Earth Magnetic Field

redefined source

reexamined influence

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Agenda

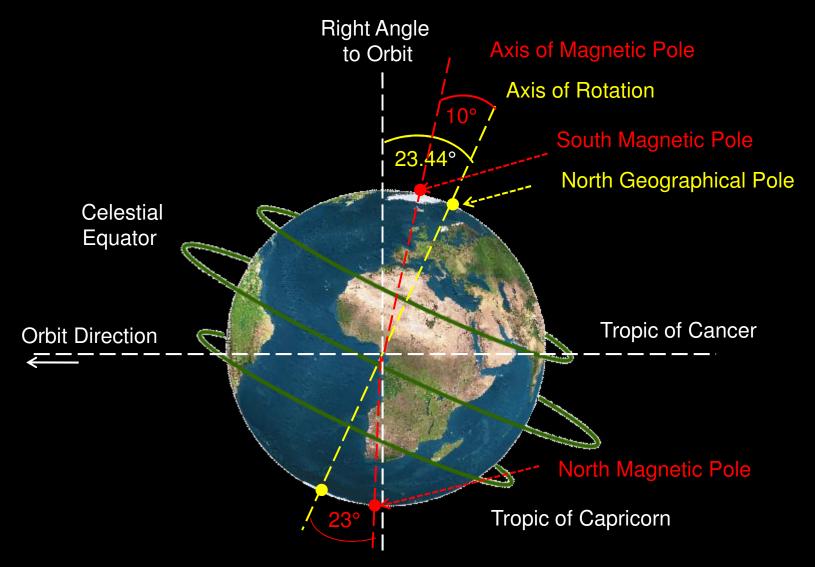
Observations

Earth Magnetic Field

Influence on Earth Spin Speed

Influence on Earth Temperature

The Geo Pole and the Magnetic Pole



https://www.ga.gov.au/products/servlet/controller?event=GEOCAT DETAILS&catno=69264

Observations

- 2 Earth magnetic poles are moving eastward. The distance between the two
 magnetic poles has increased by 5360 km since 1900, when measured across
 the Atlantic.
- The magnetic pole in the Arctic lost 6% of its strength over a 100 years, while the one in Antarctica lost 4%.
- The emergence of Reverse Magnetic Flux (Plasmoids) in Antarctica.
- Increased number of Earthquakes
- In 27 years Saturn has slowed down its 11 hours 39 minutes spin by 8 minutes.
- In 22 years, Venus has slowed down its 243 Earth days spin by 6 minutes.
- Venus and Uranus are spinning in a direction contrary to other planets.

The Magnetic Field Change is inconsistent

| | Year 1900 | | | Year 2014 | | | Change | |
|--------------------------------|---------------|----------------|--------------|---------------|----------------|--------------|--------------|------|
| | Latitude | Longtitude | nT Intensity | Latitude | Longtitude | nT Intensity | nT Intensity | % |
| South Magnetic Pole/ Arctic | 70° 30' 0" N | 96° 12' 0" W | 61,120 | 85° 54' 0" N | 149° 0' 0" W | 57,177 | -3,943 | -6% |
| Toronto | 43° 43' 15" N | 79° 24' 45" W | 62,068 | 43° 43′ 15″ N | 79° 24' 45" W | 54,220 | -7,848 | -13% |
| New York | 40° 42' 28" N | 73° 54' 19" W | 60,212 | 40° 42' 28" N | 73° 54' 19" W | 52,020 | -8,192 | -14% |
| San Francisco | 37° 47' 45" N | 122° 22' 48" W | 54,342 | 37° 47' 45" N | 122° 22' 48" W | 48,674 | -5,668 | -10% |
| Mexico City | 19° 25' 37" N | 99° 7' 39" W | 46,648 | 19° 25′ 37″ N | 99° 7' 39" W | 40,681 | -5,967 | -13% |
| Rio De Janero | 22° 43' 18" S | 43° 27' 19" W | 25,517 | 22° 43′ 18″ S | 43° 27' 19" W | 23,264 | -2,253 | -9% |
| Moscow | 55° 45' 0" N | 37° 42' 0" E | 49,668 | 55° 45' 0" N | 37° 42' 0" E | 52,388 | 2,720 | 5% |
| London | 51° 29' 16" N | 0° 10' 41" W | 47,379 | 51° 29' 16" N | 0° 10' 41" W | 48,678 | 1,299 | 3% |
| Vladivostok | 43° 7' 48" N | 131° 57' 38" E | 52,058 | 43° 7' 48" N | 131° 57' 38" E | 52,631 | 573 | 1% |
| Ankara | 39° 55' 44" N | 32° 51' 11" E | 43,741 | 39° 55′ 44″ N | 32° 51' 11" E | 47,445 | 3,704 | 8% |
| Athens | 37° 56' 38" N | 23° 39' 11" E | 42,493 | 37° 56' 38" N | 23° 39' 11" E | 45,846 | 3,353 | 8% |
| Tokyo | 35° 40' 59" N | 139° 48' 32" E | 45,695 | 35° 40' 59" N | 139° 48' 32" E | 46,394 | 699 | 2% |
| Cairo | 30° 4' 40" N | 31° 15' 3" E | 39,789 | 30° 4' 40" N | 31° 15' 3" E | 43,446 | 3,657 | 9% |
| Dubai | 25° 16' 16" N | 55° 19' 44" E | 40,345 | 25° 16' 16" N | 55° 19' 44" E | 43,947 | 3,602 | 9% |
| Colombo | 6° 55' 37" N | 79° 50' 53" E | 38,010 | 6° 55' 37" N | 79° 50' 53" E | 40,522 | 2,512 | 7% |
| Kuala Lumpur | 3° 9' 0" N | 101° 42' 29" E | 39,547 | 3° 9' 0" N | 101° 42' 29" E | 41,822 | 2,275 | 6% |
| Perth | 31° 57' 22" S | 115° 51' 11" E | 57,133 | 31° 57' 22" S | 115° 51' 11" E | 58,269 | 1,136 | 2% |
| Sydney | 33° 53' 23" S | 151° 1' 42" E | 57,923 | 33° 53' 23" S | 151° 1' 42" E | 57,092 | -831 | -1% |
| Falkland | 51° 42' 4" S | 57° 50' 56" W | 38,349 | 51° 42' 4" S | 57° 50' 56" W | 28,479 | -9,870 | -26% |
| Ushuaia | 54° 47' 31" S | 68° 17' 53" W | 43,225 | 54° 47' 31" S | 68° 17' 53" W | 32,016 | -11,209 | -26% |
| Toamasina/ Madagascar | 18° 10' 0" S | 49° 23' 0" E | 38,810 | 18° 10' 0" S | 49° 23' 0" E | 35,110 | -3,700 | -10% |
| Aukland | 36° 54' 14" S | 36° 54' 14" E | 39,195 | 36° 54' 14" S | 36° 54' 14" E | 30,068 | -9,127 | -23% |
| Cape Town | 33° 58' 44" S | 18° 28' 55" E | 35,984 | 33° 58' 44" S | 18° 28' 55" E | 25,653 | -10,331 | -29% |
| North Magnetic Pole/ Antarctic | 71° 48' 0" S | 148° 24' 0" E | 69,175 | 64° 18' 0" S | 136° 48' 0" E | 66,749 | -2,426 | -4% |

