

# Visualisation

André Moitinho

GENIUS WP 400.20 /  
DPAC CU9 WP980

# Architecture



Gaia archive



Object  
Server



Visualization  
clients

e.g. CSI-VEGA, Topcat  
VISIVO, Aladin, ...

# User interface (client) - Lets keep it simple!

irsa.wise.image.server - P... WISE - Position

irsa.ipac.caltech.edu/applications/wise/#id=Hydra\_wise\_wise\_1&RequestClass=ServerRequest&DoSearch=true&in Search

Most Visited ADS astroph Gaia Gaia Archive Core... CINE Diretório de Utiliz... SIMBAD STSC: Working Gr... AVI guide Outlook Web App AS

IRSA | DATA SETS | SEARCH | TOOLS | HELP

Pixel Size: Eq-12000: Image Pixel: WISE Band 4 Lock By Click Background Monitor

WISE Searches History Help Catalogs

Position m33; Type=CENTER; Image Size=0.1667 deg; allwise-multiband

Coverage Multi-Color Details

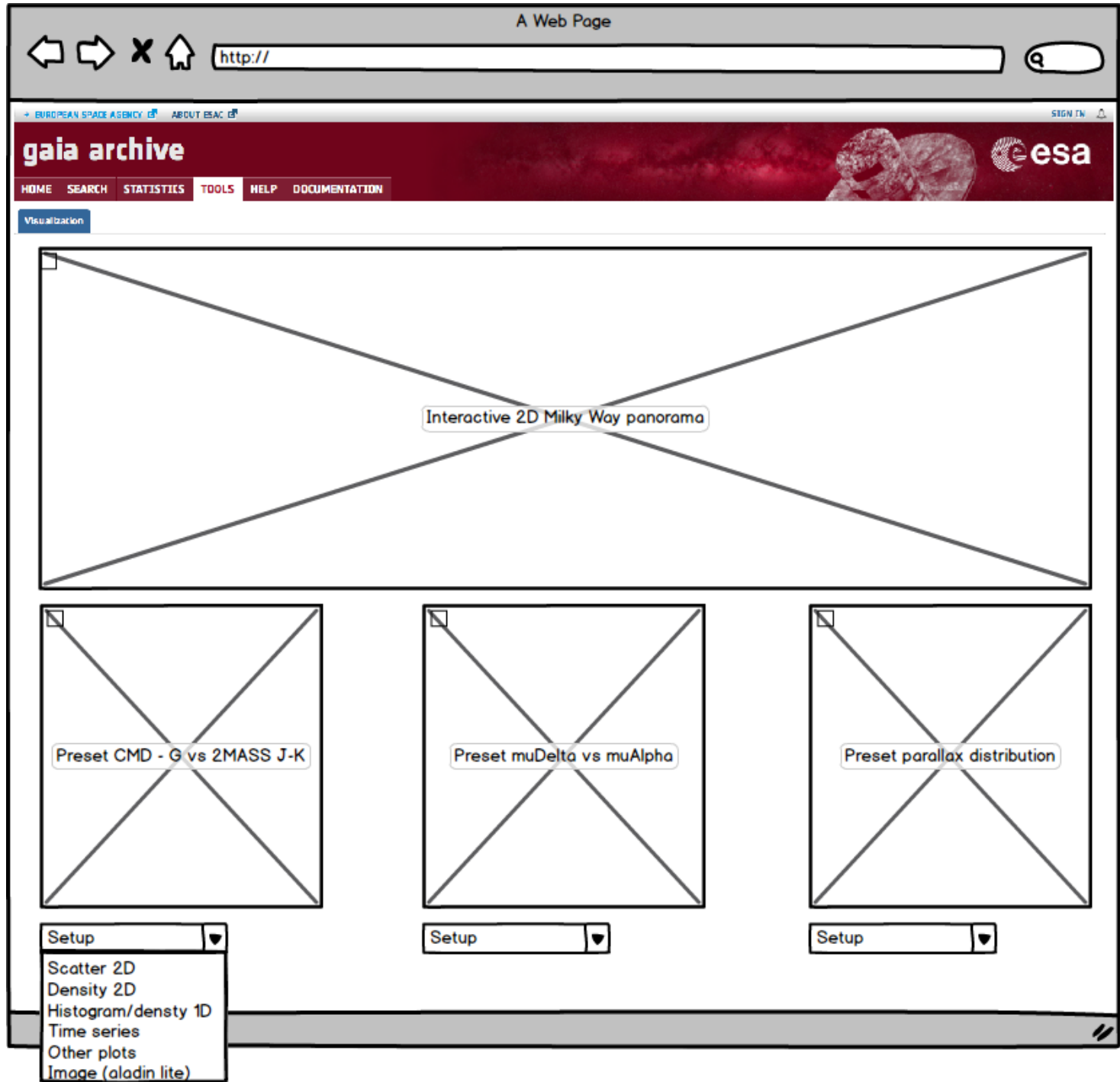
IRAS:IRIS 100 2.5x

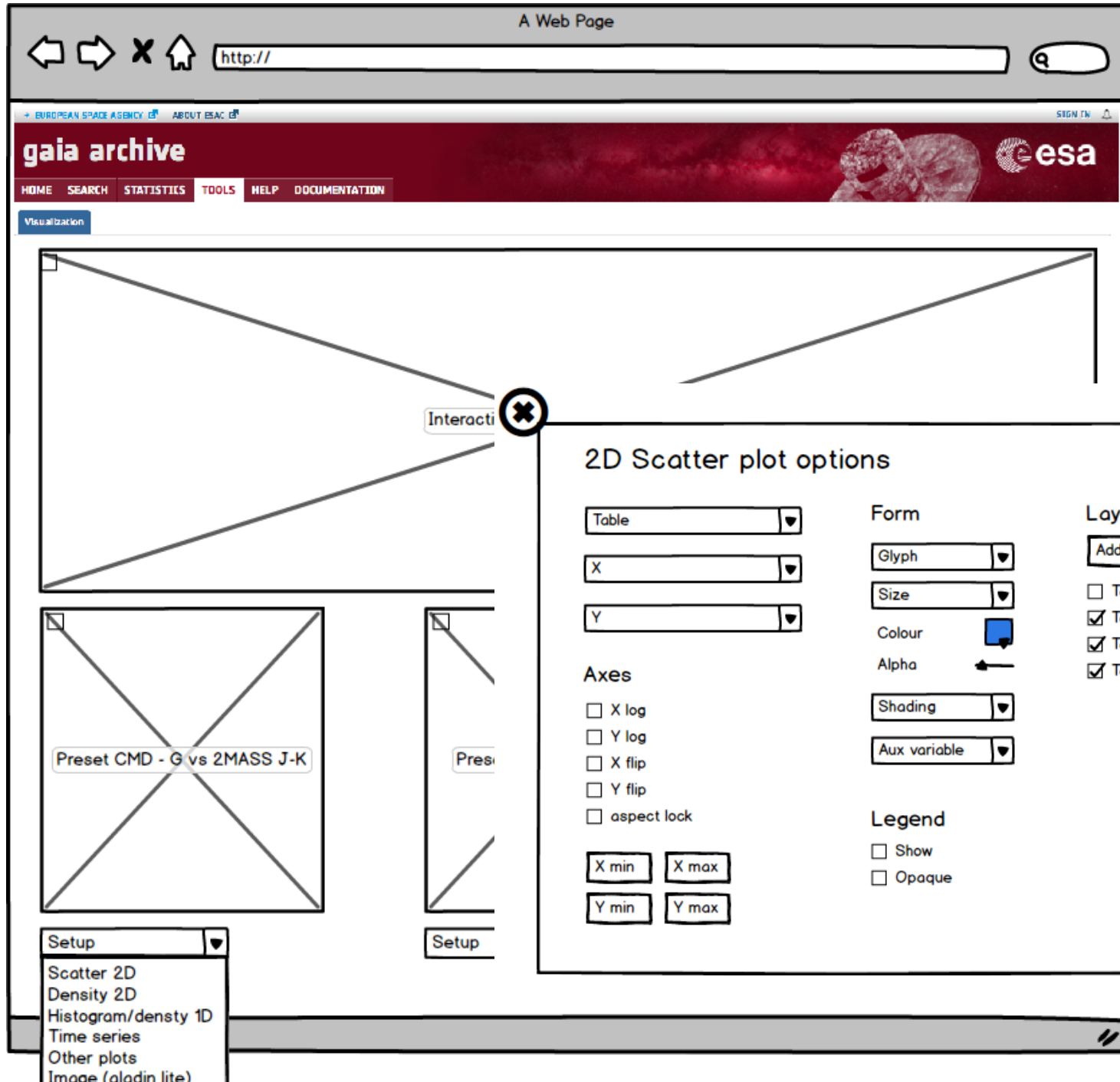
Atlas (Level 3)

