

# Detection of galaxies super clusters in simulated cosmological structures

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## 1 Abstract

Galaxies form larger-scale structures known as clusters and super clusters. Tully et al [1] used the V-Web algorithm, developed by Hoffman et al[2], on the flow map of the local universe [3] to define our home super cluster of galaxies, which they named Laniakea, which means infinite heaven in Hawaiian.

In this work we used similar techniques to detect galaxies super clusters in different simulations generated with the N-Body simulator Gadget-2 [4]. The results of the simulation were read with the pyGadgetReader module [5]. We performed different approaches using the velocities as a basis to detect different large-scale structures if the same order of magnitude as Laniakea (100 Mpc/h). We can then perform comparisons of different properties of these structures with our home super cluster, Laniakea.

## References

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