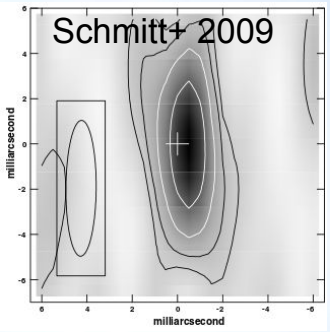
Self-cal / JMMC

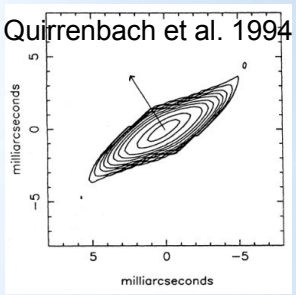
17 Novembre 2015

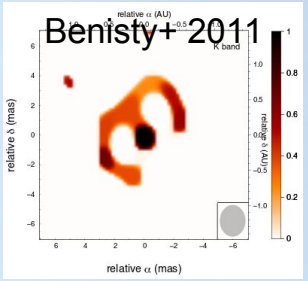
Florentin Millour

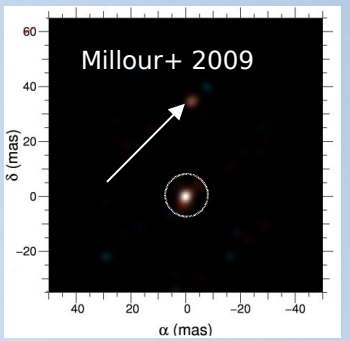
Observatoire de la CÔTE d'AZUR

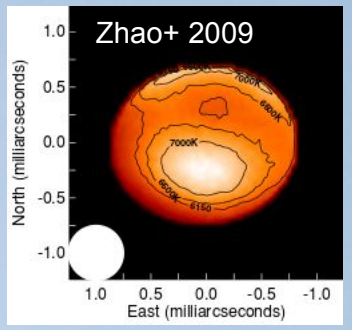
Images en 2015

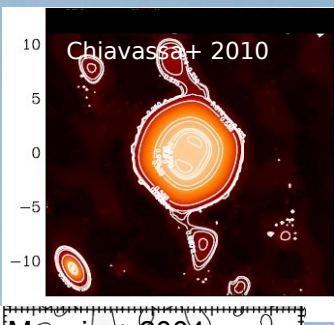


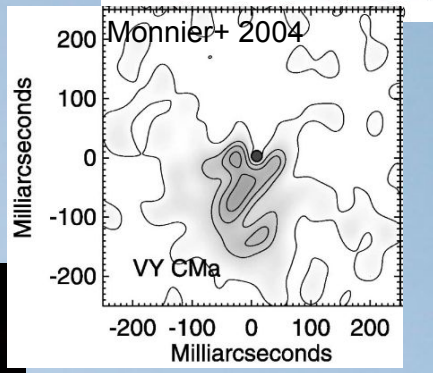


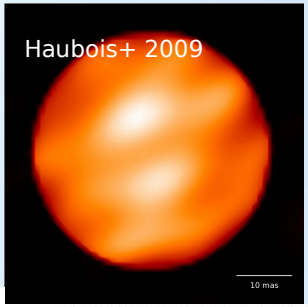