Prepare Download 1 of 1 (1 - 4 of 4)

<input type="checkbox"/>	band	coadd_id	date_obs1	mid_obs	date_obs2
<input type="checkbox"/>	1	0226p302_ac51	2010-01-16 23:36:35.494	2010-07-25 06:48:10.520	2011-01-20 05:20:55.686
<input type="checkbox"/>	2	0226p302_ac51	2010-01-16 23:36:35.494	2010-07-25 06:48:10.520	2011-01-20 05:20:55.686
<input type="checkbox"/>	3	0226p302_ac51	2010-01-16 23:36:35.494	2010-07-23 21:28:11.984	2010-08-03 00:21:57.473
<input type="checkbox"/>	4	0226p302_ac51	2010-01-16 23:36:35.494	2010-07-23 21:28:11.984	2010-08-03 00:21:57.473

WISE Band 1 1x WISE Band 2 1x WISE Band 3 1x WISE Band 4 1x





Interact

## 2D Scatter plot options

Table

X

Y

### Form

Glyph

Size

Colour

Alpha

Shading

Aux variable

### Axes

- ☐ X log
- ☐ Y log
- ☐ X flip
- ☐ Y flip
- ☐ aspect lock

X min X max

Y min Y max

### Layers

Add

- ☐ Table 1
- ☒ Table 2
- ☒ Table 3
- ☒ Table 4

### Legend

- ☐ Show
- ☐ Opaque

Preset CMD - G vs 2MASS J-K

Pres

Setup

- Scatter 2D
- Density 2D
- Histogram/density 1D
- Time series
- Other plots
- Image (aladin lite)

Setup

Gaia Archive Core System... x +

https://gaia.esac.esa.int/archive/ Search

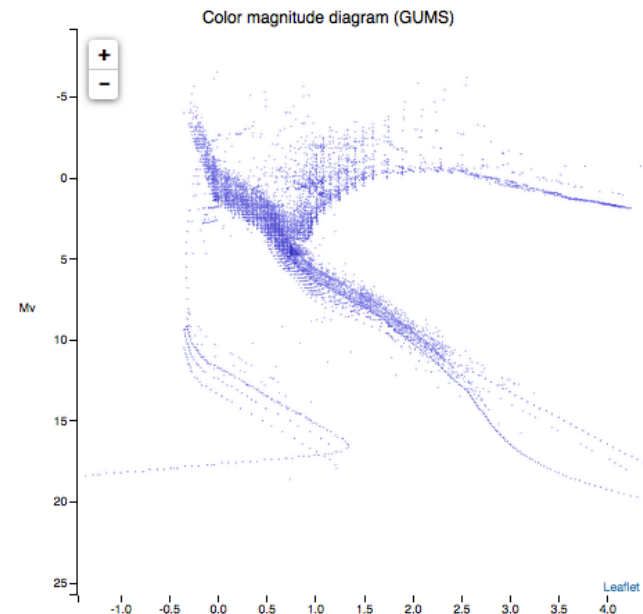
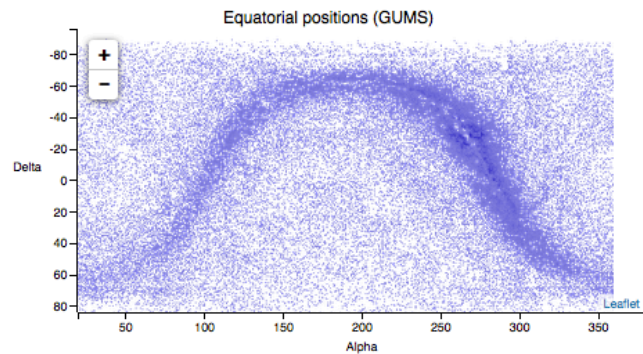
Most Visited ADS astroph Gaia Gaia Archive Core... CINE Diretório de Utiliz... SIMBAD STSC: Working Gr... >>

