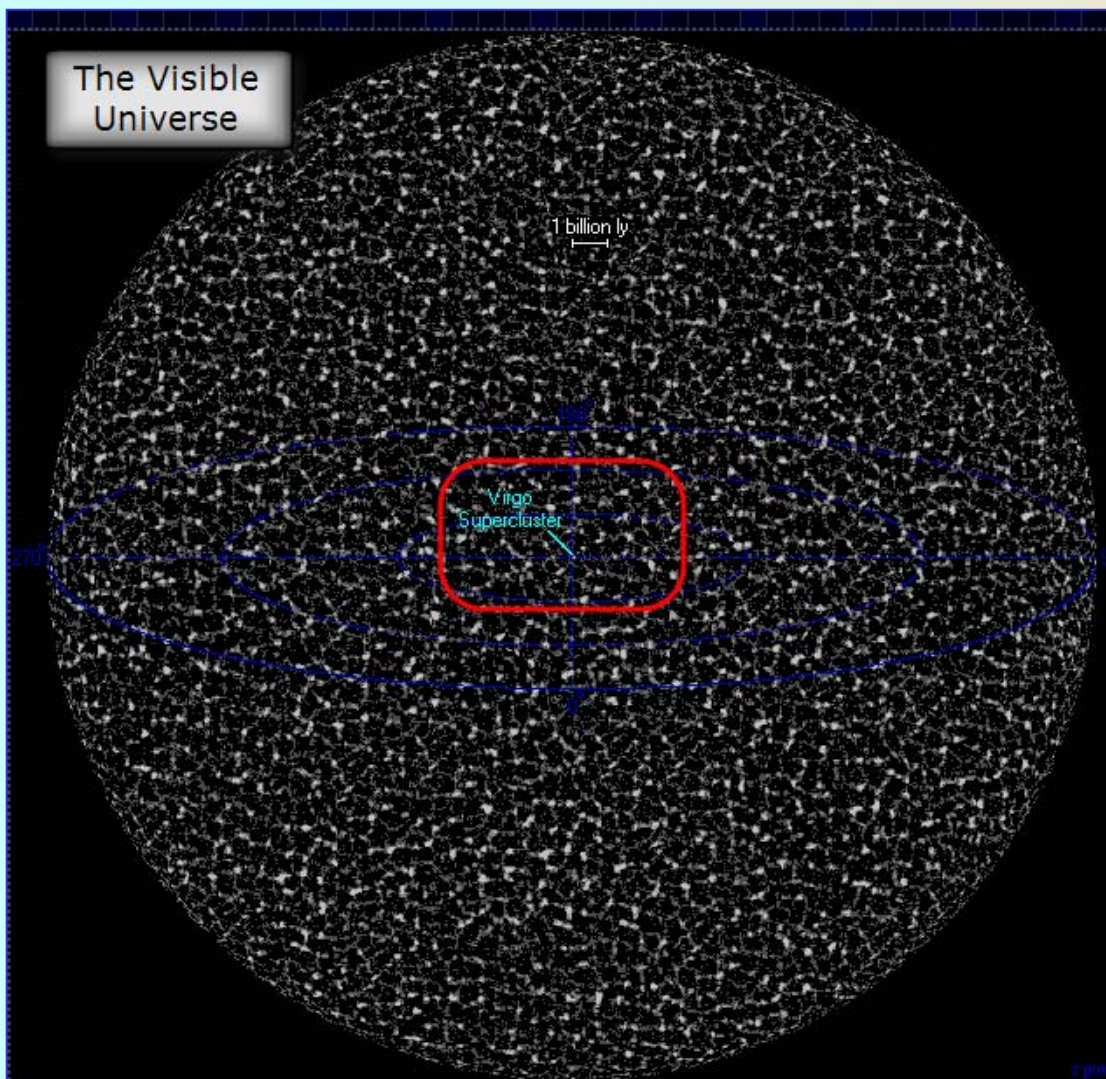


Atlas of the Universe



The Visible
Universe

1 billion ly

Virgo
Supercluster

The Visible Universe

Main characteristics:

