

# The Structure of UFO

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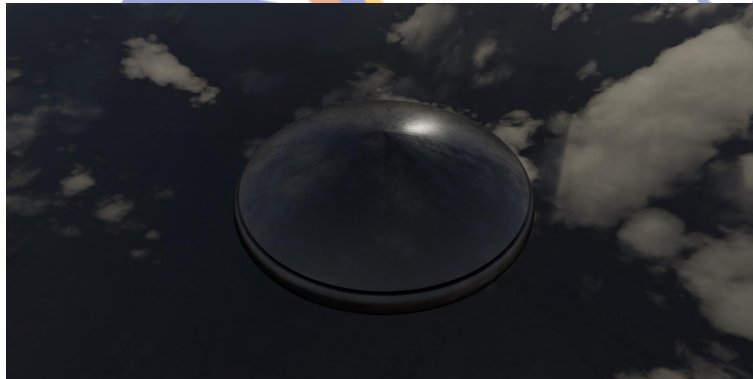
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## I. ABSTRACT

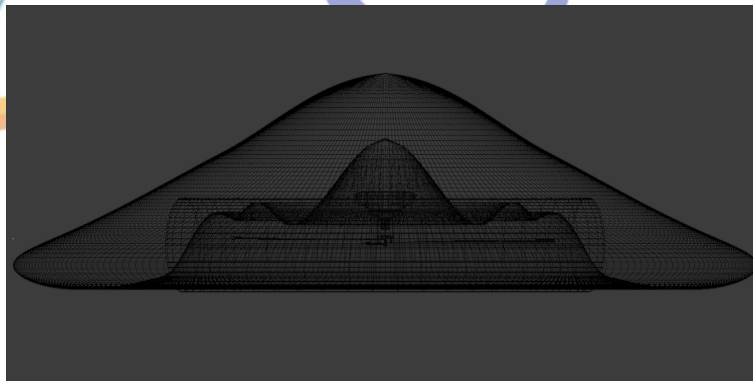
UFOs or Unidentified Flying Objects have racked the brains of thinkers and conspiracy theorists for ages since prehistoric times and will do so, for ages to come. When we decipher the mysteries for the existing crisis, another will come up. People have claimed sightings of mysterious flying machines supposedly more advanced than the ones we have. People have been claiming this for a long time, and this is not a recent upsurge of action. True that mankind has always had the ability to fantasize but as the saying goes, 'all lies have a core of truth'. In this paper we shall endeavour to construct the structure of an UFO based on popular thoughts and then try to solve the working of it from the perspectives of an Engineer. We shall see how UFOs look and then try to work out a simple mechanism so as to mimic it's working. Expected outcome of the project This Project shows the possibility of such a flying object as has been thought about and this shall end a debate to the possibility of existence of such an unknown object. It is quite probable that such objects do exist. Now, there are two theories about the UFOs. One states they belong to intelligent lifeforms from outside the planet. Other theory suggests that UFOs are but government secrets. This paper doesn't aim at fanning the doubt towards either of the roads but merely suggest that the thing exists, whoever owns them.



## II. HOW DOES A STANDARD UFO LOOK?

UFOs have been reported in many sizes and shapes but here we shall try to generalize the basics of the whole array of the machine through reports of sightings, movies and storybooks. Right from prehistory they have been referred to as 'fiery discs' suggesting they are shaped like discs and they have a glossy cover. A cover that reflects the Sun's rays. The classical Roman empire has had, apparently, a number of experiences. They say the 'thing' looks like a 'beam of light' or a 'spark' when high up, suggesting the speedy movement through the upper layers of the atmosphere

causing intense heat due to friction. This makes sure that vehicle does travel at high altitudes and at high speeds. They unanimously agree of the colour, calling it like molten silver. Now, silver is glossy indeed. Also they call the structure as 'wine jar' which indeed should look like a disc from below. A wine-jar structure tells us of the radial symmetry and of a smooth exterior. Now, the subsequent sightings have all been described as of a 'spherical shaped' object(s) with minor variations including that of a doughnut (Harold A. Dahl, US, 21-6-1947) and Kenneth Arnold's in 24-6-1947 that caused the famous name and description, the 'flying saucer' in action. Following were similar sightings of disc-shaped or spherical structures and another landmark is reached in 8-1- 1981 when the description goes as two bowls, one of them inverted, on top of the other with the wider edges meeting. This 'saucer' or 'spherical' shaped UFO receives an opposition too. 14-4-1561 had shown the people of Nuremberg a supposed aerial battle between unidentified flying objects shaped like triangles, at least from below. In 7-1-1948, US Air Force pilot reported the sighting of a delta-winged craft that was unidentifiable and hence categorised under the UFO tag. Again, in 24-7-1952, three mysterious delta-winged aircrafts grabbed the attention of pilots. In 30-3-1990, again triangular UFOs are seen. In 2007, the Dudley Dorito came up as triangular UFO. In 27-10-1954, in an Italian stadium, many people saw a 'cigar-shaped' UFO. Now, this cigar shape closely aligns with the 'wine jar' shape reported by the Romans in the ancient ages, but it has been listed here because a cigar shape from modern era doesn't count as spherical as 'wine-jar' from classical era. In 1965, Kecksburg UFO incident supposedly saw 'acorn' shaped UFO which could be considered in between a cylindrical and a spherical shape when simplified.



