L1: Geography of the Tropics
“Climatic tropics”
  “warm and moist all year”
Koppen climate classification: non-arid, mean $T \Rightarrow 18^\circ$ C

**Geographic Tropics**

The area between the **Tropic of Cancer** (in the north) and
The **Tropic of Capricorn** (in the south)

Defined as the highest of latitude at which the sun is directly overhead at noon on ONE day of each year
23.43929°
Earth’s Orbit

March 20 or 21 (equinox)

December 21 or 22 (solstice)

June 20 or 21 (solstice)

September 22 or 23 (equinox)
Tropic of Cancer
Tropic of Capricorn
Earth;

Circumference of the Earth = 24,800 miles.
Rotation at equator is \( 24,800/24 \text{hrs} = 1033 \text{ mph} \).

mean radius = 6371 kms
Equatorial bulge is = 42.72 kms
The shape of the Earth with water.

Everest: 8848m (29,035 ft) a.s.l.; latitude 27° 59”
Equatorial bulge ~ 37.7 kms (Cosine latitude * 42.7)
Distance from Earth Center = 6382.3 kms
Chimborazo: 6310 m (20,686 ft) -1° latitude.

+ equatorial bulge, 6,384.4 km from earth’s center.

(2168 m further than Everest, at 6,382.3 km)
Tropical Ecosystems

Desert
Semi-desert
Savanna
Tropical Moist Forests (TMF’s):
  Lowland Evergreen ( < 1200 m)
  Lower Montane Rainforest (1200-1500 m)
  Upper Montane Rainforest (incl. “cloud forest”) (1500 – 3000 m)
  Elfin Forest (3000 m – treeline)

Mangrove Forest
Tropical Dry Forest
Paramo