

Science Data Segment activities @ IASF Milano

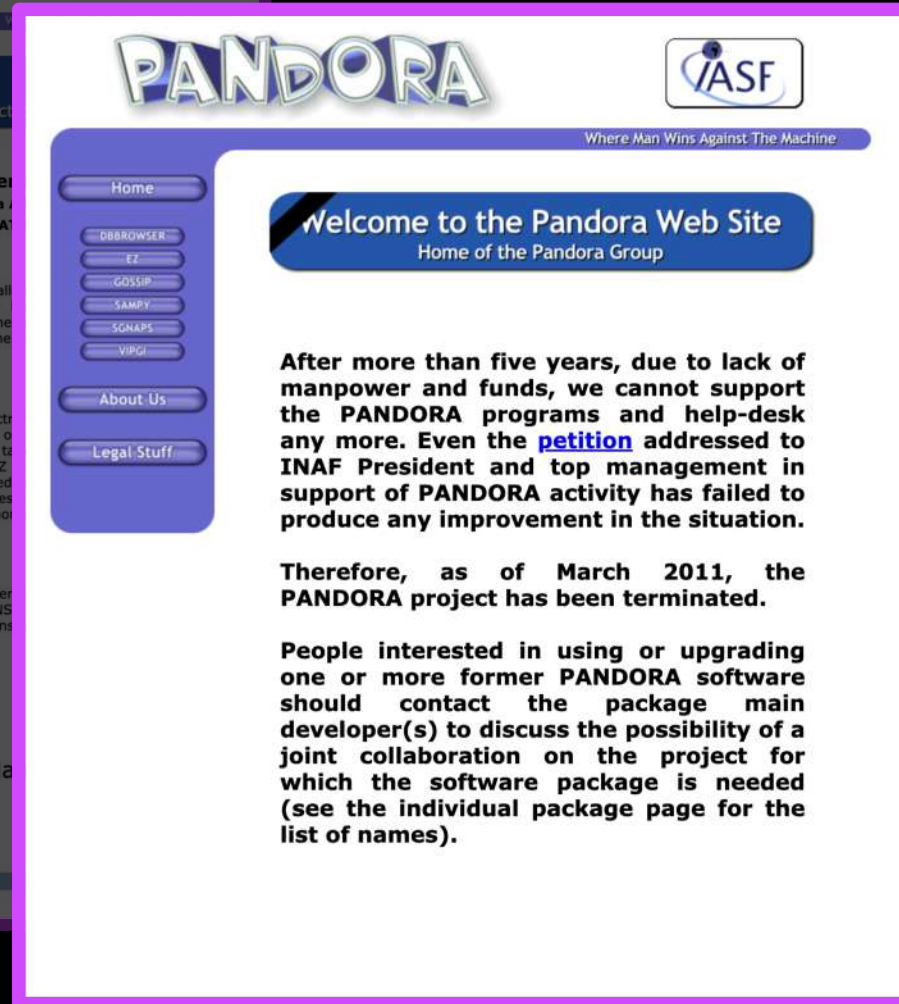
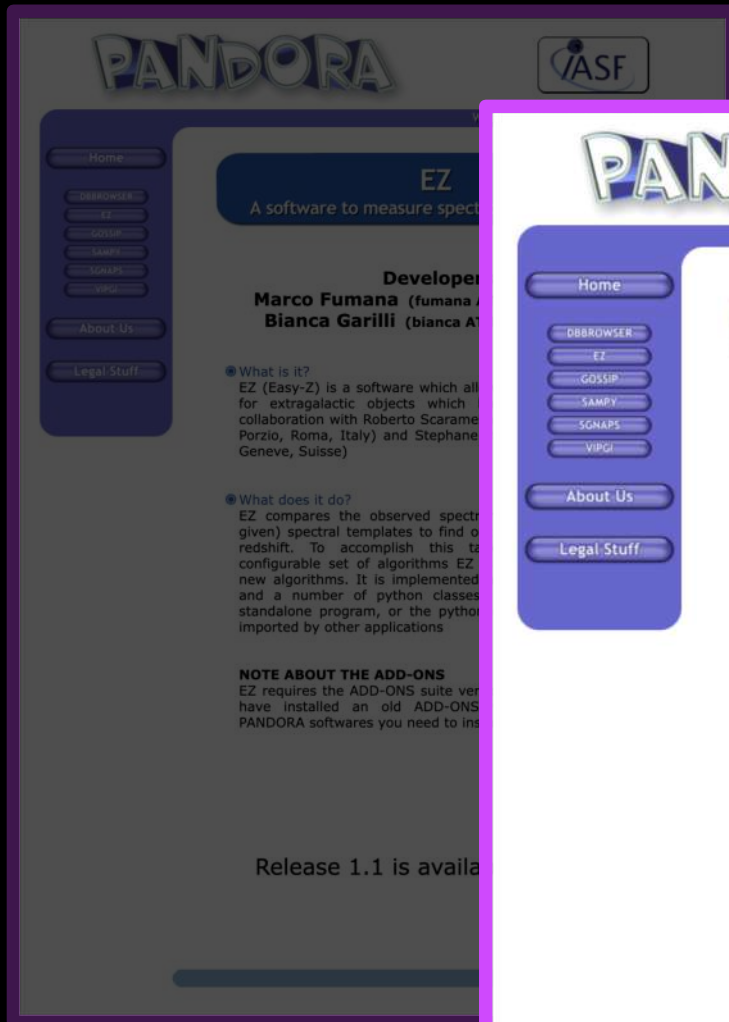
Paolo Franzetti