http://www.ngdc.noaa.gov/geomag-web/#igrfwmm

http://wdc.kugi.kyoto-u.ac.jp/poles/polesexp.html%20

The Magnetic Field Strength at Poles



| | <u>Antarctic</u> | | | | Arctic | | | |
|------|-----------------------------------|-----------------------|-----------------------|-------------------------|-----------------------------------|-----------------------|-----------------------|-------------------------|
| Year | Distance from Geo Pole (km) | Measured Mag Field | Estimated Plasmoid | Estimated True Field | Distance from Geo Pole (km) | Measured Mag Field | Estimated Plasmoid | Estimated True Field |
| 1900 | 2,025 | 69,175 | 2,403 | 71,578 | 2,168 | 61,120 | 2,819 | 58,301 |
| 2014 | 2,861 | 66,749 | 4,838 | 71,587 | 458 | 57,177 | - | 57,177 |

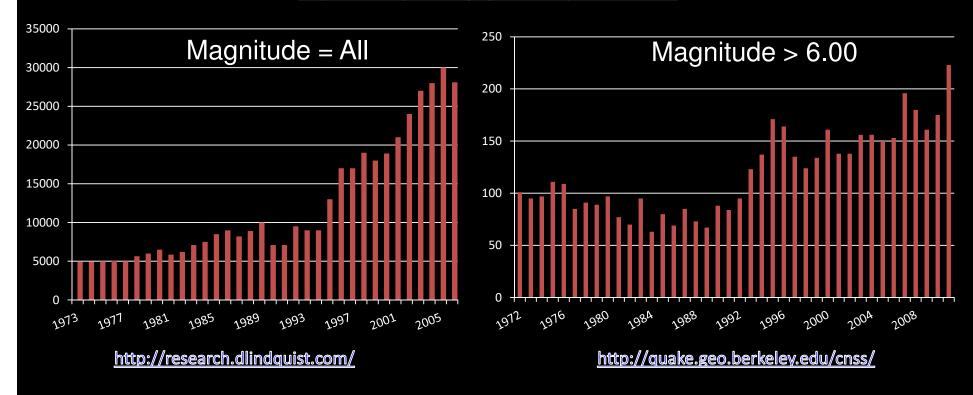
http://www.ngdc.noaa.gov/geomag-web/#igrfwmm

http://wdc.kugi.kyoto-u.ac.jp/poles/polesexp.html%20

Earthquakes

| DATES | DEDIOD | # EARTHQUAKES | | | |
|--------------|---------------|--------------------|--|--|--|
| FROM & TO | <u>PERIOD</u> | (Magnitude > 6.99) | | | |
| 1863 to 1900 | 38 yrs | 12 | | | |
| 1901 to 1938 | 38 yrs | 53 X 18 | | | |
| 1939 to 1976 | 38 yrs | 71 | | | |
| 1977 to 2014 | 38 yrs | 213 | | | |

https://earthquake.usgs.gov/earthquakes/search/



Where is Earth Magnetic Field coming from



hemisphere (clockwise).