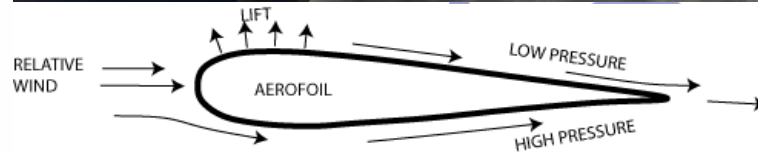
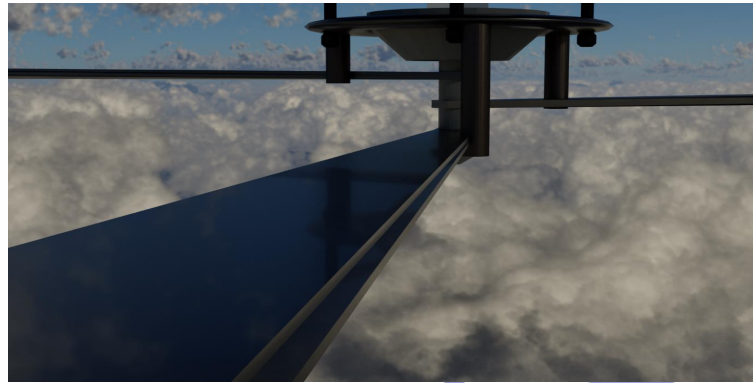
In 11-4-1980, In Peru, Air force noticed an UFO of spherical shape but the main thing we derive from this incident is the colour, an enamelled cream colour; similar to an incandescent lightbulb with a much wider circular silver base. In 29-12-1980, diamond-shaped object expelling flame and emitting heat irradiated three witnesses on an isolated road in dense woods; all required treatment for radiation poisoning though this might have been a thing of the US government and therefore can be dismissed in this study. In 25-1-2010 in Canada, missile-shaped UFO were noted. This missile-shape can be aligned with the cigar-shaped sightings as well as the wine-jar shaped sighting. There have been many others which either say of light-emitters or gleaming objects or was caught on RADAR, hence shedding no light upon the shape. Now, to generalise, we get two shapes to think upon, one is the smooth shiny one with a circular base and more-or-less the shape of two bowls with wide-edges meeting. The other one is just known by the dark triangular look from below. Looking from below, if the object appears to be a triangle, the most probable shapes are either a cone (considering the movement being when at a horizontal inclination) or a pyramid. Now, we see a whole range of movies about the extra-terrestrials and when we look at the shape and sizes of the space crafts, we see a general inclination for the 'saucer-upon-saucer' shape. Modifications are made, indeed, but the general shape is maintained. Also some do use a shape

close to the 'wine-jar' or 'cigar' but those also exhibit radial symmetry unlike the pyramid shape. Also the extremes are of spherical origin and not flat like cone or pyramid, thereby upholding the 'spherical' theory with exceptions here and there, though for the outer-atmospheric 'mother-ship', we often get a cylindrical shape. Also, 'delta-winged' vehicles, which undoubtedly have an upper hand in fast travels are depicted here and there. On seeing of the storybooks, we see a lot of storybooks about these. Mentionable are War of the Worlds by H.G.Wells where he dreamt of cylindrical projectiles being launched from outer planets and Satyajit Ray's thoughts- the main problem of the saucer theory is that everyone says it is a saucer, like sheep following the trend. He himself believed that UFO, if true could also bear other shapes and he has adapted a pyramid version for his 'Professor Shonku- Mohakashar Doot'. He was a brilliant mind and his ideas are respectable indeed. Another notable work of his in this field is Bonkubabur Bondhu. Other works include Erik Von Daniken's Chariots of the Gods where he focuses on historical evidences to support alien life and there too, we see a majority of ellipsoids for UFOs. Horipurer Horek Kando by Shirshendu Mukherjee, a prominent writer says about spherical UFO and Bipinbabur Bipod by the same author speaks about missile-shaped ones. In We the Arcturians by Dr. Norma Milanovich, a base of a cylindrical shape is mentioned. In 'Dune' by Frank Herbert, a long, flexible cylindrical UFO was mentioned. Spherical ones are described in 'Pocket Guide to UFOs and ETs'. In the 'Big book of UFO facts, figures and truth' by S. Spignesi and W.J. Birnes, disc shaped UFOs have been mentioned. In 'Status Report: Project Blue Book', spherical UFOs have been mentioned in report 8. There are other innumerable works of fiction under this category.

