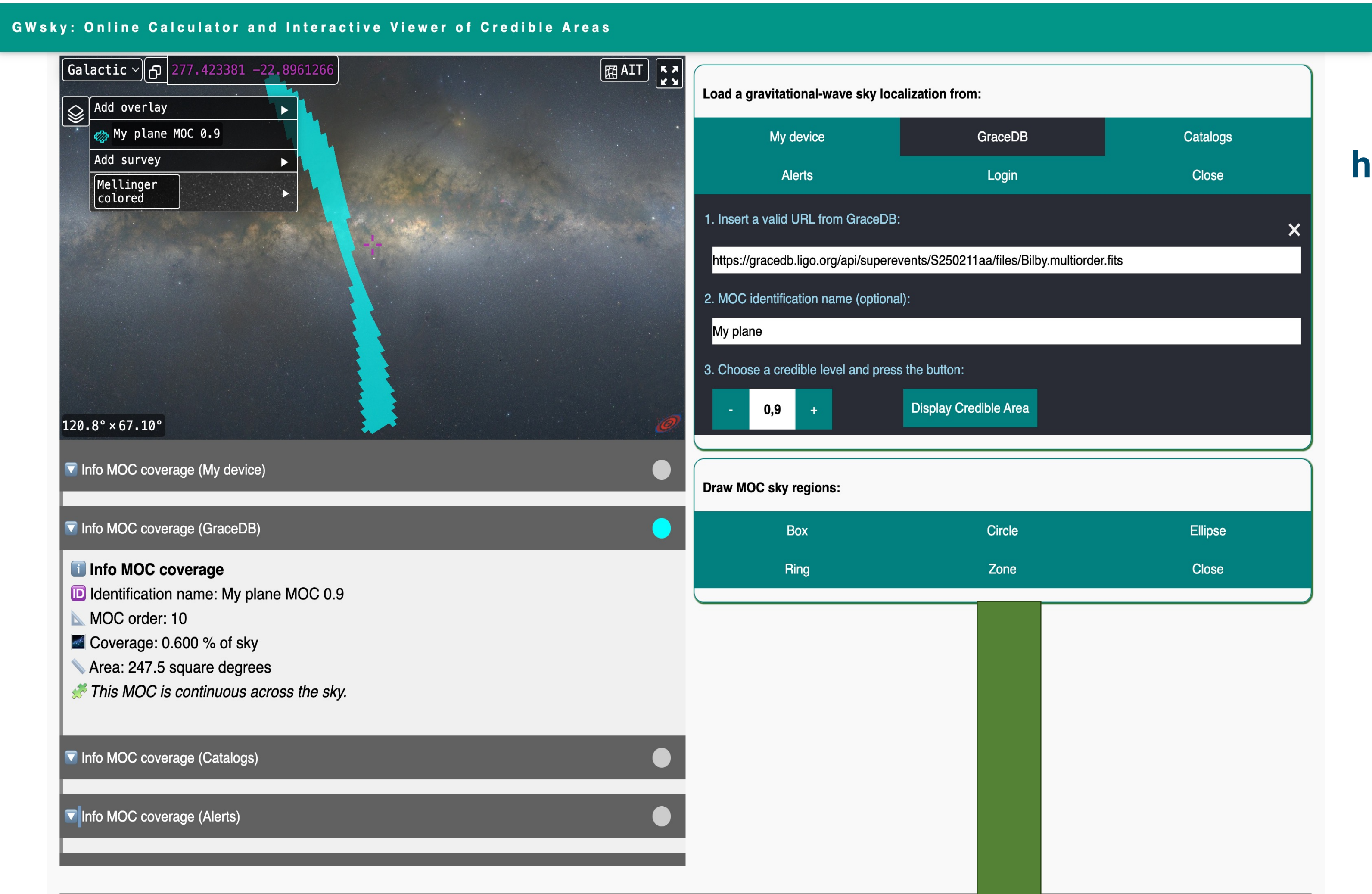


GWmaps: Online Calculator and Interactive Viewer for Credible Areas of Gravitational-Wave Sky Localizations

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The tool provides the credible areas of gravitational-wave sky localizations issued by the LIGO-Virgo-KAGRA collaborations (LVK). The resulting credible area is encoded with the data-structures Multi Order Coverage map (MOC). MOC is a Virtual Observatory standard recommended by the IVOA (International Virtual Observatory Alliance) to manage sky coverage. Each MOC is visualized in the Aladin Lite with various background image surveys. The whole list and the image surveys are accessible by clicking the icon manage layers located at the top left. MOC maps are generated and processed using the WebAssembly-based library, MOCWasm.

