A 2DFDR KOALA CHEAT SHEET

(Basic procedures for reducing KOALA CCD data with 2dFdr)

2dFdr Quick Start

For a specific observation run data set (i.e. ccd data fits files with the nameing convention: [OBS-DATE][CCD-NO][SEQUENCE NO].fits), 2dfdr has rules for sequentially reducing the entire data set and selecting appropriate choices of calibration files to use for each stage.

2dFdr Quick Start Via GUI:

From the directory containing the observation run data set:

- drcontrol koala.idx -> Will call up the 2dfdr GUI for the Koala settings
- Press the "Reduce All" button.

2dFdr Quick Start Via Command Line:

From the directory containing the observation run data set:

```
      aaorun reduce_run  [run no] -idxfile koala.idx
```

where [run no] = [OBS-DATE][CCD-NO]

eg

```
      aaorun reduce_run  27feb2  -idxfile koala.idx
```

Detailed reduction steps (using aaorun):

Consider the data frames:

21apr20001.fits -> BIAS Frame	21apr20005.fits -> DARK Frame
21apr20002.fits -> BIAS Frame	21apr20006.fits -> FLAT Frame
21apr20003.fits -> BIAS Frame	21apr20007.fits -> ARC Frame
21apr20004.fits -> DARK Frame	21apr20008.fits -> SCIENCE Frame

Command line reduction as follows:

```
%> aaorun reduce_bias 21apr20001.fits -idxfile koala.idx
```

```
%> aaorun reduce_bias 21apr20002.fits -idxfile koala.idx

%> aaorun reduce_bias 21apr20003.fits -idxfile koala.idx

%> aaorun combine_image “21apr20001red.fits 21apr2002red.fits 21apr20003red.fits” \
        -idxfile koala.idx  -COMBINEDFILE BIAScombined.fits COMBINEDred.fits

%> aaorun reduce_bias 21apr20004.fits -idxfile koala.idx

%> aaorun reduce_bias 21apr20005.fits -idxfile koala.idx

%> aaorun combine_image “21apr20004red.fits 21apr2005red.fits \
        -idxfile koala.idx -COMBINEDFILE DARKcombined.fits

%> aaorun make_tlm       21apr20006.fits -idxfile koala.idx

%> aaorun reduce_arc     21apr20007.fits -idxfile koala.idx \
        -TLMAP_FILENAME 21apr20006tlm.fits

%> aaorun reduce_fflat   21apr20006.fits -idxfile koala.idx \
        -TLMAP_FILENAME 21apr20006tlm.fits \
        -WAVEL_FILENAME 21apr20007red.fits

%> aaorun reduce_object  21apr20008.fits -idxfile koala.idx \
        -TLMAP_FILENAME 21apr20006tlm.fits \
        -WAVEL_FILENAME 21apr20007red.fits \
        -FFLAT_FILENAME 21apr20006red.fits
```

Useful aaorun Commands

```
General aaorun commands have the following syntax

aaorun [command] [target] -[option name] option value \
                          . . .                       \
                          -[option name] option value

where target is usually a fits data frame or a list of fits data frames in
quotation strings, eg
aaorun reduce_bias 21apr20002.fits
aaorun combine_image “21apr20001red.fits 21apr20002red.fits 21apr20002red.fits”
```

aaorun simple commands:

```
aaorun version    -> return the version number of 2dfdr
aaorun help       -> List all available commands and the location of the local
                        html help pages.
aaorun help koala -> List all koala specifc options
aaorun examples   -> Provide a list of examples of using the reduction commands
aaorun clean      -> Remove all derivative files (except combined files)
aaorun list       -> List all koala data frames in the current directory
                     specifying type and lamp name (in the case of arc frames)
```