

Chapter - 1 - Earth in our Solar system.

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few Celestial Bodies twinkle because →
But not all

Atmospheric Disturbance
Distance of Body
Size and nature
Celestial Body might not be star

- Celestial Bodies - Everything we see in our sky is celestial Body

→ Huge Ball of Burning gas (star)

Eg - Sun, Moon, stars etc

Round shaped

→ just like Sun But very far

1/4 Size of Earth

- Major celestial Bodies

→ Sun (Day) - Does not allow other celestial Bodies to show up due to high brightness

→ Moon (Night) - Show up due to Reflection of light of sun

(Amavasya)

New moon

Phases

(Due to Reflection of light of sun)

Full moon (Purnima)

15 Days

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- All Celestial Bodies other than sun and moon form some kind of noticeable patterns called

constellations → Ursa major or Big Bear, Sapt Rish or small Bear

Recognised by Pole star → Brightest star in sky
(North star or Dhruv star)



- Planets are ~~star~~ almost spherical shaped celestial body that often revolve around a star (Do not have own light)
 (from greek word Planetai → Wanderers)

- Satellites are celestial bodies that revolve around a planet

Man made
(THSAT)

Natural
(moon)

★ Some planets have ring (Rocks and Debris) around them (Jupiter, Saturn, Uranus)

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★ "Sol" is name of Sun god → ~~the~~ English word Solar is derived from Roman word Sol

in Roman Mythology

Everything related to Sun.

- Solar System — Sun, ~~on~~ eight planets, Asteroids, Meteoroids
 (M V E M J S U N)
 Sun ← → Earth
 150 mill.km
 Speed → 300000 km/second
 Light travels this distance in 8 minutes

- Orbit → Path of any celestial body continuously revolving around any other celestial body

Earth

- Planet on which we live
- fifth largest
- Venus is called twin (Because of shape and size)
- Supports life (water, oxygen, temperature)
- 2/3 covered by water (Blue planet)

Shape

↓

Globe

- Aug 2006 - Pluto was declared Dwarf planet By Int. Astronomical Union (Because - Irregular orbit, not round, cannot clear neighbourhood)



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- Earth $\xleftrightarrow[\text{384400 km}]{\text{Distance}}$ Moon \rightarrow Rotation and Revolution
 \searrow light takes 1.3 sec
 27 Days
- Neil Armstrong (American) - first person to land on moon
 on 21 July 1969
 \swarrow
Indian? \rightarrow Rakesh Sharma on April 2 1984
 (Also first Indian to go on space)

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- Asteroids - Rocks and debris revolving around sun
 Between orbit of Mars and Jupiter \rightarrow Asteroid Belt
 \downarrow
Enter Atmosphere of earth \rightarrow Meteoroids
- Galaxy - Huge system of Stars and clouds of gas and dust
 \downarrow
Our galaxy \rightarrow Milky way

That's it



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Ceres

Mercury
Venus

Earth
Mars

Jupiter

Saturn

Uranus

Neptune

Pluto

2003 UB₁₇

"Dwarf
Planets"

"planets"

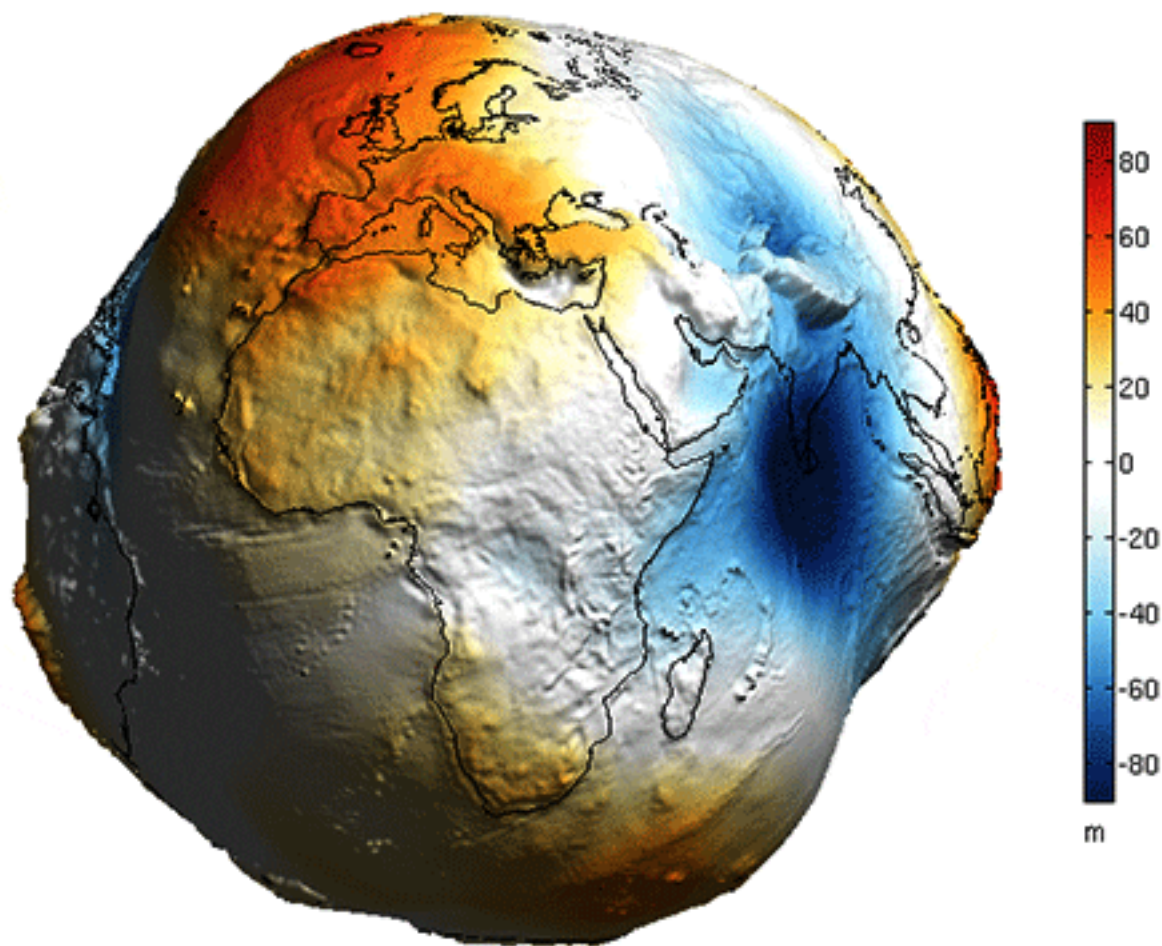


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384,400 km



Comet

A chunk of ice, rock and dust, which develops a bright coma and tails when it is closer to the Sun
(nucleus ~10km wide, coma 1000s of km wide, tails millions of km long)

Meteoroid

A piece of rock, ice and/or metals, from space dust up to boulders in size
(10 μ m to 1m wide)

Asteroid

A large object in space, mainly composed of rock and metals, with some ice
(1m to 100s of km wide)

Micrometeoroid

A bit of rock or ice, from the size of a speck of dust to a grain of sand
(10 μ m to 2mm wide)

Fireball

A meteor that is at least as bright as Venus

Meteorite

A meteoroid or asteroid that survives its trip to Earth's surface*



Bolide

An exceptionally bright fireball that ends with the meteoroid or asteroid exploding

Meteor

A streak of light in the sky, produced by a meteoroid entering the atmosphere, either on its own (sporadic) or as part of a meteor shower

*Meteorite shown is NWA 1918-EUC, on display at Toronto's Royal Ontario Museum

