**Results based on the driver’s reaction time (T)**

These are the results for this time of response:













**Discussion**

From the results, it can be stated that the phantom jam can be reproduced by using this model. One of the key factors is the reaction time of the model: if it is lower than a certain value all the vehicles will converge at the same velocity and no jam will be created:



Position and velocity of the cars at a certain instant of time ( at left and after speed convergence at right) for

On the other side, when this value is higher than this threshold, after some time driving the vehicles will not be able to maintain a constant distance, thus their speed will never be constant. Then, the phantom jam is created. The figure below shows the position and velocity of the vehicles when the phantom jam effect occurs: some vehicles have to reduce their speed until the point they have to stop while other cars are driving at free flow speed.



Position and velocity of the cars at for