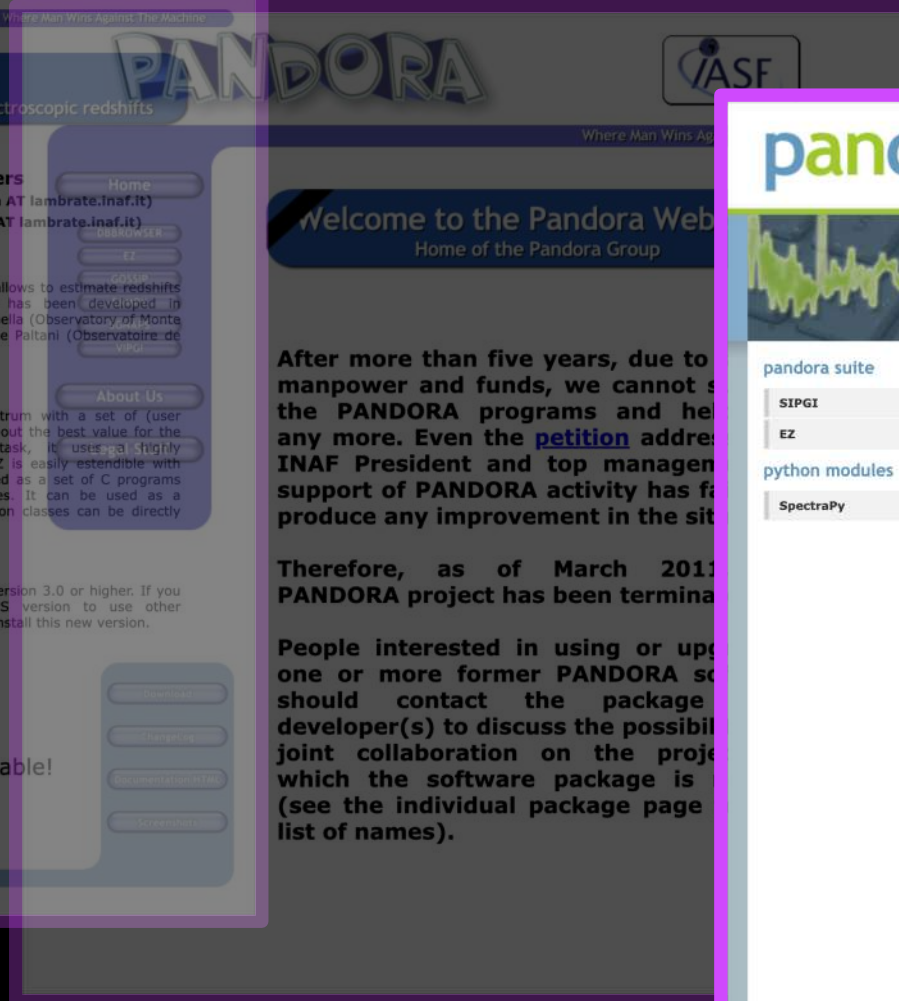
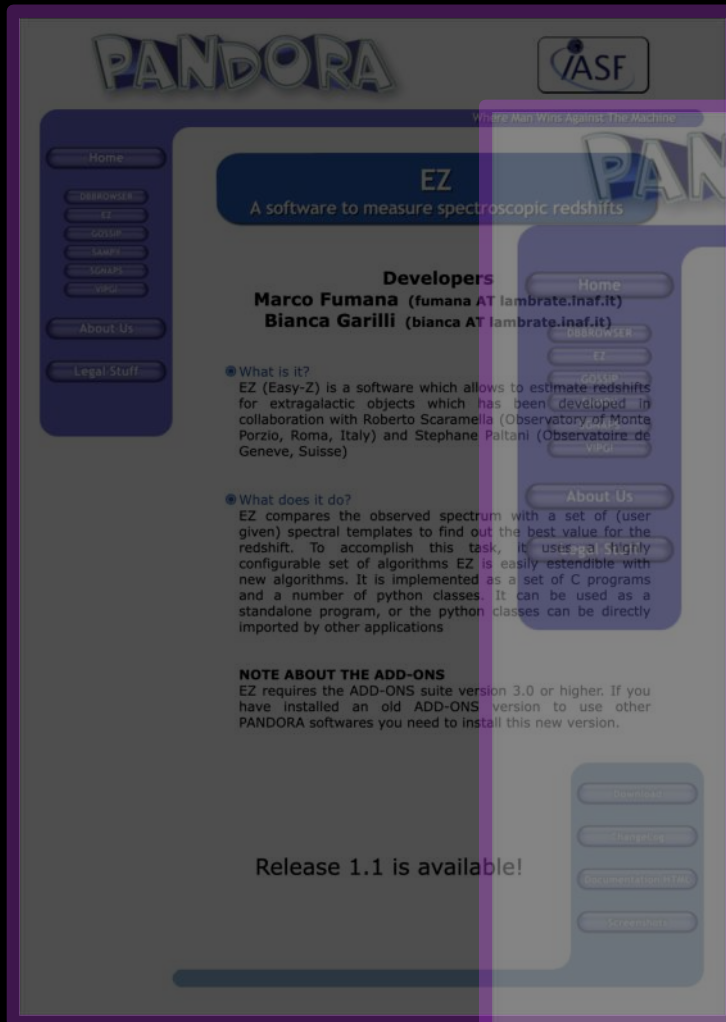
Forum della Tecnologia – 23/6/2022

la storia

The screenshot shows the Pandora website interface. At the top left is the 'PANDORA' logo, and at the top right is the 'IASF' logo. Below the logos is a navigation bar with the tagline 'Where Man Wins Against The Machine'. A left sidebar contains buttons for 'Home', 'DEBROWSER', 'EZ', 'GUISP', 'SAMP', 'SGRAPS', 'VPSG', 'About Us', and 'Legal Stuff'. The main content area features a blue header for 'EZ' with the subtitle 'A software to measure spectroscopic redshifts'. Below this, the 'Developers' section lists 'Marco Fumana (fumana AT lambrate.inaf.it)' and 'Bianca Garilli (bianca AT lambrate.inaf.it)'. Two sections follow: 'What is it?' and 'What does it do?'. A 'NOTE ABOUT THE ADD-ONS' section is also present. At the bottom right, there is a 'Release 1.1 is available!' announcement and a vertical stack of buttons for 'Download', 'ChangeLog', 'DocumentationHTML', and 'Screenshots'.

programs for astronomical data organization reduction and analysis
<http://pandora.lambrate.inaf.it/>





programs for astronomical data organization reduction and analysis
<http://pandora.lambrate.inaf.it/>

the median abstract la storia

In recent years, thanks to the evolution of the astronomical instrumentation, the size of spectroscopic surveys at all redshifts has greatly increased.

