

KIC 003749365

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})
003749365-01	OBS	1176.01	1.973756	133.294502	30251.3	1.971	1466.6	1276.8	0.50	3807	9.28	76.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003749365-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

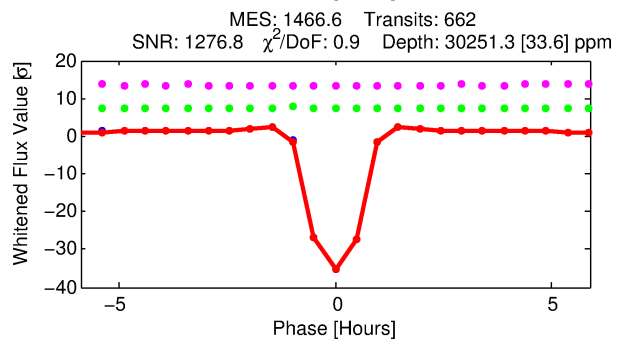
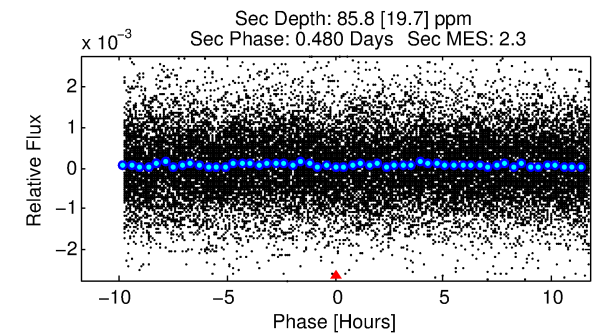
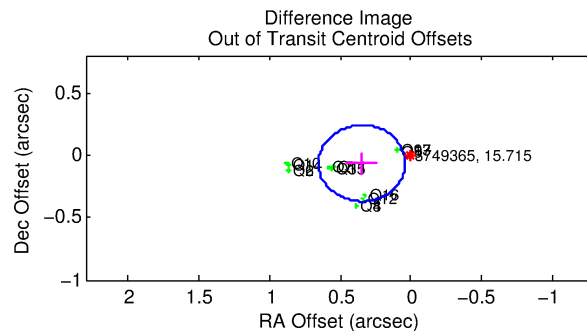
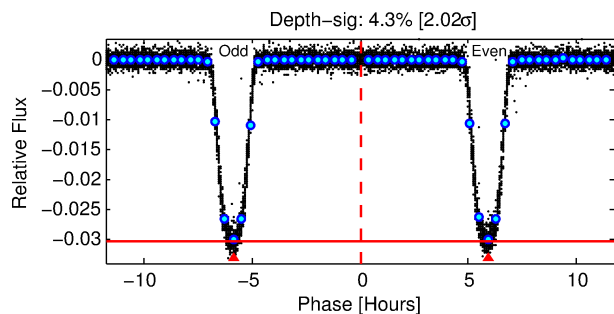
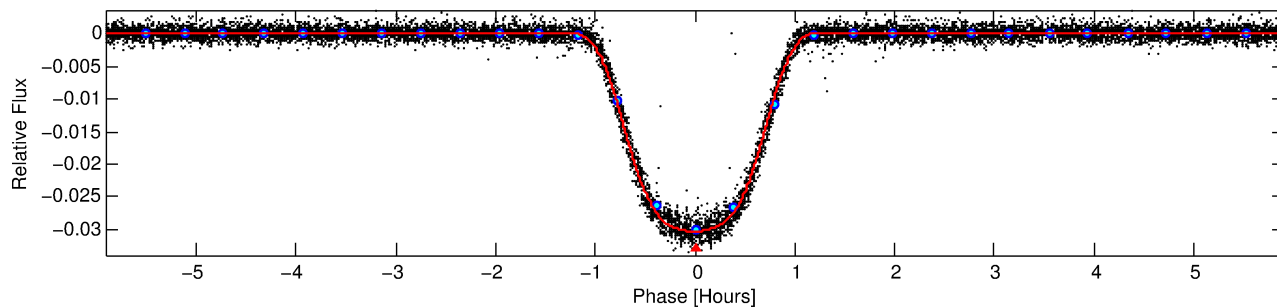
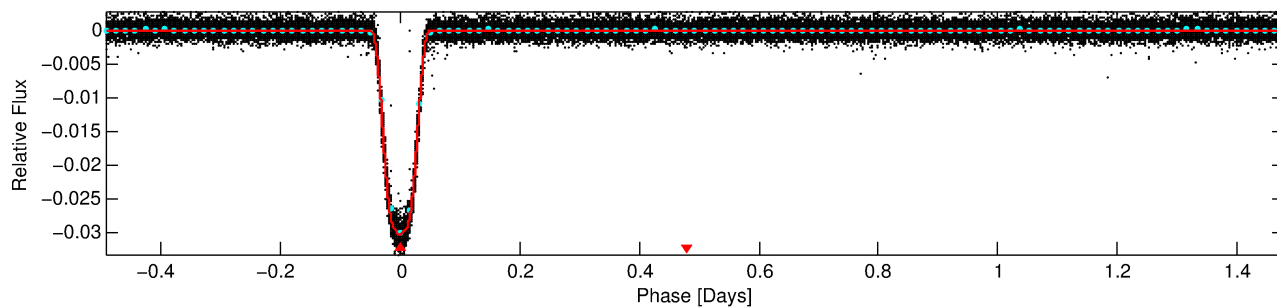
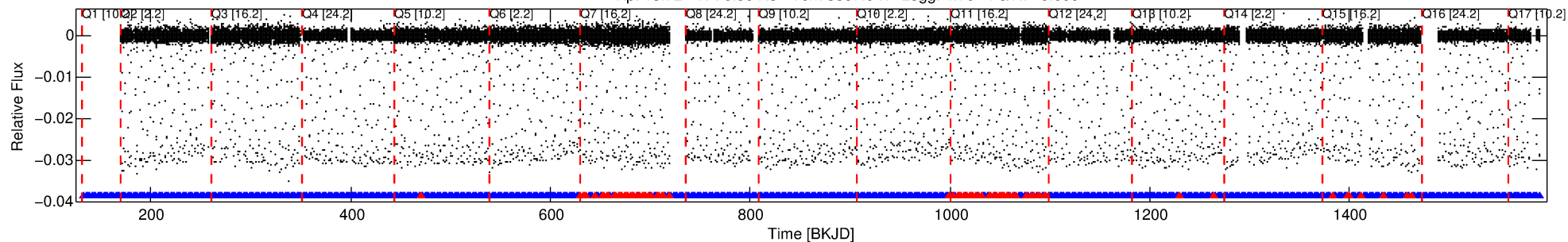
Ephemeris Match Information For 003749365-01

