

## Mission

Since 2000, the JMMC coordinates the efforts of the French partner Laboratories to offer all the potential users of interferometric facilities the best operational environment. The mission of JMMC is threefold and consists in:

- develop, produce, document and maintain the software necessary for the exploitation and the follow-up of new interferometric equipments, especially the VLTI.
- stimulate and coordinate the academic formation of non specialists.
- participate to the prospective around new interferometric instruments.

The main activity of JMMC, besides prospective and training, is software oriented system analysis and software development.

...read more at [http://www.jmmc.fr/about\\_jmmc](http://www.jmmc.fr/about_jmmc)

## Organization

The JMMC is a **network of expertise** of the french laboratories involved in Optical Interferometry, and a **resource centre**.

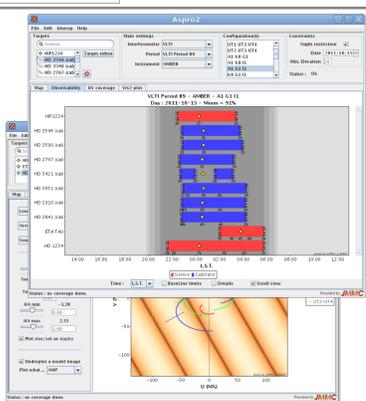


- One scientific council
  - One director and scientific director
  - One technical team
  - Five PI and working groups
  - One user support team which responds to any issue or question
- > <http://www.jmmc.fr/support>

## Software Suite

### Prepare observations with Aspro2

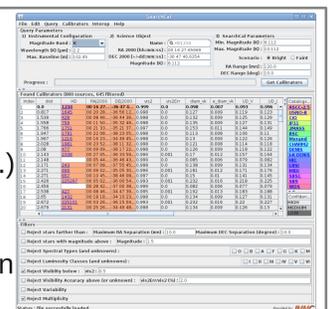
- Fetch target parameters at CDS
- Gather observational information on your target list :
  - Observability
  - UV plot
  - Vis2 plot
- Export your setup to Obs (VLTI, CHARA)
- Use as an 'observation portfolio'
- Share with collaborators.
- Use simulated OI-Fits for modelfitting or image reconstruction programs to test feasibility
- Help schedule night runs.



...with a new smart GUI and VO capabilities since 2010

### SearchCal

- Find and select your calibrator given instrument configuration and various filters.
- Export your selection to VO tools (Aspro2,...)



### JSDC

- Jmmc **Stellar Diameter Calibrator** build on top of SearchCal engine.
- ~ 40000 computed photometric diameters
- delivered to ESO for Calvin

### BadCal

- Maintains a list of bad calibrators
- HTML/CSV/VOTable views
- Any scientist can report a "bad calibrator" for the community using a simple web interface.
- Any facility can retrieve the list using web queries.

## Prepare

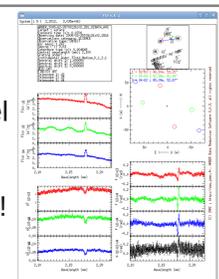
## Observe

JMMC is outside Instruments Consortia and do not normally participate to instrument building and their first versions of Data Reduction Systems. However we gather the expertise of several ex-consortia authors of DRS and the day-to-day continuous experience of our instrument users to maintain several DRS: AMBER, PIONIER and VEGA. To gain knowledge about instrument during their lifetime and update accordingly the DRS is a necessity for interferometric instruments. A collaboration with ESO is in place to this effect.

## Reduce

### AmberDrs

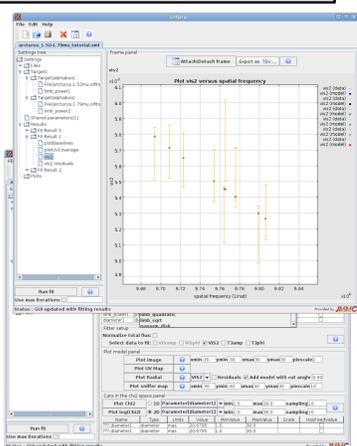
- Version 3 made by JMMC
- Optimized and more accurate noise model
- "Real instrument" model
- Numerous other changes
- Use in place of V2 to get unbiased results!
- Served with a complete pipeline, including absolute calibration



## Analyze, Interpret

### LITpro

- Perform model fitting without coding
- Uses ofits files in input
- Provides wide list of geometrical models
- Actually limited to grey model but can share parameters between several models fitted simultaneously
- Can fit your model defined in Aspro2 with its simulated data in one click



ImageReconstruction: Next in line with WISARD

: uses Virtual Observatory standards

## Other products, Facts and Numbers

- Involved in **Virtual Observatory** developments ( application launcher, Optical Interferometry **data models** )
- More than 250 users (includes ~50% of the VLTI 2011 registrants!)
- International community of users
- Co-organizer of 8 training schools
- Jmmc tools are cited by more than 64 refereed papers since 2005

