
Plan Overview

A Data Management Plan created using DMPTool

Title: ViaLactea Data for Visual Analytics

Creator: Eva Sciacca - **ORCID:** [0000-0002-5574-2787](https://orcid.org/0000-0002-5574-2787)

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ViaLactea Data for Visual Analytics

Products of research

Describe the types of data and products that will be generated in the research, such as physical samples, space and/or time-dependent information on chemical and physical processes, images, spectra, final or intermediate numerical results, theoretical formalisms, computational strategies, software, and curriculum materials.

The ViaLactea Visual Analytics (VLVA) will consume a variety of surveys to analyze star formation regions within the Milky Way Galactic Plane in different wavelength. Currently the following surveys are made accessible for analysis, the surveys can be classified into the following categories:

- Near-InfraRed: UKIDSS (<http://www.ukidss.org>) and VISTA VVV (http://mwm.astro.puc.cl/mw/index.php/Main_Page).
- Mid-InfraRed: The GLIMPSE (<http://www.astro.wisc.edu/glimpse>), WISE (<http://wise.ssl.berkeley.edu>) and MIPS GAL (<http://mipsgal.ipac.caltech.edu>).
- Far-InfraRed: HERSCHEL Hi-GAL (<http://hi-gal.ifs-roma.inaf.it>).
- Sub-millimetre continuum: ATLASGAL (http://atlasgal.mpifr-bonn.mpg.de/cgi-bin/ATLASGAL_DATABASE.cgi) and JCMT (<http://www.eaobservatory.org/jcmt/science/legacy-survey/>).
- Molecular and Atomic Line Surveys: the Galactic Ring Survey (<http://www.bu.edu/galacticring>) (GRS) and the International Galactic Plane Survey (<http://www.ras.ucalgary.ca/IGPS>) (IGPS)
- Radio continuum: the CORNISH (<http://www.leeds.ac.uk/Cornish>) and MAGPIS (<http://third.uclnl.org/gps/>).
- Molecular Masers: the Methanol Multi-Beam survey (<http://www.jb.man.ac.uk/research/methanol>) (MMB)

Each survey retains its own data policy and only the public part will be made available to the VLVA users.

Products of these analysis will be published in the major journals detailing the pipelines and workflows to obtain them and will be made publicly available within the ViaLactea Knowledge Base (VLKB) for further studies and analysis.

Data format

Describe the format in which the data or products are stored (e.g. hardcopy logs and/or instrument outputs, ASCII, XML files, HDF5, CDF, etc). What metadata will be part of the data sets produced?

The accessed data are available in the following formats:

- Flexible Image Transport System (FITS) cubes : Radio cubes surveys and pointed archives.

for the following surveys: CHIMP, CHaMP, HOPS, ThrUMMS, JCMT-HARPS, MALT90, VGPS, CGPS, SPGS

- FITS images : Continuum surveys.

for the following surveys: CORNISH, MAGPIS, MIPS GAL, WISE

- Catalogues Single band catalogues used in band-merging (in CSV).

for the following surveys: WISE, ATLASGAL, BGPS, MIPS GAL, MSX

Access to data, and data sharing practices and policies

Describe your plans for providing access to data, including websites maintained by your research group and contributions to public databases. If maintenance of a web site or database is the direct responsibility of your group, provide information about the period of time the web site or database is expected to be maintained. Also describe your practice or policies regarding the release of data—for example whether data are available before or after formal publication and the approximate duration of time that the data will be kept private. Describe your policies (where applicable) for protection of propriety data, privacy and confidentiality, intellectual property, or other rights or requirements.

The data will be updated following survey updates and analysis results (e.g. for band-merging processing or filamentary structure detections) due to updates to the pipelines used to generate them.

Versions of the data product that have been revised due to errors / updates (other than new data) will be retained in an archive system. A revision history document will describe the revisions made.

Backups of the data files will be retained at the INAF IA2 data center.

Policies and provisions for re-use, re-distribution and production of derivatives

Describe your policies regarding the use of data provided via general access or sharing. If you plan to provide data on a website, will the site contain disclaimers, or conditions regarding the use of the data in other publications or products? If the data or products are copyrighted, how will this be noted on the website?

The final data product will be released to the public as soon as the star formation studies have been completed and the data have been prepared. There is no period of exclusive use by the data collectors. Users can access the data files via the VLVA and the VLKB interfaces. Raw data will be maintained on internally accessible servers and made available on request at no charge to the user.

Archiving of data

Describe whether and how data will be archived and how preservation of access will be handled. For example, will hardcopy logs, instrument outputs, and physical samples be stored in a location where there are safeguards against fire or water damage? Is there a plan to transfer digitized information to new storage media or devices as technological standards or practices change? Will there be an easily accessible index that documents where all archived data are stored and how they can be accessed? If the data will be archived by a third party, please refer to their preservation plans (if available).

Our intent is that the long-term high quality final data product generated by this project will be available for use by the research and policy communities in perpetuity. The raw supporting data will be available in perpetuity as well, for use by researchers to confirm the quality of the ViaLactea data.

The standardized metadata record relies on the Virtual Observatory standards to be easily discoverable at large by the astronomical community.