

KIC 010472119

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010472119-01	OBS	No	232.256564	312.557347	528.9	14.747	8.0	5.8	0.77	5305	1.88	0.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010472119-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

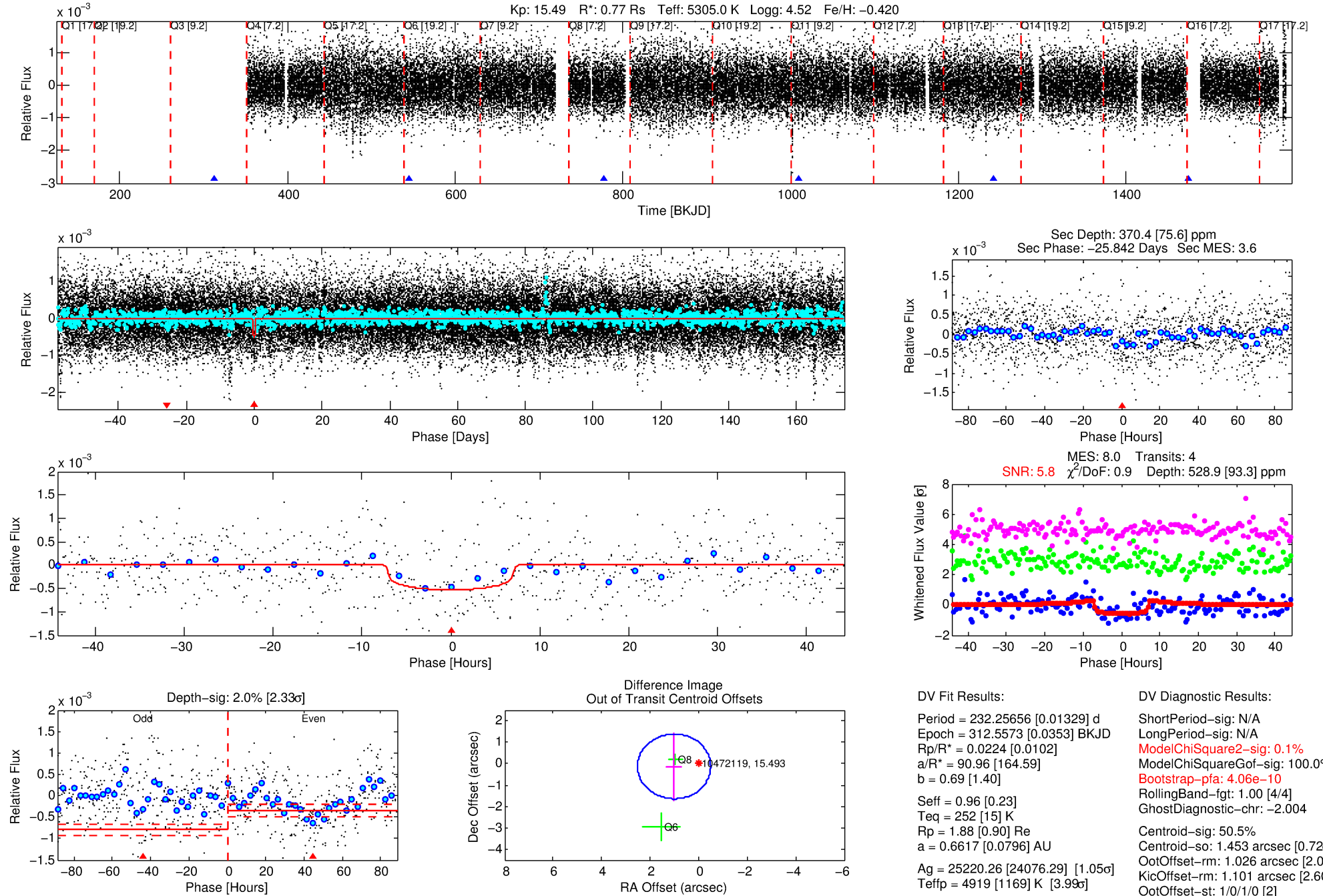
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010472119-01

No Significant Match Found

DV One-Page Summary

KIC: 10472119 Candidate: 1 of 1 Period: 232.257 d



DV Fit Results:

Period = 232.25656 [0.01329] d
Epoch = 312.5573 [0.0353] BKJD
Rp/R* = 0.0224 [0.0102]
a/R* = 90.96 [164.59]
b = 0.69 [1.40]
Seff = 0.96 [0.23]
Teff = 252 [15] K
Rp = 1.88 [0.90] Re
a = 0.6617 [0.0796] AU
Ag = 25220.26 [24076.29] [1.05] σ
Teffp = 4919 [1169] K [3.99] σ

