700 watts/m^3. To arrive at the power applied to the ice crystal, we will take the surface area of the crystal exposed perpendicularly to the sunlight, and apply the solar radiation to it. The solar radiation will be applied on a continuous basis to the surface area until melting is complete.

Power absorbed = d^2 * (watts/m^2) * (1E-6m/u)^2

and since 1 watt = 1 joule/sec

Power absorbed = d^2 * (J/(m^2 s) * (1E-12) m^2/u^2

The model now becomes:

t(sec) = (d(u)^3 * (9.17E-16) cm3 gm kg m^3 * ((4.21kJ/kg * dT kJ/kg C) + (335kj/kg))) / (d(u)^2 * (J/(m^2 s) * (1E-12) m^2 / u^2)

Simplifying:

t(sec) = ((d(u) * (9.17E-13) * (4.21dT + 335) J cm^3 gm kg m^3 s m^2) / (Watts * 1E-12 J m^2 m^3 cm^3 gm kg)

or t(sec) = (d(u) * (9.17E-13) * (4.21dT + 335)) sec / (Watts * 1E-12)

or t(sec) = (d(u) * .917 * (-4.21T + 335)) / Watts/m2

where d is measured in microns, T is the air temperature where the contrail forms, measured in Celsius, and solar radiation is in watts per square meter.

Representative cases and the application of this model will now be considered. Research indicates that the expected size of particles emitted from aircraft ranges between 30 and 200 microns (Goethe MB – Ground Based Passive Remote Sensing of Ice Clouds with Scattered Solar Radiation in the Near Infrared – Max Planck Inst Meteorol). The temperature of the air at flight altitudes commonly approaches -50 deg. C. Solar radiation commonly ranges between 400 and 700 watts per square meter.

In the tables presented, d is the dimension of the ice crystal along one side of the cube, T is the temperature of the ambient air where the contrail forms (.e.g, 35000ft. MSL), and P is the solar radiation in Watts/sq. m. t is the length of time that it requires for the contrail, or ice crystal to dissipate (i.e., transform from ice to water vapor).

d(microns) T(deg. C.) P(watts/sq. m) t(sec)

1 -50 600 1
10 -50 600 8
30 -50 600 25
50 -50 600 42
100 -50 600 83

1 -40 400 1
10 -40 400 12
30 -40 400 35
50 -40 400 58
100 -40 400 115

1 -30 700 1
10 -30 700 6
30 -30 700 18
50 -30 700 33
100 -30 700 60

This model covers the expected size range of any particles expected to be emitted by aircraft; most airborne particles range between

0-100 microns. It is of interest that the particle sizes considered in this model are generally considered to be too large to serve as cloud condensation nuclei; the average expected size of cloud condensation nuclei is extremely small, and on the order of .1 to .2 microns. A 10 micron particle is considered extremely large with respect to cloud condensation nuclei. This size distinction, when coupled with the results of the model above, further indicate the need to consider cloud formation as a separate and distinct physical process from that of contrail dissipation. That analysis would necessarily consider the significant role that aerosol particles, deliberately or otherwise introduced, would have on the cloud nucleation and formation process.

As can be seen, the results of this model agree extremely well with the observed properties of contrails over their historical existence. This work is based upon the physical processes, chemistry and mathematics of thermodynamics with respect to water and the various phase states. Consideration has also been given to the phenomenon of sublimation, and it has been found to be not applicable due to the extremely low atmospheric pressure requirements for sublimation to occur(P<.006atm). The greatest variation within this model is seen to relate to particle size. It is seen that the contrails composed of the smaller particles dissipate within 30 seconds or less, and that the contrails composed of even relatively large particles are expected to dissipate within a couple of minutes at most.

If the dissipation of an observed contrail does not conform to the model above, and the corresponding physics and chemistry and math of same, then the logical conclusion that can be drawn is that the material of emission is not likely to be water vapor. As mentioned earlier, the physics of cloud formation are an entirely separate process, and are highly dependent upon temperature, relative humidity, aerosol type and the size of aerosol particles that are introduced. Any alterations in the formation of cloud processes as they have been repeatedly observed and recorded must necessarily consider the impact of these aerosols, identified and unidentified, within the analysis. Prior attention given to microscopic hydrated salts remains a priority in this research.

Clifford E Carnicom
September 16 2000
Authored at Lake Heron, NM

OFFICIAL RESPONSES TO AEROSOL OPERATION INQUIRIES

Sep 20, 2000

OFFICIAL RESPONSES TO
AEROSOL OPERATION INQUIRIES:

AIR FORCE INCREASES RANK OF LIE
AIR FORCE LIES TO AMERICA
USAF EXTENDS LIE TO FAZIO
AIR FORCE : ALL IS 'ORDINARY'
SECRETARY OF DEFENSE : 'NO CAUSE FOR ALARM'
DEMOCRACY NOW : BEYOND RETICENCE
UNITED STATES EPA IS 'NOT AWARE'
EPA CONTINUES TO PROFESS TO BE 'UNAWARE'
EPA PERPETUALLY 'UNAWARE'
EPA REGION 4 IS ALSO 'UNAWARE'
EPA ISSUES CONTRAIL 'FACT SHEET' (.PDF FILE)
GREENPEACE 'CAN'T HELP'
GREENPEACE 'UNABLE TO COMMENT'
SENATOR BINGAMAN OFFERS 'ASSURANCE'
SENATOR LUGAR REPLIES
CONGRESSMAN REFUSES CERTIFIED LETTER
O'CONNELL OPPOSES SPRAYING

REP. UDALL REFUSES TO RESPOND,
THEN CALLS FOR HEARINGS, THEN RECANTS

REPRESENTATIVE MIKE THOMPSON – ALL IS 'NORMAL'
NM ENVIRONMENT DEPT. DENIES 'ILLEGAL ACTIVITY'
NM ATTORNEY GENERAL OFFICE SUBSTANTIATES ALL IS 'NORMAL'
OHIO EPA DECLARES 'UNABLE TO INVESTIGATE'
ABC NEWS 20/20 SAYS 'UNFORTUNATELY' IT WAS NOT CHOSEN
WORLD NET DAILY 'PASSES' FOR NOW
WORLD NET DAILY : REAL MEDIA REPORT
UNIV. OF MICH. CLASSIFIES INQUIRY AS 'HARASSMENT'
PORT COLUMBUS AIR TRAFFIC CONTROL RESPONSE
USA TODAY – WILLIAM THOMAS RESPONSE

