The background of the slide features a wide, horizontal image. The upper portion shows a vibrant, multi-colored galaxy (likely the Milky Way) against a dark, star-filled sky. The lower portion shows several large radio telescope dishes, some of which are partially obscured by a white rectangular box containing the title. The dishes are set against a dark landscape, possibly a desert or high-altitude site.

Archive and Data products

Presented by Magda Arnaboldi
Head - Archive Science Group
ESO Survey Team leader

marnabol@eso.org

M. Arnaboldi, N. Delmotte, E.P Farina L. Mascetti, A. Micol, J. Retzlaff, C.
Spiniello (ASG)

Back-End Operation Department

- **ESO Science Archive Facility - SAF**
- **ESO Telescopes & Public Surveys**
- **Science Data Products**
 - ✓ **In house reprocessing**
 - ✓ **Contributed science products**
- **Phase 3 data releases, query forms and Archive science portal**
- **Building a community, impact & statistics from ESO SAF**



ESO Science Archive Facility





ESO Science Archive Facility (SAF)

<http://archive.eso.org>

European Southern Observatory

ESO — Reaching New Heights in Astronomy

Public Science User Portal Intranet Contact Site Map Search Go!

05 Feb 2020

Welcome to the ESO Science Archive Facility

The ESO Science Archive Facility contains data from ESO telescopes at La Silla Paranal Observatory, including the APEX submillimeter telescope on Liano de Chajnantor. In addition, the raw UKIDSS/WFCAM data obtained at the UK Infrared Telescope facility in Hawaii are available.

The Principal Investigators of successful proposals for time on ESO telescopes have exclusive access to their scientific data for the duration of a proprietary period, normally of one year, after which the data becomes available to the community at large. Please read the [ESO Data Access Policy](#) statement for more information, along with the [relevant FAQs](#).

Browsing the archive does not require authentication. Please [acknowledge the use of archive data](#) in any publication.

There are three main ways to access the archive, varying for content and presentation/interface: the usual Raw Data query form, the innovative Science Portal to browse and access the processed data, and the novel Programmatic and Tools access which permits direct database access to both raw and processed data, and to the ambient condition measurements, also in a scriptable and VO manner. Other query forms are available in the table at the bottom of this page.

Raw Data

Science Portal
Processed Data

Catalogue Facility
Catalogue Data

Programmatic
Raw, Processed, Catalogue, and Ambient Data

Community Forum
Share ideas, ask questions, send feedback

Latest News and Updates

- New data release of spectra and catalogue from the VANDELS ESO Public Spectroscopic Survey (12 Nov 2019)
- Final imaging data release of the VST Public Survey VPHAS+ (18 Oct 2019)
- FEROS in-house processed data products not published since February 2019 (18 Oct 2019)

More news ...

To browse the archive

Currently, **raw data** and various types of **data products** can be reached via different interfaces:

Category	Access Point	Data collection	Data Type	Instruments
LPO Raw Data	Raw data query form (all instruments) Instrument specific query forms Direct retrieval of raw data by file name	All ESO raw data	Various	Many La Silla Paranal instruments
LPO Processed Data <i>[Description of reduced data products types]</i>	Science Portal (Processed Data) Type specific query forms (generic, spectral, imaging, VISTA) Direct retrieval of reduced data by file name	Processed Data (ESO public surveys; ESO pipeline-reduced products; Large programs: GOODS, zCOSMOS, etc.)	Imaging, Spectroscopy, Catalogs, etc.	Various
	Catalogue Facility query interface	Catalogues (ESO User Portal authentication required)	Catalogues	Various
	HARPS-Polarimetry pipeline processed data query form	HARPS-Polarimetry and calibration pipeline processed data	Spectroscopy	HARPS-Polarimetry, HARPS reduced calibrations (other HARPS see Phase3 above). FEROS is now available via the Phase 3 interfaces.
	Other Advanced Data Products (available only as downloadable packages, no query form)	Various (30 Doradus, Corot, GaBoDs, etc.)	Spectroscopy Imaging	FEROS WFI
	Science Verification, Commissioning, EIS, etc. (no query form)	Full list of available data packages	Various	Many
APEX Quick Look Products	APEX query form	APEX	Heterodyne, Bolometer	ArTÉMIS, CHAMP+, FLASH, LABOCA, SABOCA, SEPIA, SHF
LPO Schedule	Scheduling query form	ESO Observing Programme Information and Scheduling		All La Silla Paranal instruments, including APEX
ALMA Data	ALMA Science Archive	All ALMA data	Cube	ALMA

The ESO Science Archive Facility was developed in partnership with the Space Telescope – European Coordinating Facility ST-ECF in December 2010.

Since 1998
Technical and Science Archive
Storage of the ambient conditions
from the La Silla Paranal Observatory

Proprietary period is one year

- Data generated at the telescopes need to be processed before science information can be extracted
- What does ESO do?
 - Archive the data!
 - Provide science-ready processed data
 - Support customized data processing by end users:
 - Pipelines
 - Workflows
- Why does ESO do it?
 - ESO's mission: provide the best **science data** to our community, to investigate and understand our Universe
 - Increasing complexity of instruments and data → need to support the community in exploiting the information

Operations @ the ESO SAF

■ Operations of the Archive

- Inflow: ~10 TB/month; outflow ~15 TB/month
- Total archive holdings: ~1 PTB of data in 50 million files and ~40 billion database rows to store header keywords
- Infrastructure: on-going studies to support the evolution of software and hardware – storage/browsing/downloading infrastr.

■ Phase 3 process

- Ingestion, validation and publication of science data products in routine operation, from external users and in-house repr.
- Science Data Product Standard v6.0 - evolving to include new products from VLT/VLTI and ELT



ESO Telescopes and Public Surveys





**205 Gb/night of
compressed data;
Transferred within 24 hrs
(EVALSO cable link)**



ESO Public Surveys

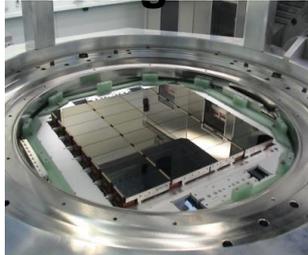
<http://www.eso.org/sci/observing/PublicSurveys/sciencePublicSurveys.html>

Public Surveys in a nut-shell

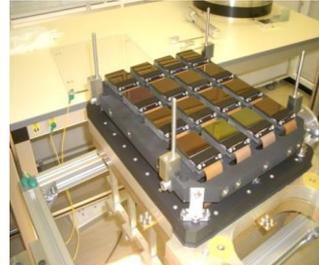
- Legacy value for astronomical community at large
- Very large programmes (>2 years); very diversified observing strategies
- Synergy between optical and NIR imaging, from 0.33 to 2.15 micron
- Spectroscopic follow-up of sources; multiplexing capabilities (FoV ~ 10 arcmin) to single slit; Spec_res 10^4 to ~1000.
- All raw observations are immediately public
- Survey teams commit to deliver reduced images/spectra and catalogues within ~yearly releases (<http://eso.org/rm/publicAccess#/dataReleases>)



VST & OmegaCAM



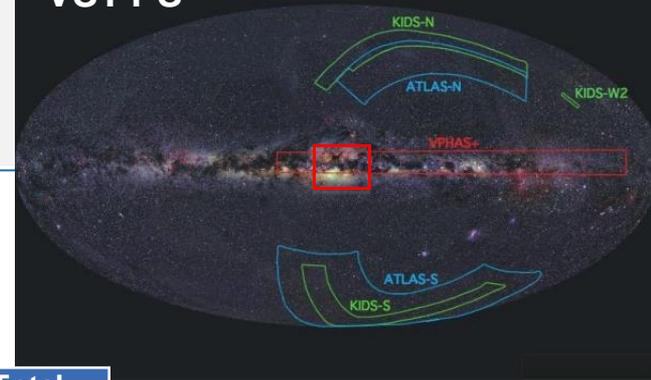
VISTA & VIRCAM



FLAMES@UT2
VIMOS@UT3



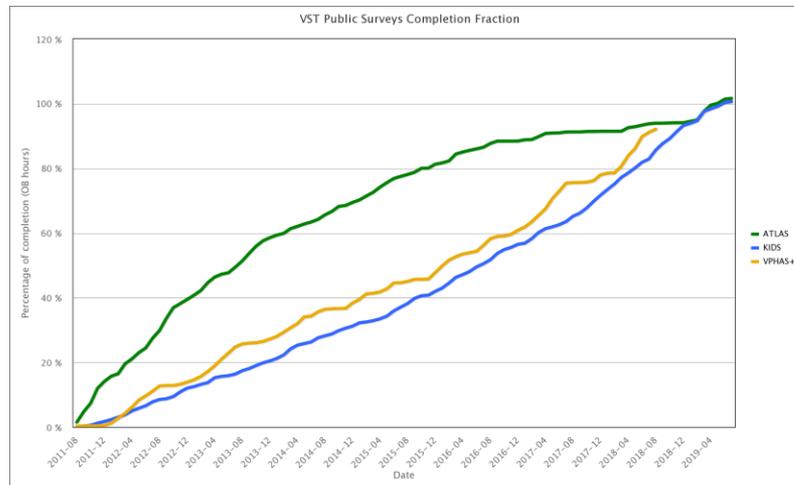
EFOSC&SOFI
@NTT



The VST surveys started operations on October 2011

VST Survey ID and home page	Science topic	Area (deg ²)	Filters	Magnitude limits	Total hrs
KIDS http://kids.strw.leidenuniv.nl/ de Jong et al. 2013 Messenger 154 44	Extragalactic	1350 ^a	u' g' r' i'	24.1 24.6 24.4 23.4	3421
ATLAS http://astro.dur.ac.uk/Cosmology/vstatlas/ Shanks et al. 2013 Messenger 154 38	Wide area/BAO	4700 ^b	u' g' r' i' z	22.0 22.2 22.2 21.3 20.5	1585
VPHAS+ http://www.vphas.eu Drew et al. 2013 Messenger 154 41	Stellar astrophysics	1800 ^c	u' g' H α r' i'	21.8 22.5 21.6 22.5 21.8	1200

Completed
Completed
Completed

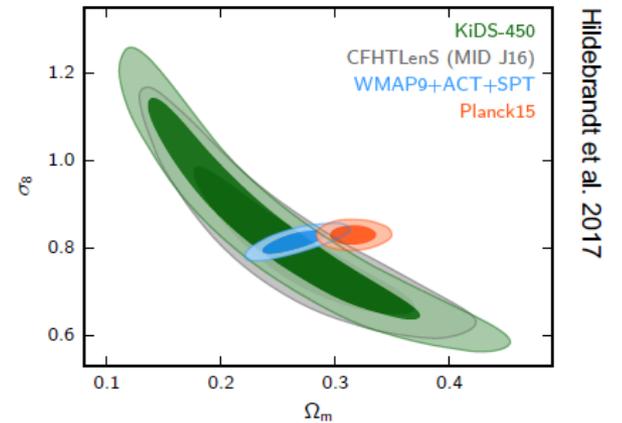


- **ATLAS** extended 700 sqdeg in u'
- **VPHAS+** reprioritization
- **KIDS** to be completed in 2019

Arnaboldi et al. [2019Msngr.178..10A](#)

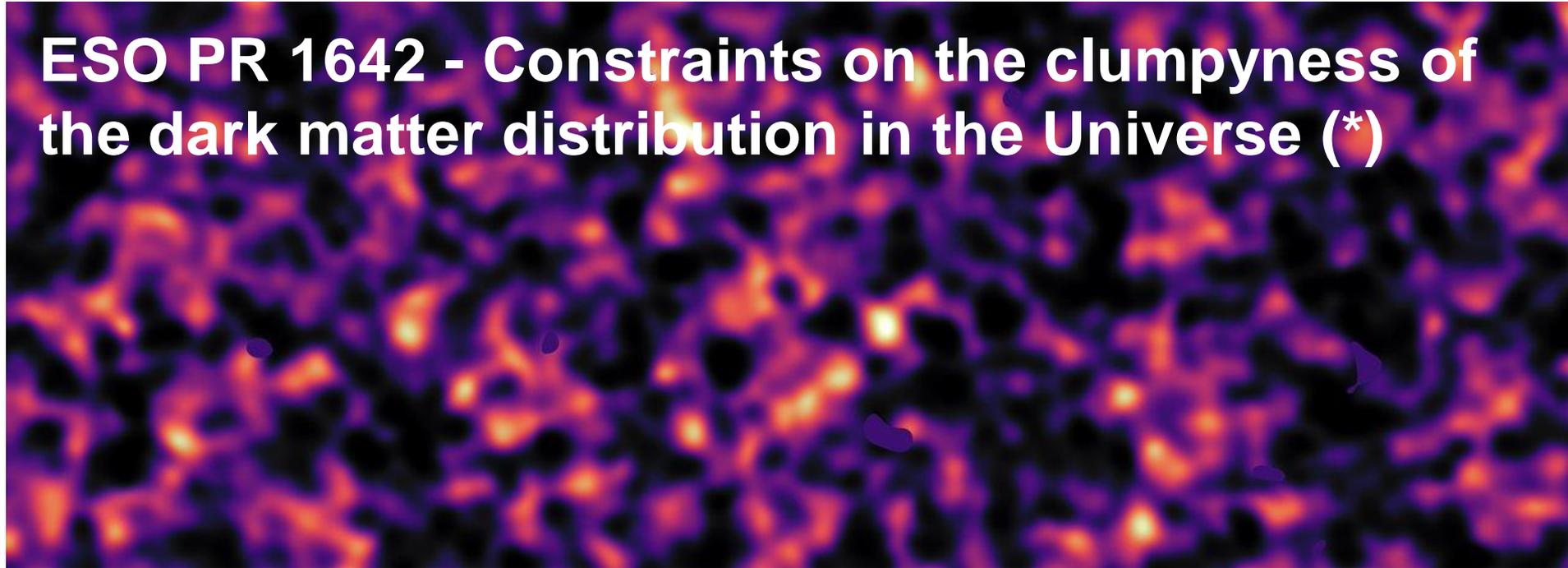
Highlights

- ATLAS: new dwarf galaxies (Crater), streams, ISW effect, cold spot
- KIDS: cosmic shear, halo masses
- VPHAS+: young stars, white dwarfs, planetary nebulae, extinction maps

