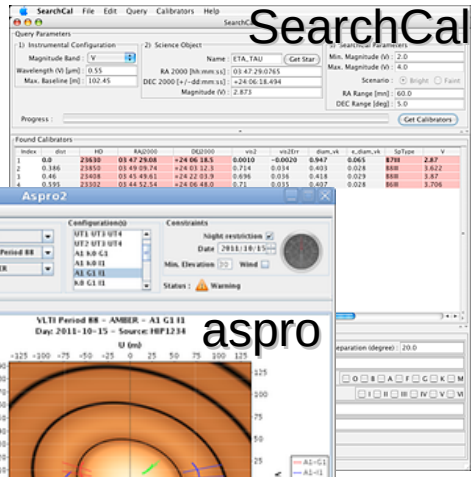
The JMMC in 2017

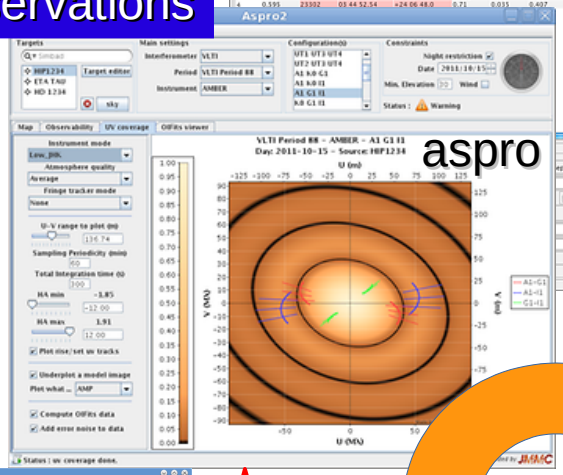
G .Duvert

The JMMC in 2017

(From the JMMC general assembly november 2015, Nice)