GREENPEACE RESPONSE TO AEROSOL INQUIRY FROM A CONCERNED CITIZEN

Sep 20, 2000

**GREENPEACE RESPONSE TO AEROSOL INQUIRY
FROM A CONCERNED CITIZEN, AND AS POSTED ON
MESSAGE BOARD ATTACHED TO www.carnicom.com:**

Thank you for contacting Greenpeace for assistance with this problem. While we would like to be able to help you, Greenpeace focuses its resources on global environmental problems including global warming, ancient forest destruction and commercial whaling. Unfortunately, we do not have local chapters that could help you with your situation.

For further assistance, you may want to contact the following organizations which focus specifically on helping people with toxic-related issues:

CENTER FOR HEALTH, ENVIRONMENT AND JUSTICE…..703-237-2249

CHEMICAL INJURY INFORMATION NETWORK……773 278 4800 x299

If you have any further questions or comments, please do not hesitate to contact our Supporter Services at 1-800-326-0959, visit our Web site at http://www.greenpeaceusa.org, or write to us at 564 Mission Street, Box 416, San Francisco, CA 94105.

For a green and peaceful planet,

Supporter Services

_____

None of those sources responded.

The mission statement of Greenpeace is stated as follows on www.greenpeace.org:

“An independent campaigning organization which uses non-violent – creative confrontation to expose global environmental problems for a peaceful future”.

PROJECT REPORT NO. 1

Sep 20, 2000

PROJECT REPORT NO. 1

Project Report No. 1

The following report has been made available for posting on www.carnicom.com.
The author is not specified at this time.

20 September 2000

PROJECT REPORT No. 1

SUBJECT: AIRCRAFT “CHEMICAL TRAILS” IN THE ATMOSPHERE and ASSOCIATED MILITARY PROJECTS

PROJECT OBJECTIVES:

1) Determine nature of persistent aerosol chemical trails emitted by subsonic aircraft.
2) Determine nature of and investigate phenomena associated with the atmospheric aerosol trails and resulting cloud cover.
3) Summarize overview observations of government and individual agency involvement in clandestine military and civilian operations and projects within the borders of the United States for dissemination to interested parties.

RESEARCH GROUP:

Researchers assigned to this project have diverse backgrounds and are trained in and associated with a variety of disciplines including electronics, communications and environmental engineering, general medicine, biomedical research, chemistry, government/political, NSA/CIA, and military theory and technology. A team of organized and dedicated professionals has devoted thousands of hours to this project over the past year, and read hundreds of scientific, government and military documents found in the public domain. Individual researchers have conducted in-depth investigation by other means, including
direct observation and inquiry.

FINDINGS:

Aerosols – Polymer Fibers:

It appears that aerosol chemical trails are being deliberately discharged into the atmosphere from military and civilian registered aircraft over the continental United States, Canada and Mexico. It appears that selected commercial airliners have been modified and equipped with specialized aerosol dispersion devices. Aircraft emission of aerosol chemical trails is being consistently reported in several other countries worldwide.

Aerosol chemicals deliberately emitted from subsonic aircraft are currently understood to be a base barium salt mixture.

Several types of experimental polymer fibers are repeatedly being found in various locations subsequent to observed incidence of aerosol discharge by subsonic aircraft. Research and development of electro-active polymer fibers is identified and described in Defense Advanced Research Projects Agency, DARPA, documents. Other polymer fiber types are mentioned in other government and military documents.

It is believed that the combination of a barium salt mixture and polymer fibers in the atmosphere may be the chemical and physical irritant that is responsible for the recent nationwide epidemic increase in cases of
asthma, allergies and upper respiratory symptoms including pneumonia.

Based on the study of various military and scientific documents, the polymer fibers would appear to have several applications in conjunction with the barium salt mixture:

a) Aircraft cloaking when irradiated.
b) Advanced Radar Applications.
c) Biological applications – delivery, decontamination and detection.
d) Communications applications.
e) Military weather modification.
f) Other applications, including the VTRPE computer propagation and similar programs.

Military Projects and Experiments:

Insight is required to categorize the many layers of military projects and experiments currently in progress for they are numerous. An overwhelming array of ongoing military research and development – and defense related activity – is layered from ground level into space, according to unclassified documents studied and discussed. Space Warfare Battle Plans and space weapons have been developed and include advanced laser and refinement of Nikola Tesla’s scalar [directed energy] weapons technology.

Weather Modification and Associated Programs:

Inventor and scientist Nikola Tesla’s concepts of “directed energy” have been developed, refined and applied. High Frequency Active Auroral Research Project [HAARP] ionospheric “heaters” are positioned around the world [Alaska, Ukraine, Norway, Russia, Puerto Rico, etc.] and are used to “heat” and modify the ionosphere. The United Nations organization has knowledge of, and sanctions, the HAARP project. This is a military project.

Example: URSI, Commission G –
Scientists worldwide are involved in different aspects of environmental research projects and experiments. Universities worldwide, including the University of Massachusetts/Lowell, the University of Colorado, the

University of California/Davis and the University of Texas/Arlington, just to name a few, are deeply involved in data collection and technology development.

One of government's primary military objectives is to control rain, drought, storms, tornadoes, hurricanes, and weather patterns generally. Precipitation suppression and enhancement strategies are being refined specifically for implementation in the conduct of future warfare. This activity is in direct violation of U.N. treaties.

Armies will no longer be needed; new computerized virtual warfare technology has been developed, refined and applied.

Areas of ongoing R&D:

* Optics-based Network Communications systems above the earth.
* Optical Switching Systems.
* Scalar ["directed energy"] Missile Defense System above the earth. Ground based missile defense against incoming missile system is no longer a viable consideration. Proposed missile defense system is a Tesla
scalar system above the earth and, again, in violation of U.N. Treaty.
* Military Weather Modification.
* Virtual Warfare Systems.
* Biological Warfare – aggressive.
* Biological decontamination techniques.
* Systems apparatus for potential chemical and electrical influence of human behavior.
* Electrical power transfer.

