Stop-Motion Animation Demonstrating Parker Solar Probe's Achievement

BY SPACE HEX

On the way to the sun

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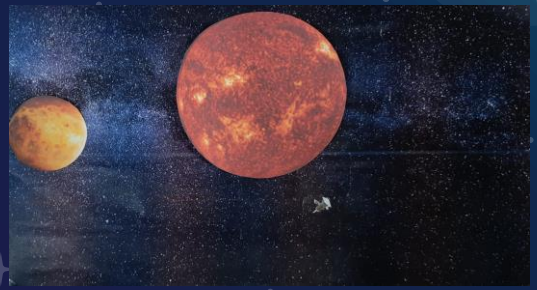
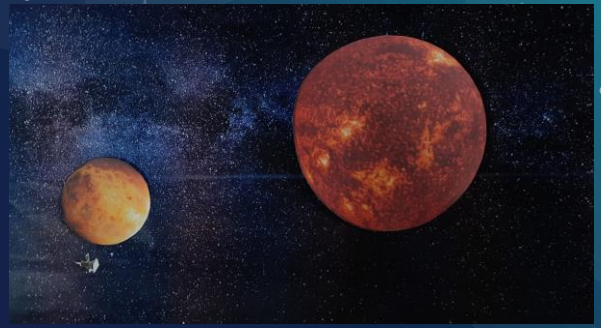
WHAT ARE WE PRESENTING?

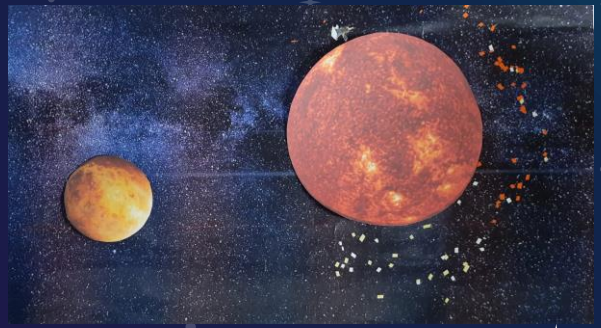
- In Aug 2018, in Florida, NASA launched Parker Solar Probe to touch the Sun.
- The project scientist of this mission was Dr. Nour Raouafi.
- One of the major goal for the Parker Solar Probe was to study how Corona, Sun's outer most layer affects the properties of the solar wind in the heliosphere.
- Solar Wind in turn affects our magnetosphere.
- Magnetosphere shields us from erosion of our atmosphere by the solar erosion, particle radiation and cosmic rays from deep space.

- Solar Winds poses a danger to spacecraft and astronauts, navigation systems & power grids.
- The probe started it’s journey by revolving around in Earth’s orbit.
- The probe decelerated then, moving towards the Sun, orbiting it at a very large distance.
- To achieve a closer path while orbiting the Sun, the probe takes detour around Venus.
- The probe leaves some of its velocity with Venus (interplanetary gravity assists) and achieves a closer orbit around the Sun.
- Then on April 21, 2021, during the probe’s 8th flyby by the Sun, Parker Solar Probe ‘touched’ the Sun.



- The probe leaves some of its velocity with Venus (interplanetary gravity assists) and achieves a closer orbit around the Sun.
- Then on April 21, 2021, during the probe's 8th flyby by the Sun, Parker Solar Probe touched the Sun.
- It came in contact with Corona at about a distance of 8.1 million miles from the Sun's surface and had crossed the Alfvén critical surface.
- To demonstrate this knowledge in a way that appeals to a younger audience we wrote a poem discussing the technical details of the probe in form of literature.
- The poem while with a dramatic touch stays true to the factual information about the Parker Solar Probe.





- We created a stop-motion animation using paper pieces, containing 300+ individual shots.
- The orbits around each spatial body were reduced for simplicity but the actual trajectory remained accurate.
- The scenes start from Delta IV Heavy's launch followed by probe's detachment above the Earth's gravitational pull.
- Eventually when the probe reached the corona, the solar wind particles being detected by the Solar Probe Cup (SPC) were shown.
- The structure, elements & materials used to construct the Parker Solar Probe were then discussed.