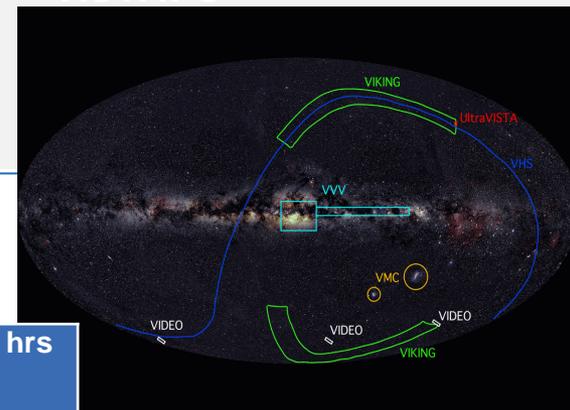


Impact of ESO PS

ESO PR 1642 - Constraints on the clumpyness of the dark matter distribution in the Universe (*)



Dark matter may be less dense and more smoothly distributed throughout space than previously thought. An international team used data from the Kilo Degree Survey (KiDS, PI Kujken) to study how the light from about 15 million distant galaxies was affected by the gravitational influence of matter on the largest scale in the Universe. The results appear to be in disagreement with earlier results from the Planck satellite. (*) Hildebrandt et al. 2017, MNRAS, 465, 1454



- **First cycle of VISTA surveys started operations on April 2010. Essentially completed in P102**

VISTA 1 st cycle Survey ID and home page	Science topic	Area (deg ²)	Filters	Magnitude limits	Total hrs
Ultra-VISTA http://home.strw.leidenuniv.nl/~ultravista/ McCracken et al. 2013 Messenger 154 29	Deep high-z	1.7 deep 0.73 ultra deep	Y J H Ks NB118	25.7 25.5 25.1 24.5 26.7 26.6 26.1 25.6 26.0	1832
VHS http://www.ast.cam.ac.uk/~rgm/vhs/ McMahon et al. 2013 Messenger 154 35	Whole Southern Sky	17800	Y J H Ks	21.2 21.1 20.6 20.0	4623
VIDEO http://www-astro.physics.ox.ac.uk/~video Jarvis et al. 2013 Messenger 154 26	Deep high-z	12	Z Y J H Ks	25.7 24.6 24.5 24.0 23.5	2073
VVV http://wsurvey.org/ Hempel et al. 2014 Messenger 155 29	Galactic MW	560	Z Y J H Ks	21.9 21.1 20.2 18.2 18.1	2205
VIKING http://www.astro-wisconsin.org/projects/VIKING/ Edge et al. 2013 Messenger 154 32	Extragalactic	1500	Z Y J H Ks	23.1 22.3 22.1 21.5 21.2	2424
VMC http://star.herts.ac.uk/~mcioni/vmc/ Cioni et al. 2013 Messenger 154 23	Resolved SFH	180	Y J Ks	21.9 21.4 20.3	2047

Completed

Completed

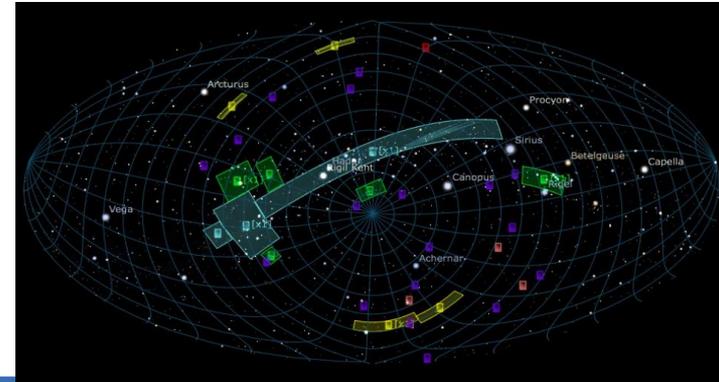
Completed

Completed

Completed

Arnaboldi et al. [2019Msngr.178...10A](#)

- Second cycle of VISTA surveys, ESO call in 2015
- 13 Loi submitted by the community, oversubscription > 2
- 7 proposals selected; started operations in April 2017



Name P.I.	Short Title	Filters	Tot. Time (hrs)	Area (deg ²)
VINROUGE; N. Tanvir	Kilonova counterparts to Gravitational wave sources	Y J Ks	420	300
UltraVISTA; J. Dunlop	Completing the legacy of UltraVISTA	J H Ks	756	0.75
VVX; D. Minniti	Extending VVV to higher Galactic latitudes	J H Ks	1000	1700
VEILS; M. Banerji	VISTA Extragalactic Infrared Survey	J Ks	1180	9
CAV; M. Nonino	Clusters at VIRCAM	Y J Ks	560	30
VISIONS; J. Alves	VISTA star formation atlas	J H Ks	553	550
SHARKS; I. Oteo	Southern Herschel-Atlas Regions K-band survey	Ks	1200	300

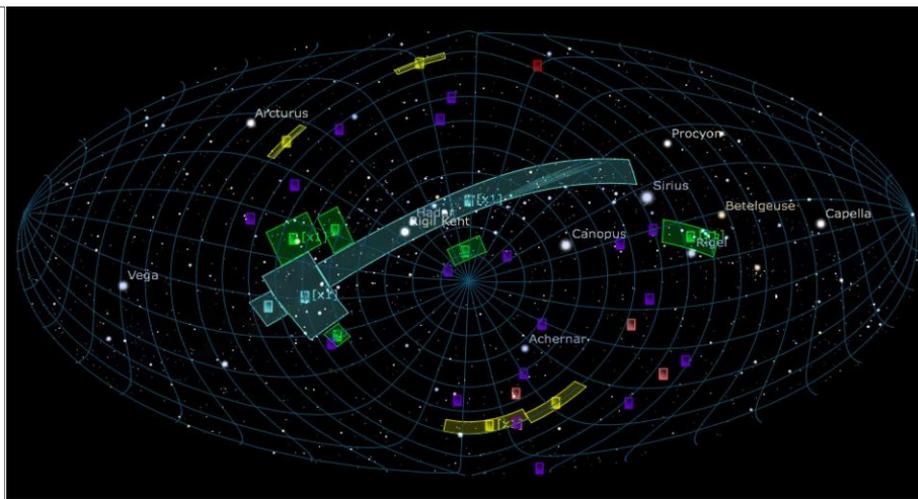
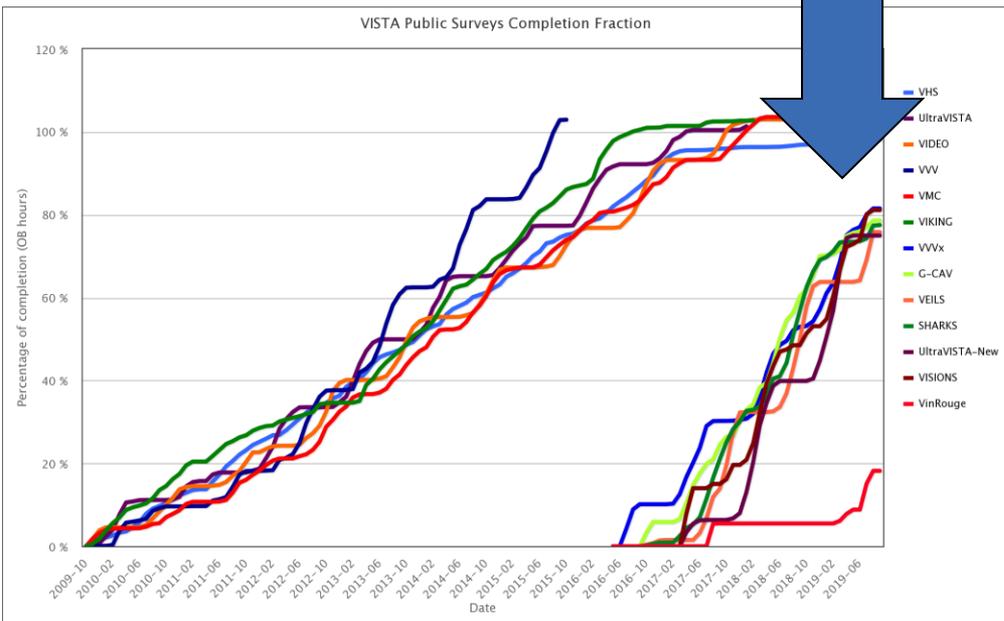
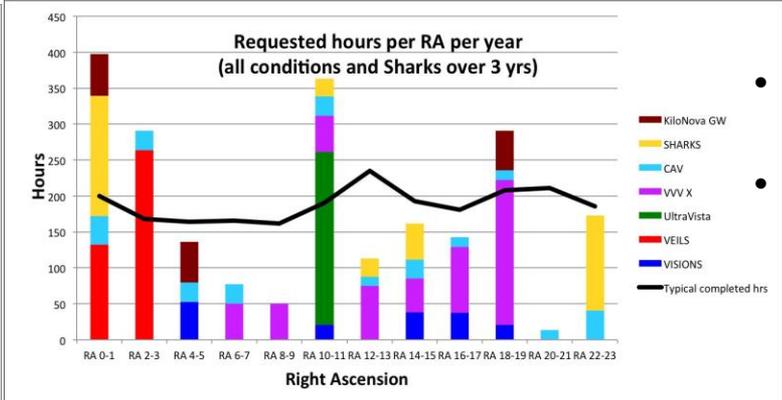
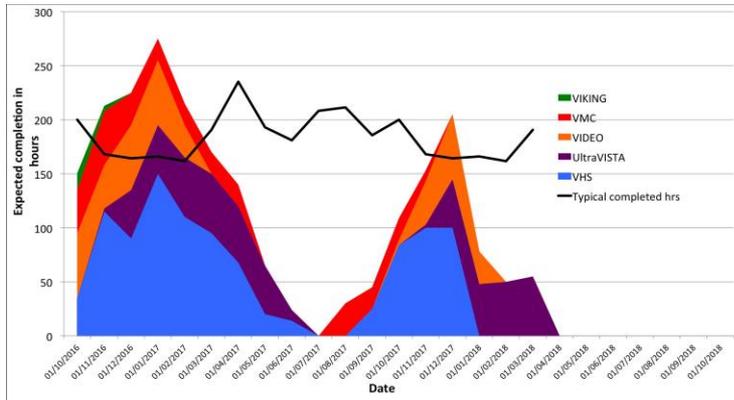
Surveys with multi-epoch observations (exploit time domain)



Lessons learnt and time domain

VISTA 1st cycle surveys completed in P102!

- **Compreh. Science program;**
- **complementing obs. constraints**
- **Exploitation of the time domain universe**



Arnaboldi et al. [2017Msngr.168...15A](#)

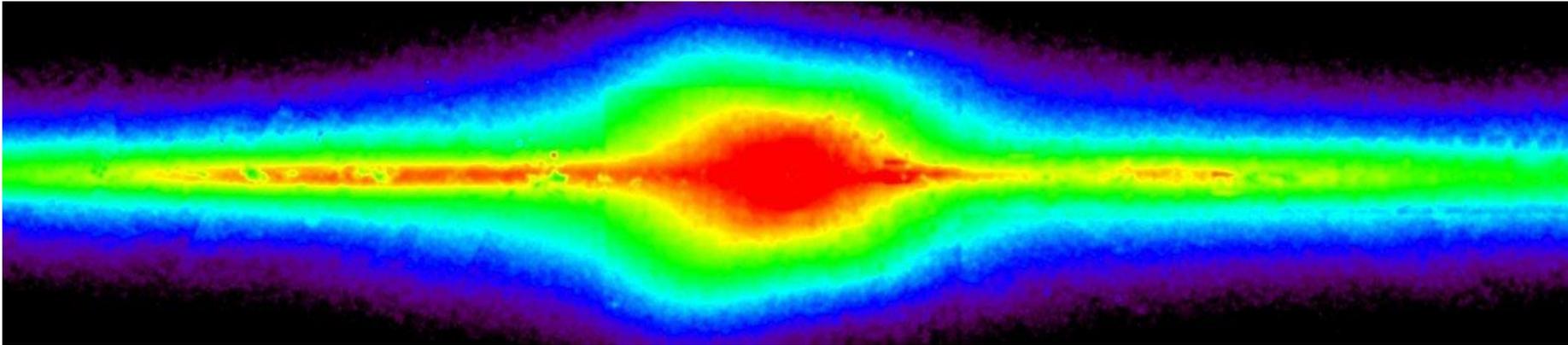


Highlights

- UltraVISTA: Early universe, high-redshift objects, galaxy evolution
- VHS: connections to several optical surveys (e.g. DES), discovery of brown dwarf at 2pc, planetary-mass companions, high-z QSO
- VIDEO: high-z quasars, galaxy evolution
- VIKING: high-z quasars, galaxy evolution, lensed galaxies, cool, dwarf stars; *still to come: cosmology with KIDS*
- VMC: LMC star formation history, geometry, Cepheids. RR Lyrae, reddening map of 30 Dor field, MC bridge
- VVV: structure of bulge, reddening map of inner galaxy, new star clusters, variable stars/transients

Highlights of ESO PS

The structure of the Milky Way outside the Bulge(*)



This image shows the surface density of stars in the Milky Way as seen from the Sun, taken from four different surveys (UKIDSS, VVV, 2MASS, and GLIMPSE) and corrected for extinction. The bulge is the thicker region near the center; it is asymmetric because it is barred. The asymmetry in the disk towards the left of the image is due to the thinner long bar outside the bulge. Wegg, Gerhard & Portail 2015, MNRAS, 450, 4050

