Sheet 0 Solutions

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Exercise 1

a)

Das Virgo-Cluster befindet sich bei einer Rektaszension von 12h 27m und Deklination von 12° 43'. Geben Sie Koordinaten in Radiant und Grad im aquatorialen und im galaktischen Koordinatensystem an.

```
1  from astropy.coordinates import SkyCoord
2  from astropy import units as u
3  import numpy as np
4
5  # Virgo has R.A 12h27m = 12.45h = 12.45h * 15°/h = 186.75°
6  # Virgo has Dec 12° 43' = 12° + (43' * 1°/60' ) = 12.717°
7
8  # from what I read ICRS seems to correspond to equatorial coordinates
9  virgo_cluster_ICRS = SkyCoord('12h27m +12:43', unit=(u.hourangle, u.deg))
10 virgo_cluster_galactic = virgo_cluster_ICRS.transform_to("galactic")
11
12 print(virgo_cluster_ICRS)
13 print(virgo_cluster_galactic)
14
15 # Script output, coordinates of virgo cluster in different coordinates
16 # >>> <SkyCoord (ICRS): (ra, dec) in deg (186.75, 12.71666667)>
17 # >>> <SkyCoord (Galactic): (l, b) in deg (280.08096214, 74.49390662)>
```

asdasd