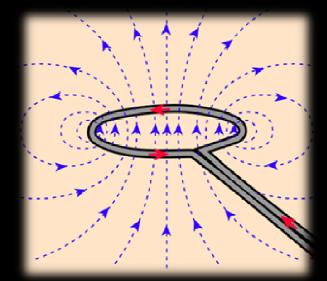
The Coriolis Effect

The Coriolis Force is an inertial force that acts on objects that are in motion relative to a rotating frame of reference. It acts in a direction perpendicular to the rotation axis.
 Objects moving in a rotating fluid veer to the right in northern hemisphere (anti-clockwise) and veer to the left in southern

http://www.cleonis.nl/physics/phys256/inertial oscillations.php

Electromagnetic Right Hand Rule

- 1. The right hand rule deals with the magnetic field that is induced by Current moving through a wire. Take your right hand, and wrap your fingers around the
 - wire, with your thumb pointing in the direction that the current is flowing. Your fingers now represent the direction of the lines of magnetic force.
- 2. Since Electrons direction is opposite to its Current, then the rule should be inversely applied to find the
 - direction of the induced magnetic field, when attributed to electrons flow direction.



Combining the Two Rules in the Outer Core

SSSS Induced Magnetic Field in the upper half of the Outer Core points downward. When traced unto the Surface it appears as a magnetic field of South Polarity. 2. Induced Magnetic Field in the lower half of the Outer Core points upward. When traced unto the Surface it appears as a magnetic field of South Polarity... Also! 5555 5555

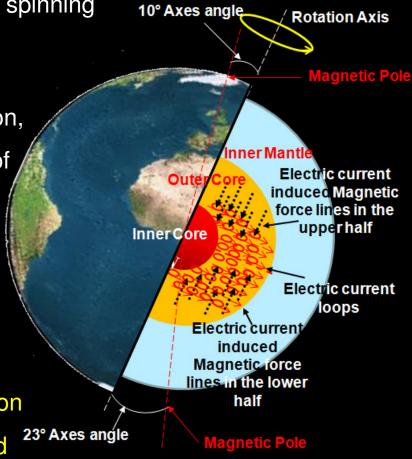
http://www.cleonis.nl/physics/phys256/inertial oscillations.php

Profile of Earth Induced Magnetic Field

It would last as long as long as the Radioactive Inner
 Core keeps ejecting electrons that flow in the spinning
 Outer Core.

2. It would emerge parallel to the Axis of Rotation, since it is induced on right angle to the path of the electrons, which flows at right angle to the Axis of Rotation.

3. It would appear in the northern and southern hemispheres as magnetic field of South Polarity at the orthographic projection of the Outer Core. The centre of which should be co-centric to geo poles.



Iron Crystal Alignment with a Magnetic Field

Force

The Inner Core has an Inner Core of its own

The solid iron crystals in the outer- Inner Core are aligned

in north-south direction; Ferromagnets do have their

crystals aligned along with it magnetic field function.

• The solid iron crystals in the inner-Inner Core are roughly aligned east-west, which tells that it carries no ferromagnetic function.

It is the radioactive body that keep ejecting electrons

out in all directions but follow east-west by Coriolis Effect.

Radioactive Inner Inner Iron Crystal Alignment with electrons flow

Ductile Outer Core

Ferromagnet Outer Inner

https://news.illinois.edu/view/6367/204421

Rotation

Axis

Upper Core

∕lagnet

Magnet

The Earth has a 3-Magnet Configuration

•2 induced magnetic fields out of the Outer Core that are witnessed around Earth Rotation Axis. The resultant surface magnetism is Magnetic Axis

a ring shape around the geo poles at the orthographic

projection of the Outer Core on the surface of Earth.

Its strength is proportionate to Earth spin speed

and radioactive life time of the Inner Core.

• 1 permanent magnet (the Inner Core) that is free to move inside the Outer Core. Its field is stronger than the induced field and its poles keep wandering on

the surface of the Earth as the Inner Core tilts, swivels

and flips due to attraction forces of magnetic cores of celestial

objects such as planets and stars.

Mantle

Reverse Magnetic Flux in Antarctica

There are regions of Reverse
 Magnetic Flux (RMF) where
 Magnetic Field Force points in a
 direction opposite to that expected
 from a dipole magnetic field, in
 ocean areas below Antarctica, South

America and South Africa.

emerge.

