The DAIS program package (in Matlab) consists of

1. DaisForce.mat, an input forcing file for the period 240 kyr BP to 2010 AD at one year intervals with the forcing variables TA (Antarctic temperature reduced to sea level), SL (sea level), TO (high latitude subsurface ocean temperature and GSL (time rate of change of SL).

2. CalcDAIS.m, the program specifying parameter values and doing the hindcast calculation. The output from this program (OutDais) is ice sheet radius (Rad), ice sheet volume (Vol) and sea level equivalent (SLE) at one year intervals over the 240 kyr BP – 2010 AD period. Sea level is also carried along for the plotting.

3. PlotDAIS.m, the program doing the plotting of the output. The figure produced shows a hindcast of sea level equivalent (SLE) from changes in Antarctic Ice Sheet ice volume for a model setup specified in CalcDAIS (see below) for the period 240 kyr BP to 2010 AD. The hindcast is plotted relative to present day values (means for 1961-1990 AD). Frames **b** - **d** are blowups of the full hindcasts shown in **a.** Paleoreconstruction targets for the last interglacial, the last glacial maximum and the mid-Holocene are shown as vertical bars in **a** – **c**, respectively. Also shown is reconstructed global mean sea level from 6000 BP to the present (black dashed lines in **c** and **d**).

Run CalcDAIS for the one of the four different setups for model parameters gamma and alpha in lines 42 – 45 in CalcDAIS. The four setups in the order listed correspond to 1. the original (but corrected) Oerlemans (2005) model. 2. a setup with increased sensitivity of ice flow to sea level, 3. a setup with increased sensitivity of ice flow to ocean subsurface temperature and 4. a setup with increased sensitivity of ice flow to sea level and ocean subsurface temperature.

Uncomment one of the setups, run CalcDAIS and then plot the results the results

Other parameter combinations can be chosen by the user (but they may make it necessary to change the scale in the plotting program). Gamma may vary from 1 to 19/4 and alpha may vary from 0 to 1.