TROPOSPHERE
Ground Level - 10 km

Cumulonimbus Clouds
AKA thunderclouds, they may extend into the stratosphere.

Altitude: 2-12 km

TROPOSPHERE
Ground Level - 10 km

Altocumulous Clouds
These usually form in groups & are ~1 km thick.

Altitude: 5.5 km

TROPOSPHERE
Ground Level - 10 km

Nimbostratus Clouds
These vast, dark gray, low clouds mean rain or snow!

Altitude: 2-4 km

TROPOSPHERE
Ground Level - 10 km

Cirrocumulus Clouds
These small, rounded puffs of clouds can look like fish-scales.

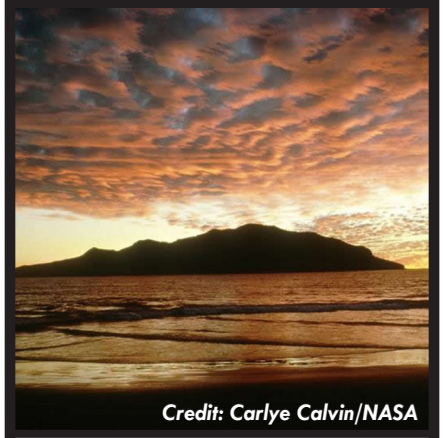
Altitude: 5-12 km

TROPOSPHERE
Ground Level - 10 km

Cirrus Clouds
These ice crystal clouds look like long wispy streamers.

Altitude: 5 - 15 km

TROPOSPHERE
Ground Level - 10 km



Stratocumulus Clouds
A common sky visitor, they often form well-defined lumps or patches.

Altitude: .5-2 km

TROPOSPHERE
Ground Level - 10 km

Cumulus Clouds
Puffy, they form when water vapor rises from earth & condenses.

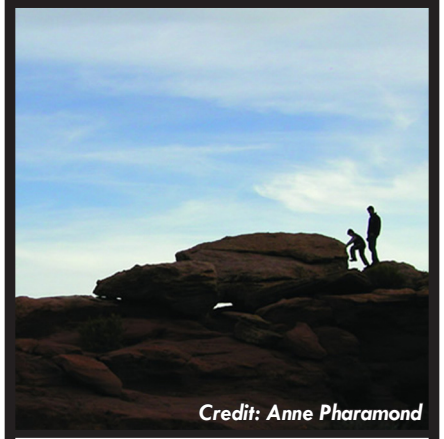
Altitude: 1.8 km

TROPOSPHERE
Ground Level - 10 km

Stratus Clouds
Fog-like, low and gray, sometimes drizzle falls from these clouds.

Altitude: 0-2 km

TROPOSPHERE
Ground Level - 10 km



Cirrostratus Clouds
The sun & moon may shine through these & form a halo.

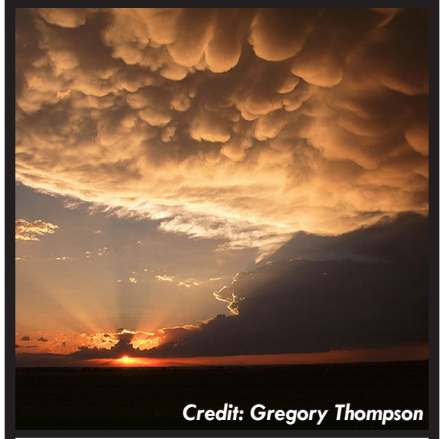
Altitude: 3-6 km

TROPOSPHERE
Ground Level - 10 km

Altostratus Clouds
Mid-level gray or blue-gray clouds that often cover the sky.

Altitude: 2-7 km

TROPOSPHERE
Ground Level - 10 km



Mammatus
These pouches of cloud form under storm clouds.

Altitude: 5-15 km

TROPOSPHERE
Ground Level - 10 km

Hot Air Balloons
A sheep, a duck, and a rooster were the first balloonists!

Altitude: .3-1km

TROPOSPHERE
Ground Level - 10 km

Rüppell's Griffon Vulture
This endangered bird is the highest flying on record.

