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VIDE: The Void IDentification and Examination toolkit

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Abstract

The Void IDentification and Examination toolkit (VIDE) identifies voids using a modified version of the parameter-free void finder ZOBOV ([ascl:1304.005](#)); a Voronoi tessellation of the tracer particles is used to estimate the density field followed by a watershed algorithm to group Voronoi cells into zones and subsequently voids. Output is a summary of void properties in plain ASCII; a Python API is provided for analysis tasks, including loading and manipulating void catalogs and particle members, filtering, plotting, computing clustering statistics, stacking, comparing catalogs, and fitting density profiles.

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