

DISTANCE

We often ask: how far away is that? The concept of distance is very familiar to us. One way to describe distance is as the ground covered between two points. When we think about things on different scales, we find that distances can stretch (or shrink) almost as far as our imaginations.

DEFINITION: how far away an object is or the amount of ground an object has covered in its motion

Units: meter (m), kilometers (km), feet, miles, light years (A light year is the distance light travels in a year, about 6 trillion miles/9.5 trillion km).

COSMIC EXAMPLE

Distance to the Bullet Cluster:
about 3.4 billion light years
(3.2×10^{22} km) or 2×10^{22} miles

The Bullet Cluster is the site of a spectacular collision between two galaxy clusters located at a distance of some 3.4 billion light years or 3.2×10^{22} km

OLYMPIC EXAMPLE

The record for ski jumping is more than twice the length of a soccer field. 253.3 meters (830 feet)

EVERYDAY EXPERIENCE

Distance from one end of
Brooklyn Bridge to the other:
1,797 meters (5,989 feet)