 Such RMF aka Plasmoids first appeared some 8,000 BC which could tell that Earth spin about its axis was much slower for any induced Magnetic Field Force to

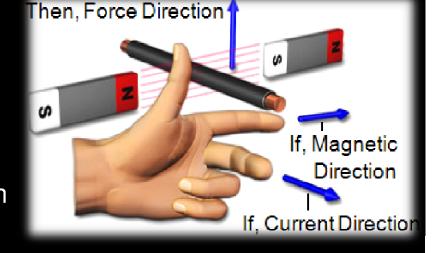
Rotation Axis S: Magnetic Pole of South Polarity Upper Core Induced **Arctic Circle** Magnet Inner Mantle ower Core Induced Mag.₄et **Antarctic Circle**

Source: GIRIJA RAJARAM, T. ARUN, WAY DHAR and A. G. PATIL, 2000 Indian Institute of Geomagnetism, Colaba, Mumbai 400 005, India

Magnet makes the Planet go round

The Lorentz Force by James Maxwell in 1865

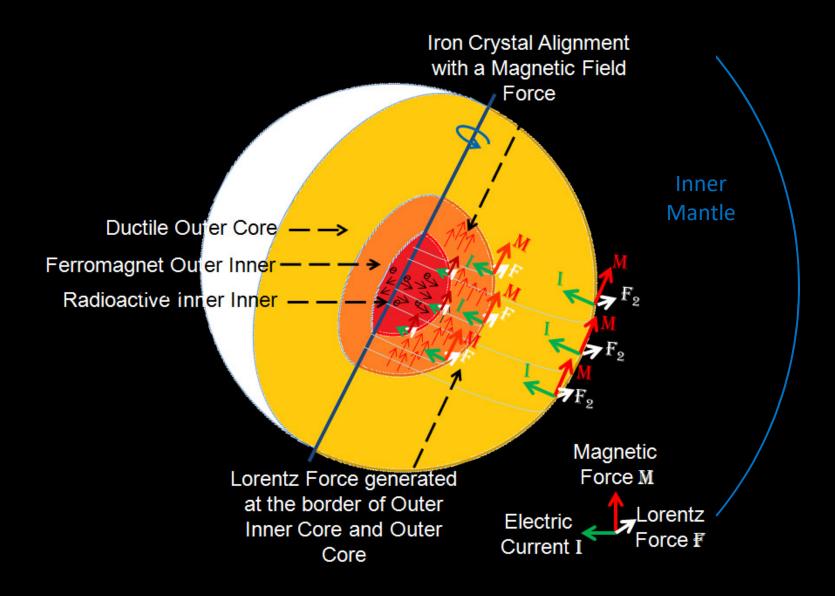
- When a wire that carries electric current is exposed to a magnetic field, a
 Motion Force is generated on the wire that is proportionate to:
 - The Strength of the Electric Current.
 - The Strength of the Magnetic Field Force
 - The Angle that exists between the Magnetic
 Current and the Magnetic Field Force.
- The Motion Force works at right angle with respect to the plane joining of the Electric Current and Magnetic Field Force.



 The Lorentz Force Principle is applied in every day's life, in what we call Motors.



Spinning of Inner Core and of Inner Mantle





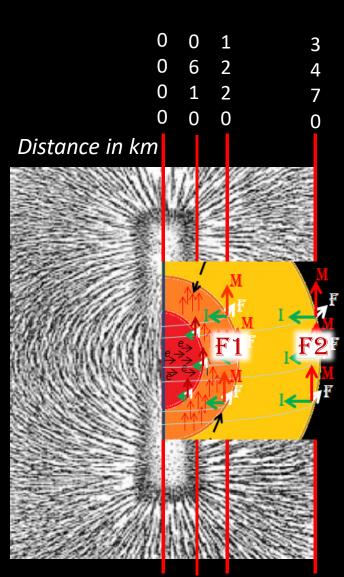
The inner shell of the Inner Mantle

- The main components of the mantle rock, Iron Monoxide included, don't conduct electricity at temperatures and pressures we're used to here at the surface.
- Carnegie Institution for Science in Washington, D.C., led the computer simulation. Starting from 700,000 times the pressure and 1600°C the Iron
 Monoxide conducted electricity as well as a metal. At 3430°C—the temperature at the boundary between the Inner Mantle and the Outer Core—the Iron
 Monoxide remained a respectable conductor.
- The inner shell of the Inner Mantle could therefore be treated as a good conductor, at each point of which there exist 2 distinct forces:
 - Electric Current of electrons arriving from the Outer Core
 - Magnetic Field Force lines sourced from the Inner Core that bath all the geo layers of the planet

http://www.sciencemag.org/news/2012/01/electric-material-mantle-could-explain-earths-rotation