Altitude: 11 km

TROPOSPHERE
Ground Level - 10 km

Helicopter
Founded in 1955, *Whirly-Girls* supports women in helicopter aviation world-wide.

Altitude: 3-7.6 km

TROPOSPHERE
Ground Level - 10 km

Common Crane
These may migrate over the Himalayas to reach summer nesting spots!

Altitude: 10 km

TROPOSPHERE
Ground Level - 10 km

Bumblebees
Some species of bumblebee occur naturally as high as 5,600 m in the Himalayas.

Altitude: 5.6 km

STRATOSPHERE
10 km - 50 km

Commercial Jets
They fly up into the calm stratosphere to avoid wind & weather.
Altitude: 9-13 km

STRATOSPHERE
10 km - 50 km

U-2 "Dragon Lady" Spy Plane
First flown in the 1950's, this spy plane also does science research.
Altitude: 21 km

STRATOSPHERE
10 km - 50 km

F/A-18 Hornet
A supersonic fighter jet can create a cloud when it breaks the sound barrier.
Altitude: 11 km

STRATOSPHERE
10 km - 50 km

Concorde Supersonic Plane
The concorde could cross the Atlantic in 3.5 hours.
Altitude: 5.5 km

STRATOSPHERE
10 km - 50 km

Polar Stratospheric Clouds
Polar winter visitors, they diffract sunlight in rainbow hues.
Altitude: 15-25 km

STRATOSPHERE
10 km - 50 km

SR-71 Blackbird
Lockheed's highest flying, manned spacecraft retired in 1999.
Altitude: 25.9 km

STRATOSPHERE
10 km - 50 km

Blue Jets
Special lightening that goes up into the stratosphere instead of down to Earth!
Altitude: Up to 50 km

STRATOSPHERE
10 km - 50 km

Weather Balloons
This NASA balloon named ASTHROS is the size of a football stadium.
Altitude: 40 km

MESOSPHERE
50 km - 85 km

Noctilucent Clouds
Best seen just after sunset, "noctilucent" means night-shining.

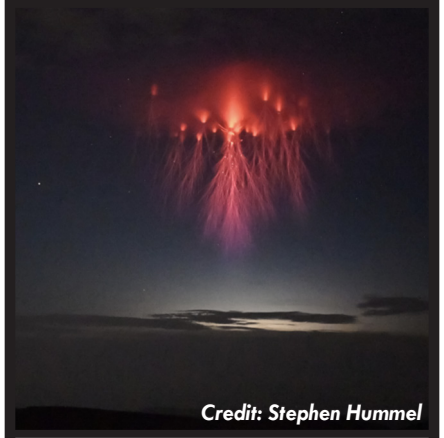
Altitude: 80-85 km

MESOSPHERE
50 km - 85 km

Aurora
These many-hued scarves of light delight viewers at both of Earth's poles.

Altitude: 80-500 km

MESOSPHERE
50 km - 85 km



Red Sprites
Lightening sprites are mysterious electrical discharges.

Altitude: 80 km

MESOSPHERE
50 km - 85 km

Meteors
The light from space debris that burns up on hitting the mesosphere.

Altitude: 50-85 km

MESOSPHERE
50 km - 85 km

Sounding Rockets
Student research projects have been carried on these!

Altitude: 20 to 113 km

MESOSPHERE
50 km - 85 km

Falcon 9
Built by SpaceX, the first reusable rocket to travel to the ISS & back!

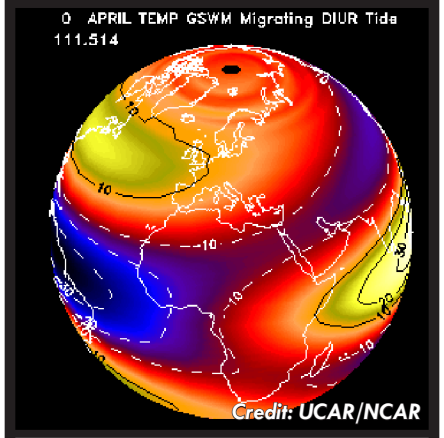
Altitude: 80 km

MESOSPHERE
50 km - 85 km

Airglow
This faint light is emitted by our atmosphere, here seen from the ISS.