This trend will surely continue with the next generation of instruments posing new challenges for the management of such huge amounts of data.

Information that can be potentially obtained from these surveys is enormous, but to extract it, the data organisation and reduction, the survey advancement monitoring at all stages and the data distribution within the collaboration and to the whole community must be performed at an unprecedented level of efficiency and with minimum human intervention.

the median abstract la storia

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Information that can be potentially obtained from these surveys **is enormous,** but to extract it, the data organisation and reduction, the survey advancement **monitoring at all stages** and the data distribution within the collaboration and to the whole community must be performed at an **unprecedented level of efficiency** and with **minimum human intervention.**

le attività

pipelines

- data reduction
- data organization

The screenshot displays the VIPGI software interface, which is used for managing astronomical data reduction pipelines. The interface is divided into several sections:

- Left Panel:** A vertical menu of buttons for various tasks such as "Create Bad Pixels Image", "Adjust First Guess", "Auto Adjust", "Measure Seeing", "Create Master Dark", "Create Master Bias", "Create Image Master Flat", "Locate Spectra", "Create Master Lamp", "Preliminary Reduction", "Create Sensitivity", "Create Sensitivity One Click", "Reduce Single Observations", "Reduce Sequence of Obs.", "Apply Atm. Correction", "Create Summary File", "Split 1D Spectra", and "Measure Redshift".
- Top Panel:** Shows the current project as "VIMOS_PROJECT" and a specific pipeline configuration "MOS-W1P111-LRred-Q1".
- Observation Table:** A table listing individual observations with columns for FILENAME, FILETYPE, SEEING MEASURED, and DATE OBS.
- Master Files Table:** A table listing master files for different observation types, with columns for FILENAME and FILETYPE.
- Filtering Section:** A section with dropdown menus for FILETYPE, GRISM, and QUADRANT, currently set to "**ALL**", "**ALL**", and "Q1" respectively.
- Filtered Table:** A table showing the results of the filtering process, with columns for FILENAME, FILETYPE, GRISM, QUADRANT, VALID FROM, and VALID UPTO.
- Bottom Panel:** A status bar showing the current pipeline configuration "MOS-W1P111-LRred-Q1" and a set of navigation buttons: "Back", "Import", "Rescan", "Unclassified", and "Calib. Files".

FILENAME	FILETYPE	SEEING MEASURED	DATE OBS
fl_W1P111_LRred_1_Q1_1.fits	FLAT	-99.99	11/16/2011 02:27:52
lp_W1P111_LRred_1_Q1_4.fits	LAMP	-99.99	11/16/2011 02:30:58
sc_W1P111_LRred_1_Q1_1.fits	SCIENCE	0.819	11/16/2011 01:36:05
sc_W1P111_LRred_1_Q1_1_BFCS.fits	SCIENCE	-99.99	11/16/2011 01:36:05
sc_W1P111_LRred_1_Q1_2.fits	SCIENCE	0.761	11/16/2011 01:46:00
sc_W1P111_LRred_1_Q1_2_BFCS.fits	SCIENCE	-99.99	11/16/2011 01:46:00
sc_W1P111_LRred_1_Q1_3.fits	SCIENCE	0.736	11/16/2011 01:55:55

FILENAME	FILETYPE
msF.fits	MASTER FLAT
msFlat_W1P111_LRred_1_Q1.fits	MASTER FLAT
msLamp_W1P111_LRred_1_Q1.fits	MASTER LAMP

FILENAME	FILETYPE	GRISM	QUADRANT	VALID FROM	VALID UPTO
<input type="checkbox"/> Tab_st_EG-274_LR_blue_...	SPEC-PHOT TAB	LRblue	Q1	01/30/2011	01/30/2014
<input type="checkbox"/> msBias_spec_mar2011_Q1...	MASTER BIAS		Q1	09/25/2012	09/25/2012

VIPGI

Vimos Interactive Pipeline and Graphical Interface

The screenshot shows the SIPGI 1.1 web interface. On the left is a sidebar with various processing steps like 'Create Bad Pixels Image', 'Adjust First Guess', 'Measure Seeing', etc. The main area displays a configuration for the project 'VIMOS_PROJECT' and pipeline 'MOS-W1P111-LRred-Q1'. It features two tables: one for observation data and another for master files.

Observation Data Table:

FILENAME	FILETYPE	SEEING MEASURED	DATE OBS
fl_W1P111_LRred_1_Q1_1.fits	FLAT	-99.99	11/16/2011 02:27:52
lp_W1P111_LRred_1_Q1_4.fits	LAMP	-99.99	11/16/2011 02:30:58
sc_W1P111_LRred_1_Q1_1.fits	SCIENCE	0.819	11/16/2011 01:36:05
sc_W1P111_LRred_1_Q1_1_BFCS.fits	SCIENCE	-99.99	11/16/2011 01:36:05
sc_W1P111_LRred_1_Q1_2.fits	SCIENCE	0.761	11/16/2011 01:46:00
sc_W1P111_LRred_1_Q1_2_BFCS.fits	SCIENCE	-99.99	11/16/2011 01:46:00
sc_W1P111_LRred_1_Q1_3.fits	SCIENCE	0.736	11/16/2011 01:55:55

Master Files Table:

FILENAME	FILETYPE
msF.fits	MASTER FLAT
msFlat_W1P111_LRred_1_Q1.fits	MASTER FLAT
msLamp_W1P111_LRred_1_Q1.fits	MASTER LAMP

Grism and Quadrant Data Table:

FILENAME	FILETYPE	GRISM	QUADRANT	VALID FROM	VALID UPTO
<input type="checkbox"/> Tab_st_EG-274_LR_blue_...	SPEC-PHOT TAB	LRblue	Q1	01/30/2011	01/30/2014
<input type="checkbox"/> msBias_spec_mar2011_Q1...	MASTER BIAS		Q1	09/25/2012	09/25/2012

At the bottom right, there are buttons for 'Back', 'Import', 'Rescan', 'Unclassified', and 'Calib. Files'.

