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Spectroscopic observation on Helley-type comet 12P/Pons-Brooks

We present our time-series spectroscopic observation of comet 12P/Pons-Brooks using the LISA spectrograph mounted on the Lulin One-meter Telescope. The data were obtained between 25 November, 2023 and 24 March 2024, with heliocentric distances from 2.463 to 0.941 au at the pre-perihelion epoch. We clearly detected the emission features of CN, C₂, C₃, NH₂, and OH, and estimated the production rates of these minor chemical species by adopting the Haser's model. Our observation provides a valuable record of the evolution of coma gas abundance over time of 12P/Pons-Brooks.

Section

Solar System/Exoplanets

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