

SOME COMMON ASTRONOMICAL MISCONCEPTIONS

The motions of the Earth:

- We experience our seasons because of the Earth's changing distance from the Sun
- Everyone on the Earth shares the same seasons.
- The Sun appears straight up in the sky at noon every day.

The Moon and its phases:

- The Moon can only be seen at night and it's there right after the Sun sets.
- The Moon does not rotate on its axis.
- The phases of the Moon are caused by the Earth's shadow falling on the Moon or by clouds covering the Moon.
- The far side of the Moon is always in darkness.
- The Moon gets its light from the Sun . . . which is located behind the Moon.

Constellations:

- All the stars in a constellation are near one another and the same distance from us.
- The constellations form patterns that clearly resemble people, animals, etc.
- The North Star is the brightest star in the sky.

Gravity and space travel:

- There is no gravity in space or on the Moon.
- You can bottle gravity and take it with you.
- We can shield ourselves from gravity inside a space ship.

The Solar System:

- The solar system is very crowded, especially the asteroid belt (ala "Star Wars").
- Meteors are actually "falling stars" or "shooting stars" or comets.
- Comets quickly sweep across the sky like meteors. Comets are also "burning" and their tails are always behind them.
- The sun is made up of lava and has craters on it.
- The Sun is red.

Stars & the Universe:

- Our Milky Way galaxy is a very crowded place.
- All stars are the same size and temperature. . . and they last forever.
- Stars really twinkle.
- Stars leave the sky in the daytime.
- Black holes are huge cosmic vacuum cleaners in space, sucking everything up.
- Aliens visit the Earth on a regular basis.
- The main purpose of a telescope is to magnify things.
- Astrology really works!

Amateur Involvement in Astronomy – selected web sites:

Programs:

Center for Backyard Astrophysics = www.cbastro.org

Epsilon Aurigae observing = www.hposoft.com/Campaign09.html or www.citizensky.org/

Hands-On Universe = www.handsonuniverse.org

Galaxy Zoo = www.galazyzoo.org

Globe at Night (star counting) = www.globeatnight.org

Lowell Amateur Research Initiative = www.lowell.edu/LARI_welcome.php

Milky Way Project = www.milkywayproject.org

Planetquest search for extra solar planets = www.planetquest.org

Seti@Home = www.setiathome.berkeley.edu

SkyMorph = www.skyview.gsfc.nasa.gov/skymorph/skymorph.html

Zooniverse = www.zooniverse.com

Organizations:

American Association of Variable Star Observers = www.aavso.org

American Astronomical Society = www.aas.org

Association of Lunar & Planetary Observers = www.alpo-astronomy.org

Astronomical League = www.astroleague.org

Astronomical Society of the Pacific = www.astrosociety.org

Champaign-Urbana Astronomical Society = www.cuas.org

Great Lakes Planetarium Association = www.glpaweb.org

International Occultation Timing Association = www.occultations.org

International Meteor Organization = www.imo.net

Night Sky Network = www.nightsky.jpl.nasa.gov

The Planetary Society = www.planetary.org

William M. Staerkel Planetarium = www.parkland.edu/planetarium

Other:

Astronomy Picture of the Day = www.apod.nasa.gov

Sky & Telescope magazine = www.skyandtelescope.com

Astronomy magazine = www.astronomy.com

Museums at the Crossroads = www.m-crossroads.org

Time lapse movies of the sky = www.dakotalapse.com

2012 information = www.astrosociety.org/education/publications/tnl/79/79.html