

THE COMING SOLAR FLARES

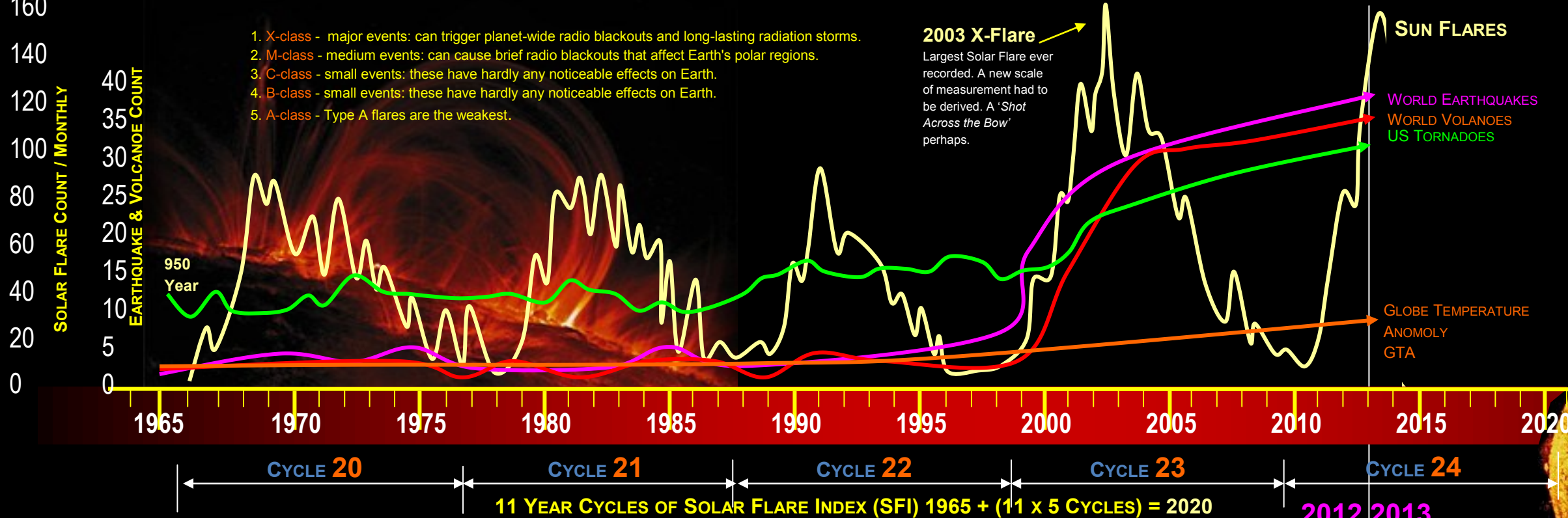
SOLAR FLARE FREQUENCY COUNTDOWN FROM 1965-2012

The purpose of this illustration is to show a possible association amongst the Solar Flares and Earth's geological and meteorological effects. There is no concrete proof that Solar Flares contribute to global changes, but Solar activity does seem to be affecting numerous Earth patterns **simultaneously**. The Sun has been fairly quiet for a long time and the natural cycles of Earth have been relatively constant -up until around the year 2000. What happened then? For one, in 2003 the largest X-Flare occurred, perhaps setting in motion irreversible consequences for life on Earth. The latest *Solar Maximum* (4 or 5 years of increased solar flares) that was supposed to have started in the Summer of 2009 started late in 2010, This lull has been deemed to be the 'quiet' before the big 'solar' storm of Cycle 24 that is turning out to be. It appears the Earth is at a point of a 'cosmic convulsion' of sorts that may affect life negatively on Earth as we know it.

1. X-class - major events: can trigger planet-wide radio blackouts and long-lasting radiation storms.
2. M-class - medium events: can cause brief radio blackouts that affect Earth's polar regions.
3. C-class - small events: these have hardly any noticeable effects on Earth.
4. B-class - small events: these have hardly any noticeable effects on Earth.
5. A-class - Type A flares are the weakest.

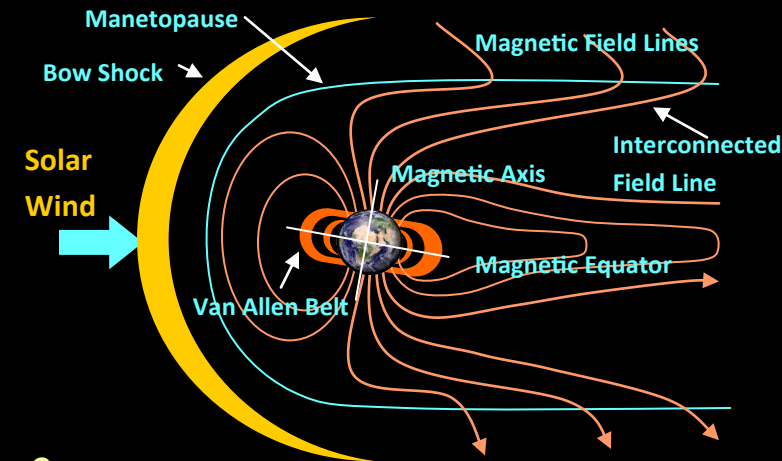
2003 X-Flare

Largest Solar Flare ever recorded. A new scale of measurement had to be derived. A 'Shot Across the Bow' perhaps.



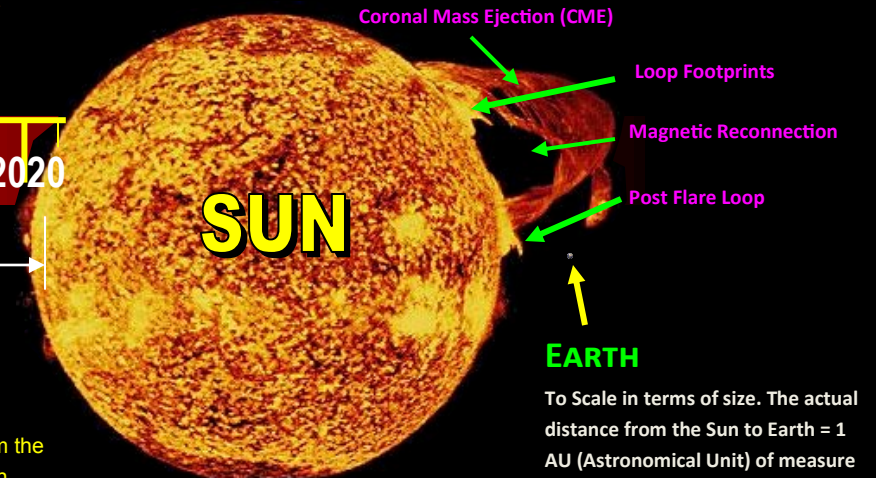
EARTH MAGNETIC SHIELD

It produces a defense from the solar flares produced by the sun. The Magnetic Field forms a defense which is called the Magnetosphere. The Magnetosphere is a bubble of magnetism that surrounds Earth and protects it from the solar wind generated radiation.



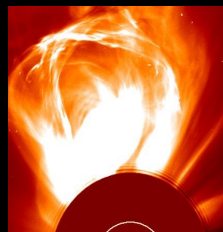
CLASSIFICATION

Solar flares are classified according X-ray brightness in the wavelength range 1 to 8 Angstroms. Solar activity operates on an 11 year cycle with the Sun being more active in the 11th year. The next cycle , 24 is said to be from 2009-2020.



SOME SOURCES

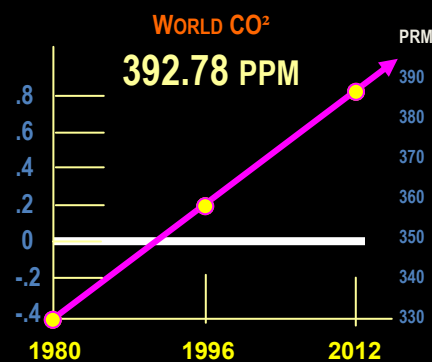
- Astronomytoday.com
- Crystalinks.com
- Endoftheworld2012.com
- Handpen.com
- NASA.gov
- Solarsystemscope.com
- Timeanddate.com
- USGS.gov



SOLAR CYCLE 24

Currently, the Sun is in the 24th solar cycle since 1755, when recording of solar sunspot activity began. It is the current solar cycle, and began on January 4, 2008. There has been minimal activity until early 2010. According to NASA, in May of 2009 the NOAA/Space Weather Prediction Center's reported that the Solar Cycle 24 was predicted to peak at 90 sunspots in May 2013. In May 2012 NASA's expert David Hathaway predicted that the current solar cycle would peak by the Spring of 2013 with about 60 sunspots. This estimations of sunspot numbers would make it the most active cycle in the past two hundred years.

GLOBAL TEMPERATURE ANOMALY



SOLAR FLARES

Flares last from a few seconds to at most a couple of hours so only one side of the Earth would experience one at any given time. Solar flares happen when energy that is stored in twisted in the magnetic fields and is suddenly released. This reaction causes an explosion of plasma to shot up from the surface of the Sun. Apparently the energy from these solar flares can be enough to produce 100 billion atomic bombs. An average atomic bomb is 25 megatons. The Nagasaki bomb was 15 kilotons.

CORONAL MASS EJECTIONS - CMEs

Magnetic fields in the sun can heat the sun's gases to tens of thousands of degrees. This energy can explode rapidly out of the sun's corona (the unstable outer surface) at very high speeds ejecting up to 10 billion tons of ionised gas into the solar system at speeds of up to 2 million miles per hour. These events are called coronal mass ejections (CME). This is different to solar flares because the plasma actually lifts off from and leaves (is ejected from) the surface of the sun. It is then carried by solar winds into the solar system and can be as big as the sun itself. A CME can result in magnetic storms when its gasses interact with the Earth's magnetic field. This distorts the shape of our magnetic field and speeds up the electrically charged particles that are trapped inside.

NUMBER OF SUNSPOTS

