

Contribution ID: 34

Type: **Either**

## Efficient Image Visualization and Analysis with CARTA - Cube Analysis and Rendering Tool for Astronomy

CARTA (Cube Analysis and Rendering Tool for Astronomy) is a state-of-the-art software designed for image visualization and analysis in astronomy, developed by an international collaboration from ASIAA, IDIA, NRAO, the Dept. of Physics University of Alberta.

CARTA is a powerful tool for astronomical data with high performance in visualizing large images/data cubes (~1 TB size data cube can be loaded in seconds with ~1 GB of RAM). CARTA handles not only radio data cubes but also optical/IR images and IFU data. CARTA provides a wide range of efficient tools –annotation, contour, spectral line-related analysis, catalog visualization, etc. CARTA produces publication-qualified figures. CARTA is highly interactive empowering users to explore their data in real-time, for example: i) The interactive PV (Position-Velocity) image preview. Users can see the resulting PV images on the fly by adjusting the PV cuts. ii) One-step color (RGB) blending by simply loading different wavelength images and tuning the weighting for each wavelength. iii) The channel map view allows users to show the selected channel range with a free layout for displaying channels. CARTA is to support your research and study and has many more features waiting for you to explore.

### Section

Facility Program

**Primary authors:** HOU, Kuan-Chou (ASIAA); CARTA COLLABORATION (ASIAA, IDIA, NRAO, Dept. of Physics University of Alberta)

**Presenter:** HOU, Kuan-Chou (ASIAA)

**Session Classification:** Poster-Facilities