

A civilization causing own extinction could be said up side down.

Now scientists fear for spiking out huge methane gas from Antarctic sea floor, which has been anticipated to cause abrupt & disastrous climate change crisis. Doomsday is not fiction, but may be real unless we take unprecedented actions. In the below, we describe the discussions by both methods of revelational (PART 1) and scientific (PART 2).

### [Part I] : Apocalyptic Revelations of John, Muhammad and Jucelino.

#### ①Scientific validity of prophecy the elementary introduction:

In the central dogma of modern science, people never consider religious revelations real, but except rare ones do. Then fact is often up side down.

(1)**non-contradiction**: A contradiction never happens in our visible material world.

A merchant says "this spear can break through any shields, and this shield can block any spears". Then a passerby asked the merchant "If you try to break through the shield with the spear, what would happen?",.....

Simultaneous realization of affirmative proposition  $\equiv Q$  (if cause A, then result B) and the negative one  $\equiv \text{not } Q$  is impossible in visible material world.

You never could see the W images of affirmative and negative realization.

It is origin of **causality**, because only  $Q \equiv (\text{cause } A \rightarrow \text{result } B)$  becomes true.

(2)**negation of material world is vacuum world (nothing is contradictory)**:

$0 = +a - a$ . Left side is nothing, then what is right side?. Not nothing?!

Left is entirely nothing, while right has simultaneously cash  $a$  and debt  $a$ .

Thus nothing is simultaneously nothing and not nothing. It is **contradictional** !.

☞: Physical vacuum of elementary particle world is known to be constituted from positive particle  $a^+$  and negative particle  $a^-$ . (material and anti-material....).

☞: You never can tell the most large natural number  $M$ , which is infinite. On the other hand, consider  $Z = 1/M$ .  $Z$  is smaller than any definite rational number. Thus  $Z$  can't be any positive number, but except real number zero  $0$  (nothing). Then  $M$  is indefinite. So real number  $0$  must be also simultaneously indefinite. Nothing must be indefinite. It is also contradictional.

(3) **Contradiction enables entirely all realizations = allmighty <logic theorem>.**

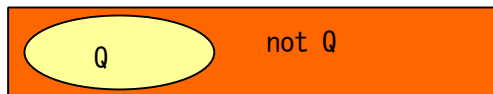
Q and (not Q) is everything.

Once a contradiction could be, then

anything becomes true (realizable). It is breaking down of causal law.

This is **the supreme allmighty world, but invisible except miracle.**

☞: People in general never be known where nothing physical law. Certainly it is entirely nothing world, so none could see physical vacuum world. Though the being could do marvelous roles <**phenomena paranormal**>.



(4) Extremely summary to tell, non-contradictional material world where both negative and affirmative visible phenomena never simultaneously be realized is called causal law (**physical law**), while non-material world (vacuum world) is contradictional, where anything become possible (allmighty world without law).

That is, **the other world** is where anything such as past history and future one . . . . . could be realized. Then extremely grievous events would be informed to person the prophet. Twin's **telepathy**, or **astral projection** are key concepts.

You should remind **resonance phenomenon** between receiver and transmitter.

Sympathy is mind resonance among mankind.

☞: Introduction of Al Qur'an is "owing to the name of entirely merciful Allah".

☞: <<http://www.777true.com/Jucelino.pdf>>

☞: Universe came out from nothing. Because entirely nothing is also entirely **nothing of physical law.** Then everything is allowable by **allmighty being.**

## ② The Apocalypse: The symbolic revelation of St John.

In the past, the Apocalypse of the final judgement (doomsday) has been variously debated among experts. The kernel is "**sudden realizing**" of the thousand year kingdom of bliss. The kingdom is told to be established when old regime dominant of Satan against Messiah would have been destroyed. Satan is often related with number 666 which means incompleteness, or ruin. Then a modern civilization causing own extinction may be said incompleteness of Satan. That is, at least modern humankind after the industrial revolution, they might have become member of Satan group. Remarkable feature of Satan against God is up side down.

Facts are often found to be up side down.

<[http://en.wikipedia.org/wiki/Book\\_of\\_Revelation](http://en.wikipedia.org/wiki/Book_of_Revelation)>

☞: Heart Sutra's a kernel point is that material world is **up side down illusion.**

### ③ Satan rebelled against God's command of bowing to Adam<Al Qur'an>

I am higher than them, because you made me from smokeless fire, while Adam were made from clay. Thus Satan was throwned into hell maze for long time. Then note that curious **methan clathrate** is a kind of ice containing dense methane gas and is fired without smoke. Commercial **oil and gas** having realized modern era and is considered the evil compound causing climate change crisis(CCC) and may be a kind of smokeless fire. Note that

(1) Satan consider himself higher rank<**nobilitism** the hereditary>.