-Composed of galaxies (groups of stars)

-The galaxies tend to gather in clusters (big groups) of galaxies

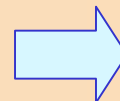
-Size of the Universe around 14 billions light-years (ly)

size: $14 \cdot 10^9$ light-years

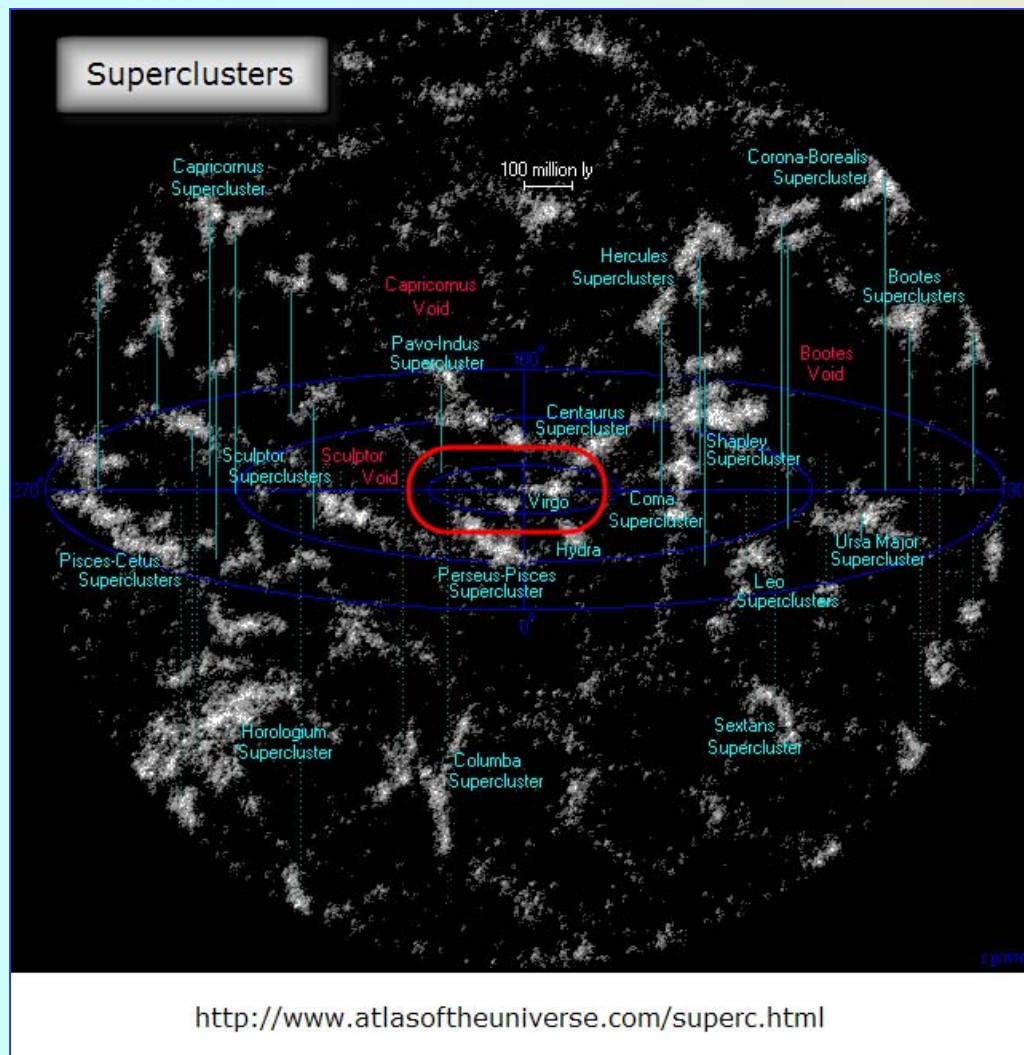
-A light-year is the distance travelled by the light in a year

