# Dataset S11

# R code to calculate variance associated with cycles and apply bandpass filters

# Uses object created by Dataset S9

# Integrate power spectra

pwrRes1.3=integratePower(turnPwr, npts=401, pad=4000, ydir=-1, xmax=2, unity=F, ln=T,   
 flow=0.53, fhigh=0.90, genplot=F)

pwrRes2.6=integratePower(turnPwr,npts=401,pad=4000,ydir=-1, xmax=2, unity=F, ln=T,   
 flow=0.21, fhigh=0.52, genplot=F)

pwrResBoth=cb(pwrRes1.3[1], pwrRes1.3[4])

pwrResBoth[2]=pwrRes1.3[4]+pwrRes2.6[4]

# Bandpass filter

ecc=taner(turnProb, xmax=2, padfac=5, detrend=T, flow=1/3.1, fhigh=1/2.1, roll=10^6,   
 genplot=F)

obl=taner(turnProb, xmax=2, padfac=5, detrend=T, flow=1/1.18, fhigh=1/1.47, roll=10^6,   
 genplot=F)

# A summary plot

pl(r=1,c=4)

plot(pwrRes1.3[,4], pwrRes1.3[,1], type=”l”, lwd=1.5, col=”red”,   
 ylim= c(470.925,429.025), ylab=”Millions of years”, xlab= “1.3 Myr variance”,   
 cex.axis=1.2, cex.lab=1.3)

plot(pwrRes2.6[,4], pwrRes2.6[,1], type=”l”, lwd=1.5, col=”blue”,   
 ylim=c(470.925,429.025), ylab=”Millions of years”, xlab= “2.6 Myr variance”,   
 cex.axis=1.2, cex.lab=1.3)

plot(pwrResBoth[,2], pwrResBoth[,1], type=”l”, lwd=1.5, ylim=c(470.925,429.025),   
 ylab=”Millions of years”, xlab=”Combined variance”, cex.axis=1.2, cex.lab=1.3)

plot(ecc[,2], ecc[,1], type=”l”, lwd=1.5, col=”blue”, ylim=c(470.925,429.025),   
 ylab=”Millions of years”, xlab=”Filter outputs”, cex.axis=1.2, cex.lab=1.3)

lines(obl[,2], obl[,1], lwd=1.5, col=”red”, cex.axis=1.2, cex.lab=1.3)