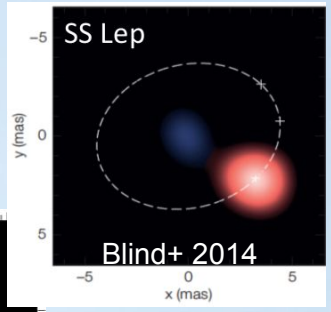


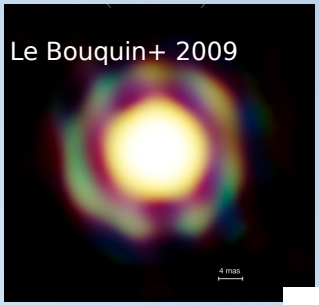


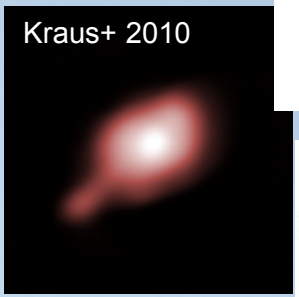


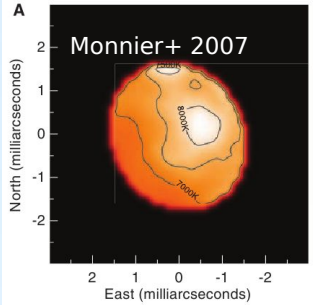


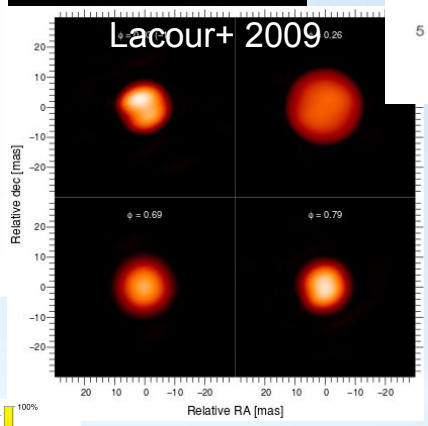


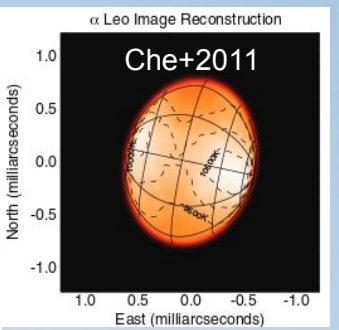


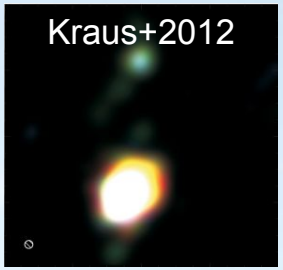


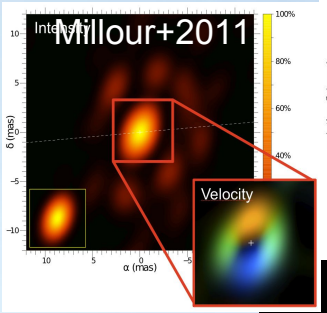


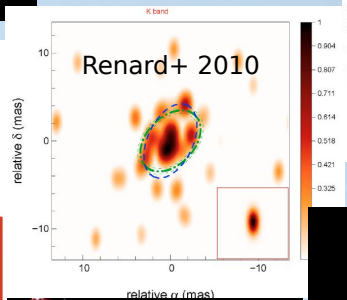


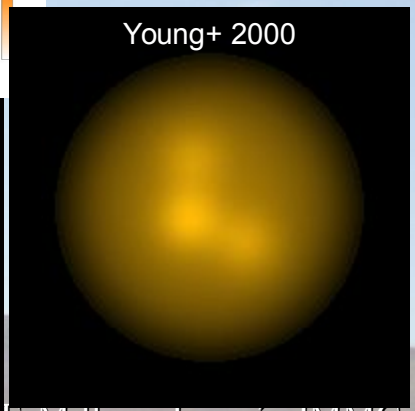


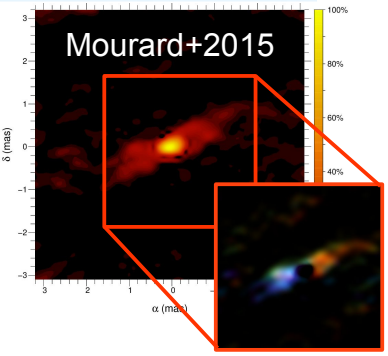


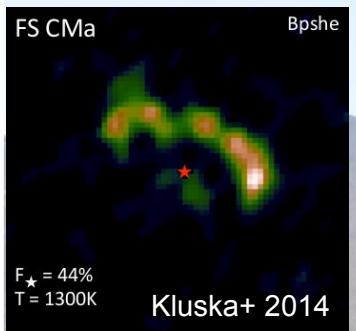


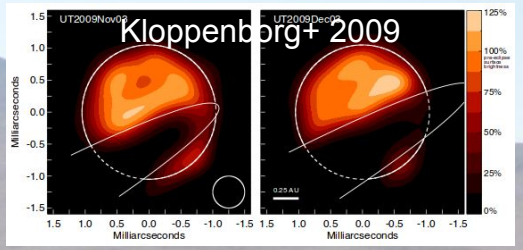


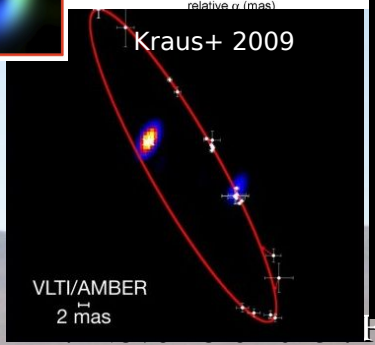




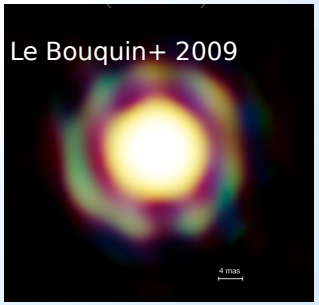


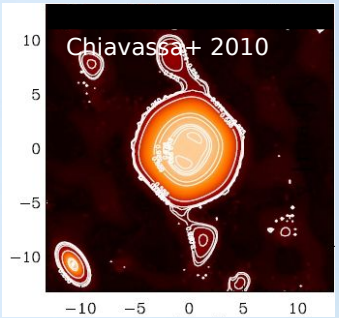


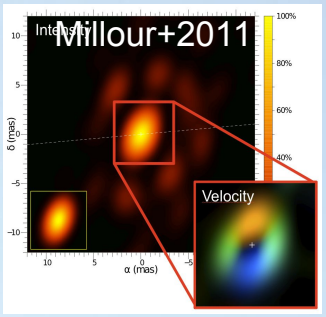


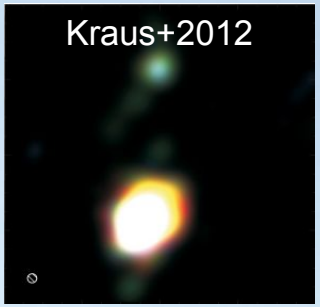


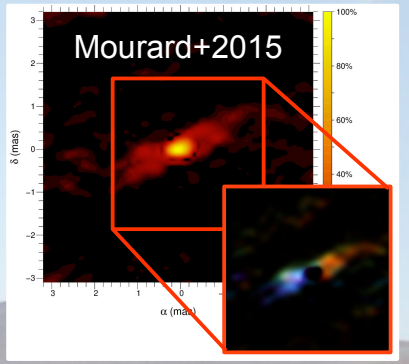
Images « en couleurs »





