

Establishing time zone for the moon

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In news– The European Space Agency (ESA) said that current system of time zone for moon is unsustainable. A universal timekeeping system for the moon is needed.

ESA Time zone for the moon-

- The ESA said that the main objective of establishing a universal timekeeping system for the moon is to streamline contact among the various countries and entities, public and private, that are coordinating trips to and around the moon.
- It has said that a universal timekeeping system for the moon is needed, but that many details remain to be worked out.
- One of the questions that has yet to be settled was whether lunar time should be set on the moon or synchronized with Earth.
- **Time on Earth is precisely tracked by atomic clocks**, but synchronizing time on the moon is tricky because clocks run faster there, gaining around 56 microseconds, or millionths of a second, per day.
- Once a new lunar time zone is established, the methods used to create it will be useful for future space exploration.
- Astronauts could go to Mars in the next two to three decades, he said, and will face similar logistical hurdles that a Martian time zone could address.

Coordinated Universal Time or UTC-

- UTC is the primary time standard by which the world regulates clocks and time. It is within about one second of mean solar time at 0° longitude and is not adjusted for daylight saving time. It is effectively a successor

to Greenwich Mean Time.

- The coordination of time and frequency transmissions around the world began on 1 January 1960.
- UTC was first officially adopted as CCIR Recommendation 374, Standard-Frequency and Time-Signal Emissions, in 1963, but the official abbreviation of UTC and the official English name of Coordinated Universal Time (along with the French equivalent) were not adopted until 1967.
- The system has been adjusted several times, including a brief period during which the time-coordination radio signals broadcast both UTC and “Stepped Atomic Time (SAT)” before a new UTC was adopted in 1970 and implemented in 1972.

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reading:

<https://journalsofindia.com/national-atomic-timescale/>