OMFIT ONETWOtime Module Tutorial

DISCLAIMER:

This is an editable public document! When you make a change to it, it will be visible immediately from everyone! Feel free to edit it and help other OMFIT users!

Since this is an evolving document, there may be some small inconsistencies as different figures have been taken by different people with different versions of OMFIT for different analyses.

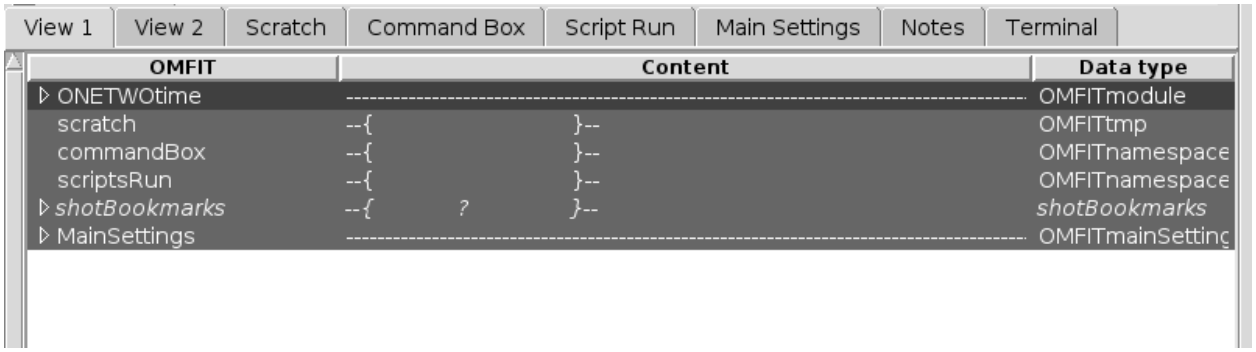
This tutorial shows how to use the ONETWOtime module in OMFIT to analyze DIII-D discharges. The ONETWOtime module is meant as a replacement for the autoonetwo IDL tool. To run ONETWO, one needs profiles and equilibria. For ONETWOtime, these are specified through dependencies. Currently, there are two accepted methods of obtaining profiles:

1) Using GAprofiles
2) Using the OMFITprofiles module

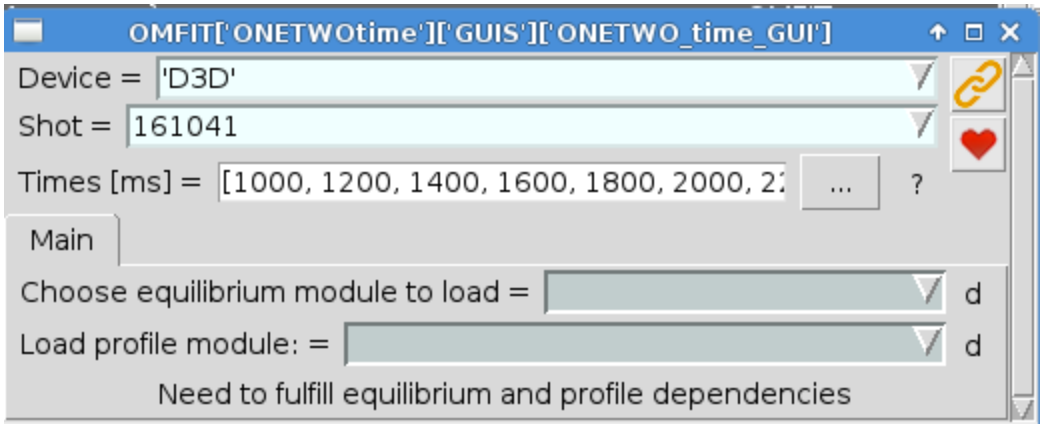
This tutorial will treat each separately.

Step 1: Start up OMFIT with the ONETWOtime module's GUI:

```
omfit -m ONETWOtime
```



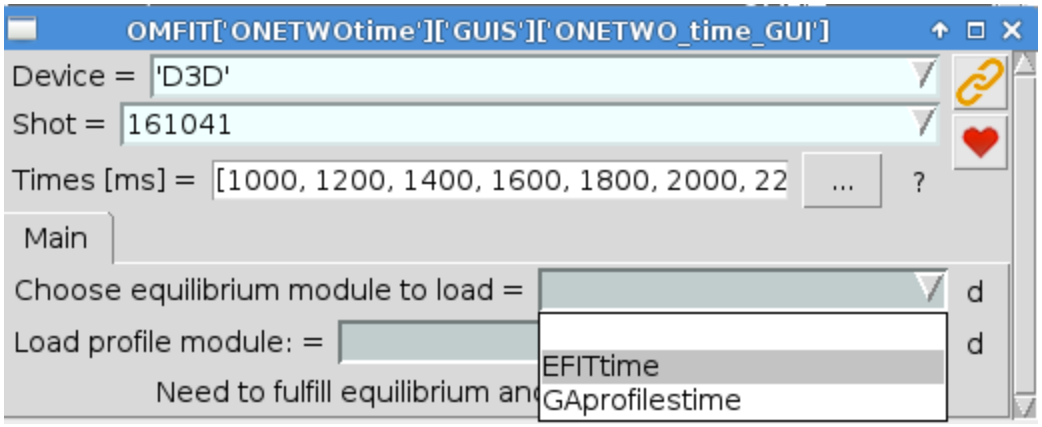
Launch the ONETWOtime GUI by double-clicking on the ONETWOtime line.



