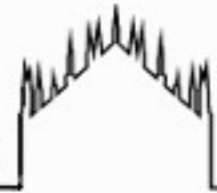


INAF



ISTITUTO NAZIONALE DI ASTROFISICA
NATIONAL INSTITUTE FOR ASTROPHYSICS

Istituto di Astrofisica Spaziale e Fisica cosmica di Milano



Olivier's Legacy: more than science

Bianca Garilli

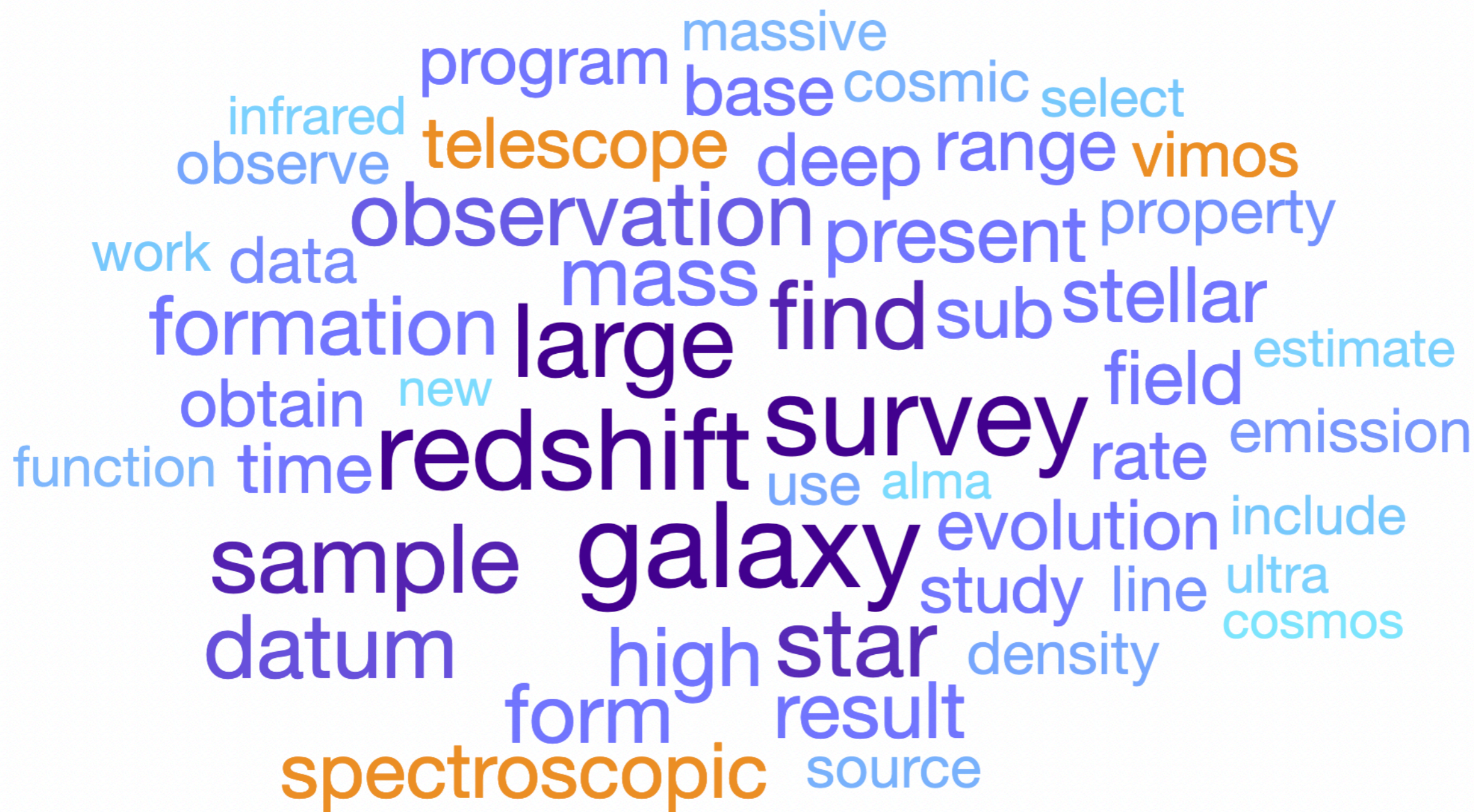


“La recherche c’est pas seulement des questionnements des scientifiques, c’est réellement qu’on comprend d’où on vient, pour réellement développer un méthode de travail qui est complètement basé sur l’observation et sur la théorie. Et c’est comme ça que tout notre cycle fondamental de connaissance évolue au cour du temp” (OLF, UTLS lycée, 17 novembre 2009)

Research is not only “questions which researchers ask to themselves”, it means to understand where we come from, and developing a **working method** totally based on **observation** and theory. It is in this way that our fundamental cycle of knowledge evolves through time



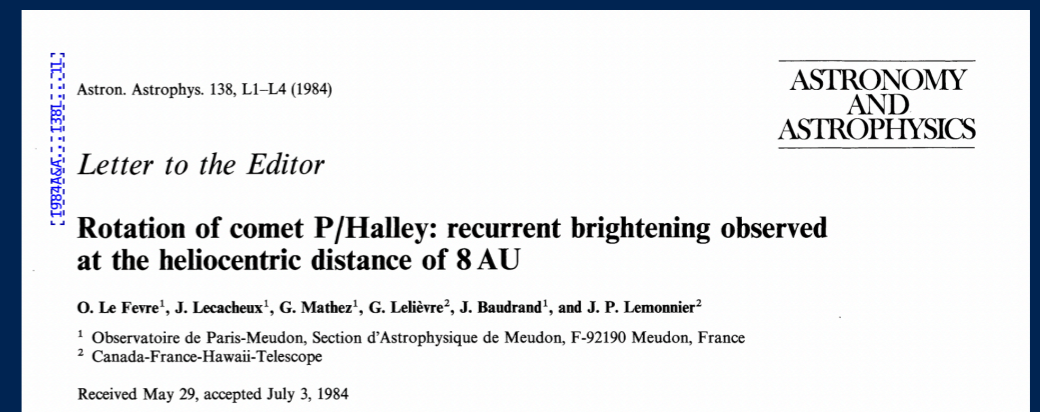
massive
program base cosmic select
infrared telescope deep range vimos
observe observation present property
work data mass find sub stellar
formation large field estimate
obtain new redshift survey rate emission
function time use alma evolution include
sample galaxy study line ultra
datum high star density cosmos
form result
spectroscopic source