Nuclear Waste disposal in space:

Preliminary evidence indicates that there is an ongoing project which involves the breaking down of radioactive waste using plasma processing techniques. It is believed that the "benign" components of this separation process are being disposed of in the upper regions of the atmosphere.

Ozone Layer [tropospheric and stratospheric}:

There is great concern among the scientific community that the ozone layer has been seriously damaged. We believe the reason for the damage has not yet been mentioned or addressed. Ongoing study of this problem by individual researchers is eliciting concrete evidence that, at the very least, the atmospheric chemistry and circulation of the earth's atmosphere have been disrupted. There is a growing body of
evidence to justify concern that the problems with our atmospheric chemistry will extend well into the 21st century.

CONCLUSION:

The investigative study group individually and collectively is negatively impressed by the deceitful and disingenuous nature of those parties involved in the projects and experiments. Never in the history of civilization on the earth has there been such a

complex, overwhelming array of secretive and potentially destructive experiments ongoing, the logistics of which are cloaked in deliberate lies to the citizens they ultimately affect.

We have outlined the general areas of science, military and government activity in this, our Report #1. This preliminary report is intended to focus your attention on and encourage your investigation into these areas
which we feel will ultimately affect your life and the lives of your children. We have approached this investigation seriously and reported our findings honestly, to the best of our abilities.

20 TIMES

Sep 21, 2000

20 TIMES
Clifford E Carnicom
September 21 2000

Recent and preliminary pH test data from across the nation indicates that the atmospheric chemistry has been altered by a factor of 20 with respect to hydroxide ion concentration, relative to baseline values established from the years of 1990 -1999, as well as individually with respect to 1999 data. This is a remarkable change in a relatively short period of time, and has major implications for both the chemistry and biology of the nation and the globe.

Human biology is sensitive to pH blood changes as low as 0.1 (approximately 25% change in the H+ concentration); the current data indicates an average change in the pH of rainwaters that are being analyzed across the country at 1.30. It is important that more citizens become immediately involved in this testing process, as it is relatively inexpensive and simple to accomplish. Significant variations, such as those being currently observed, demonstrate the need for immediate formal investigation into the atmospheric chemistry changes associated with aircraft aerosol operations since the beginning of 1999.

The preliminary data as of this date indicates a 20 times increase in the number of hydroxide ions in the atmosphere, this change apparently occurring primarily within the last year. The following statement from the Nobel Prize winner of Chemistry in 1995 is repeated to emphasize the significance of this topic and the need for public testing and disclosure:

“The single most important chemical species in clouds and precipitation is the hydrogen ion (H+), whose concentration can be indicated by specifying the solution’s acidity, or pH value. You may recall from high school chemistry that the pH scale ranges from 0 to 14, low pH values indicating high acidity (high concentrations of H+) and high pH values indicating high alkalinity (low concentrations of H+)”

from Atmosphere, Climate, and Change by Graedel and Crutzen,
Scientific American, 1997.

Please also refer to:

A Case For Testing
pH Test Alert
ph Test Results

Appendix:

The above calculation is based upon the following definition of pH:

pH = log (1/H+)

Therefore, for two independent pH readings:

pH2 – pH1 = log (1/H2+) – log (1/H1+)

pH2 – pH1 = log((1/H2+) / (1/H1+))

pH2 – pH1 = log (H1+ / H2+)

or

10^(pH2 – pH1) = H1+ / H2+

and with the average difference in pH being reported as +1.30 as of this date with respect to 1999:

10^1.30 = 20.0

and note that POH is similarly defined as:

pOH = log (1 / OH-)
leading to similiar results for the analysis of hydroxide ions.

Clifford E Carnicom
September 21 2000

This page will be edited as circumstances or conditions require.

DRASTIC pH CHANGES

Sep 24, 2000

DRASTIC pH CHANGES
Clifford E Carnicom
September 24 2000

1. The most significant chemical species in the clouds and precipitation is the hydrogen ion (or hydroxide ion, correspondingly) concentration, as measured by the pH, according to the 1995 Nobel Prize winner for chemistry, Paul J. Crutzen, Director of Air Chemistry Division of the Max Planck Institut.

2. The magnitude of recently measured pH values of rainfall across the country shows a twenty fold increase in the number of hydroxide ions in the year 2000 vs. both 1990 and 1999 baseline data. This translates directly to a major change in pH and atmospheric chemistry during the recent year.

3. A statistical Student's t test applied to the year 2000 measured differences in rainfall pH is statistically significant at the 99.9%+ level.

4. A Wilcoxon's Signed Rank non-parametric statistical test, which makes no assumptions about the underlying distribution of the data (normal or otherwise), shows a statistically significant difference in the atmospheric chemistry of the year 2000 pH data at the 99.9999%+ level.

5. A 95% confidence interval for the average 2000 pH change relative to 1999 data indicates the average 2000 pH difference is expected to fall between +1.0 and +1.7. This corresponds to a 10 to 50 times increase in the hydroxide ion concentration in the atmosphere, occurring primarily within a twelve month period.

6. The atmospheric changes are correlated directly with the presence of sustained and extensive aircraft aerosol operations since the beginning of 1999.

7. These drastic changes and the results of these studies demonstrate the urgent need for a formal investigation into recent and radical changes in the atmospheric chemistry of the nation and globe. Citizens across the country are urged to organize and to demand this investigation without delay.

Clifford E Carnicom
September 24 2000
Santa Fe, NM
Authored at Rio Chama, NM

O'CONNELL OPPOSES SPRAYING

Sep 25, 2000

O’CONNELL OPPOSES SPRAYING

FROM : [redacted] FAX NO. : [redacted] Sep. 25 2000 07:54AM P1

[redacted]

California State Senate

SENATOR
JACK O'CONNELL
EIGHTEENTH SENATORIAL DISTRICT

[redacted]

September 22, 2000

[redacted]

Dear [redacted]

Thank you for contacting my Santa Barbara District Office recently to express your concerns regarding contrails/military chemtrails.