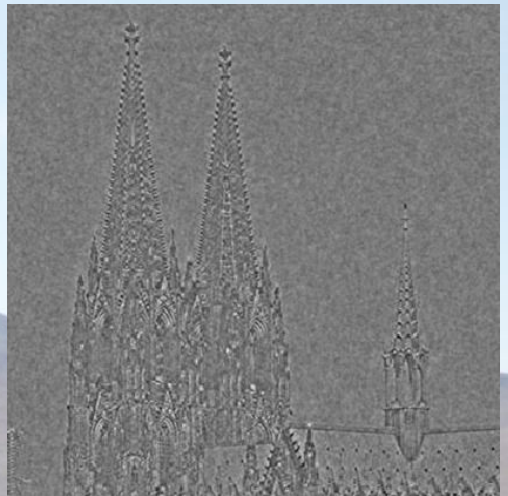
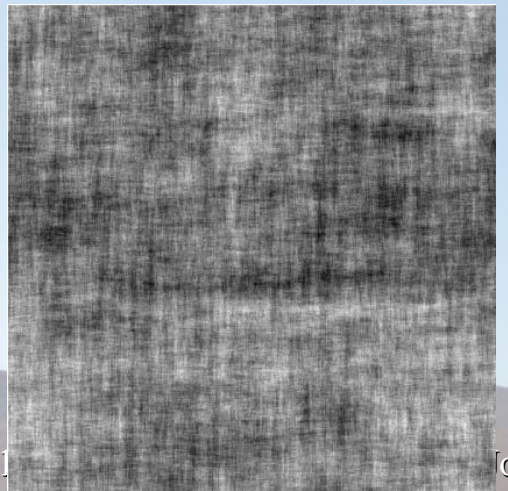






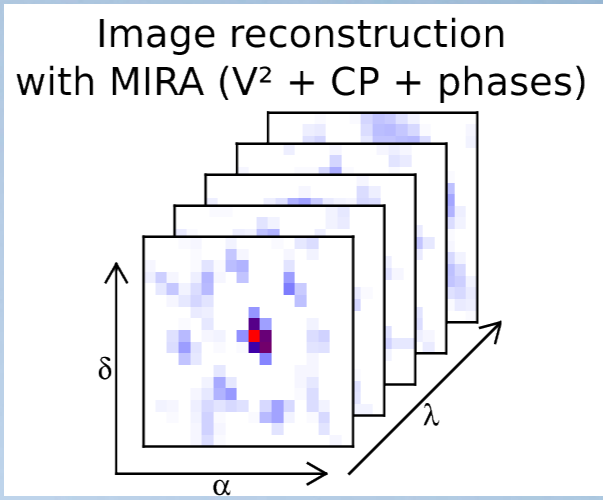
Les phases, c'est important

- Mais pas mesurables facilement
- $(N_{tel}-1)(N_{tel}-2)/2$ Clôtures de phases
- $N_{tel}(N_{tel}-1)/2$ Phases différentielles
  Phases différentielles pas utilisées dans les logiciels utilisés aujourd'hui
  (MIRA, WISARD, BSMEM, MACIM)

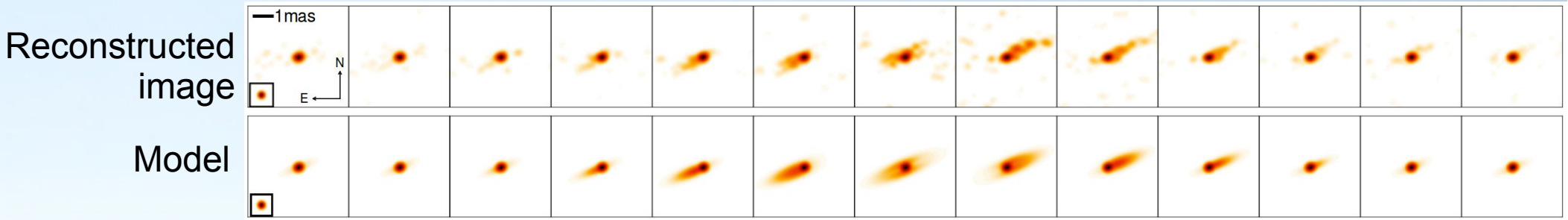




Les défauts de calibration sont importants

- Self-calibration
  http://self-cal.oca.eu
  - Differential phases
    - Millour et al. 2010, Ohnaka et al. 2010