Passion of life

- Oliver's interest, and passion, for astronomy and instruments dates back to the real beginning, when as still a high school student
 - Amateur astronomer
 - Polishing of a small (30cm) mirror
 - Summer camp entertainer
- PhD in Toulouse (Pic du Midi)
- Post-doc at CFHT => CFRS





NIRMOS: A WIDE FIELD NEAR-IR MULTISLIT IMAGING-SPECTROGRAPH FOR THE VLT

O. Le Fèvre¹, P. Felenbok¹, F. Hammer¹, L. Tresse¹, B. Delabre², P. Vettolani³,
Y. Mellier⁴, J.P. Picat⁴, S.J. Lilly⁵

ESO Workshop on science with the VLT

June 28-July 1 1994

WFIS: A WIDE FIELD VISUAL MULTISLIT IMAGING-SPECTROGRAPH FOR THE VLT

G. Vettolani¹, F. Delabre², O. Le Fevre³, F. Hammer³, G. Zamorani⁴

We would like, however, to stress another point which is worth mentioning. *Whilst studies as the ones above described have been the major driving force for building 8 meter class telescopes, in the present instrumentation plan of VLT there is almost no room for this kind of work. Not to build an instrument like the one here proposed, or a more clever one but with the same goals, means to throw out European research from the field of observational cosmology.*



Why MOS?

- Galaxy properties: luminosity, color, environment
- And their evolution: several redshift intervals
- Minimize cosmic variance: several independent fields
- At least 50 galaxies per measurement

$$\text{LF: } 50 \times 10 \times 3 \times 3 \times 4 \times 7 = 126000 \text{ galaxies}$$

per bin mag.bin colors env. fields time steps

- Previous Samples: ~1000 galaxies
- Since the beginning, GTO allocated to ONE big project (VVDS)



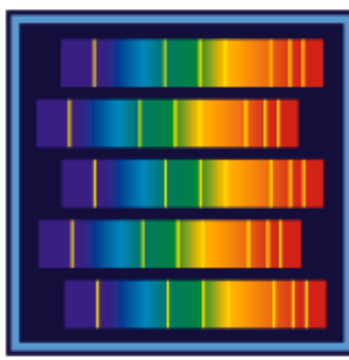
Phase A: June 1995-june 1996, competition with australian led consortium

Cuby & Gilmozzi, Messenger, vol. 91, p. 16-17, 03/1998

At its meeting in Milan in October 1996, the STC recommended the procurement of 2 instruments for imaging and massive multi-object spectroscopy, VIMOS and NIRMOS, as conceptually designed by the VIRMOS consortium.

Contract signature: August 1997

Instrument	UT	Preliminary Acceptance in Chile
VIMOS & MMU	#3	May 2000
NIRMOS	#4	April 2001