SIPGI 1.1

Spectroscopic Interactive Pipeline and Graphical Interface ([10.20371/inaf/sw/2021_00002](https://doi.org/10.20371/inaf/sw/2021_00002))

pipelines

- data reduction
- data organization

database

users

parent catalog(s)

ancillary data

masks / fibers
layout

observations

spectra

derived data

The screenshot displays the CANDELS database interface. At the top, the logo features the word 'CANDELS' in a blue, outlined font, with a red diagonal banner across it containing the word 'DATABASE' in white. Below the logo is the text 'A deep VIMOS survey of the CANDELS UDS and CDFS fields'. A navigation bar contains buttons for 'new query', 'modify query', 'query results', 'user data', 'help', 'internal', and 'public'. Below this, there are tabs for 'Tables', 'Simple', 'Advanced', and 'Get all columns'. The 'Tables' tab is active, showing a list of tables grouped into categories: 'Photometry' (CDFS_PARENT, UDS_PARENT), 'Spectroscopy' (CDFS_BEST_SPECTRA, CDFS_SPECTRA, CDFS_SPECTRA_DR2, UDS_BEST_SPECTRA, UDS_SPECTRA, UDS_SPECTRA_DR2), and 'Releases' (DR2). Each table name has a small square checkbox to its right. To the right of the table list is a 'CORRELATION' section with a button labeled 'Do not apply correlation' and a blue dot.

DART

Database Access and Retrieval Tool

pipelines

- data reduction
- data organization

management

- masks/OBs preparation
- observations monitoring and raw data retrieval
- data distribution for measurements
- data distribution for analysis

database

users

parent catalog(s)

