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RELATION BETWEEN SUNSPOTS AND COVID19 – A PROOF FOR PANSPERMIA

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Abstract - *The novel viral or the bacterial pandemics and epidemics are not new to this earth. Often these disease-causing pathogens are of unknown origin and often identified as an infection which is transmitted from other animals. They are frequently found as the mutated form of the original strain or completely a newly developed strain. The causes for this mutation are many which comprises of both natural and artificial sources. The time of occurrence of these pandemic and epidemic astonishingly coincides with the sun spot extremum (often minimum). It is observed that whenever there is a sun spot extremum there was a novel microbial pandemic or epidemic. The current COVID19 pandemic is also suggested to be due to such sunspot extremum as the sun cycle is currently at its sun spot minimum. This review aims at providing the facts of relation between sunspots and the novel corona virus pandemic and there by stating this occurrence as a proof for panspermia.*

Key Words: Pandemic, Epidemic, COVID19, Sunspot, Solar Cycle, Solar minimum, Panspermia

1. INTRODUCTION

1.1 SUNSPOTS:

Sunspots are the dark regions in the sun's surface due to the concentration of magnetic field in that region. These regions are relatively colder to the other regions of the sun's surface. Hotter region emits more light than the colder region hence these regions appear to be darker and called the spots of the sun. The magnetic fields near sunspots crosses each other and gets tangled; this often leads to a great explosion called solar flares releasing a huge amount of radiation into the space.

1.2 SOLAR CYCLE:

These sunspots follow a cyclic pattern ranging from few or no sunspots to a greater number of sunspots for a period of 11 years. This is called solar cycle. The period when the number of sunspots is low and the activity of the sun like solar flare, the X-ray emission is low is called solar minimum and the period when the number of sunspots is high and solar activity is at its peak is called solar maximum. During solar maximum the intensity of the interplanetary magnetic field is high and during solar minimum the intensity of the interplanetary magnetic field is low near the earth.

These interplanetary magnetic field is generated, maintained and controlled by the flow of electrons from the sun. During the solar maximum the earth is shielded from the cosmic ray or high energy particles or some other harmful particles by the strong interplanetary magnetic field. But during solar minimum this field is weakened and therefore the Galactic Cosmic Rays (GCR) enters the earth's atmosphere.

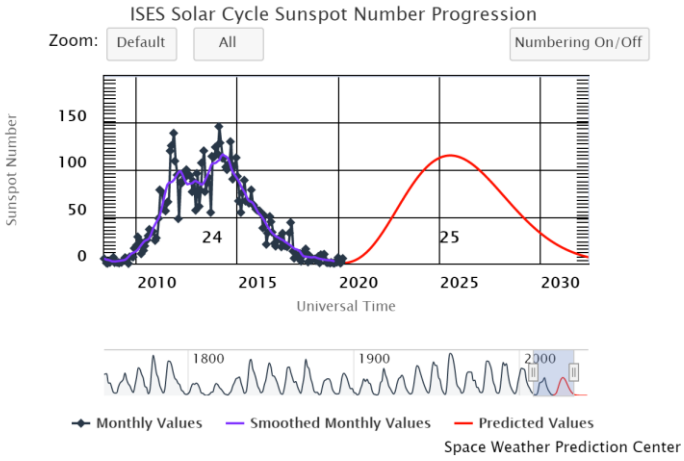

Fig -1: ISES data of Solar cycle

2. SUNSPOT AND PANDEMIC:

Sunspot minimum has a direct connection between the formation of the radioactive atoms such as ^{14}C and ^{10}Be. This is due to the increase in the number of cosmic rays entering the earth's surface. The most of the radioactive ^{14}C on the earth is suggested to be formed during a major solar minimum called The Maunder minimum which lasted during 1645-1715 and the Sporer minimum which lasted during 1400-1520.

The sunspot minimum also had a direct relation between the pandemics that lasted over the years. The SARS in 2002; the Influenza H1N1 in 2009; the MERS in 2012; the Influenza A H7N9 in 2013; the Ebola in 2014; the Zika in 2015 and the Scarlet fever during 2010-1016; all these pandemics and epidemics occurred when the number of sunspots is minimum. Obviously the current COVID19 is not an exception. (shown in fig. 2.)

3. PANSPERMIA:

It is hypothesis that states the life or preliminary source of life existed all over the space as dust particles or charged particles. This theory suggests that the origin of life on earth is due to the entry of such precursor life forms from outer space and not exclusively formed on earth.

It is suggested that during the sunspot minimum either a radiation enters the earth, causes mutation in the species and makes them vulnerable leading to pandemics or the disease-causing organism which are inevitably charged are entered into the earth from outer space. The latter possibly stands as a key proof for panspermia.

4. REGION OF SETTLEMENT:

The viral particles penetrate the earth's magnetic field and reaches the stratosphere and then settles down to the ground by gravitational force which take years. The first descent of these species (viral particles) would occur in the region where stratosphere is the thinnest, the eastern Himalayan region has the thin stratosphere where lies the China. The COVID19 infection was first occurred in China, which strengthens the fact the solar minimum could have had an influence in the COVID19 pandemic.

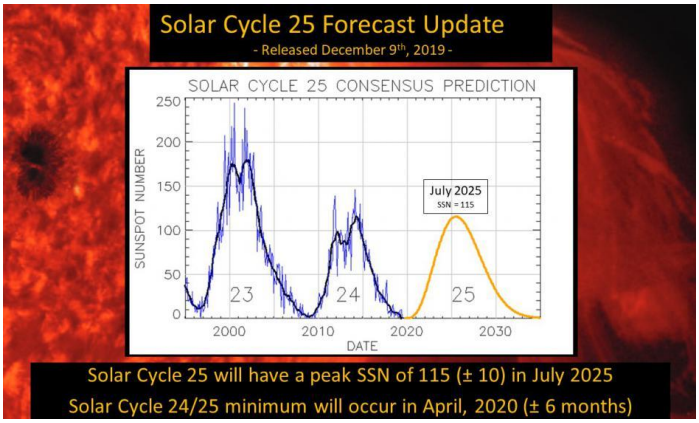

Fig -2: Time period of occurrence of solar minimum for 4 decades

5. INFERENCE AND CONCLUSION:

The minimum number of sunspots leads to low interplanetary magnetic field which in turn allows the galactic cosmic rays (GCR) and other electrically charged species (pathogens) to enter into the earth's atmosphere which causes pandemic or epidemic such as the COVID19. If this fact is true then the concept of panspermia may also be true, that the species or the organisms in the earth had their origin not in earth but somewhere in the outer space and reached the earth in the same way as these pathogens.

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