Let me begin by stating that I oppose any chemical spraying of civilian populations. Although there have been reports that contrail activity is followed by sickness, I am unaware of any scientific studies showing that these two are causally related. I do appreciate you taking the time to provide me with information on contrail related internet sites and I would like to take this opportunity to direct you to the National Aeronautics and Space Administration (NASA) website located at:

http://hyperion.gsfc.nasa.gov/AEAP/98contrails.html

This site contains some scientific studies on contrail activity which may be of interest to you and your group.

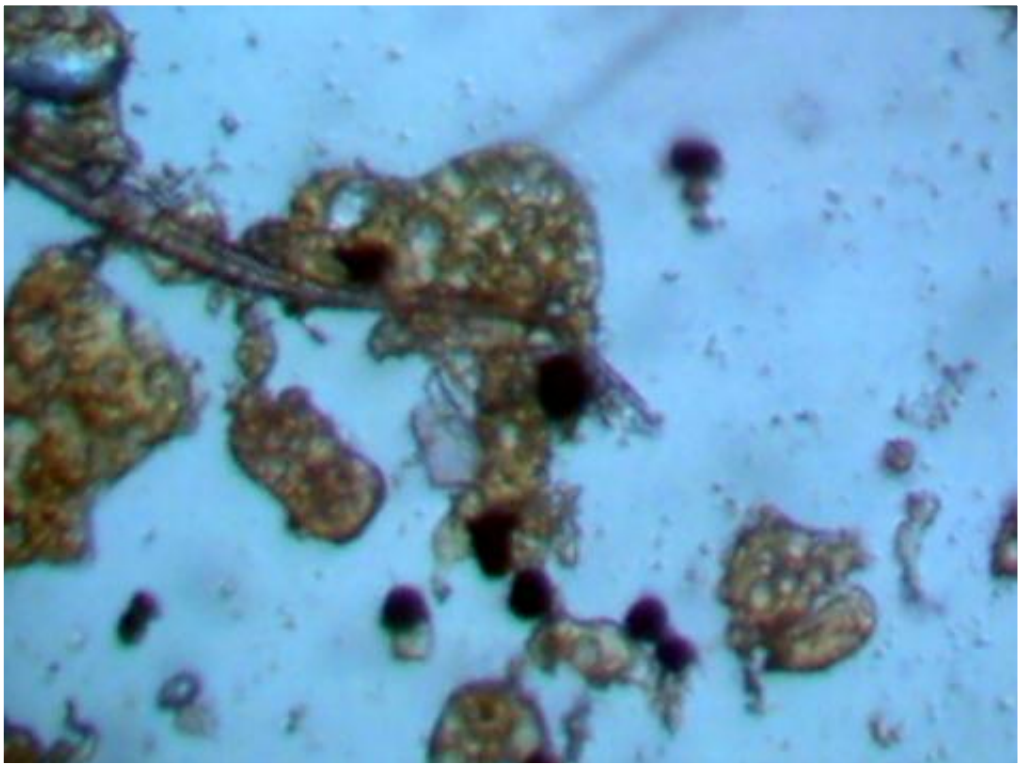
Again, thank you for writing. As always, if I can provide you with information or assistance on any state matter, please do not hesitate to contact me or Gabriella Frederick in my Santa Barbara District Office. I look forward to working with you.

Sincerely,

JACK O'CONNELL
JO:gf
E8a

Oct
GEL COMPONENTS
Oct 8, 2000

GEL COMPONENTS
October 8 2000
Sample submitted to and posted by C.E. Carnicom



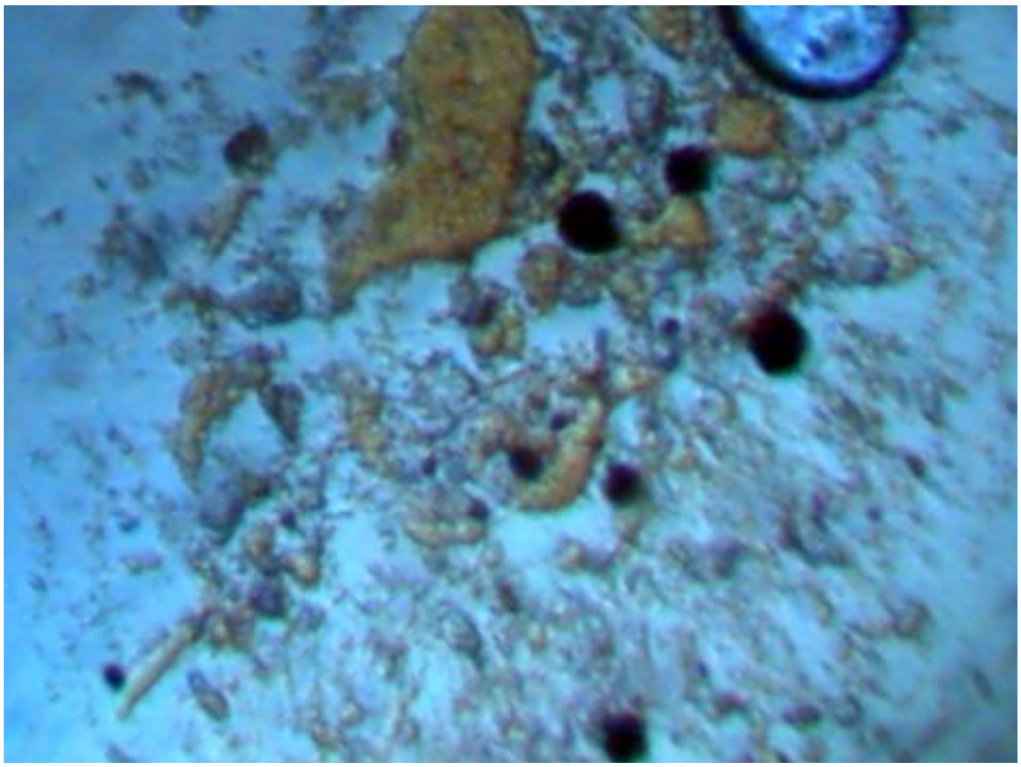
500x

A gel sample shown on this page and collected in the Pacific northwest has recently been received. This sample is identical in appearance to two previously identified samples. The material of this sample is more substantive, and has been placed under the microscope and subjected to an iodine stain. There is what appears to be a clear cellular structure within the gel material itself. In addtion, there are cellular bodies which absorb the iodine stain readily and become darkened in color. Both of these features are identifiable in the microphotographs shown below. Reports of serious ill health have been reported in association with this gel material. Microphotographs at 500x and 2400x are shown below.