EUROPEAN SPACE AGENCY ABOUT ESAC SIGN IN

# gaia archive

HOME SEARCH STATISTICS **TOOLS** HELP DOCUMENTATION

Visualization

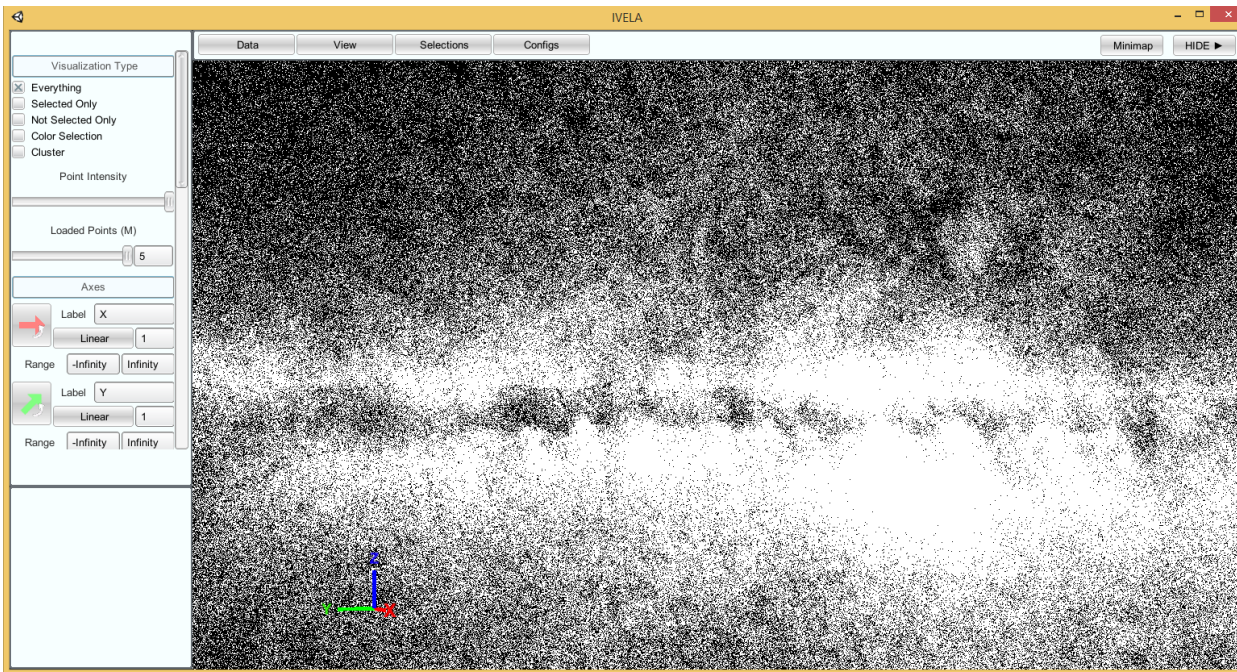


### Other visualization applications:

[Gaia 3D](#)  
[Topcat](#)  
[Aladin](#)  
[Vaex](#)  
[Visivo](#)  
[Sandbox](#)

