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Cosmology with type-la Supernovae

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The large-scale search for type Ia supernovae, which has been undertaken since the discovery of the accelerated expansion of the universe in the late nineties, has been largely successful. With now about 1000 SNe-Ia on the Hubble diagram, recent type Ia supernovae surveys provide a precise mapping of the distance-redshift relation up to $z \sim 1$, setting, at this time, the most stringent constraint on the nature of dark energy.

In this contribution, we review the status of cosmology with SNe Ia. We present the available sample and discuss systematic uncertainties affecting the measurement. We present recent improvements on this topic and the associated improvement on cosmological constraints. We then discuss improvement perspectives and the future of the probe.

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