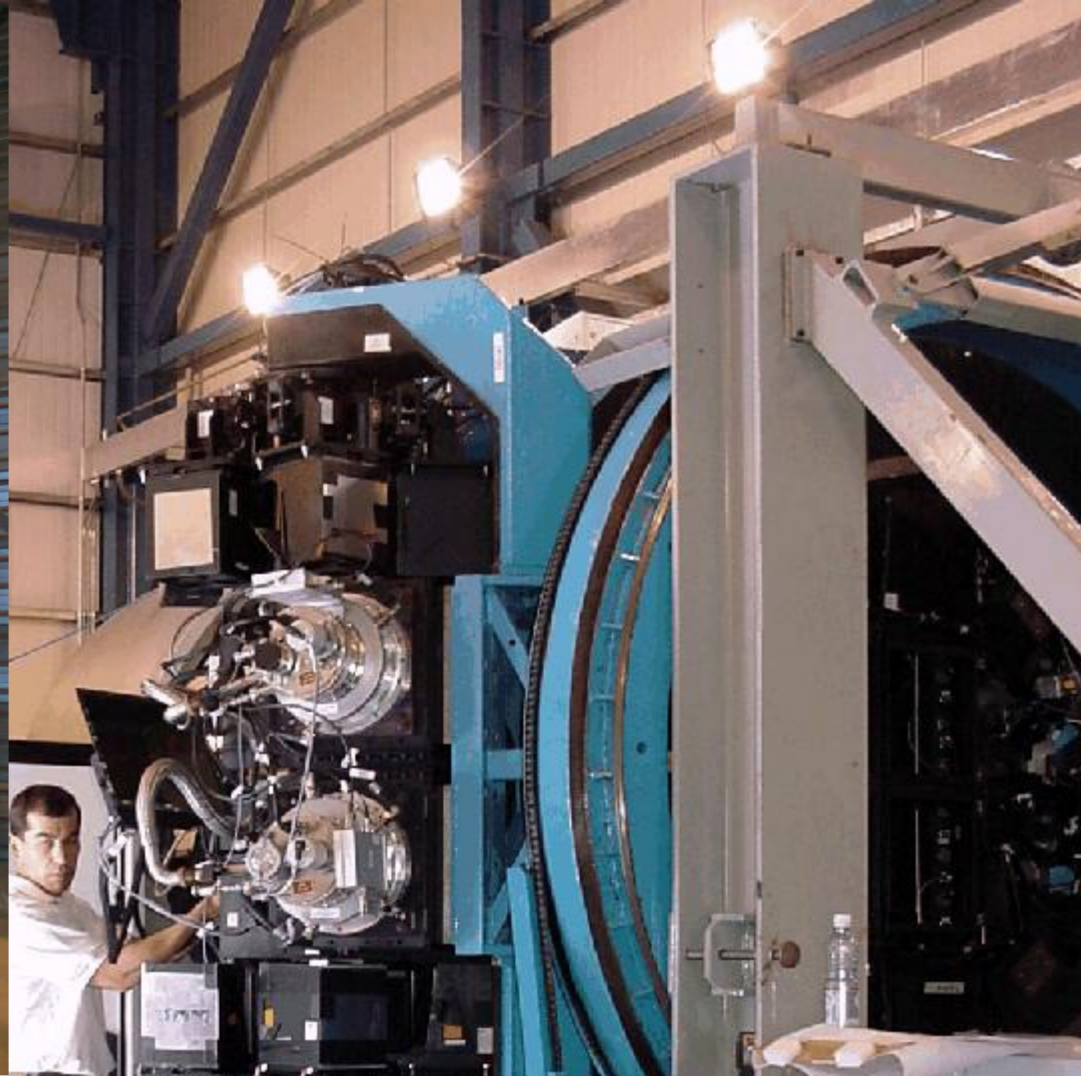
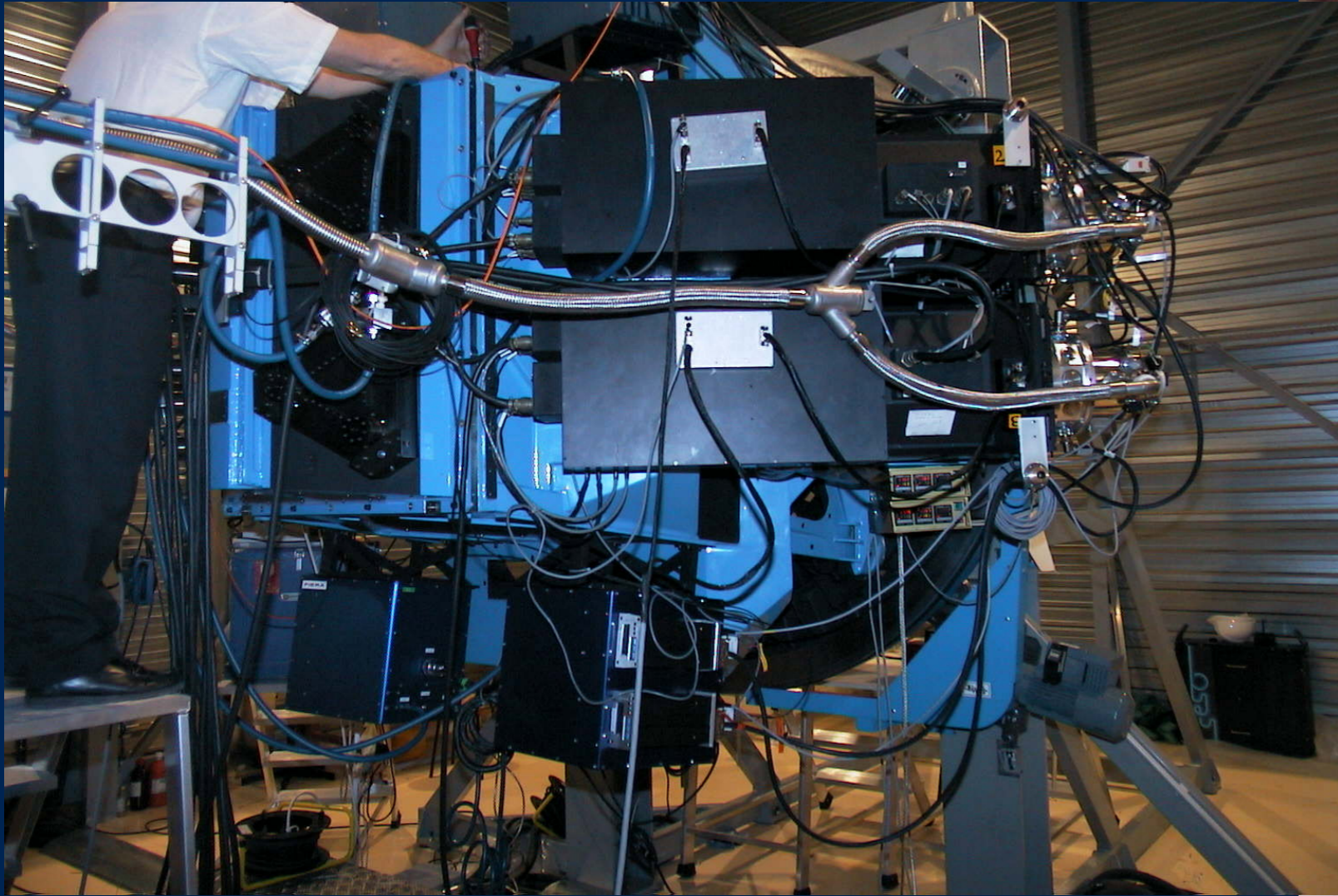


VIMOS

- **PI: Le Fevre (LAM-Marseille)**
- CO-PI: Vettolani (IRA-Bo)
- Participants
 - ◆ OAMP: Project Office & optics
 - ◆ OA Capodimonte: Mechanics & electronics
 - ◆ OA Brera: filters & grisms
 - ◆ IASF-Mi: MMU & s/w (OPS,DRS,OS)
 - ◆ IRA Bologna: OS
 - ◆ OA Bologna: DRS
 - ◆ OAMP: Instrument control s/w
 - ◆ OHP: Integration facility
- **For a total of 66 persons (6 women)**