Note that high status person who fear own decline tend to become Satan.

Therefore, for social stability, people must be equal in God.

(2) What Satan does is often **up side down**<opposer against God, **deceptive** world>.

(3) Satan is **hate group leader** against religious humankind.

He had become hatred against God and his faithful humankind by the banishment.

Bush(connecting UK imperial,...)entirely satisfies above three conditions.

It is told that in USA, there exist two opposing major powers. One is **military-industry complex with CIA**, they connect also with nobilities the hereditary (**imperials**). They organize nationalistic **rightist terrorisms**. Their danger and anachronistic ideology consider that nation and the people are being exploited by the nobility the dictator due to their eugenic ideology(Hoegell)<sup>(1)</sup>. They also tend to think that revolution is more terrible than war defeating<F. Konoe>\*.

The other power is international entrepreneur's group who against former power. However to say so, they usually has been making compromise.

(4)\* Nothing is making person more cruel than fear of person in crisis of own decline. Japanese emperor Hirohito decided to make war against USA(1941) even though he knew little possibility of win. Then his most fear was domestic revolution by spiking out nation people's frustration by withdrawing military force in China.

-Reference-

(1) K. Millegan & A. Sutton, *Fleshing out skull & bones*, Trineday LLC, 2003, USA.

(2) not English<<http://www.tanakanews.com/>>

#### ④ Jucelino Noblega da Luz the great prophet of now world:

His prophecies are not complete, but marvelous for the prediction accuracy. His advent may be a symptom of apocalyptic era of now world. His warning is the most emergent worth for any people in now world. Summary to tell, humankind had destroyed nature too much to cause own disasters (especially CCC). To recover the soundness needs to recover that of humankind's spirit. That is, peculiar respect for thanks to the great nature. The time limit of people's awakening is '07/12/31. Too much greedy for material prosperity had caused today and future's many grievous disasters, which has been accelerated due to international competitive capitalism the excess doing. He said notable facts as follows.

(1) Kyoto protocol for mitigation for global warming is of no effective.

It is pointed out also by author <<http://www.777true.com/Temperature2.pdf>>

(2) One of his notable words is that he has been merely telling peoples what world minor wise dominator had already known entirely. Then in other words, it is stupid us who know nothing about own destiny.

(3) In 1943, 80% of mankind would become extinct, then new era would begin<sup>(3)</sup>.

(4) Then important matter is that we could change our future by our will.

He strengthen that worth of his prophecies lies in there.

(5) In his almost weekdays night dream, he is to encounter many grievous disasters with his wonder guide. None could be such him who observe tremendous disasters in human history. Thus he has been entirely warning and warning.

(6) Conclusionary to tell, we now stand on situation of entirely wrong.

Since a civilization causing own extinction could be said up side down.

It is due to the will of world minor wise dominator who know everything.

The key to understand is that revolution is more terrible than war

defeating. They consider it better being extinct together with people than

losing their established high status and the power (the kernel of Satan).

-References-

(2) <<http://www.jucelinodaluz.com.br/>>

(3) Mario Enzo, O HOMEN A FRENTE DAS PROFECIAS, 2005, Mario Enzo Bellior Jr, Brazill.  
葺澤, 山川監修訳、未来からの警告, たま出版, 2007, 東京.

(4) Jucelino, 山川訳, 未来予知ノート p25, softbank creative, 2007, 東京.

☞: Now it is told that his publication is nothing except in Brazill and Japan.

⑤ **The 1970s greatest hit songs suggesting grievous apocalypse world.**

Then key is the angel name **Michael** who thrown down Satan into hell.

(1) **Jumping Jack Flash** by Mick Jagger the Rolling Stones UK(1969).

It's not a kind of commonsense lyric, but entirely curious **black magic world song** shouting "it's all right, it's gas, gas, gas!!!". The introduction is in serious weather, I was born in cross fire hurricane of driving rain.....

I was schooled with a strap across my **back**....., I was crowned with a spike right through my head. I'm Jumping Jack Flash. it's gas,.....

The song had foretold death of a member by drowning.

By this song, author could not help associate with abrupt bursting of methane gas at north pole (the crown of earth). You should ask climatologists about it.

Also in UK, Michael J. Benton wrote WHEN LIFE NEARLY DIED (2003). It tells shocking mass extinctions of species by methane burp in paleo-climatology researches.

(2) **Save the children** in album What's going on by Marvin Gaye USA (1971).

Who really care?, To save the world in **despair**, There'll come a time the world won't be singing, Flower won't grow, Bell won't be ringing,

Who's willing to try to save the world that is destined to die.

