A Study on the Importance of Life Star

Jeevan D. Dhivare[1]* Antara Nandy[2]

[1] University of Entrepreneurship & Technology

[2] Architect - B. U. Builders & Consultants Pvt. Ltd.

Abstract – The building called Life Star standing on single point support of vertex of the cone holding sphere on the flat round base of the cone. Life star is a star shaped building structure inherited from the shapes of sun and star and nature too as life will exist in an artificial star. Life star building for is made up of two shapes in sphere and cones. a solid geometric figure generated by the revolution of a semicircle about its diameter; a round body whose surface is at all points equidistant from the center. The surface of such a figure; a spherical surface. This paper presents the detailed about the Life star Concept.

Keywords: Life Star, Single Point, Sphere, Cones

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1. INTRODUCTION

The basic idea of this project “LIFE star” in English or “ Jeevan Tara ” in Hindi or Marathi is taken as inspiration from the sun as the form of this building is like shining sun, so let’s go through the history of sun as follows.

The Sun

Our Sun is a normal main-sequence G2star, one of more than 100 billion stars in our galaxy.

The Sun Profile

Diameter:	1,390,000	km.
Mass:	1.989e30	kg
Temperature:	5800 K (surface)	15,600,000 K (core)

Sun

The Sun is by far the largest object in the solar system. It contains more than 99.8% of the total mass of the Solar System (Jupiter contains most of the rest).

It is often said that the Sun is an "ordinary" star. That's true in the sense that there are many others similar to it. But there are many smaller stars than larger ones; the Sun is in the top 10% by mass. The median size of stars in our galaxy is probably less than half the mass of the Sun.

Fig 1 Personified Son

The Sun is personified in many mythologies: the Greeks called it Helios and the Romans called it Sol.

The Sun is, at present, about 70% hydrogen and 28% helium by mass everything else ("metals") amounts to less than 2%. This changes slowly over time as the Sun converts hydrogen to helium in its core.

The outer layers of the Sun exhibit differential rotation: at the equator the surface rotates once every 25.4 days; near the poles it's as much as 36 days. This odd behavior is due to the fact that the Sun is not a solid body like the Earth. Similar effects are seen in the gas planets. The differential rotation extends considerably down into the interior of the Sun but the core of the Sun rotates as a solid body.

Conditions at the Sun's core (approximately the inner 25% of its radius) are extreme. The temperature is 15.6 million Kelvin and the pressure is 250 billion atmospheres. At the center of the core the Sun's density is more than 150 times that of water.

The Sun's power (about 386 billion billion mega Watts) is produced by nuclear fusion reactions. Each second about 700,000,000 tons of hydrogen are converted to about 695,000,000 tons of helium and 5,000,000 tons (=3.86e33 ergs) of energy in the form of gamma rays. As it travels out toward the surface, the energy is continuously absorbed and re-emitted at lower and lower temperatures so that by the time it reaches the surface, it is primarily visible light.

For the last 20% of the way to the surface the energy is carried more by convection than by radiation. The surface of the Sun, called the photosphere, is at a temperature of about 5800 K. Sunspots are "cool" regions, only 3800 K (they look dark only by comparison with the surrounding regions). Sunspots can be very large, as much as 50,000 km in diameter. Sunspots are caused by complicated and not very well understood interactions with the Sun's magnetic field.

The highly rarefied region above the chromosphere, called the corona, extends millions of kilometers into space but is visible only during a total solar eclipse (left). Temperatures in the corona are over 1,000,000 K.

It just happens that the Moon and the Sun appear the same size in the sky as viewed from the Earth. And since the Moon orbits the Earth in approximately the same plane as the Earth's orbit around the Sun sometimes the Moon comes directly between the Earth and the Sun. This is called a solar eclipse; if the alignment is slightly imperfect then the Moon covers only part of the Sun's disk and the event is called a partial eclipse. When it lines up perfectly the entire solar disk is blocked and it is called a total eclipse of the Sun. Partial eclipses are visible over a wide area of the Earth but the region from which a total eclipse is visible, called the path of totality, is very narrow, just a few kilometers (though it is usually thousands of kilometers long). Eclipses of the Sun happen once or twice a year. If you stay home, you're likely to see a partial eclipse several times per decade. But since the path of totality is so small it is very unlikely that it will cross you home. So people often travel half way around the world just to see a total solar eclipse. To stand in the shadow of the Moon is an awesome experience. For a few precious minutes it gets dark in the middle of the day.