No Significant Match Found

DV One-Page Summary

KIC: 3749365 Candidate: 1 of 1 Period: 1.974 d
KOI: K01176.01 Corr: 0.963

Kp: 15.72 R*: 0.50 Rs Teff: 3807.0 K Logg: 4.76 Fe/H: -0.060



DV Fit Results:

Period = 1.97376 [0.00000] d
Epoch = 133.2945 [0.0000] BKJD
Rp/R* = 0.1690 [0.0003]
a/R* = 7.47 [0.04]
b = 0.65 [0.00]
Seff = 76.30 [29.90]
Teq = 754 [74] K
Rp = 9.28 [2.25] Re
a = 0.0250 [0.0046] AU
Ag = 0.34 [0.11] [-5.72σ]
Teff = 891 [85] K [1.22σ]

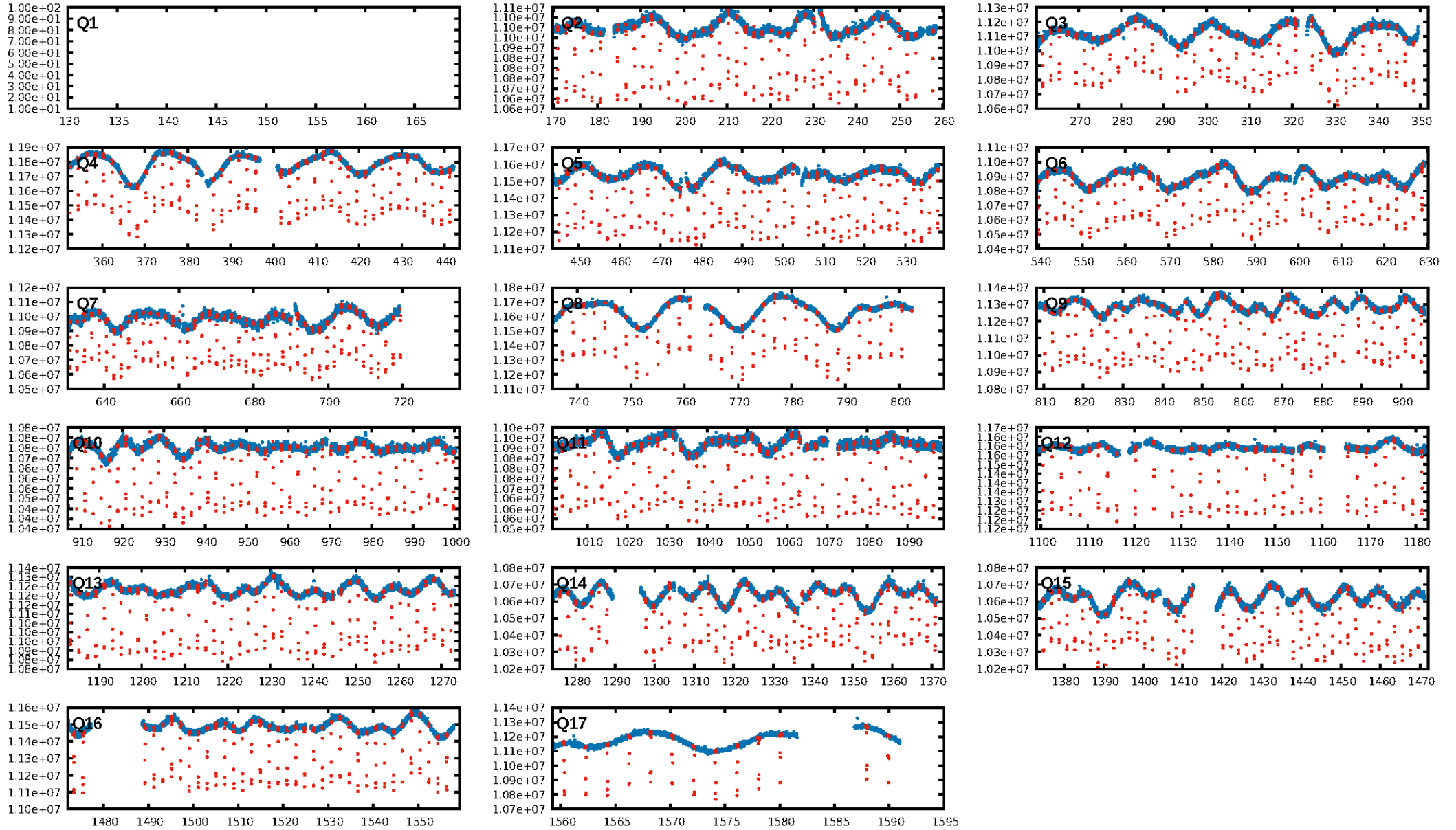
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.89 [575/649]
GhostDiagnostic-chr: 2.809
Centroid-sig: 0.0%
Centroid-so: 0.503 arcsec [65.37σ]
OotOffset-rm: 0.354 arcsec [3.46σ]
KicOffset-rm: 0.094 arcsec [1.37σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