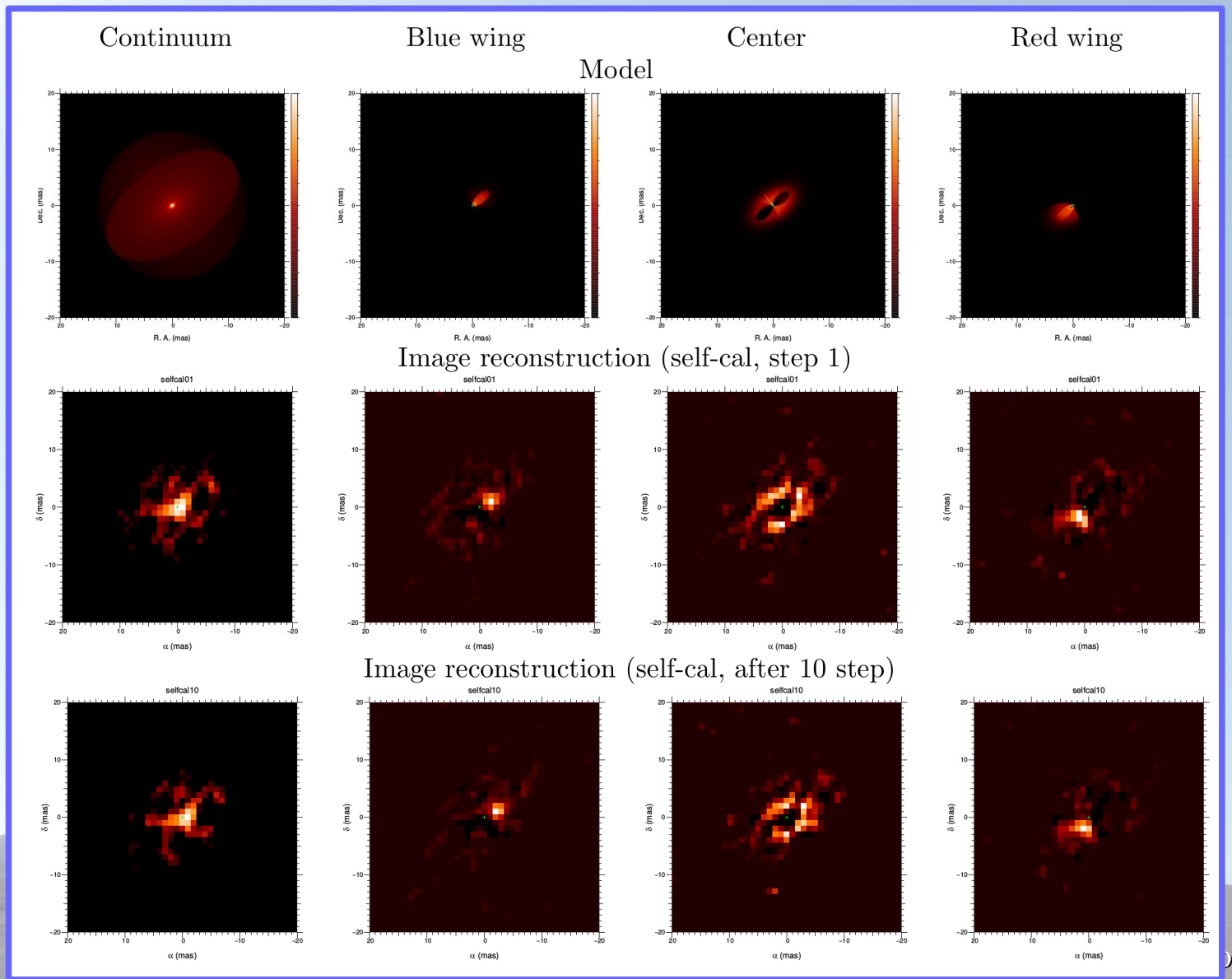
  - Diff. phases + amplitudes (visibilities)
    - Mourard et al. 2015