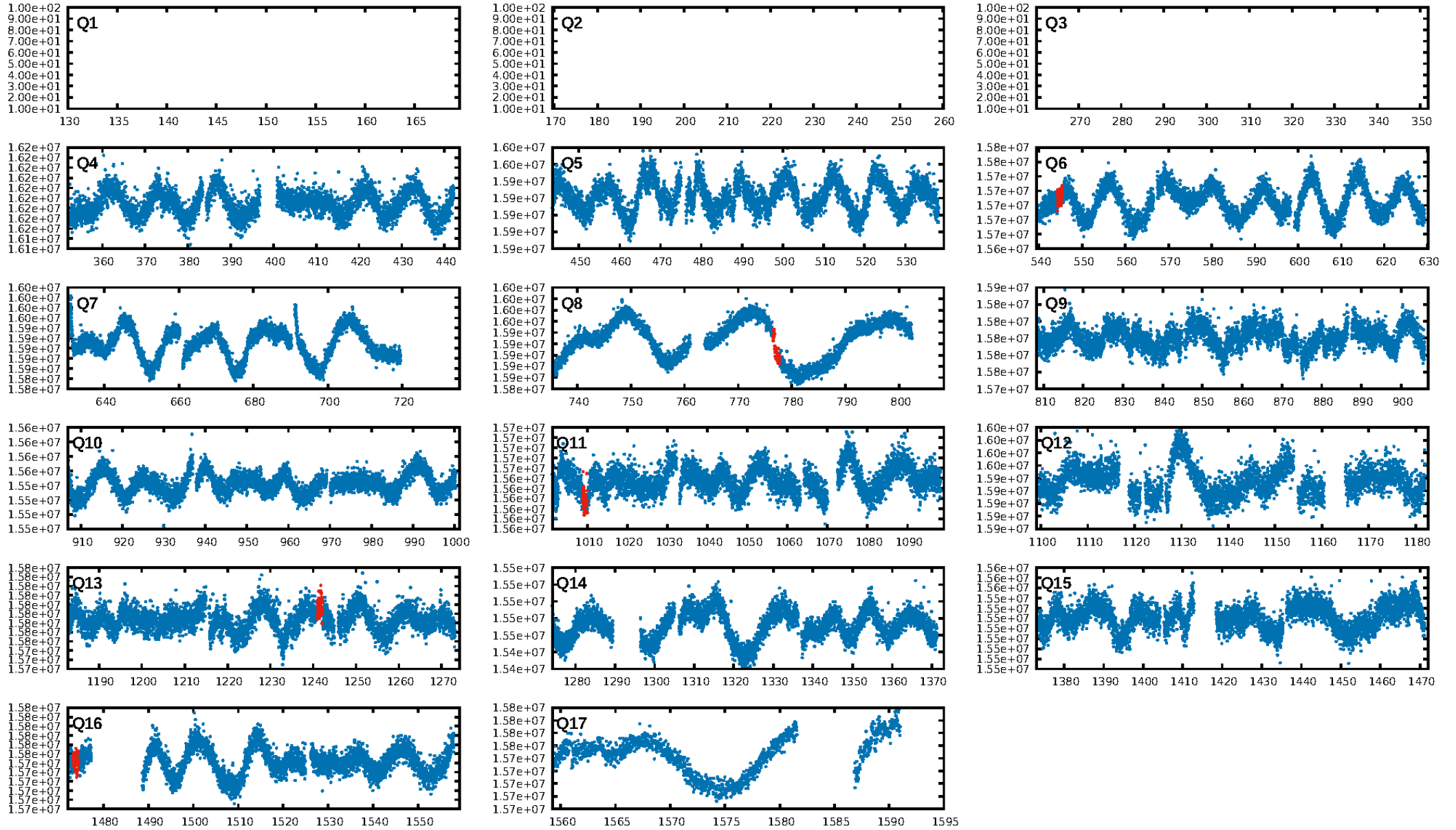
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.06e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.004
Centroid-sig: 50.5%
Centroid-so: 1.453 arcsec [0.72] σ
OotOffset-rm: 1.026 arcsec [2.04] σ
KicOffset-rm: 1.101 arcsec [2.60] σ
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

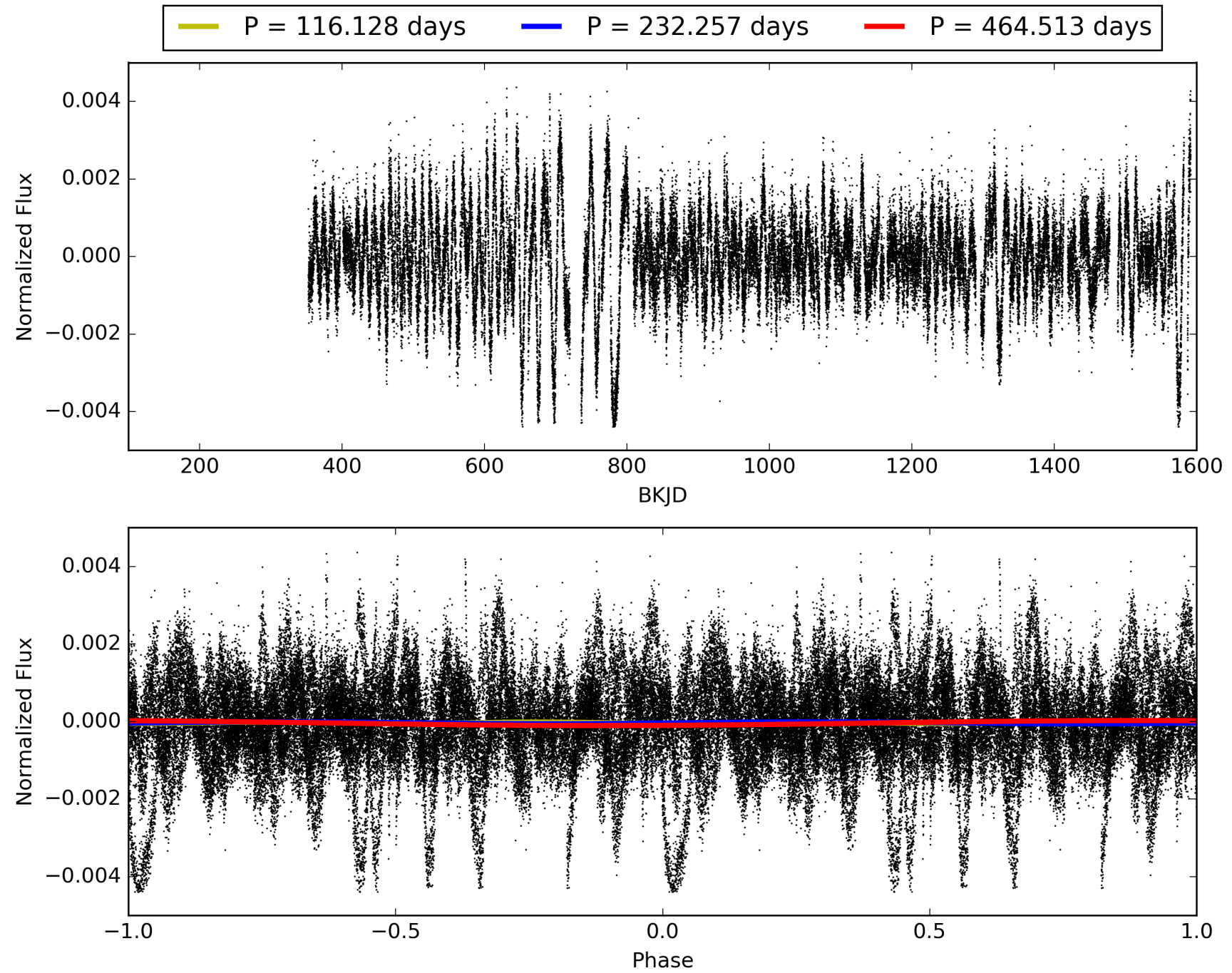
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:58:38 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010472119-01, PDC Light Curves

