F R E L L E D

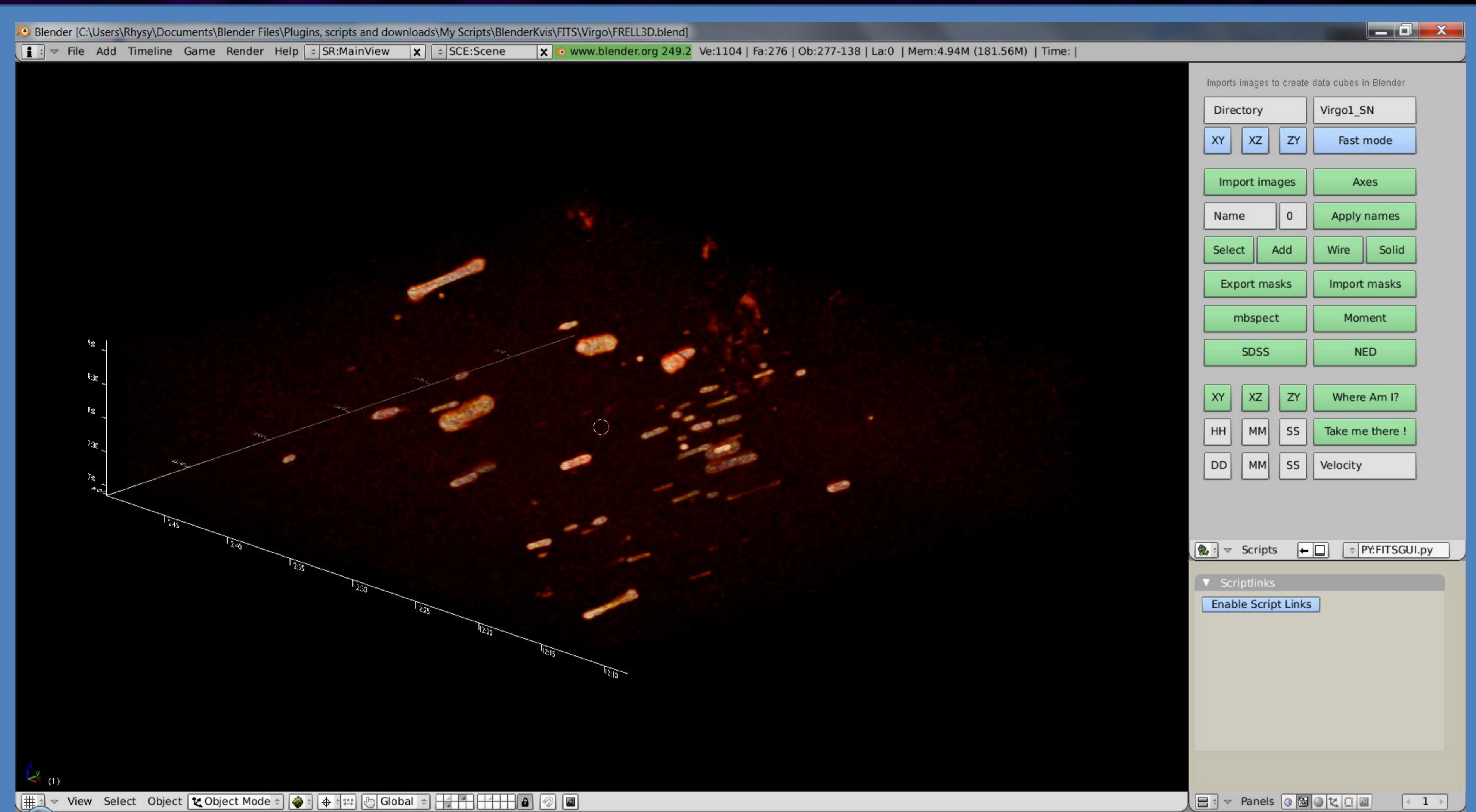## Fits Realtime Explorer Low Latency Every Dimension

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FRELLED is a FITS viewer designed for 3-dimensional data sets. Unlike other viewers, FRELLED allows the user to freely rotate the view in realtime, with no need to wait while the view is re-rendered. This is made possible by the user of the graphics engine of Blender, an open-source graphics creation suite. FRELLED also allows the user to interactively mask regions and create inputs for use with other analysis programs.
