Tutorial session 4 examples

1. ADAS412 Test Case

1. Move to your directory */.../<uid>/adas/pass/* . Start ADAS412.
2. The Input window is different from the usual you have encountered so far.
3. In the top part of the screen you can choose a data set to interrogate directly. Try */.../adas/adf11/acd89/acd89_n.dat* for nitrogen.
4. Then try to lower screen search method. Select iso-nuclear master c-r class ACD. Then enter *96* as the year, *89* as the default year and *n* as the element. Select *Standard* for the type for master file. Click the *Search* button.
5. On the pop-up choose one of the files offered and click Select to return to the input screen.
6. On the processing screen you can make the usual choices of temperature and density pairs by default or using the editor.
7. Move on to the output screen and finally obtain the graph.
8. You may like to go into the data base and explore ADF11 a bit further. Also look at the ADAS User manual entry *appxa-11*.

1. ADAS506 Test Case

9. Move to your directory */.../<uid>/adas/scripts405/*. Check if you have files *NULL* and *rfx_test_c*. If not, copy them both from */.../adas/adas/scripts405/*.
10. Move back to your */.../<uid>/adas/pass/* directory. Start ADAS and move to the ADAS4 series menu. Select ADAS405.
11. The Input window is complex. Note the Isonuclear Classes - click the *SELECT* button. On the drop down choice click on the buttons for *ACD, SCD, PRB, QCD, XCD, PLT*. then click *Done*.
12. Note the Select directory branch - click on the button and select *Central*.
13. Enter Year of data [96{return}]. Enter Default year *96*.
14. Enter Isonuclear element symbol *c*.
15. Note Type of master files - click on the button and select *Partial*. Note the Specify partial type code - click on the button and select *Resolved*.
16. Look at the lower section on the Line and Analysis Selection File. Click on the button for *User data*. Select the file NULL. Click *Done* to move to the processing window.
17. Click the *Default temperature/density* values button. You will need to choose an electron density, 1.00E9 say, and a hydrogen density, 1.00 say. Then click *Done* to move to the Output options window.
18. Click the button for *Graphical output*. Then click the button for *Fractional abundance plot*. Finally click *Done* to see the graph.
19. Click *Done* to return to the Output options screen. You can *Exit to menu* using the icon in this program.

2. ADAS 601 Test Case

1. Move back to your *pass* directory */.../<uid>/adas/pass*. Start ADAS407
2. The code can operate in interactive or automatic mode. On the Analysis Choice window select Interactive
3. The code works on the adf04 files for adjacent ionisation stages. These adf04 files must have recognizable Eissner configuration format. In practice this restricts you to */copmm#<nucchg>* libraries.
4. On the upper part of the Input screen select *copmm#54/ls#xe10.dat*. If a *copmm#<nucchg>* file is selcted then the adjacent ionised ion file is automatically selected in the lower part of the screen. Otherwise you must make an explicit choice.
5. On the upper left side of the Processing window, click Selections. You must choose the lowest level, that is the ground state. (ADAS407 has another mode for which additional metastable choices are required).
6. On the upper right side of the Processing window the same for the ionised ion.
7. On the Parameter Form section, select A for all items.
8. On the Matching Temperature part, select 2.420e+06.

9. Click on the select ionising ion ground state, just above the Selection button on the upper left side. This sets transitions in the lower right sub-window.
10. You assign a bundle index to each transition in turn in the lower right editable box. {Return} to record the value on the list. You can re-edit your choices.
11. Choose a Specific Line Index also and then click *Done*.
12. On the Output window, select the ATOMPARS Passing File and the usual paper.txt file.
13. Click *View graph*
14. Click *Done* and then on the Output window click *Output files and back to input*.
15. Exit and look at the ATOMPARS passing file.
16. Note the top line of the ATOMPARS passing file. There are two sets of ?? marks. Edit 10 into both these locations, that is the initial and final ion charge state – you have only done one stage so both are 10.