VisIVO is a package for supporting the visualization and analysis of astrophysical multi-dimensional data. It is VO standards compliant and supports the most important astronomical data formats such as FITS, HDF5 and VOTables. It is also able to interoperate with the other astronomical VO compliant tools through PLASTIC (PPlatform for AStronomical Tool InterConnection). This feature allows VisIVO to share data with many other astronomical softwares in order to obtain further information on the data loaded. VisIVO is included in the PRIN INAF program “Determinazione delle proprietà della materia oscura con il weak lensing nelle survey a largo campo”

**VisIVO Data Sharing and Interoperability**

VisIVO start the PLASTIC hub connection

Topcat select a subsample from the received VoTable, and....

VisIVO highlights selected data from Topcat

...send the selection to VisIVO

Topcat receives data from VisIVO

VisIVO and submitted jobs in the INFN Grid (EGEE compliant)

We have built a web service that allows VisIVO to run HOP in grid. HOP is an algorithm for finding groups of particles based on their instantaneous densities (developed and coded by Daniel Eisenstein & Piet Hut, Institute for Advanced Study, Princeton, NJ). The user can run an HOP instance from VisIVO. The output file is a VoTable containing clustered particles with their density values and group id from the HOP algorithm. The possibility of displaying and analyzing VoTable data is a fundamental feature of VisIVO. The VoTables reader is implemented using Savot 2.6, a set of Java libraries developed by CDS Strasbourg (http://cdsweb.u-strasbg.fr)