Prepare Observations

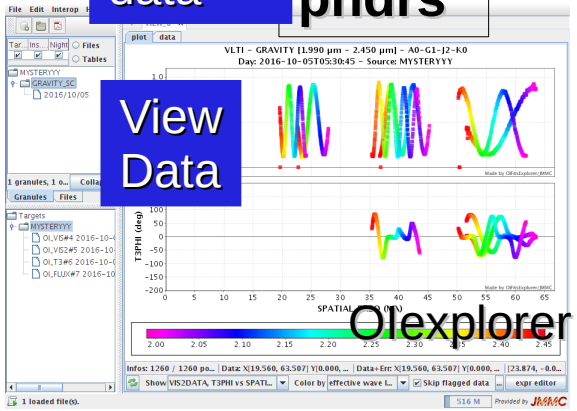




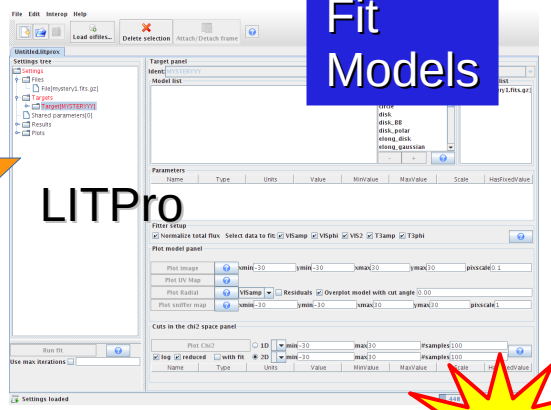
Reduce data

amdlib
pndrs

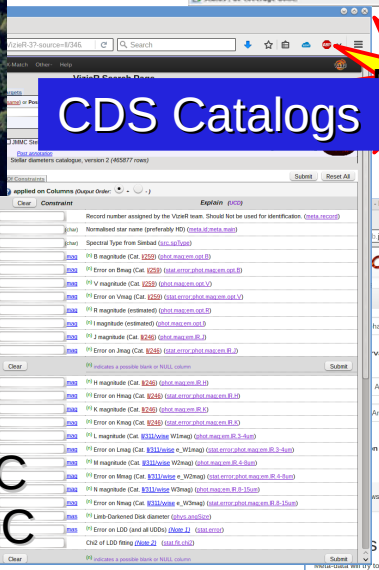
View Data

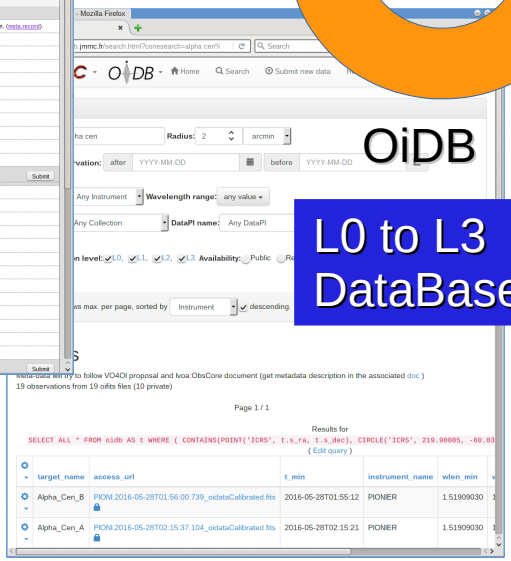


Fit Models



New!

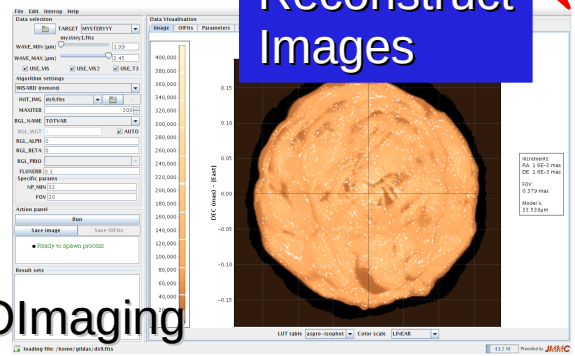




L0 to L3 DataBases

New!