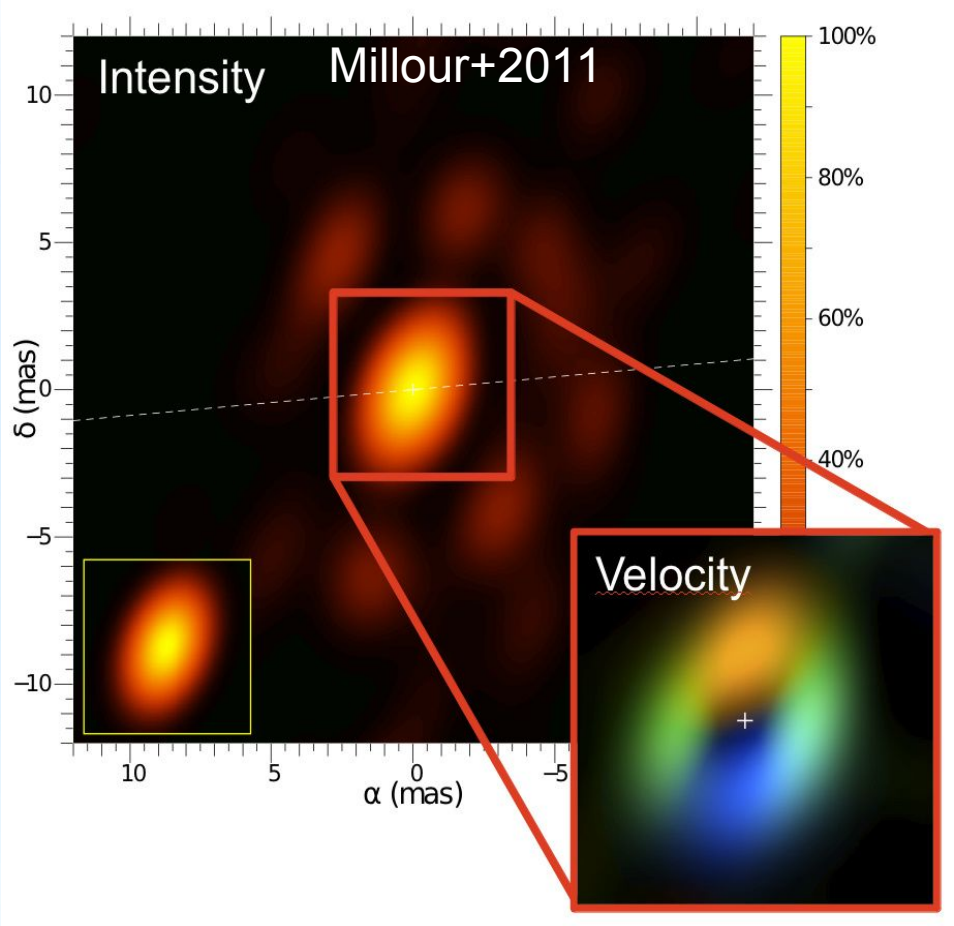
  - Can be applied to software accepting complex visibilities, i.e. MIRA, WISARD, … ?

