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AG Peg - searching for optical flickering

ATel #12115; *R. Zamanov, B. Mihov, L. Slavcheva-Mihova, N. A. Tomov, K. A. Stoyanov*

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Credential Certification: R. K. Zamanov (rkz@astro.bas.bg)

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AG Peg is an unique symbiotic star that experienced a nova outburst in the mid-19th century and two brightness maxima in 2015 that are typical for the classical symbiotic stars. Recently, Zhekov & Tomov (2018, MNRAS, 481, 5156) reported UV flickering variability with an amplitude of about 0.1 mag on a time-scales of minutes-hours.

We searched for optical flickering variability on time-scale of minutes with the 50/70 Schmidt telescope of the Rozhen NAO on October 8, 2018. For 150 minutes, we have secured 400 exposures with exposure time of 6 seconds in the B band. Aperture photometry was performed using HD 207860 as a comparison star adopting B=9.169 mag.

We do not detect optical flickering (see Fig. 1). The upper limit of the amplitude is 0.02 mag (20 mmag).

Probably, the accretion disc around the white dwarf is very hot and the flickering is visible only in the UV, but not in the optical bands yet. Another explanation could be the different sites of origin and/or different mechanisms for the flickering activity in the UV and the optical bands.

Fig. 1 AG Peg - non-detection of flickering in the B band.

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R. E. Rutledge, Editor-in-Chief rrutledge@astronomerstelegam.org

Derek Fox, Editor

dfox@astronomerstelegam.org