Path 1: Use EFITtime and OMFITprofiles

Part 1: Equilibrium

Choose EFITtime as the equilibrium module



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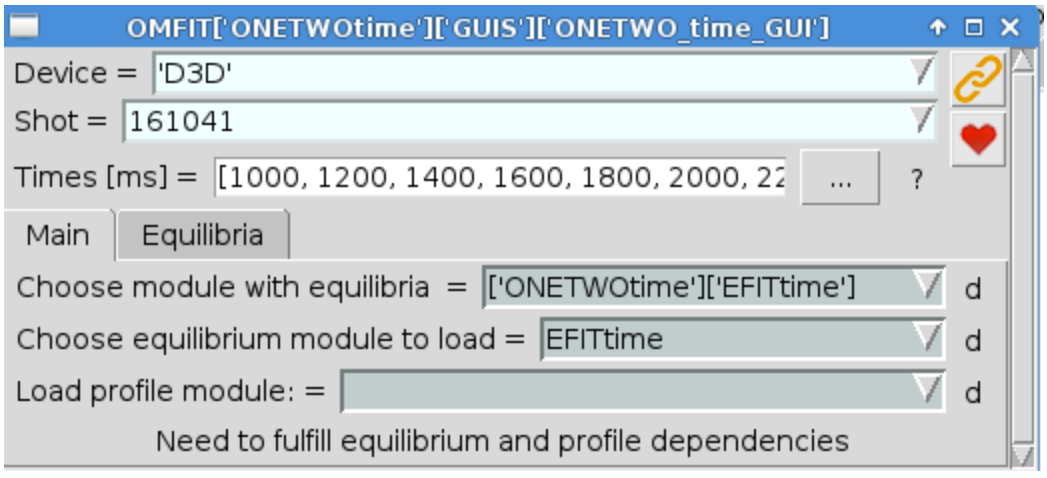
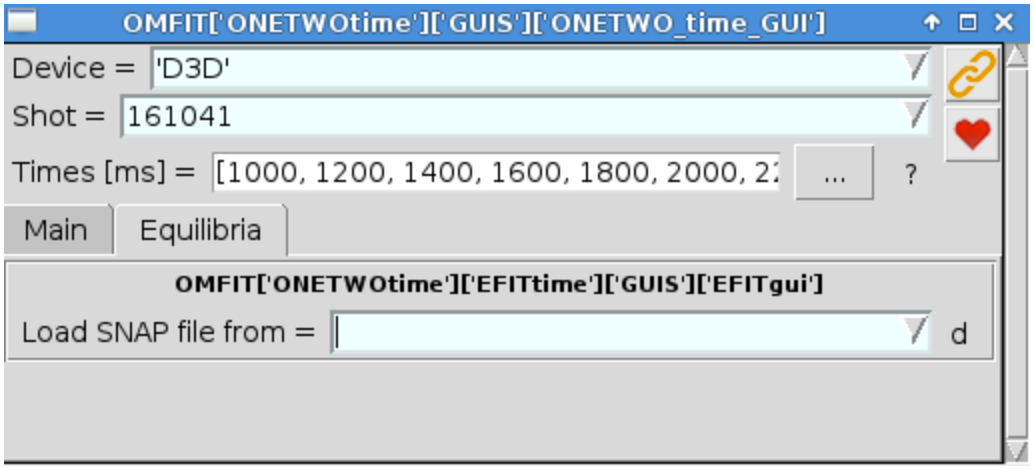
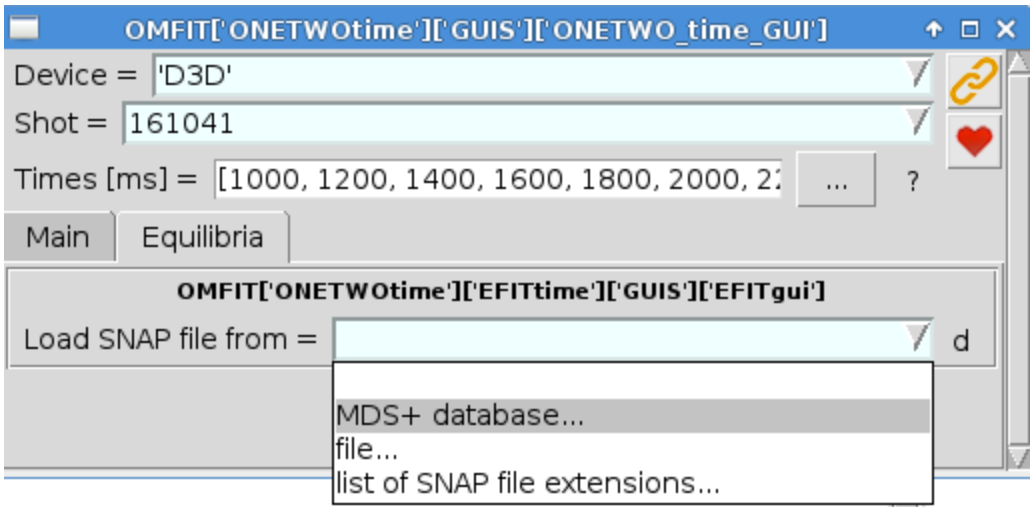