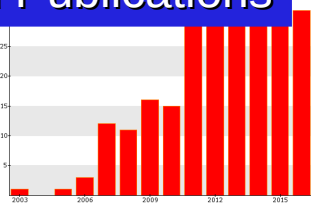
Reconstruct Images



+ Training

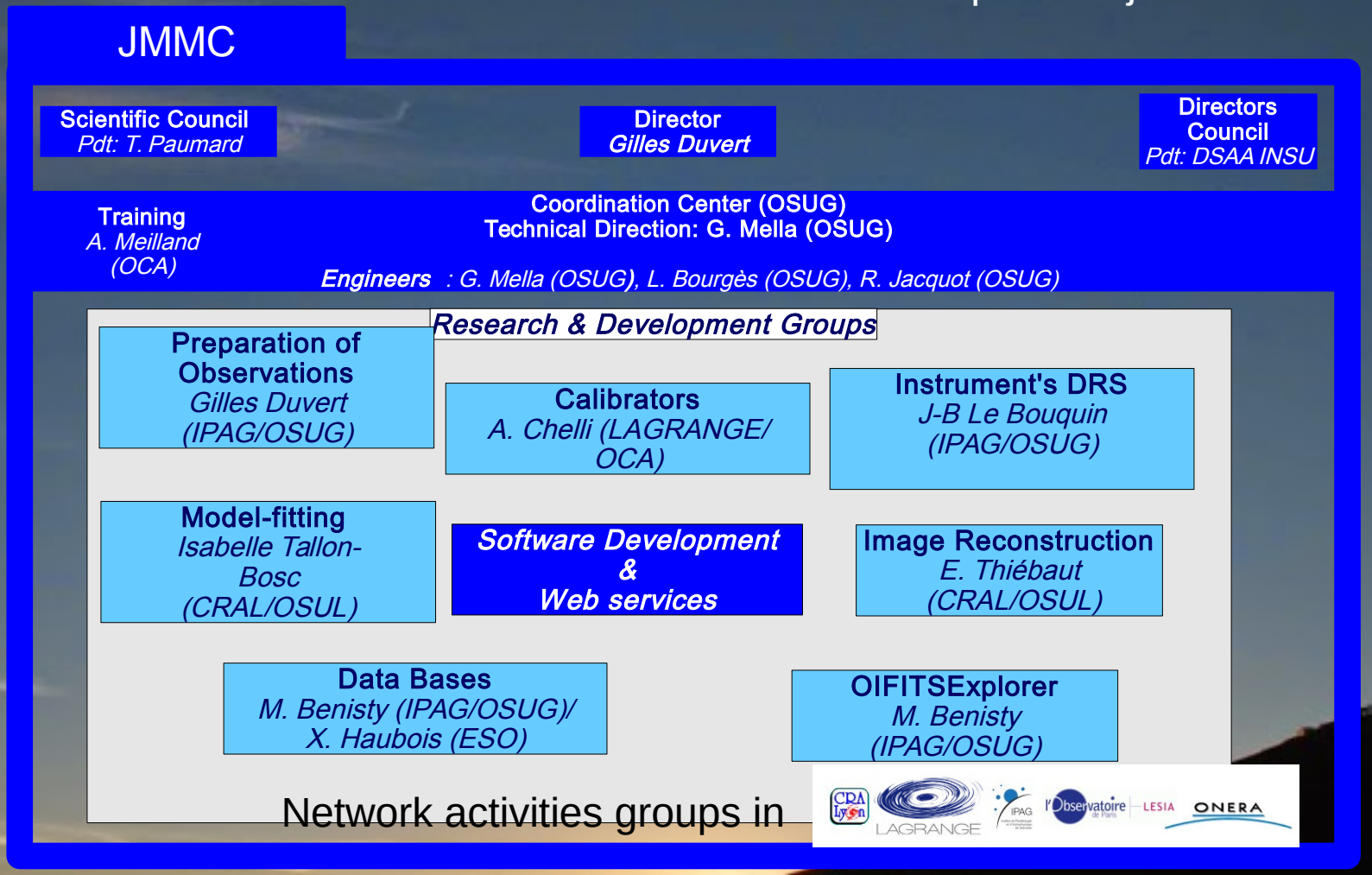
+ User Support

+ OLBIN forum And Publications

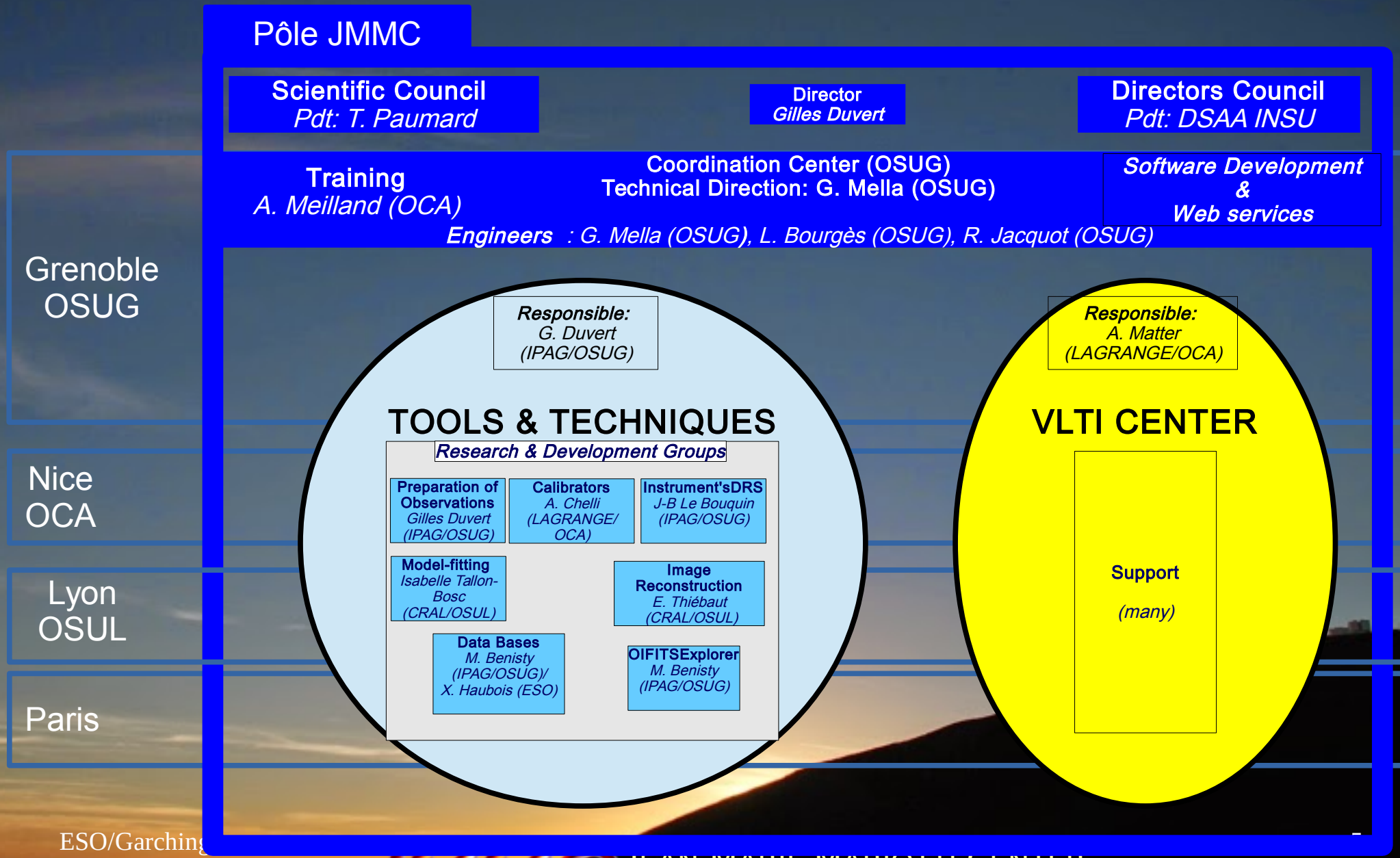


JMMC Yesterday

http://www.jmmc.fr



JMMC new structure



In the next future: the french VLTI CENTER

In summary: light version of ARCnodes

- Feb 2017: letter of intent sent to INSU.
- Light structure: 1-2 person/site (Nice, Paris, Lyon, Grenoble) + coord. at OCA (A. Matter). Rooms available. Travels not compensated.