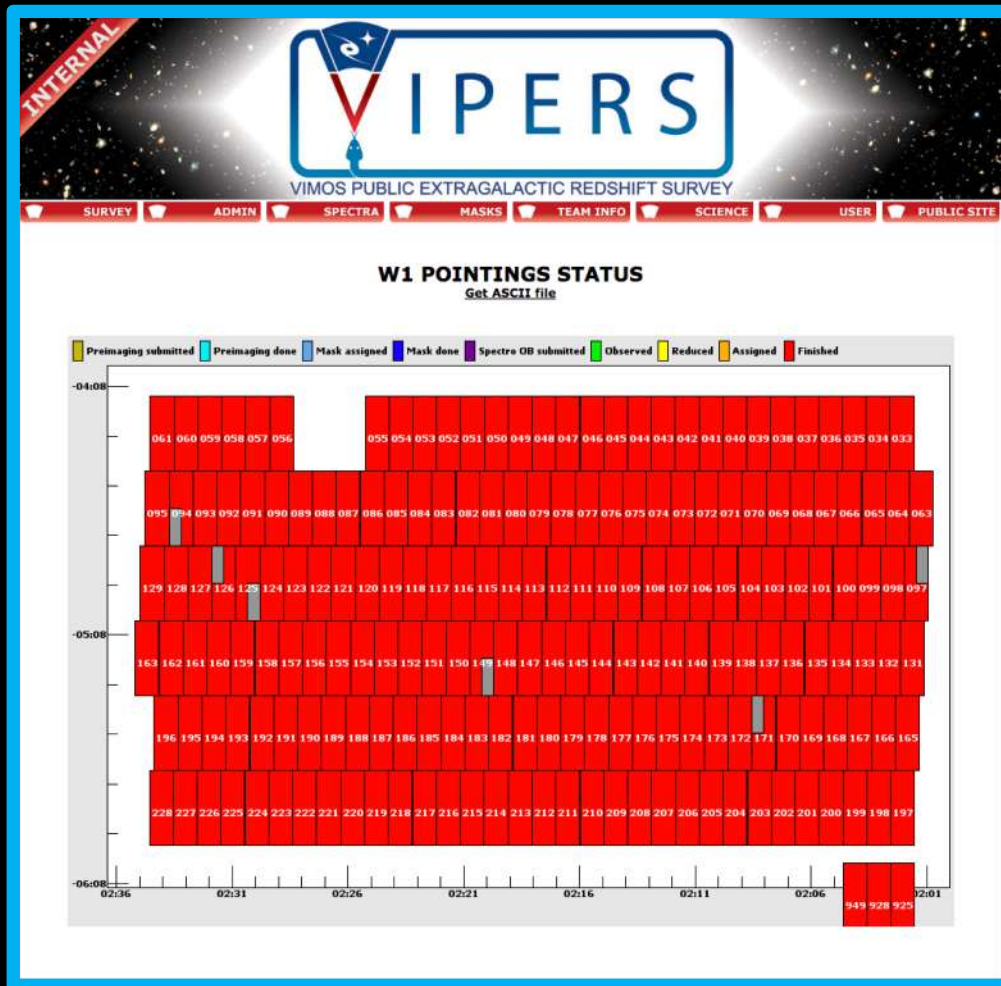
ancillary data

masks / fibers
layout

observations

spectra

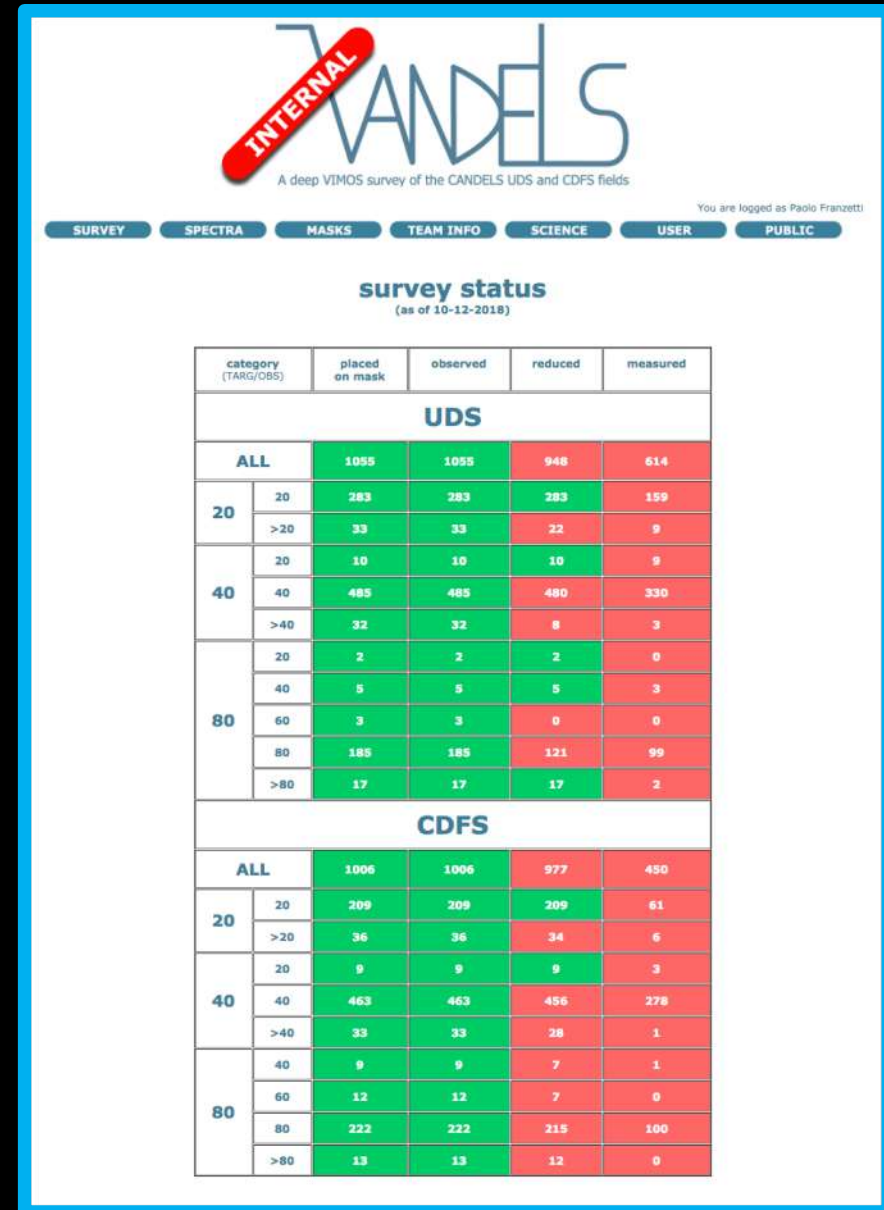
derived data



EASYLIFE

<http://vipers.inaf.it>

<http://vandels.inaf.it>



pipelines

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users

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masks / fibers
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spectra

derived data

website

public

- data releases
- survey info

internal

- database
- wiki /workgroups
- team info
- mailing lists
