IFRAME BACKGROUND

About me

I am currently doing a PhD at UiT The Arctic University of Tromsø. The working title of the project is “Global temperature response to volcanic activity”, where we will be looking at how the global mean temperature responds to volcanic activity using a new non-parametric approach.

You can have a look at my **CV** here, or download it as PDF.

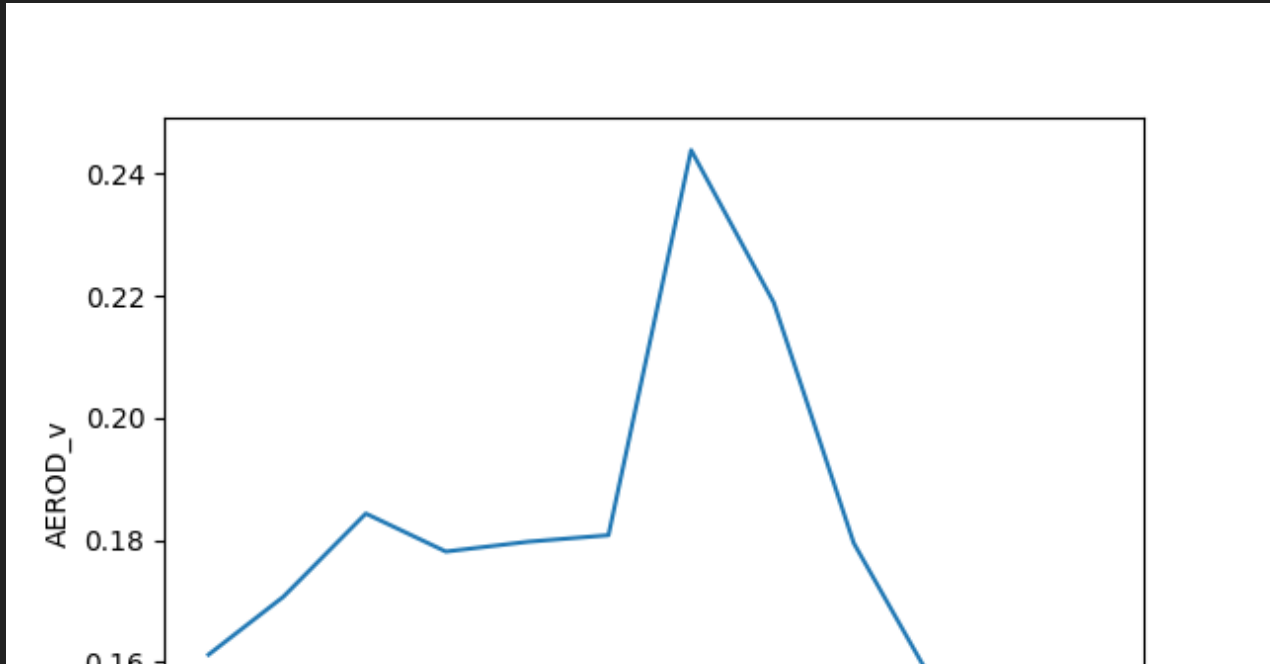
I have another website over at flottflyt.com. There I put up things I find interesting and projects I work on in my spare time.

Work

Master Thesis

My master thesis was titled **“A model for IS spectra for magnetized plasma with arbitrary isotropic velocity distributions”**. It discusses radar theory related to incoherent scatter radars and measurement of suprathermal electrons, electrons with more energy than the normal population of electrons present in the upper atmosphere. A large part of the thesis work was put into creating a code that solved the power spectrum of said suprathermal electrons numerically. The home page of the source code is available here.