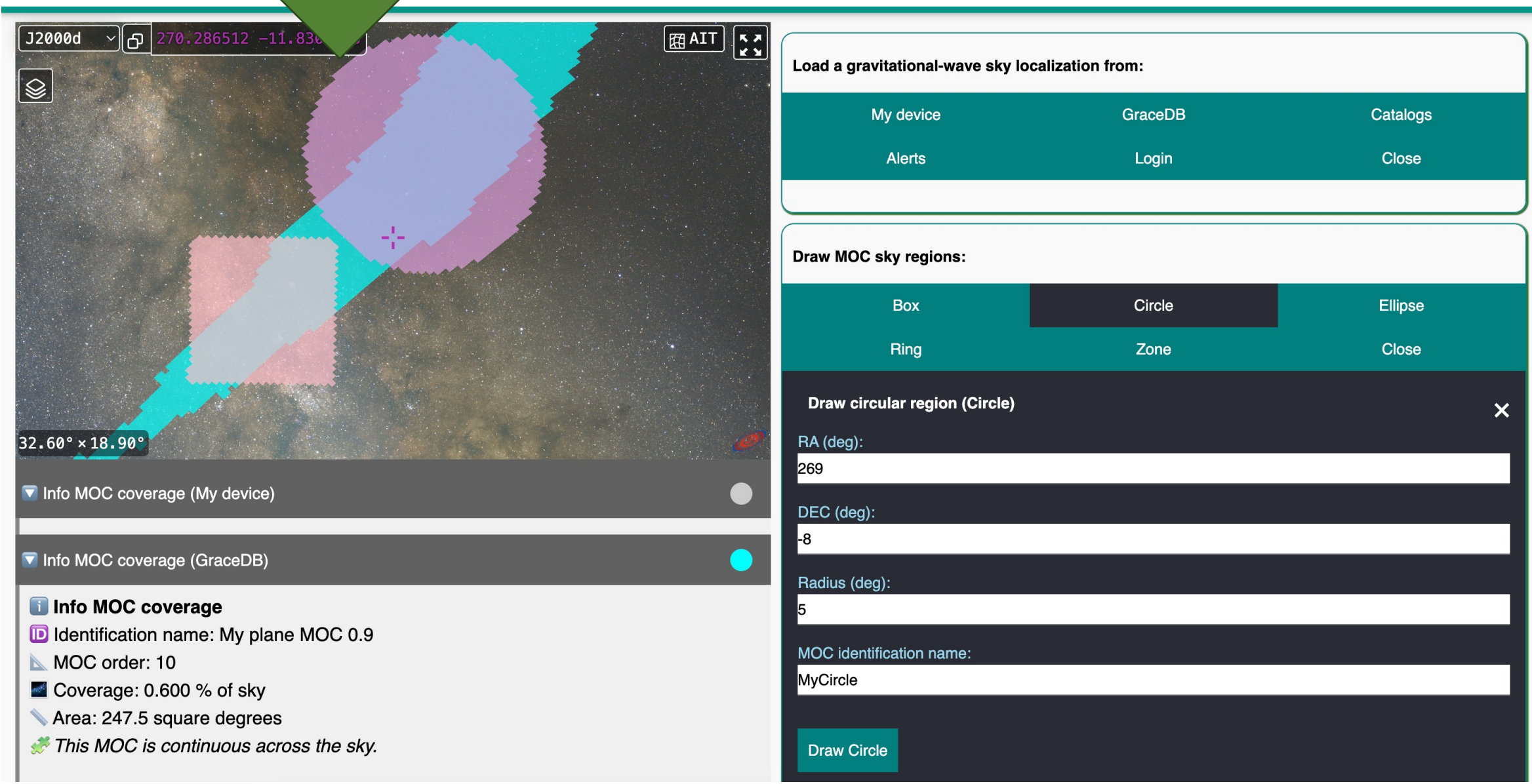


<https://virgo.pg.infn.it/maps/>



Extensions to the MOC standard are being studied to support alerts in multi-messenger astronomy in the era of ET.

See the talk “Challenges in Multimessenger Astronomy in the ET Era: From Interoperability to Multimodal Generative AI Systems” - ET e-Infrastructure Board (EIB).



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