

SAp

Aspects FONCTIONNELS

INTERPRETATION

Cosmology
Galaxy evolution
D. Elbaz

Star and planet Formation
P. André

High energy phenomena
(A. Goldwurm)

Stellar Plasmas
S. Turck-Chièze

Théory and Modélisation
J.P. Chièze

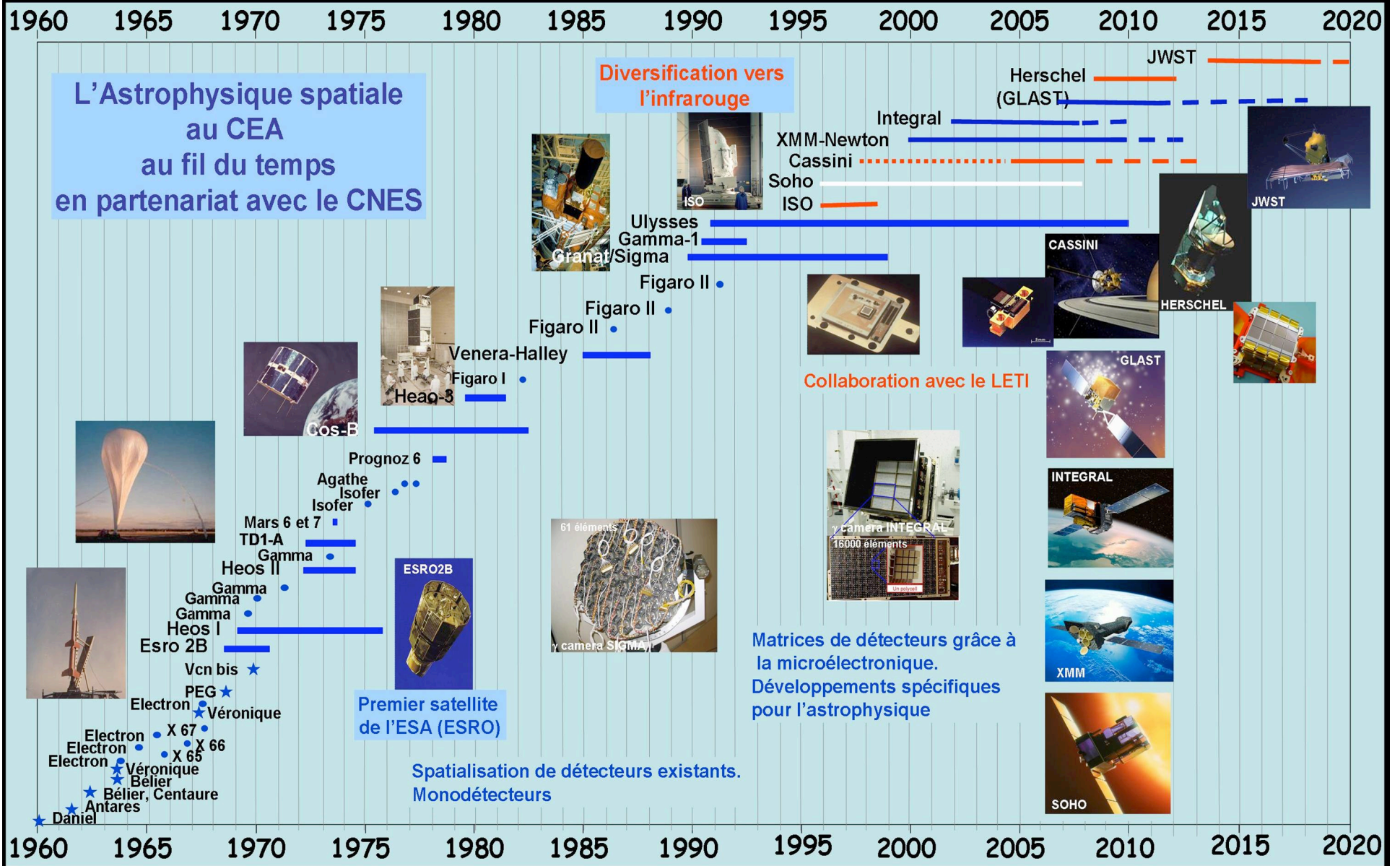