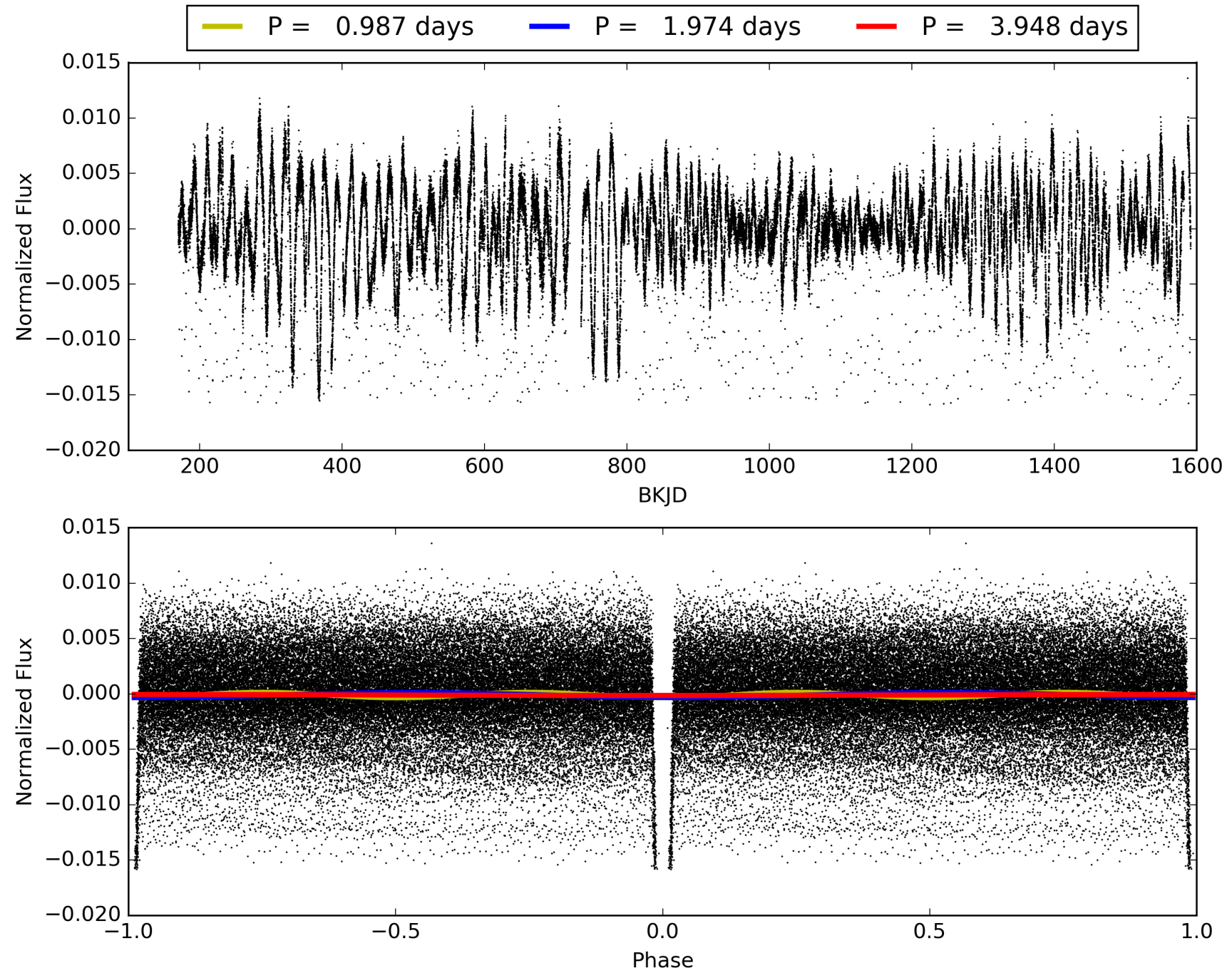
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:15:07 Z

