

## Practice 11

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- Differential equations of the model

$$\frac{dT(t)}{dt} = \frac{-k}{m \cdot c} T(t)$$

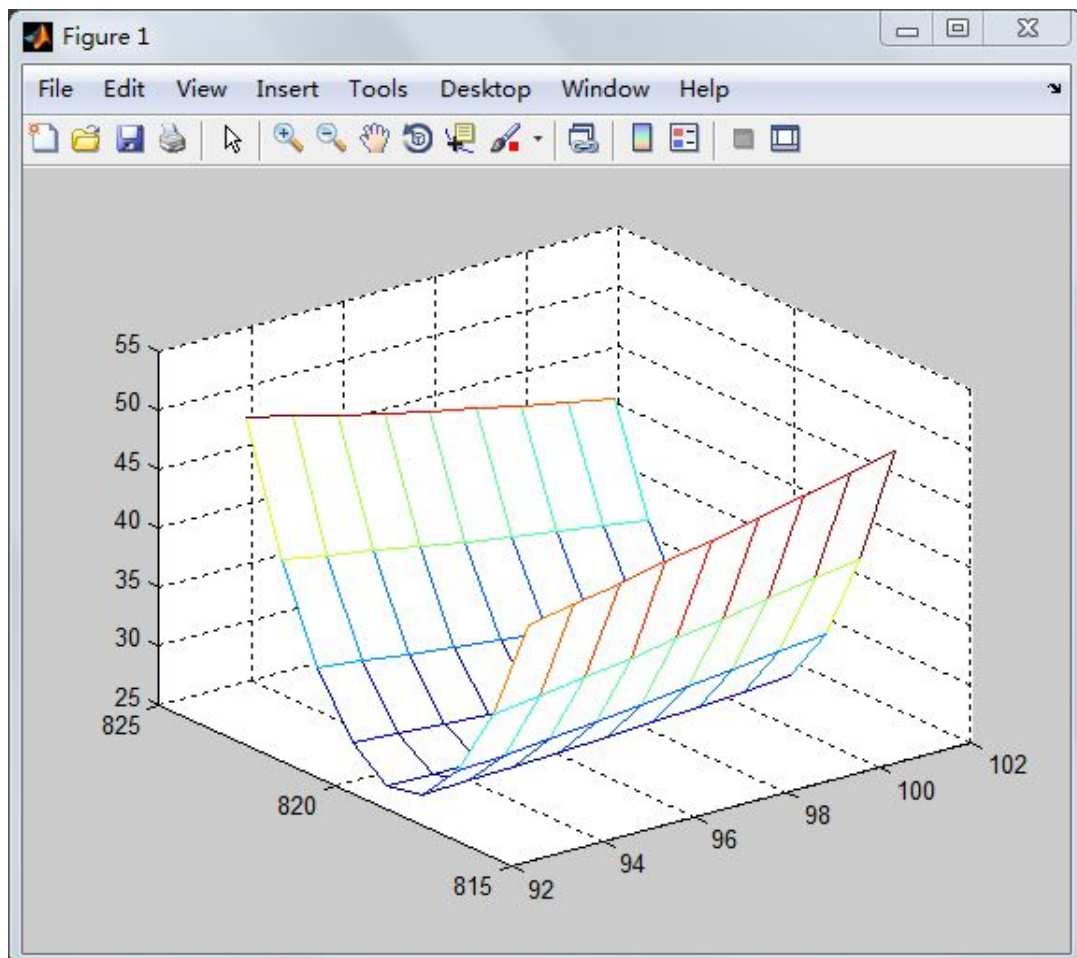
- Table of all the parameters of the model with columns

m	c
Mass of water in a thermos	Specific heat capacity of water
0.75*0.961	4211
kg	J/(kg.K)

