Quick data reduction for class

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0.1 Starting with CLASS

The file we are interested on is located in the ∼/observationData/mira directory and this directory is protected, users will no be able to write anything here. It is better to start class in a directory where you can manage your data (i.e. ∼/Projects)

Opening CLASS

Class, as well as Mira, run on the mashine mrt-lx3, so, whenever we want to start class we want to make sure we go to the correct place:
> ssh pools07@mrt-lx3 – Ask the AoD or Operator for the password

Loading the 30m files

Once you are in the right place, simply type *class* and the class program will open:
LAS> set cursor on –> so that we can use the mouse within the plot
LAS> set format long –> this will allow you to see more information on the plots.
LAS> set plot histo –> To see the plot in histogram mode.
LAS> file in ∼/observationData/mira/spectraOdp.30m –> this will open the **spectraOdp.30m** file containing the observations.
LAS> find /sou XXXX –> XXXX is the name of your source, it will find all data in the spectraOdp.30m that contains this source.

Reducing the data

We should know what is the rms that the astronomer is requiring, which resolution, and at what wavelength (3mm is the usual); once we have this information we might proceed:
LAS> list –> will show us averything we have selected so far.
LAS > find /source XXX /tel XXXX –> tel refers to telescope, and we can see this information in the list.
LAS> sum –> summing all the spectra.
LAS> sm –> smooth, we do this and plot until we reach the resolution we are aiming for. (Dv, you can find this on the plot page, where all the information is)
LAS> set window –> we select the part of the spectra that wont be taken in to account when removing the baseline. To do this simply go with the mouse to the first point of the selection, press the space bar, go to the other point, press the space bar, and finally the letter E to exit. you may type *draw window* to see your selection.
LAS> base 1 /pl –> will remove the base line using a fitting of a polynom of degree 1. This will show at the same time the rms reach so far.
LAS> pl –> if you want to see the spectra without the baseline.

IMPORTAT:
If new observations are now available in the spectraOdp.30m file, it is important to do "file in ∼/observationData/mira/spectraOdp.30m" again in order to reload the data.

For further work, please go to the class manual.
(http://www.iram.es/IRAMFR/GILDAS/doc/pdf/class.pdf)