* MPE PR http://www.mpe.mpg.de/6333402/News_20150521



Spectroscopic Surveys

Galactic MW, stellar evolution

SuperNovae physics

Galaxy evolution, Cosmology

- Gaia ESO:** this survey targets 10^5 stars distributed across the Milky Way (MW) and in 100 open clusters in synergy with the Gaia satellite survey. It provides the photometry and abundances for the stellar populations in the MW. It is part of the FLAMES/UVES@UT2, current 5th year of operations. Data comes from the imaging surveys VHS and VVV, among others. (<http://www.eso.eu/>)
- PESSTO:** spectroscopic follow-up of about 1000 galaxies in an unbiased sample of nearby galaxies to understand supernovae explosion. Started in 01/2012 on EFOSC/SO. Current 5th year of operations. (<http://www.pessto.org/>)
- VANDELS:** study of the star forming galaxies in the redshift range $2.5 < z < 7.0$ and passive galaxies in the redshift range $1.5 < z < 2.5$, in the two COSMOS fields, CDF South and UDS. Goal is to measure metallicities and ionized gas in these systems. 914 hours allocated on VIMOS. (<http://www.vandels.inaf.it>)
- LEGA-C:** study of 3000 galaxies in the COSMOS field in the redshift range $0.6 < z < 1.0$. Understand how galaxies grow in mass through measurements of their dynamical masses, ages and metallicities. 1010 hours allocated on VIMOS@UT3. (<http://www.mpia.de/home/legac/index.html>)





Spectroscopic Surveys

Public Spectroscopic Survey ID and home page	Science topic	Number of targets/ spectra	Spectral resolution	Total number of nights
Gaia ESO http://www.gaia-eso.eu/ Randich et al. 2013 Messenger 154 47	MW, stellar populations	200000	20000	282.5
PESSTO http://www.pessto.org/ Smartt et al. 2013 Messenger 154 50	Transient, SN progenitors	150	~2500	384.0
VANDELS http://vandels.inaf.it McLure et al. 2017 Messenger 167 31	Physics of galaxies in the early universe CANDELS, UDS & CDFS fields	2700	~1500	142.7
LEGA-C http://www.mpia.de/home/legac/index.html van der Wel et al. 2016 Messenger 164 36	Dynamics of galaxies at $z = 0.6 - 1.0$	3100	~1500	99.8

Completed

Completed

Completed

Completed

Arnaboldi et al. [2019Msng.178...10A](#)

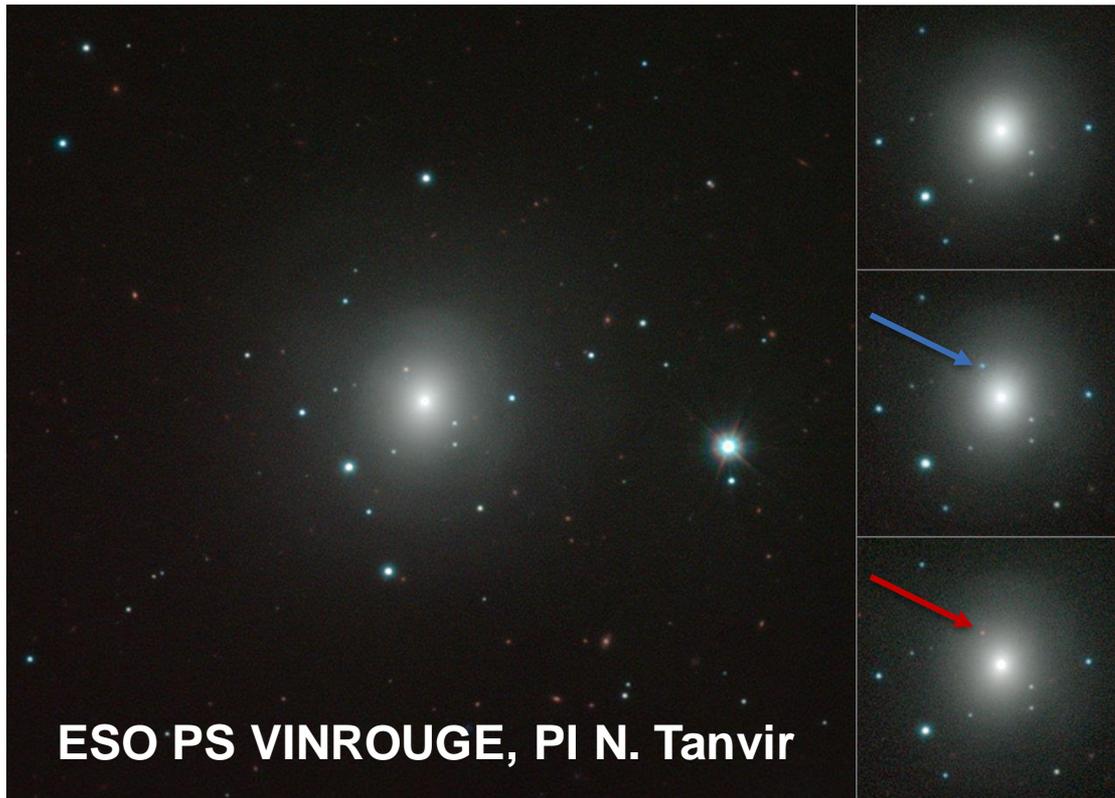
Highlights

- Gaia-ESO: metallicity gradients, age-metallicity relations, kinematics of dwarf galaxies and stellar clusters, metal-poor stars
- PESSTO: characterization of neutron star merger, superluminous, supernovae, supernova progenitors, CSM of SNe Ia
- LEGA-C: ages and star formation history in $z \sim 1$ galaxies, gas & stellar dynamics, scaling relations
- VANDELs: stellar mass, star-formation rates, stellar metallicities and gas outflow rates in $z > 2.5$ galaxies

IMPACT of ESO PS

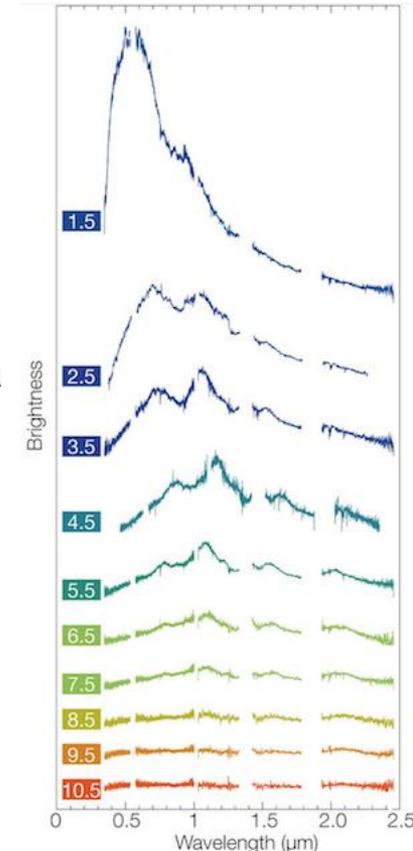
ESO PR 1733 - ESO Telescopes Observe First Light from Gravitational Wave Source

Mosaic of VISTA images of NGC 4993 showing changing kilonova



Montage of X-shooter spectra showing changes in the kilonova in NGC 4993 over 12 days.

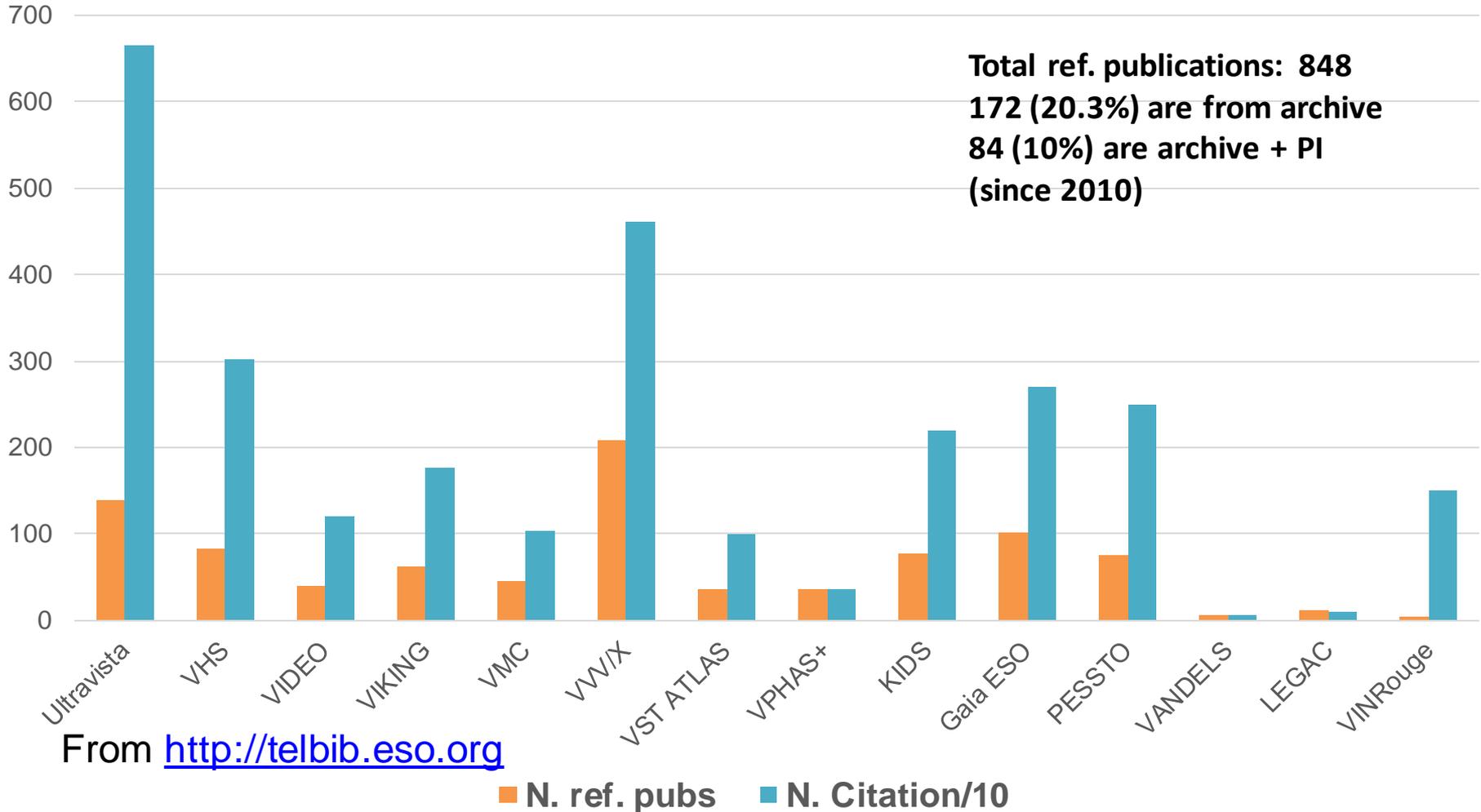
ESO/Pian et al./Smartt & ePESSTO





Impact of ESO PS

Cumulative number of refereed publications/citation for ESO PS



Science Data Products

- ✓ In-house reprocessing
- ✓ Contributed science products

- Processing data at ESO & feed the science archive (since 2013) - QC group + BOD
 - 1.7 million spectra including UVES Echelle, XSHOOTER Echelle, HARPS, FLAMES/GIRAFFE MOS (Medusa)
 - ~ 10000 IFS including MUSE & MUSE DEEP
 - ~ 20000 images including HAWKI & VIMOS imaging

- Requirements for quality-oriented processing of science data
 - Stable science operations
 - Calibration plan
 - On-site QC0
 - Instrument status well known (scores, Health Check monitor)
 - QC loop
 - Understood and certified data processing tools (pipelines)



- Science Users Information
- Observing Facilities
- Future Facilities and Development
- Observing with ESO Telescopes
- Policies and Procedures
- Telescope Time Allocation
- Phase 1 Proposals
- Phase 2 Preparation
- Phase 3
 - Phase 3 Overview
 - Phase 3 Policies
 - Release Manager
 - Questions and Answers
 - News and Changes
 - Data Releases
 - Data Streams
 - Public Surveys
 - Observing Tools and Services
 - Visiting Astronomers
 - Phase 2 Preparation
- Science Software
- Data Handling and Products
- Science Archive Facility
- Science Activities
- Science Publications
- Science and Technical Meetings
- IT Services
- Library and Information Centre
- Vacancies

Overview of Phase 3 Data Streams

Pipeline-Processed Science Data Products

ESO Instrument	Release Content	Access
UVES - Ultraviolet and Visual Echelle Spectrograph	1-dimensional wavelength-calibrated spectra of point-like objects	
XSHOOTER - multi wavelength (300-2500nm) medium resolution spectrograph	1-dimensional wavelength-calibrated spectra	
HARPS - High Accuracy Radial velocity Planet Searcher	1-dimensional wavelength-calibrated spectra	
FLAMES/GIRAFFE, MEDUSA mode, medium-high (R=5600-46000) resolution spectrograph	1-dimensional wavelength-calibrated spectra	
MUSE - Multi Unit Spectroscopic Explorer, Wide Field Mode	IFU data cubes	
MUSE-DEEP - Deep 3D cubes obtained with the Multi-Unit Spectroscopic Explorer	IFU data cubes	
HAWKI - High Acuity Wide field K-band Imager (0.85-2.5 μm)	Images and associated source lists	
FEROS - Fibre-fed Extended Range Optical Spectrograph	1-dimensional wavelength-calibrated spectra	
PIONIER - Precision Integrated-Optics Near-infrared Imaging Experiment	squared visibility amplitudes and closure phases	
VIMOS - Visible wide field imager and multi-object spectrograph (360 to 1000 nm)	Images and associated source lists	

Links to the associated data documentation

Links for Data Access

The following page contains an overview of [Phase 3 Data Releases](#), including ESO public survey programmes.