Altitude: 50 - 300 km

MESOSPHERE
50 km - 85 km



Tides & Waves
Like our ocean, the Mesosphere has tides and waves which move air.

Altitude: 80-120 km

THERMOSPHERE
85 km - 740 km

Space Shuttle
It supported ISS development, ferrying cargo & crew to and from Earth.
Altitude: 304-528 km

THERMOSPHERE
85 km - 740 km

Space Walk
ISS astronauts go on walks as long as 8 hours, depending on the job.
Altitude: 317 km

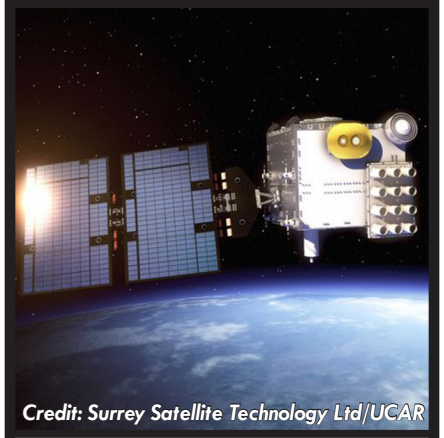
THERMOSPHERE
85 km - 740 km

International Space Station
Multi-national science teams work together to understand our planet & beyond.
Altitude: 408 km

THERMOSPHERE
85 km - 740 km

Hubble Telescope
Bus-sized & solar-powered, Hubble takes vivid images of planets, stars & galaxies.
Altitude: 547 km

THERMOSPHERE
85 km - 740 km

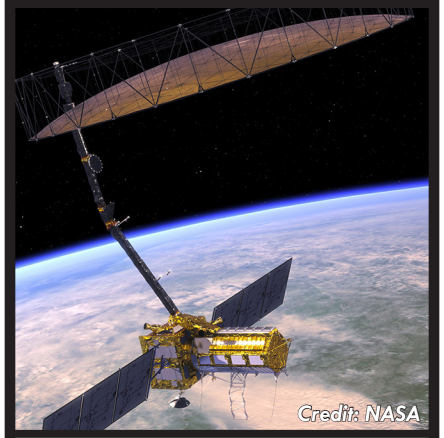


COSMIC-2
Six satellites work in tandem gathering space & weather research.
Altitude: 80 - 250 km

THERMOSPHERE
85 km - 740 km

ELVES
These dim, expanding, glowing red rings appear briefly above thunderstorms.
Altitude: 100 km

THERMOSPHERE
85 km - 740 km

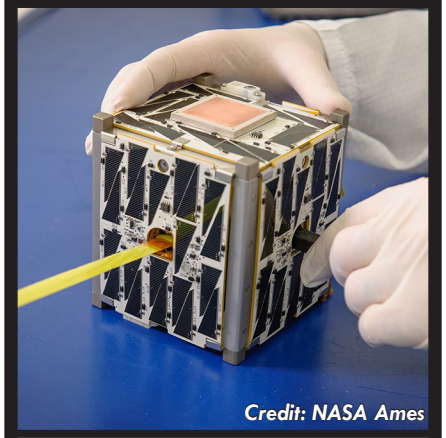


NASA NISAR Probe
A joint mission with the USA & India to observe climate change.
Altitude: 740 km

THERMOSPHERE
85 km - 740 km

Van Allen Probes
Studied interactions between Earth and space weather driven by the sun.
Altitude: 618-37,000 km

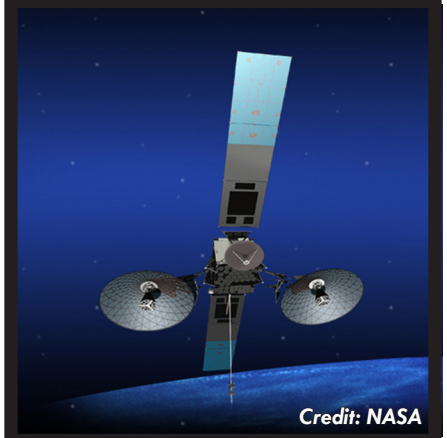
EXOSPHERE
740 km - 1,140+ km



Cube Satellites
These mini-science labs can be as small as a jewelry box!

