

# Minilab 2: Isochrones

## 1 No Burning

The hard work for setting up a work directory was all done in minilab 1. Here we can continue to use that directory, and simply change what we're looking for. We now want to look at model properties at specific ages, so find this line in `inlist_brown_dwarf`

---

```
max_age = 10d9
```

---

That tells the run to stop after the star reaches an age of 10 Gyr. Change this to a value of just 30 Myr:

---

```
max_age = 30d6
```

---

Remember to turn off any other stopping conditions such as `photosphere_r_lower_limit` that you may have put in before. Now run and report these values from the terminal output at the end of the run in the Day 1 Minilab 2 tab of the spreadsheet:

- Mass
- lg\_L
- Teff
- lg\_Tcntr
- lg\_Dcntr

Edit the stopping condition to run again up to ages of 100 Myr, 300 Myr, and 1 Gyr. Report the same four entries as before in the spreadsheet for each age. You should be able to save time by restarting from a recent photo each time you change to a new `max_age`.

## 2 With Burning

Recall that we turned off burning back in minilab 1. Now let's turn it back on by commenting out the line about burning:

---

```
! max_abar_for_burning = 0
```

---

With burning on, go through the same steps as you did in part one for ages of 100 Myr, 300 Myr, and 1 Gyr. In addition to the quantities reported on the spreadsheet before, also report

- lg\_Lnuc

Watch as the plots are populated with points for all the different masses that have been run.