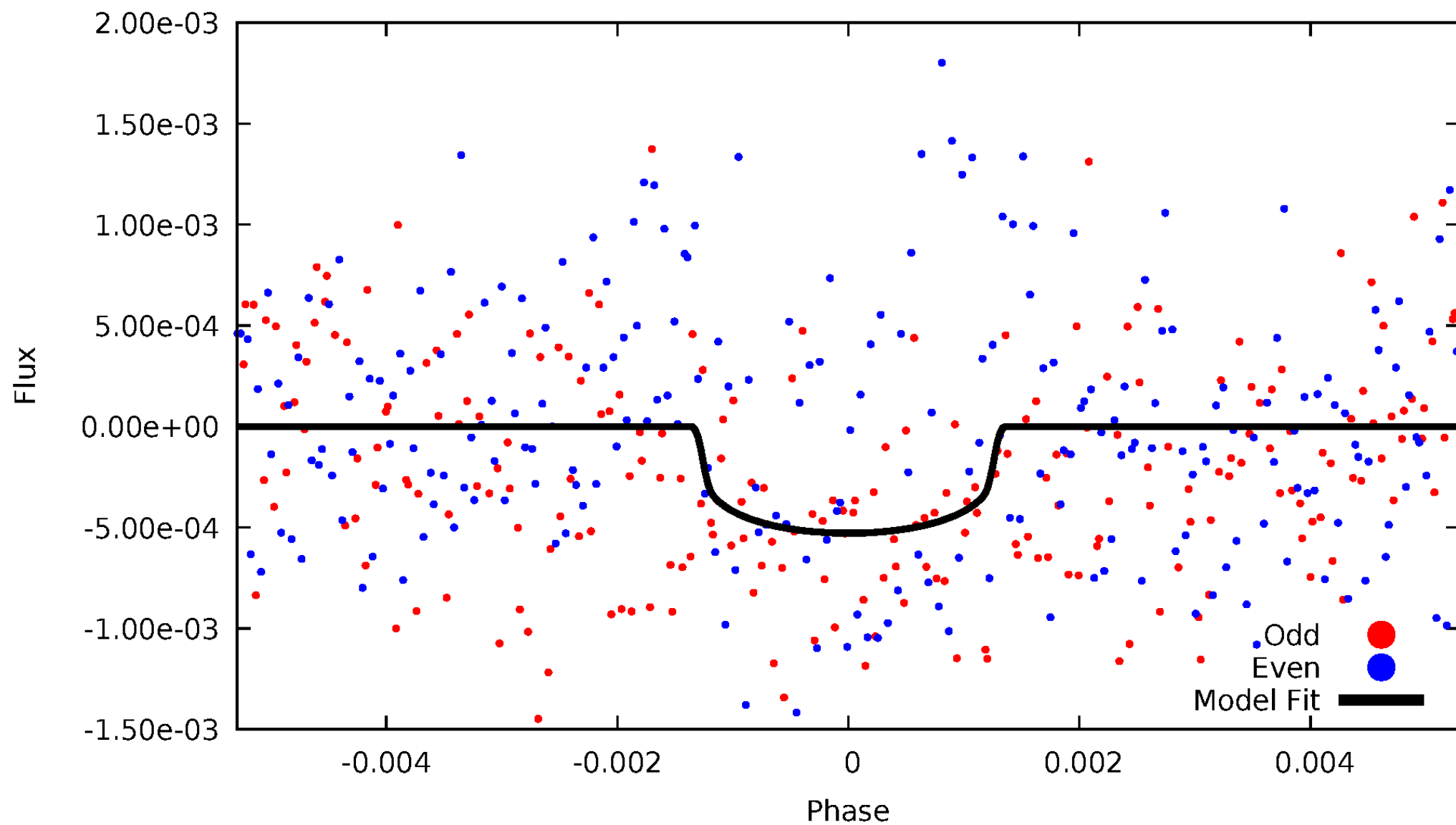


TCE 010472119-01



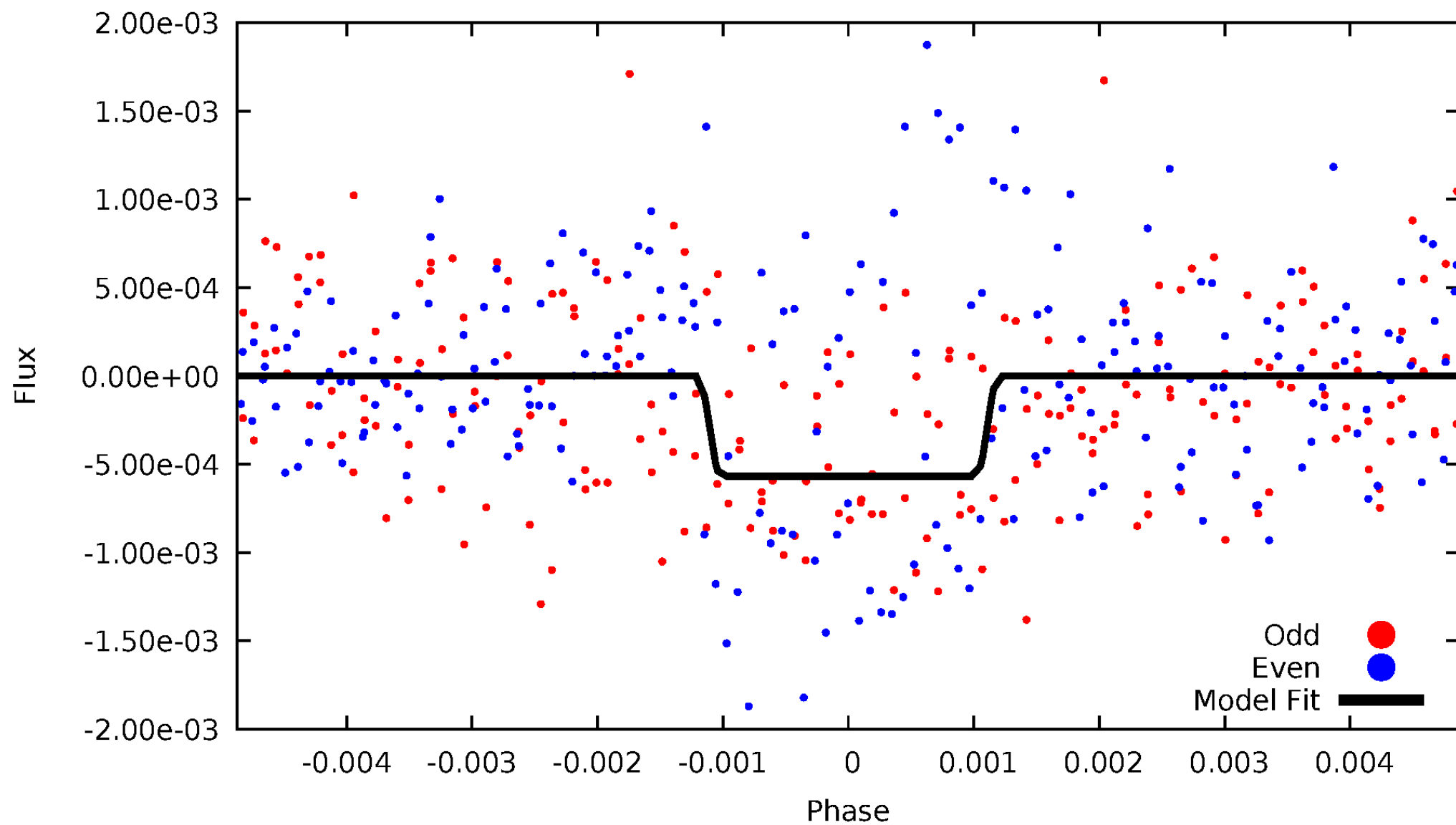
