

# 1 Thu

## A Bash

- a) A little bit of Bash each day keeps the doctor away. In the main loop, around line 140, we have

```
read -p "Starting generation ${gen} at location ${state}.\n      Press any key to continue... " -n1 -s
```

Option `-p <prompt>` outputs the **prompt** string before reading user input.

Option `-n <number>` returns after reading the specified **number** of chars.

Option `-s` does not echo the user's input.

## 2 Fri

*On a flight home. Didn't do much except started going over Part B1 again*

### 3 Sat

#### A Meeting with Julie

- a) The meeting this Wednesday was cancelled. In the meantime, Julie suggests reading the Appendix and her candidacy paper. I have largely finished reading the relevant part of the Appendix, so the rest of this week will most likely be spent reading the candidacy paper and checking out the **Loop Parts** in more detail.
- b) Part B1 second pass: will also check out the job submission script this time around (final line of **Part\_B\_GPU\_job\_1.sh**, but still not going to look into the xmacros).

#### B Regex

- a) Started reading about regular expression, although perhaps not directly relevant to anything.

## 4 Sun

### A Meeting with Julie

- a) Currently a bit confused by the job submission script `GPU_XF_job.sh`
- b) I think this is because I am not familiar enough with the file structure yet.
- c) Also, I am not entirely sure what the `individual number` is for in this script.

## 5 Mon

### A Meeting with Julie

- a) Still on the job submission script of **Part B1**. I am confused about when exactly are the `indiv_parent_dir` created (the ones in `$XFproj/Simulations`)

### B SLURM

**Filename replacement** are as follows:

- a) `%x` - Job name, which can be given as `--job-name=<name>`
- b) `%a` - Job array ID (index) number
- c) `%A` - Job Array's master job allocation number
- d) More options here: <https://slurm.schedmd.com/sbatch.html>

Note that the following are not the same:

- a) `$SLURM_ARRAY_JOB_ID`: this is the `%A` from above
- b) `$SLURM_ARRAY_TASK_ID`: this is the index (`%a` from above)

## **6 Tue**

### **A Meeting with Julie**

- a) Started reading Julie's candidacy paper.

## 7 Wed

### A Meeting with Julie

- a) Read everything aside from Chapter 5.
- b) **TODO:** Go over Chapter 3 again before reading chapter 5.
- c) Ask Julie about Figure 6,7 8 and 9 (a discussion on all of chapter 3.1.2 if possible)
- d) **Zenith Angle:** The angle at which the muon traveled into the IceCube detector, with respect to the vertical. Source: <https://user-web.icecube.wisc.edu/~krosenau/index.html>

### B Bash

- a) A backtick is not a quotation mark. Instance: **Part\_B\_GPU\_job1.sh** line 37

```
for i in `seq 1 $NPOP`
```

Everything we type inside the backticks is executed before in the shell before the main command (such as **chown**), and the output of the backticked-command is then read by the main command