The JMMC in 2017

G. Duvert
The JMMC in 2017

(From the JMMC general assembly November 2015, Nice)
JMMC Yesterday

http://www.jmmc.fr

JMMC

Scientific Council
Pdt: T. Paumard

Director
Gilles Duvert

Directors Council
Pdt: DSAA INSU

Coordination Center (OSUG)
Technical Direction: G. Mella (OSUG)

Engineers: G. Mella (OSUG), L. Bourgès (OSUG), R. Jacquot (OSUG)

Research & Development Groups

Preparation of Observations
Gilles Duvert (IPAG/OSUG)

Calibrators
A. Chelli (LAGRANGE/OCA)

Instrument's DRS
J-B Le Bouquin (IPAG/OSUG)

Model-fitting
Isabelle Tallon-Bosc (CRAL/OSUL)

Software Development & Web services

Image Reconstruction
E. Thiébaut (CRAL/OSUL)

Data Bases
M. Benisty (IPAG/OSUG)/X. Haubois (ESO)

OIFITSEplorer
M. Benisty (IPAG/OSUG)

Network activities groups in

Software Development & Web services

Data Bases

OIFITSEplorer
JMMC new structure

Pôle JMMC

Scientific Council
Pdt: T. Paumard

Director
Gilles Duvert

Directors Council
Pdt: DSAA INSU

Coordination Center (OSUG)
Technical Direction: G. Mella (OSUG)

Engineers: G. Mella (OSUG), L. Bourgès (OSUG), R. Jacquot (OSUG)

Training
A. Meilland (OCA)

Grenoble
OSUG

Nice
OCA

Lyon
OSUL

Paris

ESO/Garching
March 9 2017

G. Duvert
(IPAG/OSUG)

Responsible:

L. Bourgès (OSUG)

R. Jacquot (OSUG)

Preparation of Observations
Gilles Duvert
(IPAG/OSUG)

Calibrators
A. Chelli
(LAGRANGE/OCA)

Instrument'sDRS
J-B Le Bouquin
(IPAG/OSUG)

Model-fitting
Isabelle Talon-Bosc
(CRAL/OSUL)

Image Reconstruction
E. Thiébaut
(CRAL/OSUL)

Data Bases
M. Benisty
(IPAG/OSUG/ESO)

OIFITSEXplorer
M. Benisty
(IPAG/OSUG)

Responsible:

A. Matter
(LAGRANGE/OCA)

Support
(many)

TOOLS & TECHNIQUES

Research & Development Groups

VLTI CENTER

JEAN-MARIE MARIOTTI CENTER
Infrared and Optical Interferometry for Astronomy
In the next future: the french VLTI CENTER

In summary: light version of ARCnodes

- Feb 2017: letter of intent sent to INSU.
- “Face-to-face” help in:
  - Proposal preparation;
  - GRAVITY & MATISSE pipeline data reduction;
  - Model fitting & Image reconstruction (JMMC tools)
To be followed:

- French VLTI Center → How to return expertise on instrumental data (instrument health, observing methods & strategies, suggestions for DRS improvements…) to ESO?

- Set-up of the network of VLTI Expertise Centres accepted as a result of last proposal by EII. **A funding of 19 person/month has been secured.** It should help raising VLTI Centres at Porto/Portugal, Exeter/UK, [JMMC/France,] Liège/Belgium, Heidelberg/Germany.
MISCELLANEOUS NEWS 2016

  - But use ArXiv version (maintained)
- OifitsExplorer: many improvements.
- OiDB: official repository A&A L3, CHARA data.

- New stellar diameter catalog (JSDC) for ~450000 stars.
- OPTICON-funded task:
  - A specification for interchange btw. Image reconstruction programs
  - A “universal” GUI for image reconstruction: Oimaging.
AND NOW Something Completely different...

RAMBLING ABOUT

VLTI'S EFFICIENCY

or

Comparing
Let's compare what is comparable.

- Interferometer = Sum of huge complex infrastructure (telescopes, delay lines, relay optics, dual beam, field rotators, control sw) and “instruments”. Everything must work OK together…
- … *NOT* a single-telescope instrument …
- … compare with peers:

ALMA!
Recent opportunity:

Comparing two reports about global effectiveness of two Interferometric arrays: ALMA and VLTI


- Exact figures on first 2 years of science use.


- Values estimated from the percentages given in the text.
### ALMA $1.3B

- Cycles 1 & 2. Operations possibly not yet at top level.
- 24/24 operation (“days”)
- 2626 hours of observation (archived, science)
- For 344 projects.
- 113 publications.
- Ratio H/P: 23

### VLTI $? 0.2 B?

- 11 years (2003-2014) of not-always-mature operations… and before the gigantic effort presented yesterday.
- 12/24 operation (“nights”), non-Twilight Night usage: ~40% of total year hours
- Allocated time: ~50% (?)
- Losses (weather+tech): ~30% of above
- ~13500 hours of observation (archived, science).
- 250 publications at 2014.
- Ratio H/P: 54
  - (66/4 telescopes compensation) divide by 16...
  - (Baseline number compensation) …or by 357
  - (per photon detected) …
About the IMAGES (1)

ALMA

VLTI

NO PHOTO?

HL Tau, cycle 2

HD 62623 AMBER
PLEASE COMPARE WITH SAME NUMBER OF TELESCOPES!

GM Aur
CO J=2-1 line
Dutrey & al, 1998, 100 citations
4 Antennas Plateau de Bure

HD 62623, Br line, Millour et al 2011,
AMBER (3T) + SelfCal
50 citations
ESO/Garching
March 9 2017