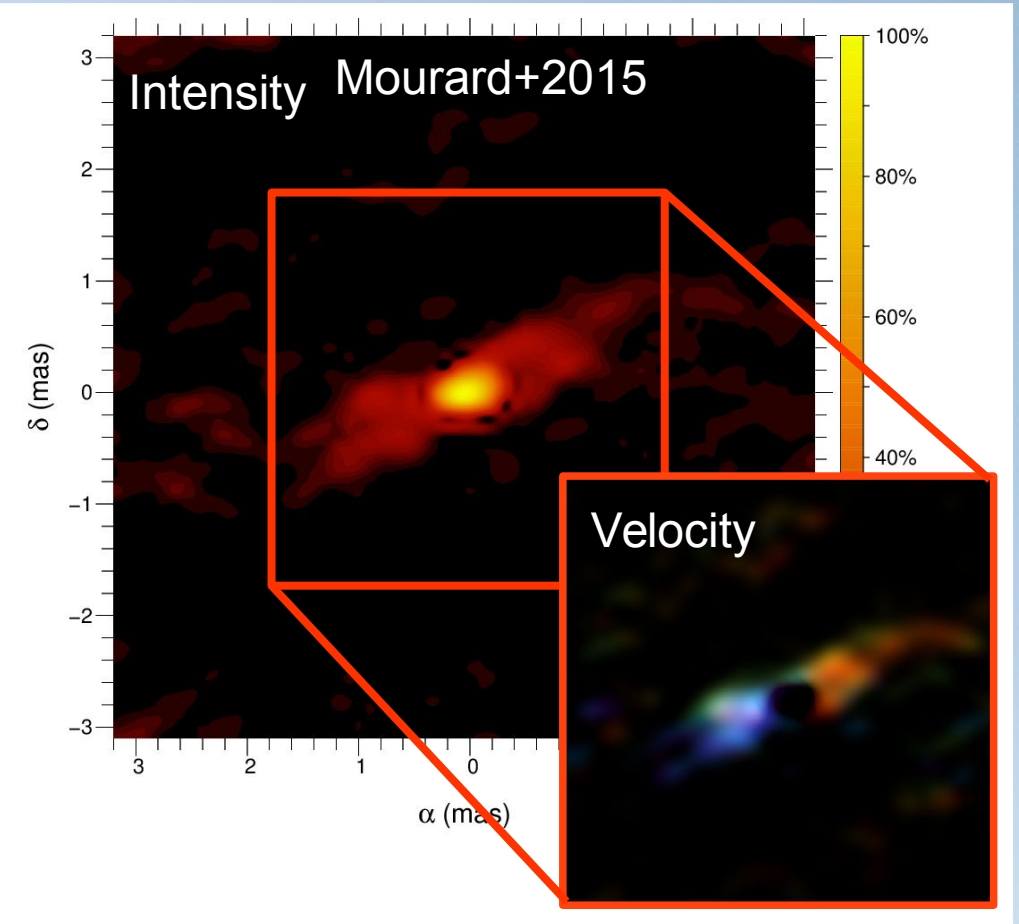
Tests sur des données simulées

Millour et al. 2012



Exemples d' application





Proposition de transférer self-cal au JMMC : Février 2015

Le logiciel est distribué via la page de l'OCA en attendant

Demande de faire partie du groupe de reconstruction d'image

Interfaçage self-cal / WISARD : première étape : « chromatiser » WISARD

Fichiers d'échange entre logiciels (images, oifits)
• Proposition de facto dans self-cal/miral.i
• Propostition par MH & KHH dans IRBIS

miral.i (~/CVS/fitOmatic/fitOmatic/trunk/yorick) - gedit

Ouvrir ▾ Enregistrer Annuler

miral.i ×

```
/*****************************************************************************/

func miral_self_calibrate(inputFiles, inputImage, outputDir, overwrite=,
wlenIdx=, calibrateAmp=, useVisAmp=, pse=, kill=, gain=, plot=)
    /* DOCUMENT miral_self_calibrate(inputFiles, inputImage, outputDir,
overwrite=, wlenIdx=, calibrateAmp=, useVisAmp=, pse=, kill=, gain=)

       DESCRIPTION
       Self-calibration step for MIRA-L

       PARAMETERS
       - inputFiles  : input oifits files
       - inputImage  : input image cube (the hybrid map)
       - outputDir   : output data directory (the synthetic data)
       - overwrite   : overwrite or not already-existing files
       - wlenIdx     : mask to use only selected wavelengths for self-
calibration of the differential phase
       - calibrateAmp: whether or not calibrate the amplitude also
       - useVisAmp   : Use V2 or visamp to get the visibility amplitude
       - pse         : Pause between plots
       - kill        :
       - gain        :

       SEE ALSO
    */
{
    if(is_void(pse))
        pse = 0;

    if(is_void(gain))
        gain = 1.0;

    if(is_void(kill))
        kill=1;

    if(is_void(plot))
        plot=1;

    if(plot)
        if(kill==1)
        {
            winkill,11;
            winkill,12;
            winkill,13;
            window,13,width=3,height=3,wait=1;
            yocoNmCreate,12,3,1,landscape=1,width=800,height=600,
wait=1,dx=0.1, V = [0.1,0.9,0.12,0.70],fx=1;
            if(calibrateAmp)
                yocoNmCreate,11,2,2,landscape=1,width=800,height=600,
wait=1,dx=0.1, V = [0.1,0.9,0.12,0.70],fy=1,dy=0.1;
            else
```