OHP Integration hall, built on purpose



Integration at OHP: 2000-2001

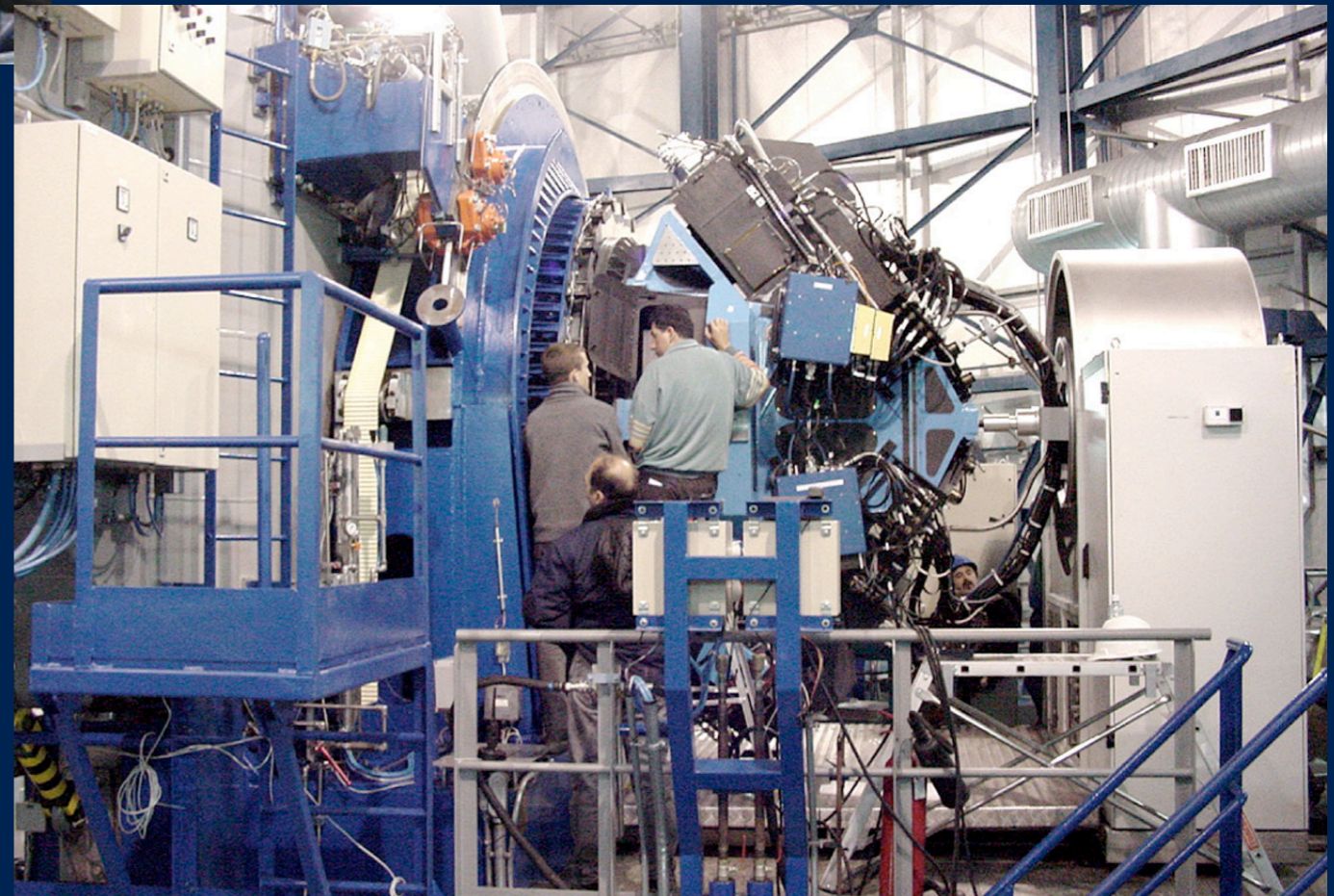


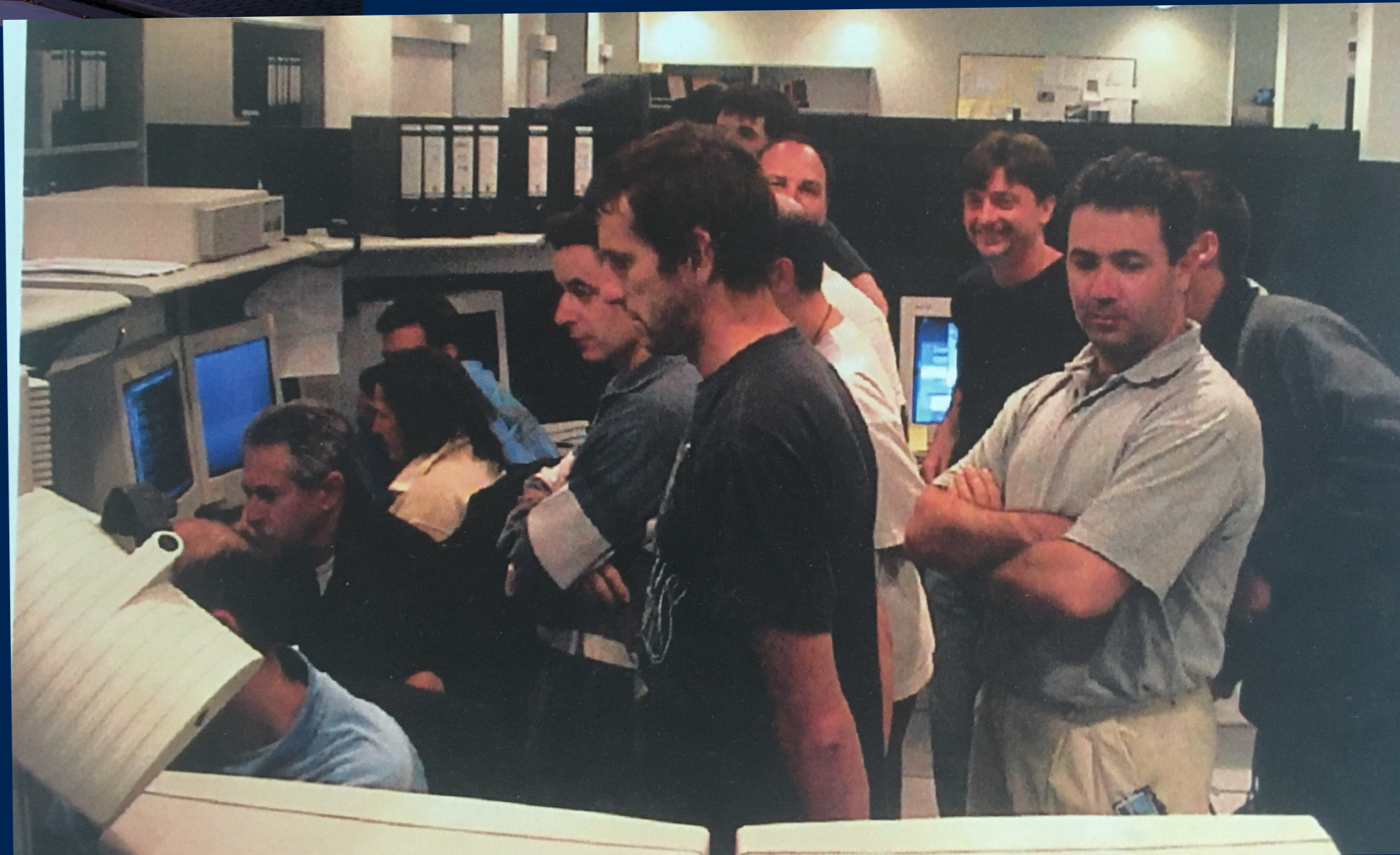
December 2001: VIMOS being sent to Chile