- “Face-to-face” help in:
  - Proposal preparation;
  - GRAVITY & MATISSE pipeline data reduction;
  - Model fitting & Image reconstruction (JMMC tools)

VLTI CENTER(s), Continued

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

- **New version of OIFITS format** available (Duvert, Young and Hummel 2017, A&A, 597,A8)
  - 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...

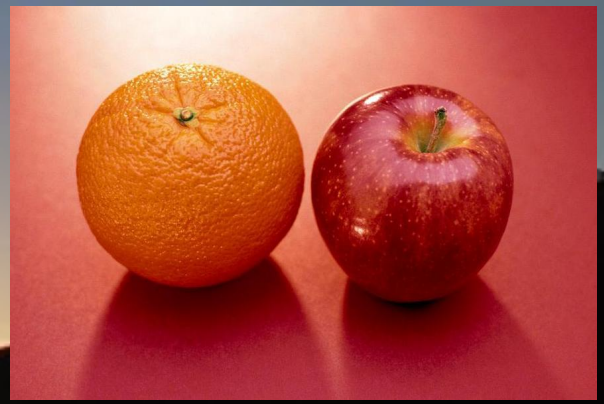
RAMBLING ABOUT

VLTI'S

EFFICIENCY

or

Comparing



Let's compare what is comparable.

