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Appendix A

Code

Below is an excerpt from the Matlab code used to generate the FFT graph and as well as the x-axis values.

A.1 FFT implementation in Matlab

```
%% FFT ANALYSIS OF THE DATA

T = 24*60/10; %period
ts = 10;      %sampling interval / period

f = 1/T; %frequency
fs = 1/ts; %sampling frequency
fn = fs/2; %nyquist frequency

for month = 1:12
x = data(month).original(:);

t = ts:ts:length(x)*ts;

ffty = abs(fft(x))/(length(x));

dF = fs/((length(ffty)+1));
```

```
F = dF:dF:fn;

F2 = 1./((1./F)/(60*24)); % x axis values in Daily Frequency

hold on
fftgraph = plot(F2, ffty(1:length(F2)));
xlabel('Frequency (F_{days})');
title('FFTs for each month of the year overlayed');
end
```