The following statement has been received on Oct 8 2000 regarding this sample :

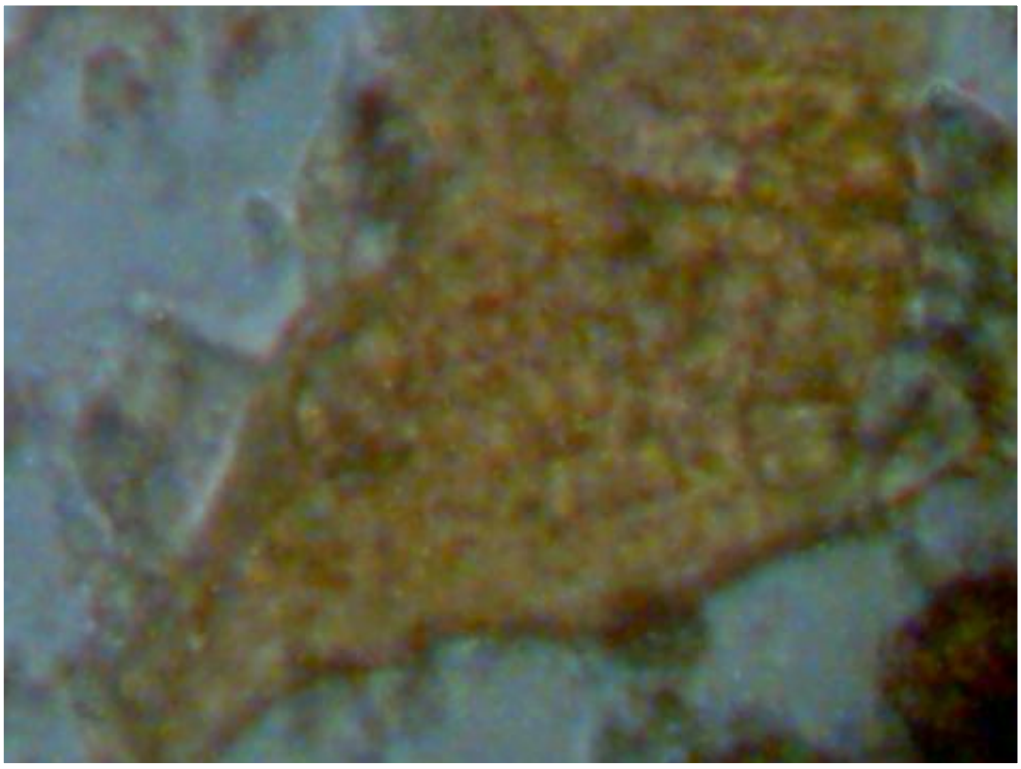
“When I found the gel I was at the time going through a battle with social services. I am a home caregiver for my handicapped brother and a single mom of a 3 year old. I work at home and have been studying and working on getting exposure of chemtrails for the last year. I have been working with a great group of people networking to get the facts out. In July around the 16th or so I noticed on a throw rug a glob of goo. I was distracted and cleaned it with a tissue and threw it away. I had no idea what it was. Then I found the same stuff on a shirt that was in a laundry basket I had left on the deck. I took the gel off with a tissue and washed the shirt. The stain was on for several washes. Then I found my ceramic bird feeder knocked off the deck and on it was a

huge glob. Then it dawned on me what this could be. I brought it in and after sticking a fork in it and watching it pull out in a string and then form back into the gel when you finally managed to get it off the fork. I threw the fork out and grabbed a plastic bag and wrapped it up and stuck it in the freezer. Now at this time my freezer did not freeze but it did stay real cold. I then forgot about it as I was in the middle of a guardianship battle with social services. My son found another glob on his green Power Ranger toy that had been left out. He had his finger in it and was saying "what is this stuff?". I grabbed the toy and threw it in the sink without thinking and that glob slithered down the sink! I scrubbed my sons hands. I got a new freezer 2 or 3 weeks later and took the bird feeder out of the old and before I put it in the freezer I took a peek at it. It looked exactly the same. Just a little more solid due to it was pretty cold, maybe 35 degrees or 40. Just not freezing as I could not even get ice cubes. Well it stayed in the freezer a while until I got the freedom to get it sent. I have quite a big glob so decided to split it up in to 4 samples. When I took it out of the freezer to my amazement I noticed that it had spread out over the feeder and it had a mold growing on top of it! I let it thaw to split it and it maintained its original flexibility except it seemed more fluid and it now had black spots which were the mold spores I had seen. Please note that the original plastic bag I used was a bag that had had oranges (probably) in it so some contamination may come from that but I did not let the bag touch the sample. I also touched it with my finger. All other objects were sterilized with boiling water before touching and samples were double bagged with ziplocks. Small airplanes and helicopters both have flown at a low altitude over my house. Twice a small black helicopter flew very low as I was out talking with the neighbor lady. We both saw them. I have looked all over my yard and the surrounding area and have found no other samples of gel. All objects hit with this gel were on my deck. I am willing to answer any questions and I'm not hiding. If anyone wants to ask me anything, perhaps it could be done through the message board on your site.
CK"



500x

2400x



2400x

ATMOSPHERIC SALT CONFIRMED

Oct 10, 2000

ATMOSPHERIC SALT CONFIRMED
October 10 2000
Clifford E Carnicom

The unusual presence of an alkaline salt form in the atmosphere is in the process of being established and confirmed through electrolysis testing. It has been deduced and established from earlier work and research that a case for testing the atmosphere, water and soil for alkaline salts exists based upon meteorological, chemical and physical principles. Please refer to A Case for Testing, Eight Conditions, Drastic pH Changes, pH Test Alert, 20 Times and pH Test Results for additional reference material on this topic.

