

7.Pips-forbs model simulation

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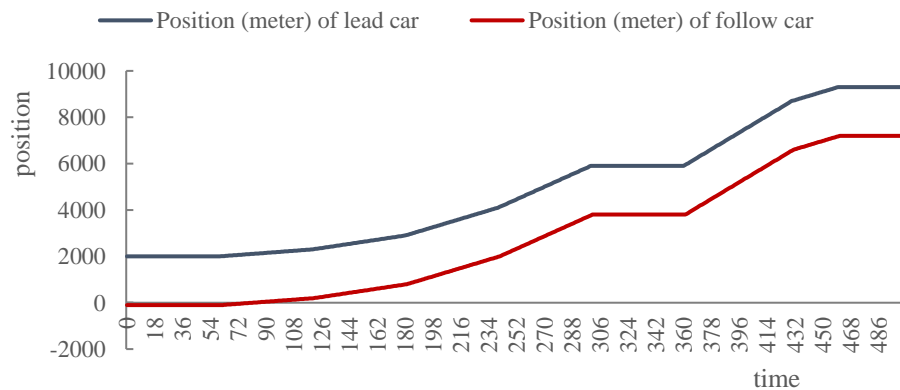
Exercise

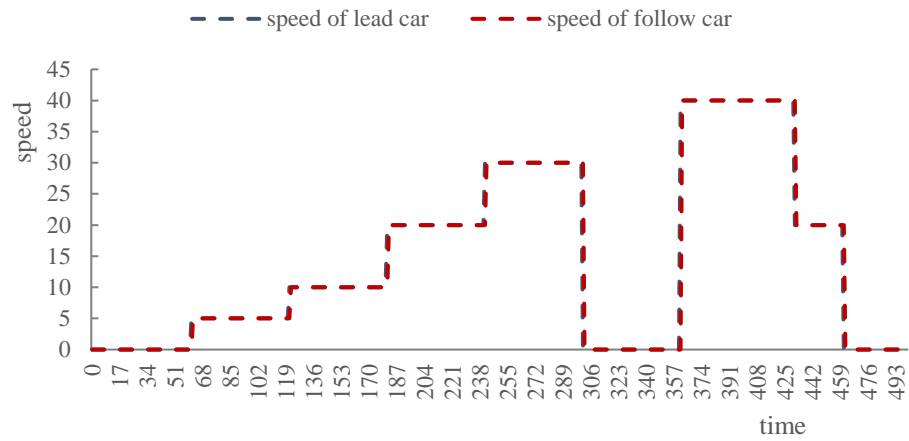
Execute simulation of the model by Chandler, Hermann, and Montroll

输出 output 表（部分）:

Time (second)	Position (meter) of lead car	speed of lead car	Position (meter) of follow car	speed of follow car	acceleration
0	2000	0	-102	0	0
1	2000	0	-102	0	0
2	2000	0	-102	0	0
3	2000	0	-102	0	0
4	2000	0	-102	0	0
5	2000	0	-102	0	0
6	2000	0	-102	0	0
7	2000	0	-102	0	0
8	2000	0	-102	0	0
9	2000	0	-102	0	0
10	2000	0	-102	0	0

仿真结果:





轨迹高度重叠，不符合现实

代码：

```

1. import pandas as pd
2. datas = pd.read_excel('Lead+car+data.xlsx')
3.
4. for i in range(0,500):
5.
6.     datas.iloc[i,5] = datas.iloc[i,2] - datas.iloc[i,4]
7.     datas.iloc[i+1,4] = datas.iloc[i,4]+datas.iloc[i,5]
8.     datas.iloc[i+1,3] = datas.iloc[i,3]+datas.iloc[i+1,4]
9.
10. datas.to_excel('output.xlsx',index =False)

```