A sort of image pipeline for BIMA data

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Motivation

- I would like to have a *easier* way to process interferometric data
- Processing of large amount of data, i.e. mosaicing data for ALMA
- I have interest in numerical algorithms for processing data and numerical simulations.

Anatomy of a calibrated-data reduction

- Imaging or Fourier transform form the visibility plane to the image plane (*dirty stokes images*)
- Deconvolution or *cleaning*, to remove the beam
- Calculation of the position angle and fractional polarization maps
- Displaying the final map

Description

- Web service which calls a script to reduce visibility-calibrated data creating an image using *MIRIAD*
- A URL is return for the resulting image
- Server and Client written in python using SOAPpy library
- Service runs locally and over the network
- Data chosen is G30.79 FIR 10, which is a massive star forming region (4000 solar masses)

Conclusions

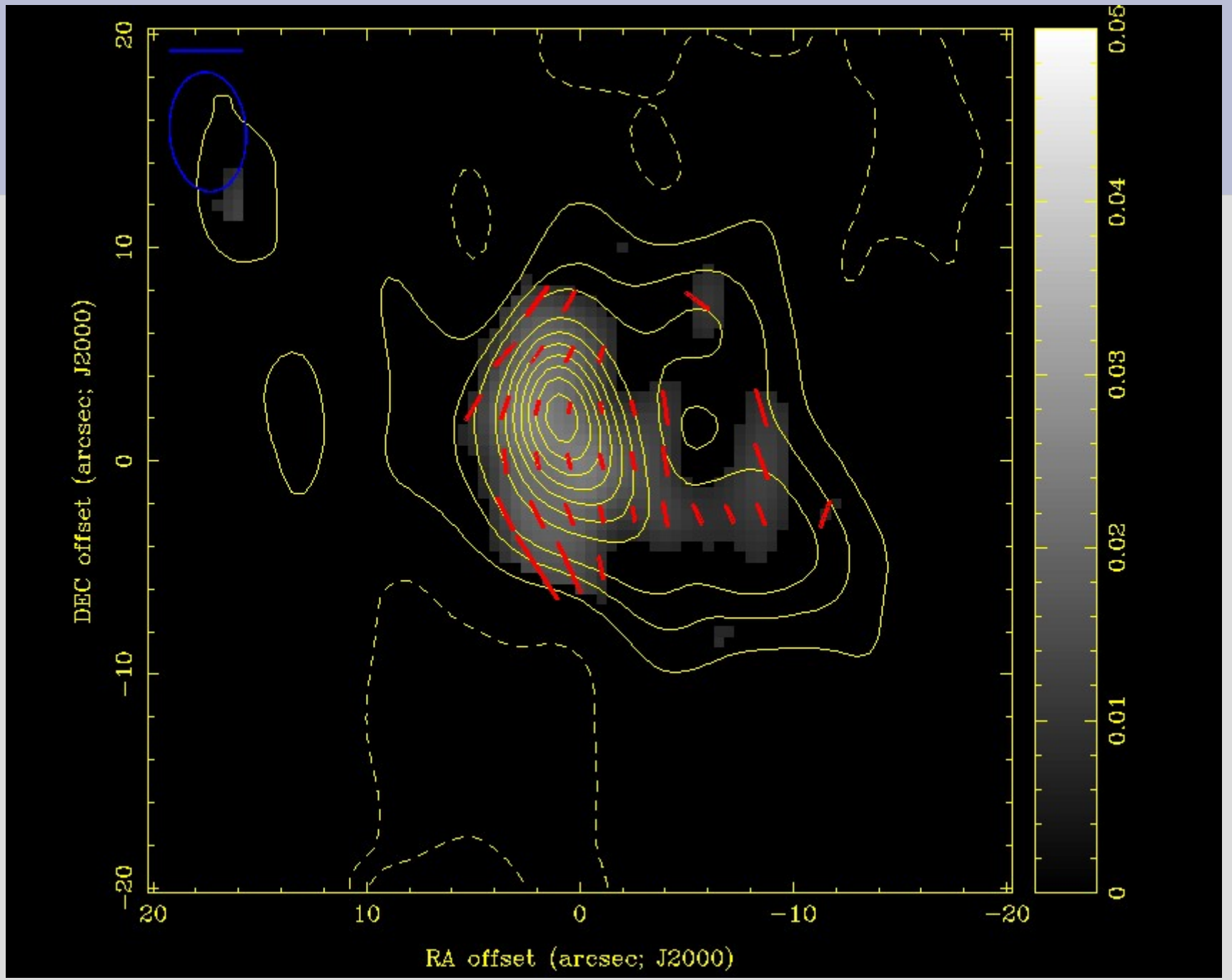
- Faster than I thought
- Firewalls may be a real problem for web services (sys-admins also)
- Also I tried to use globus, the effort was unsuccessful

Future Work

- Implement it with globus

Emergency Slide

- reduceServer.py -> Server implemets wrappers over miriad reduction routines
- reduce.py ->Client sends messages to the Server which uses the messages to reduce the data


DEC offset (arcsec; J2000)
RA offset (arcsec; J2000)
20
10
0
−10
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0.05
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