Why could they recognize such outrageous and disastrous future ?,

Underlined phrase is too severe for us now indulged in our responsibility !.

Then note that the famous Rome report warning against the accelerated and destructive global industrialization was issued at (1972). Both of them had been regretfully neglected by stupid us.

(3) Poem "**Vers la Flamme (Toward the Flame, 1914)**" by Alexander Nikolayevich Scriabin (1872-1915), <[http://jp.youtube.com/watch?v=5\\_FKKIC1oSw](http://jp.youtube.com/watch?v=5_FKKIC1oSw)>.

His son was also died by drowning in river (1919). He was engaged in the theosophical society established by Helena Petrovna Blavatsky. Theosophy discloses being of the **Akashic Records** of human being history from ancient to future. Person the extraordinary could access the informations. They insist the universal brotherhood of humanity with people's equality. Also theosophy seems to be aimed to rescue people by employing full essential knowledges in religions, philosophy and science of all the times.

<<http://en.wikipedia.org/wiki/Theosophy#Music>>.

'08/10/31, 11/16.

**[Part II] : Experimentat and Theoretical Science Approach.**

**[1]:The Climate Change Crisis(CCC) the highest priority emergent problem>**

**① Manifest validity of global Climate Change Crisis by man made GHG emission.**

Discussion in the below is simple, but essential to estimate global temperature.

**(1) Nothing atmospheric gas(GHG) on globe becomes averaged temperature=-18C.**

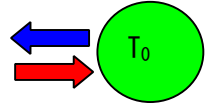
It's very cold. Hence Green House Gas(GHG) is to act temperature rising.

Energy flows are electromagnetic radiations <radiant ray and infrared ray>.

①(1)  $\pi R^2 F_0 = 4 \pi R^2 \sigma_0 T_0^4. \rightarrow T_0 = 255^\circ\text{C} (-18^\circ\text{C}).$

<<Stefan-Boltzmann law>>

energy inflow from sun = energy outflow from earth.



Note if nothing cooling flow from globe, it immediately becomes thermal hell.  
As  $T_0$  is rising, so globe is becoming slightly hotter. That is, inflow > outflow.  
Although macroscopic  $T_0$  could be estimated by assuming "inflow=outflow".

(a)  $F_0 = (\text{solar constant}) = 1368 \text{W/m}^2$  : energy input on unit area on earth from sun.

$R(\text{earth radius}) = 1.5 \times 10^7 \text{m}.$

$\sigma = 5.67 \times 10^{-8} \text{Wm}^{-2}\text{K}^{-4}.$  (Stefan Boltzmann constant),

**(b) Generalized pseudo-cavity radiation of Stefan-Boltzmann law:**

General thermalized matter ( $T_0$ ) in vacuum radiates **electromagnetic wave** energy from surface to surrounding vacuum with the surface energy density  $\sigma_0 T_0^4$ . This is verified by using classical electromagnetic theory and thermodynamics. The essence is due to fact that electromagnetic field thermal pressure  $P = u_R/3$ , where  $u_R$  is EM field energy density. Also note that thermal wall pressure  $P$  and almost molecule thermal kinetic energy density of ideal **gas** is also  $P = u_G/3$ .

Consequently Stefan-Boltzmann law is applicable not only for **EM radiation field**, but also for **thermal molecule gas field** <pseudo cavity radiation>.

☞:  $dU = TdS - PdV. \rightarrow (\partial U / \partial V)_T = T (\partial P / \partial T)_V - P.$  <Thermodynamics>.

$\{U = Vu, P = u/3\} \rightarrow u = T (1/3) du/dT - u/3. \rightarrow du/u = 4dT/T, \rightarrow u = \sigma_0 T^4.$

☞: As its actuality, thermal exchange between atmosphere and globe surface is not only EM radiational, but also thermal molecule kinetical. Then

$$u = u_R + u_G = (\sigma_R + \sigma_G) T^4.$$

(2) **Inflow reflection by albedo and outflow reflection s by GHG trapping:**

More considerations are necessary for so called albedo and GHG trapping.

(a) **Albedo** is solar inflow reflection probability  $\equiv m$  by globe surface (clouds, ice surfaces, etc), that is,  $F_0 \rightarrow (1-m) F_0$ .

(b) GHG almostly do'nt trap input **radiant ray**, but do outflow of **infrared ray**.

GHG gas on globe enforces **infrared ray** many times trial to penetrate through GHG in repeated reflection between globe surface and GHG. We define **ray penetrating probability**  $\equiv a \equiv 1-b$ , then  $Fb$  is energy flow beign trapped and reflecting to the surface by GHG, thus the infinitive times repeating forms so called power series.