Phase 3 data streams organized by

- pipeline-processed data

http://www.eso.org/sci/observing/phase3/data_streams.html





In-house generation of science processed data

The screenshot shows the ESO User Portal Services page. At the top, there is a navigation bar with the ESO logo, the text "European Southern Observatory", and the slogan "ESO – Reaching New Heights in Astronomy". Below this is a secondary navigation bar with links for "ESO Home", "Science", and "Contact", along with a user profile dropdown for "Dr. Arnaboldi".

The main content area is titled "ESO User Portal Services" and is organized into several service categories:

- Phase 1:** Submit an observing proposal, Check the time allocation information.
- Phase 2:** Prepare observing materials, Submit a target or set-up change request, Check the status of your observing runs, Delegate Phase 2 tasks.
- Phase 3:** Download the Science Data Products Standard, Submit data, Delegate Phase 3 tasks.
- Archive Services:** La Silla Paranal data (raw), Science Portal (processed data), APEX reduced data, Catalogue data, Programmatic and Tool Access. Sub-services include: Check your Archive requests, Delegate proprietary data access rights, Access ALMA data, Archive homepage for other services.
- Help:** Ask for help, Find User Portal Information and FAQ, Check the data reduction FAQ, Go to the ESO Archive Community Forum.

A left-hand sidebar contains a menu with options like "ESO User Portal", "Privileged Actions", "Request a Special Run", "Account Configuration", "Change Username", "Change Password", "Change E-mail Address", "Manage Profile", "Science Users", "Science User Information", and "ALMA Science Portal".

At the bottom of the page, a footer contains the text "ESO User Portal © ESO Data Flow System".

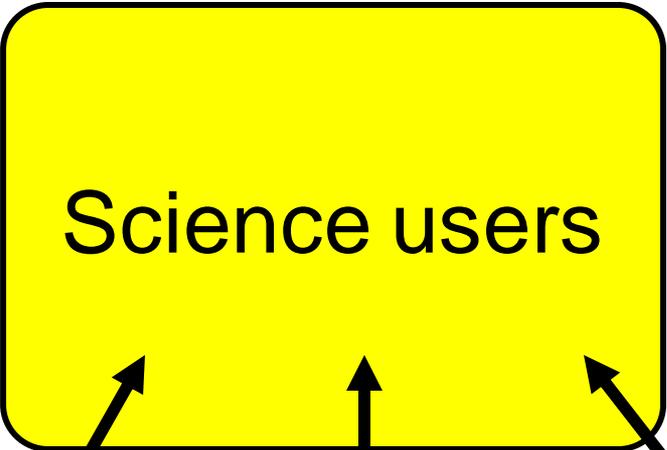
In house processed products available to Pis of ESO approved runs during proprietary period from user portal account.



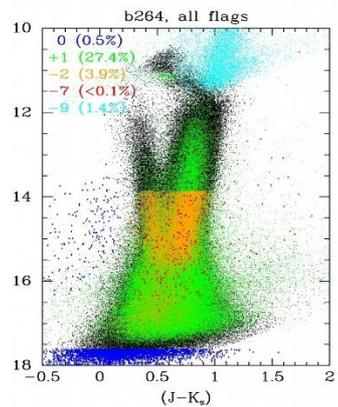


Contributed processed science data

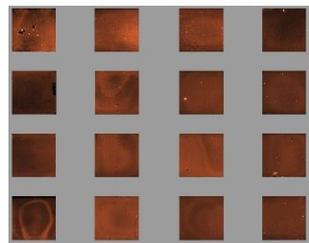
Extraction of science content



Data processing



Source lists at several wavelengths



VIRCAM raw frame



Contributed processed science data

■ Processed data contributed by the community to the science archive – routinely since 2011

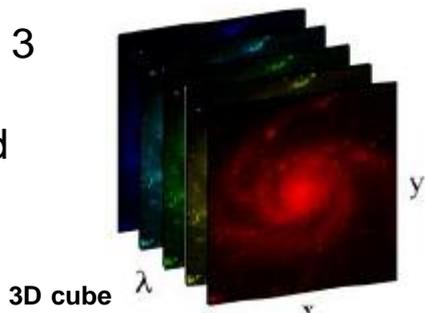
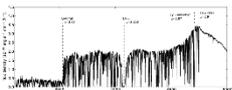
- Mandatory for datasets with high legacy value (Public Surveys and Large Programmes) - Arnaboldi+2014, Messenger, 156, 24
 - Open to contributions from the community at large

■ Goals of the quality control on the contributed data: build high quality, trusted content

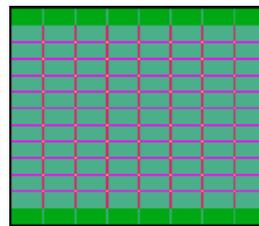
- Homogeneity and completeness of the published data
- Coherent and comprehensive scientific quality of the data
- Ensure homogeneous, reliable user documentation of the data

Content validation by ASG

ASG - Phase 3
science
data standard



3D cube



VISTA survey tile.



Retzlaff+2014, SPIE, 9149, 3



Contributed processed science data

European Southern Observatory

ESO — Reaching New Heights in Astronomy

ESO Home User Portal Contact Site Map Search Go

Science User Information / ESO User Portal / Phase 3 Release Manager

Overview of Phase 3 Data Releases

Include history of now obsolete data releases?

C Catalog I Image S Spectrum 3D 3D Cube

ESO Public Surveys

Public VISTA Surveys

Publication date	Programme	Data release	Observation date	Filter set/ Bands	deg ²	Data types	Obsolete ⓘ	Access
<i>VHS - VISTA Hemisphere Survey</i>								
17/10/2011		DR1	Nov 2009-Sep 2010	Y, J, H, Ks	2244.5	I	99%	⚙
01/12/2015		DR3 ⓘ	Nov 2009-Oct 2013	Y, J, H, Ks	8453.6	C I	2%	⚙
04/11/2016		DR4 ⓘ	Oct 2013-Oct 2015	Y, J, Ks	5563.4	I	0%	⚙
09/02/2018		DR4.1 ⓘ	Nov 2009-Oct 2015	Y, J, H, Ks	-	C	0%	⚙
<i>VV - VISTA Variables in the Via Lactea Survey</i>								
15/07/2014		DR1	Oct 2009-Oct 2010	Z, Y, J, H, Ks	592.6	C I	98%	⚙
19/08/2015		DR2	Oct 2009-Oct 2011	Z, Y, J, H, Ks	592.6	C I	82%	⚙
09/03/2015		DR3	Jan 2010-Oct 2013	Z, Y, J, H, Ks	593	I	<1%	⚙
20/01/2017		DR4	Sep 2010-Oct 2015	Z, Y, J, H, Ks	628.8	I	0%	⚙

<http://eso.org/rm/publicAccess#/dataReleases>

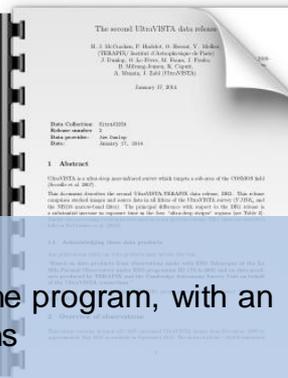




atlas_dr1.pdf



kids_dr1.pdf



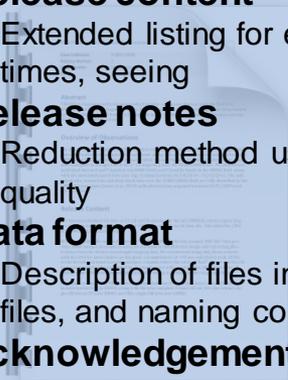
vvista_dr2.pdf



vhs_dr2.pdf



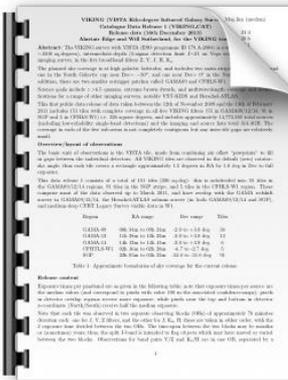
video_dfs_dr1.pdf



vjvop_dr2.pdf



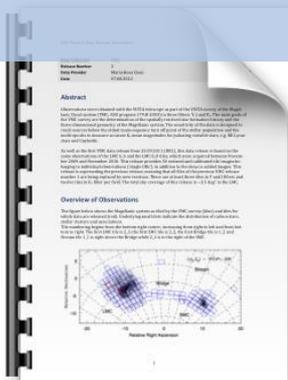
video_es1_dr1.pdf



viking_cat_dr1.pdf



viking_dr1.pdf



vmc_dr2.pdf



vphasplus_dr1.pdf



ww_dr2.pdf

Data Release Description

- Provide short broad overview of the program, with an overview/layout of the observations

Essential input for data content validation

- Extended listing for each sky position, filters, exposure times, seeing

Release notes

- Reduction method used, calibration procedures, data quality

Data format

- Description of files in this data release, associated files, and naming conventions

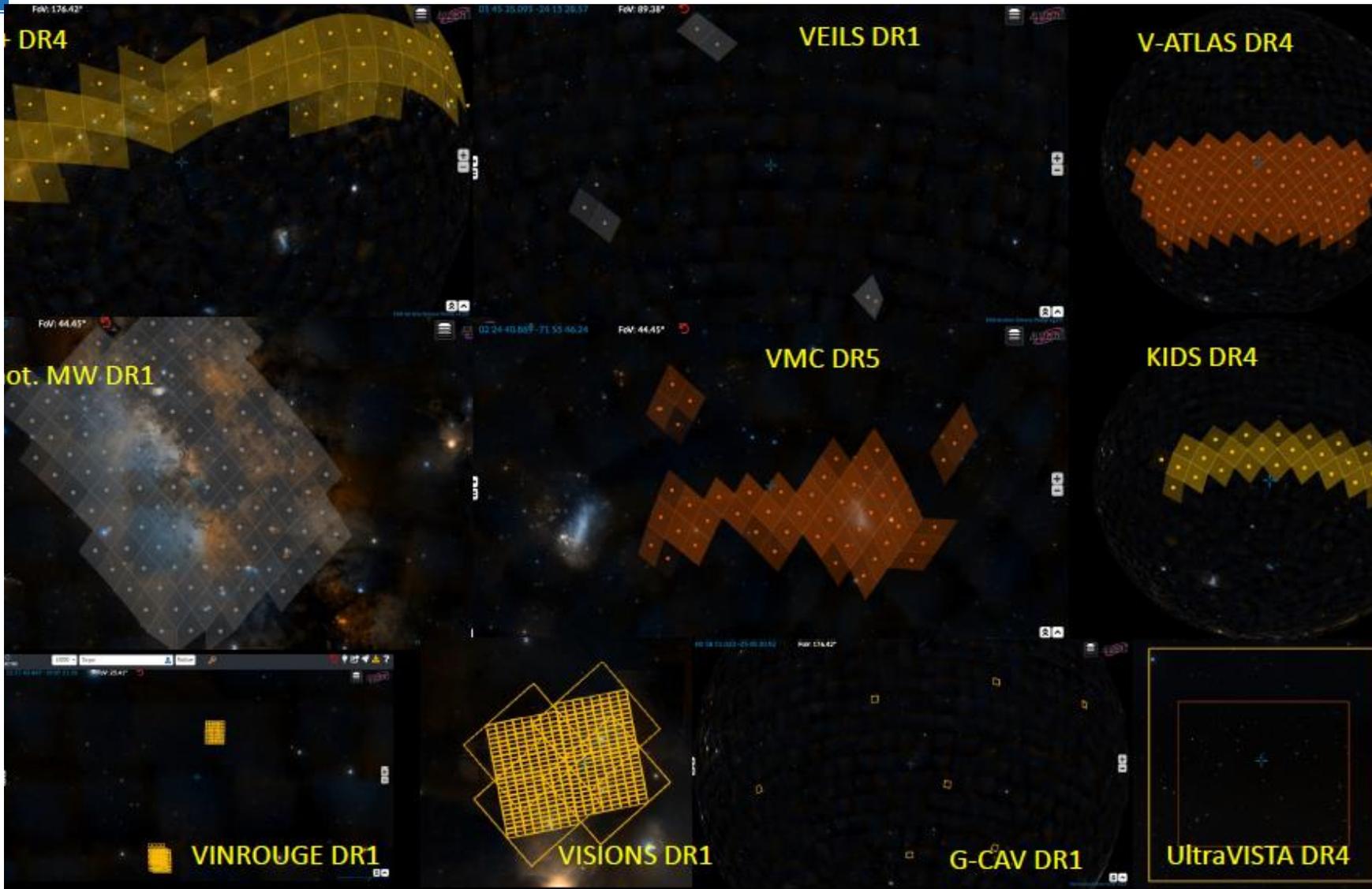
Acknowledgements

- Bibliographic reference to be included when using these data.



Phase 3 releases, query forms and Archive Science Portal

Data releases in 2019





- Science Users Information > Science Archive Facility
- Science Archive Facility
- Data Portal
- ESO Data
- Hubble Space Telescope Data
- Virtual Observatory Tools
- Catalogues, Plates and DSS
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Raw Data

Science Portal
Processed Data

Catalogue Facility
Catalogue Data

Programmatic
Raw, Processed, Catalogue, and Ambient Data

Community Forum
Share ideas, ask questions, send feedback

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[More news ...](#)

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[Description of reduced data products types]	Catalogue Facility query interface	Catalogues [ESO User Portal authentication required]	Catalogues	Various
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ESO Science Archive - Data Products

archive.eso.org/wdb/wdb/adp/phase3_imaging/form

ESO Data Products Imaging Query Form

Other data products query forms

Archive Facility HOME ESO HOME INRO FAQ

This form provides access to **reduced and/or fully calibrated data** that were produced by PIs of ESO programmes and then integrated into the ESO Science Archive Facility starting April 2011, through the [Phase 3 process](#). Each available data set is fully described; please see the [list of data releases](#) of type "Image". VISTA data are also accessible via a dedicated [VISTA Data Products query form](#). To search for other ESO Phase 3 data products, please use the [Generic Data Products query form](#), or the [Spectral query form](#). Other data not yet migrated to the Phase 3 infrastructure are available via different user interfaces; please check the [archive home page](#).