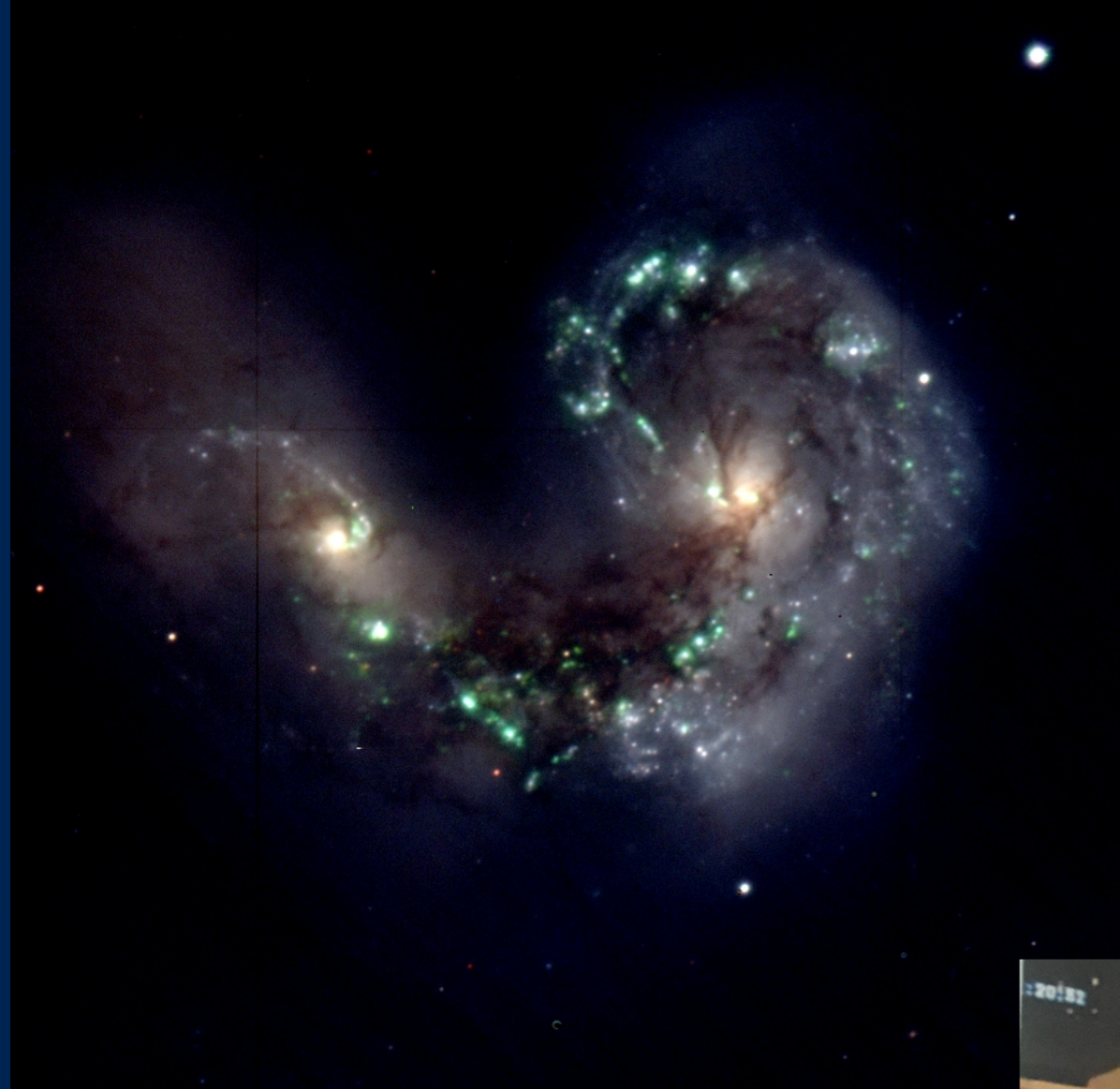




February 2002: Entering UT3

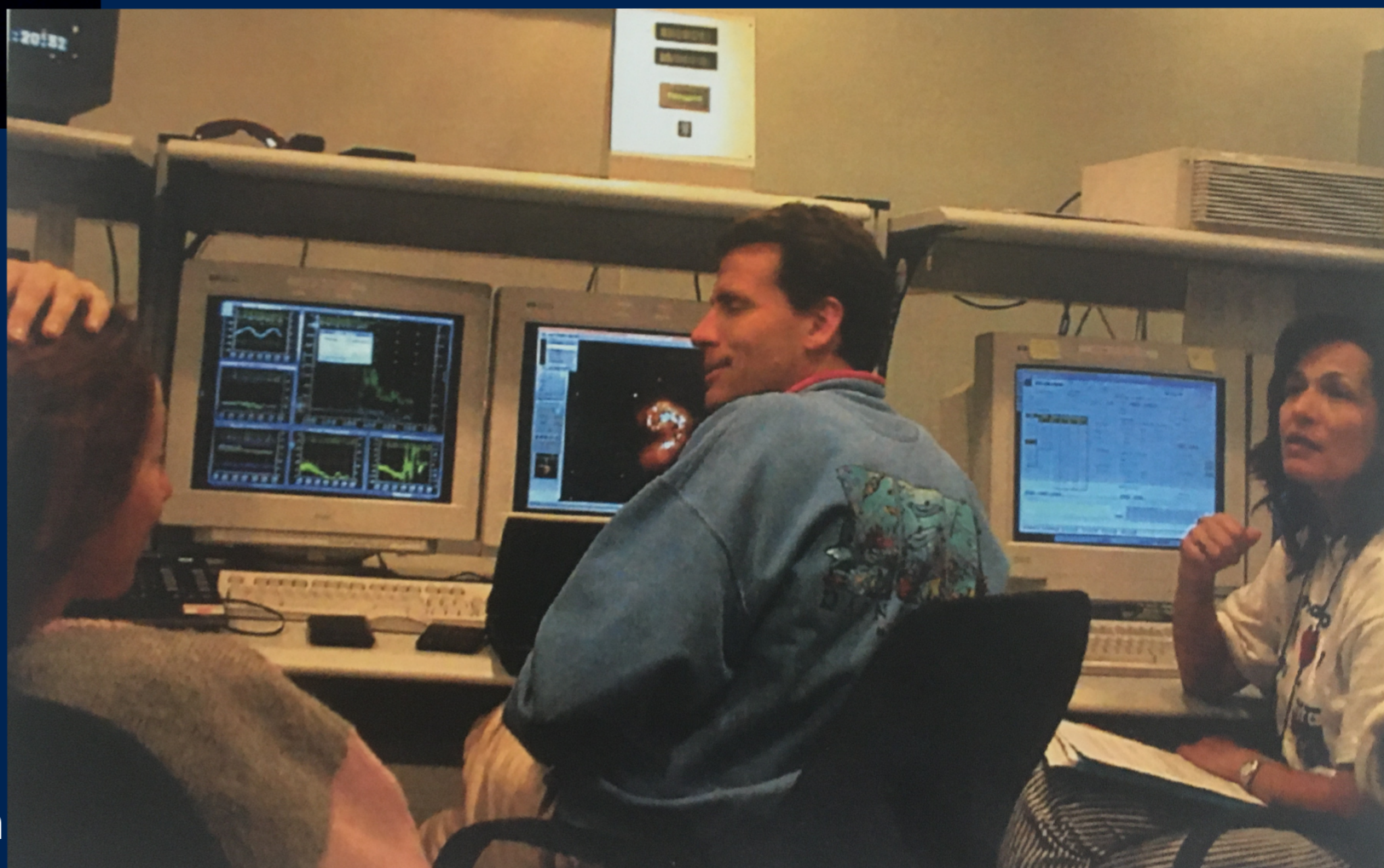






First Image

February 26, 2002



B. Garilli, "From





And the first spectra

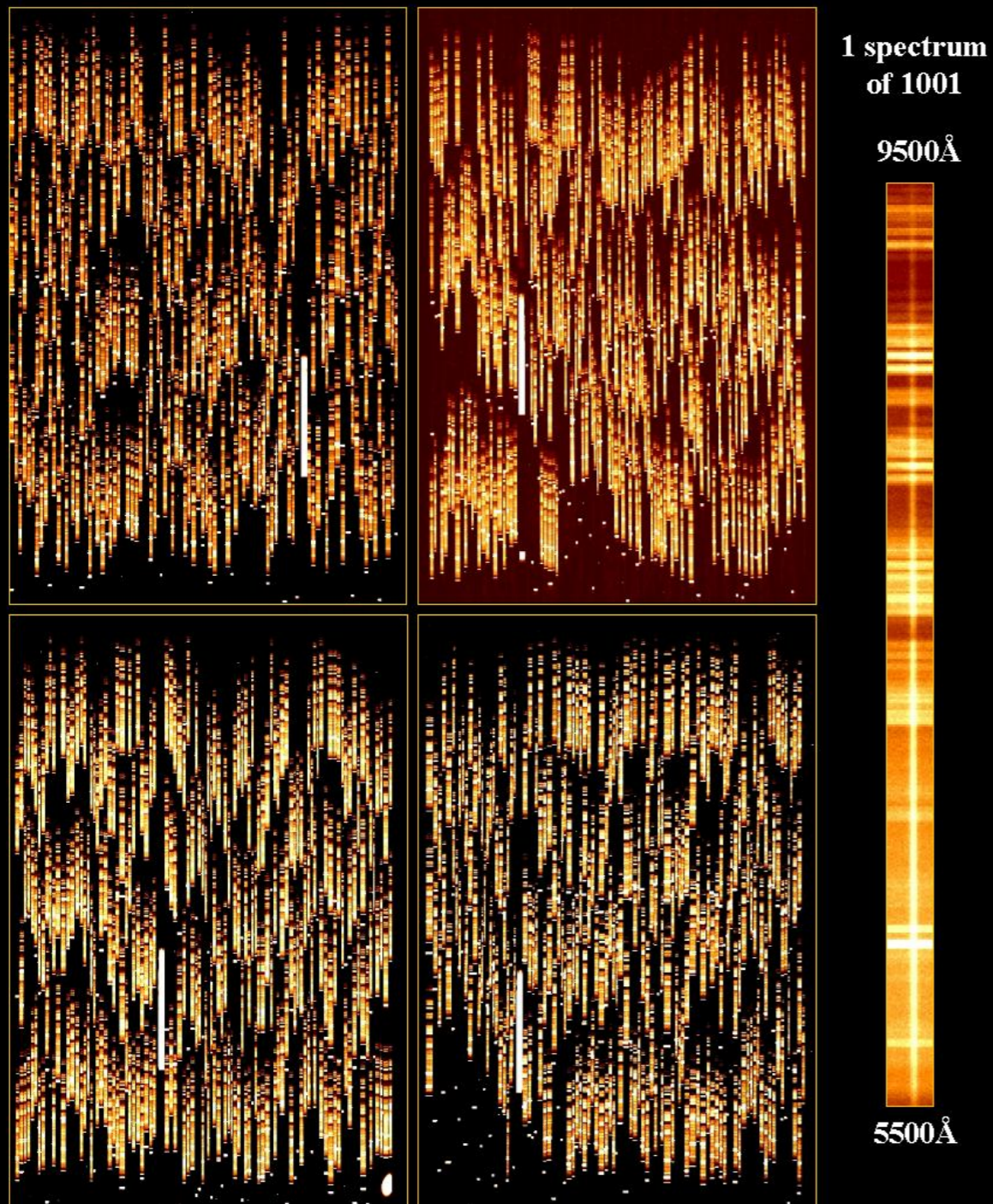
March 2, 2002

Only 2 channels: 220 spectra, half the CFRS in 3 hours





**VIMOS at the ESO VLT
measures the distance of 1001 distant galaxies
in one single observation 28/09/2002**