<http://www.atlasoftheuniverse.com/universe.gif>

Closer to
Earth



Atlas of the Universe

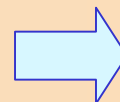


Superclusters

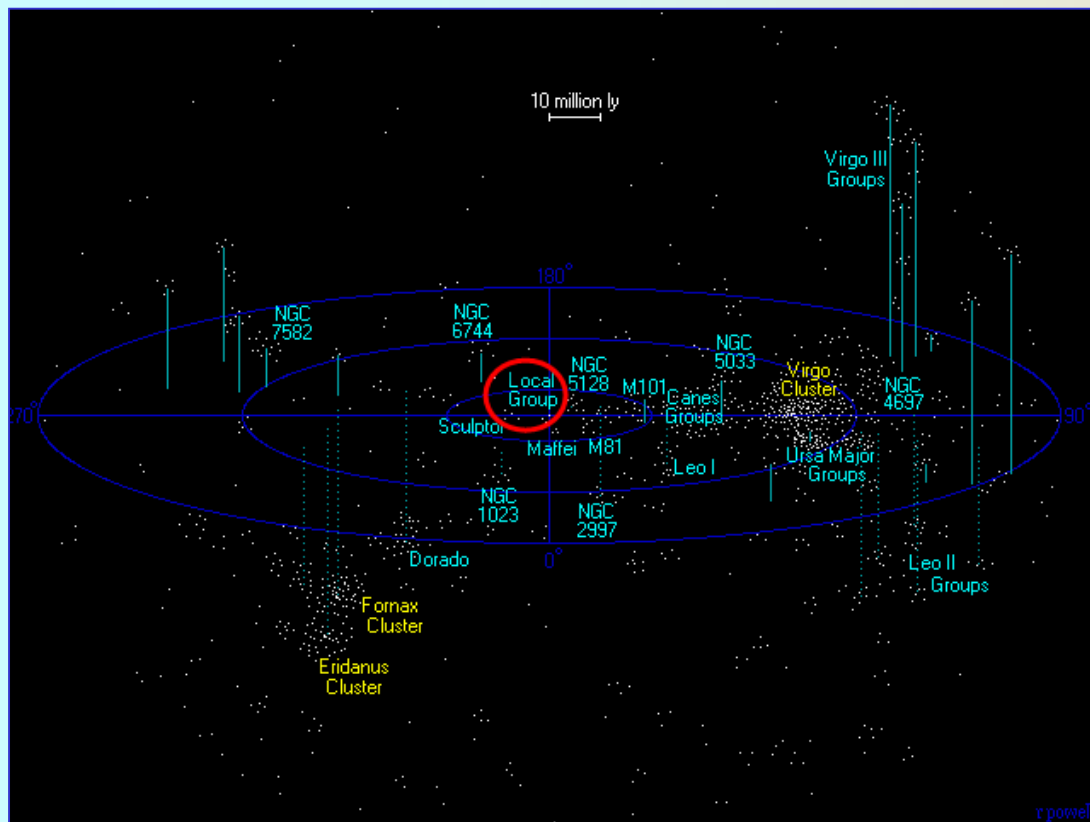
Main characteristics:

- Galaxies and clusters of galaxies are collected into vast clusters.
- Virgo supercluster is where our galaxy is placed.
- The map is approximately 7 percent of the diameter of the entire visible Universe.

Closer to
Earth



Atlas of the Universe



<http://www.atlasoftheuniverse.com/virgo.html>

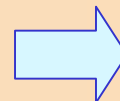
The Virgo Supercluster

Main points:

-Galaxies tend to cluster into groups, the largest nearby cluster is the Virgo cluster a concentration of several hundred galaxies which dominates the galaxy groups around it.

-Collectively, all of these groups of galaxies are known as the Virgo Supercluster.