**GHG EFFECT of STATISTICAL MECHANICAL MODEL**  
as repeated reflection of infrared ray between surface and atmosphere.

[http://www.fnorio.com/0040Greenhouse\\_effect1/Greenhouse\\_effect1.htm](http://www.fnorio.com/0040Greenhouse_effect1/Greenhouse_effect1.htm)

$$S_n = F + bF + b^2F + b^3F + b^4F + \dots + b^n F \dots = F / (1-b) \equiv g F.$$

$$R_n = aF + baF + b^2aF + b^3aF + \dots + b^naF = aF (1 + b + b^2 + b^3 + b^4 + \dots + b^n) = aF / (1-b) = F.$$

Thus input flow equivalently increase by GHG <Green House Effect, or **radiation force**> as  $F\{b + b^2 + \dots + b^n + \dots\}$ , where  $b$  is trapping probability. In anyway, major input energy never fail to escape from globe by many many trials.

<<generalized Stefan-Boltzmann law>>  
 $\pi R^2 F_0 (1-m) / (1-b) = 4 \pi R^2 \sigma_0 T^4 \dots \textcircled{1} \textcircled{2}$

Case for  $m=0.4$ .  
 $T=15^\circ\text{C}$ .  $\rightarrow b=0.48, a=0.52$ . <now state>,  $g=1.15$ .  
 $T=17^\circ\text{C}$ .  $\rightarrow b=0.49, a=0.51$ . <critical state>,  $g=1.18$ .

Note that **global mean temperature** is dominated only by two factors  $= \{m, b\}$ .

That is **ALBEDO REFLECTION** probability and **GHG TRAPP** probability. This fact is to become main factors also for policy making against climate change crisis.

**② Observing actual disasterous CCC scens in many countries on globe make you notice and realize serious facts without hard scientificl debates.**

After all, CCC is to become more cruel to cause destroying fundamental **living resource** (especially foods and water) and **living infrustructures** (houses, etc).

(1) Recent years giant drought in Australia, Africa with famine and AIDS, USA, ..

Droughts always accompany big floods in counter side districts. Epecially recent Africa has become almost hell, which is rarely informed to us.

That is, the facts may be need to conciel against peoples for certain powers.

(2) giantic hurricane in USA, middle America, South Asia, frequent tornades,

USA may be most advanced nation in climate change sicence, but simuletaneously most innocent people nation emitting the worst CO2. However the hurricane

Catrina and frequent tornades are said to make people to notice CCC.

(3) sea level rising in Bangladesh's delta, southern ilands, Venetia,

(4) anomaly heat waves in Europe, big forest fires in many country, etc, .....

10°C temperature variation is not rare in our dailly life. It is not Global 1°C temperature rising itself, but is the enormous dynamic energy by 1°C rising in atomospheric fluid causing various disasters is serious important.

Could you imagine how much energy need to warm up globe by 1°C ?.

You should observe inner state of boiling kettle, where steam bubbles are bursting and random fever water flows are found. It's small extreme model of **thermalized fluid daynamic**s simulating atmospheric one.

It is certain that many many disaster events had happned on globe, but to find systematically collected topical information is difficult in websites.

<<http://www.ncdc.noaa.gov/oa/reports/weather-events.html>>

**③** IPCC (inter govermental panel on climate change) released serious report

(2007/11/17, Spain Valencia) that (P13) anthropogenic warming could lead to some impacts that are abrupt or irreversible depending upon the rate and magnitude of the climate change. Though they say nothing concrete about the "some incompact....".

<[http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4\\_syr\\_spm.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf)>.

Therefore author could not help to research on **abrupt or irreversible impacts**.

Untill end of 2007, stupid author has been considering CCC would be events in far future and gradual process. Then he had noticed the fact is up side down.



## [2]:The highest priority emergent problem<methane clathrate melting crisis≡MC>

Most of people consider that so called global warming is gradual process in coming decades and the crisis would be in the future. However the fact is not so optimistic. Now many scientists fear for huge amount of unstable MC = methane clathrate (ice, hydrate) melting in Antarctic sea floor by rising sea temperature 2~3°C. The estimated amount of global mc is about 7000G ton in carbon standard, which is about twice much of fossil coal and fuel reservoir. Methane is more 25 times potent as GHG effect than CO<sub>2</sub>. Once they emitted to atmosphere, temperature rising accelerate that of sea to enhance more emission of methane. It becomes feedback process to spike out temperature rising. Abrupt and irreversible CCC is to attack on earth. Paleo-climatology recently recognized mass extinction of pieces by methane burps in Permian (251.4my) and Paleocene - Eocene Thermal Maximum (55.8my = million years ago). The final stage might be hell.