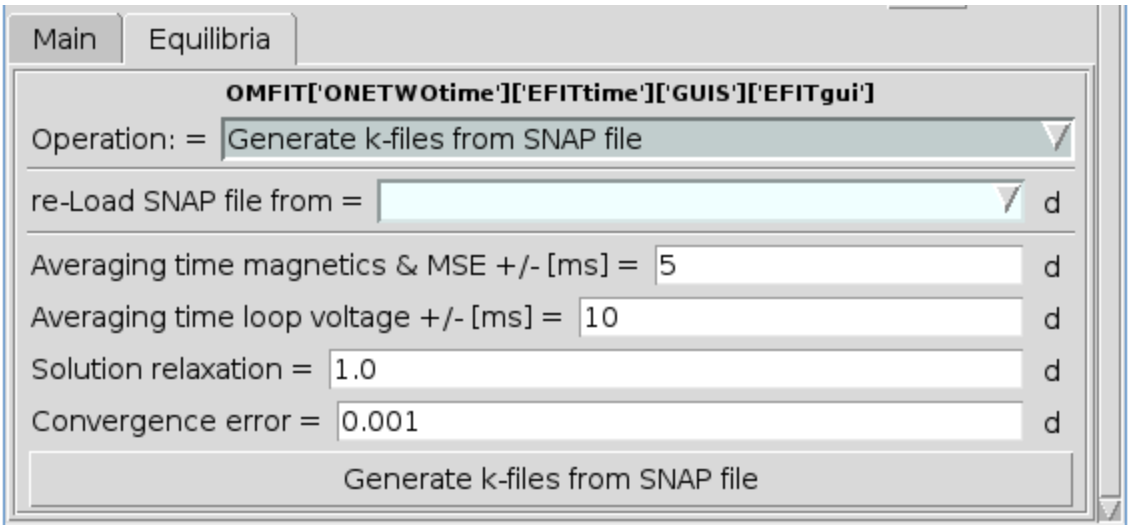
Choose the Equilibria tab



Load a snap file

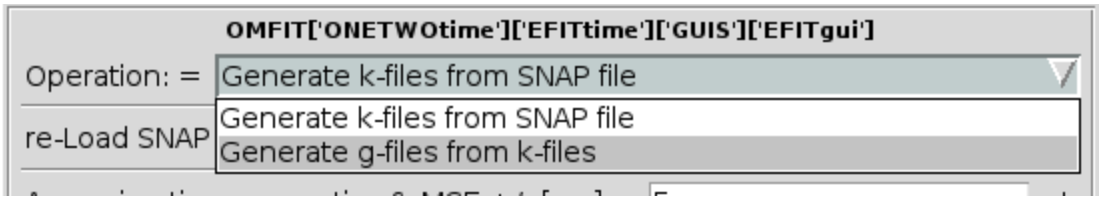


f

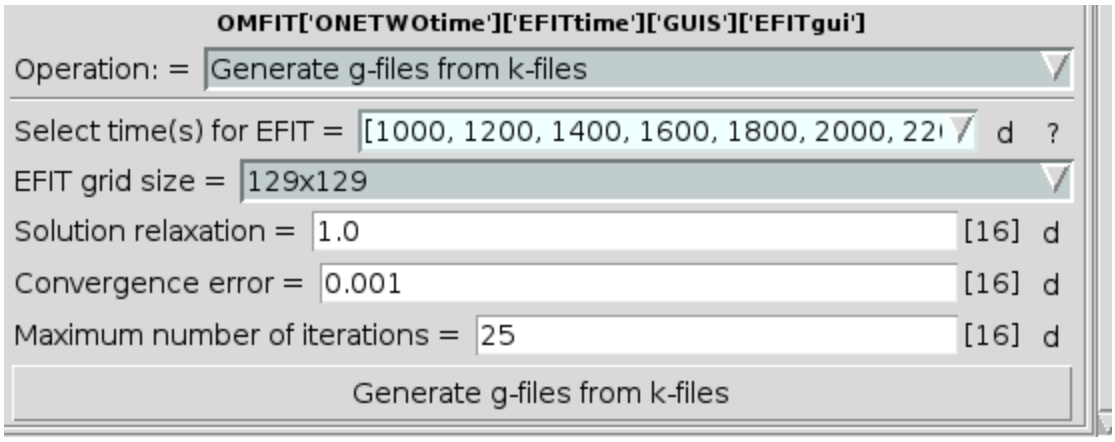


Click the Generate k-files... button

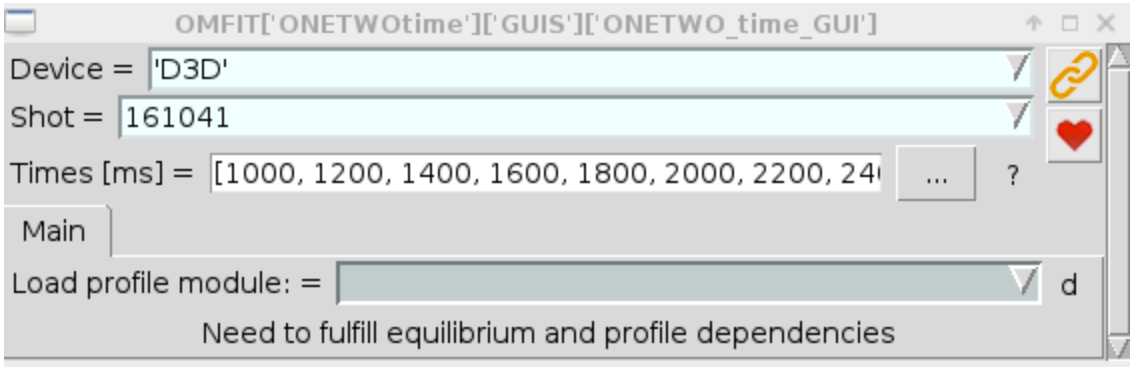
Choose the Operation: Generate g-files ...



Click the Generate g-files… button



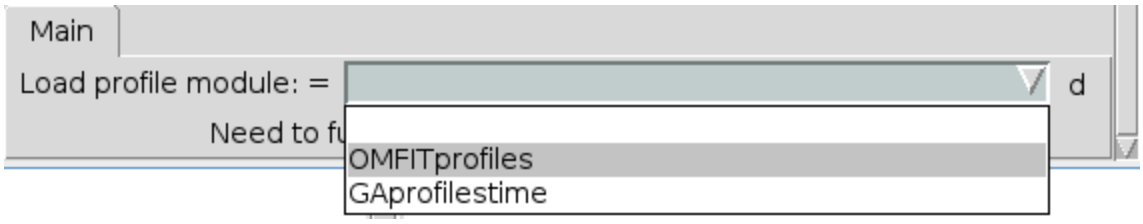
Now the gfiles have been produced, and the GUI reformed to reflect this



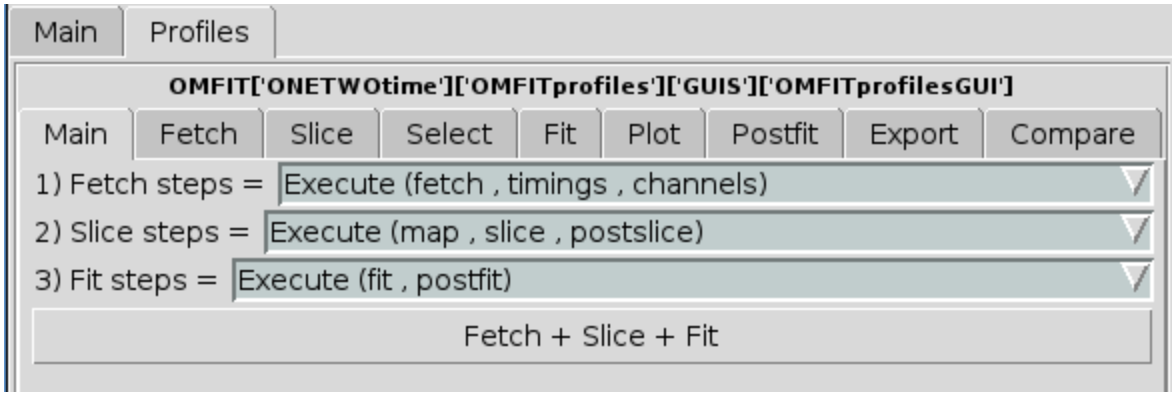
If you want to further refine the equilibria, you can navigate in the tree to ONETWOtime->EFITtime->GUIS->EFITgui

