

Solution for assignment 2

Save [A2-CalibrationData.bin](#) and [A2-MeasurementData.bin](#) into MATLAB current directory.

MATLAB code:

read_binary_float.m

```
function [ data ] = read_binary_float( filename )
    fid = fopen(filename);
    if fid ~= -1
        data = fread(fid, Inf, 'float');
        fclose(fid);
    end
end
```

assignment_2.m

```
fieldium_ground_truth = 31.006277;
fieldium_measurements = read_binary_float('A2-CalibrationData.bin');
cerrolodium_measurements = read_binary_float('A2-MeasurementData.bin');

bias = fieldium_ground_truth - mean(fieldium_measurements);
sd = std(cerrolodium_measurements);
unbiased_mean = mean(cerrolodium_measurements) + bias;

fprintf('Bias: %0.6f\n', bias);
fprintf('Standard deviation: %0.6f\n', sd);
fprintf('Estimate melting point of cerrolodium: (%0.6f, %0.6f)\n',
unbiased_mean, sd);
```

Output:

Bias = 0.235710

Standard deviation = 0.062826

Estimate melting point of cerrolodium = (20.085607, 0.062826)