



Credits: INAF/ESA Herschel Space Observatory/Hi-GAL Consortium/ASI; Map-Making by UNIMAP (L. Piazzo, Univ. Sapienza Roma); Mosaics by E. Schisano (INAF-IAPS); Process by G. Li Causi (INAF-IAPS)



# Space-S1 ViaLactea Service

NEANIAS Open Event

Sant Cugat del Vallès, 22-23 Sep. 2022

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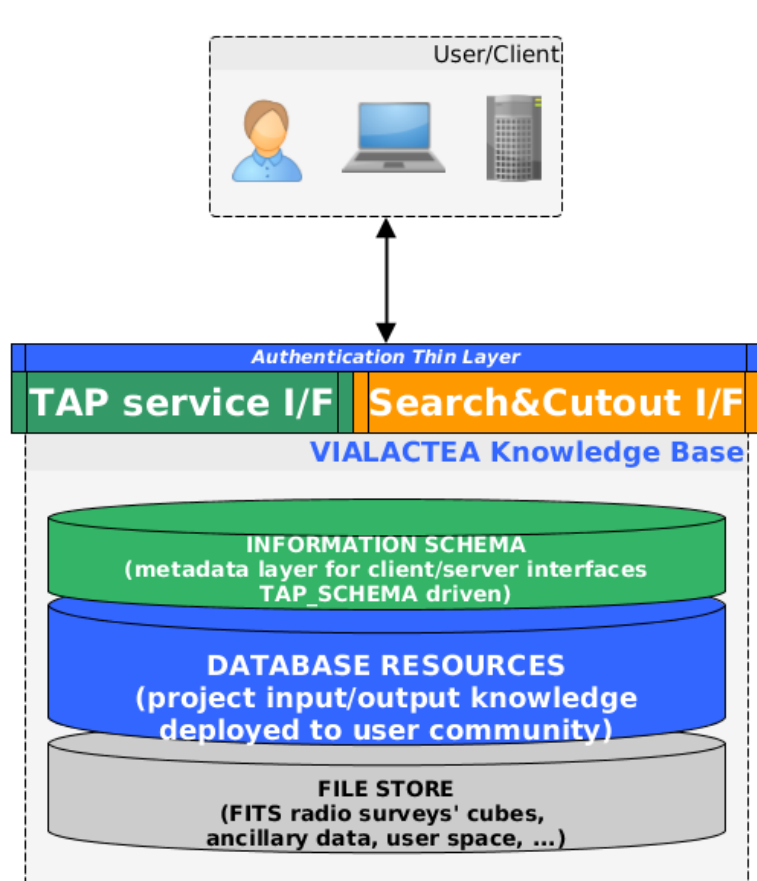




## ViaLactea Service Components

- ViaLactea Knowledge Base
- ViaLactea Web
- ViaLactea Visual Analytics





- The ViaLactea Knowledge Base (VLKB) identifies a set of data collections, catalogues and services enabling discovery and access on them, all targeted at the galactic plane and initially put together and made available by the EU FP7 VIALACTEA Project.
- The storage contains FITS files spanning from 2D images in the radio continuum to 3D cubes containing radio velocity spectra at specific molecular lines.
- The TAP service provides access to information of catalogue content such as compact sources, filament structures and numerical Spectral Energy Distribution (SED) models.