The stars come out. The animals and birds think it's time to sleep. And you can see the solar corona. It is well worth a major journey

2. THE SUN'S SATELLITES

There are eight planets and a large number of smaller objects orbiting the Sun. (Exactly which bodies should be classified as planets and which as "smaller objects" has been the source of some controversy, but in the end it is really only a matter of definition. Pluto is no longer officially a planet but we'll keep it here for history's sake.)

Magnetic activity

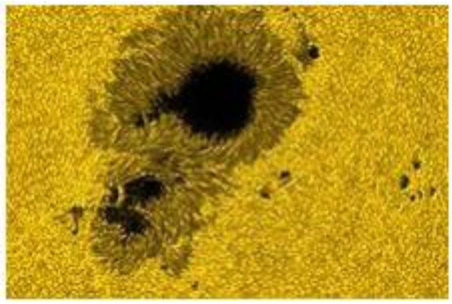

Fig 2 Visible light photograph of sunspot

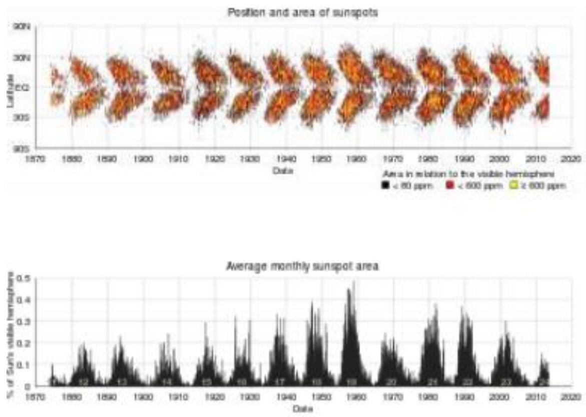

Fig 3 Butterfly diagram showing paired sunspot pattern

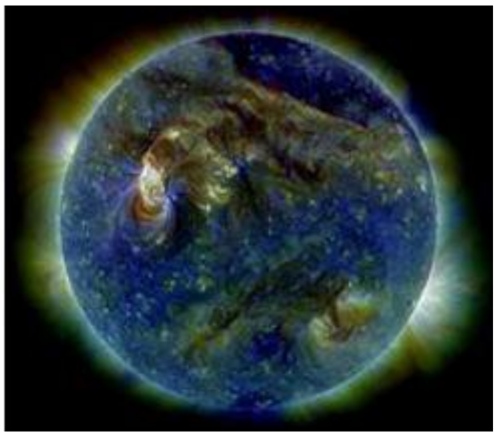

Fig 4 sunspot area

In this false-color ultraviolet image, the Sun shows a C3-class solar flare (white area on upper left), a solar tsunami (wave-like structure, upper right) and multiple filaments of plasma following a magnetic field, rising from the stellar surface.

Fig 5 Sun's rotating magnetic field

The heliospheric current sheet extends to the outer reaches of the Solar System, and results from the influence of the Sun's rotating magnetic field on the plasma in the interplanetary medium.

The Sun has a magnetic field that varies across the surface of the Sun. Its polar field is 1–2 gauss (0.0001–0.0002 T), whereas the field is typically 3,000 gauss (0.3 T) in features on the Sun called sunspots and 10–100 gauss (0.001– 0.01 T) in solar prominences.

The magnetic field also varies in time and location. The quasi-periodic 11-year solar cycle is the most prominent variation in which the number and size of sunspots waxes and wanes.

Sunspots are visible as dark patches on the Sun's photosphere, and correspond to concentrations of magnetic field where the convective transport of heat is inhibited from the solar interior to the surface. As a result, sunspots are slightly cooler than the surrounding photosphere, and, so, they appear dark. At a typical solar minimum, few sunspots are visible, and occasionally none can be seen at all. Those that do appear are at high solar latitudes. As the solar cycle progresses towards its maximum, sunspots tend form closer to the solar equator, a phenomenon known as Spörer's law. The largest sunspots can be tens of thousands of kilometers across.

An 11-year sunspot cycle is half of a 22-year Babcock–Leighton dynamo cycle, which corresponds to an oscillatory exchange of energy between toroidal and poloidal solar magnetic fields. At solar-cycle maximum, the external poloidal dipolar magnetic field is near its dynamo-cycle minimum strength, but an internal toroidal quadrupolar field, generated through differential rotation within the tachocline, is near its maximum strength. At this point in the dynamo cycle, buoyant upwelling within the convective zone forces emergence of toroidal magnetic field through the photosphere, giving rise to pairs of sunspots, roughly aligned east–west and having footprints with opposite magnetic polarities. The magnetic polarity of sunspot pairs alternates every solar cycle, a phenomenon known as the Hale cycle.