- Table of all state variables of the model with columns

$T(t)$
temperature
\.
°C

- Graph of objective function

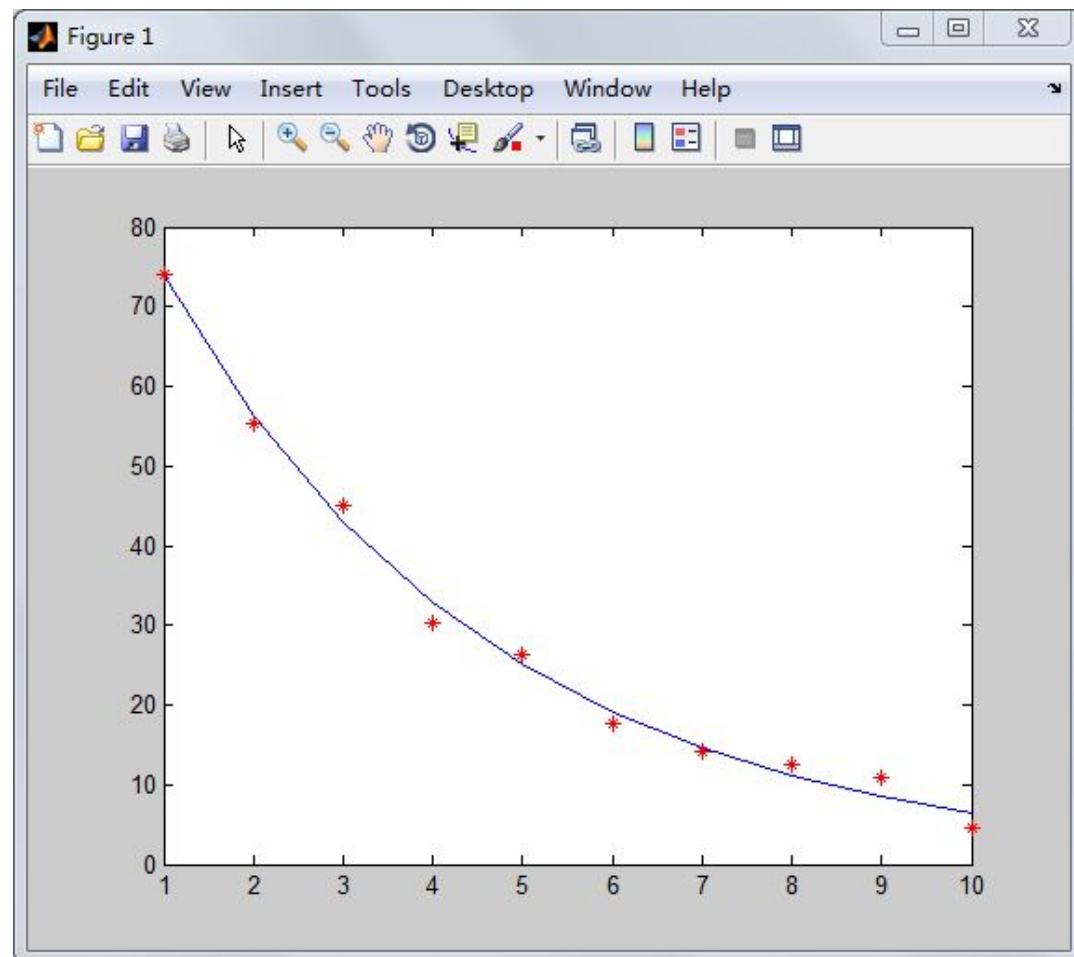


- **Analytical calculation**

