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# Asteroseismology of SZ Lyn using very high time resolution photometry in BVR bands.

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## Abstract

We report new photometric results based on very high time resolution observations in BVR bands of SZ Lyn. The photometric observations were carried out using the 50 cm CDK reflector at Mount Abu Observatory, India, on six nights. WASP and AAVSO data of SZ Lyn were also considered. The observation was primarily attempted to determine the oscillation frequencies beyond the well established main oscillation frequency of 8.295 c/d. The light curves were analyzed for frequencies from 5 to 100 cd-1 with a frequency step size of the order 10-5 cd-1. 7 frequencies were recovered in the light curves. The amplitudes and phases of the frequencies were also determined for mode identification. The comparison of the theoretical and observational amplitude ratios determined the fundamental frequency, 8.295 cd-1, as  $l = 0$  mode. No higher order oscillation modes were found except the 6 harmonics of the fundamental frequency for SZ Lyn.

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