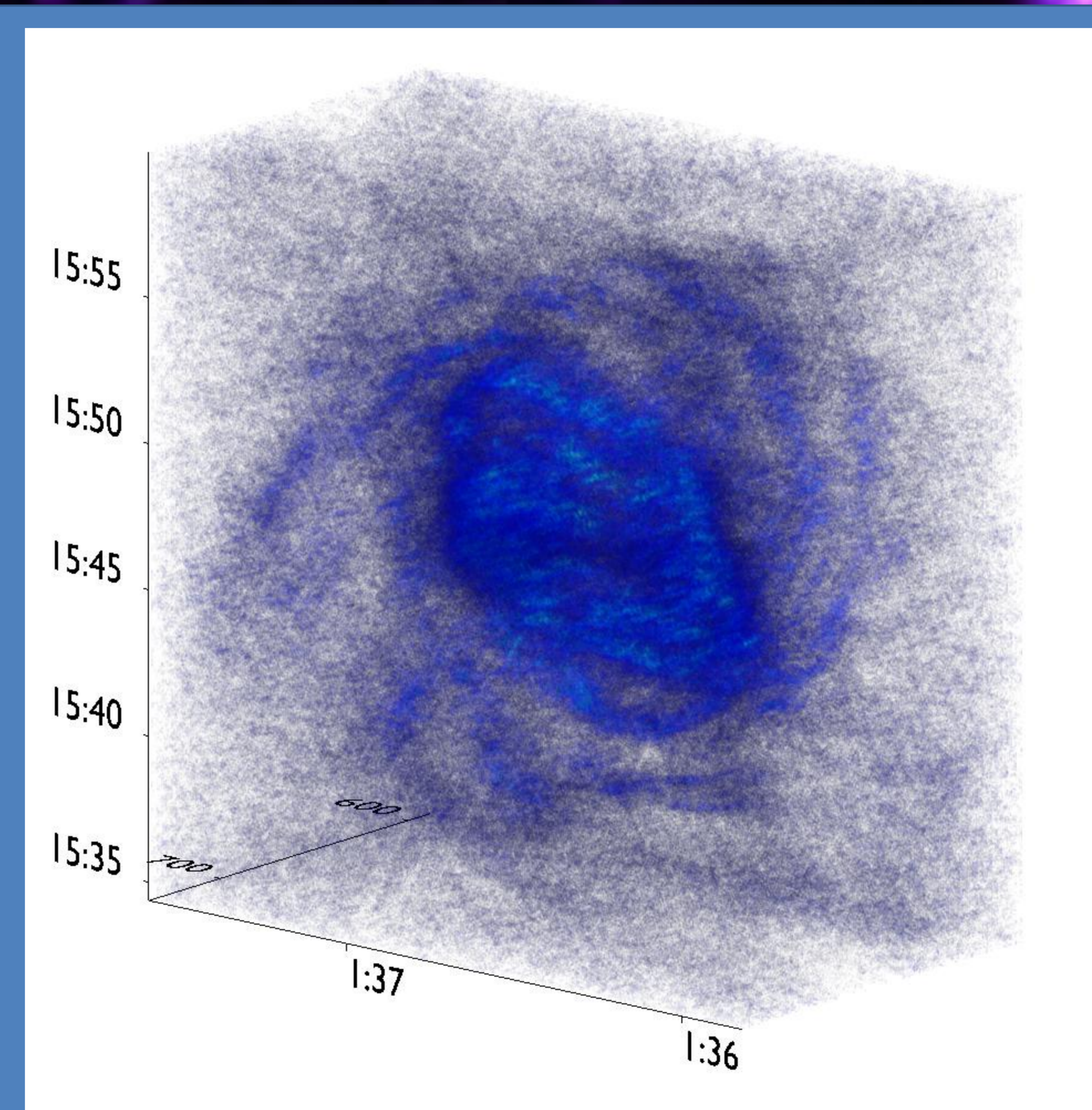
Extended sources can now be explored in a new way. Rather than taking many hours to carefully create a fixed movie, the user can easily position the view wherever they like. Creating a movie is unnecessary since the view is updated in real time. FRELLED relies on the GPU, so it is strongly hardware dependent. With a 1 GB graphics card, data cubes of about 600^3 voxels can be viewed. Larger data sets can be rendered, but with lower performance.
