

In this thesis, light curves measured by the satellite *TESS* were analysed for pulsating variable stars BL Cam and BO Lyn. In total, 705 new times of maximum light were identified for BL Cam and 333 for BO Lyn. Additionally, photometric data measured from the Mayer 65 cm telescope at Ondřejov yielded 6 new times of maximum light for the star BL Cam from the past year. The new times of maximum light were compared to already published data in an O-C diagram for both stars. The new data clearly connects to the long-term data with possible sinusoidal behaviour. A new linear ephemeris was determined for the star BL Cam, with a period of $P = 0,0390979079(4)$ days. The short-term scale data from the satellite *TESS* was also investigated in O-C diagrams for both stars. These short-term changes of period length were found to be consistent with long-term changes for BO Lyn, but another cyclical effect was likely observed for BL Cam.