Connecting past and present (observations) with LEGA-C, a deep spectroscopic survey at $z \sim 1$

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The Large Early Galaxy Astrophysics Census (LEGA-C), is a 130-night public VLT/VIMOS survey of $\sim$ 3000 galaxies at $0.6 \lesssim z \lesssim 1.0$, each observed for 20 hours and with typical continuum $S/N \simeq 20$/Å. It is the first legacy survey with the depth and statistics needed to revisit at higher redshifts the scaling relations discovered with SDSS and to study in detail the full range of physical properties manifested by continuum emisson and absorption lines, such as ages, metallicities, and absorption line velocity dispersions. I will present and discuss an overview of early results based on the second data release, including star-formation histories, stellar kinematics, the Tully-Fisher relation, and the relation between $D4000_n$ and Hδ absorption strength. These results fill the redshift void between SDSS on the one hand and future spectroscopic studies of similar depth at $z > 2$, such as with JWST, on the other hand, and provide predictions for the stellar mass growth in galaxies at these high redshifts.

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