

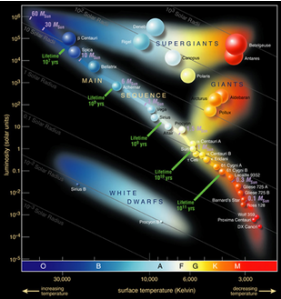
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Hertzsprung-Russell Diagram

In this portfolio, you will create your own HR Diagram, similar to the one below.



To do this you will need to download data from the [Geneva Stellar Evolutionary code](#). This database provides a model grid of stellar parameters in different stages of a stars evolution.

The different models contain information for

- isochrones (**same age**, different masses) and
- evolutionary tracks (**one mass** over time).

Import relevant libraries

Here we provide some of the libraries that need to be read in to be able to execute our code. Remember that:

- 1- **NumPy** is a fundamental package of Python. It allows for a wide range of data types and data manipulation capabilities. To use it you will call it simply as **np**.
- 2- **Matplotlib** is a Python 2D plotting library. We are only loading the Pyplot capabilities, which provide a collection of command that make matplotlib work like **MATLAB**.
- 3- `%matplotlib notebook` allows for interactive plotting.

Include any other libraries that you may find useful.

```
1 %matplotlib notebook
2 import numpy as np
3 import matplotlib.pyplot as plt
```

Getting the Data

For this assignment, we will use Grids of Stellar Models with Rotation, primarily using solar abundance models ($Z = 0.014$).

[Download the tracks and isochrone grid on VizieR](#).

To limit the output, you will need to specify:

- $Z = 0.014$
- Specify models with rotation