Search [Reset] Output preferences: html table Return max 200 rows. All Fields Syntax Help

Imaging Observing Programme

Programme: Any UltraVISTA VHS VIDEO VIKING

Collection: Any UltraVISTA VHS VIDEO_XMM VIKING

Release version: default: latest

Run/Program ID

Target Information

Target name
Coordinate System
Search Box
Input Target List
Equatorial Output Fo

Observation Parameter

Telescopes: Any ESO-VIST ESO-VLT ESO-VST

DATE OBS

MJD OBS

EXPTIME

TEXPTIME

MULTI EPOCH

MULTI OB

Imaging Properties

Filter: Any u_SDSS g_SDSS r_SDSS NB_659

PRODCATG: Any SCIENCE.IMAGE SCIENCE.MEFIMAGE SCIENCE.SRCTBL Detailed product category

Sky Coverage: sky solid angle [deg^2] e.g. 0.6..1.8

ISAMP: Any Sky Sampling

PIXELSCALE: Spatial Sampling [arcsec]

ABMAGLIM: Limiting Depth [mag] e.g. 20..22.5

ABMAGSAT: Saturation Limit [mag] e.g. 13.5..15

PSF_FWHM: Spatial Resolution [arcsec] (e.g. 0.9..1.1)

Data Product Properties

Release Date

Publication Date

ORIGFILE: Original File Name

ARCFILE: Archive File ID

Data products are available for download by the astronomical community worldwide!

ESO Archive Query Forms

- Seamless access to all ESO data products via top-level query form;
- Including ESO-stream of nightly data; including the following:
 - VISTA
 - XMM-Newton
 - Gemini
 - Magellan
 - Keck
 - Subaru
 - ESO-Medusa

by high-quality parameters:

- MAGLIM
- PSF_FWHM





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Catalogue Facility Query Interface

Go to the URL
<http://www.eso.org/qi>

Load an input file containing the list of target names or tab-separated target coordinate pairs (J2000).

id	target	ra	dec	magnitude	priority
1	148.74448	2.28354	0	0	0
2	150.02071	2.87192	0	0	0
3	148.88227	1.73586	0	0	0
4	150.73182	2.72022	0	0	0
5	150.29272	2.14863	0	0	0
6	150.22879	2.41856	0	0	0

Find catalogues by
Title: cosmos Context: Include obsolete versions
Find

1

Click to inspect the kind of content

Click on the catalogue title to display detailed information

Details: DeepUltra-Deep Near-Infrared Catalogue of the COSMOS Field

Column	Description	Type	Units	Units
NUMBER	Number of objects	Integer		
RA	Right ascension of object	Double	degrees	degrees
DEC	Declination of object	Double	degrees	degrees
MAG	Median magnitude	Double	mag	mag
MAG_ERR	Median magnitude error	Double	mag	mag
FLUX	Flux	Double	mag	mag
FLUX_ERR	Flux error	Double	mag	mag
AREA	Area	Integer	arcmin	arcmin
AREA_ERR	Area error	Integer	arcmin	arcmin
PERCENT	Percentage of objects	Double	%	%
PERCENT_ERR	Percentage error	Double	%	%
OBJECTS	Number of objects	Integer		
OBJECTS_ERR	Number of objects error	Integer		
OBJECTS_PERCENT	Percentage of objects	Double	%	%
OBJECTS_PERCENT_ERR	Percentage of objects error	Double	%	%
OBJECTS_FLUX	Flux of objects	Double	mag	mag
OBJECTS_FLUX_ERR	Flux of objects error	Double	mag	mag
OBJECTS_AREA	Area of objects	Integer	arcmin	arcmin
OBJECTS_AREA_ERR	Area of objects error	Integer	arcmin	arcmin
OBJECTS_PERCENT_FLUX	Percentage of objects flux	Double	%	%
OBJECTS_PERCENT_FLUX_ERR	Percentage of objects flux error	Double	%	%
OBJECTS_PERCENT_AREA	Percentage of objects area	Double	%	%
OBJECTS_PERCENT_AREA_ERR	Percentage of objects area error	Double	%	%

Entry page

2 Catalogue query form

Examples:
=10
>99
<=1.5
!=5
10 .. 20
=abc%

Constraint qualification using the ASU syntax

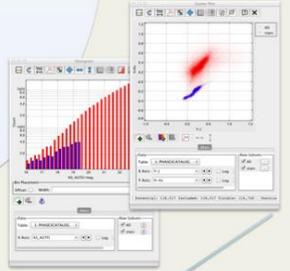
Col	Column	Constraint	Unit	Description	ICD
*	SOURCE_ID			Uniquely identifies the source	meta.cosmos.mean
*	NUMBER			Running object number	meta.cosmos.mean
*	ALPHA_2000		deg	Right ascension of object in decimal degrees (J2000)	meta.cosmos.mean
*	DELTA_2000		deg	Declination of object in decimal degrees (J2000)	meta.cosmos.mean
*	RA_2000		deg	Object position along x	meta.cosmos.mean
*	DEC_2000		deg	Object position along y	meta.cosmos.mean
*	FLUX_2000		mag	Median magnitude	meta.cosmos.mean
*	MAG_ERR		mag	Median magnitude error	meta.cosmos.mean
*	FLUX		mag	Flux	meta.cosmos.mean
*	MAG_ERR_FLUX		mag	Flux error	meta.cosmos.mean
*	AREA		arcmin	Area	meta.cosmos.mean
*	AREA_ERR		arcmin	Area error	meta.cosmos.mean
*	PERCENT		%	Percentage of objects	meta.cosmos.mean
*	PERCENT_ERR		%	Percentage error	meta.cosmos.mean
*	OBJECTS			Number of objects	meta.cosmos.mean
*	OBJECTS_ERR			Number of objects error	meta.cosmos.mean
*	OBJECTS_PERCENT		%	Percentage of objects	meta.cosmos.mean
*	OBJECTS_PERCENT_ERR		%	Percentage of objects error	meta.cosmos.mean
*	OBJECTS_FLUX		mag	Flux of objects	meta.cosmos.mean
*	OBJECTS_FLUX_ERR		mag	Flux of objects error	meta.cosmos.mean
*	OBJECTS_AREA		arcmin	Area of objects	meta.cosmos.mean
*	OBJECTS_AREA_ERR		arcmin	Area of objects error	meta.cosmos.mean
*	OBJECTS_PERCENT_FLUX		%	Percentage of objects flux	meta.cosmos.mean
*	OBJECTS_PERCENT_FLUX_ERR		%	Percentage of objects flux error	meta.cosmos.mean
*	OBJECTS_PERCENT_AREA		%	Percentage of objects area	meta.cosmos.mean
*	OBJECTS_PERCENT_AREA_ERR		%	Percentage of objects area error	meta.cosmos.mean

Click to sort the result set

3 Query results

758 records found (out of 3107)

NUMBER	Y_2000	J_2000	H_2000	K_S_2000	K_S_AUTO	H_2000_AUTO	J_2000_AUTO
20314	21.9906	21.9754	21.2824	20.9837	20.7943	2	21.7026
20210	20.0419	22.2412	21.4361	20.9873	20.7163	0	22.2898
27734	20.9211	21.7286	21.2881	20.8688	20.7887	0	21.7813
27733	21.9924	21.7480	21.2018	21.0209	20.7478	3	22.0241
27746	20.9403	21.2842	21.2402	21.0286	20.7767	0	21.7184
27884	20.0274	22.4723	21.7003	21.0746	20.9679	0	22.0048
27642	22.0242	21.9182	21.4034	21.0794	20.8176	0	21.8719
27649	22.8473	21.6227	21.4604	21.1406	20.9272	1	21.8018
28248	22.2262	21.8142	21.4316	21.1421	20.8668	0	21.8762
27378	21.9360	21.9196	21.4065	21.1385	20.9831	0	21.8875



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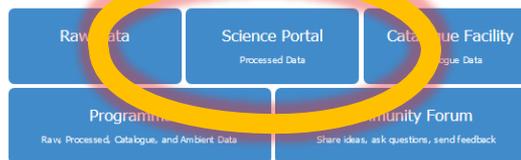
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ESO Archive Science Portal

<http://archive.eso.org/scienceportal>

Archive Science Portal BETA 04:23:40.002 -29:25:41.20 FoV: 175.91°

2651862 RESULTS

Target: Rad.: J2000-

Include proprietary data

▼ Collapse all

Data Type 15

- SPECTRUM 2053888
- CATALOG 300801
- IMAGE 39958
- CUBE 1334
- VISIBILITY 1543

Spectral Range

Undefined for 22 datasets

Filter/Band 15

- Ks 221604
- J 171331
- Y 57191
- H 46579
- I_SDSS 22625

▶ Show 24 more out of 29
Undefined for 2061671 datasets

Spectral Resolution

Search results Sky selection

Actions	Data Type	Spec.Range	Spec.Res.	SNR	Sensitivity	Obs.Date	FoV	Sky Res.	Collection	Instrum.	T.Exp.T.	#Obs	PI	Program Id	Object	Pub.Date
<input type="checkbox"/>	SPECTRUM	373.2-691.3 nm	115000	0		2018-05-23 17:03			HARPS	HARPS	1 s	single	OBSERVATORY, L 60A-9700	Presel-near-Zenith	2018-05-25	
<input type="checkbox"/>	SPECTRUM	378.2-691.3 nm	115000	0		2018-05-20 17:05			HARPS	HARPS	1 s	single	OBSERVATORY, L 60A-9700	Presel-near-Zenith	2018-05-22	
<input type="checkbox"/>	CUBE	460-935.2 nm	2989	25.265		2018-05-20 08:05 1.9'	0.727"		MUSE	MUSE	2900 s	single	FUMAGALLI MIC 1100A-0528	Q2139-4443	2018-05-28	
<input type="checkbox"/>	CUBE	460-935.2 nm	2989	24.317		2018-05-19 08:19 2.05'	0.927"		MUSE	MUSE	2900 s	single	FUMAGALLI MIC 1100A-0528	Q2139-4443	2018-05-28	
<input type="checkbox"/>	CUBE	460-935.2 nm	2989	24.659		2018-05-19 07:14 1.74'	0.987"		MUSE	MUSE	2900 s	single	FUMAGALLI MIC 1100A-0528	Q2139-4443	2018-05-28	
<input type="checkbox"/>	CUBE	460-935.2 nm	2989	24.104		2018-05-13 08:07 2.1'	1.149"		MUSE	MUSE	2900 s	single	FUMAGALLI MIC 1100A-0528	Q2139-4443	2018-05-29	
<input checked="" type="checkbox"/>	CUBE	460-935.2 nm	2989	24.117		2018-05-12 08:06 1.52'	1.03"		MUSE	MUSE	2900 s	single	FUMAGALLI MIC 1100A-0528	Q2139-4443	2018-05-28	
<input type="checkbox"/>	SPECTRUM	378.2-691.3 nm	115000	97.5		2018-05-03 09:45			HARPS	HARPS	500 s	single	OBSERVATORY, L 60A-9700	HD216770	2018-05-17	
<input type="checkbox"/>	SPECTRUM	378.2-691.3 nm	115000	101.5		2018-05-03 09:37			HARPS	HARPS	500 s	single	OBSERVATORY, L 60A-9700	HD216770	2018-05-17	
<input type="checkbox"/>	SPECTRUM	378.2-691.3 nm	115000	103.3		2018-05-03 09:28			HARPS	HARPS	500 s	single	OBSERVATORY, L 60A-9700	HD216770	2018-05-17	
<input type="checkbox"/>	SPECTRUM	378.2-691.3 nm	115000	126.9		2018-05-03 09:18			HARPS	HARPS	500 s	single	OBSERVATORY, L 60A-9700	HD208487	2018-05-17	



Archive Science Portal BETA

target: NGC253 ra... | obj.type: IMAGE | inst: VIMOS | remove all 3

00 47 38.012 -25 23 15.35 | FoV: 1.17°

36 RESULTS | 16 SELECTED | RESET FOV

Include proprietary data

Filter/Band

- V 13
- B 12
- R 9
- U 2

Spectral Resolution

Signal-to-Noise Ratio

No data to display

Sensitivity

Date of Observation

Maximize | Overlays | Download | SAMP | Feedback

Target-driven search & multi-resolution preview of imaging data

Search results (36) | Sky selection (14)

Actions	Dist.	Data Type	Spec.Range	Filter	Spec.Res.	Sensitivity	Obs.Date	FoV	Sky Res.	Collection	Instrum.	T.Exp	#Obs	PI	Program Id	Object	Pub.Date
<input checked="" type="checkbox"/>	0	IMAGE	383-478 nm	B	4.531578947368421	25.416	2014-07-30 06:46:37	7.66°	0.801"	VIMOS	VIMOS	480 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27
<input checked="" type="checkbox"/>	0	IMAGE	504-591 nm	V	4.531578947368421	25.416	2014-08-02 06:25:51	7.66°	1.408"	VIMOS	VIMOS	690 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27
<input checked="" type="checkbox"/>	0	IMAGE	383-478 nm	B	4.531578947368421	25.416	2014-08-02 06:25:51	7.66°	0.894"	VIMOS	VIMOS	480 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27
<input checked="" type="checkbox"/>	0	IMAGE	383-478 nm	B	4.531578947368421	25.351	2014-07-27 06:19:13	7.65°	0.874"	VIMOS	VIMOS	480 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27
<input checked="" type="checkbox"/>	0	IMAGE	383-478 nm	B	4.531578947368421	25.351	2014-08-21 04:40:18	7.65°	0.837"	VIMOS	VIMOS	540 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27
<input checked="" type="checkbox"/>	0	IMAGE	383-478 nm	B	4.531578947368421	25.351	2014-09-27 01:28:23	7.65°	0.859"	VIMOS	VIMOS	480 s	single	HAKALA, P.	093.D-0599	NGC 253	2018-03-27