INSTRUMENTATION For Space missions

Product assurance
J. Fontignie

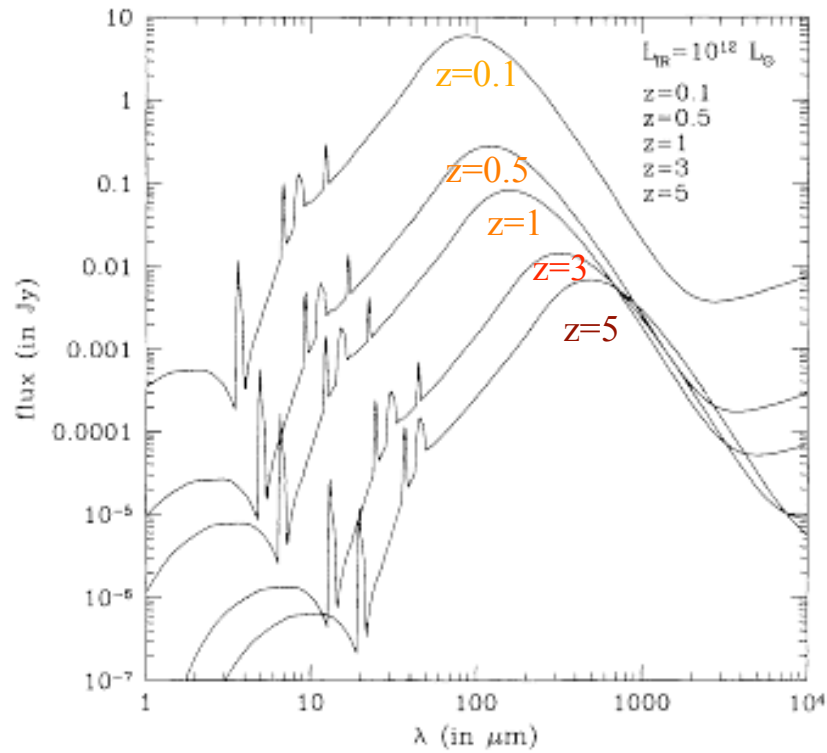
System and architecture
Y. Rio

Detection
B. Cordier

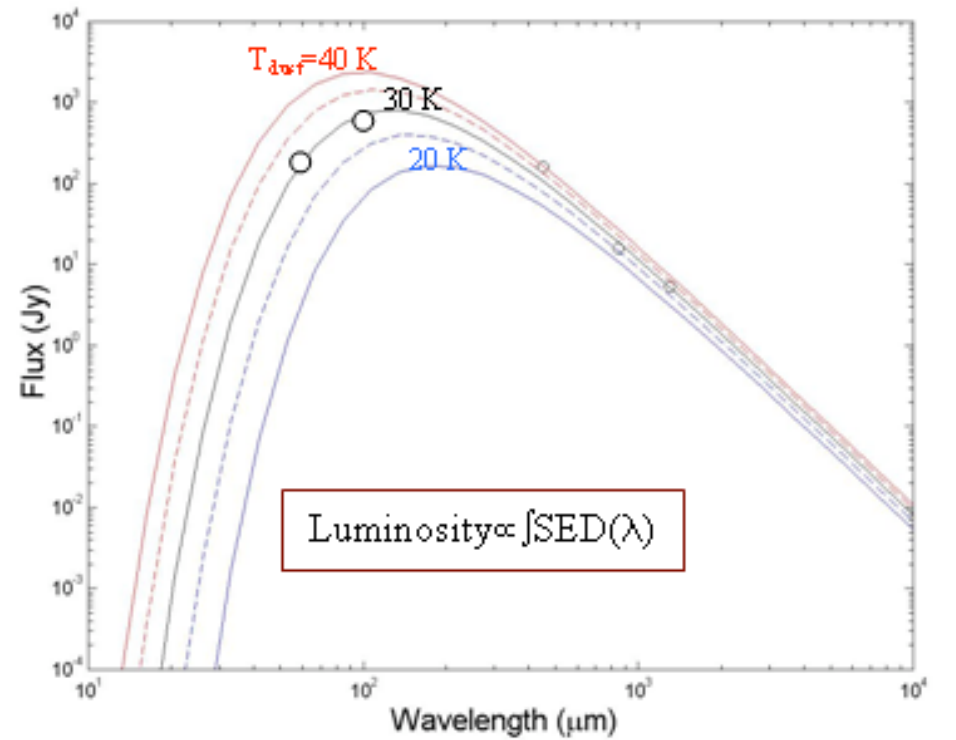
Electronics
C. Cara



Far-IR radiation important



SED Galaxies



SED proto-star