CODE



```
def count_printed_lines(i: int) -> int:
    """Run the print loop.

    Parameters
    ----------
    i: int
        How many lines to print

    Returns
    -------
    int
        The number of lines that was printed
    """
    for i in range(3):
```

MATH

Math should be wrapped in `backticks`

```
`$\frac{1}{2}$`
```

This:

$$\begin{aligned}\left\langle n_{\mathrm{e}}^{*}(\boldsymbol{k}) Y_{\mathrm{e}}\right\rangle &= -\frac{1}{V}\frac{1+2ZX_{\mathrm{p}}^{2}}{1+2X_{\mathrm{p}}^{2}(1+Z)}\int_{\boldsymbol{v}}\int_{-\infty}^{\varphi} G_{\mathrm{e}}(\varphi,\varphi')f_{\mathrm{e},0}(\boldsymbol{v})\mathrm{d}\boldsymbol{v}\mathrm{d}\varphi' \\ &= \frac{n_{\mathrm{e},0}}{\Omega_{\mathrm{e}}V}\frac{1+2ZX_{\mathrm{p}}^{2}}{1+2X_{\mathrm{p}}^{2}(1+Z)}g_{\mathrm{e}}\left(\boldsymbol{k},\frac{\boldsymbol{s}}{\Omega_{\mathrm{e}}}\right)\end{aligned}$$

$$\begin{aligned}\left\langle n_{\mathrm{e}}^{*}(\boldsymbol{k}) Y_{\mathrm{i}}\right\rangle &= -\frac{1}{V}\frac{2ZX_{\mathrm{p}}^{2}}{1+2X_{\mathrm{p}}^{2}(1+Z)}\int_{\boldsymbol{v}}\int_{\infty}^{\varphi} G_{\mathrm{i}}(\varphi,\varphi')f_{\mathrm{i},0}(\boldsymbol{v})\mathrm{d}\boldsymbol{v}\mathrm{d}\varphi' \\ &= \frac{n_{\mathrm{e},0}}{\Omega_{\mathrm{i}}V}\frac{2X_{\mathrm{p}}^{2}}{1+2X_{\mathrm{p}}^{2}(1+Z)}g_{\mathrm{i}}\left(\boldsymbol{k},\frac{\boldsymbol{s}}{\Omega_{\mathrm{i}}}\right)\end{aligned}$$

...is generated from this:

```
`$$
\begin{align}
\begin{split}
    \langle n_{\mathrm{e}}^*(\boldsymbol{k})Y_{\mathrm{e}}\rangle
    &=-\frac{1}{V}\frac{1+2ZX_{\mathrm{p}}^2}{1+2X_{\mathrm{p}}^2(1+Z)}
    \int_{\boldsymbol{v}}\int_{-\infty}^\varphi G_{\mathrm{e}}(\varphi,\varphi')
    f_{\mathrm{e},0}(\boldsymbol{v})\text{d}\boldsymbol{v}\text{d}\varphi' \\
    &=\frac{n_{\mathrm{e},0}}{\Omega_{\mathrm{e}}V}
    \frac{1+2ZX_{\mathrm{p}}^2}{1+2X_{\mathrm{p}}^2(1+Z)}
    g_{\mathrm{e}}\left(\boldsymbol{k},\frac{s}{\Omega_{\mathrm{e}}}\right)
\end{split} \\[1em]
\begin{split}
    \langle n_{\mathrm{e}}^*(\boldsymbol{k})Y_{\mathrm{i}}\rangle
    &=-\frac{1}{V}\frac{2ZX_{\mathrm{p}}^2}{1+2X_{\mathrm{p}}^2(1+Z)}
    \int_{\boldsymbol{v}}\int_{\infty}^\varphi G_{\mathrm{i}}(\varphi,\varphi')
    f_{\mathrm{i},0}(\boldsymbol{v})\text{d}\boldsymbol{v}\text{d}\varphi' \\
    &=\frac{n_{\mathrm{e},0}}{\Omega_{\mathrm{i}}V}
    \frac{2X_{\mathrm{p}}^2}{1+2X_{\mathrm{p}}^2(1+Z)}
    g_{\mathrm{i}}\left(\boldsymbol{k},\frac{s}{\Omega_{\mathrm{i}}}\right)
\end{split}
\end{align}
```

$$
\begin{aligned}
\dot{x} &= \sigma(y - x) \\
\dot{y} &= \rho x - y - xz \\
\dot{z} &= -\beta z + xy
\end{aligned}
$$

EXPERIMENTS

EXPERIMENTS