This directory contains the code for one particular sensitivity analysis of the planets simulation:

Name: SA21 – narrowing habitable envelopes

Description: more complex life (prokaryotic -> eukaryotic -> multicellular -> intelligent) appears to be less tolerant of extreme environmental conditions. The habitable range for temperature might therefore be expected to shrink over time if evolution is on course towards successfully producing intelligent life. Here Tmin and Tmax, which are constant in the default simulation, are replaced where appropriate with time-varying values. The habitable range starts off 20C wider than in the default simulation, and ends up 20C narrower.

The following files were altered in order to implement this sensitivity analysis:

set\_constants.m

calc\_asymmetry.m

calc\_attractor\_properties.m

calc\_planet\_freqs.m

calc\_planet\_properties.m

calc\_run\_freqs.m

calc\_runaways.m

determine\_feedbacks.m

determine\_initial\_T.m

events\_pl.m

planets\_ODE.m

plot\_feedbacks.m

plot\_history.m

plot\_planet\_histograms.m

plot\_run\_histograms.m

plot\_scatterplots.m

ts\_slave.m

Files added for this SA:

Tminvar.m

Tmaxvar.m