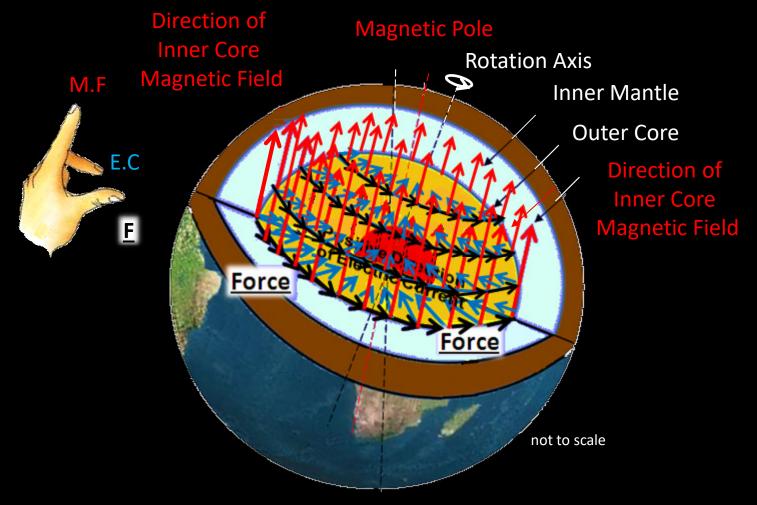
The Inner Core spins faster than the Rest

- On 2011 a research by University of Cambridge concluded that the Inner Core is spinning faster than the rest of Earth.
- Lorentz Force at source of the magnetic field force inside the Inner Core (F1) is greater than that 3,470 km away at the Inner Mantle shell (F2). The spin speed will follow the Lorentz Force applied.
- Caught by the friction forces of the Inner Core and the Inner Mantle, the Outer Core spins at the average of the 2 speeds.
- This explains why the Inner Core spins faster than the rest of the planet



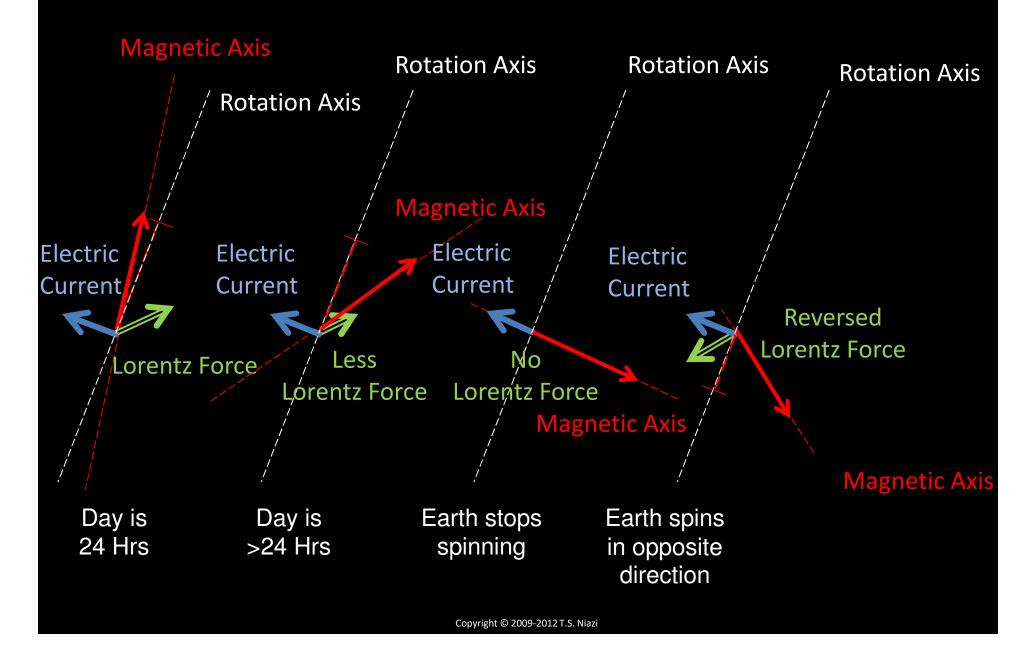


Earth spin follows Lorentz Principle



The Lorentz Force, that results along the perimeter shell, which lies between the Outer Core and the Inner Mantle, drives Earth to spin about its axis.

Earth spin speed can change



Why does Saturn spin in Reverse

• Why when the polar regions of Uranus receive a greater energy input from the Sun than its equatorial regions, Uranus is hotter at its equator

than at its geo poles?

 Why the magnetic field varies. At the northern region is stronger than the magnetic field at the southern region?

 Why Uranus spins in a clockwise direction about its axis, when Earth, currently, spins in an anti-clockwise direction about its axis?

Why does the wind average speed reach 560

Arc 106°

Arc 106°

South Magnetic Pole

Axis of Rotation

Core

Atmosphere

Arc 106°

North Magnetic Equator

Magnetic Equator

Magnetic Field

North Magnetic Pole

Arc 74°

North Magnetic Pole

Arc 74°

North Magnetic Pole

Arc 74°

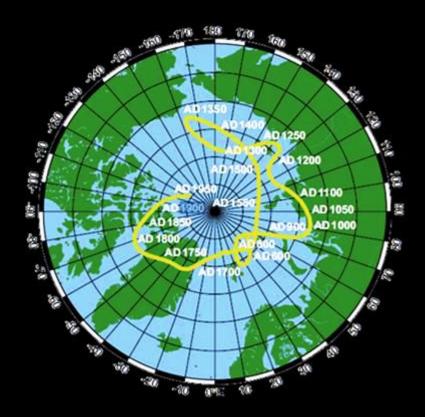
miles/ hour (900km/ hour) on Uranus while on Earth an inconceivable top wind speed of Tornado stands at 319 to 379 mile/ hour (510 to 600 km/ hour)?.