It is established that testing shows an approximate twenty fold increase with respect to baseline values in the level of hydroxide (OH- ions) of rainwater during the previous year. These tests are statistically significant at the 99.99%+ level. This increase is directly associated with extensive and sustained aircraft aerosol operations across the country since the early part of 1999. This equivalently means that the pH of the atmosphere has recently been significantly and rapidly altered as an apparent consequence of the aerosol operations.

The presence of an anticipated alkaline salt form, or electrolyte, has now been confirmed through electrolysis testing. The specific salt form is not yet identified, although the number of candidates is relatively few in number.

Two simultaneous conditions exist which bear out the conclusions being reached on this page. First, the dramatic increase in rainfall pH indicates that an unusual presence of hydroxide ions, (OH-) now commonly exists in reported rain samples across the country. Secondly, electrical current applied to these same samples results in a chemical reaction that can occur only in the presence of an electrolyte, i.e., a salt form. The specific reaction which has been recorded involves evolution of hydrogen gas at the cathode, and the dissolution of copper at the anode when copper electrodes are used. The magnitude of the reactions recorded, in comparison to control tests, indicates the presence of a metallic alkaline salt within the rainfall that has been tested.

The candidate list of salt forms is expected to consider those elements within Group I and II of the periodic table, with a special emphasis applied to barium oxide, barium hydroxide and barium hydrate. Future research will focus on the separation of the influence of carbonic acid, if any, in the electrolytic reaction, and identification of the specific salt form under examination. The concentration levels within an individual rain sample of the salt form are expected to be extremely low as indicated by the pH values recorded, and therefore potentially difficult to detect. It is also worth noting that the safe levels of elements such as barium in the environment are also quite low, and on the order of 1-2ppm.

Additional photographs and specifics of the electrochemical testing currently underway will be presented as time and circumstances permit. It is important that the electrodes used be relatively inert with respect to water, such as copper, platinum, silver, or gold. The voltage source currently being used is 24 volts. These preliminary results are presented to expedite additional tests that may soon be conducted by involved citizens. This page will be edited as conditions and information require.

Clifford E Carnicom
October 10 2000

GREENPEACE 'UNABLE TO COMMENT'

Oct 11, 2000

GREENPEACE ‘UNABLE TO COMMENT’

**GREENPEACE RESPONSE TO AEROSOL INQUIRY
FROM A CONCERNED CITIZEN, AND AS POSTED ON
MESSAGE BOARD ATTACHED TO www.carnicom.com:**

GreenPeace response to my question, where they stand on ChemTrails:

“…Thank you for your e-mail regarding chemtrails. Greenpeace does not have an official position on this matter and thus we are unable to make any comment. We thank you for your interest in our opinion and have forwarded your comment on to the appropriate staff. If you need more information, please do not hesitate to contact Supporter Services at: 1 800 326 0959, write to us at Supporter Services, 182 Howard Street, Box 416, San Francisco, CA 94105, or visit our Web site at: www.grenpeaceusa.org …”

That was September 18th, (when received the above…).

Posted by the user Speechless2 on Oct 11 2000

ADDITIONAL FIBER PHOTOS RECEIVED

Oct 30, 2000

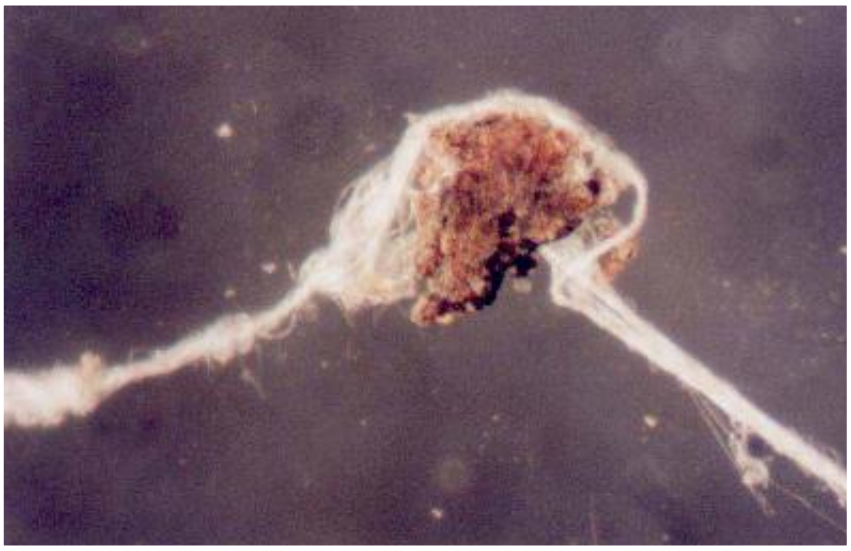
ADDITIONAL FIBER PHOTOS RECEIVED
OCTOBER 30 2000

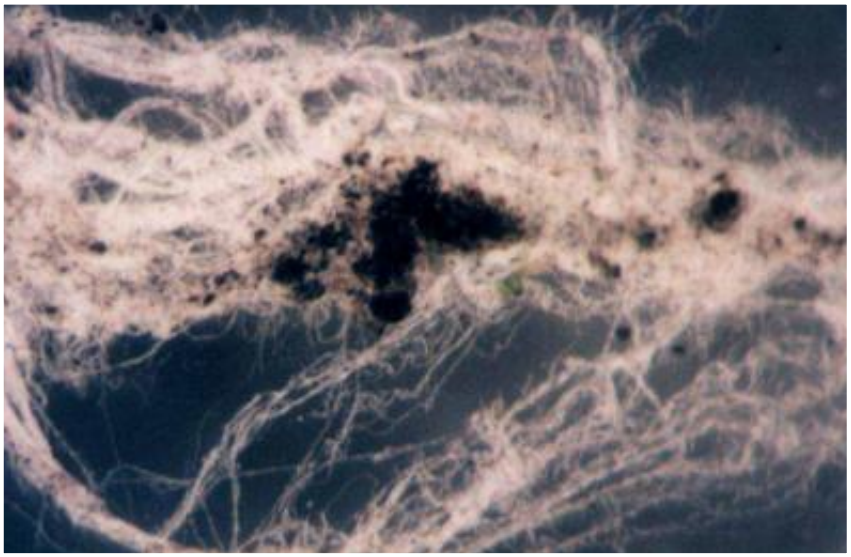
Submitted by Email.
Posted by C.E. Carnicom on behalf of the sender.