Altitude: 600-800 km

EXOSPHERE
740 km - 1,140+ km



TRDS Satellites
These satellites carry equipment that can see through clouds.

Altitude: 37,000 km

EXOSPHERE
740 km - 1,140+ km

NOAA 15
This environmental research satellite has orbited Earth over 100,000 times!

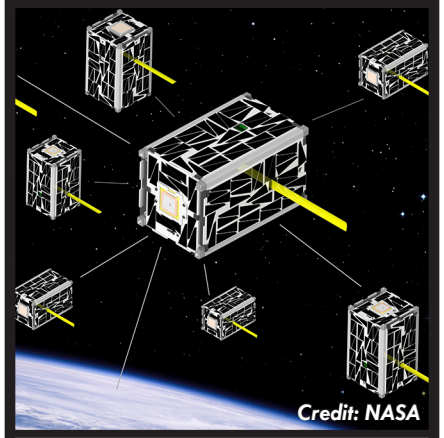
Altitude: 810 km

EXOSPHERE
740 km - 1,140+ km

FIREBIRD Satellites
University students explore space data from these 10cm x 10cm CubeSats.

Altitude: 886 km

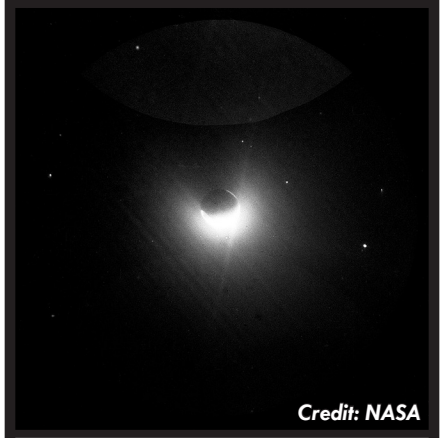
EXOSPHERE
740 km - 1,140+ km



SODA Swarm Satellites
This collection of small cubesats under development will orbit in formation.

Altitude: 600-800 km

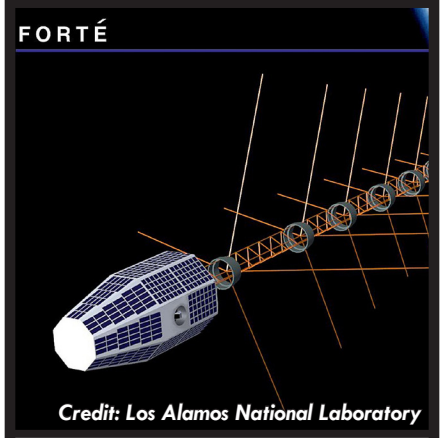
EXOSPHERE
740 km - 1,140+ km



Geocorona
The luminous, outermost region of the exosphere, here seen by Apollo 16.

Altitude: 60,000 km

EXOSPHERE
740 km - 1,140+ km



FORTÉ
This satellite studies lightening from space and the ionosphere.

Altitude: 800 km

EXOSPHERE
740 km - 1,140+ km

Jason 2
This satellite studied ocean topography, sea-level rise and climate change.

Altitude: 1,336 km

TROPOSPHERE
Ground Level - 10 km

TROPOSPHERE
Ground Level - 10 km

TROPOSPHERE
Ground Level - 10 km

TROPOSPHERE
Ground Level - 10 km

STRATOSPHERE
10 km - 50 km

MESOSPHERE
50 km - 85 km

THERMOSPHERE
85 km - 740 km

EXOSPHERE
740 km - 1,140+ km