- measurements assignments
- data releases
- abstracts / papers

management

- masks/OBs preparation
- observations monitoring and raw data retrieval
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data analysis le attività

pipelines

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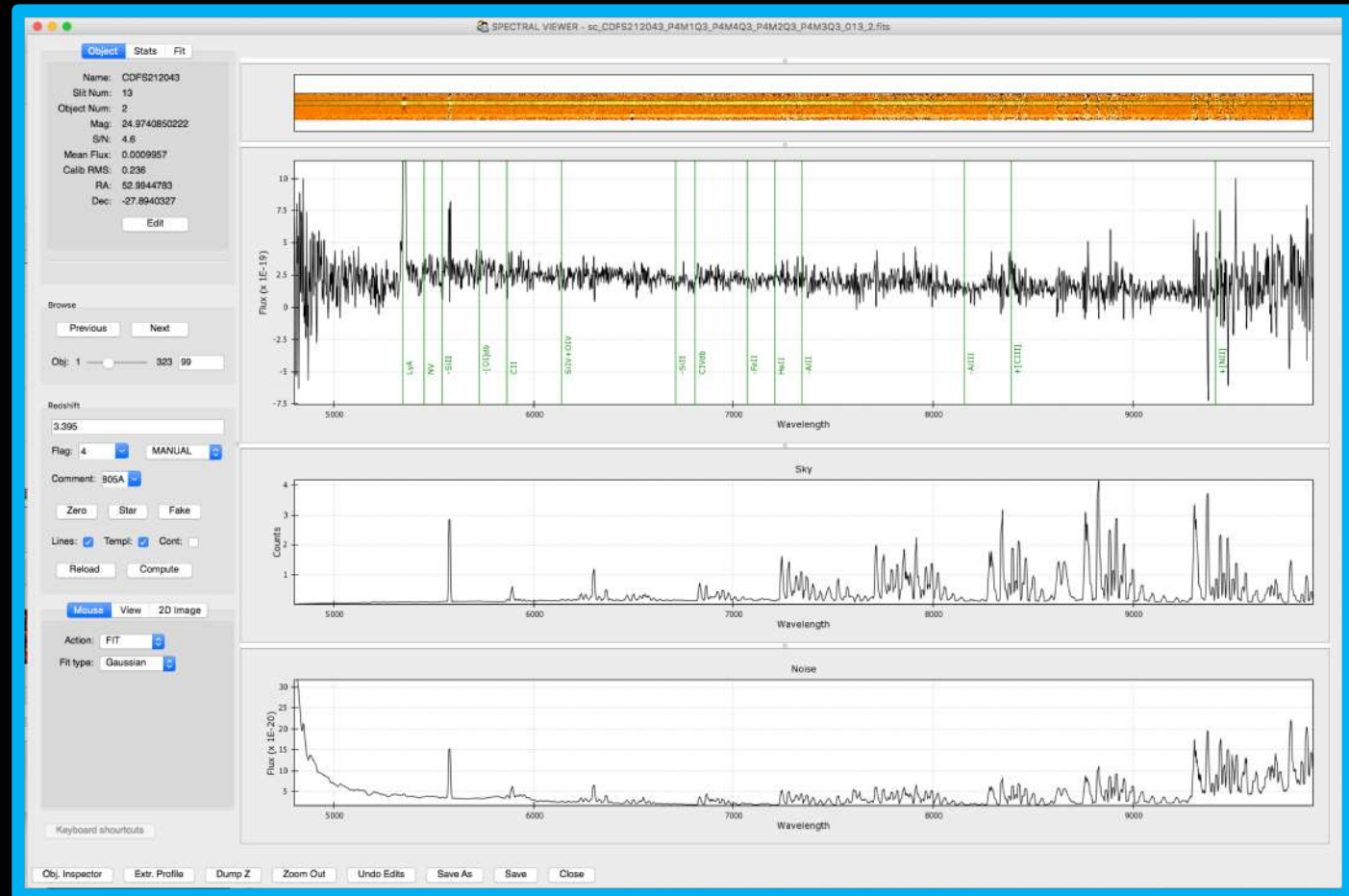
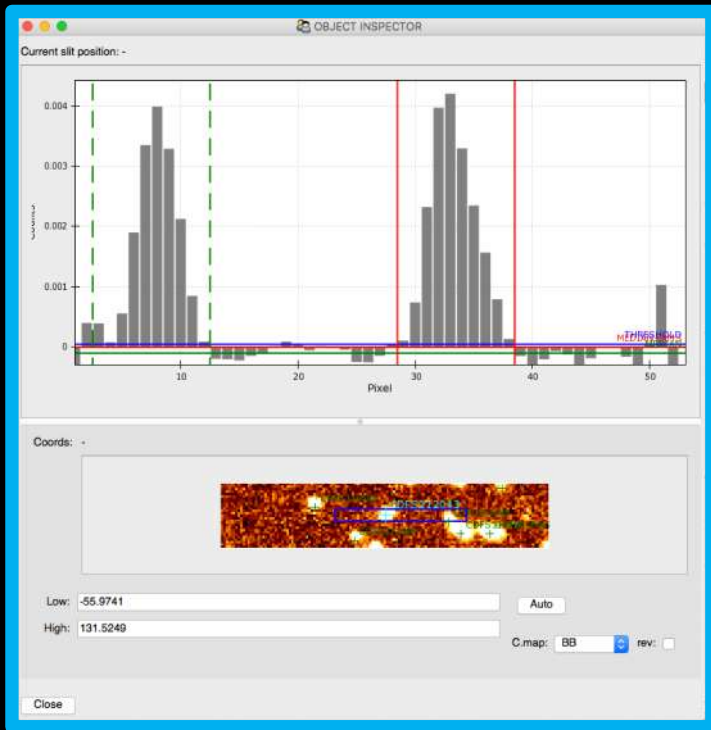
- database
- wiki /workgroups
- team info
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- measurements assignments
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- abstracts / papers