DV Odd/Even

TCE 010472119-01

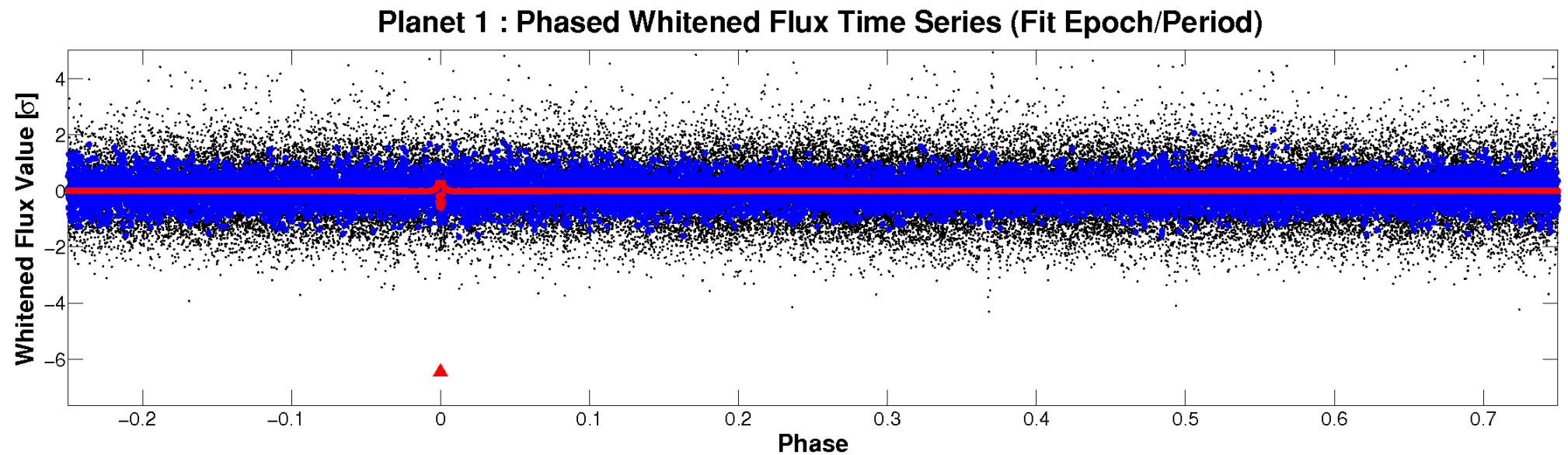
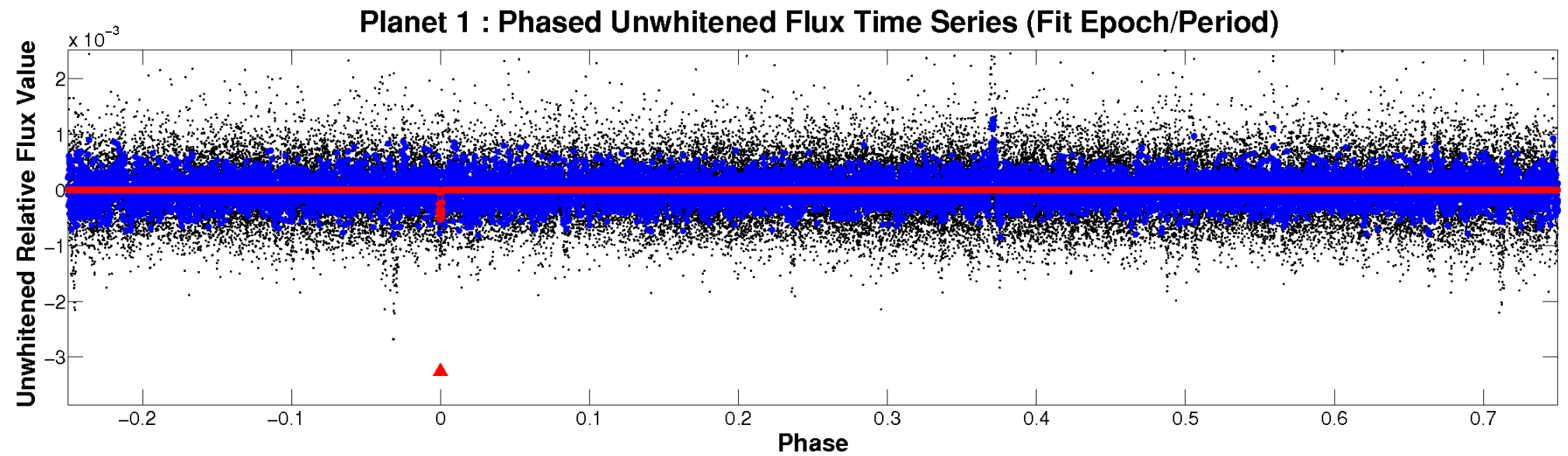


