Sublimation of Dry Ice

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

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

In[1]:=
```
data = {{0., 25.525}, {120.0, 24.512}, {240.0, 23.524}, {360.0, 22.639},
  {480.0, 21.765}, {600.0, 20.89}, {720.0, 20.043}, {840.0, 19.221}, {960.0, 18.431},
  {1080.0, 17.677}, {1200.0, 16.936}, {1320.0, 16.22}, {1440.0, 15.548},
  {1570.0, 14.828}, {1680.0, 14.213}, {1800.0, 13.553}, {1930.0, 12.91},
  {2040.0, 12.331}, {2170.0, 11.689}, {2280.0, 11.188}, {2410.0, 10.566},
  {2530.0, 10.043}, {2690.0, 9.377}, {2780.0, 9.011}, {2880.0, 8.616},
  {3060.0, 7.945}, {3220.0, 7.404}, {3380.0, 6.877}, {3480.0, 6.593}, {3600.0, 6.244}}
```

Number of data points:

In[3]:=
```
n = Length[data]
```

A plot of the data

```
ListPlot[data, AxesLabel → {"time (seconds)", "mass (grams)"}]
```

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

In[13]:=
```
u[t_, m_, b_] = b - m * t
SS = Sum[(u[data⟦j, 1⟧, m, b] - data⟦j, 2⟧)^2, {j, 1, n}]
```

Then minimize SS with respect to m and b.

Redo with your own (better/physically motivated) model for u(t)!