Closer to
Earth

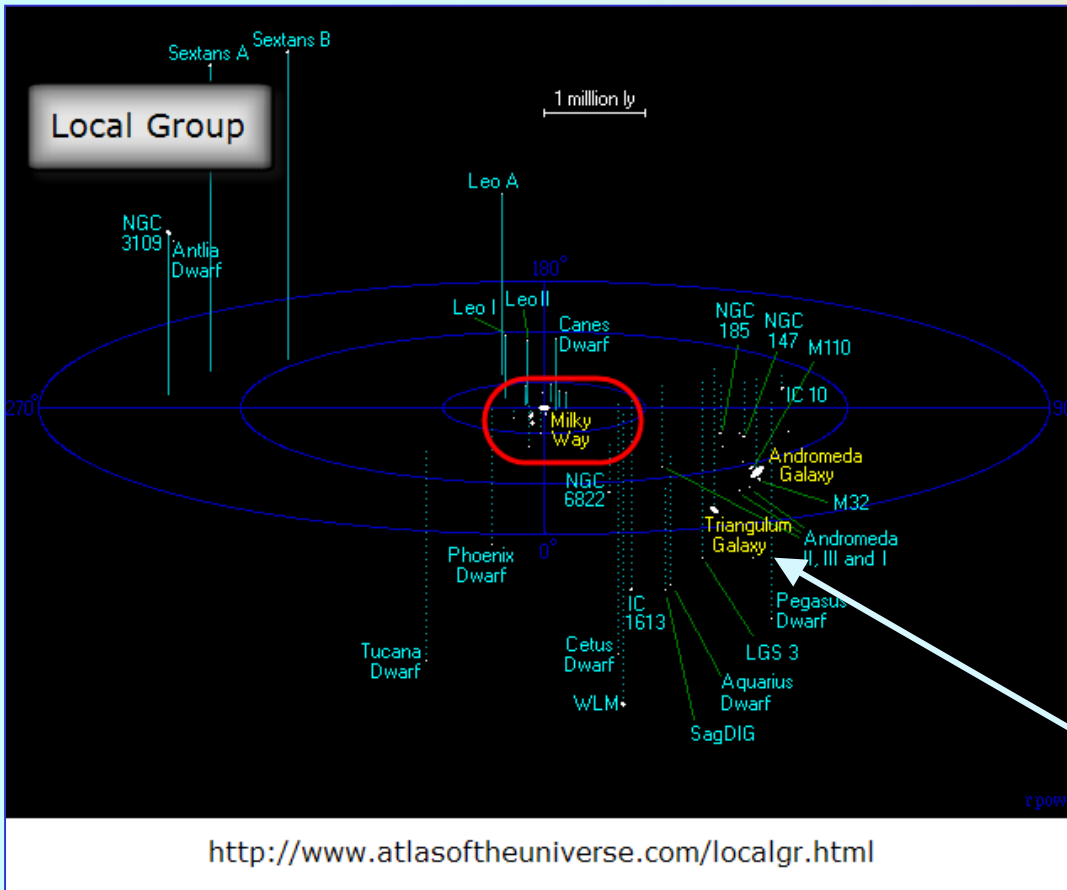


Atlas of the Universe

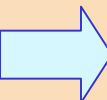
The Local Group of Galaxies

Main points:

