Photometric results of the long-term monitoring of the active asteroid (596) Scheila

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(596) Scheila was observed to have an active appearance as a result of impact event in late 2010. In addition to the coma feature, the shape of light curve had been found the difference probably fresh material or surface properties changed around the impact site. In this study, we present the results of our monitoring observations obtained in 2014 and 2019-2020. The mean values of the color indices ($B-V = (0.75 \pm 0.08)\text{m}$, $V-R = (0.45 \pm 0.04)\text{m}$, and $R-I = (0.44 \pm 0.09)\text{m}$) agree well with the values for asteroids of the D-types. The rotation period of the asteroid estimated from photometric observations in 2014 is $15.8 \pm 0.1\text{h}$. The shape of the light curve is similar as that found after impact event. Furthermore, we did not find any rotational color variability in B-V, V-R and R-I diagrams, meaning the observed surface in this observing period of 2019-2020 is homogeneous.