**Different ranges of celestial bodies**

1. **Star** ­  a large light producing object (through

nuclear fusion) whose gravity is large enough

to pull other objects near it.

Life of a star = nebula 🡪 nuclear fusion🡪 core collapse

1. **Planet**­ an object, which orbits a star
2. **Satellite** ­ an object which orbits a planet ex.

moons, artificial satellites

***Galaxies***

A galaxy is a massive group of stars, gas and dust

all held together by gravity.

Galaxies contain upwards to 100 billion stars.

You 🡪Earth 🡪 Solar System 🡪 Milky Way Galaxy

Earth is a planet in our solar system.  Our solar system is one of many in the Milky Way Galaxy.

The Milky Way Galaxy is one of many in the Universe.

The Milky Way is 75 000 light years in diameter.  It

is a spiral galaxy because of its shape.  The Sun is

located near the outer part of the spiral.

The band that we can see occupies about 400

billion stars.

**The main types of galaxies are:**

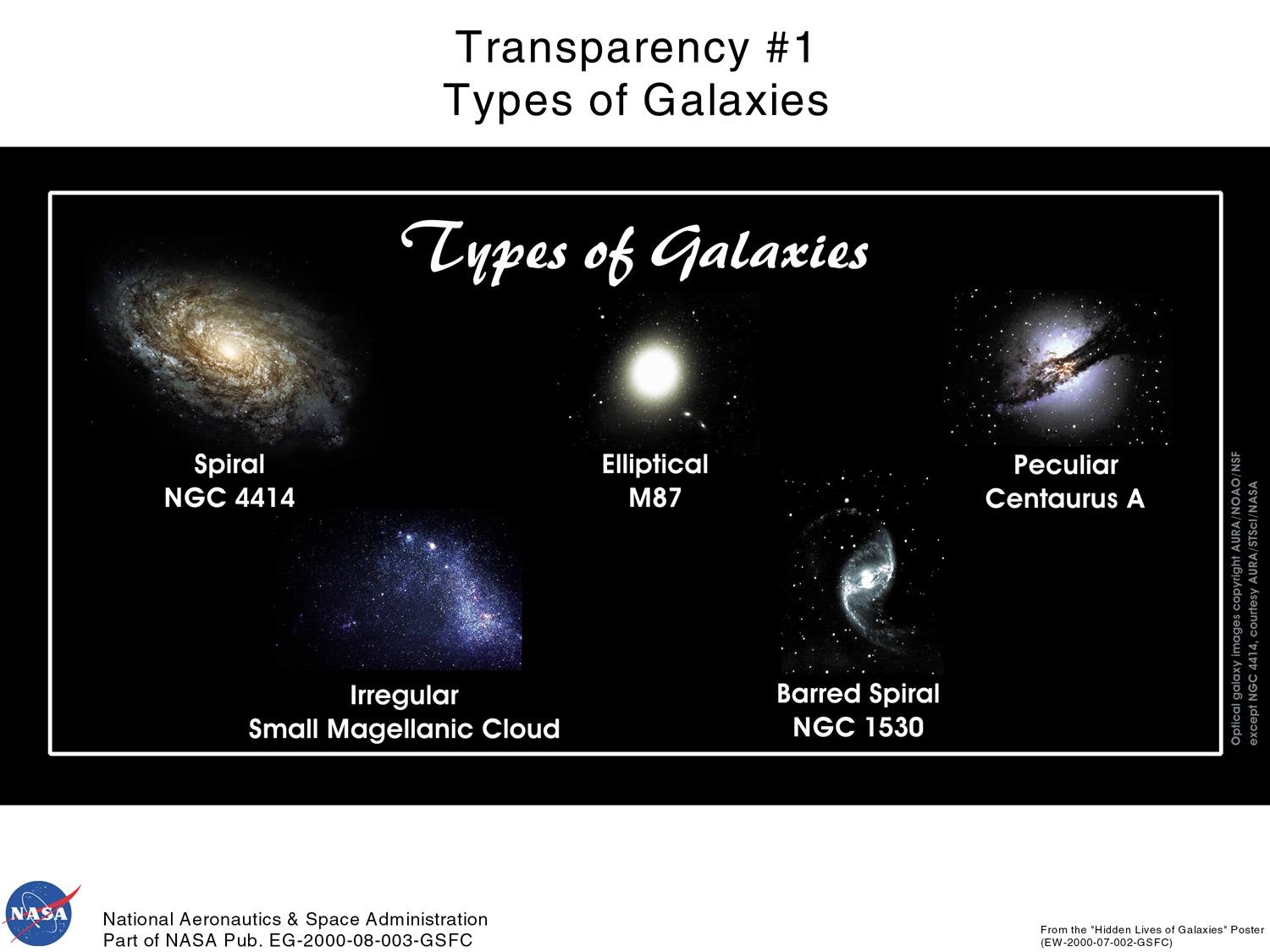
Spiral - galaxy with tightly wound spiral arms

Elliptical - slightly elliptical to nearly circular

Barred Spiral - spiral with a bright bar of gas through the center

Peculiar - fits none of the descriptions

Irregular - small, patchy, irregularly shaped galaxy



The closest galaxy to us is called Andromeda (2.5 million light years away). It is visible with the naked eye! It was discovered by Edwin

Hubble in 1925.

The "Hubble Deep Field" image was taken by the Hubble Space Telescope December 18 - 28, 1995. It was taken of a region near the handle of the Big Dipper, and covers a patch of sky about only 0.05 degrees across (equivalent to the width of a dime viewed 75 feet away). This region was chosen because there are very few stars there. So nearly every object in the image is a galaxy.

Using the “Hubble Deep Space Image” identify the types of the ten galaxies labeled on the Deep Survey Image.

