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GSC 4004_1211: A NEW VARIABLE IN THE FIELD OF V360 CASSIOPEIAE

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Name of the object:	
GSC 4004_1211	

Equatorial coordinates:	Equinox:
$\mathbf{R.A.} = 23^{h}34^{m}17^{s}$ $\mathbf{DEC.} = +55^{\circ}53'58''$	2000.0

Observatory and telescope:

Private Observatory in Lennestadt, 0.32-m Ritchey-Chretien telescope; Esteve Duran Observatory, 0.6-m Cassegrain telescope

Detector:

Filter(s):

Comparison star(s): GSC 4008_809

Check star(s): GSC 4004_1159, GSC 4004_1259

CCD

V

Transformed to a standard system:

Availability of the data: Through IBVS Web-site as 4701-t1.txt

Type of variability: DSCT:

No

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Remarks:

The variability of GSC 4004_1211 was found while being used as comparison star for V360 Cas. CCD observations show that this object has light variations with an amplitude in the V band close to 0.1 magnitude and a period of 0.129701 ± 0.000002 days. The shape of the light curve indicates that this variable is not an ellipsoidal nor eclipsing binary system. Although the period has remained stable for almost a year, from 31 October 1997 to 7 October 1998, the light curve shows instabilities from cycle to cycle similar to those of a Delta Sct star. To derive more information about GSC 4004_1211, its average B - V color index was estimated using the TYCHO star GSC 4004_0715. Photometric data showed that $B - V = 0.61 \pm 0.07$. This value is redder than the typical one for a Delta Sct variable, but GSC 4004_1211 is near the Galactic plane and it might be affected by interstellar extinction. Figure 1 shows the light curve of GSC 4004_1211 folded according to the given period. To construct Figure 1 and due to light curve instabilities, the zero epoch was arbitrarily fixed.

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Figure 1.