Part 2: Profiles

Choose the OMFITprofiles module



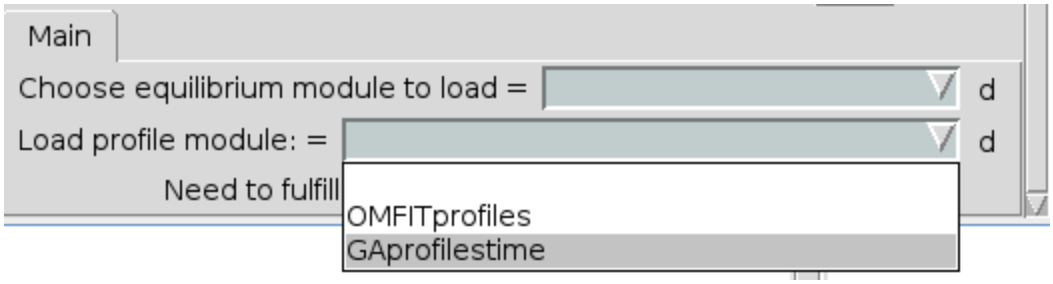
Choose the Profiles tab

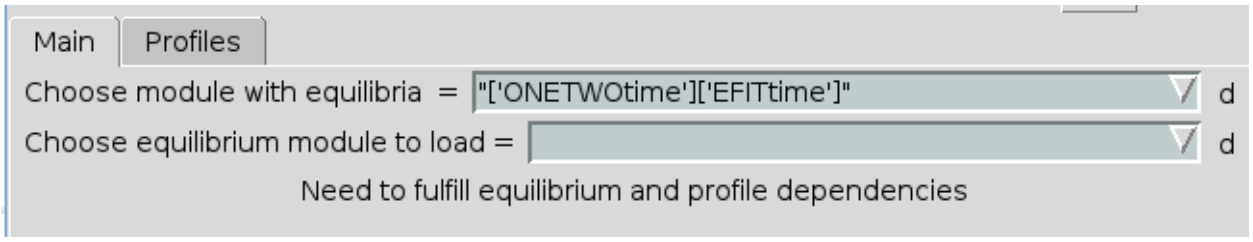


Run OMFITprofiles accordingly. If you are unfamiliar with this module, check out its tutorial.