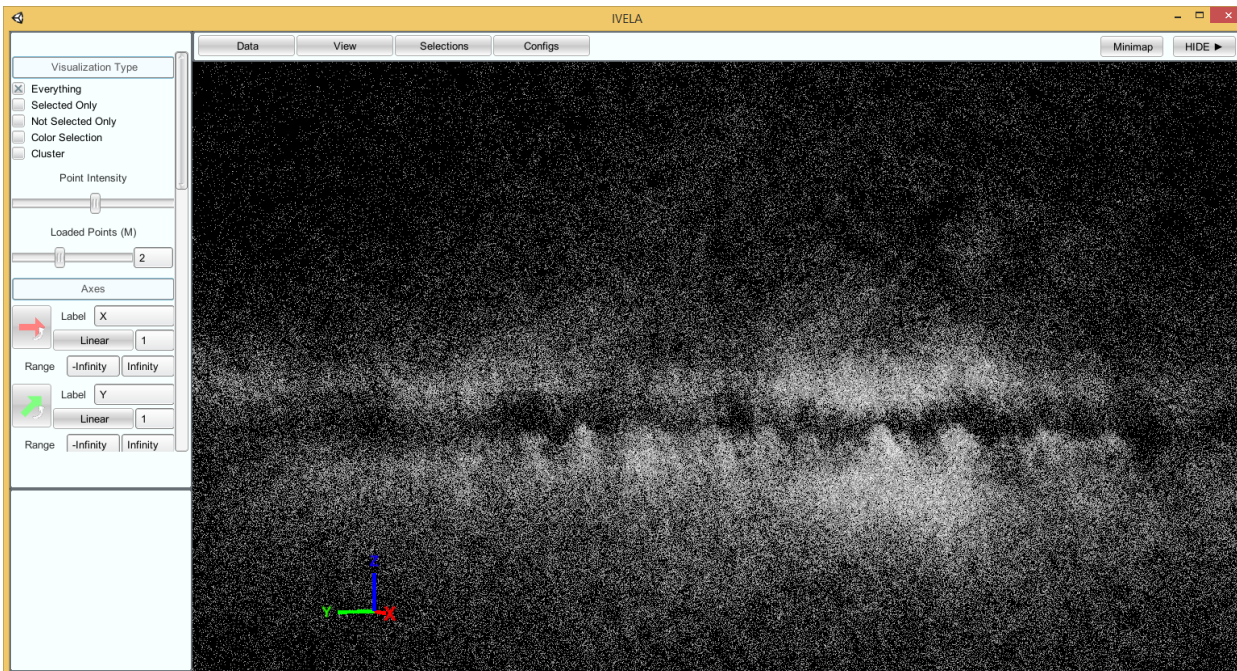
Levels of detail as rasters  
computed on the server side.  
Tech: Leaflet  
**No points are left out!**



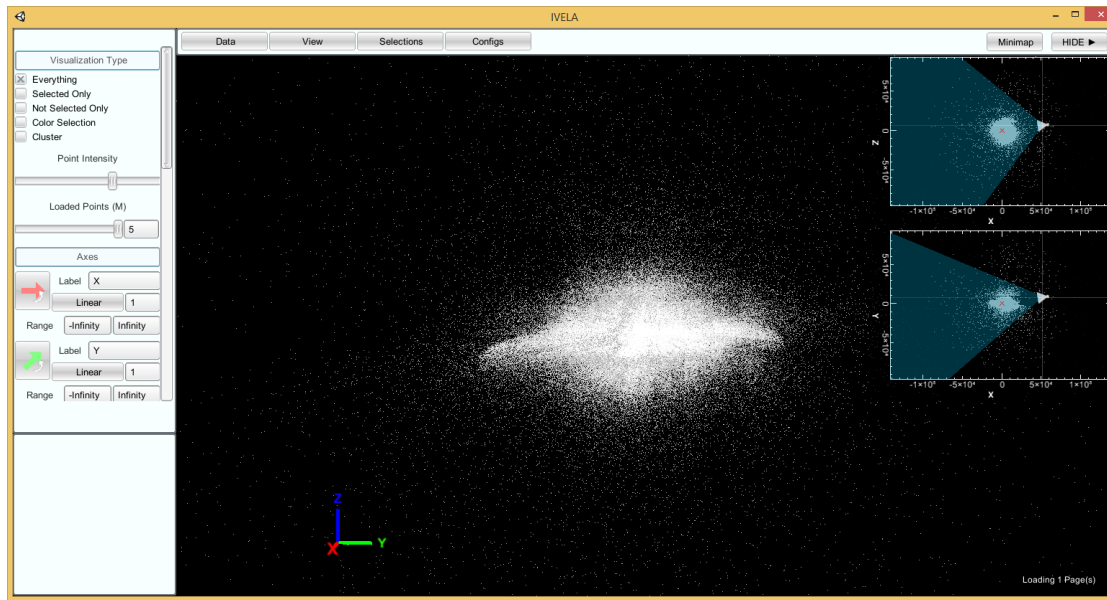


External 3D navigator  
receiving from Vis  
Server

View of the GUMS  
GC. Full point  
intensity and  
maximum  
simultaneous points

