Introduction to Astronomy
Summary Questions Week 13

13 January 2020

1. How are Galactic coordinates defined?

> **Solution:**
>
> The Galactic coordinate system consists of *Galactic longitude and latitude*. The longitude is usually measured in degrees and is defined as *the angle between: the object projected onto the plane of the Galaxy, the Solar System and the Galactic centre, increasing counterclockwise as seen from the North.*
>
> The Galactic latitude (also usually measured in degrees) measures how far an object is above the Galactic plane, as seen from Earth. It is defined as *the angle between: the object, the Solar System and the object's projection onto the plane of the Galaxy. Positive angles point North of the Galactic plane, negative angles South.*

2. Name three important components of the Milky Way.

> **Solution:**
>
> 1. Disk (containing the spiral arms, HII regions etc.)
> 2. Bulge (containing the bar and the supermassive black hole, a.o.)
> 3. Halo (containing the globular clusters, population II stars and some satellite galaxies)
>
> Also correct are "bar", "spiral arms", "supermassive black hole" and perhaps even "globular clusters" or "Satellite galaxies", although that's a bit of a stretch.
>
> The Disk, bulge and halo are the most important components, everything else is really already painting the detail of these three.