During the solar cycle's declining phase, energy shifts from the internal toroidal magnetic field to the external poloidal field, and sunspots diminish in number and size. At solar-cycle minimum, the toroidal field is, correspondingly, at minimum strength, sunspots are relatively rare, and the poloidal field is at its maximum strength. With the rise of the next 11-year sunspot cycle, differential rotation shifts magnetic energy back from the poloidal to the toroidal field, but with a polarity that is opposite to the previous cycle. The process carries on continuously, and in an idealized, simplified

3. VARIATION IN ACTIVITY

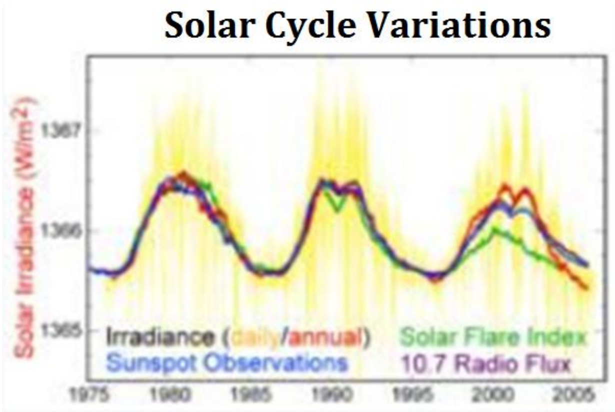

Fig 6 solar cycle variation

Measurements from 2005 of solar cycle variation during the last 30 years The Sun's magnetic field leads to many effects that are collectively called solar activity. Solar flares and coronal-mass ejections tend to occur at sunspot groups. Slowly changing high-speed streams of solar wind are emitted from coronal holes at the photospheric surface. Both coronal-mass ejections and high-speed streams of solar wind carry plasma and interplanetary magnetic field outward into the Solar System.

The effects of solar activity on Earth include auroras at moderate to high latitudes and the disruption of radio communications and electric power. Solar activity is thought to have played a large role in the formation and evolution of the Solar System. With solar-cycle modulation of sunspot number comes a corresponding modulation of space weather conditions, including those surrounding Earth where technological systems can be affected

Long-term change

Long-term secular change in sunspot number is thought, by some scientists, to be correlated with long-term change in solar irradiance, which, in turn, might influence Earth's long-term climate. For example, in the 17th century, the solar cycle appeared to have stopped entirely for several decades; few sunspots were observed during a period known as the Maunder minimum. This coincided in time with the era of the Little Ice Age, when Europe experienced unusually cold temperatures. Earlier extended minima have been discovered through analysis of tree rings and appear to have coincided with lower-than-average global temperatures.

A recent theory claims that there are magnetic instabilities in the core of the Sun that cause fluctuations with periods of either 41,000 or 100,000 years. These could provide a better explanation of the ice ages than the Milankovitch cycles.

4. LIFE PHASES

The Sun today is roughly halfway through the most stable part of its life. It has not changed dramatically for over four billion years, and will remain fairly stable for more than five billion more. However, after hydrogen fusion in its core has stopped, the Sun will undergo dramatic changes, both internally and externally.

Formation

The Sun formed about 4.6 billion years ago from the collapse of part of a giant molecular cloud that consisted mostly of hydrogen and helium and that probably gave birth to many other stars. This age is estimated using computer models of stellar evolution and through nucleocosmochronology. The result is consistent with the radiometric date of the oldest Solar System material, at 4.567 billion years ago. Studies of ancient meteorites reveal traces of stable daughter nuclei of short-lived isotopes, such as iron-60, that form only in exploding, short-lived stars.

This indicates that one or more supernovae must have occurred near the location where the Sun formed. A shock wave from a nearby supernova would have triggered the formation of the Sun by compressing the matter within the molecular cloud and causing certain regions to collapse under their own gravity. As one fragment of the cloud collapsed it also began to rotate because of conservation of angular momentum and heat up with the increasing pressure. Much of the mass became concentrated in the center, whereas the rest flattened out into a disk that would become the planets and other Solar System bodies. Gravity and pressure within the core of the cloud generated a lot of heat as it accreted more matter from the surrounding disk, eventually triggering nuclear fusion. HD 162826 and HD 186302 are hypothesized stellar siblings of the Sun, having formed in the same molecular cloud.

5. CONCLUSION

Life star is a star shaped building structure inherited from the shapes of sun and star and nature too as life will exist in an artificial star with characteristics of sphere, cone , prism , domes etc. The shape of the building is star shaped. The building will stand on single point of one conical arms of star attached to the sphere making it look like a star.

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Corresponding Author

Jeevan D. Dhivare*

University of Entrepreneurship & Technology