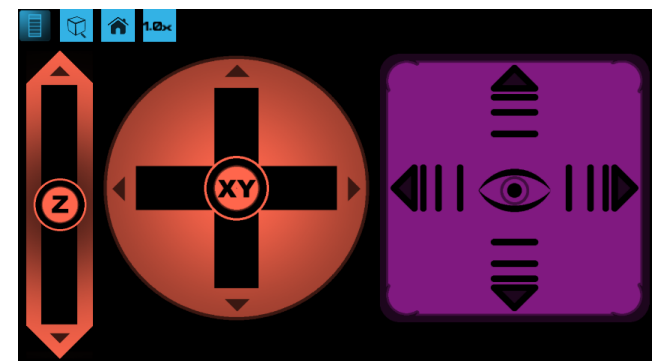
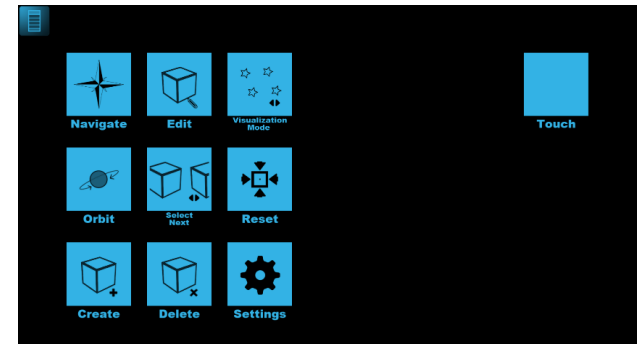
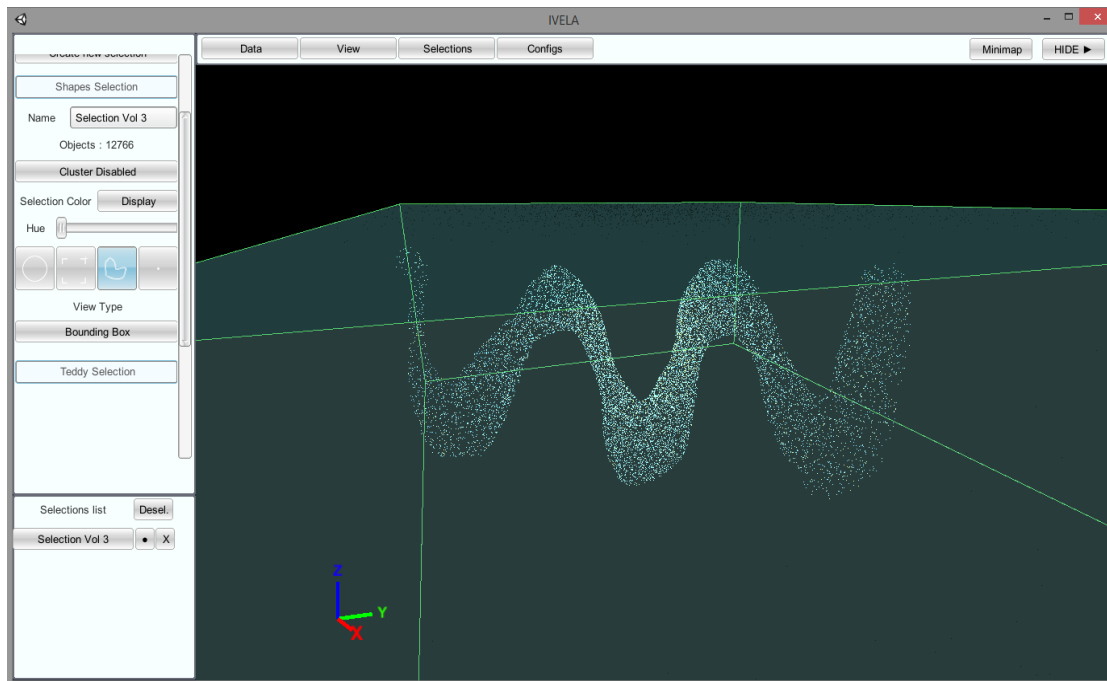


Limited to 2 million  
and medium point  
intensity



Mini map feature

Advanced 3D selection  
and interfaces





- Final notes
  - Optimised for common hardware.
    - Must make sure that will scale appropriately.
  - Interest from other parties
    - Uniview
    - Glue python framework (Harvard, NASA)