Date: **Wed, 2 Oct 2002 15:45:09 +0200 (CEST)**

From: Olivier Le Fevre <Olivier.LeFevre@oamp.fr>

To: virmos_sci@oamp.fr, virmos_board@oamp.fr ... etc

Subject: VIMOS observes 1001 galaxies

Dear all

As a postscriptum to this successful VIMOS commissioning, ended 2 days ago, I attach 2 sets of data acquired with VIMOS:

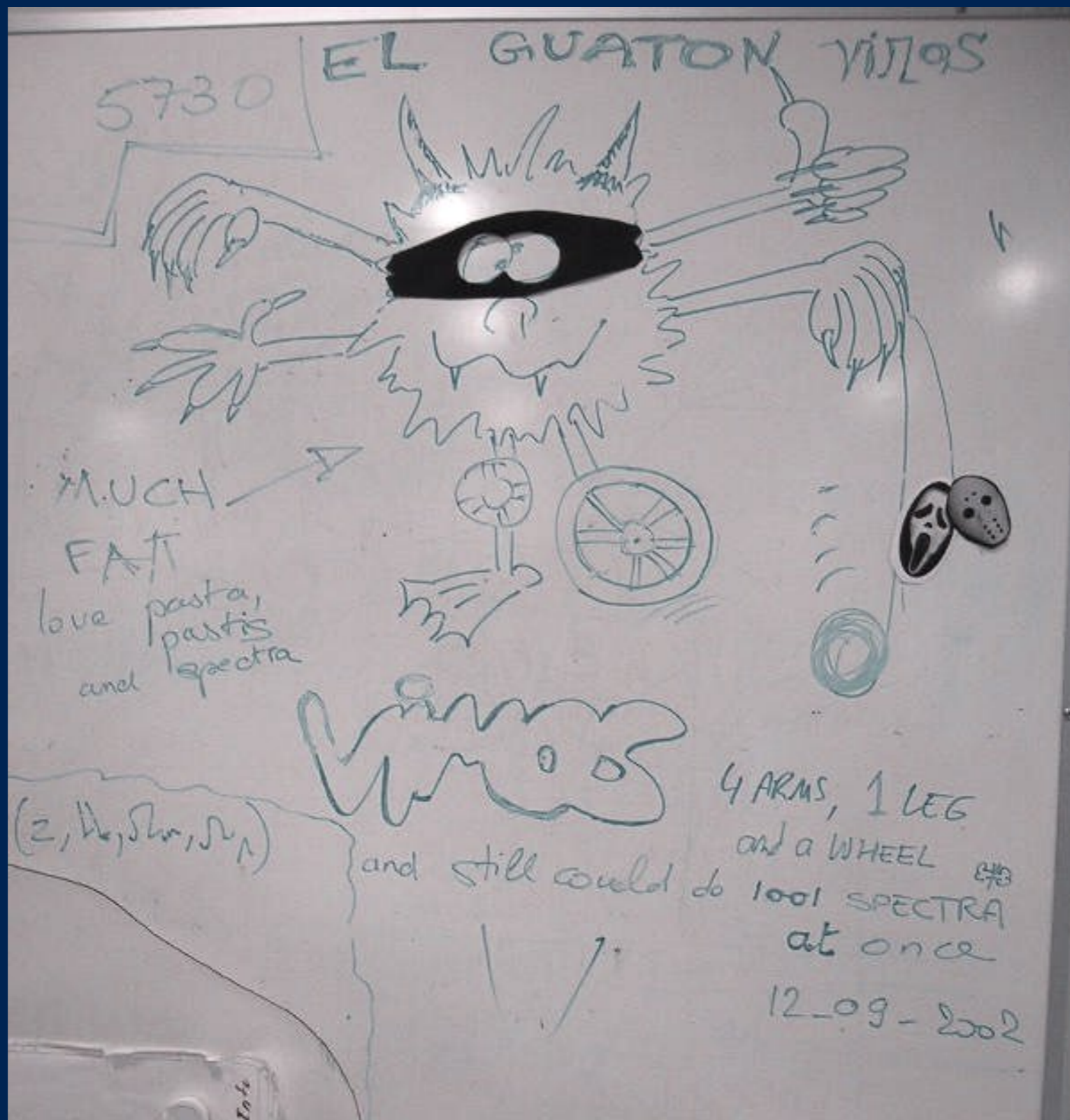
Spectra of 1001 galaxies to IAB~24, observed in one single observation, **certainly a world record !**

High resolution ($R \sim 4000$, high R for distant galaxies !) of ~ 150 IAB~22.5 galaxies observed at once and extracts showing the quality of the data (20min exposure)

Image quality has been superb at times, recording exposures with as good as 0.48" FWHM. The instrument has been "subjected to torture" in all its modes. We seem to have reached a stable and predictable behavior, confirming the performances announced.