ADP2018-03-26T12:59:35.239

Include proprietary data

Collapse all

Spectral Resolution

Signal-to-Noise Ratio

Undefined for 13 datasets

Sensitivity

Date of Observation

FoV

Target: NGC6388 (17h 36m 15.427s, -44° 45' 48.03") FoV: 15.14'

467 RESULTS 11 SELECTED

RESET FOV

Maximize Overlays Download SAMP Feedback

Search results (468) Sky selection (2)

Actions	Dist.	Data Type	Spec.Range	Fit.	Spec.Res.	SNR	Sensitivity	Obs.Date	FoV	Sky Res.	Collection	Instrum.	T.Expt.	#Obs.	PI.	Program Id	Object	Pub.Date
	7.14'	SPECTRUM	848.1-899.2 nm		18000	217.4		2008-07-29 23:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	8000048	2015-04-01
	7.42'	SPECTRUM	848.2-899.3 nm		18000	214.1		2008-06-12 03:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	8000051	2015-03-31
	7.42'	SPECTRUM	848.2-099.3 nm		18000	193.9		2008-06-07 01:			GIRAFFE	GIRAFFE	1517 s	single	LANZONI, BARE	381.D-0329	8000051	2015-03-31
	3.2'	SPECTRUM	848.2-899.3 nm		18000	170		2008-06-12 03:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	7000216	2015-03-31
	3.2'	SPECTRUM	848.2-899.3 nm		18000	155.7		2008-06-07 01:			GIRAFFE	GIRAFFE	1517 s	single	LANZONI, BARE	381.D-0329	7000216	2015-03-31
	3.2'	SPECTRUM	848.2-899.3 nm		18000	110.6		2008-06-26 06:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	7000312	2015-03-31
	4.5'	SPECTRUM	848.2-899.3 nm		18000	94.2		2008-06-12 03:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	7000357	2015-03-31
	4.5'	SPECTRUM	848.2-899.3 nm		18000	64.4		2008-07-29 23:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	7000297	2015-04-01
	3.95'	SPECTRUM	848.2-899.3 nm		18000	32		2008-06-12 03:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	7003003	2015-03-31
	3.95'	SPECTRUM	848.2-899.3 nm		18000	32		2008-06-12 03:			GIRAFFE	GIRAFFE	1517 s	single	LANZONI, BARE	381.D-0329	7003003	2015-03-31
	0	MAG	1156-1239 nm		18000	0.07		2008-06-12 03:			GIRAFFE	GIRAFFE	1517 s	single	LANZONI, BARE	381.D-0329	8000051	2015-12-01
	2.89'	SPECTRUM	848.1-899.2 nm		18000			2008-07-29 23:			GIRAFFE	GIRAFFE	2320 s	single	LANZONI, BARE	381.D-0329	99	2015-04-01

Zoom, Pan, Rescale



VHS background image

Inspecting spectral data using the integrated previewer



Multi-dimensional faceted (all-sky) search

Archive Science Portal BETA

04 23 40.002 -29 25 41.20 FoV: 175.91°

2651862 RESULTS

Target Rad. J2000- Include proprietary data

Collaps all

Data Type

- SPECTRUM 2013888
- CATALOG 300801
- IMAGE 389483
- CUBE 13351
- VISIBILITY 1543

Spectral Range

- UV
- opt
- NIR
- MIR
- mm

Filter/Band

- Ks 221604
- J 171551
- Y 57191
- H 46579
- I_SDSS 22625

Spectral Resolution

Signal-to-Noise Ratio

FoV

Instrument

- HARPS 1195050
- HARPS 470670
- HARPS 255132
- VIMOS 135381
- UVES 129940

Principal Investigator

- GILMORE, GERARD 431515
- MCMAHON, R. 367723
- GILMORE, G.F. 108391
- GUZZO, LUIGI 92687
- MINNITI, DANTE 48127

Program Id

- 179A-2010 367559
- 188B-3002 223728
- 193B-0936 213279
- 182A-0886 91796
- 197B-1074 62227

Object

- ATLAS survey 45004
- HD128621 19459
- Str05 13464
- Str04 12576
- Str06 12748

Publication Date

Sensitivity

Sky Resolution

Total Exposure Time

Number of OBs

Date of Observation

Data Collection

- GIRAFFE 1353242
- VHS 367559
- HARPS 255132
- UVES 131198
- XSHOOTER 94458
- VIPERS 91509
- VVV 60065
- FEROS 54430
- GAIAESO 49731
- VST-ATLAS 49154
- VPHASplus 27763
- HAWKI 20978
- ZCOSMOS 20785
- VIDEO 20218

Archive Science Portal **BETA** data_collection: Y... filter: H file_type: IMAGE remove all 3

15 39 8.873 -66.44 38.65 **FoV: 176.02°**

866 RESULTS

VVV Survey Footprint (H band)

Target: Rad. J2000+

Include proprietary data

Data Type

- Switch to subtype
- CATALOG 1011
- IMAGE 866

Spectral Range

NIR

866

Filter/Band

- Ks 25971
- Y 923
- Z 896
- H 866
- J 837

Spectral Resolution

~10

866

Signal-to-Noise Ratio

No data to display

Sensitivity

Search results (866) **Sky selection**

Actions	Data Type	Spec.Range	Flit.	Spec.Res.	Sensitivity	Obs.Date	FoV	Sky Res.	Collection	Instrum.	T.Exp.T.	#Obs.	PL	Program Id	Object	Pub.Date
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	19.281	2015-09-26 01:31	1.91°	0.891°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b241	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	19.155	2015-09-26 01:22	1.91°	0.959°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b240	2017-01-20
<input checked="" type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.817	2015-09-26 01:00	1.91°	1.185°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b235	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.861	2015-09-26 00:50	1.92°	1.179°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b239	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-26 00:34	1.92°	1.112°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b254	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-26 00:02	1.91°	1.015°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b253	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-24 01:11	1.92°	1.012°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b283	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-24 01:02	1.91°	1.163°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b282	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-24 00:50	1.91°	1.036°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b325	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-23 01:41	1.92°	0.837°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b267	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-23 01:12	1.91°	0.821°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b338	2017-01-20
<input type="checkbox"/>	IMAGE	1499-1791 nm	H	5	18.721	2015-09-23 01:14	1.91°	0.968°	VVV	VIRCAM	48 s	single	MINNITL DANTE	179-B-2002	b337	2017-01-20

ADP2017-01-18T11-58-39.137



Archive Science Portal BETA

Target: Rad J2000-
25335 RESULTS
17 03 17.270 -34 39 47.62 FoV: 44.44°
RESET FOV

Dynamic coverage maps

388 Datasets
388 Obs. Blocks

Filter	#Data sets	Total ExpTime	Max depth (Allmag)
Ks	263	12624	19.23
H	11	528	19.50
J	9	1296	19.83
Y	6	720	19.73
Z	6	720	20.02

Include proprietary data

Collapse all

Data Type: CATALOG (25796) IMAGE (9338)

Spectral Range: [Histogram]

Filter/Band: Ks (22445) Y (754) Z (726) H (716) J (694)

Spectral Resolution: [Histogram]

Signal-to-Noise Ratio: No data to display

Sensitivity: [Histogram]

Actions	Data Type	Spec. Range	Filter	Spec. Res.	Sensitivity	Obs. Date	FoV	Sky Res.	Collection	Instrum.	T. Exp. T.	#Obs	PI	Program Id	Object	Pub. Date
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.599	2015-10-16 00:51:19.1*	0.932"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b210	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.568	2015-10-16 00:41:19.1*	0.931"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b336	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.643	2015-10-16 00:46:19.1*	0.904"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b335	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.659	2015-10-16 00:31:19.1*	0.854"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b209	2017-01-20	
<input type="checkbox"/>	IMAGE	974-1067 nm	Y	10	20.22	2015-10-16 00:31:19.1*	0.889"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b208	2017-01-20	
<input type="checkbox"/>	IMAGE	974-1067 nm	Y	10	20.056	2015-10-16 00:21:19.2*	0.918"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b334	2017-01-20	
<input type="checkbox"/>	IMAGE	974-1067 nm	Y	10	20.187	2015-10-16 00:11:19.2*	0.83"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b333	2017-01-20	
<input type="checkbox"/>	IMAGE	974-1067 nm	Y	10	20.304	2015-10-16 00:01:19.2*	0.854"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b207	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.67	2015-10-13 01:11:19.1*	0.868"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b213	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.545	2015-10-13 01:01:19.2*	0.862"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b339	2017-01-20	
<input type="checkbox"/>	IMAGE	829-927 nm	Z	8	20.563	2015-10-13 01:01:19.1*	0.997"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b212	2017-01-20	
<input type="checkbox"/>	IMAGE	974-1067 nm	Y	10	19.984	2015-10-13 00:51:19.2*	0.98"	VVV	VIRCAM	120s	single	MINNITL DANTE	179B-2002	calz-b206	2017-01-20	



258 RESULTS

0 SELECTED

J2000 13.72269 -37.68422

00 54 51.931 -37 43 38.77 FoV: 19.51'

1) Drop your target list

2) Browse targets and review available data products

3) Data download

1 cube. Click to select. You can review your selection in the 'Sky selection' table.

Index	Target	RA	Dec	Results	Total size	
<input type="checkbox"/>	20	NGC 300	17.07412	-72.88411	646	218.60 MB
<input checked="" type="checkbox"/>	15	NGC 300	13.72269	-37.68422	258	247.30 GB
<input type="checkbox"/>	4	NGC 121	6.70417	-71.53611	141	79.04 MB
<input type="checkbox"/>	10	NGC 246	11.76391	-11.87193	107	315.19 MB
<input type="checkbox"/>	34	NGC 1084	41.49969	-7.57864	52	5.56 GB
<input type="checkbox"/>	42	NGC 1313	49.56686	-66.49826	19	24.99 MB
<input type="checkbox"/>	45	NGC 1316	50.67412	-37.20282	16	124.59 GB
<input type="checkbox"/>	14	NGC 299	13.35308	-72.19656	12	1.66 MB
<input type="checkbox"/>	24	NGC 613	23.57598	-29.41849	12	25.26 GB
<input type="checkbox"/>	2	NGC 55	3.72334	-39.19663	9	9.93 MB
<input type="checkbox"/>	43	NGC 1300	49.82102	-12.41115	8	170 GB

ESO Archive Science Portal v1.0.4

Archive Science Portal

Search by input list: fully integrated with iterative search paradigm & facets; subselection of datasets & download all option; up to 1000 input targets – to be released soon

<http://archive.eso.org/scienceportal/home>

The screenshot displays the ESO Archive Science Portal interface. At the top, it shows 26 datasets selected, with a search for 'A370' and a field of view of 1'. The main view is a star field with several yellow rectangular selection boxes and a large blue circle. A text overlay in the center reads 'The ESO Archive Science Portal'. On the left, there are three filter panels: 'Data Type' (CUBE is selected), 'Date of Observation' (a bar chart showing counts for 2014, 2015, and 2016), and 'Sky Resolution' (a bar chart showing counts for various resolution ranges). Below the star field is a table of datasets with columns for Actions, Dist., Data Type, Spec.Range, Spec.Res., Sensitivity, Obs.Date, FoV, Sky Res., Collection, Instrum., T.Exp.T., #Obs, P.I., Program Id, Object, and Pub.Date. A 'Sky selection' window is open over the table, showing a preview of a dataset with the ID 'ADP:2017-03-24T12:14:09.092'. The bottom right corner of the interface indicates the version 'ESO Archive Science Portal v1.3.1'.