But not yet well explored

Will change soon with

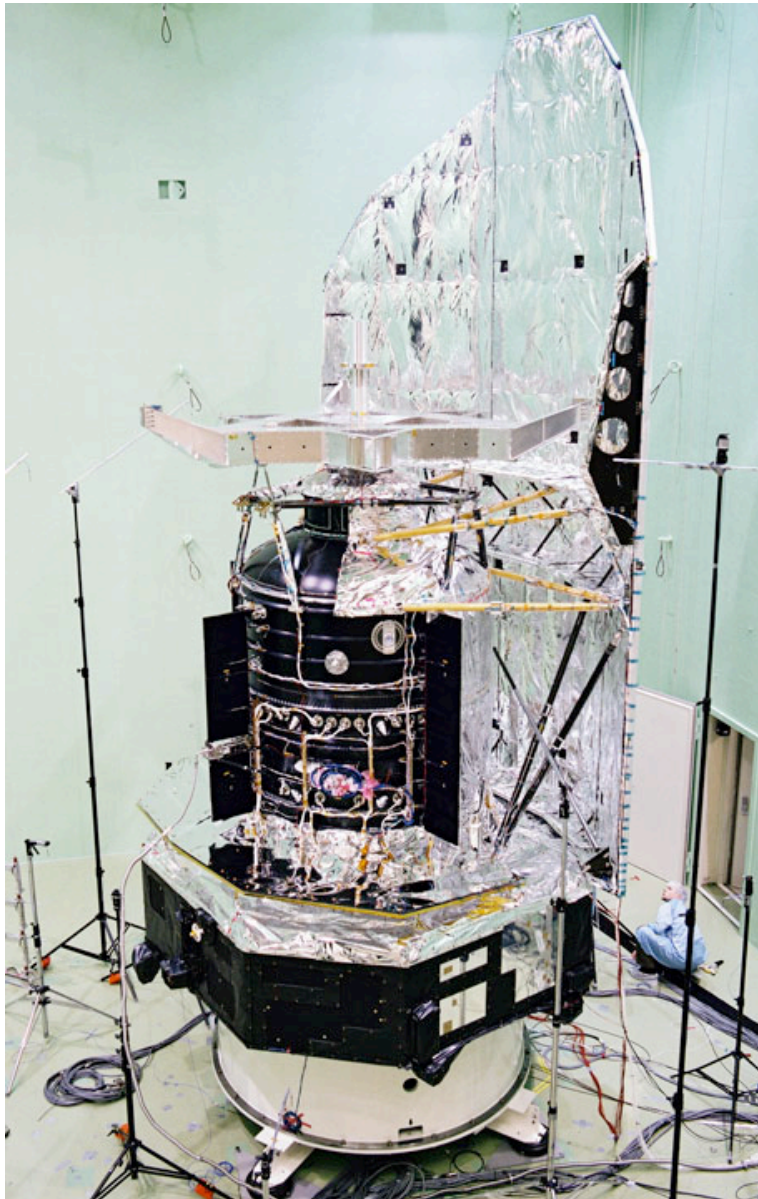
HERSCHEL



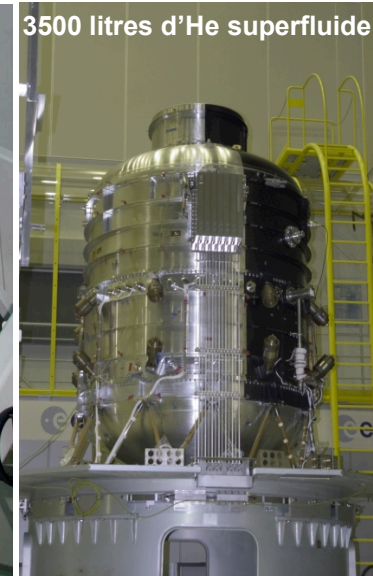
Telescope : 3.6 m

HSO QM et STM

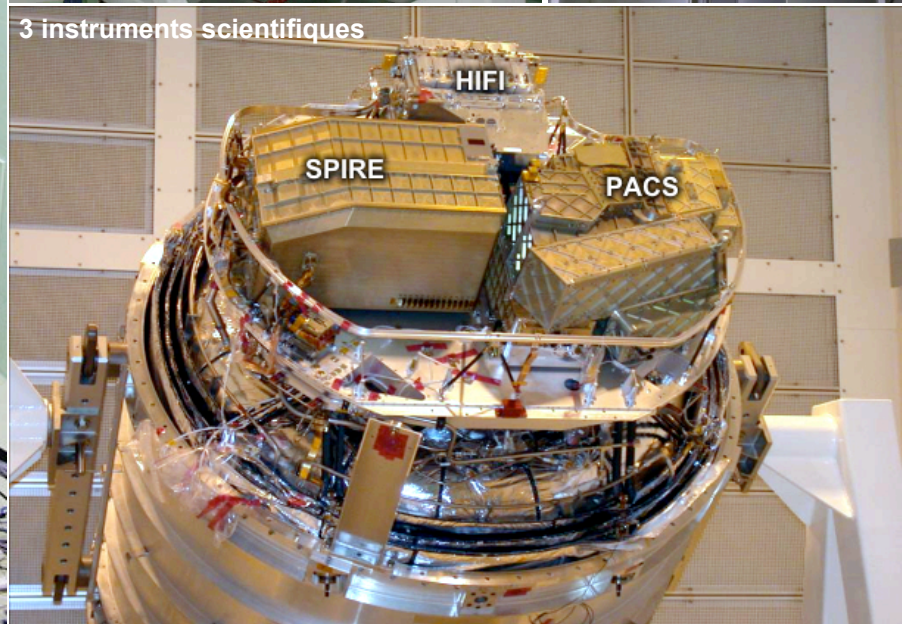
Herschel Space Observatory Qualification Model et Structural Thermal Model