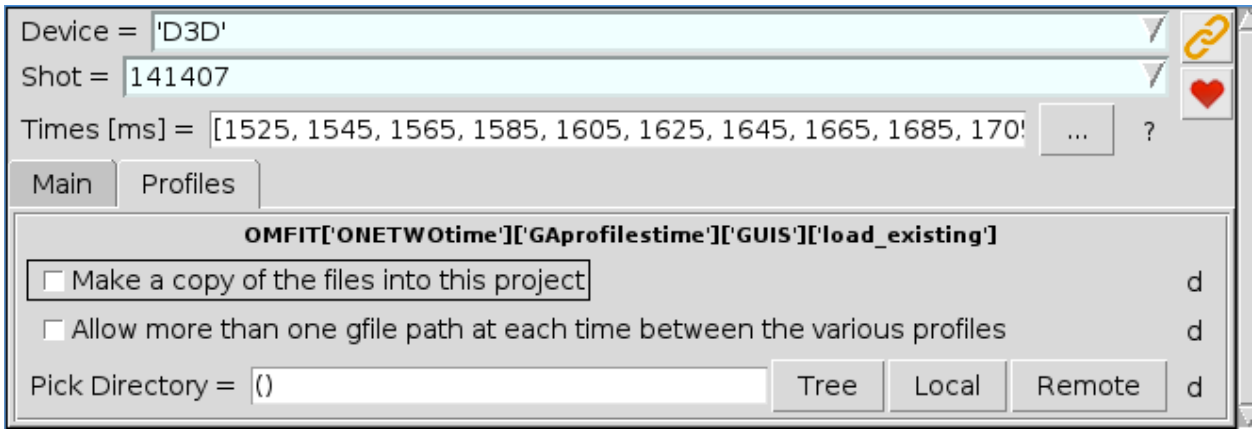
Path 2: Choose GAprofiles

Choose GAprofilestime for the profile module

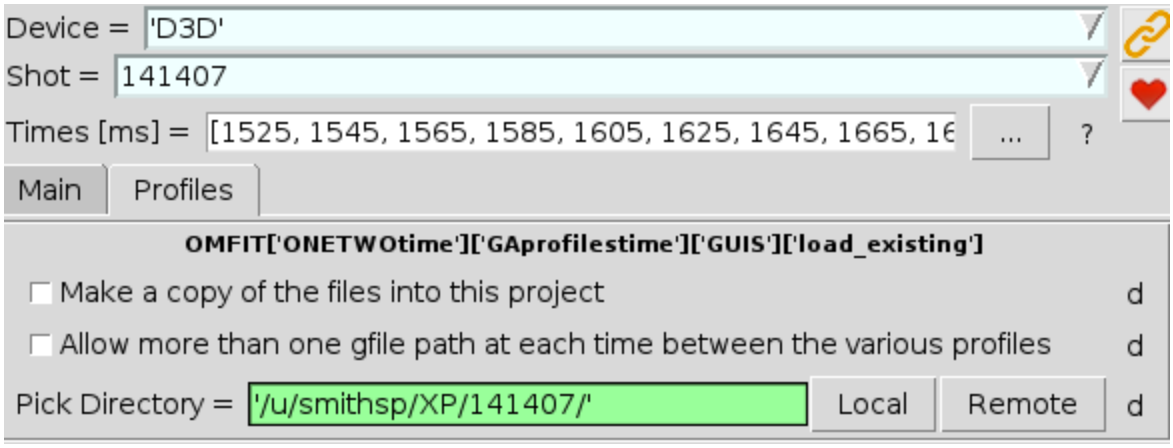




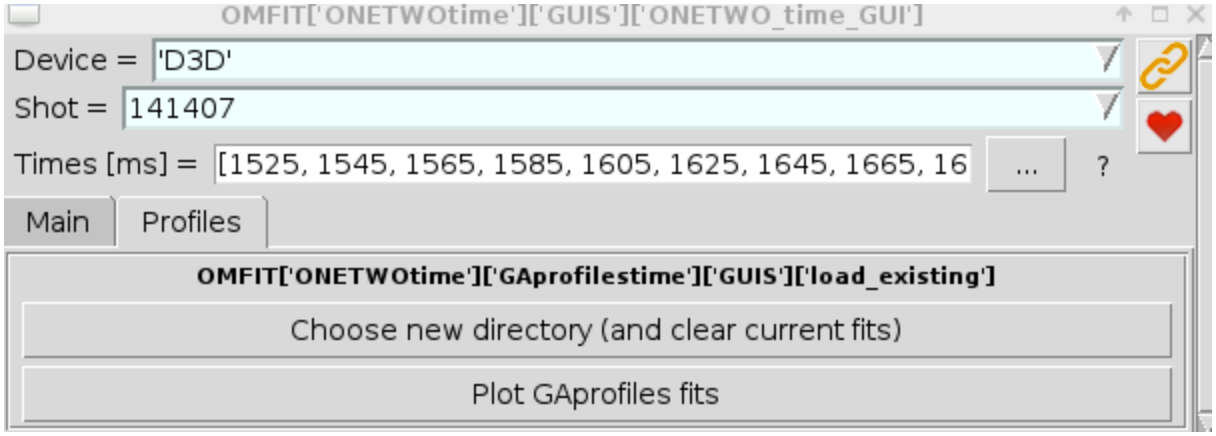