ALT Odd/Even

TCE 010472119-01

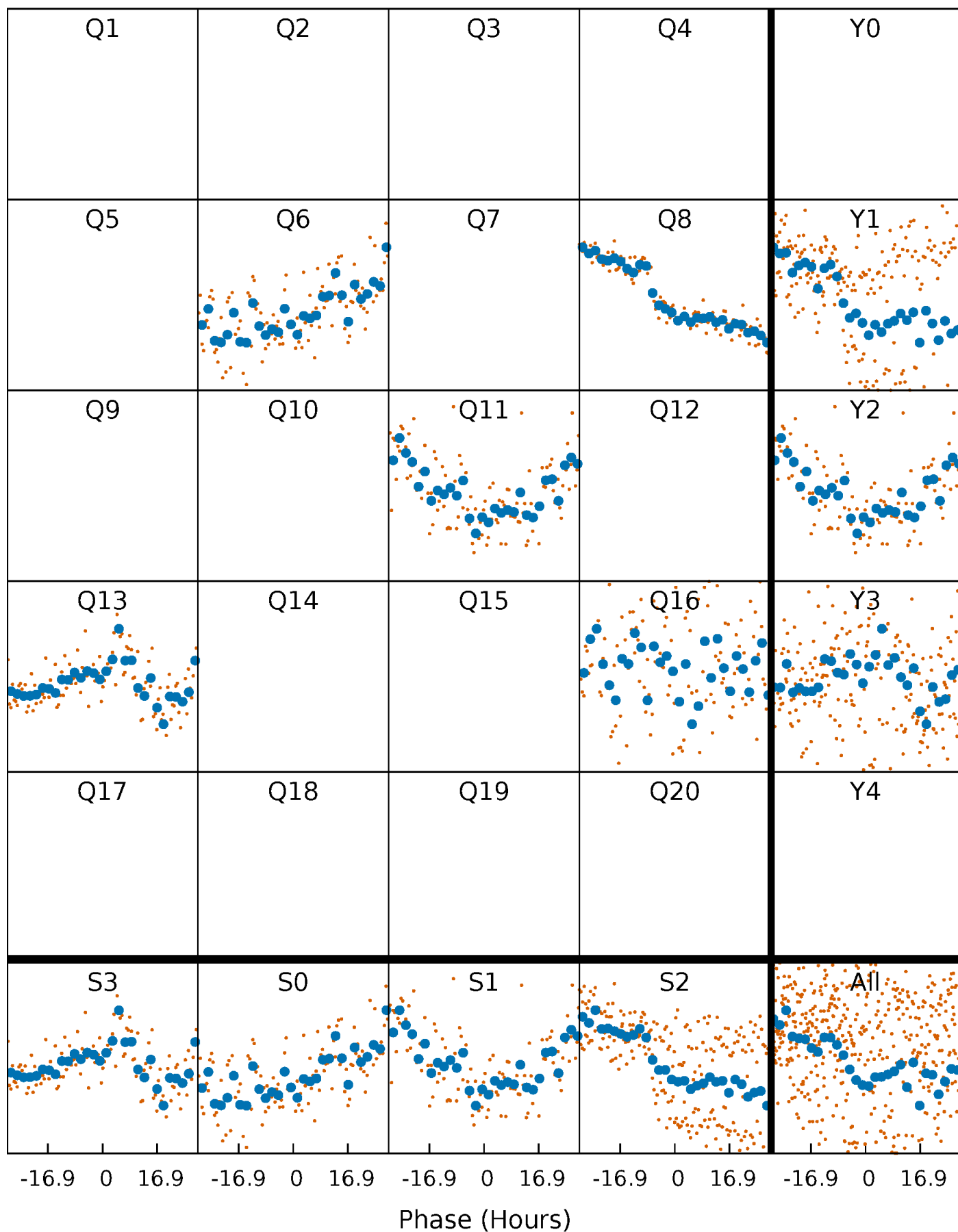


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010472119-01 P=232.256564 Days $T_0=312.557347$ (BKJD)



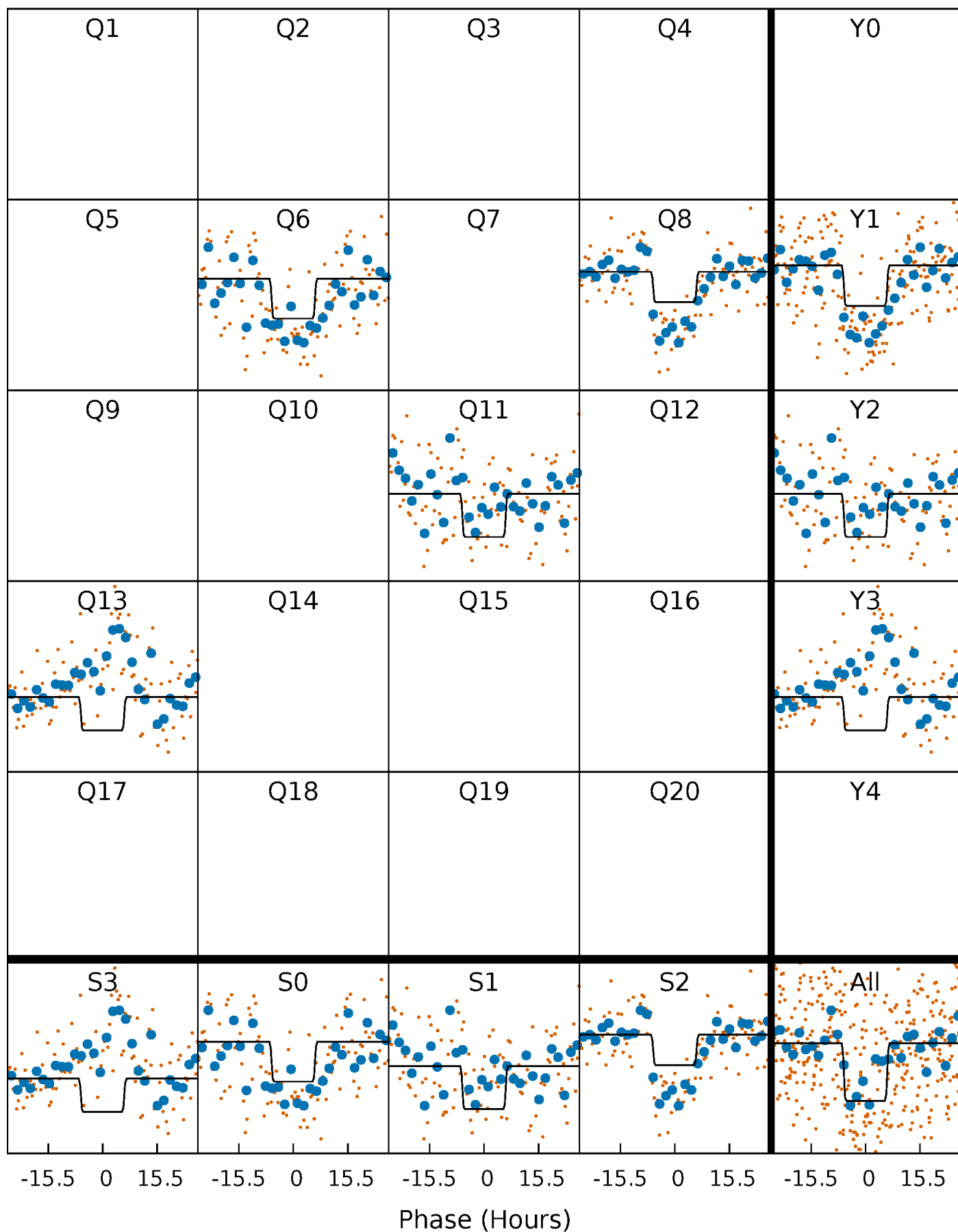
DV Quarter-Phased Transit Curves

TCE 010472119-01 P=232.256564 Days $T_0=312.557347$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