Télescope de 3.5m



3500 litres d'He superfluide



3 instruments scientifiques

**Novel detector Technology developments
powered by Astronomy**

From mono-detectors

JCMT-UKT14
350 μ m-2mm



1

1986-1996

CSO-SHARC
350 μ m array



20

1996-2004

JCMT-SCUBA
350/450 &
750/850 μ m



91

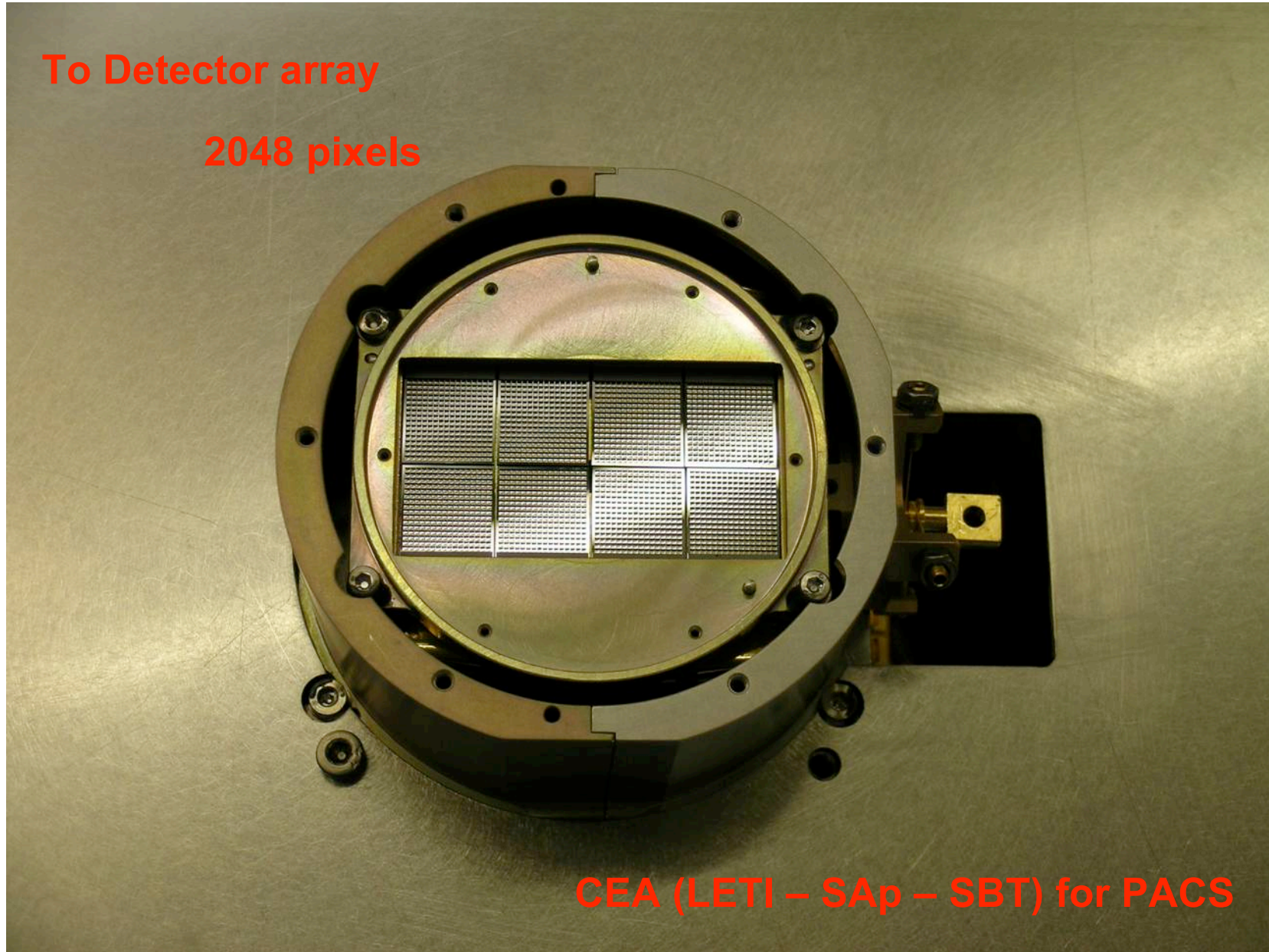


37

1997-2005

To Detector array

2048 pixels



CEA (LETI – SAp – SBT) for PACS

Large field possible

Need for angular resolution :

angular resolution (details on objects)

but also

sensitivity (Herschel sensitivity probably limited by confusion)

→ Large antenna

→ ground-based

But atmospheric transmission poor

Dry site needed

Antarctica promising very dry



Such arguments were convincing enough to be embarked upon the ARENA.

NA5 Which Astrophysics at Dome C?

leader: Hans Zinnecker (Potsdam)

Identifies key astrophysical observational programmes to be carried out in Antarctica that complement those already in progress or planned in conventional ground based observatories or with space missions. A science steering committee will prepare and publish a rationale of the science programmes, instrumental recommendations to reach the scientific objectives and a timeline for instrumental development at Dome C in the context of space and other ground based programmes.

Tasks	Task leader	Title			
5.1	M. Busso/M. McCaughrean	Wide field imaging surveys in the thermal infrared			
5.2	P.-O. Lagage	New windows in the far Infrared			
5.3	H.Rauer	New domains for ground based high precision and long duration time-series photometry and spectroscopy	5.3.1	E.Fossat	Asteroseismology and Helioseismology
			5.3.2	H.Deeg	Photometric search for extrasolar planets
			5.3.3	K.Strassmeier	Solar-stellar connection
5.4	F. Vakili	Obtaining the ultimate angular resolution			
5.5	C. Abia	Spectroscopy and spectro-imagery			

Deliverable No	Deliverable title	Deliverable date	Nature	Task
D5.1	Proceedings of Conference 1	10	Proceedings	All tasks
D5.2	Proceedings of Conference 1	22	Proceedings	All tasks
D5.3	Proceedings of Conference 1	34	Proceedings	All tasks
D5.4	Executive summary of recommendations to the National and International Agencies (ESO-ESA) for an astrophysical programme at Dome C	36	Book	All tasks

Here we are!

The results of this conference

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inputs for

ARENA2 conference to be held
in Potsdam on 17-21 September

Summary of this workshop at V. Minier