https://planet-earth-2017.com/2017/07/10/what-makes-saturn-spin-about-its-axis-in-reverse-direction-to-earth/

Magnet makes the Climate go around

The Magnetic Poles are always on the move

- The Magnetic Poles keep wandering over the surface of Earth.
- Currently, the South Magnetic Pole in the northern hemisphere is moving away from Canada towards Siberia.
- The North Magnetic Pole in the southern hemisphere is also moving towards Australia.
- As both Magnetic Poles are moving eastward the distance between the two magnetic poles has increased in 800 km in the last 100 years.



http://www.earthweek.com/2011/ew110311/ew110311h.html

http://news.berkeley.edu/2014/10/14/earths-magnetic-field-could-flip-within-a-human-lifetime/

Observations

- The ice cap is shrinking on the west Antarctica where the Magnetic Pole is moving away from and is growing on the east Antarctica where the Magnetic Pole is moving.
- The ice cap is shrinking on west of the Arctic where the Magnetic Pole is moving away from and is growing on east of the Arctic where the Magnetic Pole is moving towards
- The Ice Cap on Mars is also melting ..too.





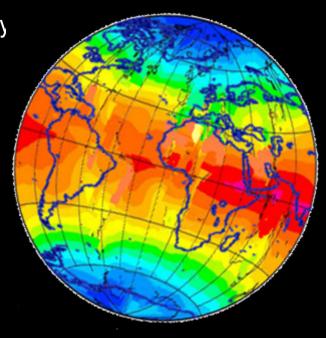
Regions of Homogenous Climate

Tropical Belt, moist hot climate.

<u>Dry Climate Belt</u>, little rain and a huge daily temperature range, arid and desert.

- Middle Latitude Belt, humid, warm, dry summers and cool, wet winters.
- Continental Belt, moderate climate, precipitation is high.

 Cold Polar Belt, cold climate, permanent ice and tundra

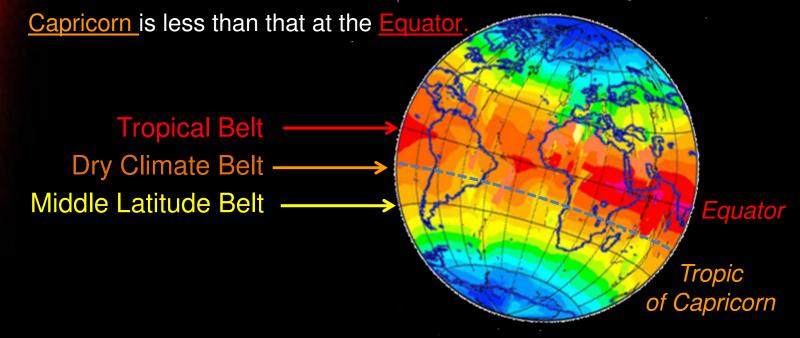


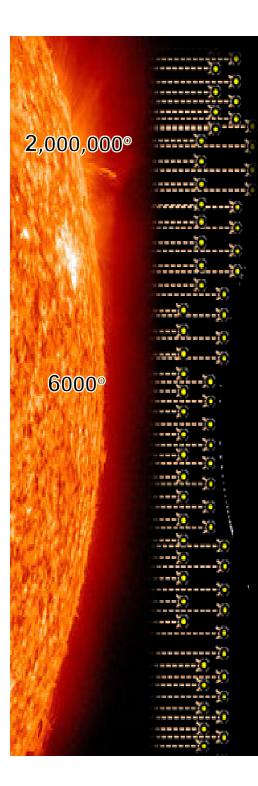


Temperature Belts Dilemma

On December 21st (*Winter Solstice*), Radiation and Light reach the Earth, at right angle, Zenith line, at the Tropic of Capricorn. Yet:

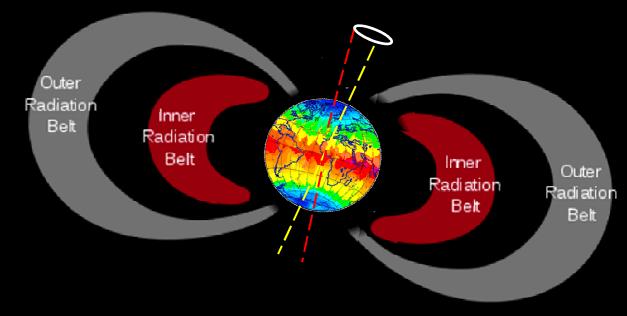
- Temperatures at the Tropical Belt and Middle Latitude Belt vary while both locations have same distance & angle of projection from the Sun!
- Although is closer to the Sun, receives sun radiation at right angle, and has longer hours of daylight, the temperature at the Tropic of





Sun's Emission

- The Sun emits radiation, such as X-rays, Ultraviolet, visible light, Infrared, and Radio waves.
- The Sun also emits charged particles, such as electrons and protons.:
 - Electrons get trapped in the Outer Magnetic Field
 - Protons get trapped in the Inner Magnetic Field.

