

CAVITY: The Calar Alto Void Integral-field Treasury survey

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The Calar Alto Void Integral-field Treasury survey, CAVITY, is a Legacy project of the Calar Alto Observatory for the coming years. It is generating the first statistically complete data set of galaxies in voids exploring the mass assembly, dark and baryonic, and gas properties of galaxies inhabiting these very low density regions. After a successful first public data release (DR1), comprising science-grade optical data cubes for the initial 100 out of a total of ~300 galaxies in the local Universe, the project is preparing for DR2 in 2026. The second release includes data products of the extension of the project, CAVITY+, a series of complementary follow-up projects, including deep optical imaging, as well as resolved CO data, and integrated HI spectra. CAVITY+ naturally completes the scientific aim of characterising galaxies in cosmic voids.

Here we present a summary of the CAVITY and CAVITY+ projects, including their main scientific objectives and recent results, obtained in the framework of the Plan Complementario de Astrofísica y Altas Energías, which are transforming the knowledge of void galaxies.

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