### ① Clathrate Gun Hypothesis the past history and the current situation:

In Antarctic sea floor, there are **ticking time bombs**. Dangerous huge amount of unstable methane clathrate (MC) is to be melted into atmosphere by triggering of sea temperature  $T_s$  2~3°C rising. Once triggered, CH<sub>4</sub> accelerate temperature rising of atmosphere =  $T_A$  as 25 times more powerful than CO<sub>2</sub>. Rising  $T_A$  simultaneously accelerate the cause of rising  $T_s$ . It becomes feedback looping as abrupt bursting of huge CH<sub>4</sub> into air <Clathrate Gun Hypothesis ≡ CGH>. The strong validity of CGH was supported by paleo-climatology that showed dramatic mass extinction of pieces by abrupt, apocalyptic disastrous methane burp. This fact impacted to scientists.

(1) A Japanese Congress asked the National Assembly on dangerous MC (2000).

He had geoscience knowledge, but his neighbours could not understand.

At that time, he pointed out necessity of taking into account of MC action in IPCC model of climate change predicting system.

<<http://www.sangiin.go.jp/japanese/joho1/syuisyo/150/syuh/s150005.htm>> <Japanese>

(2) **Methane**: A scientific journey from Obscurity to **Climate Super-Stardom** by

Gavin Schmidt (2004/9): <<http://www.giss.nasa.gov/research/features/methane/>>

- \*Wei-Chyung Wang (1976), methane in atmosphere is significant greenhouse gas.
- \*Jerome Chappellaz established chemical precise analysis on trapped air in ice core for paleo-climatology analysis.
- \*Jerry Dickens (1995) suggested that massive air input of light carbon from MC,
- \*Jim Kennett (2000) proposed the so-called "**clathrate gun hypothesis**",

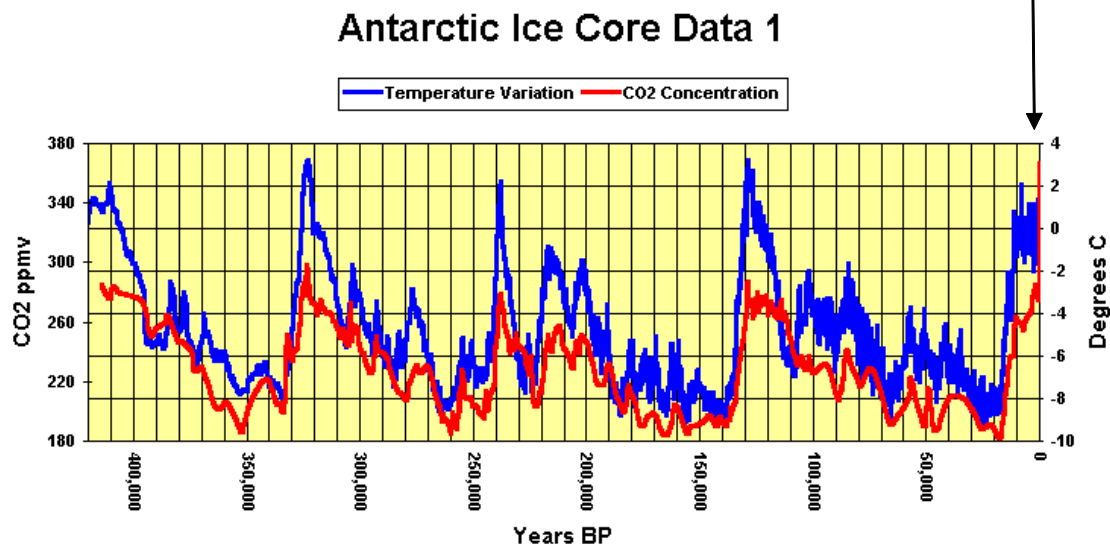
- (3) Ticking Time Bomb by John Atcheson (2004/12/15): MC warning No1 website.  
<<http://www.commondreams.org/views04/1215-24.htm>>
- (4) By Volker Mrasek, A Storehouse of Greenhouse Gases Is Opening in Siberia.  
(2008/4/18). <<http://www.spiegel.de/international/world/0,1518,547976,00.html>>
- (5) No Ice At The North Pole: Polar Scientists Reveal Dramatic New Evidence of Climate Change by Steve Connor (2008/6/27).  
<<http://www.commondreams.org/archive/2008/06/27/9920/>>
- ☞: Antarctic temperature rising is 2~3C, while global average is 1C. Hence Antarctic sea floor has become more dangerous. See below eerie photo.  
<<http://www.realclimate.org/>>
- (6) Clathrates: little known components of the global carbon cycle :  
MC reservoir is about 1100Gton much as twice of fossil resources. By temperature 1~2°C rising would trigger the burps bursting.  
<<http://ethomas.web.wesleyan.edu/ees123/clathrate.Htm>>
- (7) Michael. J. Benton, WHEN LIFE NEARLY DIED, Thame & Hudson Ltd, London, 2003.  
Permian mass extinction by MC eruption became spot lighted at a burst.  
Simultaneously also Antarctic MC became spot lighted at a burst.
- (8) <[http://en.wikipedia.org/wiki/Extinction\\_event](http://en.wikipedia.org/wiki/Extinction_event)>、
- (9) <<http://www.google.co.jp/search?hl=ja&q=mass+extinction%2Cmethan+clathrate+&btnG=%E6%A4%9C%E7%B4%A2&lr>>.
- (10) IMPACTS: Investigation of the Magnitudes and Probabilities of Abrupt Climate Transitions has launched recently in USA.  
<<http://www.sciencedaily.com/releases/2008/09/080918192943.htm>>