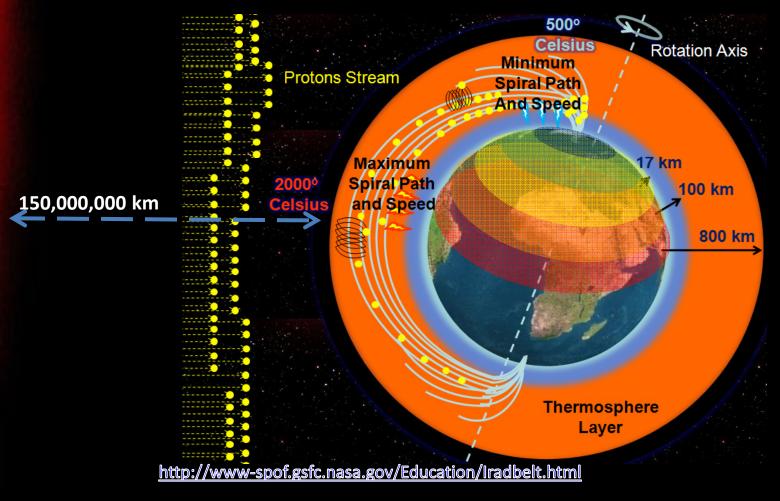


Protons swing and collide with each other

2,000,000°

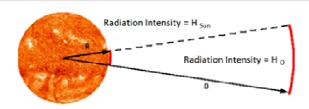
6000°

• Protons spiral along the magnetic field force lines in various pitchlengths and speeds. Protons have more chances to collide with one another at highest speed at mid distance between magnetic poles.





Thermal radiation from the Thermosphere is 1.8 fold stronger than that directly from the Sun

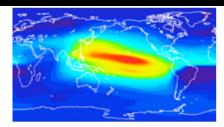


The solar irradiance on Earth at 150 million km D from the Sun is found by dividing the total power emitted from the sun by the surface area over which the sunlight falls. The total solar radiation emitted by the Sun is given by σT , as defined by the Boltzmann's blackbody equation multiplied by the surface area of the Sun $(4\pi R_{2m})$ where R_{2m} is the radius of the Sun. The surface area over which the power from the Sun falls will be $4\pi D$. Where D is the distance of the object from the Sun. Therefore, the solar radiation intensity, $H_{2\pi}$ in (Watt/m-), incident on the Earth looks as follows, where

$$H_{E-S} = \frac{R^2_{sun}}{D^2} H_{sun}$$

- H_{zz} is the radiation intensity (in W/m²) at the Earth's Troposphere due to radiation received from the Sun.
- H_{•-} is the radiation density at the Sun's surface (in W/m·) as determined by Stefan-Boltzmann's blackbody equation $E = \sigma T \cdot ;$ where $\sigma = 5.67 \times 10^{\circ} \text{ W/m·} \times \text{K} \cdot$
- T is the temperature of the surface of the Sun at 6,000 Kelvin
- R_{so} is the radius of the Sun in meters as shown in the figure above; and
- D is the distance from the Sun to the Earth's surface in meters as shown in the figure above.

It is therefore found that the radiation intensity reaching the Earth from the Sun § 1,366 Watt/m.



$$H_{E-T} = \frac{\sigma T^4 x S_{\text{heat ellipsoid in thermosphere}}}{S_{\text{heat ellipsoid reaching Earth surface}}}$$

- $H_{E:T}$ is the radiation intensity (in W/m²) at the Earth's Troposphere due to radiation received from the Thermosphere.
- T is the temperature of the mid distance between the two magnetic poles at the Thermosphere and is taken at average of the highest of 2,000° Kelvin and the lowest of 450° Kelvin i.e. 1,225° Kelvin.
- S_{heat ellipsoid in thermosphere} is the highest thermal radiation region of the Thermosphere that is modeled as an ellipsoid of radii equal to the weakest magnetic contour at 24 mTesla (400 km, 1650 km) and depth of 100 km (where most of the Sun's charged protons get trapped), and is calculated as per following, $S = 4 \pi \left[(a^p b^p + a^p c^p + b^p c^p)/3 \right]^{1/p}$; where p=1.6075 and a= 400 km, b= 1,650 km, c= 100 km.
- S_{heat ellipsoid reaching Earth surface} is the reach of the thermal radiation area from the Thermosphere which is half of the surface area of Earth which equals to ½ πr²; where r is the radius of Earth standing at 6,000 km.
- The selection of the highest thermal radiation as an ellipsoid within the Thermosphere layer is driven by the shape of the ion map measured for the Thermosphere layer at http://ccmc.gsfc.nasa.gov/models/modelinfo.php? model=CTIPe

It is therefore found that the radiation intensity, which reaches Earth from the Thermosphere is 2,534 Watt/m².