- Interferometer = Sum of huge compex 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

Source: ALMA Cycle 1 & 2 Summary Report available at https://almascience.eso.org edited in 4Q 2016.

- Exact figures on first 2 years of science use.

Source: “VLTI status update: a decade of operations and beyond”, Mérand et al, 2014, SPIE, Volume 9146

- Values estimated from the percentages given in the text.

RATIO SCIENCE / TIME

ALMA $1.3B

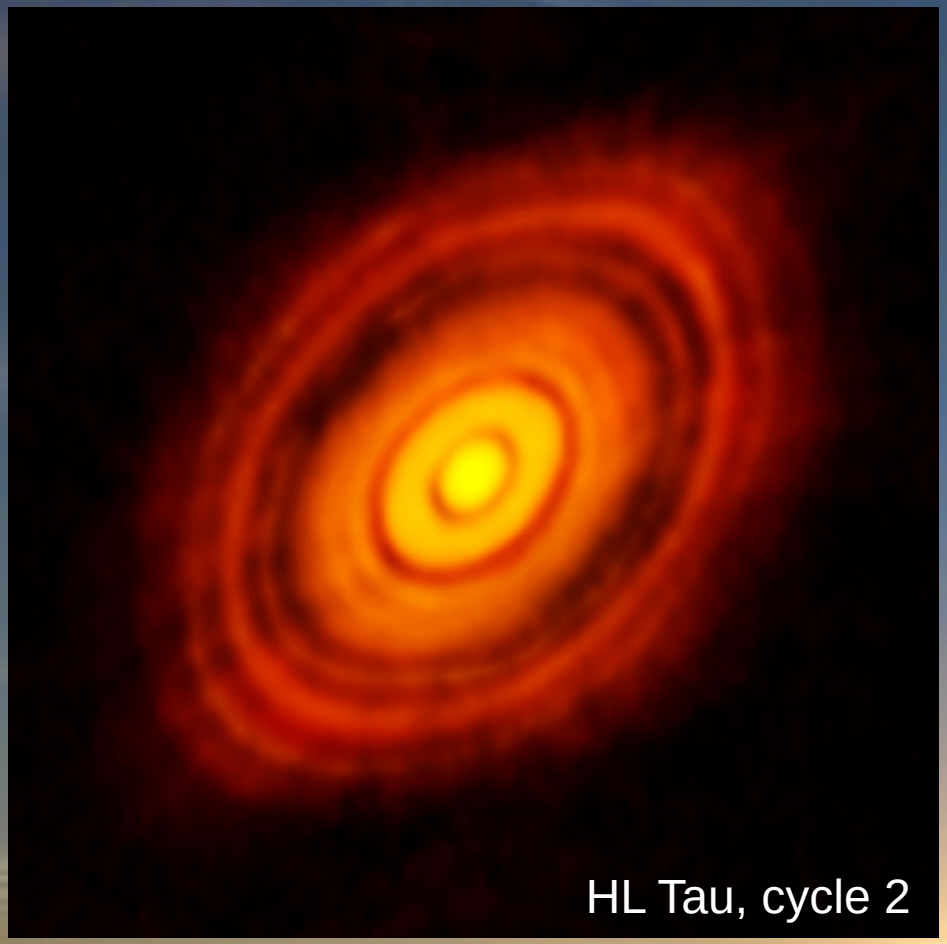
- Cycles 1 & 2. Operations possiby not yet at top level.
- 24/24 operation (“days”)
- 2626 hours of observation (archived, science)
- For 344 projects.
- 113 publications.
- Ratio H/P: **23**

VLTI $? 0.2 B?