[3]: Who dominate global mean temperature  $T_G$  in ultra long time range? !:

According to observation of paleo-climatology,  $T_G$  is periodic cycle of sawtooth. In the below, author present hypothesis that  $T_G$  is pulled up by positive feedback GHG emission from MC, and is pulled down by photosynthetic of global vegetations in continent and marine.

①  $T_G$  is determined by GHG concentration:

<[http://www.daviesand.com/Choices/Precautionary\\_Planning/New\\_Data/](http://www.daviesand.com/Choices/Precautionary_Planning/New_Data/)>



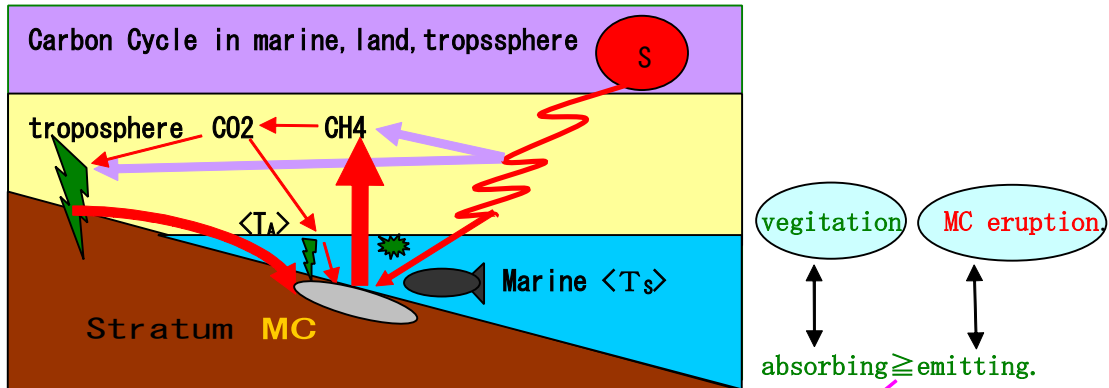
Note 0°C temperature standard is 273+15°C(global temperature now) in above data. Ice core data show that the past 500 thousands years global temperature remarkably has been **oscilating** more than 5 times between top and botom[-10~+4°C] degree with the period of about 100 thousand years as **almost sawtooth wave**. Then(ultra long)periodic  $T_G$ (for the time being,we use Antarctic temperature) amplitude=[-10C~+4°C] never become reasoable by **astrophysical parameter fluctuation**(they are almost constant in ultra long time averaging?),but only by that of globe **physical and chemical surface state**.Then most simple intepretation is overwhelming overlapping of both graph{ $T_G, D_C$ }where  $D_C$  is CO2 concentration. Now let rember the macro scopic T equation ①(2):  $F_0(1-m)/(1-b)=4\sigma_0 T_G^4$ .  $T_G$  is evidently determined by parmeter **b** as function of GHG concentration  $D_C$ .

② Then, who determine GHG concentration ? : CARBON CYCLE.

