Instructions for Read_SOCAT.m

This is the routine to get the SOCAT v1.5 data into matlab.
These are the 'Database Files from CDIAC v1.5' and
and the 'Individual Cruise Files from Pangea v1.4'
Several files can be selected, all with the same extension.
For allowed extensions, see the 'exts' variable.
It reads the file(s) until the column headers are found.
Determines # of columns from # of headers.
Creates GUI to ask user which columns to import (see figure below)
Creates another GUI to ask user which geographical region to import (see figure below)
Data is stored in variables
named after (sometimes modified) column headers
Anything before column headers is stored in 'StartText' variable
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Instructions:

User Input: the following variables can be modified to suit the user's needs.

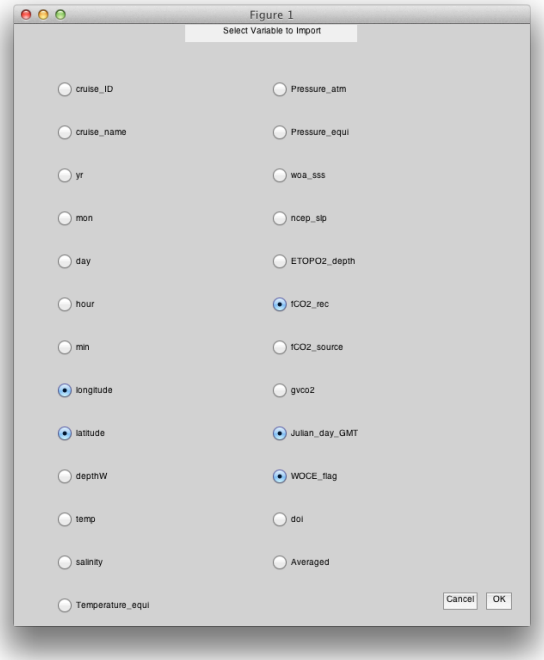
readlines = number of lines read per loop
Set to 100,000 by default. Files will be read by blocks of 100,000 lines.
Some computers might overload if this number is too big. Lower the number if that's the case

dflt = set of column numbers initially selected to be imported when interface is created.
The radio buttons for these columns will appear selected when the interface appears.
They can be deselected at will on the interface.

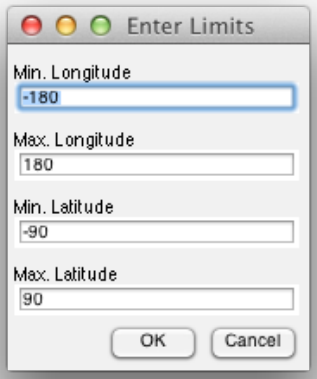
①Start the program

②Select the file(s) you want to import

③Select the variables you want to import individually on the interface…click OK. [clicking CANCEL will stop the program]



④Enter the geographical limits of the data you want to import…click OK. [clicking CANCEL will stop the program]



The names displayed are the column headers
The resulting variables in Matlab will have roughly the same names. Parts of the name between brackets or parentheses will have been removed and spaces will have been replaced by underscores.

⑤ A progress bar will appear. When it disappears, the data will be loaded in Matlab.