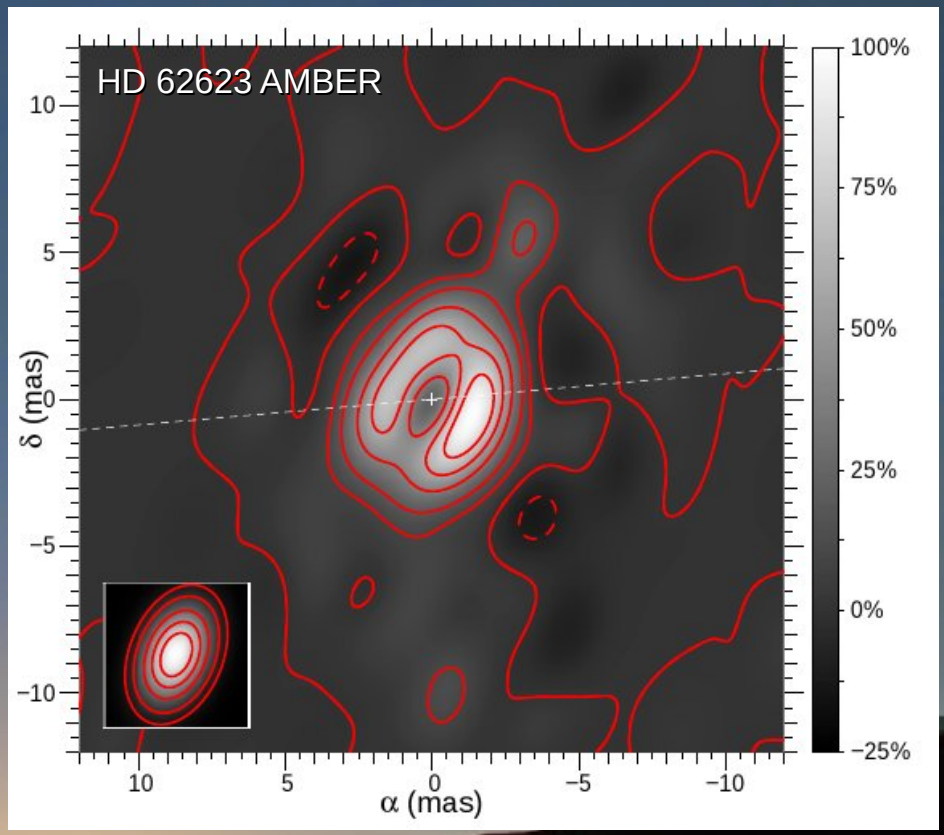
- 11 years (2003-2014) of not-always-mature operations… and before the gigantic effort presented yesterday.
- **12/24** operation (“nights”), non-Twilight Night usage: ~40% of total year hours
- Allocated time: ~50% (?)
- Losses (weather+tech): ~30% of above
- ~13500 hours of observation (archived, science).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

About the IMAGES (1)