Choose the profiles tab



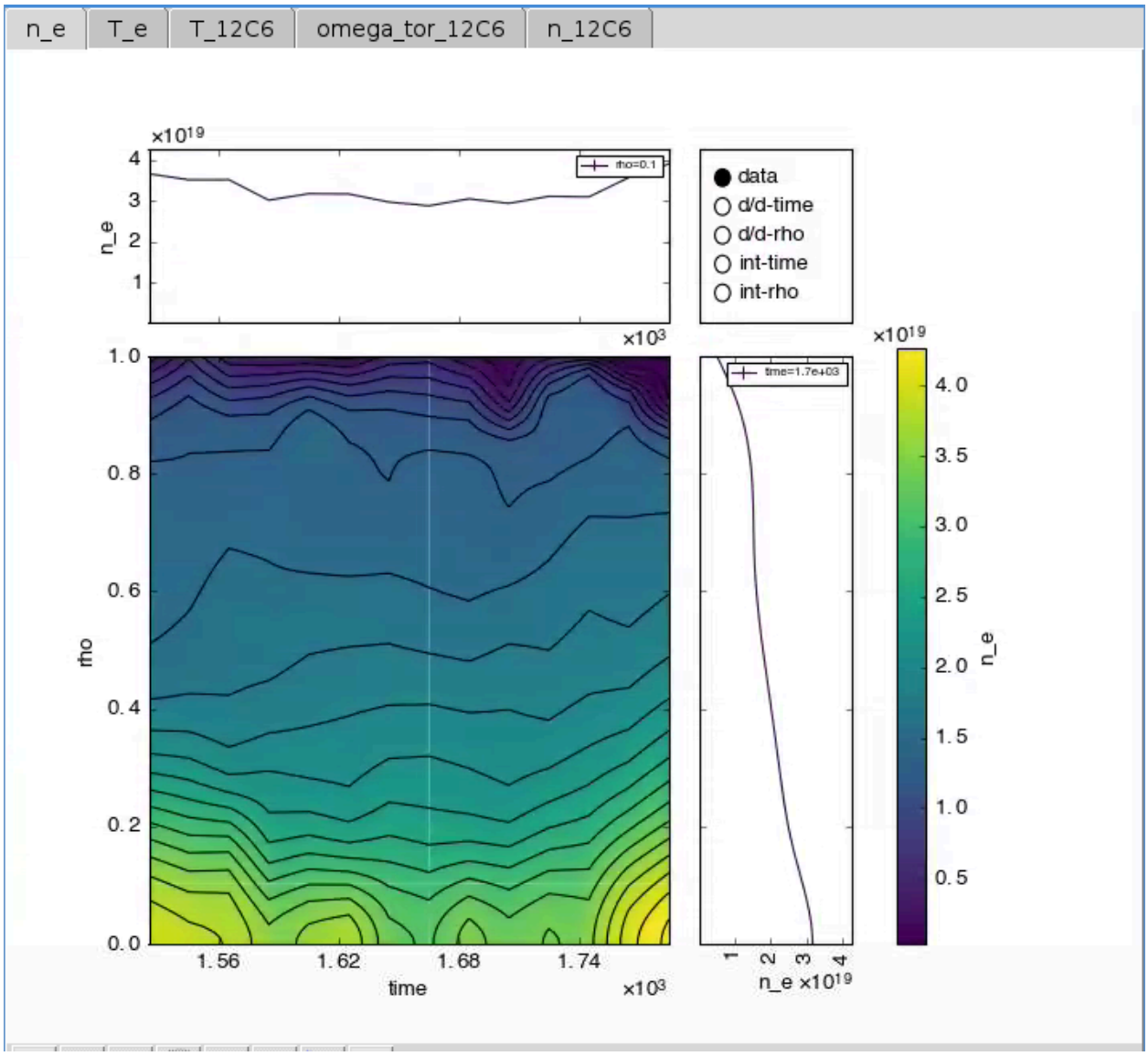
Enter the directory



Press return



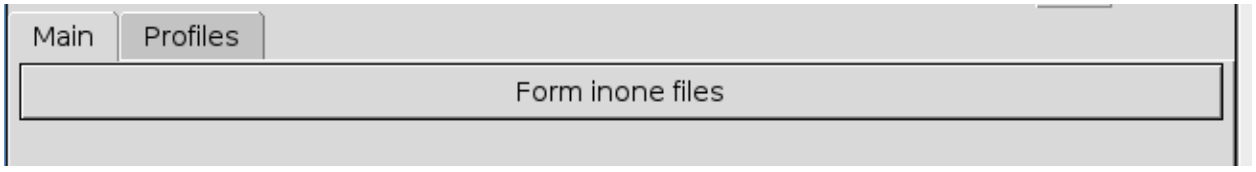
Plot the fits



