

# Minilab 2: Luminosity Function

## 1 A Quick Luminosity Function

Make a new work directory, and copy the provided `inlist_pgstar` and `inlist_project` there, replacing the default `inlist_pgstar` and `inlist_project`. Place your name next to a mass value on the Minilab 2 tab of the [spreadsheet](#), and set the controls in your `inlist_project` as follows:

---

```
initial_mass = <your value from the spreadsheet>
initial_z = 0.02
mixing_length_alpha = 1.75
max_age = 10d9
```

---

Compile and run. When the run is complete, rename the history output:

---

```
cd LOGS
mv history.data history_<your mass>.data
```

---

Then upload your history data file to the Part 1 folder under the bildsten section of the MESA Summer School Dropbox repository.

We will produce a luminosity function based on all of this data as it comes in.

## 2 Better Time Resolution

Change the time resolution of your run by setting `max_years_for_timestep = 1d7`. Follow the same steps as in Part 1, and then upload your resulting history data file into the Part 2 folder in the repository. How does time resolution affect the luminosity function that we produce?