

Star Vetter - confirmed eclipsing binary candidates

TIC	Period (d)	Depth	BLS SNR	Pixel SNR	Offset	Tier
437150434	5.2853	15.003%	1081	85.33	1"	Clean
237115819	14.7921	8.883%	507	27.82	4"	Clean
66732476	3.1087	9.814%	370	26.93	8"	Clean
29495157	5.1474	8.579%	333	52.62	5"	Alias
119459681	5.9442	15.977%	311	68.15	2"	Clean
411434067	1.3536	4.289%	193	33.70	4"	Alias
330901906	3.7321	0.498%	60	87.24	4"	Thin margin
303470667	5.4319	2.220%	57	5.02	9"	Marginal
273158289	1.1519	1.255%	41	17.24	2"	Thin margin
111149941	5.2401	0.045%	10	9.73	21"	Ambiguous
251898081	27.3089	18.630%	5535	464.16	3"	Alias
467214801	0.7609	0.950%	2134	21.36	0"	Alias
399770041	1.5802	4.291%	489	36.92	1"	Clean
349701853	30.3427	28.445%	343	51.05	6"	Clean
233459038	25.3384	8.315%	237	84.46	5"	Alias
281310348	1.7702	7.273%	180	57.87	2"	Clean
318887646	14.2817	3.605%	150	6.94	13"	Clean
444465823	18.5133	3.476%	147	25.18	1"	Alias
380943251	0.7209	7.667%	101	15.26	3"	Clean
66716482	8.0283	3.329%	65	21.51	7"	Clean
309656476	28.9204	0.050%	25	13.80	14"	Clean
229494833	15.3839	0.037%	15	5.19	12"	Alias
44533527	14.5952	0.101%	12	7.33	16"	Clean
220423668	3.6511	4.525%	755	17.67	6"	Alias
365998904	1.2494	2.398%	375	15.52	3"	Clean
233452636	1.9063	5.467%	202	8.94	2"	Thin margin
437171483	1.4735	4.947%	923	73.37	3"	Clean
411457490	2.4324	5.531%	431	58.00	1"	Alias
295373509	5.4219	8.026%	247	22.12	2"	Clean
374158907	14.6563	4.974%	179	21.40	2"	Alias

TIC 114549849

Eclipsing binary candidate dossier - Star Vetter

CLEAN

BLS EPHEMERIS

Period 8.679003 d
Epoch (t0) 1498.5801 BTJD
Duration 0.1200 d
Depth 21.723 % (217,232 ppm)
SNR 286.0

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)

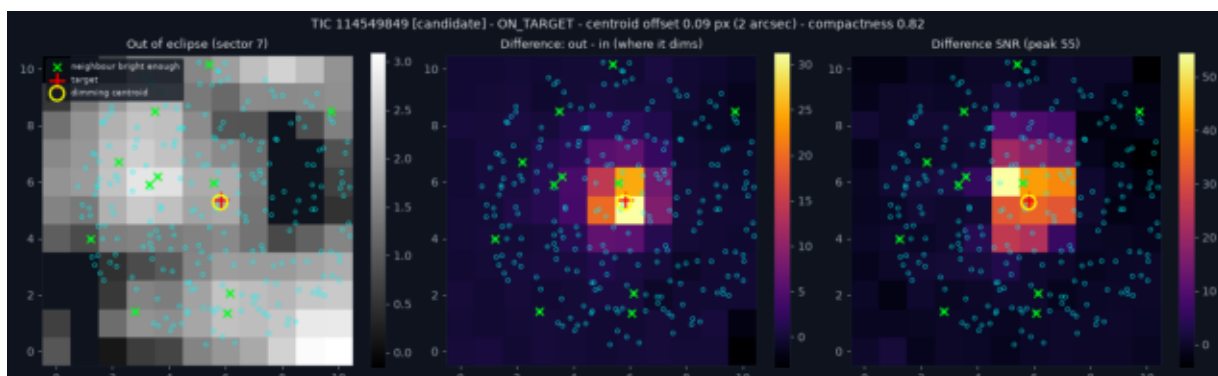
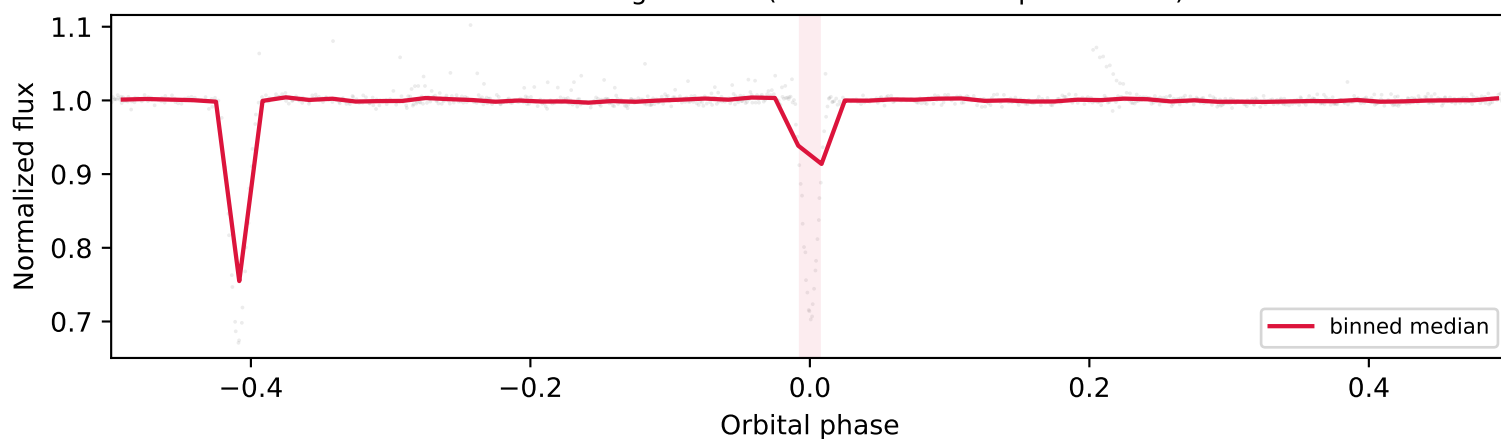
Eclipses observed 3 (gate ≥ 3)
Robust depth ratio 1.03 (gate ≥ 0.50)
Robust depth sigma 172.2 (gate ≥ 7.0)
Odd/even z-score 0.87 (consistent)
Secondary eclipse detected, phase -0.41, 7.7 sigma

Verdict: NOVEL

PIXEL-LEVEL SOURCE CHECK (TESScut difference imaging)

Sector 7 light-curve dip in this sector: 170.1 sigma t0 refined by -0.4075 phase
Difference-image peak SNR 54.60 (gate ≥ 5.0) Compactness 0.82 (gate ≥ 0.50)
Dimming centroid offset 0.09 px (2 arcsec) (gate ≤ 1.0 px, i.e. on the target)
Nearest bright-enough neighbour in cutout: TIC 114549868
0.72 px away, dTmag +0.74 - farther from the dimming than the target

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



No caveats - clean detection on every check.