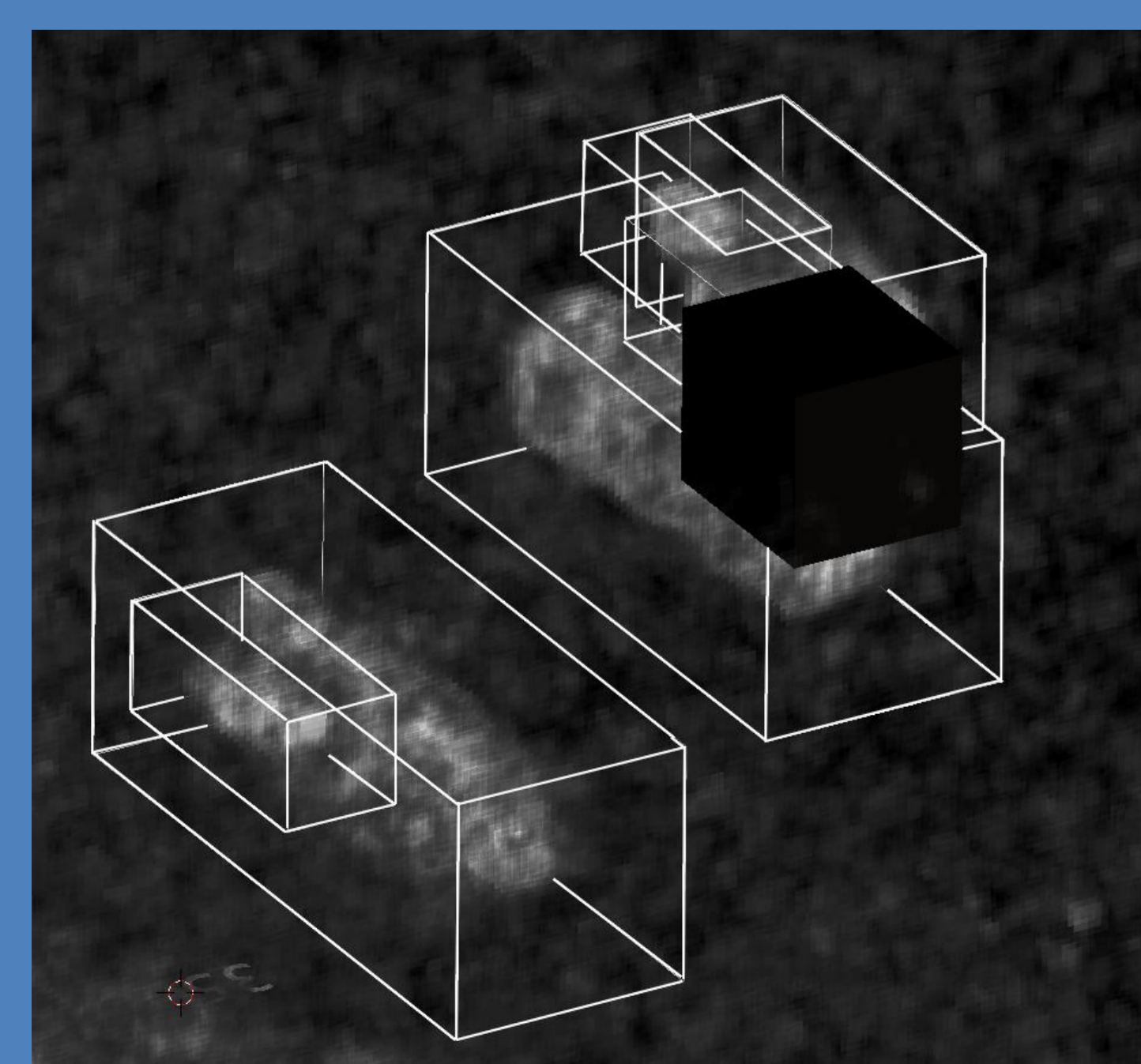
FRELLED allows the user to create 3D regions, which can be used to generate source catalogues. They allow access to the SDSS and NED. Display can be toggled from wireframe to opaque mode, so that they can serve as masks for known sources. A selection tool allows users to easily locate existing regions.
