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Título: CN observations of comet 67P/Churyumov-Gerasimenko

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Resumen:

We present spectroscopic observations with the robotic 2-m Liverpool Telescope at the Roque de los Muchachos observatory for monitoring the activity of comet 67P/Churyumov-Gerasimenko during its latest post-perihelion apparition. The LOTUS and SPRAT instruments were used to obtain low resolution near-UV and optical spectroscopy in the wavelength ranges from 3200 Å to 6400 Å and 4000 Å to 8000 Å, respectively, since September 2015 with a few days cadence. The CN emission at 3880 Å is clearly detected in the LOTUS observations, as well as several weak bands of the carbon-chain molecules C₂ (4738, 5165 and 5635 Å) and C₃ (4050 Å). We followed the evolution of the gas production rates computed with a Haser spherical model for daughter species as an indicator of comet activity, and compared with the dust production from the reflected continuum brightness in the SPRAT spectroscopy data to derive dust-to-gas ratios.