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}.\
         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 the main command (such as `chown`), and the output of the backticked-command is then read by the main command

8 Thu

A Meeting with Julie

a) Regarding Part A of June 5th, from Alex:

> those are created by XF. It's like a backend thing, we never make them ourselves but by virtue of simulating antennas they get made by XF as the location to store the antenna simulation data

In other words, we do not ourselves `mkdir` the `$indiv_dir_parent`.

b) Meeting with Julie today moved to Monday next week.

c) Went over chapter 3 of Julie's candidacy.

d) Finished `Loop_Parts/Part_B` second pass, moving on to `Part_B2`. Adding line breaks in the process; **Be careful with the trailing whitespace** *perhaps it's better to just leave them as single long lines?*