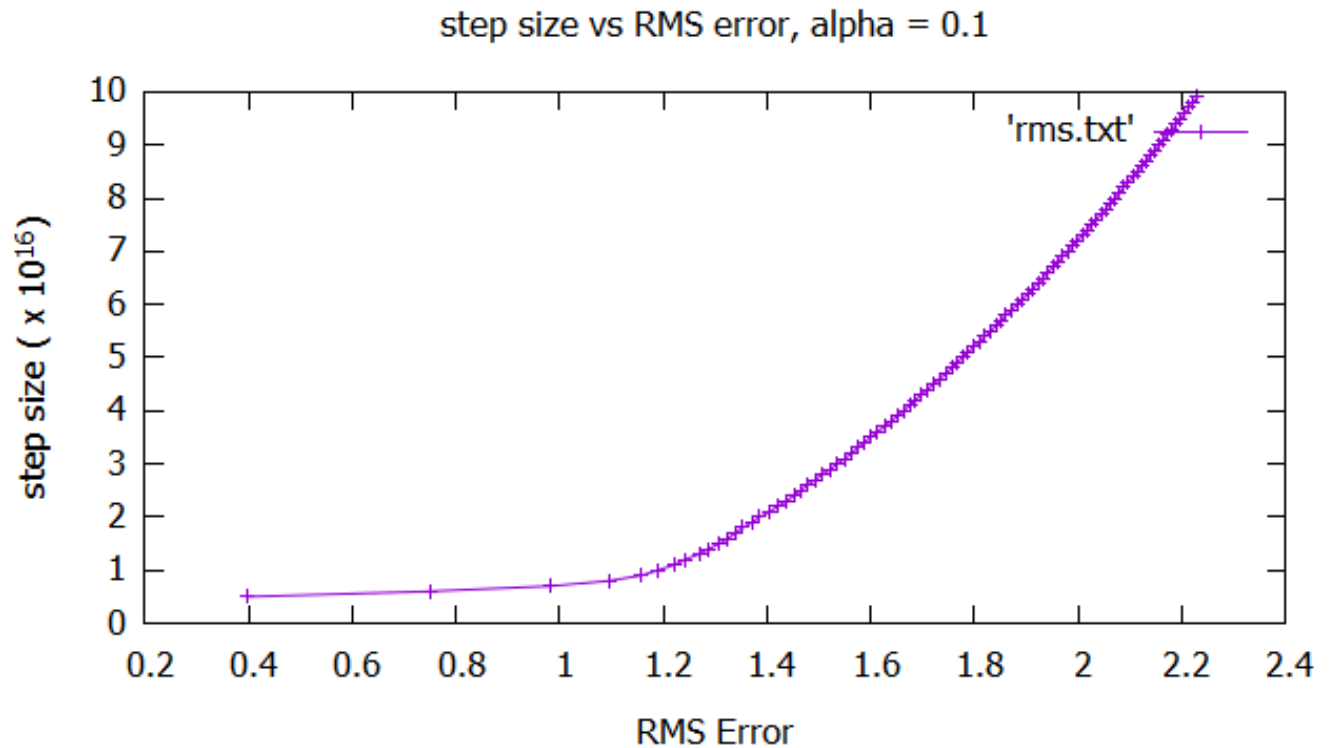
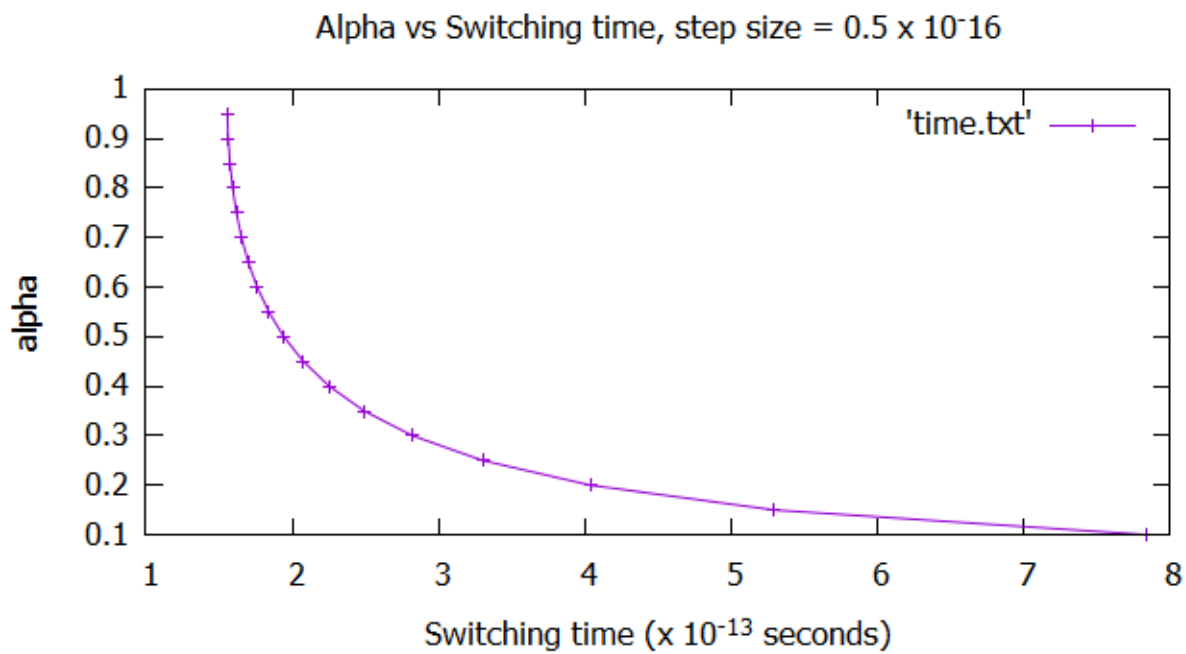


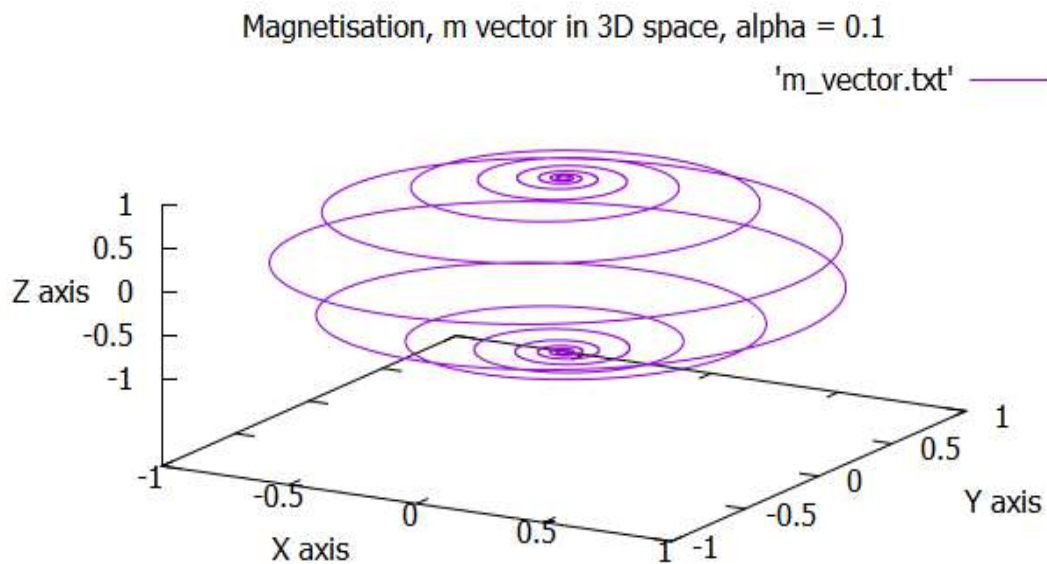
The error, taken as the distance between the points (in 3D space) obtained by the RK45 method and the Heun Method increases with iteration number reaches a maxima and again decreases to 0.

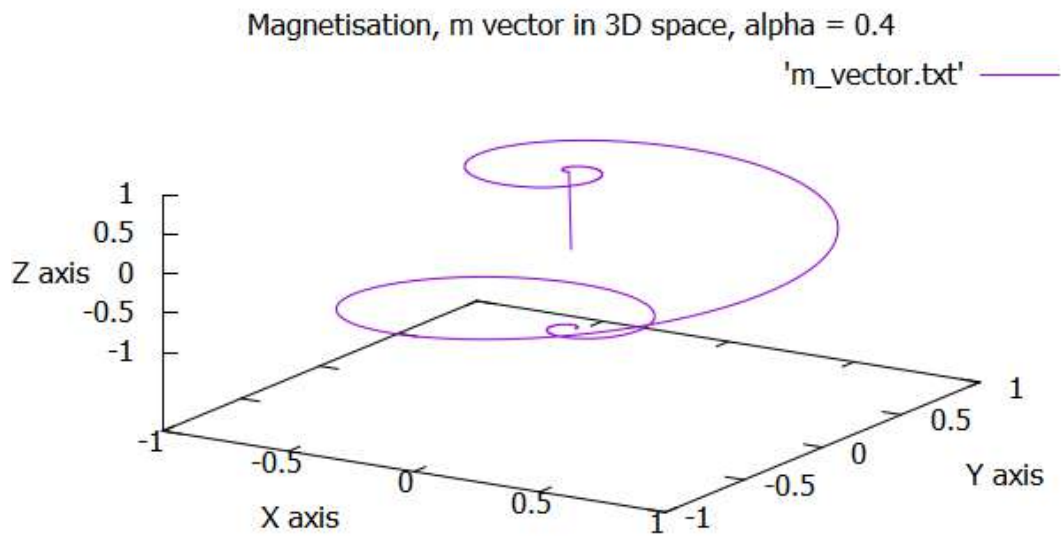


The plot of step size vs RMS error gives an almost straight line (linear graph) after for step size greater than 1×10^{16} .



As the alpha initially decreases from 1 there is a slight increase in switching time. But as the value of alpha decreases more, there is a larger increase in the value of switching time.





The 3d plots of the m vector in space are given here (for step size 0.5×10^{-16}) and as the value of α increases the m vector reaches the bottom faster and with fewer number of rotations.