



EarLy unIverse eXploration with nIRspec
A Marie Curie Initial Training Network of the European Union

First ELIXIR School:

"The JWST/NIRSpec Project"

EADS/Astrium, Ottobrunn

31 May-2 June 2010

ELIXIR Project Overview

- **Marie Curie Initial Training Network** awarded to the NIRSpec Instrument Science Team by the 7th Framework Program of the European Commission
 - dedicated to the training of young “early-stage” researchers
(note: strong competition, only 8% global success rate, only 4 in astronomy)
- ELIXIR goal: prepare young scientists for the exploitation of JWST and **develop expertise in the key extragalactic NIRSpec science areas**
 - train 13 PhD students over the period 1 Dec 2008 - 30 Nov 2012
(based at host institutions of the participating team members: Paris, Heidelberg, Leiden, Lyon, Madrid, Oxford and Rome)

ELIXIR Structure

Coordinator (CNRS)

Network Supervisory Board

IAP
S. Charlot

Chair

CRAL
P. Ferruit

DAMIR
S. Arribas

Leiden
M. Franx

MPIA
H.-W. Rix

OAR
R. Maiolino

Oxford
A. Bunker

ESA/ESTEC
P. Jakobsen

Co-chair

EADS/Astrium
R. Maurer

IAP
ESRs

CRAL
ESRs

DAMIR
ESRs

Leiden
ESR

MPIA
ESRs

OAR
ESRs

Oxford
ESRs

Training

- Emphasis on combined training by members of **different communities**:
 - ✓ Deep sky observations and spatially resolved studies of galaxies
 - ✓ Spectral evolution modeling of galaxies
 - ✓ Galaxy formation modeling
 - ✓ NIRSpec instrument (link to industry)
- Students encouraged to visit and develop collaborations with scientists at other network nodes to build up their skills
- In addition: **broad education** through a program of annual meetings and Summer schools

Role of industrial partners in training program

- Fundamental to the success of this network, which aims at training young researchers to the exploitation of a highly sophisticated space instrument
 - optimize observation and calibration strategies for the various observing modes of NIRSpec (→ instrument performance simulator).
- Expose young scientists to the other side of a science-driven technological project: complementary expertise, different work environment, career opportunities
- Industrial partners sponsor a series of “technology-oriented” schools:
 - ✓ “The JWST/NIRSpec Project” (Astrium/Ottobrunn, June 2010)
 - ✓ “How Does a Space Project Work” (ESTEC, June 2011)
 - ✓ “Simulations of NIRSpec Observations” (CRAL, June 2012)

First ELIXIR school: "The JWST/NIRSpec Project"

- Provide ELIXIR students with a global overview of the JWST project, the observatory and its instruments
- More in-depth description of the NIRSpec project
- **Unique opportunity** to meet with principal investigators/science leads of all the JWST instruments and important NIRSpec subsystems
- As part of the training, ELIXIR students will chair the school sessions

First ELIXIR school: "The JWST/NIRSpec Project"

Tuesday, 1 June: JWST mission overview

09:00-09:15	Welcome	R. Maurer
09:15-09:30	Introduction	S. Charlot
09:30-09:40	Logistics	P. Ferruit
09:40-10:40	The JWST mission: science objectives	M. Clampin
10:40-10:55	Break	
10:55-11:55	The JWST mission: the observatory and its instruments	M. Clampin
11:55-13:30	Lunch	
13:30-14:15	NIRCam	M. Rieke
14:15-15:00	MIRI	G. Wright
15:00-15:15	Break	
15:15-16:00	JWST detectors	G. Rieke
16:00-16:45	TFI+FGS	J. Hutchings
16:45-17:15	NIRSpec	P. Jakobsen

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Wednesday, 2 June: the NIRSpec instrument

09:00-09:10	Agenda	S. Charlot
09:10-09:20	Logistics	P. Ferruit
09:20-09:40	History of NIRSpec	P. Jakobsen
09:40-10:25	Technical presentation of NIRSpec	X. Gnata
10:25-10:35	Break	
10:35-11:15	Micro-shutter arrays	H. Moseley
11:15-11:55	Detectors	B. Rauscher
11:55-13:30	Lunch	
13:30-14:10	Observing with NIRSpec	T. Boeker
14:10-14:50	NIRSpec data	B. Dorner
14:50-15:30	Processing NIRSpec data	T. Beck
15:30-15:45	Conclusion	S. Charlot