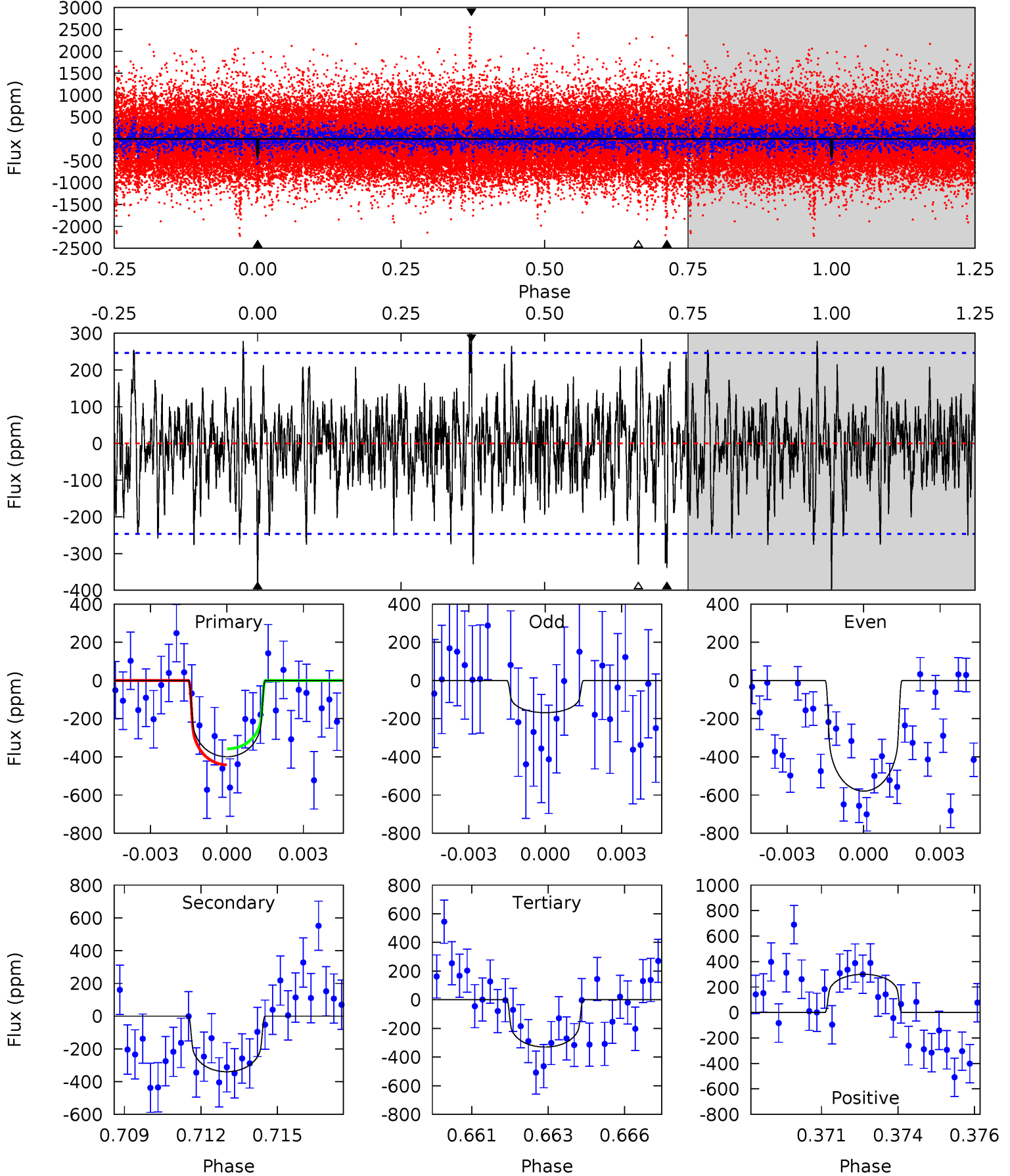
TCE 010472119-01 P=232.288710 Days $T_0=312.471020$ (BKJD)



DV Model-Shift Uniqueness Test

010472119-01, P = 232.256564 Days, E = 312.557347 Days

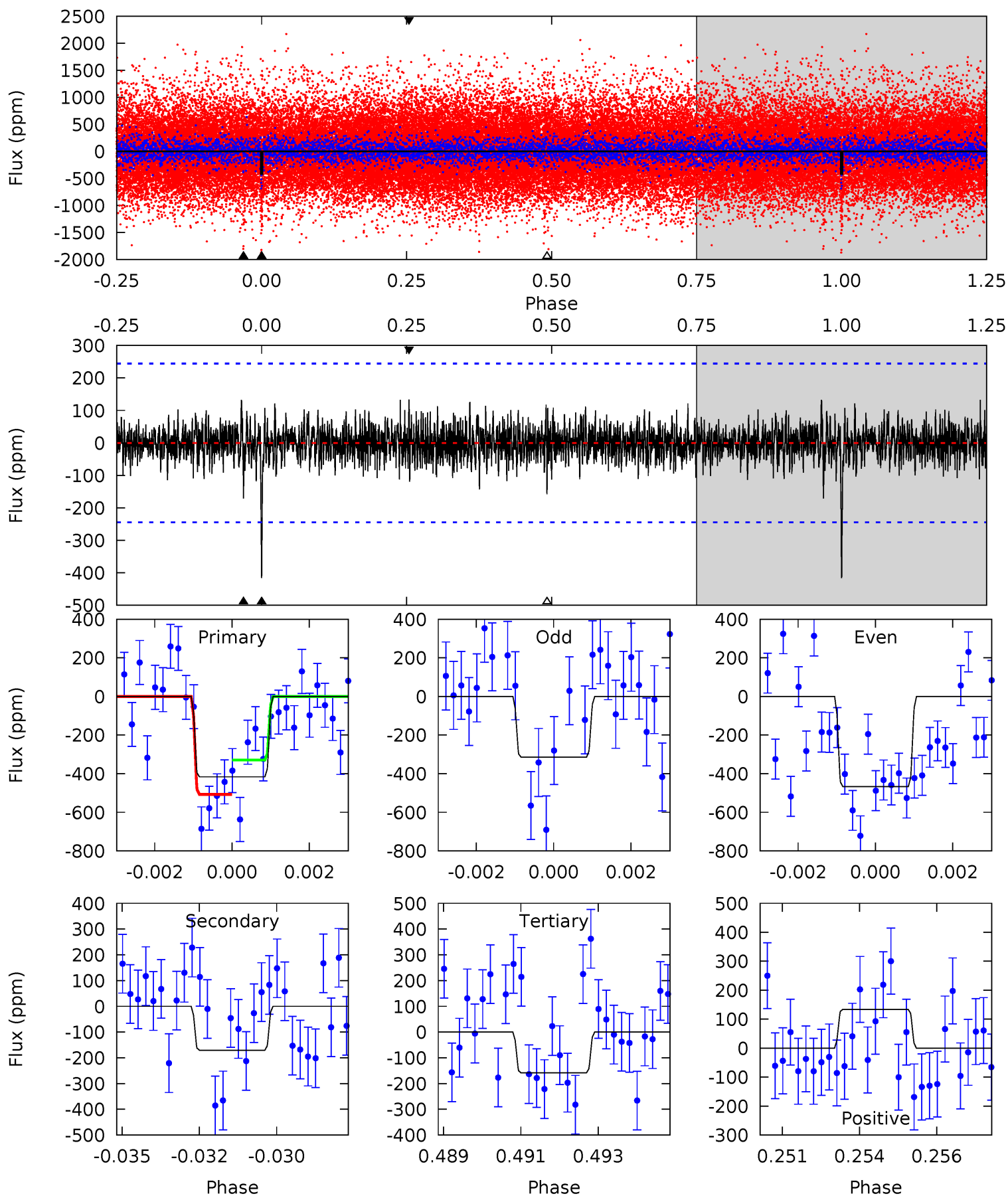
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.54	7.26	7.05	6.41	5.27	3.00	1.93	1.49	2.13	0.21	0.85	4.41	0.61	0.43	0.89