Actions	Dist.	Data Type	Spec.Range	Spec.Res.	Sensitivity	Obs.Date	FoV	Sky Res.	Collection	Instrum.	T.Exp.T.	#Obs	P.I.	Program Id	Object	Pub.Date
<input type="checkbox"/>	0	CUBE	475-9852	0.2022	25.04%	2014-11-20	(4.01'	0.7"	MUSE-DEEP	MUSE	58353 s	20	BAUER, FRA	094.A-0115; (A370	2017-06-06
<input type="checkbox"/>	2.99"	CUBE	475-9852	0.2022	25.04%	2014-11-20	(1.65'	0.717"	MUSE-DEEP	MUSE	7200 s	2	RICHARD, JO	094.A-0115	A370	2017-05-11
<input type="checkbox"/>	2.55"	CUBE	475-9852	0.2022	25.04%	2014-11-20	(1.65'	0.815"	MUSE	MUSE	3600 s	single	RICHARD, JO	094.A-0115	A370	2016-06-22
<input type="checkbox"/>	6.8"	CUBE	475-9852	0.2022	25.04%	2014-11-20	(1.48'	0.619"	MUSE	MUSE	3600 s	single	RICHARD, JO	094.A-0115	A370	2016-06-22
<input type="checkbox"/>	3.12"	CUBE	475-9852	0.2022	25.04%	2016-08-07	(1.5'	0.936"	MUSE	MUSE	2886 s	single	BAUER, FRA	096.A-0710	A370	2016-10-10
<input type="checkbox"/>	3.25"	CUBE	475-9852	0.2022	25.04%	2015-11-15	(1.49'	0.762"	MUSE	MUSE	2886 s	single	BAUER, FRA	096.A-0710	A370	2016-09-02
<input type="checkbox"/>	3.28"	CUBE	475-9852	0.2022	25.04%	2016-09-28	(1.5'	0.612"	MUSE	MUSE	2886 s	single	BAUER, FRA	096.A-0710	A370	2016-11-17
<input type="checkbox"/>	2.53"	CUBE	475-9852	0.2022	25.04%	2014-08-04	(1.48'	0.623"	MUSE	MUSE	2886 s	single	BAUER, FRA	096.A-0710	A370	2016-10-07



Dataset:
ADP.2017-03-24T12:14:09.092

- H FITS Header
- File Download
- Dataset Download
- Printable Preview
- Data Documentation

Position

Object	A370
RA (J2000)	02:39:53.03
Dec (J2000)	-01:34:54.2
Galactic longitude	173.0125
Galactic latitude	-53.56023
Sky Coverage	1.4 arcmin ²
Field of View	1.65'
Sky Resolution	0.717"
Pixel Scale	0.2"

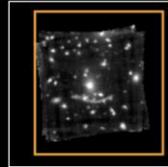
Data

Data Type	CUBE (IFS)
Sensitivity (AB mag at 5σ)	25.244
Data Level	3

Energy

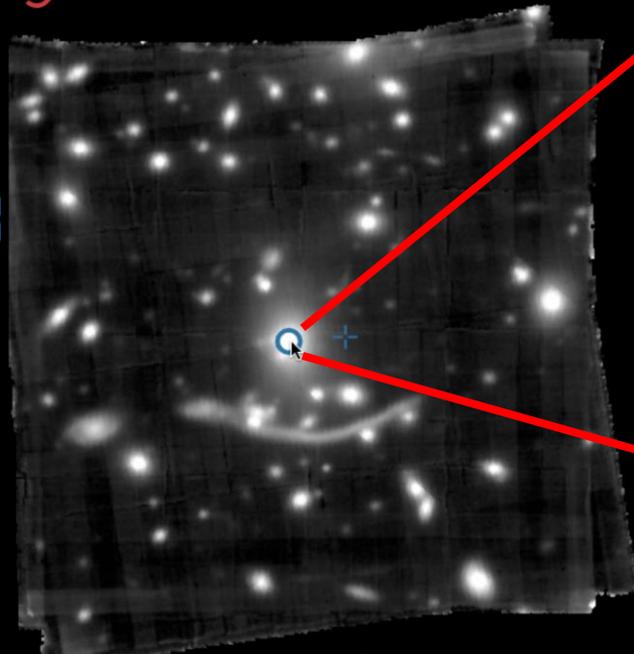
Spectral Range	475-935 nm
Spectral Resolution (R)	3027

Aperture radius: 6px (1.2")



J2000 02 39 53.126 -01 34 54.45

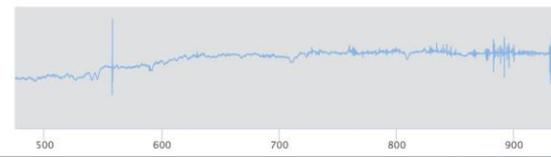
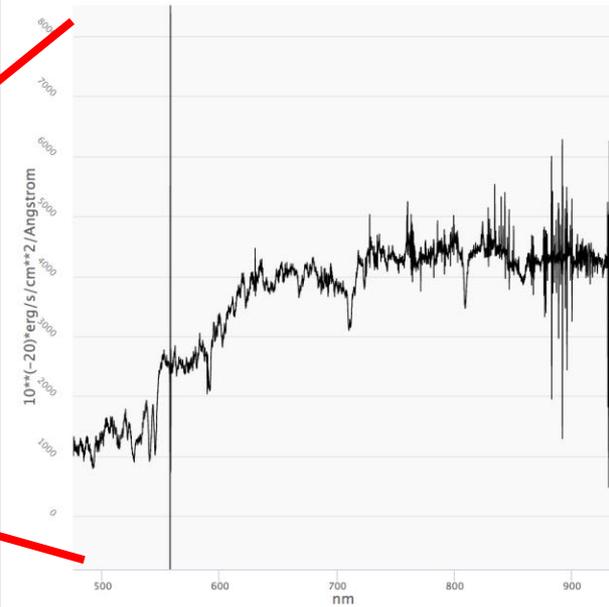
FoV: 1.27'



Wavelength: 474.983
Flux: -3.052e+0



Spectrum at 02:39:53.14 -01:34:54.4



Upcoming:

Exploring the spectral dimension of IFS data cubes

Abell 370, MUSE data, P.I. J. Richard



Dataset:
ADP.2017-03-24T12:14:09.092

- File Download
- Dataset Download
- Printable Preview
- Data Documentation

Position

Object	A370
RA (J2000)	02:39:53.03
Dec (J2000)	-01:34:54.2
Galactic longitude	173.0125
Galactic latitude	-53.56023
Sky Coverage	1.4 arcmin ²
Field of View	1.65'
Sky Resolution	0.717"
Pixel Scale	0.2"

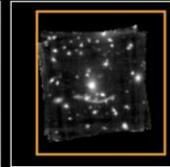
Data

Data Type	CUBE (IFS)
Sensitivity (AB mag at 5σ)	25.244
Data Level	3

Energy

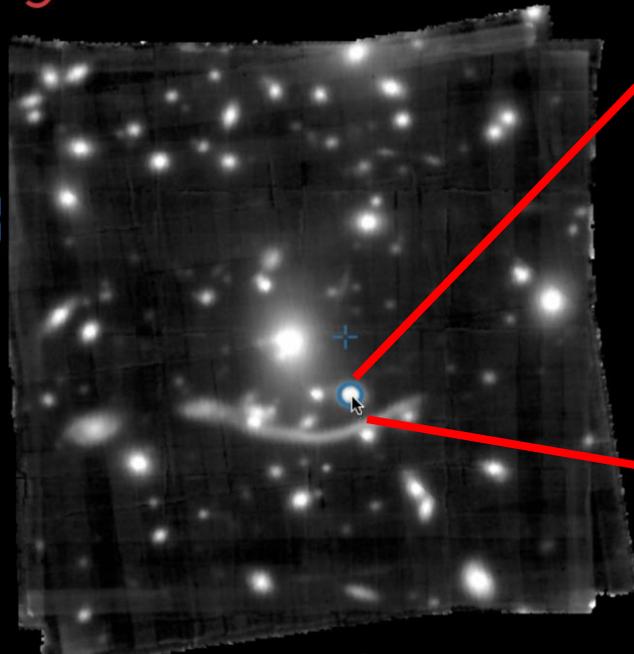
Spectral Range	475-935 nm
Spectral Resolution (R)	3027

Aperture radius: 6px (1.2")



J2000 02 39 52.702 -01 35 0.17

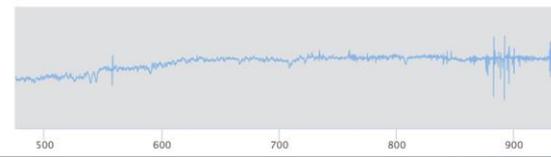
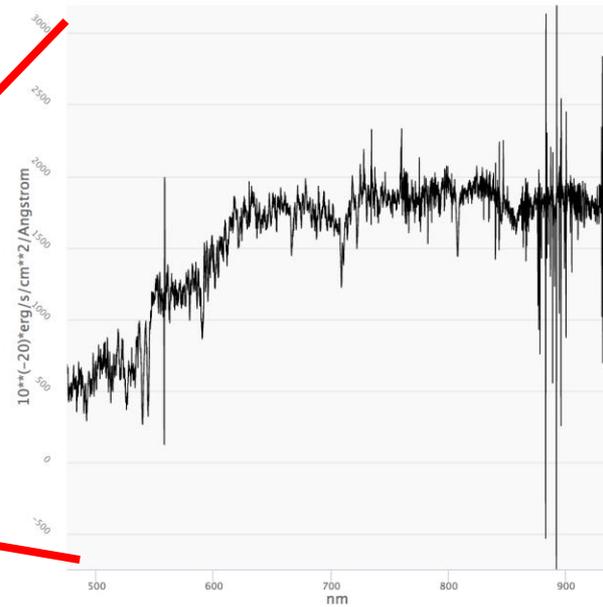
FoV: 1.27'



Wavelength: 474.983
Flux: -3.052e+0



Spectrum at 02:39:52.71 -01:35:00.0



Upcoming:

Exploring the spectral dimension of IFS data cubes
Abell 370, MUSE data, P.I. J. Richard



Dataset:
ADP.2017-03-24T12:14:09.092

- File Download
- Dataset Download
- Printable Preview
- Data Documentation

Position

Object	A370
RA (J2000)	02:39:53.03
Dec (J2000)	-01:34:54.2
Galactic longitude	173.0125
Galactic latitude	-53.56023
Sky Coverage	1.4 arcmin ²
Field of View	1.65'
Sky Resolution	0.717"
Pixel Scale	0.2"

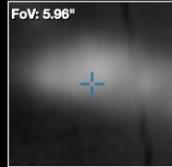
Data

Data Type	CUBE (IFS)
Sensitivity (AB mag at 5σ)	25.244
Data Level	3

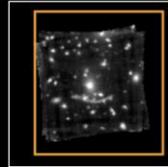
Energy

Spectral Range	475-935 nm
Spectral Resolution (R)	3027

Aperture radius: 6px (1.2")

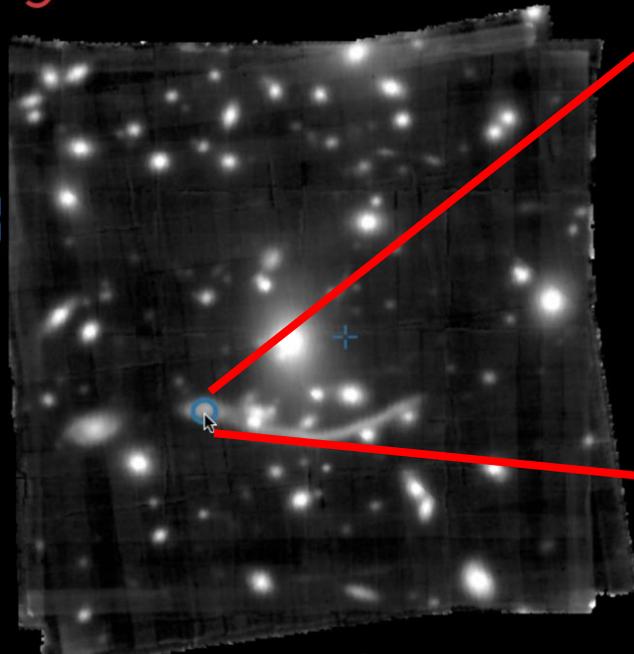


FoV: 5.96"



J2000 02 39 53.737 -01 35 2.21

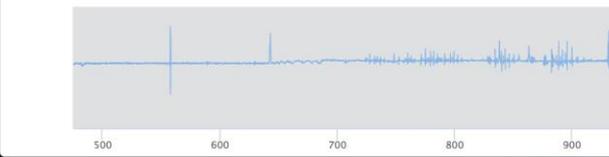
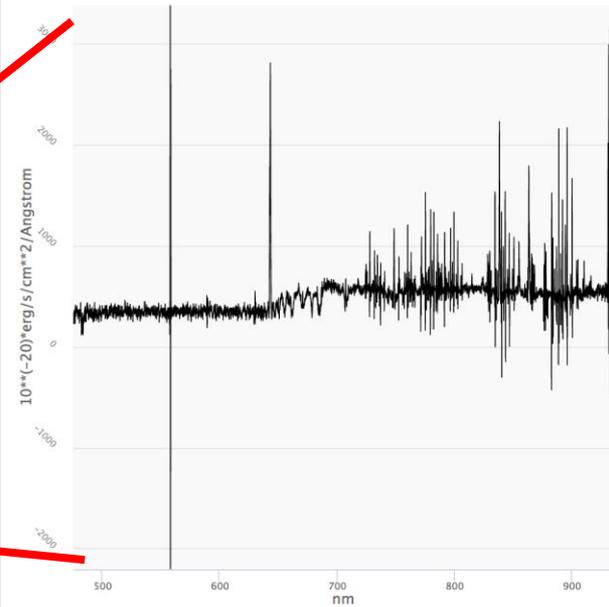
FoV: 1.27'



Wavelength: 474.983
Flux: -3.052e+0



Spectrum at 02:39:53.74 -01:35:01.8



Upcoming:
Exploring the spectral dimension of IFS data cubes
Abell 370, MUSE data, P.I. J. Richard

Dataset: ADP.2019-02-25T14:28:02.729

[H FITS Header](#)
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[Data Documentation](#)

Position
 Object: KIDS_350.3_-35.1
 RA (J2000): 23:21:12.00
 Dec (J2000): -35:06:00.0
 Galactic longitude: 4.8839
 Galactic latitude: -69.16691
 Sky Coverage: 1.0 deg²
 Field of View: 1.4°

Data
 Data Type: CATALOG (CATALOGTILE)
 Data Level: 4

Energy
 Filter Band: u_SDSS; g_SDSS; r_SDSS; I_SDSS
 Spectral Range: 327-838 nm
 Spectral Resolution (R): 3.6

Time
 Start of Observation: 2017-08-16 08:44:42
 End of Observation: 2017-09-16 05:21:00

Sky Columns (305)

Background image : I_SDSS
 show catalog preview

J2000: 23 22 0.303 -34 58 40.95 FoV: 10.31!