ALMA



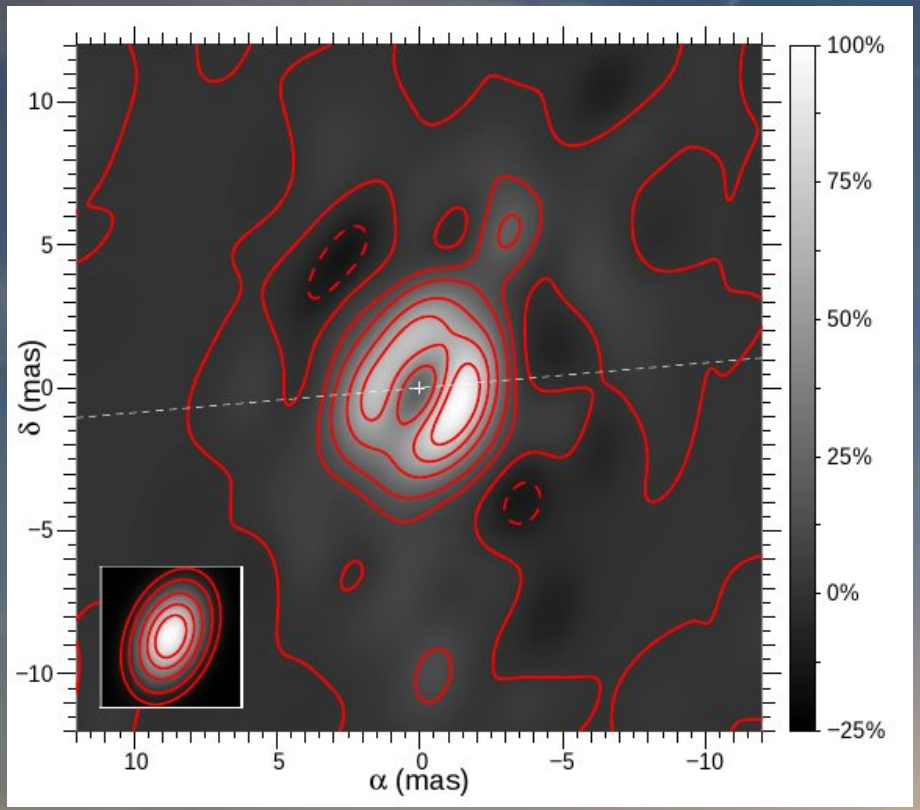
VLTI



NO PHOTO?

About the IMAGES (2)

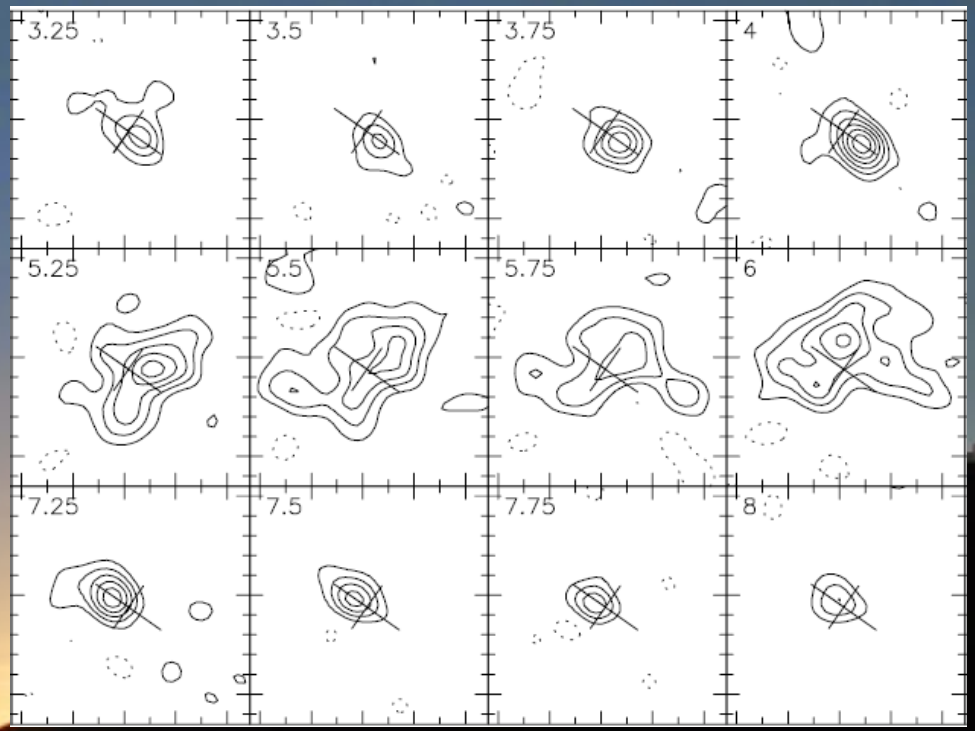
PLEASE COMPARE WITH SAME NUMBER OF TELESCOPES!



HD 62623, Bry line, Millour et al 2011,
AMBER (3T) + SelfCal
50 citations

GM Aur

CO J=2-1 line

Dutrey & al, 1998, 100 citations

4 Antennas Plateau de Bure