Further information on these samples will be provided as it becomes available. By all initial indications, this material appears identical to that analyzed and documented elsewhere on this site. In addition, this material appears identical to that which has been sent certified mail to Carol M. Browner, Administrator of the U.S. nvironmental Protection Agency, and which she refuses to identify and to disclose any testing results to the American public.

The following statement has been provided on Oct 31 2000 by the sender of the photographs shown:

“On the 21st of October, I noticed a lot of spider-web like material falling from the sky. Some were just a few inches in length but others were at least five to ten feet long. They were getting caught in the trees , TV antennas, and anything they could snag on to. I put on some latex gloves, got a pair of tweezers, a couple of zip lock bags, and finally managed to get a decent sample. The location of this first sample was Diamond Springs, California. The next day, on the 22nd of October, I recovered two more samples. One in Rancho Murietta and one in Folsom CA. All were within a 50 mile radius. I photographed some of the samples by attaching a Nikon FE camera to an Olympus stereo microscope. I can’t be sure of the magnification. The microscope zooms from 0.7 to 4 and I’m not really sure how that translates to a magnification factor.”





Nov
BARIUM AFFIRMED BY SPECTROSCOPY

Nov 1, 2000

BARIUM AFFIRMED
BY
SPECTROSCOPY
November 1 2000
Edited Dec 12 2000
Clifford E Carnicom

The unusual presence of the element barium in the atmosphere now appears to have been affirmed through the methods of spectroscopy. Spectroscopy is “the study of the absorption and emission of light and other radiation by matter, as related to the dependence of these processes on the wavelength of the radiation” (Enc. Brittanica). The results of the current research are now sufficient to establish an analytical basis for the formal investigation of radical atmospheric changes induced by relatively recent aircraft aerosol operations. This work further confirms the recent findings that have substantiated the unusual presence of an alkaline salt form in the atmosphere, as revealed through recent pH tests conducted across the country. Barium compounds, especially those of a soluble nature, are regarded as a serious health risk, and they are commonly associated with respiratory distress.

Research by this method will continue, but preliminary results are provided because of the importance of the findings and to support the claims that are made herein. It is recommended that other researchers across the country participate within this endeavor, in an effort to further refine the results of the study. Spectroscopy provides an analytic tool that can be used to establish the presence or absence of certain foreign elements in the atmosphere that have been under consideration for some time.

Clifford E Carnicom
November 1 2000

ADDITIONAL SPECIFIC INFORMATION:

More details on the methods and tools that have been used in this study will be presented as time and circumstances permit. Two significant identifying spectral lines appearing are those at 712nm and 728nm respectively; these lines are visible only under very restricted conditions near sundown. Lines in association with barium at 455, 491, 516, 554, 614 and 648nm are also under due consideration. The elements of C, Ca, Fe, H, Mg, N, Na, and O have been considered for comparison with these critical lines, and the presence of barium appears to stand unique in this portion of the spectrum at this intensity. Results of the study presented on this page are subject to revision based upon continued findings or if any errors are determined. The table below remains incomplete as this study remains in progress. One visual light prism spectroscope and one visual light diffraction-grating spectrometer are being used within the study, and the results from each are cross-checked with each other. The visible light spectrum ranges from approximately 400 to 700 nanometers(nm), with violet at the 400nm range and red at the 700nm range. The expected error in any reading is approximately 1-3 nanometers, which is sufficient in most cases to eliminate ambiguity. Those with further information to supplement the table are

welcome to contribute to the completion of it. The specific absorption lines in the instruments which have been observed thus far are:

Observed Wavelength(nm)	Associated Element(s)	ActualWavelength: (nm)	Comments or Source
428	Fe, Ca, C, Cr	427	1

BARIUM IDENTIFICATION FURTHER CONFIRMED

Nov 28, 2000

**BARIUM IDENTIFICATION
FURTHER CONFIRMED
November 28 2000
Clifford E Carnicom**

The identification of barium in the atmosphere as a result of aircraft aerosol criminal activities continues to be confirmed. Studies with a diffraction grating spectrometer have repeatedly identified important signature high intensity spectral lines at approximately 712 and 728 nanometers (in addition to others) in the visible portion of the spectrum, as reported in an earlier table. All research conducted thus far continues to indicate a unique match to the element of barium.

These spectral lines are visible under very limited time conditions near sunset or sunrise, when the sunlight shifts toward the red portion of the spectrum.

Comparisons to eliminate other candidate elements from the periodic table have now been completed at the most significant levels. Earlier research has eliminated other common elements expected within the solar spectrum, such as carbon, calcium, iron, hydrogen, magnesium, nitrogen, sodium and oxygen.

Additional work has now been completed which also eliminates further candidates which are selected from Group I and II of the periodic table. The additional elements considered which also fail to show a match with these spectral lines include lithium, potassium, rubidium, cesium, francium, and strontium. These elements have been chosen on the basis of specific criteria that satisfy the physics and chemistry of observations that have accumulated.

The efforts of identification of barium in the atmosphere are based upon a minimum of three progressions of logic that continue to satisfy all observations associated with the aerosol activities. Three fundamental tenets of this postulate include:

1. The repeated delivery of specific salt-based aerosols into the atmosphere which form pseudo-cloud decks evidenced under conditions of extreme low relative humidity.

2. The existence of specifically created hydroxides as confirmed through statistically significant rainfall pH tests by involved citizens across the country that confirm a radical and sudden change in the chemistry of the atmosphere directly associated with aerosol aircraft operations.

3. The use of spectrometry as a positive analytical method to identify the existence of barium salt compounds that have been introduced into the atmosphere on a massive scale.