Paranal view of VIMOS





And more

- Promoter/PI of the largest European extragalactic spectroscopic surveys of the past 20 years: **VVDS**, zCosmos, VIPERS, **VUDS**, VANDELS, **ALPINE**
- PI or Co-I of several MOS instruments:
 - NIRMOS, KMOS, VIMOS Upgrade
 - **Euclid**
 - **PFS**
 - **Dioramas** -> Mosaic
- Winner of an ERC “senior” grant
- Director of LAM for many years



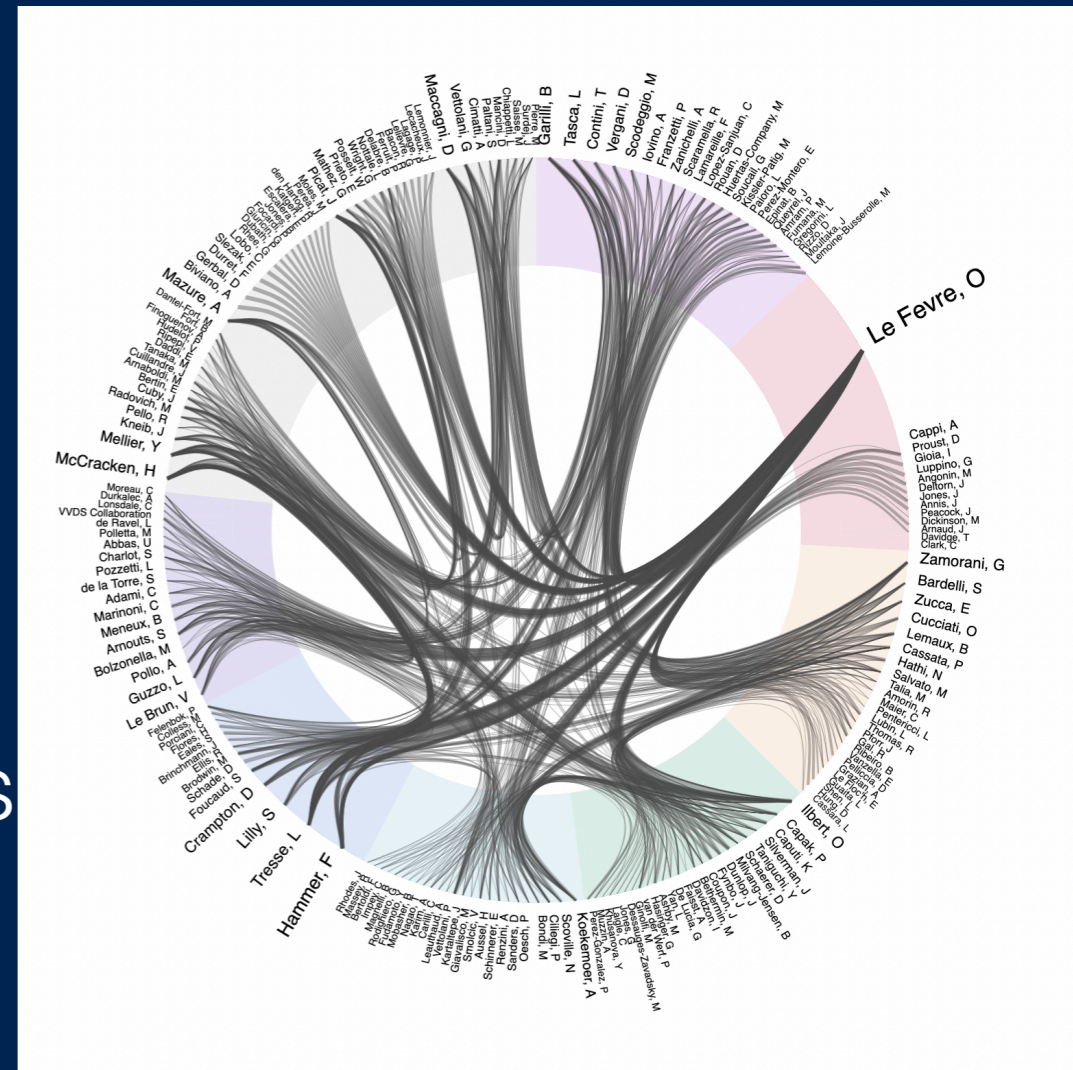
....Fast and effective exploitation...

- concept of "full chain" right at project start
 - automatic reduction
 - VIPGI (used for all VIMOS surveys and more, now evolved for LBT instruments)
 - Measurement tools
 - EZ (still in use)
 - Le Phare (still in use)
 - Amaze (developed for PSF and Euclid)



... and young astronomers

- 16 PhD thesis on VVDS
- ◆ 11 PhD students got a post-doc
- ◆ 25 post docs working on VVDS
- Team spirit : frequent F2F meetings (lately also virtual)
- Method of work: clear actions, clear work assignment (“who does what and when”)
- A 'Directorship school': at least 7 directors among VVDS participants



887 papiers, >500 co-auteurs



B. Garilli, "From galaxies to cosmology...", Marseille, 4 Luglio 2022



OLF legacy

- CURIOSITY and PASSION
- FURTHER AND DEEPER
- keep on searching and trying new ways/topics
- Never give up

Ciao Chef, Merci pour tout