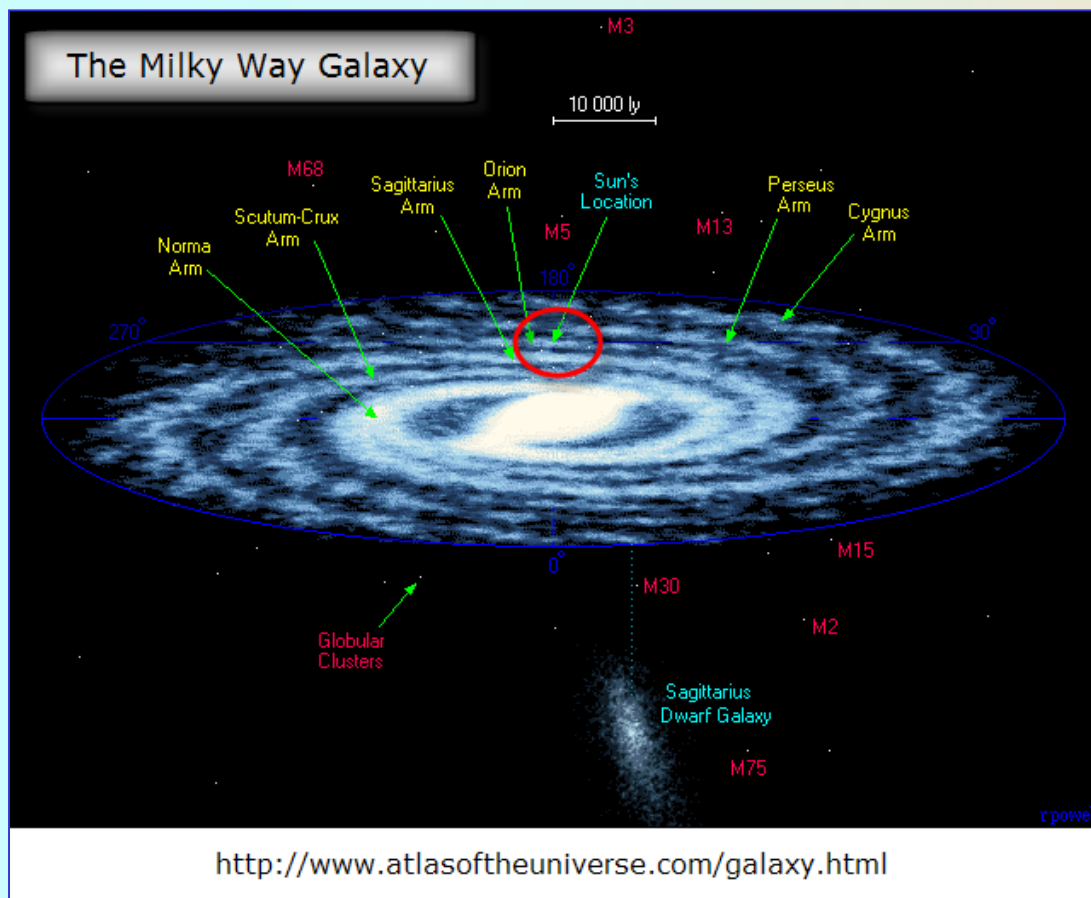
-The Milky Way is one of three large galaxies belonging to the group of galaxies called the Local Group which also contains several dozen dwarf galaxies.



