

TIC 59387976

Eclipsing binary candidate dossier - Star Vetter

CLEAN

BLS EPHEMERIS

Period 22.519045 d
Epoch (t0) 2423.4784 BTJD
Duration 0.1700 d
Depth 13.349 % (133,491 ppm)
SNR 230.6

CATALOG CROSS-MATCH (novelty)

VSX	no match
ASAS-SN	no match
Gaia eclipsing-binary table	no match
Gaia variable classification	no match
TESS EB catalog (Prsa+2022)	no match
ExoFOP TOI list	no match

INDEPENDENT CHECKS (f3i gates)

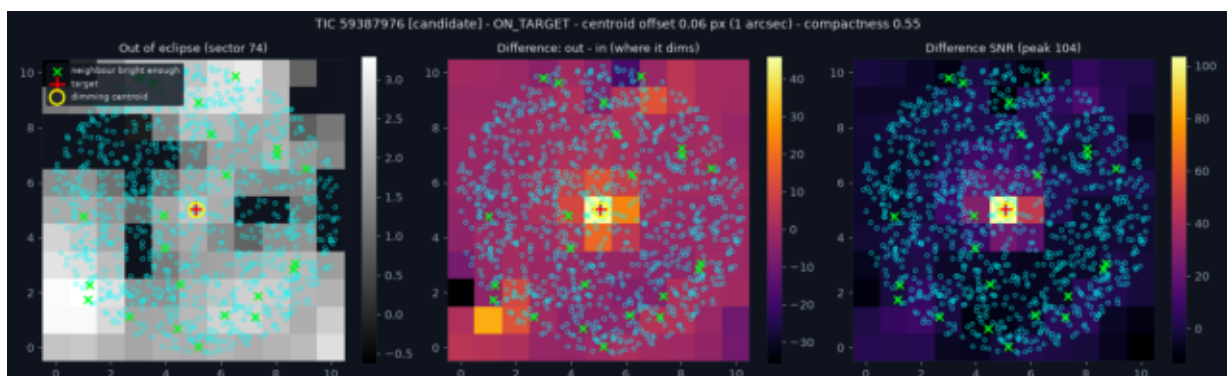
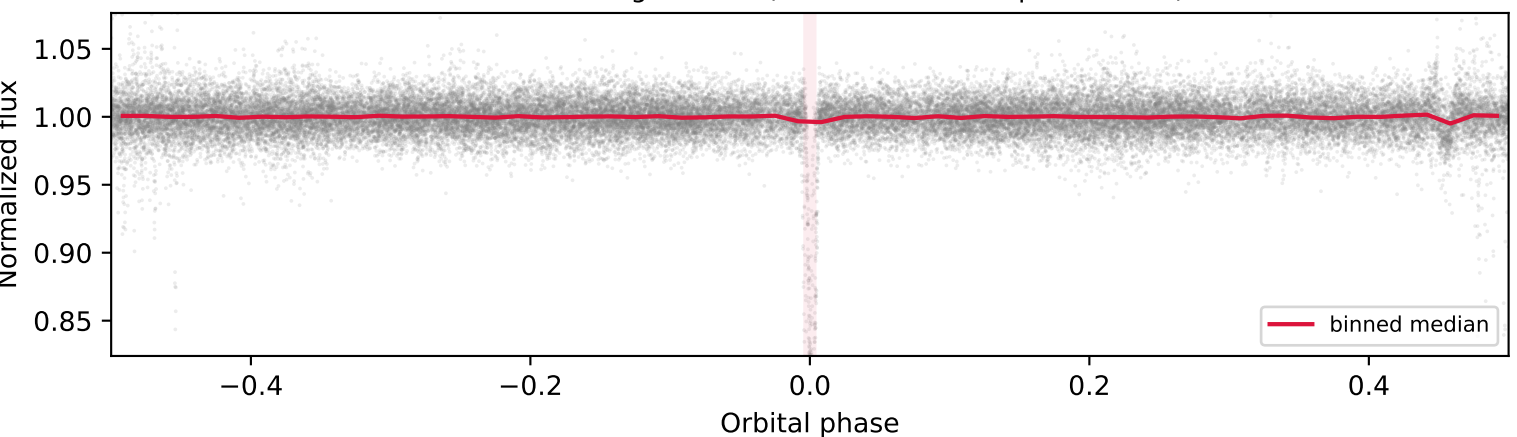
Eclipses observed 7 (gate ≥ 3)
Robust depth ratio 1.26 (gate ≥ 0.50)
Robust depth sigma 201.9 (gate ≥ 7.0)
Odd/even z-score 0.61 (consistent)
Secondary eclipse detected, phase 0.46, 7.6 sigma

Verdict: NOVEL

PIXEL-LEVEL SOURCE CHECK (TESScut difference imaging)

Sector 74 light-curve dip in this sector: 71.8 sigma t0 refined by 0.0025 phase
Difference-image peak SNR 103.64 (gate ≥ 5.0) Compactness 0.55 (gate ≥ 0.50)
Dimming centroid offset 0.06 px (1 arcsec) (gate ≤ 1.0 px, i.e. on the target)
Nearest bright-enough neighbour in cutout: TIC 59387963
1.20 px away, dTmag +1.37 - farther from the dimming than the target

Phase-folded light curve (shaded = BLS eclipse window)



No caveats - clean detection on every check.