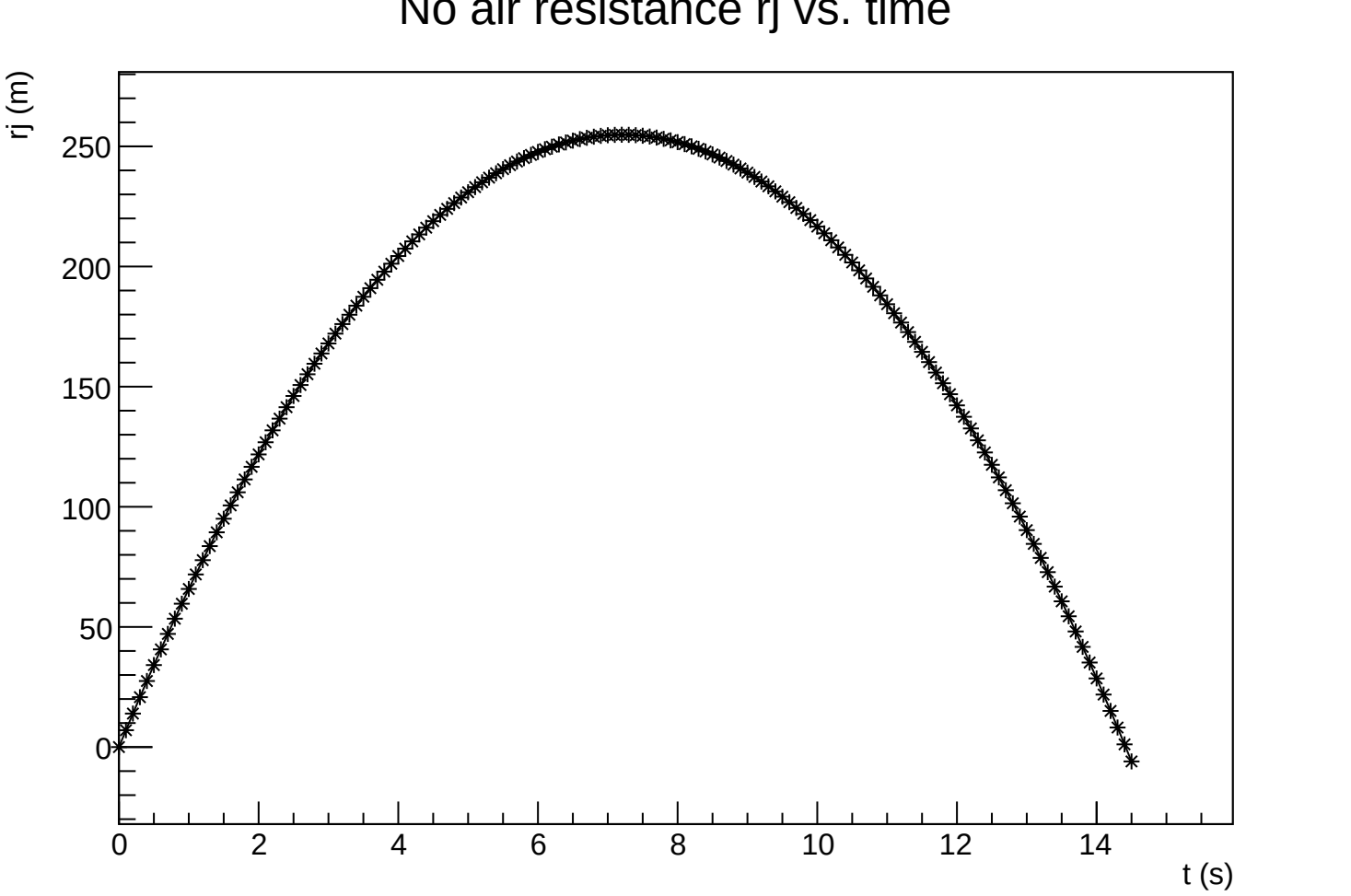
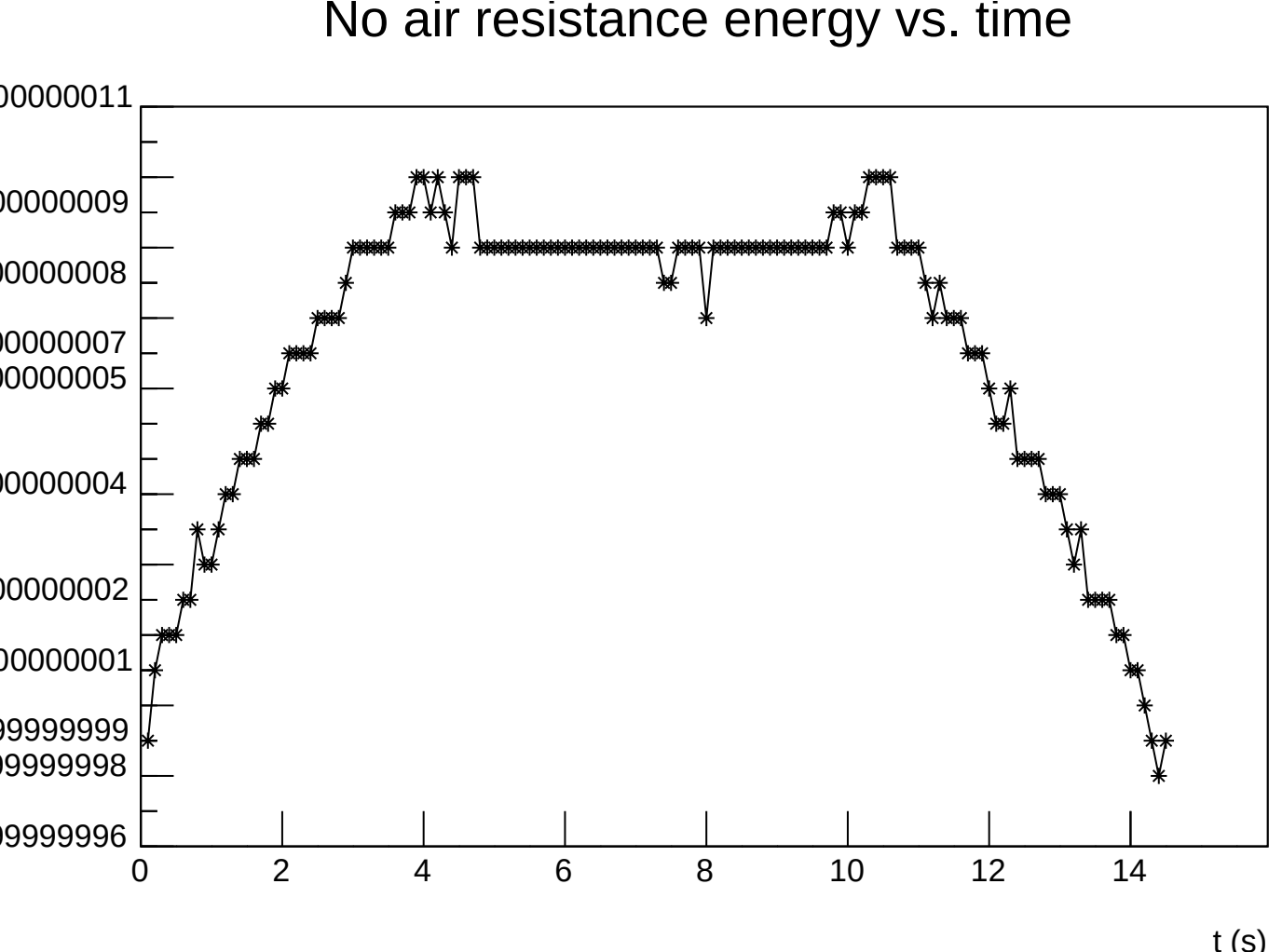
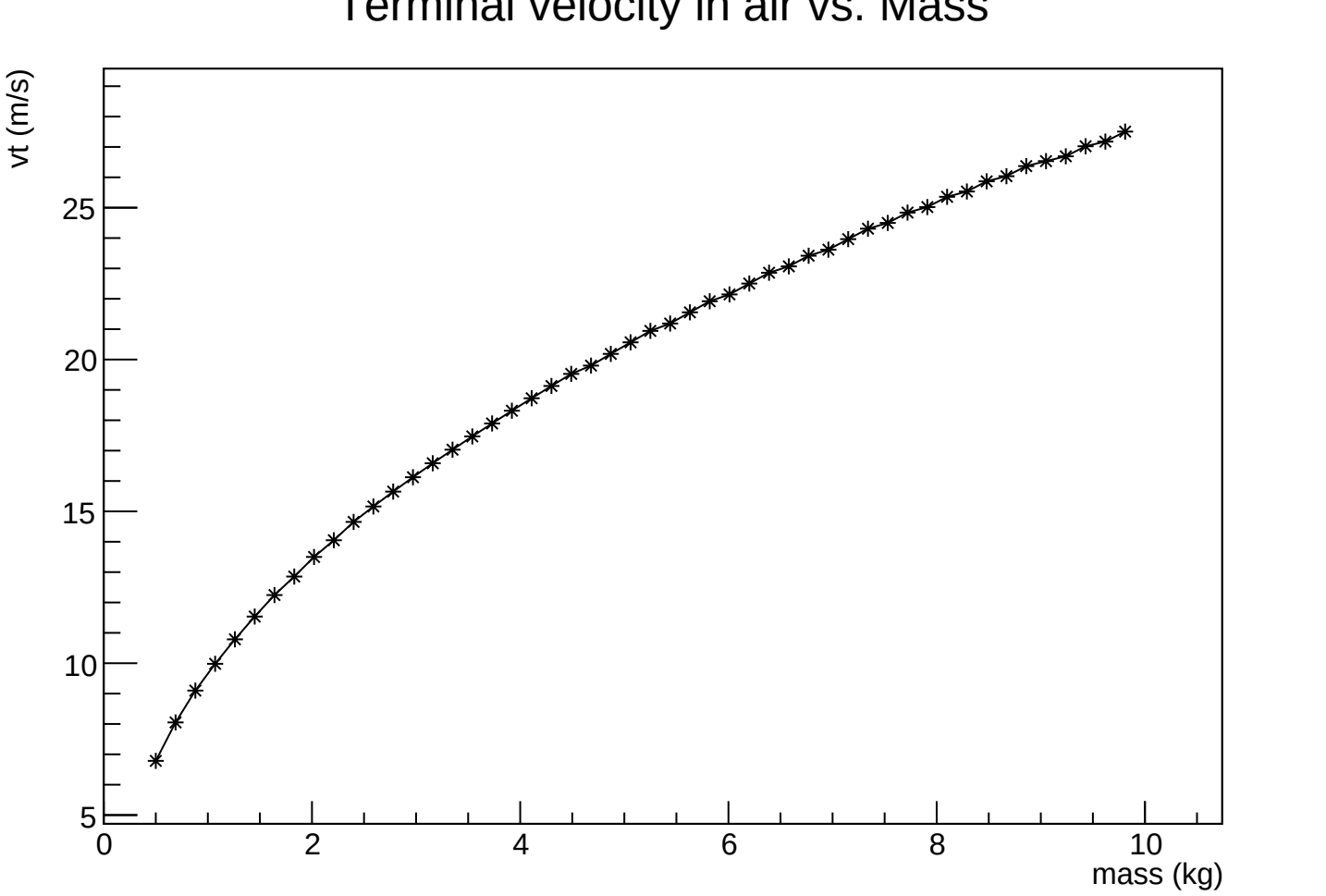

No air resistance rj vs. time
rj (m)
250
200
150
100
50
0
0
2
4
6
8
10
12
14
t (s)


No air resistance energy vs. time
00000011
00000009
00000008
00000007
00000005
00000004
00000002
00000001
99999999
99999998
99999996
0
2
4
6
8
10
12
14
t (s)


Terminal velocity in air vs. Mass
vt (m/s)
25
20
15
10
5
0
2
4
6
8
10
mass (kg)

The accuracy of the conservation of energy is improved with smaller step sized (i.e. more steps). Energy is conserved quite well at even n=200 steps, with only minor fluctuations in it, as can be seen in the graph.

The solution for terminal velocity vs. mass when accounting for air resistance seem to be reasonably accurate. We notice both that the terminal velocity is always less than that of the no air resistance case and that it increases with larger masses - as we would expect by our physical intuition.