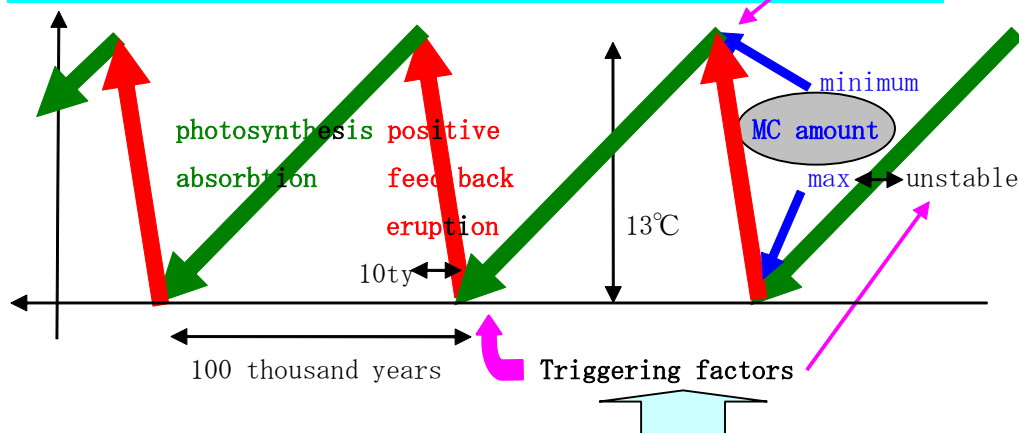
(1) One is carbon cycle through global photosynthetic vegetation, which would act only decreasing GHG concentration  $D_c$ .

(2) The other acting for increasing  $D_c$  is methane eruption in  $\{T_c, D_c\}$  spiking phase by huge amount of MC eruption from marine.

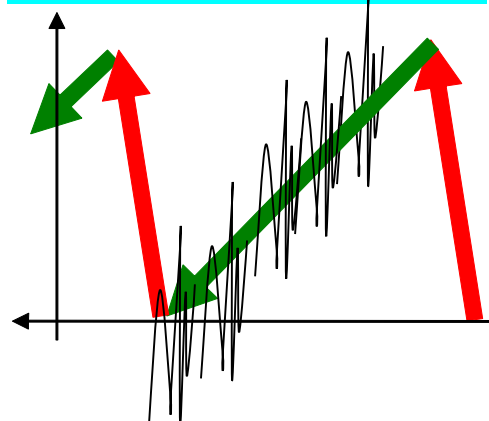
(3) The ultra long periodic concentration and temperature oscillation paralleling with carbon cycle between troposphere and marine.



(4) {cause of macro  $\{T_c, D_c\}$  sawtooth oscillation in ultra long term} :



(5) causes of local fluctuation:



- (a) Miranchovitch cycle, astro-physical, sun activity, meteorite impact,
- (b) ocean circulation variation,
- (c) volcano eruption, earth quake, volcano ash and gas,
- (d) big forest fire, thunder,
- (e) vegetation variation
- (g) local methan eruption, by...
- (h) man made  $CO_2$ .

Global temperature is dominated by alternating of both **carbon absorbtion** as vivid photosynthetic of vegetation and **carbon emitting** from methan clathrate the corpse. The latter has an aspect of so to say a reincarnation of life.

Bottom down in temperature is to weaken CO2 absorbtion of vegetation and then **something fluctuation attack unstable MC to cause CH4 eruption**(carbon emitting) which become over absorbtion of vegetation. The feedback process increasing temperature(Terminating T downward phase and turning to T upward). Then **temperature increasing recover and enhance carbon absorbtion of vegetation** to overcome CO2 emitting of MC. Thus T downward phase is to begin.

(6)Terminating absorbtion is to change to emitt carbon=temeperature upward.

The termination is caused by destroying photosynthetic vegetation,  
or by excess carbon emitting over carbon absorbing of photosynthetic.

(7)Terminating emission is to change to absorb carbon=temeperature downward.

The termination is caused by growing photosynthetic vegetation,  
or by full consumption of emitting carbon.

#### [ 4 ]:The Carbon Budget and Possible Bursting Amount from MC.

##### ①Weight distribution of each GHG componets in Atmosphere :

<<http://ja.wikipedia.org/wiki/%E5%9C%B0%E7%90%83%E3%81%AE%E5%A4%A7%E6%B0%97>>

molecule	Mol ratio	weight	wet ratio	Air total w=5282Tt (5320)
N2(28)	0.78084	21.865	0.7555	3990.55Tt=3990.55X10 <sup>12</sup> t
O2(32)	0.20946	6.7027	0.2315	1222.78
Ar(40)	0.0093	0.372	0.0128	67.61
CO2(44)	0.000381	0.01676	0.000579	<b>3.05</b> Trillion ton(Tt)
vapor				
total	0.999981	28.9565		Air total w=5282Tt

☞:1mol molecule=Avogadro number= $N_A=6.02214179 \times 10^{23} \text{ mol}^{-1}$ . ideal gas=22.4l.

##### ②CO2 Budget:

(1)280ppm(1800)→380ppm(2006) CO2 increasing. <industrial revolution≡IR≡1800>

Weight ratio 380/280=1.36times,  $3.05 \times (1-1/1.36) = 0.8074\text{Tt}$  increasing.

Before IR : 2.24Tt→**0.8070Tt increase**→now=**3.05Tt**(concentration=380ppmv).

