# Dataset S5

# R code for spectral analysis of the HMM turnover probability time series

# HMM turnover probabilities should be placed in the data frame “turnProb”

# Download these data from the Astrochron server

turnProb=getData(“graptolite”)

# Load the library Astrochron

library(astrochron)

# Conduct LOWSPEC analysis

specLow=lowspec(turnProb, detrend=T, tbw=2, padfac=1, pl=2, sigID=F, output=1)

# Conduct MTM-PL analysis

specPL1=mtmPL(turnProb, detrend=T, tbw=2, padfac=1, pl=2, sigID=F, output=1)

# Conduct Periodogram-AR1 analysis

specAR1=periodogram(cosTaper(turnProb, demean=T, detrend=T), demean=F,

background=1, fNyq=F, padfac=1, output=1)

# Conduct Periodogram-PL analysis

specPL2=periodogram(cosTaper(turnProb, demean=T, detrend=T), demean=F,

background=2, fNyq=F, padfac=1, output=1)