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

TCE 003749365-01, PDC Light Curves

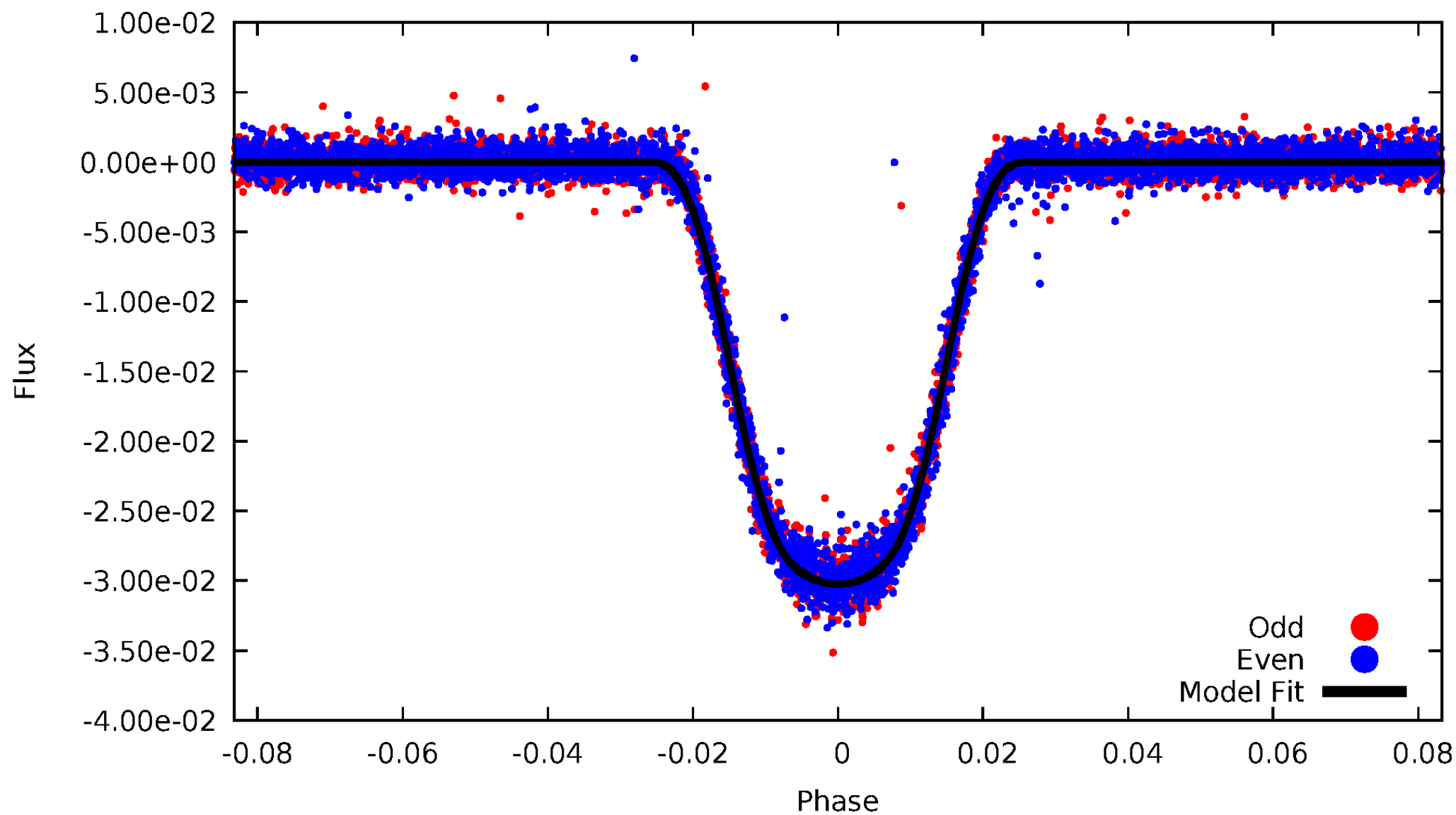


TCE 003749365-01



