Note that the theoretical value’s curve simply “jumped” from the no-parachute theoretical terminal velocity of 57.1839 ms-1 to open-parachute theoretical terminal velocity of 5.71839ms-1.

Meanwhile the numerical solution reached to around that terminal velocity in 1.25 seconds (at t= 26.25s, the velocity is 5.81022 ms-1, within 0.1 ms-1)

See below for the graph required: