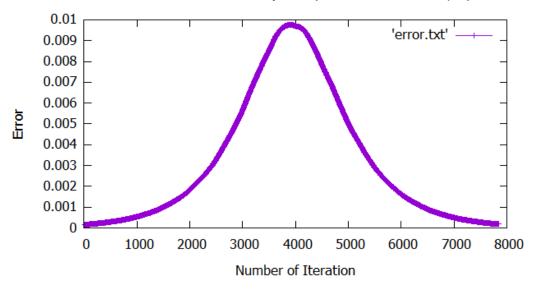
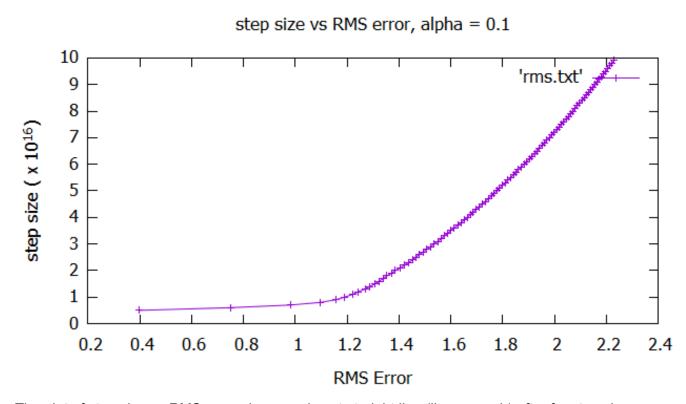
Error vs Number of Iteration Curve (for step size  $h = 0.5 \times 10^{-16}$ , alpha = 0.1

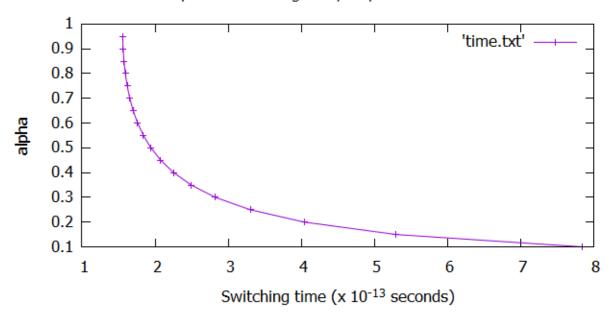


The error, taken as the distance between the points (in 3D space) obtained by the RK45 method and the Heun Method increases with iteration number reaches a maxima and again decreases to 0.



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

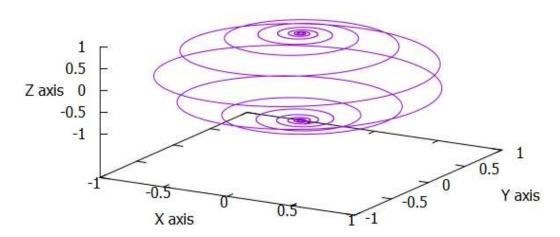
Alpha vs Switching time, step size = 0.5 x 10-16



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.

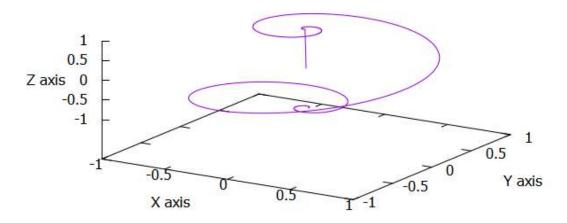
Magnetisation, m vector in 3D space, alpha = 0.1

'm\_vector.txt' ----





'm\_vector.txt' ----



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