FoV: 19.86°

Imaging data overlaid with catalogue source positions
 KiDS Data Release 4, P.I. K. Kuijken

ESO ALADIN 1.3.1



Summary of ASP Features

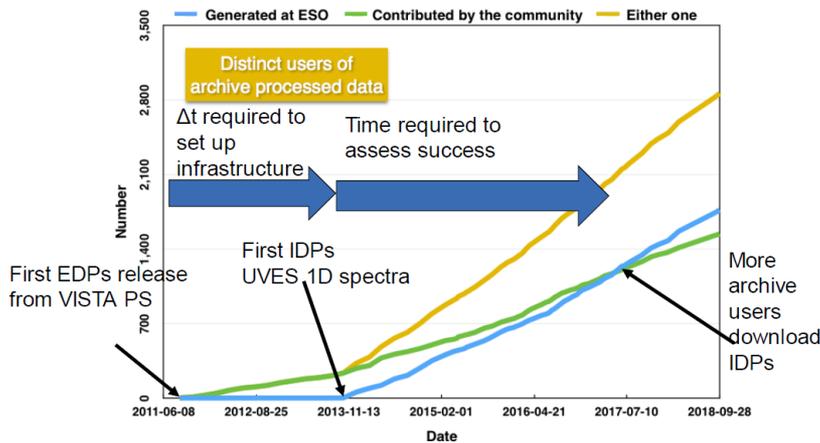
- Multi-dimensional faceted search
- Zooming and panning the sky view (powered by Aladin light, CDS)
- Aggregations expose the entire archive content
- Iterative queries (adding and dropping constraints)
- Footprints & dynamic coverage maps
- Highlighting of datasets across views
- Previews for all products
- Spectral data viewer
- Color-coding according to data type
- HiPS multi-resolution previews of imaging datasets
- Search by target name or around a position & target list
- Background Imagery from HiPS network
- Autocompletion of text-based fields
- Interval constraints
- Server-side sorting
- One-click download
- Dataset detail view
- Interoperability via SAMP & programmatic access

Building a community, impact & statistics from ESO SAF

Impact of quality archived science data

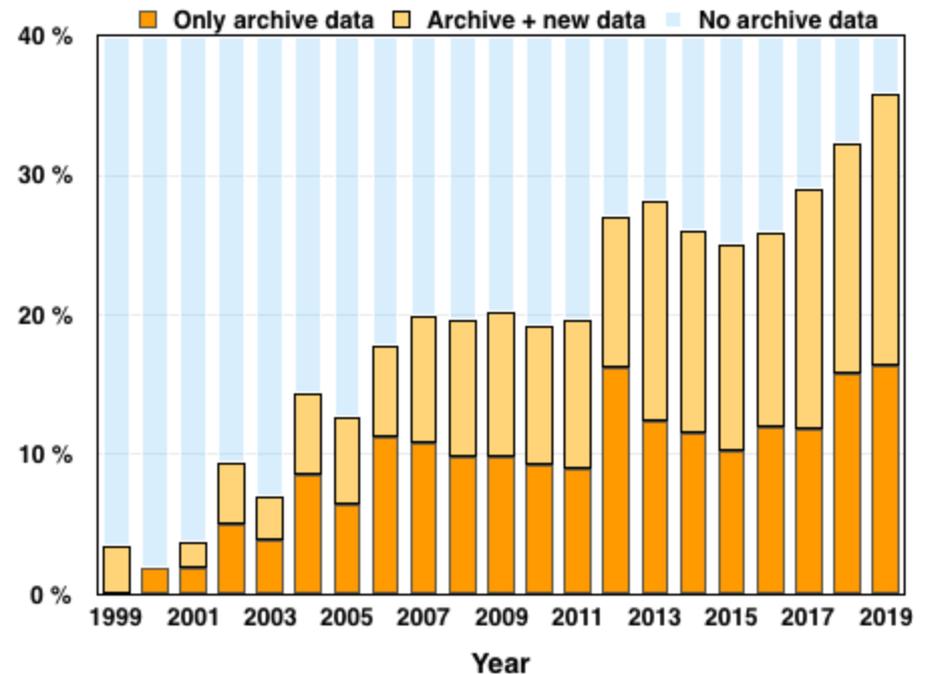
■ Building a community

- >3589 unique users of science ready data...and counting!
- **> 10 requests per user;**
- ~30% of these users are new to ESO, having not applied for tel. time



■ Refereed papers from Archive science

- The fraction of archive papers keeps increasing. In 2019 it reached 36%, up from 32% in 2018 and 29% in 2017.

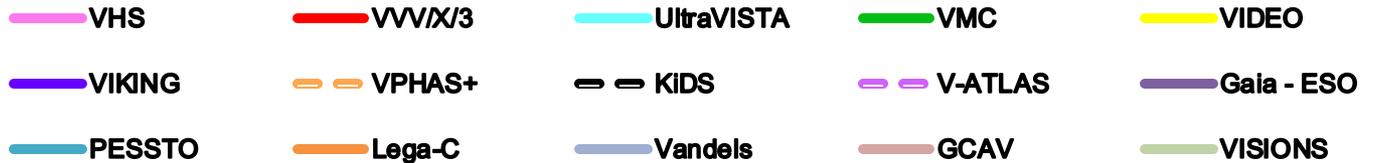
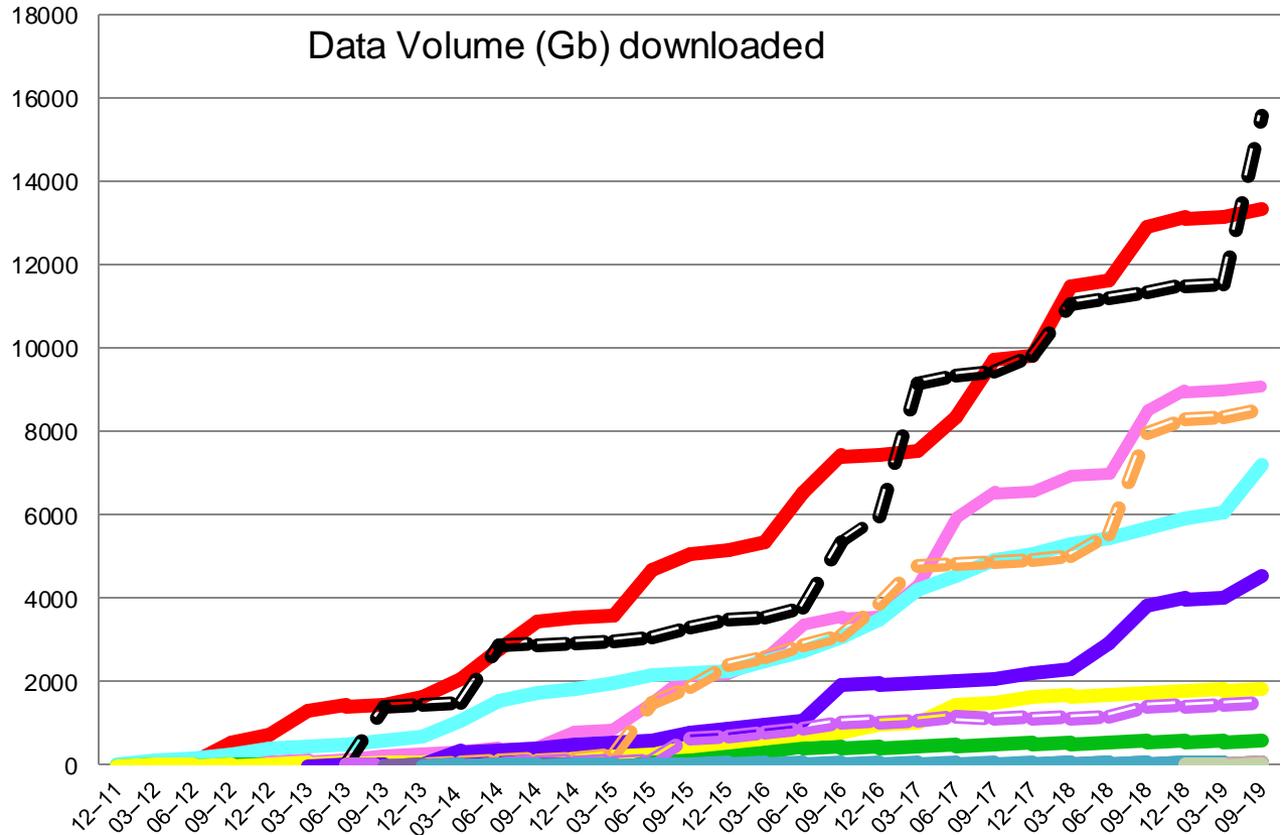




Returns for the community

<http://archive.eso.org/scienceportal>

Archive users are accessing science data products for their independent science



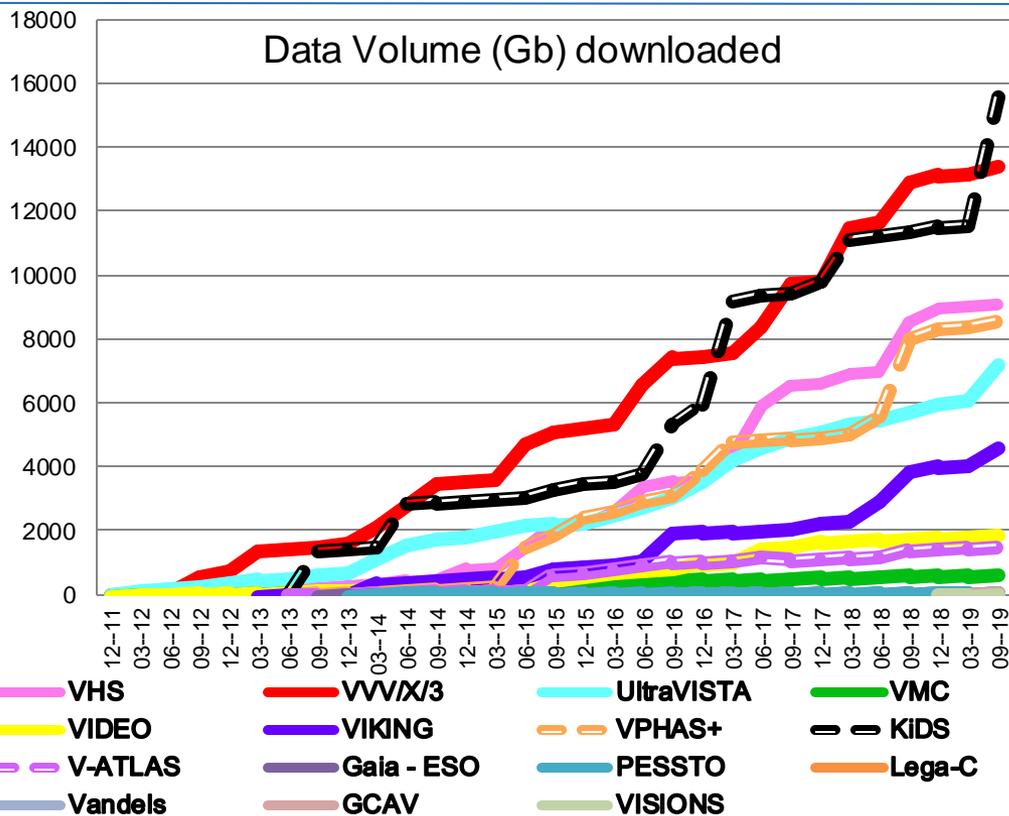
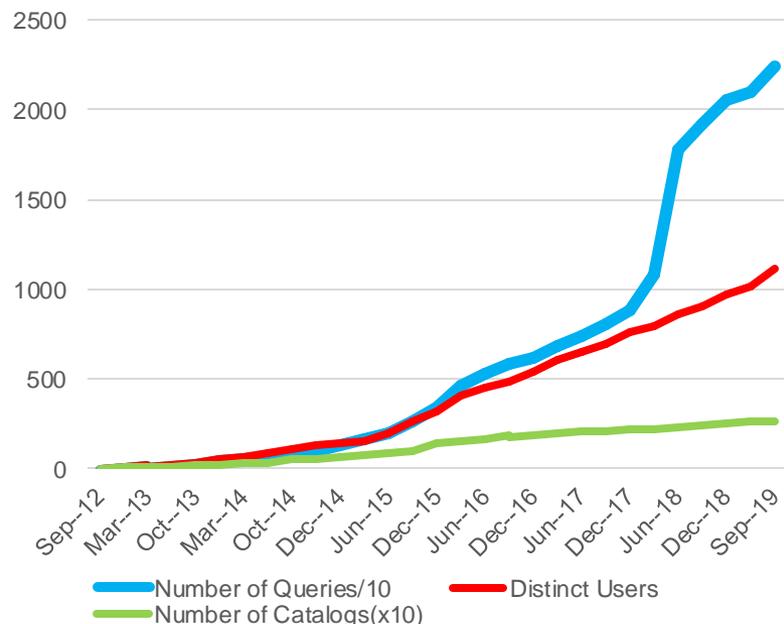


Returns for the community

<http://archive.eso.org/scienceportal>

Archive users are accessing science data products for their independent science

Catalogue facility
Number of queries and distinct users



On average users carry out **21**** independent queries for catalog records via the ESO catalog query interface.**

Since 06.2018, 10^5 invocations*/237 users for catalogues@ESO via programmatic access interface of SAF

*Aladin, topcat, sql queries

Forward look

- Exciting DRs from ESO PS (KIDS DR4, UltraVISTA DR4, VIKING DR4, GAIA-ESO DR4 etc) in 2019-2020
- Planet transit projects: Next Generation Transit Surveys (NGTS - DR1 on 19.11.2018), SPECULOOS, TRAPPIST and more DRs to come
- Call for Large programmes on VISTA/VST in P104
- Construction and deployment in operations of two wide field spectrometers: the Multi Object Optical and Near Infrared Spectroscopic Imager and the 4 meter Multi Object Spectroscopic Imager
- These spectrographs on VL1/VL2 (1000, ~2400 fibers), wide-field (500 sq. arcmin), ext. wavelength coverage (0.6-1.8 micron; 0.37-0.95 micron)

Call for Loi for 4MOST Community Public Surveys
Deadline February 28, 2020



■ End!