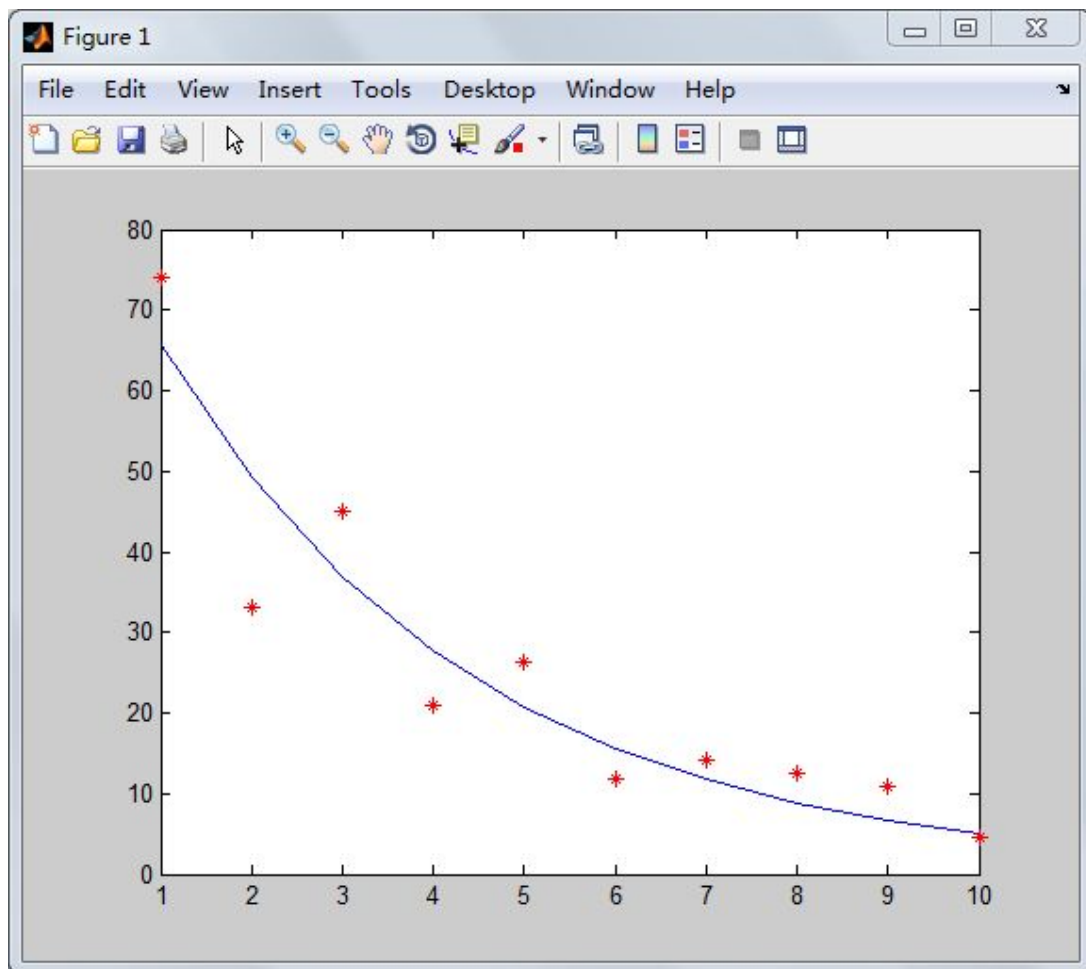
$T=10^{\circ}\text{C}$

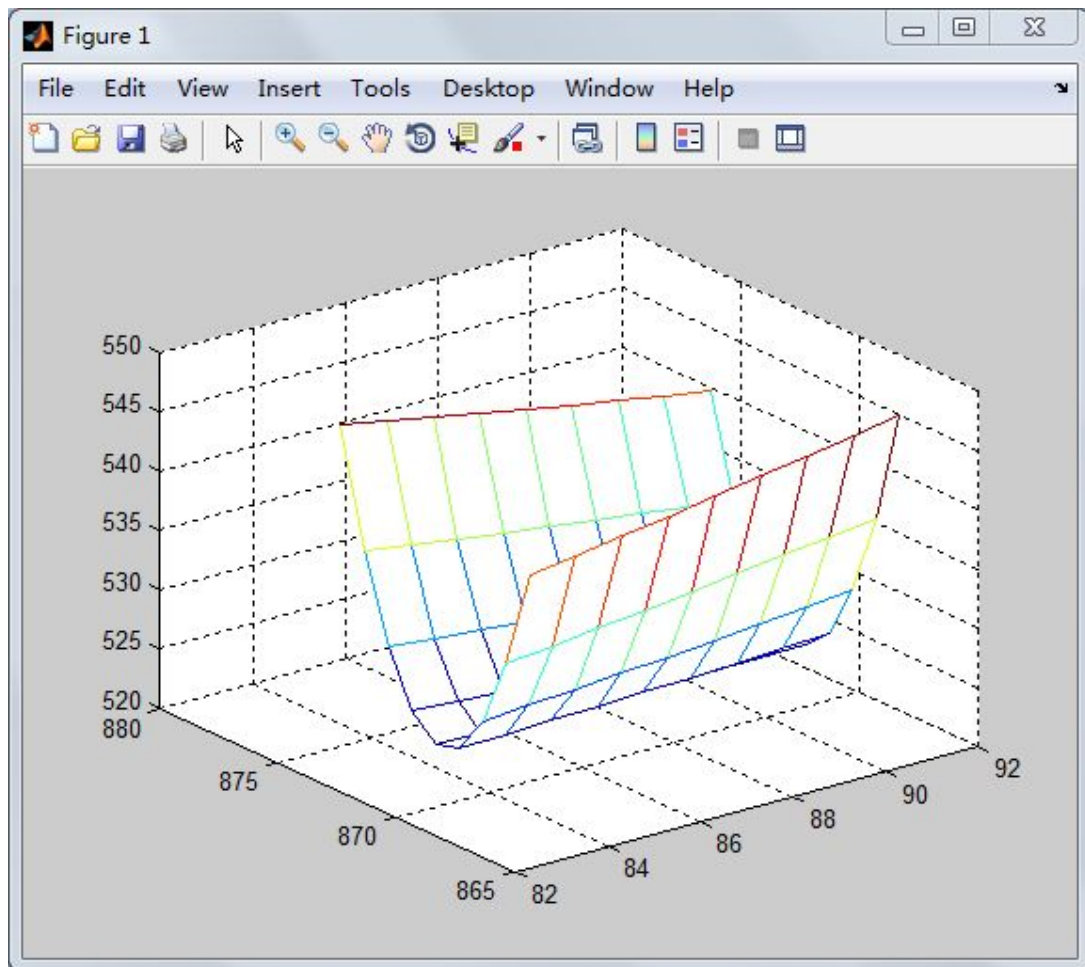
$t=8.3998$

- **Graph comparing the simulation results and measure data**



- **Repeat experiment**





**T0=87.4130**