Tutorial 5

Calibration
Flux Calibration
Phase Calibration
A look at the calibrated data
Follow the leader
Calibration based on 'Phase' calibrator

Prequel

➔ Continued support for RA effort beyond RAS

  ➔ How many of you would find it useful?

  ➔ How many of you would be willing to put in some effort towards it?

  ➔ Approach – build your own support group, make use of and build on resources already available

  ➔ Options (not mutually exclusive)

    ➔ Facebook group

    ➔ Wiki hosted at NCRA

Let's get started

➜ ras_last_files.tgz

➜ Mkdir 27Aug2013

➜ Cp -r 3C223.1_240MHz_FLAGGED.MS 27Aug2013

➜ Cd 27Aug2013

➜ Tar zxvf ../ras_last_files.tgz

Sequence to be followed

➔ Clearcal

➔ Tflagdata (scan='2')

➔ Setjy (field='0'; field='3')

➔ Bandpass (only flux calibrators)

  ➔ Plotcal to verify

➔ Gaincal (on flux and phase calibrators)

  ➔ Plotcal to verify

➔ Fluxscale (to get the flux of phase cal 8.88+/-0.13 Jy)

  ➔ Plotcal to verify

Sequence contd...

➔ Applycal (to the entire dataset)

➔ Clean – image a calibrator source

    ➔ Examine the PSF

    ➔ Examine the Image

setjy

\# setjy :: Fills the model column with the visibilities of a calibrator

vis   = '3C223.1_240MHz_FLAGGED.MS'

field   =   '0'

usescratch   =   True

REPEAT WITH field='3'

bandpass

vis   = '3C223.1_240MHz_FLAGGED.MS'

caltable= '3C223.1_240MHz_FLAGGED.BPASS'

Field   = '0,3'

Refant   = '10'

gaincal

vis   = '3C223.1_240MHz_FLAGGED.MS'

caltable= '3C223.1_240MHz_FLAGGED.GCAL'

Field   = '0,1,3'

Refant   = '10'

Calmode   = 'ap'

fluxscale

vis   = '3C223.1_240MHz_FLAGGED.MS'

caltable ='3C223.1_240MHz_FLAGGED.GCAL'

Fluxtable='3C223.1_240MHz_FLAGGED.FLUX'

Reference = '0,3'

Transfer = '1'

incremental=False

applycal

vis   = '3C223.1_240MHz_FLAGGED.MS'

field   = ''

Gaintable=['3C223.1_240MHz_FLAGGED.BPASS','3C223.1_240MHz_FLAGGED.FLUX']