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The second Type I Supernova data release of the Zwicky Transient Facility

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The Zwicky Transient Facility (ZTF) is scanning the Northern sky since 2018 with a 1.2 m class telescope installed at the Mont Palomar Observatory. This survey detects any transient in the nearby Universe within its magnitude limit, typically up to a redshift of 0.15. In February 2025, the Cosmology working group has released a set of more than 3600 Type Ia supernovae (SN Ia) corresponding to the first phase (2018-2020). This unprecedent SN Ia data sample – about 10 times more than the current compilation at low-redshift – allows to develop new cosmological analysis in the same spirit than the historical probe leading to the discovery of the accelerated expansion of the Universe. The talk will present the main characteristics of this new SN Ia data set with a review of the first results concerning their standardization procedure with new analysis, for instance on large scale structure dependency. The cosmological perspectives will be discussed as well to emphasis the game changer that can bring ZTF in particular for the Dark Energy measurement in a very near future.

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