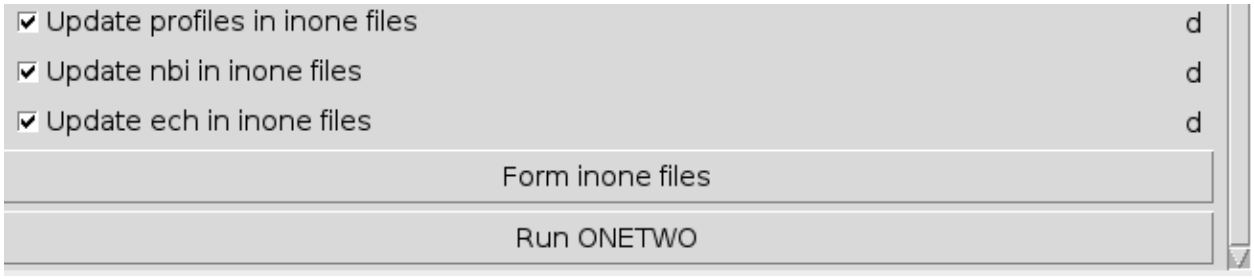
Choose the main tab

Run ONETWO:

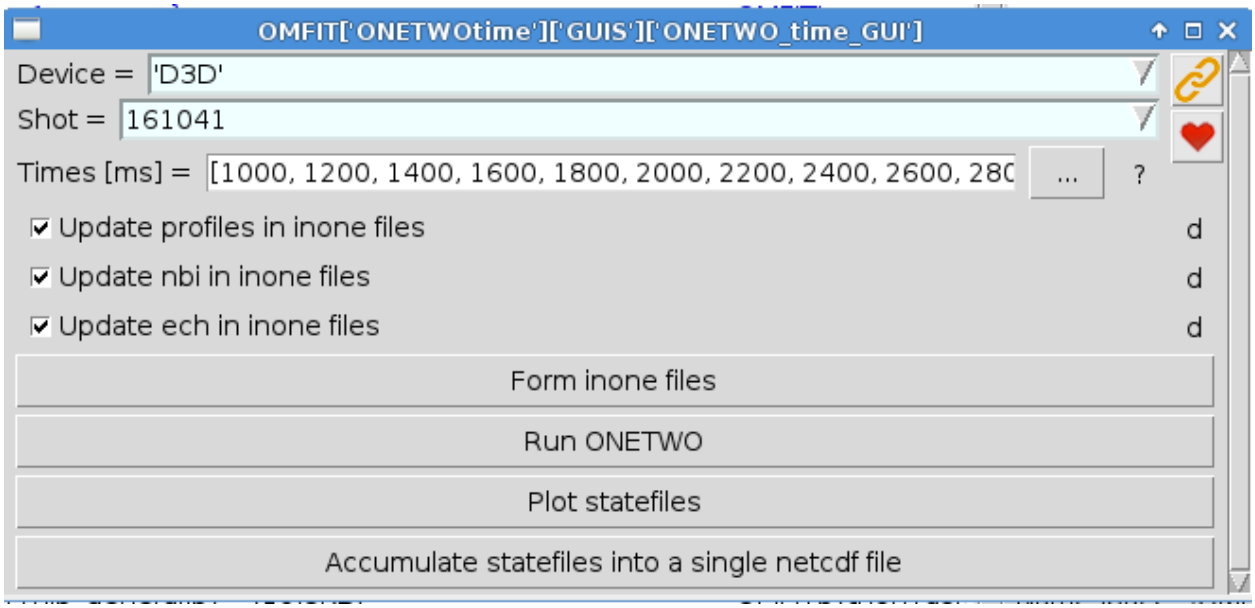
When you are happy with your profiles, switch back to the Main tab