management

- masks/OBs preparation
- observations monitoring and raw data retrieval
- data distribution for measurements
- data distribution for analysis

analysis

- redshift measure
- lines measure
- SED fitting



EZ 3.1

Easy-Z

servizio completo le attività

pipelines

- data reduction
- data organization

simulations

- etc
- spectra

management

- masks/OBs preparation
- observations monitoring and raw data retrieval
- data distribution for measurements
- data distribution for analysis

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users

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masks / fibers layout

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analysis

- redshift measure
- lines measure
- SED fitting

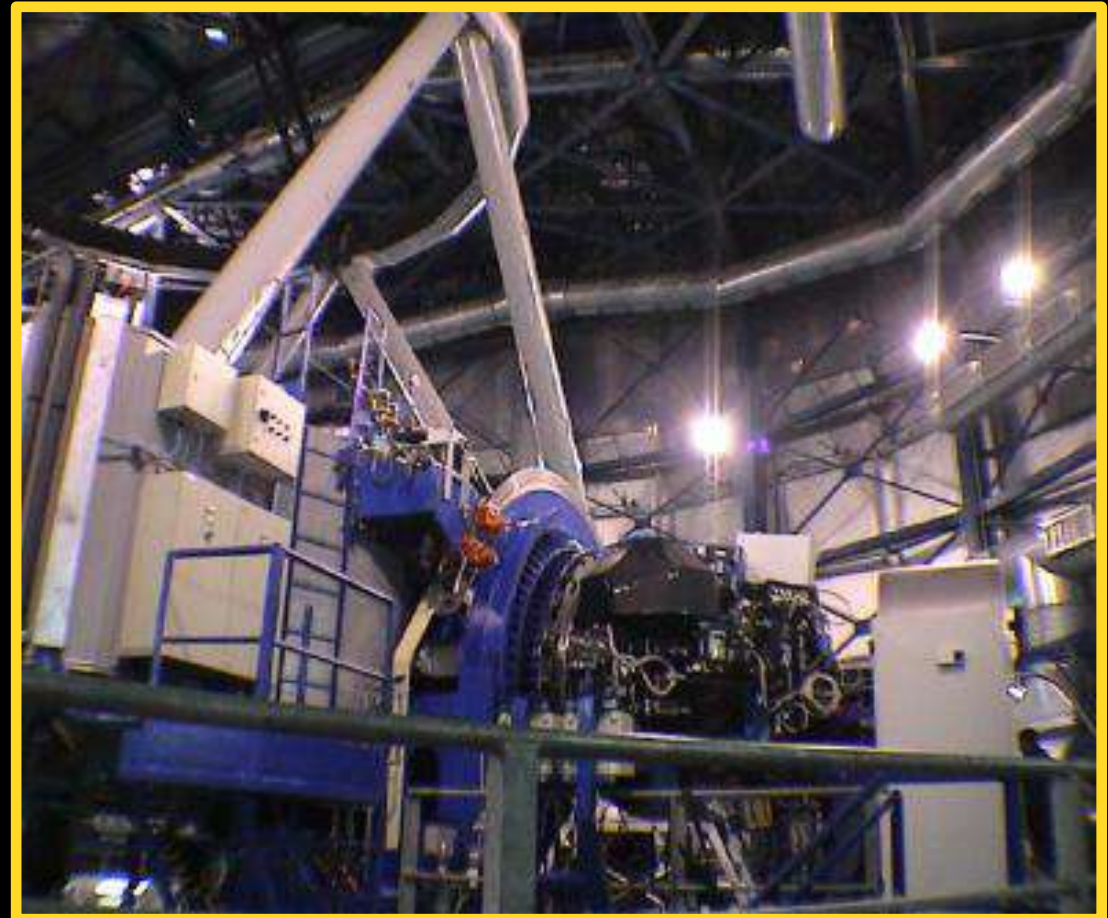
i progetti

surveys

vvds
zcosmos
vuds
vipers
vandels

expertises

pipelines
data analysis
survey management
data access

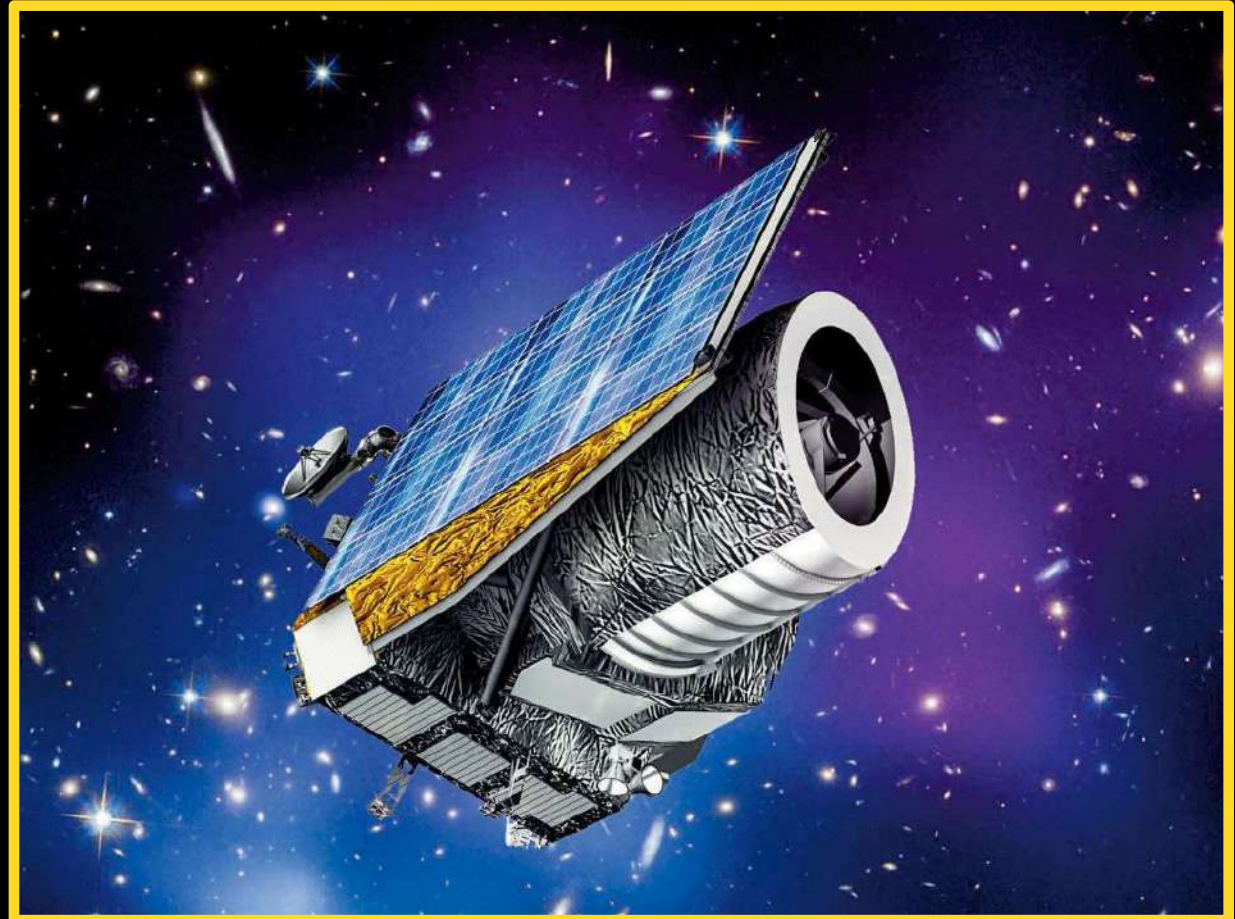


surveys

vvds
zcosmos
vuds
vipers
vandels
NISP survey

