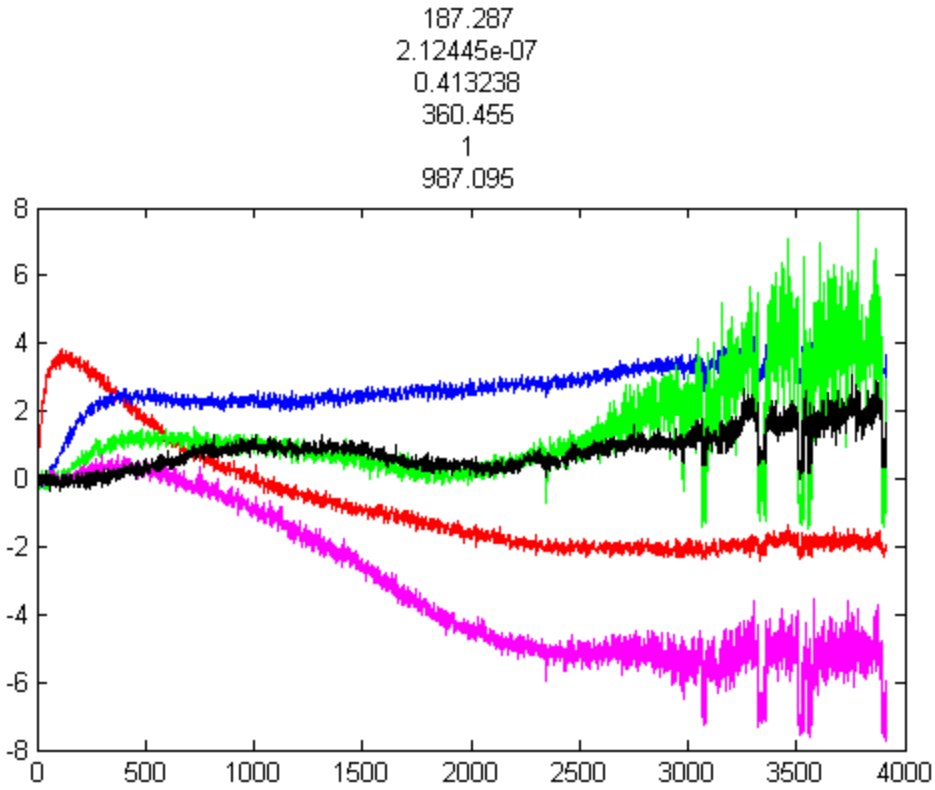
```
load('june1TransientInsulatedHeating.mat');
lb = [0 0 0 0 0 100];
ub = [Inf Inf 1 Inf 1 10000];
x = [190 0 0 375 1 988]; %initial guess
offsets2 = [0.3312 2.9439 0.75 3.3023 -1.0658 0];
%parameters: 1st is conduction constant, 2nd is convection inside tube,
%3rd is emissivity inside tube, 4th is convection outside tube, 5th is
%emissivity outside tube

tOffset = 59.1847;
reading1 = 220;
readingF = 4130;
amb1 = 0;
Pin = 9.9;
eq = 0;
iceEnd = 0;
blackRod = 0;
moistRod = 0;
%make sure readings are loaded here
[x, errsum] = lsqnonlin(@(x)transientFinDiffFuncNonLin(x, readings, tOffset, ...
    reading1, readingF, offsets2, amb1, Pin, eq, iceEnd, blackRod, moistRod), ...
    x, lb, ub);
x
errsum
```

```
Local minimum possible.

lsqnonlin stopped because the final change in the sum of squares relative
its initial value is less than the default value of the function tolerance



x =

  187.2870    0.0000    0.4132  360.4545    1.0000  987.0955


errsum =

   1.2364e+05
```



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