Closer to
Earth



Atlas of the Universe

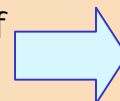


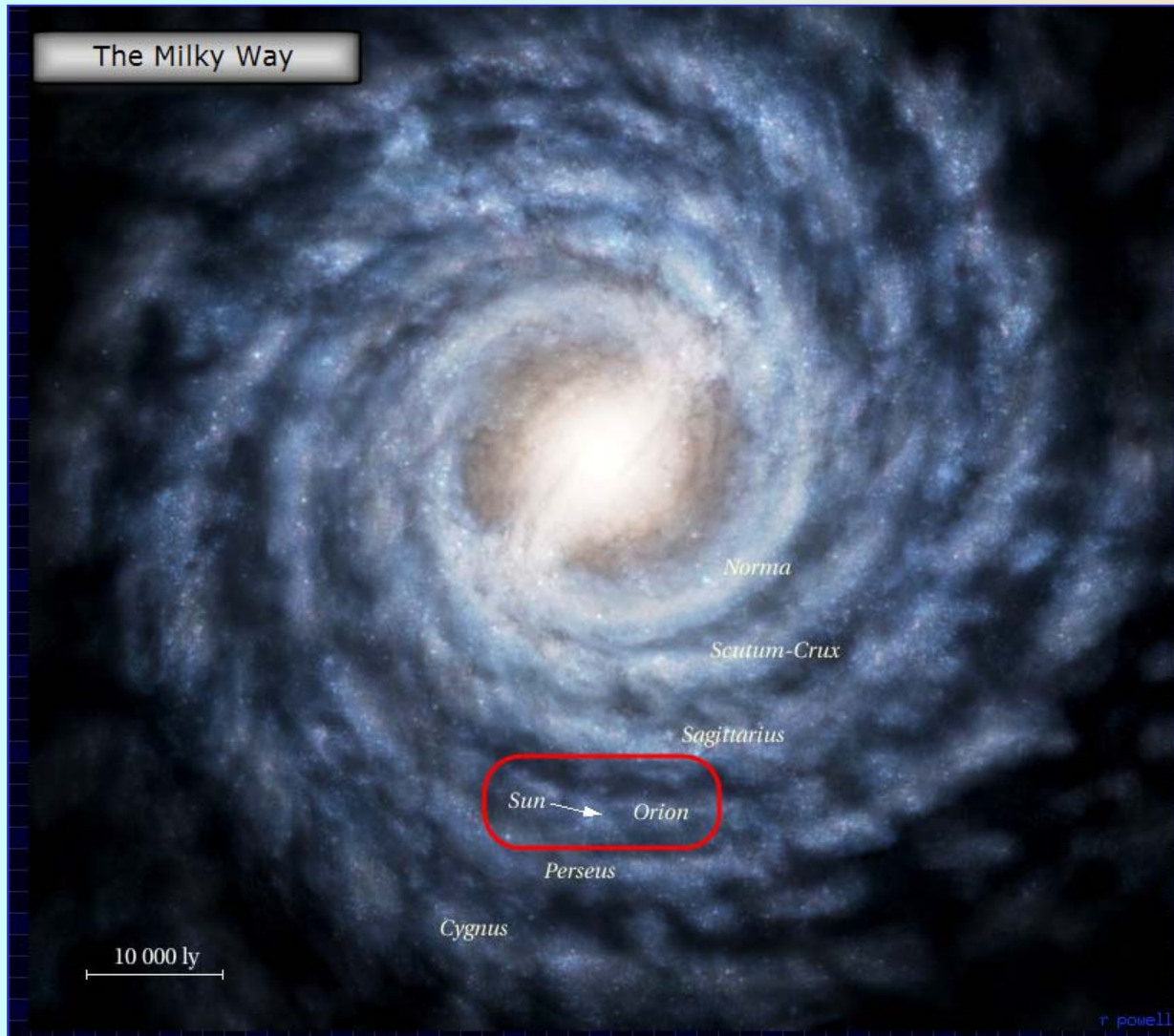
The Milky Way Galaxy

Main points:

- The Milky Way is a spiral galaxy of at least two hundred billion stars.
- Our Sun is buried deep within the Orion Arm about 26 000 light years from the centre.
- Towards the centre of the Galaxy the stars are packed together much closer than they are where we live.

Another map of
the Milky Way





<http://www.atlasoftheuniverse.com/milkyway.jpg>

The Milky Way Galaxy

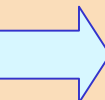
Main points:

-The Milky Way is a spiral galaxy of at least two hundred billion stars.