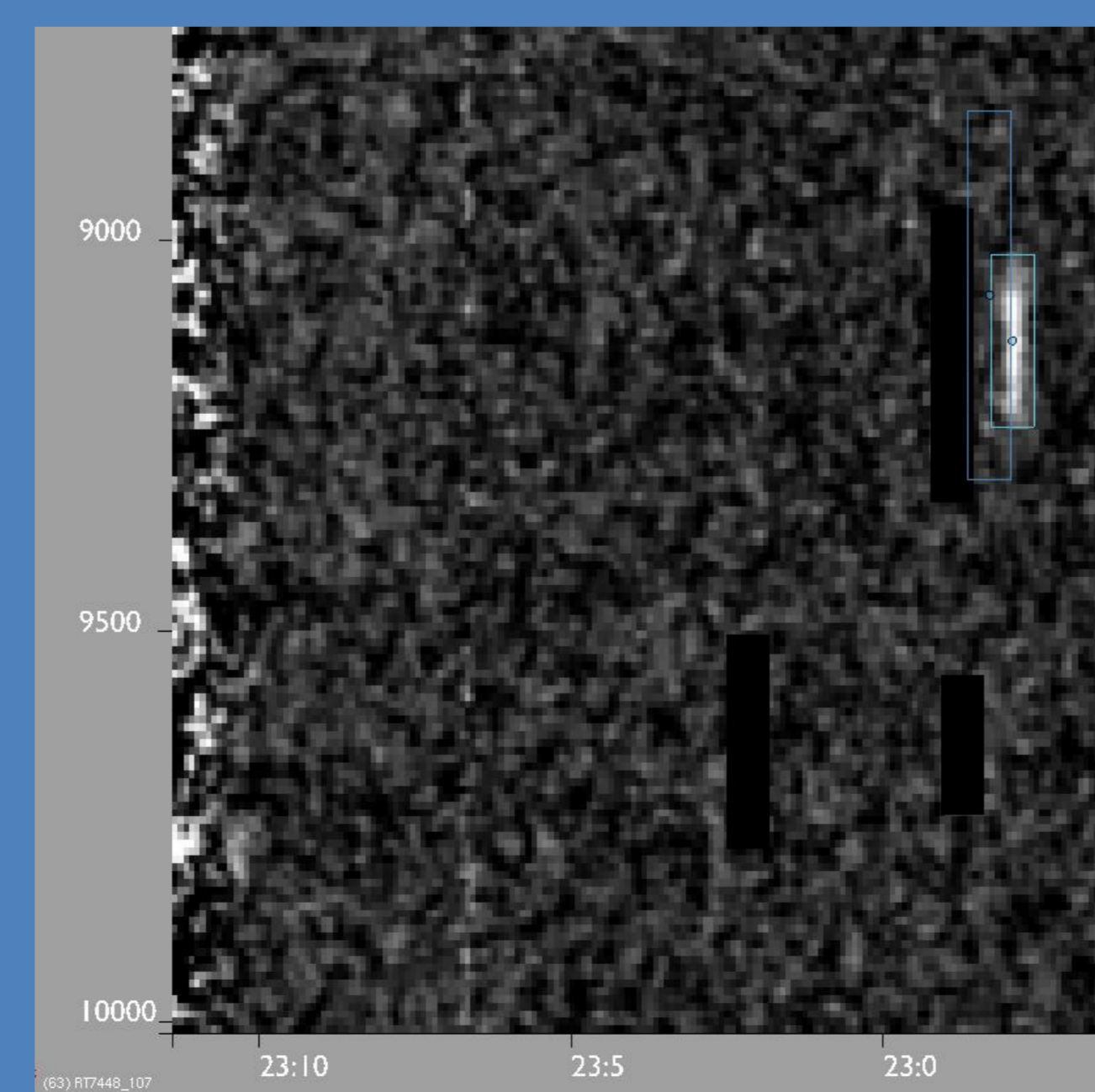
A 2D version of FRELLED is also available, offering the same cataloguing facilities as the 3D version. When changing the displayed projection, the view is automatically updated so that the current region is still visible. This makes it easy to accurately mask sources in both versions.

What's next ?

- Contour plots
- 2D image overlays
- "Make awesome movie" button
- Resampling for importing larger data sets
- Interactive colour scaling
- User requests !