Alt Model-Shift Uniqueness Test

010472119-01, P = 232.288710 Days, E = 312.471020 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.03	3.70	3.43	2.90	5.30	3.05	0.82	5.59	6.13	0.26	0.80	1.68	0.78	0.24	1.94



Stellar Parameters For KIC 010472119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5305^{+204}_{-186}	$4.520^{+0.100}_{-0.100}$	$-0.420^{+0.350}_{-0.300}$	$0.770^{+0.107}_{-0.096}$	$0.717^{+0.106}_{-0.049}$	$2.208^{+0.945}_{-0.661}$
	+4%/-4%	+2%/-2%	+83%/-71%	+14%/-12%	+15%/-7%	+43%/-30%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010472119-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-340 ± 47	$1.86^{+0.90}_{-0.81}$	354^{+19}_{-18}	4886^{+1512}_{-656}	23679^{+53025}_{-12790}
Alt.	-171 ± 46	$1.98^{+1.00}_{-0.89}$	354^{+19}_{-18}	4170^{+1087}_{-534}	10141^{+22657}_{-5657}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

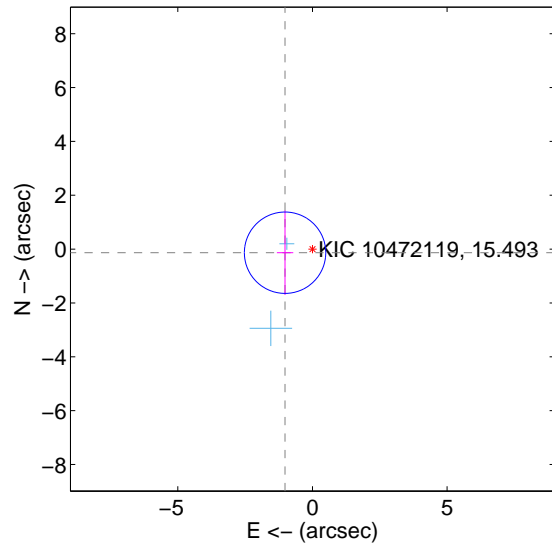
Supplemental centroid analysis for 010472119-01. Kepler magnitude: 15.49. Transit SNR 5.80

There are 2 quarters with good PRF difference image offsets

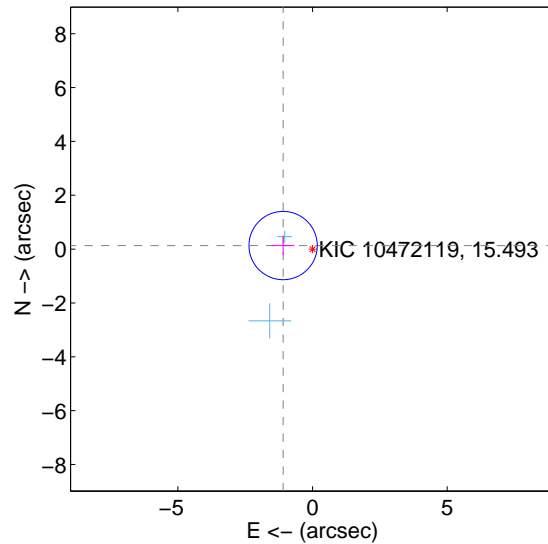
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.026 ± 0.504	2.04	1.017 ± 0.304	-0.134 ± 1.572
PRF-fit source offset from KIC position	1.101 ± 0.423	2.60	1.093 ± 0.424	0.132 ± 0.354
photometric centroid source offset	1.45 ± 2.01	0.72	0.97 ± 1.87	1.08 ± 2.12

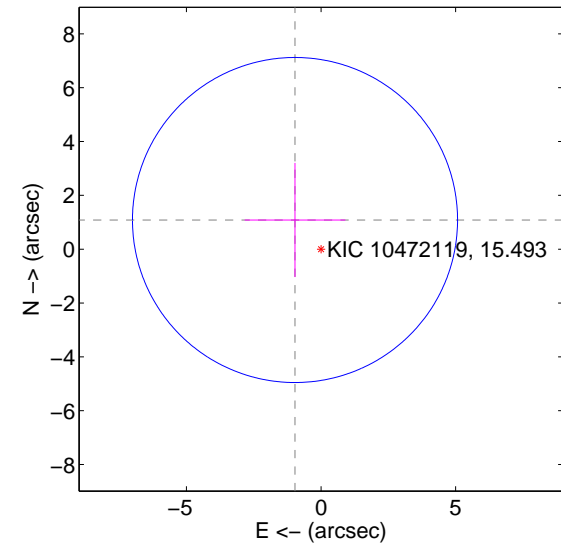
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