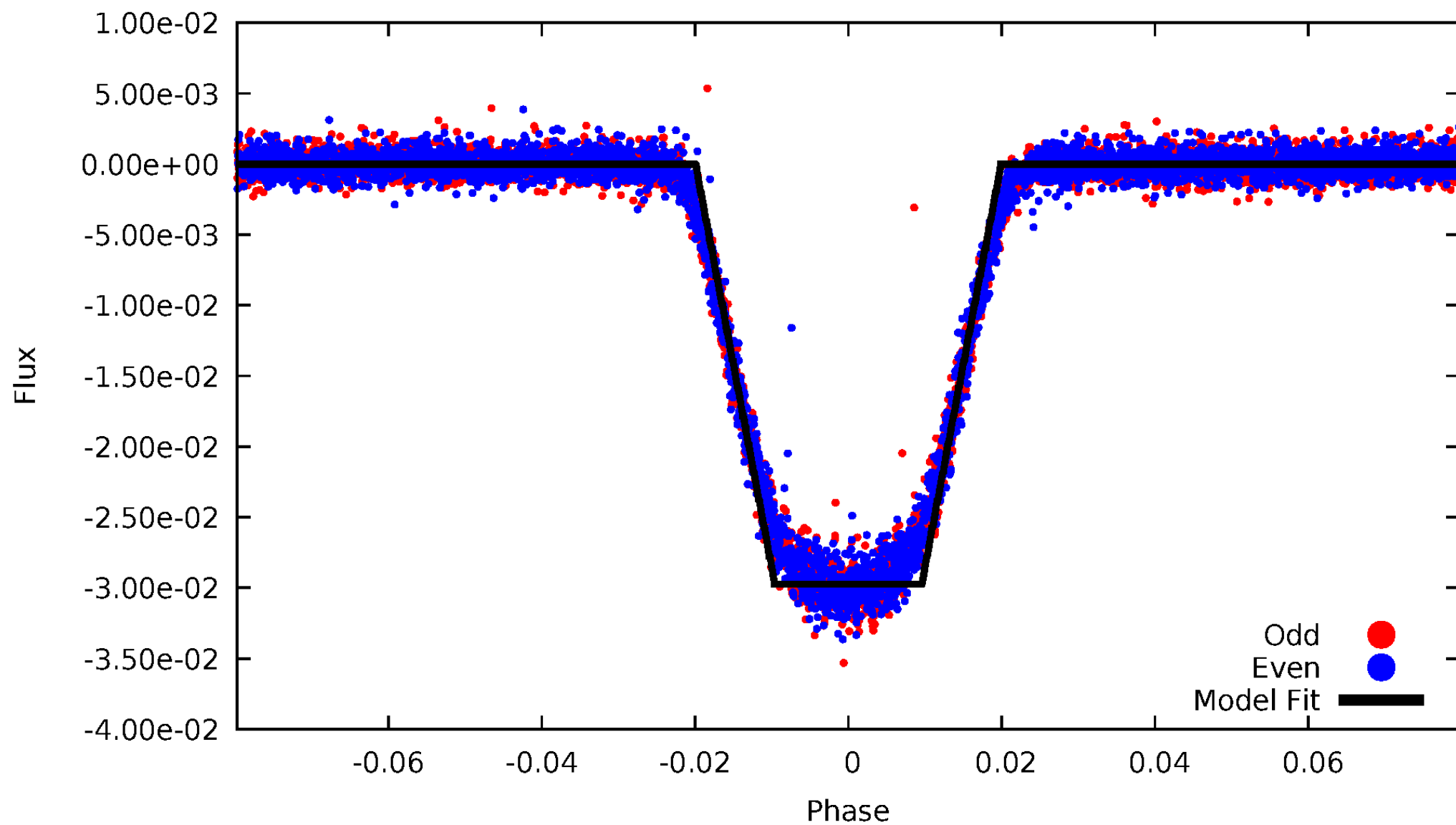
DV Odd/Even

TCE 003749365-01



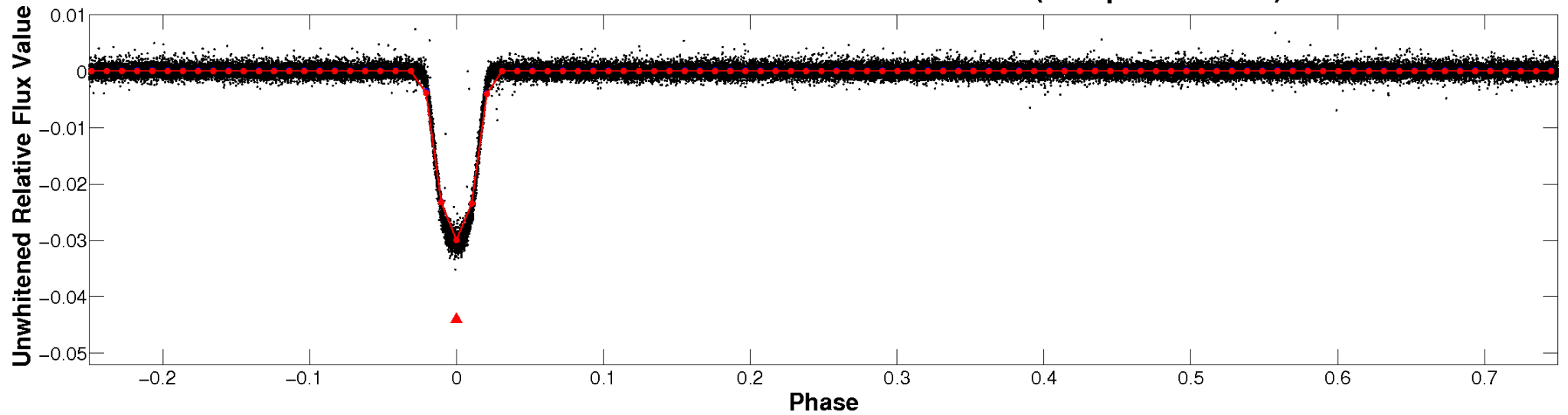
ALT Odd/Even

TCE 003749365-01