Global Warming

Global Warming:

Earth Magnetic Poles have started moving eastwards since 160 years, leading to weaker field in the western hemisphere and southern ocean; causing:

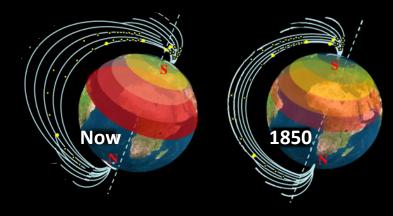
- Trapped Sun charged particles; Protons, to spiral faster along the Magnetic Field Force lines in go/ fro mode between the 2 Magnetic Poles.
- -The collision of spiraling protons at higher speed generate more thermal radiation leading the surface temperature to increase.
- -More protons are able to penetrate weakening Magnetic Field, bombarding at high Kinetic energy land and oceans, leading to additional increase of surface temperature and release of oceans Methane Hydrates, the outcome of which are 2 Green House gases $CH_4 + 2O_2 = CO_2 + 2 H_2O$.

Climate Exchange

Climate Exchange:

The Magnetic Poles are moving eastward; from Canada towards Siberia in the northern hemisphere and from Antarctica to Australia in the southern hemisphere causing:

- The Magnetic Field intensity geo map to tilt.
- The Protons' speed collision map to tilt.
- -The Thermosphere temperature map, ranging from +500°C ~ +1800°C, no only to increase as explained on the global warming



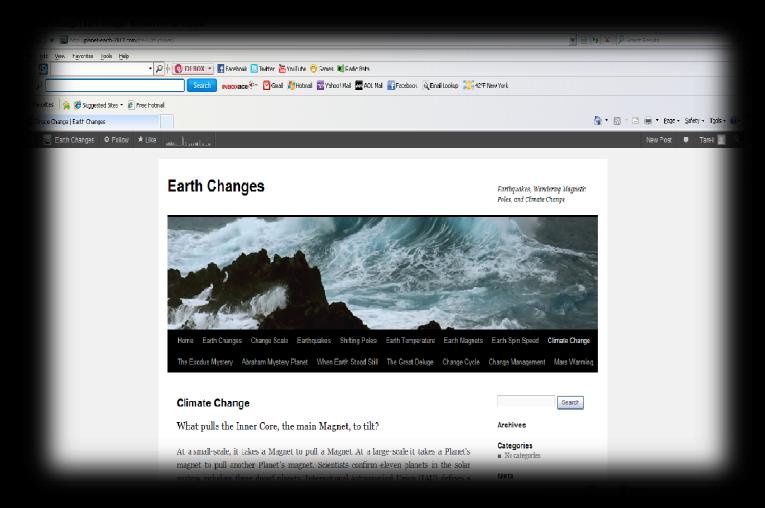
- page but also to tilt following the move of the Magnetic Poles.
- The Temperature Belts on the Earth's surface follow the Thermosphere temperature map and tilt synchronously.
- Cold temperature geographies are becoming warmer and vice versa

A Paradigm Shift that changes our Understanding of the Past and Look onto the Future



http://www.amazon.com/

A Paradigm Shift that changes our Understanding of the Past and Look onto the Future



http://planet-earth-2017.com/

Posts

- ESRI Sea Level Simulation when Earth slows down its spin speed
- Research on Magnetic Poles flipping. Why Berkley may not be correct!
- Another proof that Low Surface Temperature follows the Magnetic Pole
- The True Drop in the Magnetic Field Strength
- Current Magnetic Field Map confirms 3-Magnets Configuration
- Comment on Documentary: Tell Me Why! Earth Spins
- Unprecedented Temperatures
- Earth's magnetic field is collapsing and it is affecting the climate
- Giant Aguifers found under Arid Deserts
- One New Planet, Two New Planets, or One New Planet and its Moon!
- Another reason why Carbon Dioxide and Vapour are on the rise
- 9th Planet
- 9th Planet's Orbit: What are the odds
- Record of Summer Cold Events over Europe
- Why Earth Atmosphere is losing Oxygen
- Why Earth Spin Axis is drifting eastward
- NASA needs to change its assumptions to find Planet 9
- Potential Line of Sight to Planet 9
- Another Proof that the Magnetic Configuration of Earth has Induced and Permanent fields
- What makes Uranus spin about its axis in a reverse direction to Earth's
- Why there exists Sun charged particles at the night side of Mars
- Upsurge in big earthquakes predicted for 2018 as Earth rotation slows
- Earth Magnetic Field- redefined source, reexamined influence
- Fires at the Amazon Forest, is it man made?
- <u>Australian Fire- going deeper into the Root Cause</u>
- Mysterious 'geomagnetic spike' 3,000 years ago Explained
- Another evidence that increase of Green House Gases is not totally man made
- When methane emission by anthropogenic activities is less than its level decades ago, what causes its overall level to rise still?

Q&A