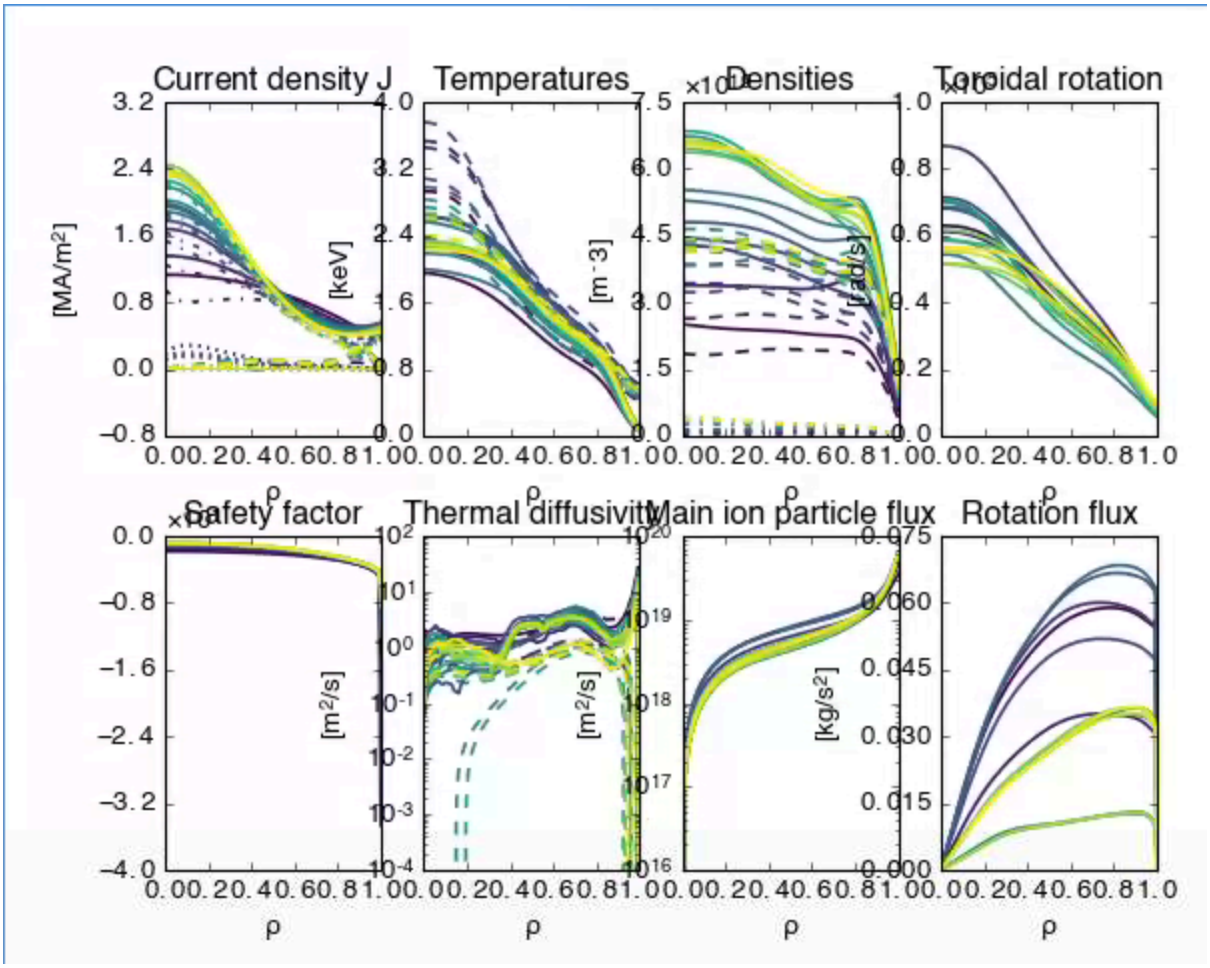
Click the Form inone files button



Click the Run ONETWO button



Plot the statefiles:



Some codes require the output statefiles to be in ASCII file format. A button has been added to run the ONETWOconvertITERDB script in ['SCRIPTS']['TOOLS'] which adds an ITERDB file in ['OUTPUTS']['iterdb'] for each time point.