expertises

pipelines
data analysis
survey management
data access
simulations



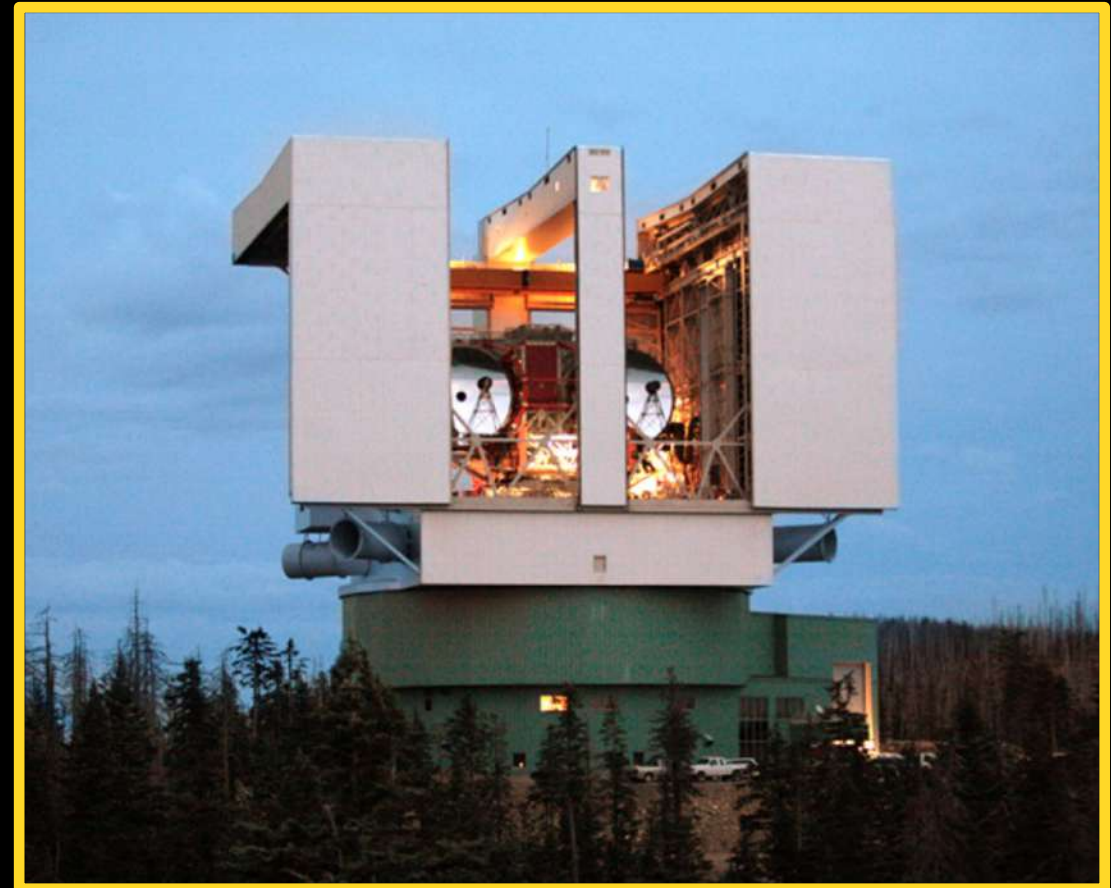
surveys

vvds
zcosmos
vuds
vipers
vandels
NISP survey
user data

expertises

pipelines
data analysis
survey management
data access
simulations

LBT spectroscopic data reduction center

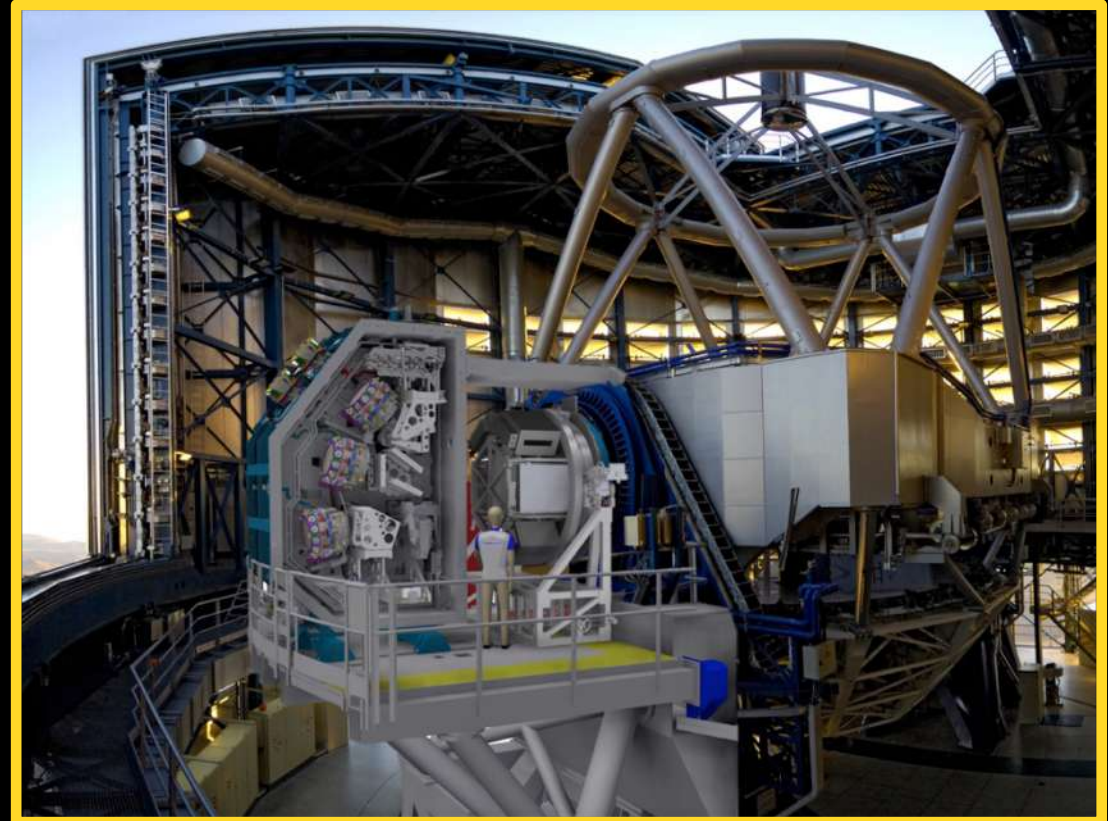


surveys

- vvds
- zcosmos
- vuds
- vipers
- vandels
- NISP survey
- user data
- MOONS GTO survey**

expertises

- pipelines
- data analysis**
- survey management
- data access
- simulations
- obs. preparation**
- data flow**
- path analysis**



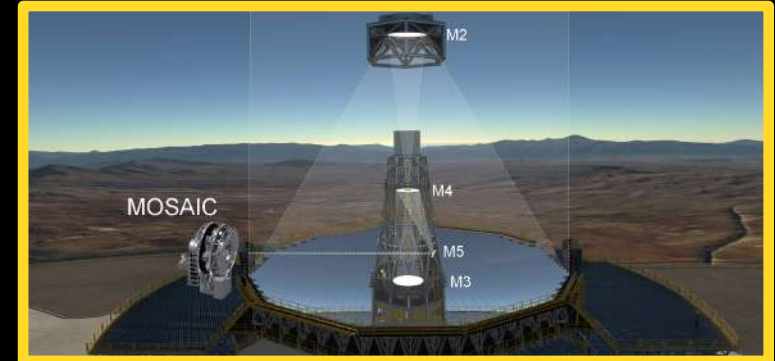
mosaic & moons i progetti

surveys

vvds
zcosmos
vuds
vipers
vandels
NISP survey
user data
MOONS GTO survey
MOSAIC GTO survey

expertises

pipelines
data analysis
survey management
data access
simulations
obs. preparation
data flow
path analysis



le persone

from science to software le persone



science

software

from science to software le persone



science

software