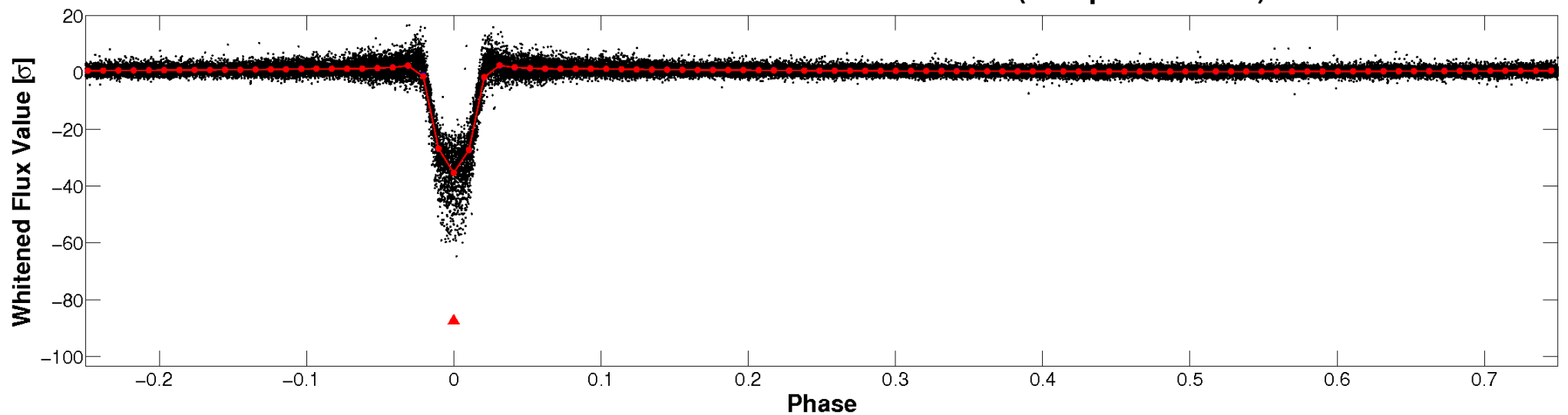


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

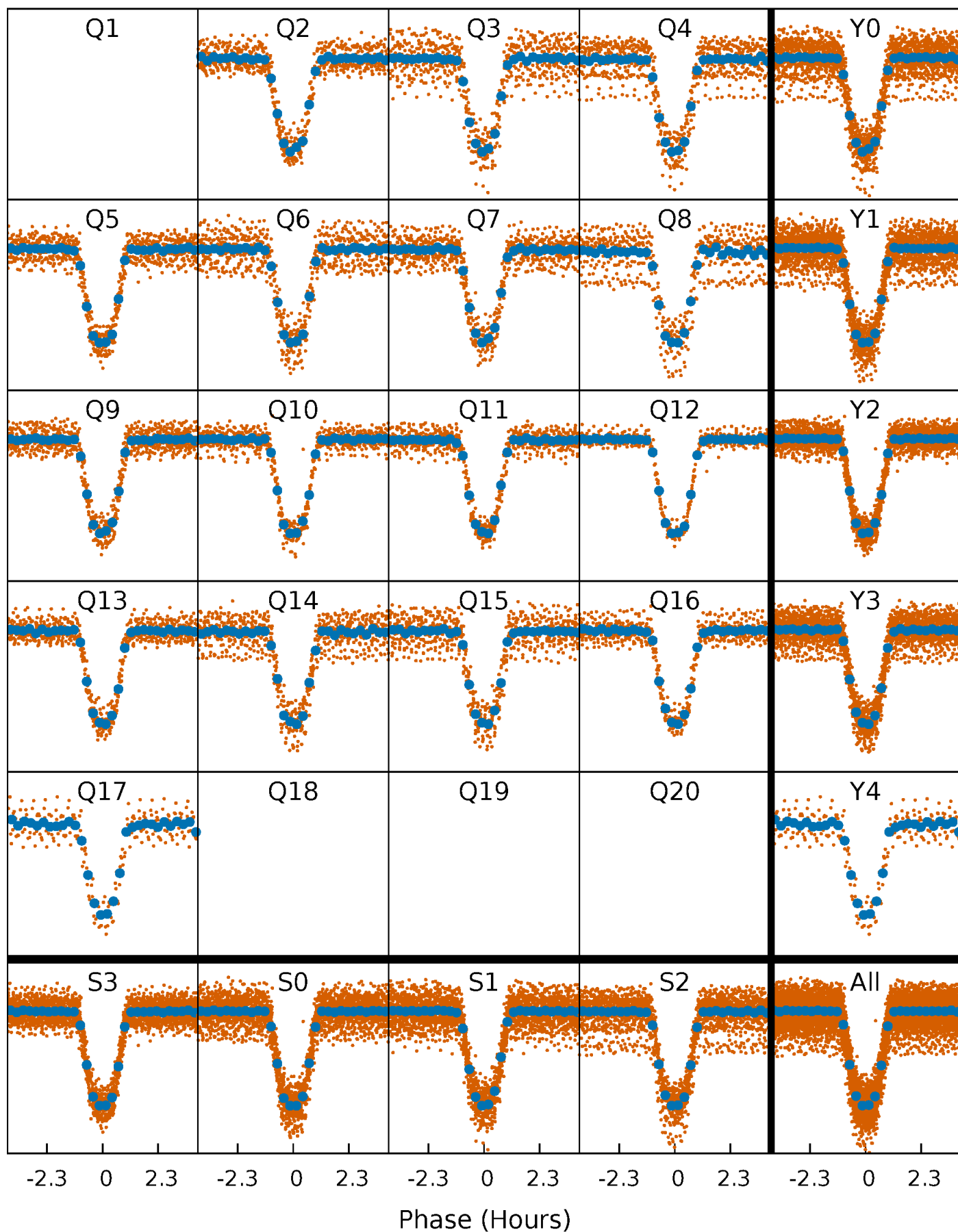


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