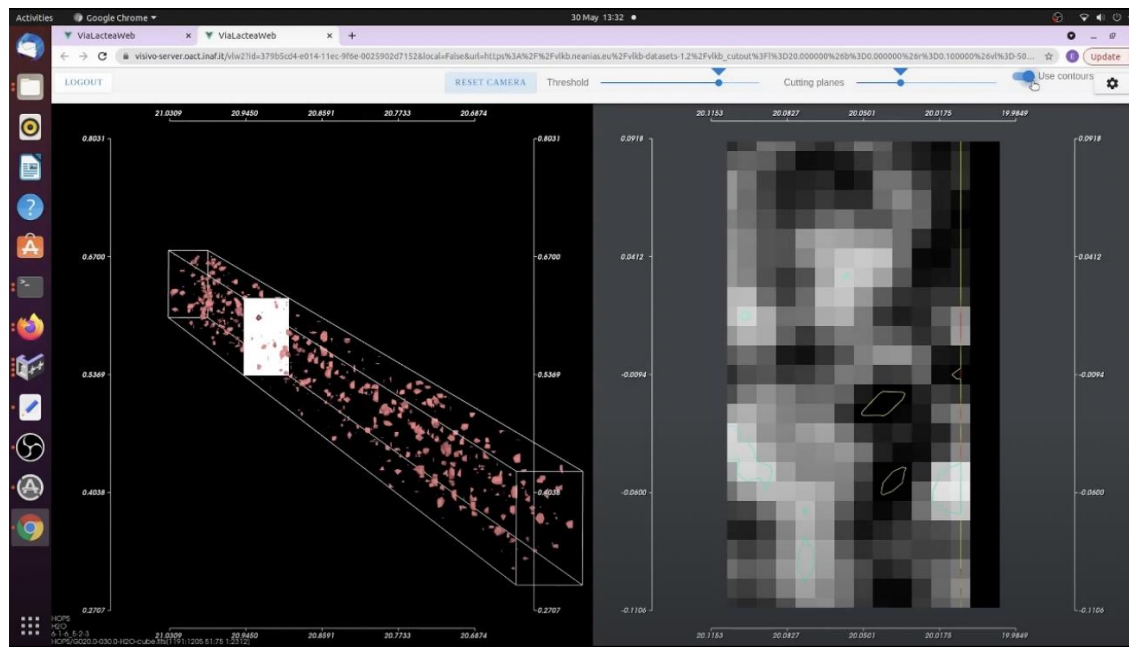
## VLKB Services

The scientific data inside the VLKB are accessible through dedicated search, cutout and merge services for 2D intensity images and 3D radial velocity cubes.

Parameters	search	cutout	merge	Description
(l b) [deg]	mand	mand	mand	center point
r or (dl db) [deg]	mand	mand	mand	area: circle or rectangle
(vl vu) [km/s]	opt	opt	opt	velocity lower-upper bound
pubdid	n/a	mand	mand	PublisherDID
surveyname	opt	n/a	mand	
species	opt	n/a	mand	
transition	opt	n/a	mand	
nullvals	n/a	opt	n/a	undefined-pixel count



- Web browser based visual analytic solution with access to VLKB
- Flexible for future functional extension and various environments adaptation (desktop/mobile/tablet support)
- Efficient offscreen visualisation (GPU and CPU rendering) on remote server



<https://github.com/NEANIAS-Space/ViaLacteaWeb>



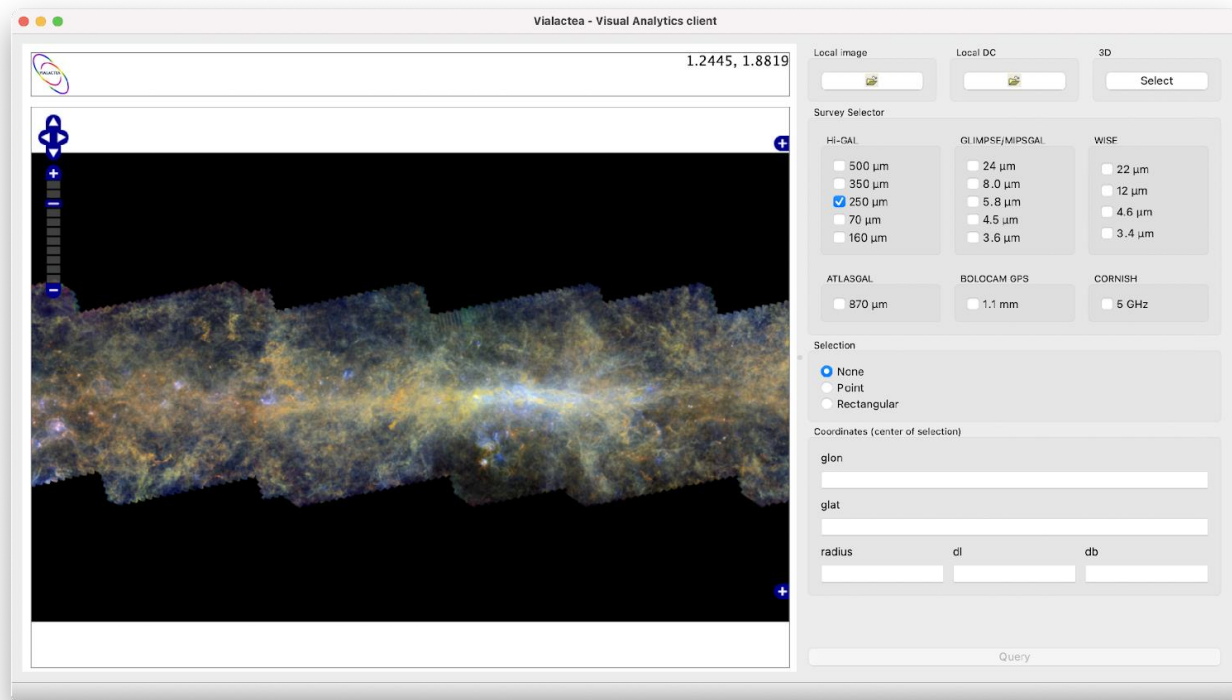
<https://visivo-server.oact.inaf.it>





ViaLactea Visual Analytics (VLVA) is an open-source cross-platform desktop application implemented in C++ extended with the Qt libraries for the GUI and Visualization Toolkit (VTK) for rendering.

The tool communicates with the VLKB to obtain user-requested data and offers a visual analytics environment allowing the users to conduct research activities on two-dimensional regions of space and three-dimensional datacubes.



<https://github.com/NEANIAS-Space/ViaLacteaVisualAnalytics>



<https://hub.docker.com/r/neaniasspace/vialacteavisualanalytics>