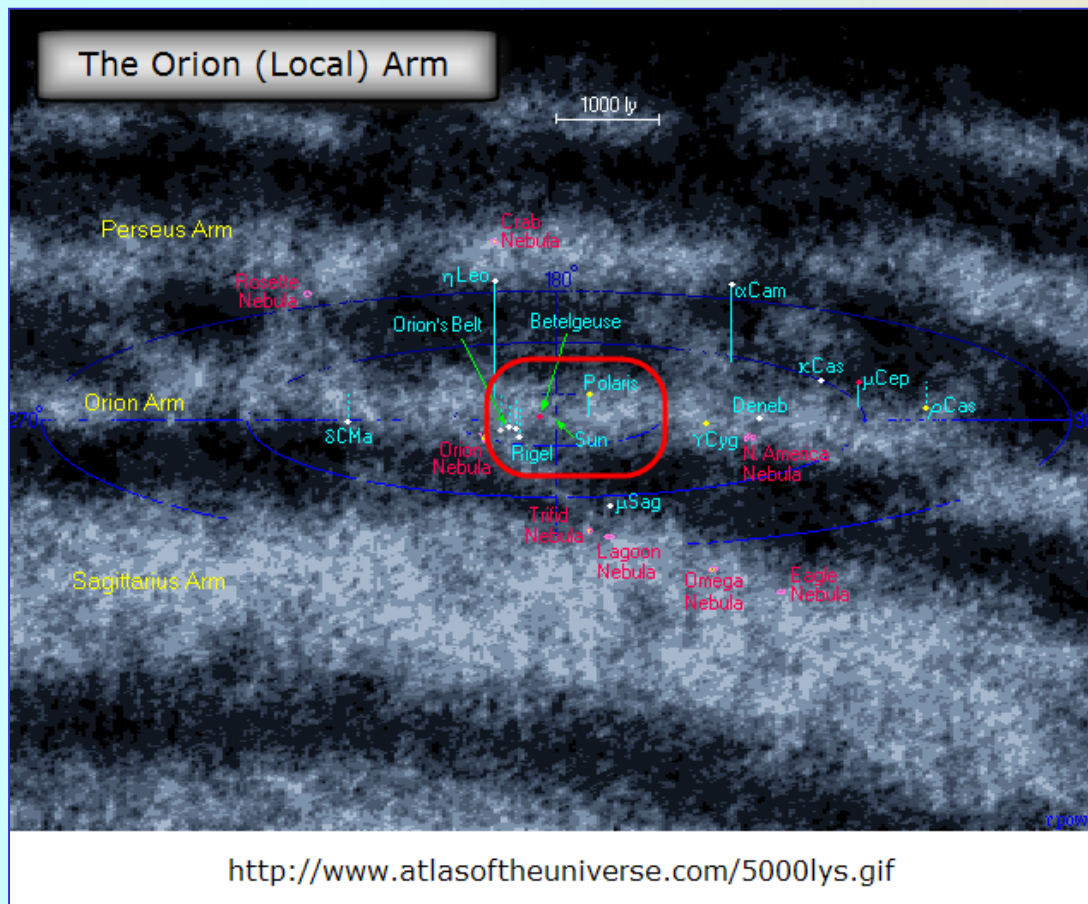
-Our Sun is buried deep within the Orion Arm about 26 000 light years from the centre.

-Towards the centre of the Galaxy the stars are packed together much closer than they are where we live.

Closer to
Earth



Atlas of the Universe



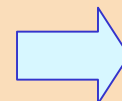
The Local Arm (Orion Arm)

Main points:

-This is a map of our corner of the Milky Way galaxy. The Sun is located in the Orion Arm.

