Prelim Bits 22-11-2017

Aditya-L1 Mission

- It is the first Indian mission to study the Sun.
- It is expected to be launched in 2019 by the launch vehicle PSLV-XL with six payloads from Sriharikota.
- The main aim of the solar mission is to do coronal and near UV studies.
- It will be launched into the halo orbit around the Lagrangian point 1 (L1) of the Sun-Earth system.
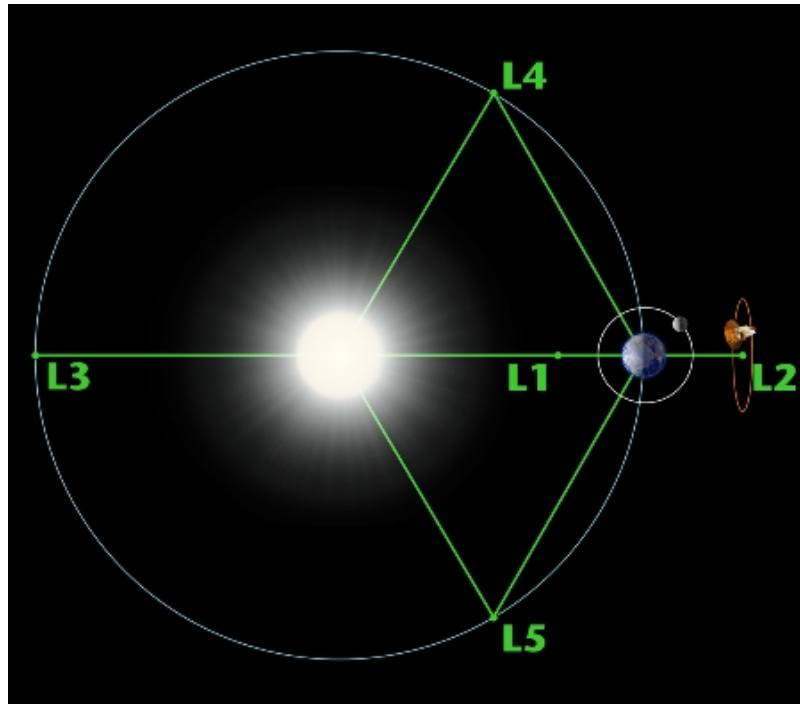- This orbit has the advantage of allowing continuous monitoring of the sun.

Lagrange Points

- A Lagrange point is a location in space where the combined gravitational forces of two large bodies, such as Earth and the sun or Earth and the moon, equal the centrifugal force felt by a much smaller third body.
- The interaction of the forces creates a point of equilibrium where a spacecraft may be "parked" to make observations.
- The first point, L1, lies between Earth and the sun and gets an uninterrupted view of the sun and free from the occurrence of eclipses.

Lagrange Points

- L2 with the Earth, moon and sun behind it, a spacecraft can get a clear view of deep space and it has a protection for radiation field from sun.
- The James Webb Space Telescope will move into L2 point in 2018.
- The third Lagrange point, L3, lies behind the sun, opposite Earth's orbit. For now, science has not found a use for this spot.
- Points L4 and L5 are stable and lie along Earth's orbit at 60 degrees ahead of and behind Earth and dust and asteroids tend to accumulate in these regions due to its stability.
- Asteroids that surround the L4 and L5 points are called Trojans and Earth's only known Trojan asteroid, 2010 TK7 is found in the region.

Global Conference on Cyber Space 2017

- India is hosting the 5th Global Conference on Cyber Space (GCCS), 2017.

- The GCCS is taking place outside OECD nations for the first time.
- It aims at encouraging dialogue among stakeholders of cyberspace.
- The theme for 2017 is 'Cyber4All: An Inclusive, Sustainable, Developmental, Safe and Secure Cyberspace'.
- It will deliberate on issues relating to promotion of cooperation in cyberspace, norms for responsible behavior in cyberspace and to enhance cyber capacity building.

Peace-a-thon

- As part of the GCCS, **a global Cyber Challenge event** called as "Peace-a-thon" was held.
- It is launched with the objective of enablement and empowerment of cyber security.
- Cyber Peace Foundation (CPF) and Policy Perspectives Foundation (PPF) in collaboration with Ministry of Electronics and Information Technology (MeiTY) organized the event.
- National Critical Information Infrastructure Protection Center (NCIIPC) has also collaborated with MeiTY.

Blue Whales

- Researchers have analyzed the movement of blue whales when catching its prey.
- Blue whales usually favor their right side similar to right handedness in people.
- But in shallow water between 10 and 100 feet, they most prefer to use their

left side to keep a good eye on its prey.
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- This is because, the tiny crustaceans known as krill, its most favoured prey usually found less plentiful in the shallow depth.
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- In deep water, there are a lot of krill, so visual contact is not important.
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- Its situation specific choice is to get as much food in their mouth.
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- Researchers say that lefties are unusual in the animal kingdom.
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Cool Subdwarfs

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- Scientists have discovered some of the oldest stars in our Milky Way Galaxy.
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- It is determined based on its location and velocities.
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- They are known as Cool subdwarfs, since they are much older and cooler in temperature than the Sun.
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Source: The Hindu, PIB

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