

Growth rate measurement using LSST type Ia supernovae

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Type Ia supernovae (SNe Ia) are well-known distance indicators. Through the distance recovered from SNe, it is possible to recover their host galaxy's peculiar velocities (PVs). The PV field measured by SNe Ia enables us to constrain the growth rate of cosmic structure. Using a realistic simulation of SNe light curves, as expected from LSST, we have analyzed the sample bias due to selections and contamination. We have used the Maximum Likelihood method to recover the growth rate constraints from LSST SNe Ia PVs. We have produced a forecast for the 10 years of LSST surveys under various scenarios and assumptions.

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Classification de Session: Présentations