Visual Analytics in Astrophysics: an integrated tool based on VisIVO

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VisIVO

VisIVO is an innovative framework that offers a unique integrated ecosystem for data exploration, visualization and visual analytics operations. It includes mobile and desktop applications and services for collaboration using science gateway technologies.

It has been re-thought under the big-data paradigm, focusing on: an effective merger of the filtering/visualization pipeline optimizing data movement and memory usage. In this way the user can see in real time the effect of operations or interactions with the visualization results.

VisIVO is **VO-enabled**, it implements *SAMP* protocol. This means that it is possible to send and receive data to and from a number of other tools such as TOPCAT, SAO Ds9 and Aladin.

VisIVO packages have been used as core to create stand-alone tools like the *Muon tomography visualizer* for the *Muon Portal project* or the *VIALACTEA Visual Analytics* client for the VIALACTEA project. This tools are also available inside VisIVO framework.

VIALACTEA Visual Analytics has been developed in the context of the FP7 VIALACTEA project which aims to exploit the combination of all new-generation surveys of the Galactic Plane to build and deliver a galaxy scale predictive model for star formation of the Milky Way.
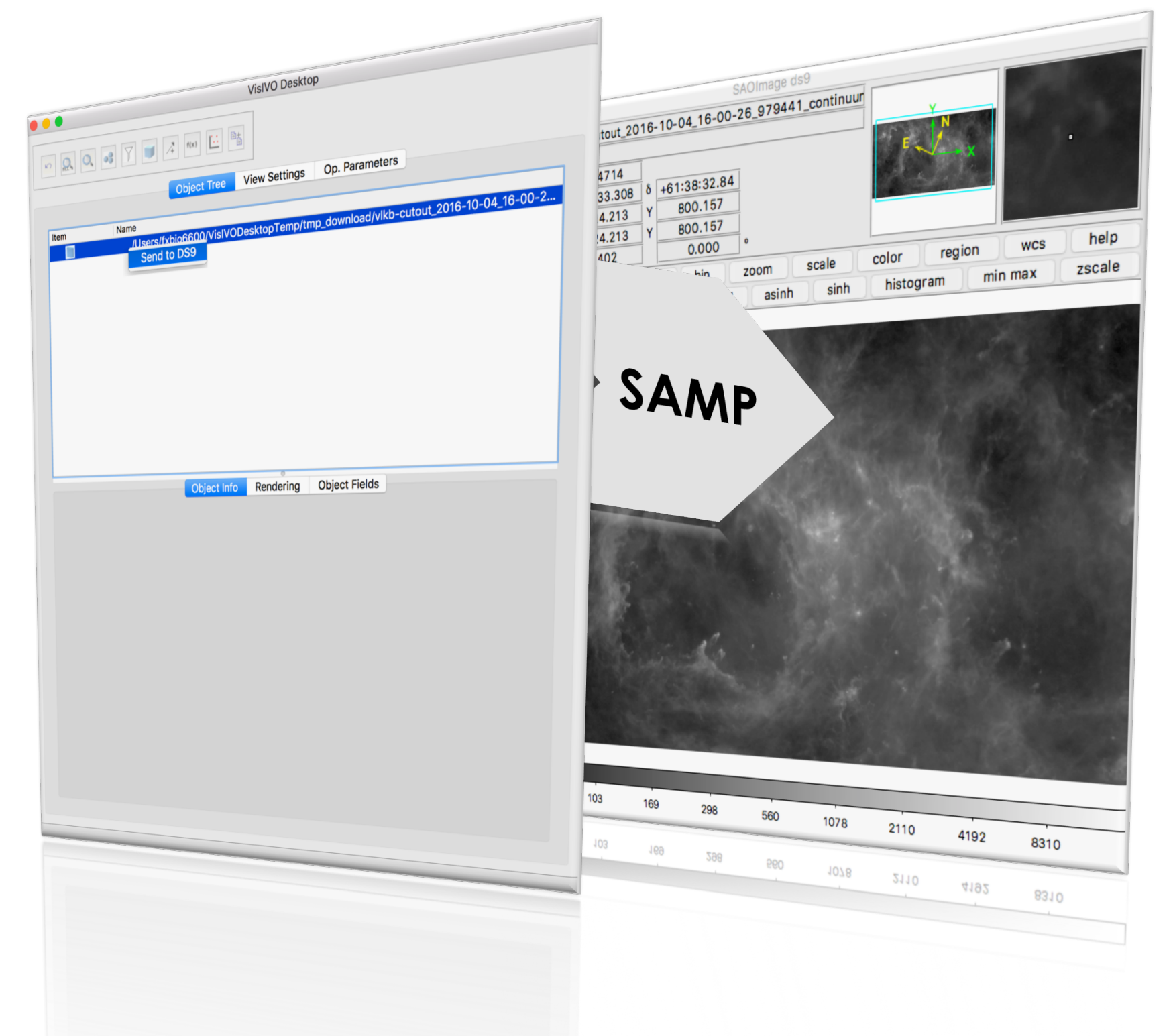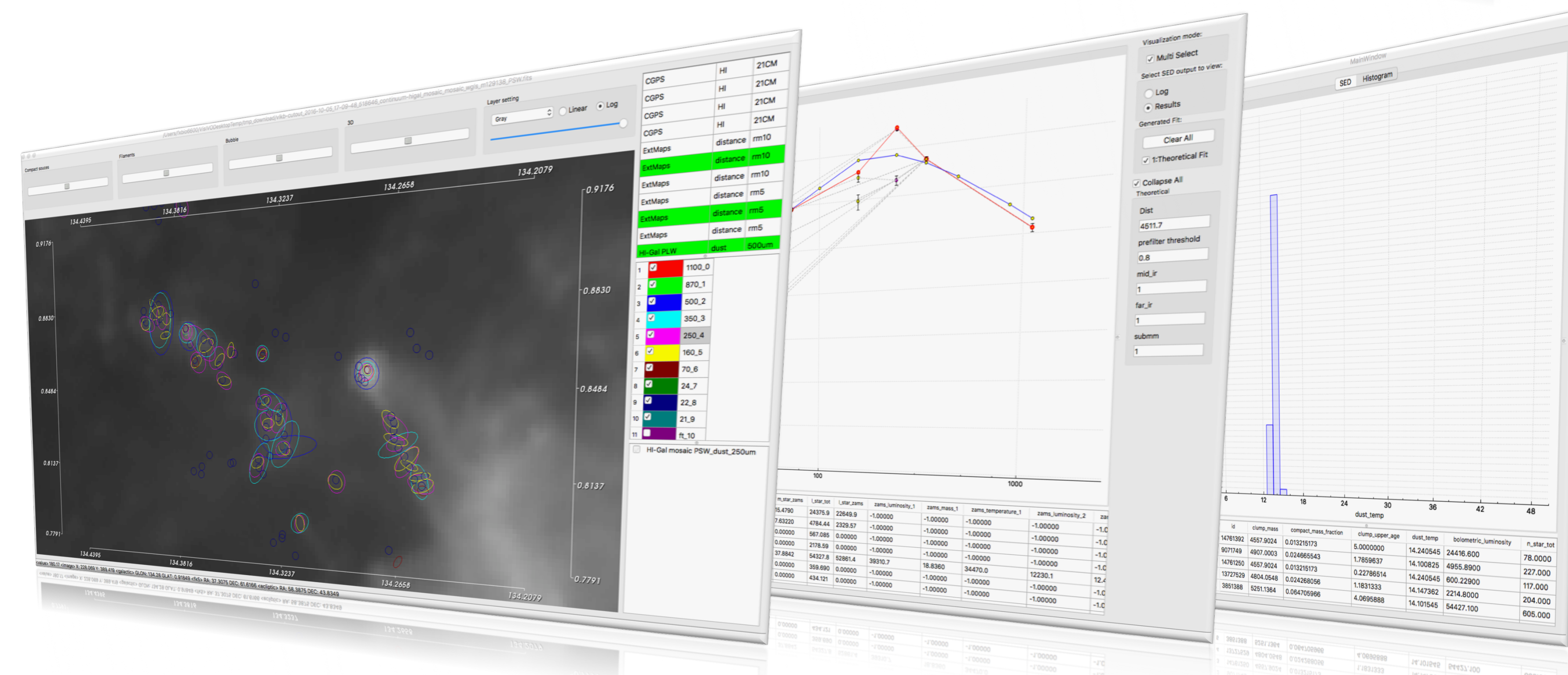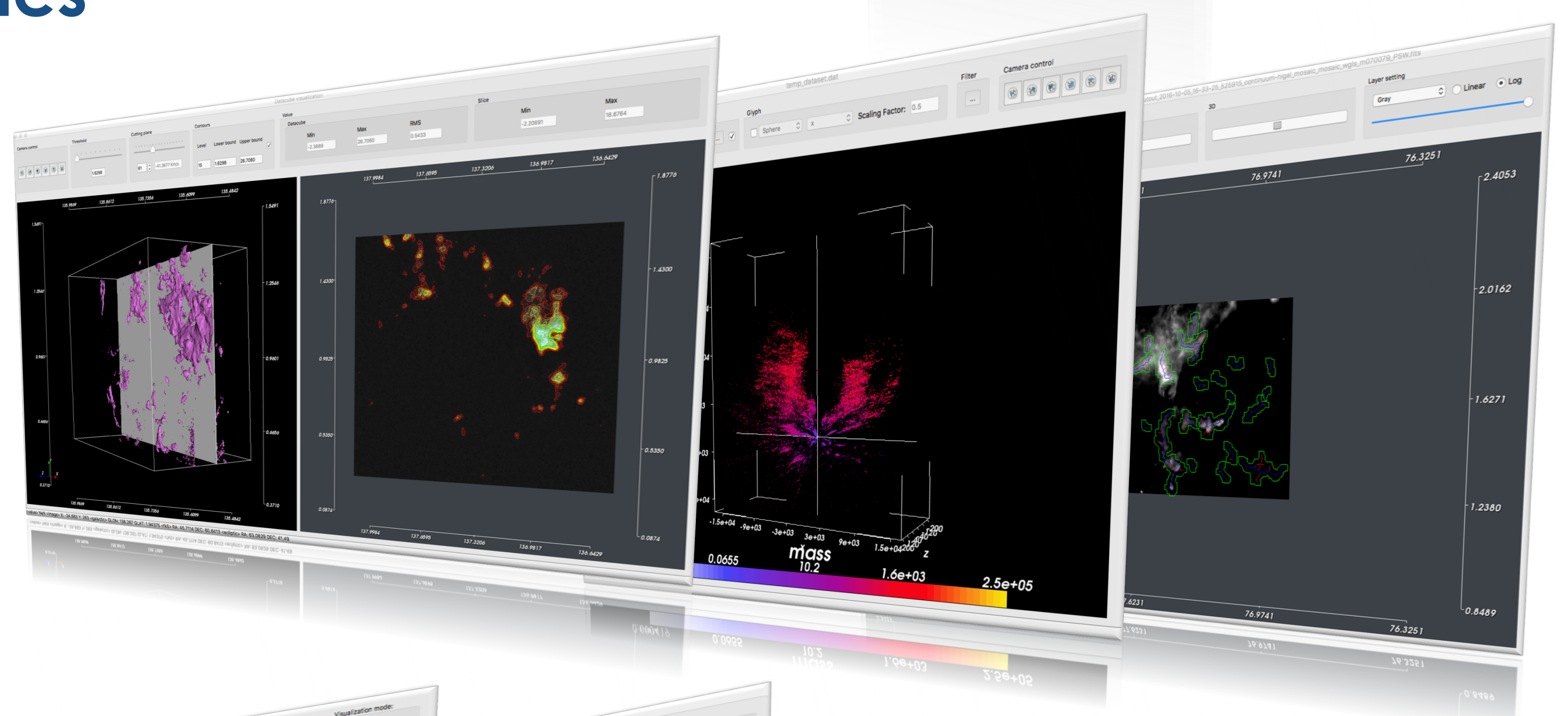

VIALACTEA Visual Analytics

Load your observational and simulated datasets or download one available in the VLKB (see related posters).

VIALACTEA Visual Analytics allows you to **visualize** 2D fits images, 3D fits datacubes and 3D representation of astrophysical data.

It includes fully integrated packages to interpret and study the spectral energy distribution (SED) of astronomical objects with the help of the most modern and complete models of star cluster formation developed in the framework of VIALACTEA project.

Use *VIALACTEA Visual Analytics* and combine different type of visualization to perform your **analysis**.

Explore the correlation between different data, for example 2-D intensity images with 3-D molecular spectral cubes.

Discover the link between different physical structures, from the extended and diffuse filamentary-shaped region of star forming complexes to the most compact, dense sources precursors of the real stars.

Related posters

P4.4, R. Butora - *Common access to 2-D and 3-D galactic radio surveys within the VIALACTEA project*

P4.17, R. Smareglia - *Archive, discover and match compact and diffuse objects on the galactic plane in the VIALACTEA project*

More information

http://visivo.oact.inaf.it/visualanalytics