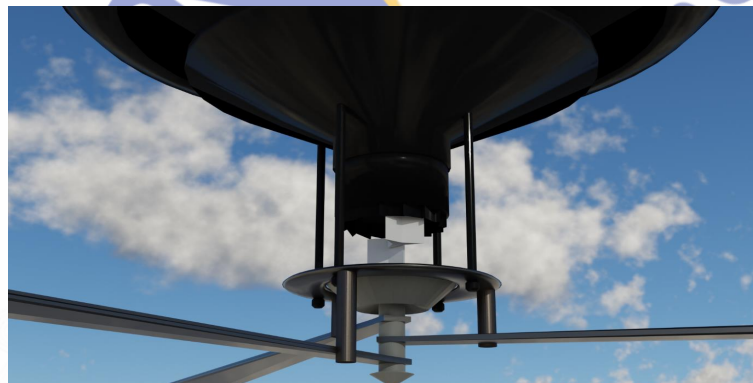
### III. MECHANISM OF UFO

We take the 'flying saucer' shape to be the standard because of the immense popularity of the shape in recognising the Unidentified Flying Objects (We shall not speak about the delta-winged aircrafts because militaries do, as of today, keep aircrafts like those in the hangar). We shall here define the probable construction of a basic flying saucer with minimum parts possible. First we break the operation up to some basic objectives- levitation, navigation and stability in air (a very notable feature in the UFO sightings where the objects tend to maintain a horizontal position, even when in motion, much like a flying disc while in air). For levitation, it is an obvious thing that we need to put force downward and as a reaction, we get a lift upwards. Now, we can imagine of a centrally placed engine, like a helicopter. So, we adopt the mechanism from the helicopter. We place a set of rotors on the downward side of the object in discussion and it pushes air towards the ground generating the lift. The rotor blades work on the aerofoil principle and due to the angle they got as shown in figure, the speed of air above and below (while they are in motion) differ (the speed above is more) and therefore, by Bernoulli principle of fluids, the air downward exerts a pressure against the upward surface thus generating a lift. More the angle, more is the lift until the angle becomes a right angle and then there is no lift, after that the direction of the horizontal force becomes opposite and the lift gets on decreasing up to 180 degrees. Now, the blades rotating whichever direction we prefer, anticlockwise or clockwise, gets an equal force in the opposite direction to the main body which shall rotate in an opposite direction to counter the rotors, though at a speed inversely proportional to the weight. To neutralise this, so as to get a static station, we rotate a small yet heavy solid object counter-direction to the direction of movement for the rotors. Thus we get an independently working system generating the necessary life for our machine.





Now we get to the point of navigation. We need to move the craft from one location to another. Locomotion is very essential. For that too we use the aerofoil technology and make certain advancements to the levitation system just as is done in a helicopter. We just need to make amendments to the angle by which the rotors are tilted so as to change the magnitude of lift generated. So when we change the angle in certain directions, we get differing lifts in the various directions, therefore tilting the whole set of rotors in certain direction by some certain angle and therefore causing a force in a direction of the horizontal category so as to enable our movement in the direction. We use two sets of controlling mechanisms for the control of the angles for each of the blades. First set controls a disc from the cockpit, the second set controls the angles from the disc. The disc is stationary itself, so as to enable a constant angle-making mechanism, here too, just like a helicopter.



Now, we need to consider the stability. The craft must be so stable as to enable a movement as described by the people who have 'seen' UFOs. Here we take help of the gyroscopic mechanism. An object, when in rotational motion, feels a perpendicular force along its axis. We need to utilise this force to keep the 'saucer' so stable as to keep it upright even during motion. Many people do describe the outer sphere as rotating object in case of an UFO. We adopt the thought and make the outer 'shell' rotate so as to provide gyroscopic assistance. To counter the motion so as to make it independent and so that it doesn't affect the other components, we use a heavy drum kept in the centre rotating in the opposite direction as of the 'shell' in a speed as needed to balance the

force in question.



So, as explained above, it is indeed possible for us to chalk out a mechanism for a structure same as the reported and thought UFO and it, to certain extent, resolves the question of possibility of such a craft. We won't venture to present a deciding statement about the structure of UFOs or their possibility but we definitely are sure that a basic description is possible fulfilling all the apparent features a standard UFO has got. Personally, we believe that this paper distinctly says that the UFOs are indeed possible and perhaps they are present, too, in the world though we don't know and won't try to guess of their origin being terrestrial or extra-terrestrial. We won't focus on any conspiracy-theories and would consider this a serious academic research and nothing but that.



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