S21a　Optical Variability of Blazars in the Tomo-e Gozen Northern Sky Transient Survey

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A blazar is an active galactic nucleus which shows intense activity due to the large gravitational energy of a supermassive black hole in the host galaxy's center. We used data obtained from the Tomo-e Gozen Northern Sky Survey to study the optical variability of blazars in the 4FGL catalog. A wide-field camera called Tomo-e Gozen, which is equipped on the 1-m Kiso Schmidt telescope, deploying 84 CMOS sensors with no filters, has been used in the Tomo-e Gozen Northern Sky Survey. The survey observes at least 7000 square degrees on a clear night with a depth of 18mag, covers nearly 60% of the 4FGL survey area, and 951 or 45% of 4FGL blazars in the area were bright enough to be studied. We analyzed the data observed from September 2019 to December 2021, with the average number of epochs per blazar of 26. We not only analyzed the optical variability of each blazar but also obtained structure functions to study the characteristics of the optical variability of the BL Lac class and the flat-spectrum radio quasar (FSRQ) class of blazars classified by the 4FGL catalog. The dependence of luminosity and redshift is also studied.