A basis for the formal investigation into the existence of hazardous trace metals within the environment, introduced as a result of aircraft aerosol operations and without citizen consent is established. Other physical materials identified, including biological components, also demand a critical explanation. Citizens across the country are urged to educate themselves on the facts of this case and to demand this inquiry by means of a Congressional hearing.

Clifford E Carnicom

Nov 28 2000

A toxicology report for barium is available with a link below. It would be beneficial for all readers to become familiar with the health effects that result from exposure to barium. Material Safety Data Sheets (MSDS) are readily available on the internet for barium compounds such as barium oxide.

Salt crystals have the ability to diffract x-rays; x-ray diffraction is a method that is commonly used to identify the atomic structure of crystals.

Barium Toxicity Profile

RADIATION AND HAARP IMPLICATIONS

Nov 30, 2000

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Clifford E Carnicom

NOTES FROM CURRENT RESEARCH :

1. A prominent characteristic of the element barium is the ability to absorb x-rays and radiation. Research indicates that the use of barium is a viable means of absorbing energy from nuclear explosions.

From the SETI website, the following statement is noted (http://www.coseti.org/lemarch1.htm**)**

“When a nuclear weapon explodes, about seventy percent of the energy released is in the form of kilovolt X-rays.”

2. Also, from a site on the General Principles of Nuclear Explosions:
(http://www.enviroweb.org/issues/nuketesting/nukeffct/enw77a.htm**)**

“The initial nuclear radiation from an air burst will also penetrate a long way in air, although the intensity falls off fairly rapidly at increasing distances from the explosion. Different materials are thus required for the most efficient removal of these radiations; but concrete, *especially if it incorporates a heavy element, such as* iron or *barium*, represents a reasonable practical compromise for reducing the intensities of both gamma rays and neutrons.”

3.EASTLUND BARIUM REFERENCE

From the patent report:

“It has also been proposed to release large clouds of barium in the magnetosphere so that photoionization will increase the cold plasma density, thereby producing electron precipitation through enhanced whistler-mode interaction.”

4.RADIATION BIOLOGY
(http://www.bio.calpoly.edu/BioSci/Courses/BIO/BIO311/Bio311.html**)**

From the section on Biological Aspects of Ionizing Radiation:

“Injury due to irradiation is caused mainly by ionization within the tissues of the body. When radiation interacts with a cell, ionizations and excitations are produced in either biological macromolecules or in the medium in which the cellular organelles are suspended, predominantly water. Based on the site of interaction, the radiation-cellular interactions may be termed as either direct or indirect.

Direct action occurs when an ionizing particle interacts with and is absorbed by a macromolecule in a cell (DNA, RNA, protein, enzymes, etc.). These macromolecules become abnormal structures which initiate the events that lead to biological changes.

Indirect action involves the absorption of ionizing radiation in the medium in which the molecules are suspended. The molecule which most commonly mediates this action is water. Through a complex set of reactions the ionized water molecules form free radicals that can cause damage to macromolecules.

The most important target for radiation in the cell is DNA in the nucleus. Biological effects result when DNA damage is not repaired or is improperly repaired. Extensive damage to DNA can lead to cell death. Large numbers of cells dying can lead to organ failure and death for the individual. Damaged or improperly repaired DNA may develop into lymphoma and cancers in somatic cells."

5. BERNARD EASTLUND AND THE ROOTS OF HAARP

6. THE MILITARY'S PANDORA BOX

7. Notes from Crystal Chemistry and Refactivity, by Howard W. Jaffe, Dover 1996:

A. The phenomenon of electronic polarizability refers to the temporary displacement of valence electrons in an atom or ion induced by the electric vector of electromagnetic radiation operative at optical frequencies. After this type of displacement, centers of gravity of the atomic nucleus and the electric charge no longer coincide, and the atom acquires an induced dipole moment.

B. Spectroscopy has shown that electrons in s orbitals are easy to excite, and yield spectral lines of high sensitivity, permitting their detection even when present in very minute quantities.

C. An element having its valence electrons in s orbitals, which have low ionization potential, will ionize readily. Such elements include the alkalies and akaline earth elements of Groups IA and IIa of the periodic table.

D Ionization potential is the energy required to move an electron from its normal quantum level to infinity.

E. First five ionization potentials of the elements (Groups IA and IIA) in electron volts:

Element	I First Ionization Potential	II Second Ionization Potential
H	13.60	
Li	5.39	75.62
Na	5.14	47.29
K	4.34	31.62
Rb	4.18	27.50
Cs	3.89	25.07
Fr	4.14	~21.76
Be	9.32	18.21
Mg	7.64	15.03
Ca	6.11	11.87
Sr	5.69	11.03

Ba	**5.21**	**10.00**
Ra	5.28	10.15

8. From the Oxford Dictionary of Science, 1999:

> Ionizing Radiation : Radiation of sufficiently high energy to cause ionization in the medium through which it passes. It may consist of a stream of high-energy particles (e.g., electrons, protons, alpha-particles) or short-wavelength electromagnetic radiation (ultraviolet, X-rays, gamma-rays). This type of radiation can cause extensive damage to the molecular structure of a substance either as a result of the direct transfer of energy to its atoms or molecules or as a result of the secondary electrons released by ionization. In biological tissue the effect of ionizing radiation can be very serious, usually as a consequence of the ejection of an electron from a water molecule and the oxiding or reducing effects of the resulting highly reactive species:
>
> 2H20 -> e- + H2O* + H2O+
>
> H2O* -> .OH + .H
>
> H2O+ + H2O -> .OH + H3O+
>
> where the dot before a radical indicates an unpaired electron and an * denotes an excited species.

9. From : http://www-istp.gsfc.nasa.gov/Education/wposion.html

> **“An atom can become ionized by the absorption of light. The atom of barium is particularly easy to ionize, because its outermost electron is very loosely bound. If a mass of barium is vaporized in space, producing a barium cloud, much of the barium becomes ionized by sunlight within less than a minute. The cloud then moves in response to electric forces in space, and can be used to study the electrical field in space.”**

10. HEPA Air Filtration information available at:

> **http://www.engr.psu.edu/ae/wjk/wjkfiltr.html**

11. Air Filter Comparison Chart available at:

http://www.indoorpurifiers.com/air-cleaner-comparison.htm