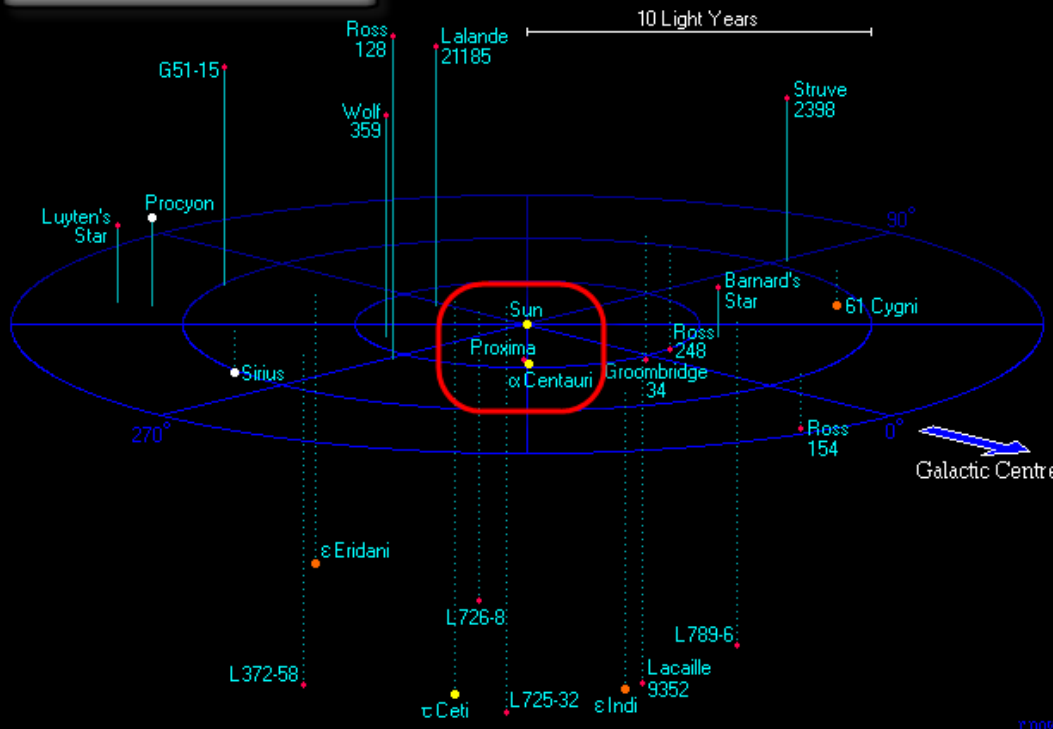
-The map shows several stars visible with the naked eye which are located deep within the Orion arm.

Closer to
Earth



Atlas of the Universe

The Nearest Stars



<http://www.atlasoftheuniverse.com/12lys.html>

The Nearest Stars

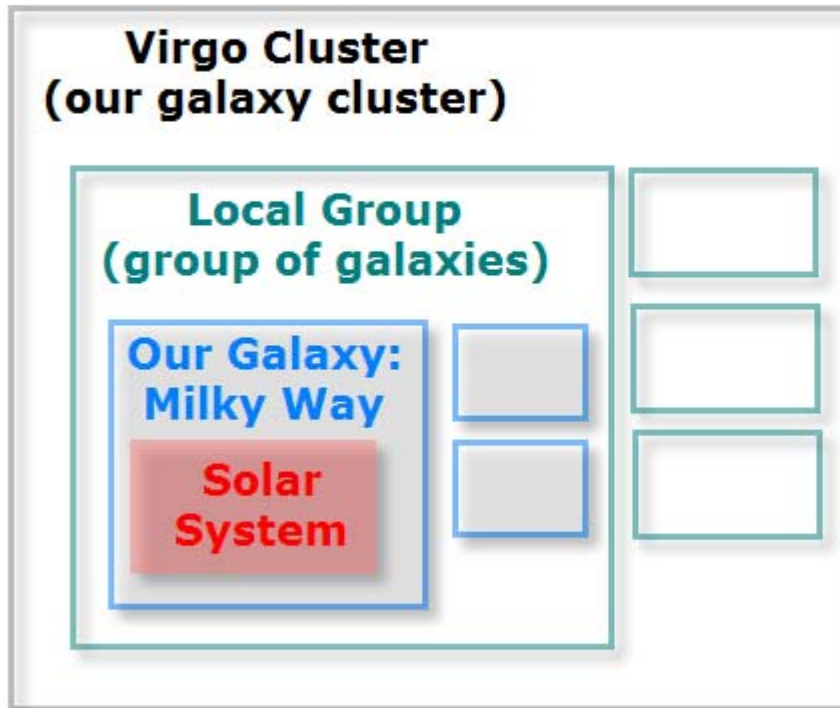
Main points:

-This map shows all the star systems that lie within 12.5 light years of our Sun.

-Most of the stars are red dwarfs - stars with a tenth of the Sun's mass and less than one hundredth the luminosity.

-Roughly eighty percent of all the stars in the universe are red dwarfs, and the nearest star - Proxima - is a typical example.

The Universe



**Millions of
galaxy clusters**