

Sublimation of Dry Ice

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Script to start analysis of dry ice model in Section 3.5.1.

The data, in time (seconds)/mass (grams) pairs:

```
times = [0., 120.0, 240.0, 360.0, 480.0, 600.0, 720.0, 840.0, 960.0, 1080.0, 1200.0, 1320.0, 1440.0]
masses = [25.525, 24.512, 23.524, 22.639, 21.765, 20.89, 20.043, 19.221, 18.431, 17.677, 16.936, 16.212, 15.506]
```

A plot of the data

```
plot(times,masses)
```

A linear model (bad) of the form $u(t) = b - m*t$ can be fit as follows

```
u = @(t,m,b) b - m*t
syms SS(m,b)
SS(m,b) = sum((u(times,m,b)-masses).^2);
```

Then minimize SS with respect to m and b. But redo with your own (better/physically motivated) model for $u(t)$!