CO2 1ppm=8Gt.

(2)Carbon emitt in 2006=1.5Gt+7.6Gt=9.1Gt. land&ocean sink=5.0Gt.

emitting amount/year=**4.1Gt**. CO2conv=**15Gt**. ⇔ 1.88ppm(観測値=1.9ppm)

<[http://www.globalcarbonproject.org/global/pdf/GCP\\_CarbonCycleUpdate.pdf](http://www.globalcarbonproject.org/global/pdf/GCP_CarbonCycleUpdate.pdf)>

##### (3)Methane Clathrate reservoir and "possible bursting amount" of equivalent CO2 :

C→CO2 weight conversion<unit : 1000Gt=1000X10<sup>9</sup>t=1X10<sup>12</sup>t=1tt>.

(4)global inventory of methan clathrate=3000 Gton in Carbon standard=3tt.

global inventory of methan bubble?=2000 Gton in Carbon standard=2tt.

<<http://geosci.uchicago.edu/~archer/reprints/buffett.2004.clathrates.pdf>>

CO2conversion=(44/12)x3.0tt=**11.0tt**. 「almost 4times of **3.05tt** now amount」.

「11.0/0.807 =13.6 times of CO2 increasing after IR」. → ΔT≅13.6°C

Aantarc resorviour=**500Gt**=CO2conv=(44/12)x0.5tt=1.83tt.

「1.83/0.807=2.23 times of CO2 increasing after IR」. → ΔT≅2.2°C.

CO2 increasing after IR caused 1 °C rising, so ΔT is coarse linear estimating.

Actually CH4 is 25times stronger than CO2, therefore it never be such small 2.2°C.

**[ 5 ]:Abrupt Global Climate Change the General Possibility:**

**①Time sensitivity equation of the global temperature:**

In the below, we show wide span discussions only by the equation [1]①(2)

$$\pi R^2 F_0(1-m)/(1-b) = 4 \pi R^2 \sigma_0 T^4 \dots [1]①(2) \rightarrow F_0(1-m)/(1-b) = 4 \sigma_0 T^4 .$$

$$\rightarrow T = [F_0(1-m(t))/4 \sigma_0(1-b(t))]^{1/4} . \dots\dots\dots(1)$$

$$dT/dt = (1/4) [F_0(1-m(t))/4 \sigma_0(1-b(t))]^{-3/4}$$

$$\times \{-F_0 m'(t)/4 \sigma_0(1-b(t)) + b'(t) F_0(1-m(t))/4 \sigma_0(1-b(t))^2\}$$

$$= (1/4 T^3) \{ \langle -m'(t)/(1-m) \rangle F_0(1-m)/4 \sigma_0(1-b(t))$$

$$+ \langle b'(t)/(1-b(t)) \rangle F_0(1-m(t))/4 \sigma_0(1-b(t)) \} .$$

—Global Temperature Change Rate Equation—

$$dT/dt = (T/4) \{ \langle -m'(t)/(1-m(t)) \rangle + \langle b'(t)/(1-b(t)) \rangle \} \equiv k(t) T . \dots(2)$$

$$k(t) \equiv (1/4) \{ \langle -m'(t)/(1-m(t)) \rangle + \langle b'(t)/(1-b(t)) \rangle \} . \dots(3)$$

$$0 < m(t), b(t) < 1 . \dots(4)$$

$$T(t) = T(0) \exp[ \int_0^t k(u) du ] = [F_0(1-m(t))/4 \sigma_0(1-b(t))]^{1/4} . \dots(5)$$

Note that **albedo of m** and **GHG of b** is quite symmetric. The **exponential function** form may enable **abrupt change** in following conditions.

**②The condition for becoming global abrupt temperature up:**

(1)  $m'(t) < 0$ : **Abrupt albedo decreasing** nearly at  $m \doteq 1$  in **glacier era**.

Then, the term  $\langle -m'(t)/(1-m) \rangle$  becomes larger. **Volocano GHG of b increasing** made triggering instability and terminating **snow ball earth** era .

(2)  $0 < b'(t)$ : **Abrupt GHG increasing** nealy at  $b \doteq 1$  in **"near future era?!?!"**.

Then, the term  $\langle +b'(t)/(1-b) \rangle$  become larger. GHG of hudge methane etc would cause unstability of messing **fire ball earth**.

**③The conditon for becoming global gradual temperature down:**

(1)  $m'(t) = 0, 0 > b'(t)$  by **giantic photosynthesis sink of vegetation**.

(2)  $0 > b'(t), m'(t) > 0$  at  $m \doteq 1$  enhance glacier growing. Then gradual b down might be sink by waters in glacier ears.