

## Measuring the growth rate of structure from the Pantheon+ supernova sample

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At low redshift, peculiar velocities are particularly well-suited to studying the nature of dark energy through the growth rate of structure. Supernovae Ia are precise distance indicators, and we can estimate peculiar velocities from their Hubble residuals at low-redshift, i.e., roughly their departure from motion caused purely by expansion. The Pantheon+ supernova sample is currently the most expansive low-redshift all-sky supernova sample. Pantheon+ corrected for peculiar velocities in their analysis, so we remove the corrections to use them as peculiar velocity tracers. As a proof-of-concept for what is to come from next-generation all-sky, homogeneous supernova Ia surveys, we measure  $f\sigma_8$  from the Pantheon+ supernovae alone for the first time.

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