Tutorial session 6 examples

1. ADAS506 Test Case

1. Move to your sub-directory */.../<uid>/adas/pass*. Start ADAS and go to the ADAS5 series sub-menu. Click with the mouse on the sixth button in adas5 series for ADAS506. The Input window for ADAS506 pops up.
2. Click on *Central Data*, the data root to data class ADF20 should appear in the window alongside. Click on the directory name *gft95#li* in the file list window. *gft95#li* appears above in the selection window. Click on *gft#li_al#o5_p1e10.dat*. It appears in the selection window.
3. Click the *Browse comments* button. Information of what is in the file *gft#li_al#o5_p1e10.dat* is displayed. Click *Done* to restore the Input window. Click *Done* and the ADAS506 Processing window appears.
4. Click on the *Fit polynomial* button, then type [*5 {return}*] in the adjacent active editable box. Click on the second transition at 1031.9A in the transition list window. It appears in the selection window above.
5. Click on the *Select Temperatures for Output File* button. Click on the *Default Temperatures Values* button. If a warning pop up appears, click *Confirm* on it. A set of temperatures appears in the Output temperatures column.
6. Click on the *Done* button to proceed to the Output options window.
7. Click on the button for *Graphical Output*. Click on the *Collection File* button and enter [*kernel.pass{return}*] in the File Name editable window. Then click *Done*. The graph pops up. Click *Done* to restore the Output options window. Click the *Exit to Menu* icon to finish up. Finally click on the *Exit* button on the sub-menu and main menu windows to exit ADAS.
8. [*ls*] to see the file created and note the collection file *kernel.pass.* You may wish to "print" it [*cat* or *more*] to see its format.

2. ADAS 601 (D.E.M.A.P.) Test Case

1. Click the mouse on ADAS series 6 *'Data Analysis Programs'*. Now click on ADAS601, *'Differential Emission Measure Analysis Program'*. The ADAS601 control screen pops up.
2. Scroll down on menu '*File'* to select '*read abundance file'*. The DEM input selection screen appears.
3. Select *Central Data* then '*abund.alan'*. and click on '*Done*'.
4. Scroll down on menu '*File'* to select '*read intensity data file'*. The DEM input selection screen appears.
5. Select *Central Data* then '*A.dat'*. and click on '*Done*'.
6. Scroll down on menu '*File'* onto submenu '*read kernel data file'* , then select '*read collection file'*. The DEM input selection screen appears.
7. Select *Central Data* then '*goft.pmwa'*. and click on '*Done*'.
8. Scroll down on menu '*Plot'* to select '*plot kernel'*. A graph of the *G(Te)* functions appears. Click on '*Done*'.
9. Scroll down on menu '*Run'* to select '*execute integral inversion*'. At this stage a FORTRAN code is spawned which performs the evaluation of the differential emission measure for the input data sets selected. Note that the *Status* sub-window shows if the DEM is being executed or if it is finished and *Ready* for further commands.
10. Scroll down on menu '*Plot'* to select '*plot D.E.M.'*. A graph of the differential emission measure appears. Click on '*Done*'.
11. Scrolling down on menu '*File*' and selecting '*exit*' will save the input and output values on the default file and quit. The input and output values will be immediately available next time you run the program. Note that if you select *quit*, nothing is saved.

2. Example 3

Repeat the sequence selecting the example intensity data file '*B.dat*' or '*C.dat*'.

4. Example 4

Call ADAS601 and display directly the DEM of your last run.

5. Example 5

Call ADAS601. Select '*graphical selection* ' in the '*Plot*' menu. Select graphical output, device (Post-script), and enable hard copy. Click *Done*. Now plot the DEM. Produce a post-script file by clicking on '*Print*'.

6. Example 6

Perform an integral inversion with a different weighting. Select under *Weight*, then *Run* the integral inversion and *Plot* the DEM.

7. Example 7

Try the *D.dat* intensity file. You will need to select *EDF equal noise variance* on the *Smoothing* menu for this case, then on the *Noise* menu select *input noise variance*. Try *4.0E-4*. Remember to press {*return*}.

6. Example 8

Now for a real case from the Serts experiment. Take *abund.anders_grevesse* in the abundance file selection. Take *serts_ar.dat* for the intensity file selection. Take *goft.SERTS* for the kernel file selection. Select *automatic smoothin*, *Run* the integral inversion and *Plot* the D.E.M. Do not be alarmed by warning messages appearing on the ADAS launch window as old kernel data is replaced. Plot the results. You may like to look at the output file *demap_output.dat* which is in the directory you launched ADAS from. You may also like to look at the *serts_ar.dat* intensity file for comparison.