

VON VOYAGER!

by:

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In school, we learn that our planet are located in the solar system, the Sun located in the center, the planets revolving around it, starting from Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and the ever controversial Pluto, together with the moons and asteroids around it. But have we ever wonder what lies beyond the edge of our Solar System? What comes after Pluto and Kuiper Belt? Well we are not alone in thinking about the idea of exploring what beyond the Solar System, National Aeronautics and Space Administration (NASA) are one of those who wants to know what is there beyond the dark edge of the solar system, that is why they come up with a plan of doing Interstellar Exploration. Interstellar refers to an area or vicinity in which the magnetic discipline of the Sun stops affecting its surroundings.

Interstellar exploration starts with a program by National Aeronautics and Space Administration (NASA) called "Voyager Program" which was launched in 1977, the program planned to build two robotic interstellar probes that will study the planets beyond the planet Mars. The probes are powered by radioisotope thermoelectric generator, it is a type nuclear energy which convert the heat generated by plutonium-238 which is radioactively decaying. The advantages of these type of energy sources is its capability to continuously produce electricity for a long period of time because radioactive elements takes about a hundred years to be decayed. It is convenient because this exploration may take decades for its objectives to be accomplished.

In the year 1977, the Space Probes were ready for launch, they named Voyager 1 and Voyager 2. NASA takes advantages that year for the launch of the Voyager Probes

because the planets Jupiter and Saturn are in a favorable position to fly near them without exerting that much nuclear fuel. Voyager 2 was launch first on August 20, 1977, its flight path is to fly directly to Jupiter to perform a gravity assist maneuver to gain speed and to capture photos of these magnificent gas giant. Voyager 1 turned into release on September 5, 1977, its flight route turned into a quicker and shorter trajectory to eventually catch up with Voyager 2, it also used Jupiter's Gravity to gain speed proceed to its objectives. Both of these space probe were send to space with Titan Centaur Expendable rockets.

On the present day, after 44 years these probes have travelled beyond the heliosphere or the area of influence by the sun. Currently they are travelling at 61,500 km/h for Voyager 1 and 55,570km/h for Voyager 2.

These probes already achieved its goals and perform way beyond the expectations of the NASA. Some of the greatest achievement of the Voyager twin probes are the exploration of all the giant planets of our solar system like Jupiter, Saturn, Uranus, Neptune and their moons, they also provided photos which are the first close up photos taken during that time. Both of the Voyagers spacecraft brings a greeting if ever it encounter a form of life. And they also gather evidence in Magnetic Field Investigations, Low Energy Charged Particle, Cosmic Ray, Plasma and Plasma Ray Investigations.

For now the space probes are in sleep mode to conserve energy while travelling. NASA also plans on sending more of these probes in the future for us to fill our curiosity of what lies beyond.

References:

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