C ▾ Largeur des tabulations : 8 ▾ Lig 1, Col 1 INS

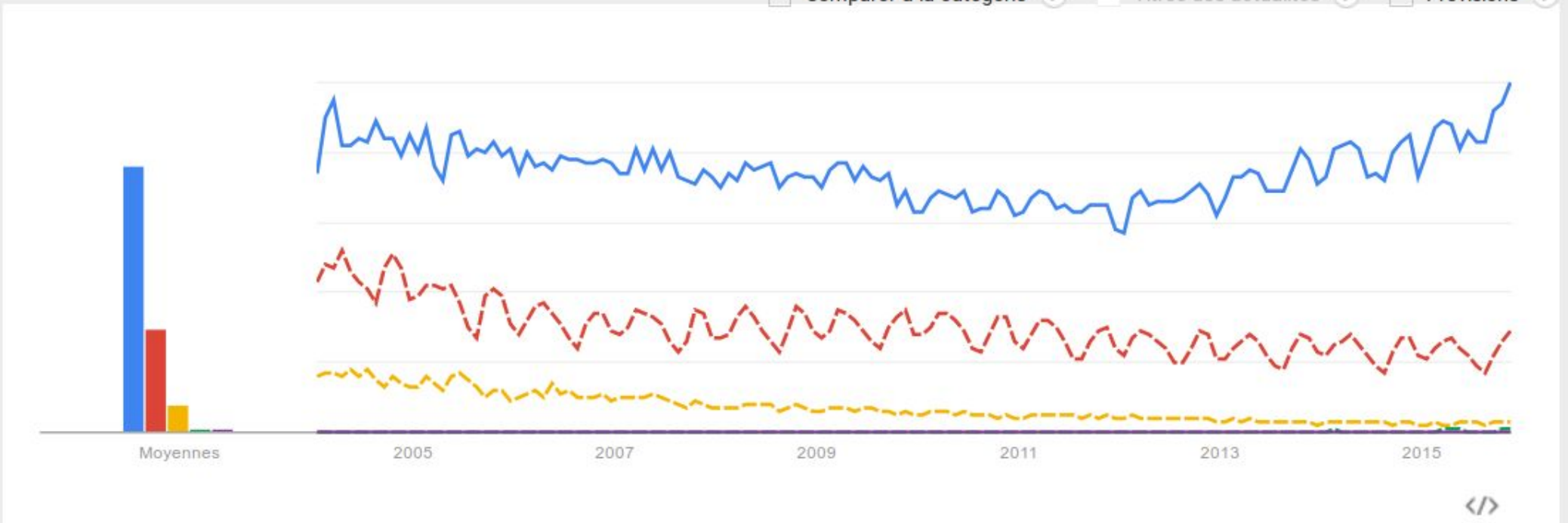
Quel logiciels scientifiques intéressent les internautes ?

python	MATLAB	IDL	Julia	yorick
Terme de recher...	Computer progr...	Programming La...	High-level progra...	Terme de recher...

Bêta : l'analyse statistique des *sujets* de recherche qui intéressent le plus les internautes est une fonctionnalité bêta qui permet d'analyser rapidement et avec précision les centres d'intérêt des utilisateurs dans la recherche sur Internet en général. Pour connaître le volume de recherche pour une *requête* en particulier, sélectionnez l'option "Terme de recherche".

Évolution de l'intérêt pour cette recherche

Comparer à la catégorie | Titres des actualités | Prévisions



Source : google trends