Recipe: Recipe to fill raw BIMA data into AIPS++ MeasurementSet

Category: Synthesis

Goals: Fill raw BIMA data into AIPS++ MeasurementSet

Using: mirfiller tool.

Results: Output is an AIPS++ MeasurementSet

Assume: Input data file is raw BIMA data

Synopsis: For convenience, first download the raw BIMA data from the BIMA Data Archive into a subdirectory named INPUTDATA, which is located in the current directory. Remember to uncompress the data in this subdirectory if you haven't already done so in DaRT, using "tar -xvf ¡filename¿." Then run the script below to write these data into an aips++ measurement set.

Script: bimafiller_rec.g

```
include 'os.g';                             # initialize os
include 'mirfiller.g';                      # initialize mirfiller tool

mf := mirfiller('./INPUTDATA/Target');      # create mirfiller tool
mf.fill('target.ms');                       # fill the data
mf.done();                                  # close the mirfiller tool

exit;                                       # exit glish

#OUTPUT:

NORMAL: Starting server mirfiller
NORMAL: Server started: /appl/aips++/weekly/linux_gnu/bin/mirfiller
                       (AIPS++ version: 1.7 (build #159))
NORMAL:
Summary of Miriad UV dataset: ./INPUTDATA/Target
 Max. no. of visibility records:    3960
 Max. no. of spectral line windows: 16 (Max no. of channels: 512)
```

```
 Max. no. of wide-band channels:    18
 No. of array configurations:       1
 Telescopes: BIMA
 Polarizations found: YY
 Time Range: 2001/06/28/09:57:46 - 2001/06/28/14:38:07
Sources:
     BLLAC      22:02:43.29     +42.16.39.98 (1 field)
Frequency Setup:
   Mode 8, 512 line channels, 18 wide channels
 Window  #chans   start freq.     increment    bandwidth    rest freq.
    1       32   112.14251 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    2       32   112.04251 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    3       32   111.94348 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    4       32   111.84348 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    5       32   111.74346 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    6       32   111.64346 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    7       32   111.54344 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    8       32   111.44344 GHz   -3125.00 kHz  100.00 MHz    115.27120 GHz
    9       32   114.88768 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   10       32   114.98768 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   11       32   115.08671 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   12       32   115.18671 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   13       32   115.28673 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   14       32   115.38673 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   15       32   115.48676 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
   16       32   115.58676 GHz    3125.00 kHz  100.00 MHz    115.27120 GHz
NORMAL: Input looks like a raw BIMA dataset; setting default defpass="rawbima"
NORMAL: Starting mirfiller::fill
NORMAL: Accepted 3960 input MIRIAD records.
Loaded 71280 data records for
       2035440 visibilities,
       18 spectral windows,
       1 polarization,
       1 field, and
       1 array configuration.
NORMAL: Finished mirfiller::fill
      25.71 real       11.66 user       13.83 system
NORMAL: Successfully closed empty server: mirfiller
```

Conclusion: Current directory should now contain the aips++ ms (named "target.ms" in this example). The current implementation (version 1.7, build #159) should fill the multi-channel data and the wideband (one for each sideband) average by default.

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Date: 2002-Feb-08