Dark energy and cosmic curvature: Monte-Carlo Markov Chain approach QIANG WU, Deparment of Physics, Baylor University, TX, YUN-GUI GONG, College of Electronic Engineering, Chongqing University of Posts and Telecommunications, Chongqing, China, ANZHONG WANG, Deparment of Physics, Baylor University, TX — We use the Monte-Carlo Markov Chain method to explore the dark energy property and the cosmic curvature by fitting two popular dark energy parameterizations to the observational data. The new 182 gold supernova Ia data and the ESSENCE data both give good constraint on the DE parameters and the cosmic curvature for the dark energy model $\omega_0 + \omega_a z/(1+z)$ The cosmic curvature is found to be $\Omega_k \leq 0.03$ For the dark energy model $\omega_0 + \omega_a z/(1+z)^2$ the ESSENCE data gives better constraint on the cosmic curvature and we get $\Omega_k \leq 0.02$.

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