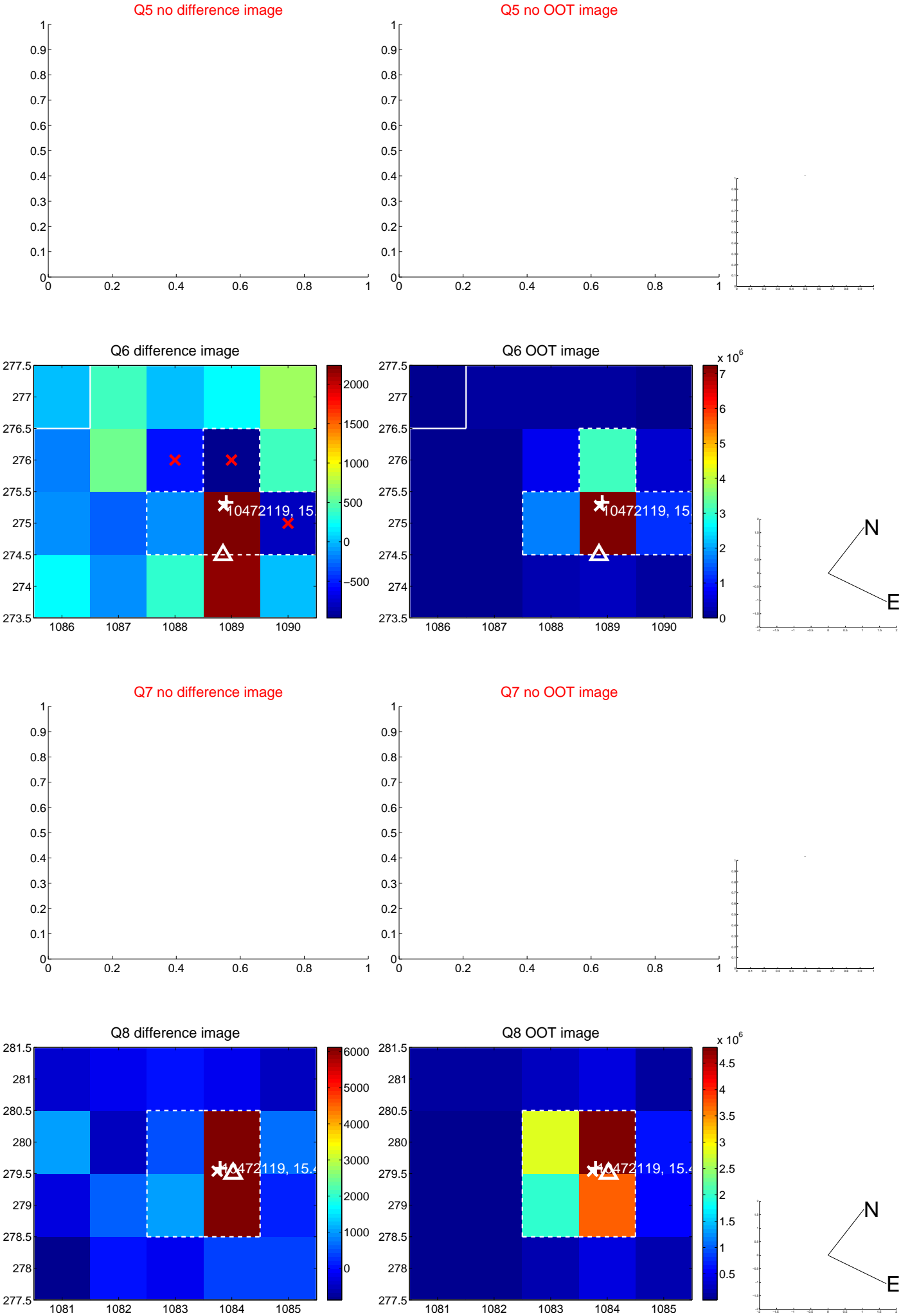


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



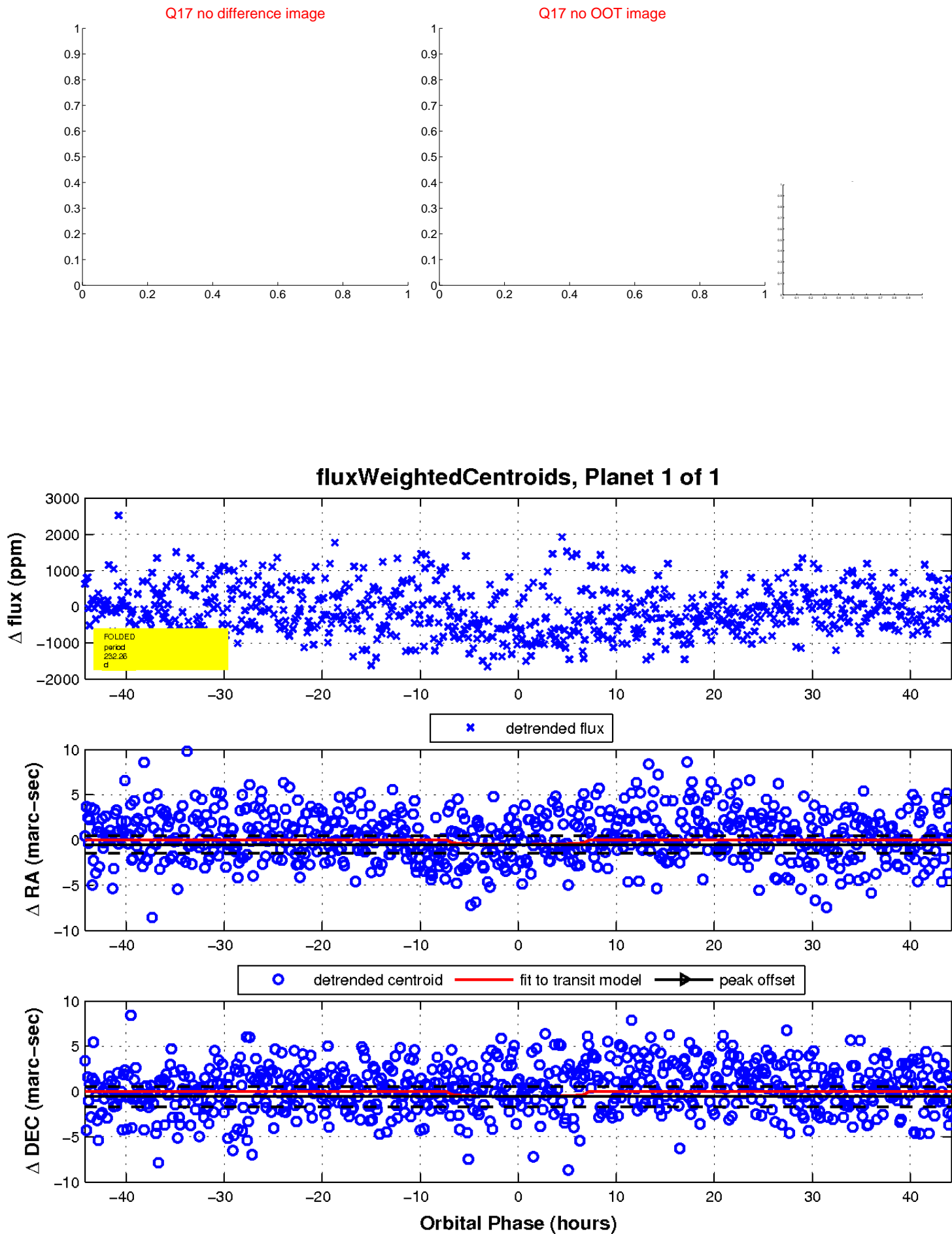
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