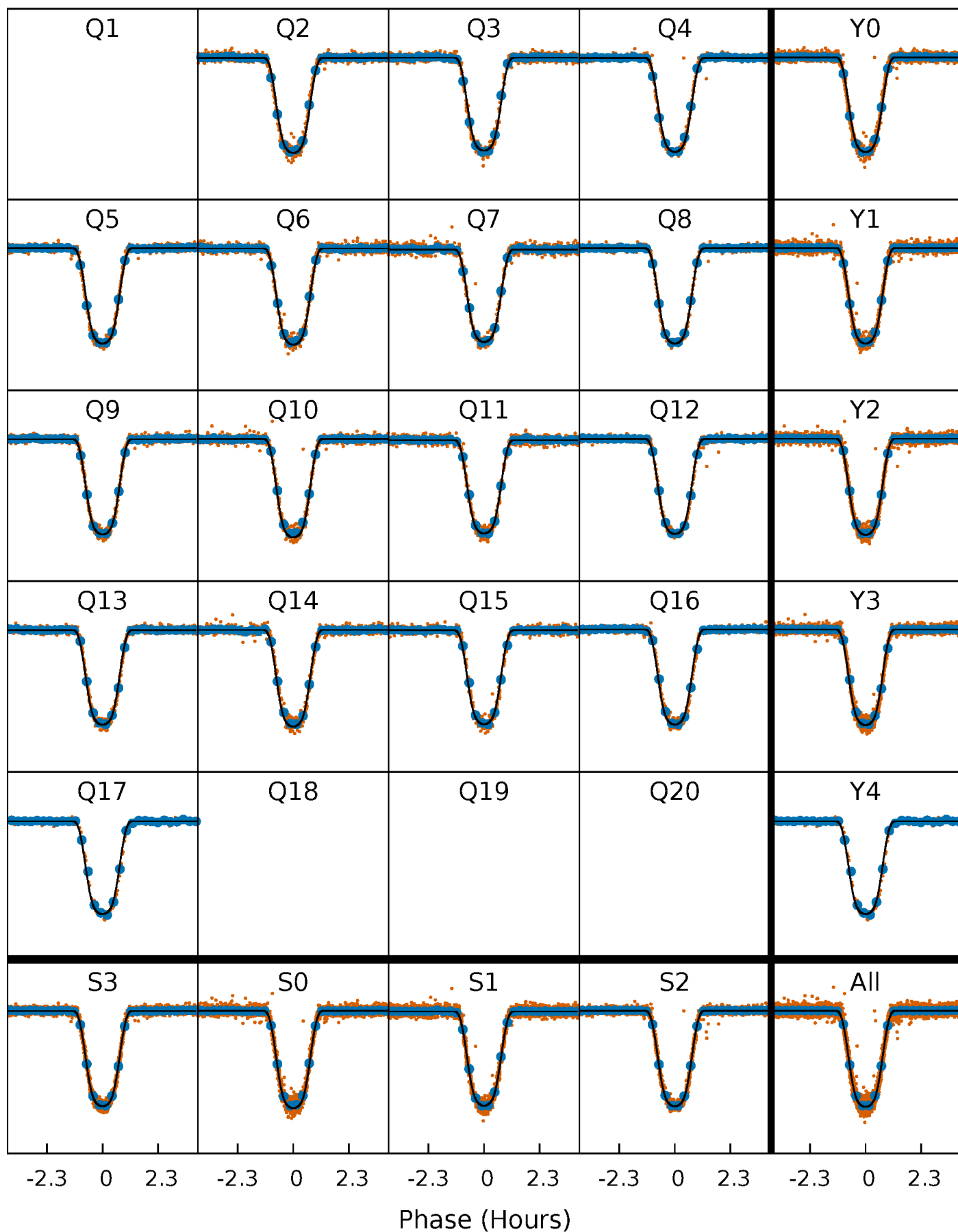
PDC Quarter-Phased Transit Curves

TCE 003749365-01 P= 1.973756 Days $T_0=133.294502$ (BKJD)



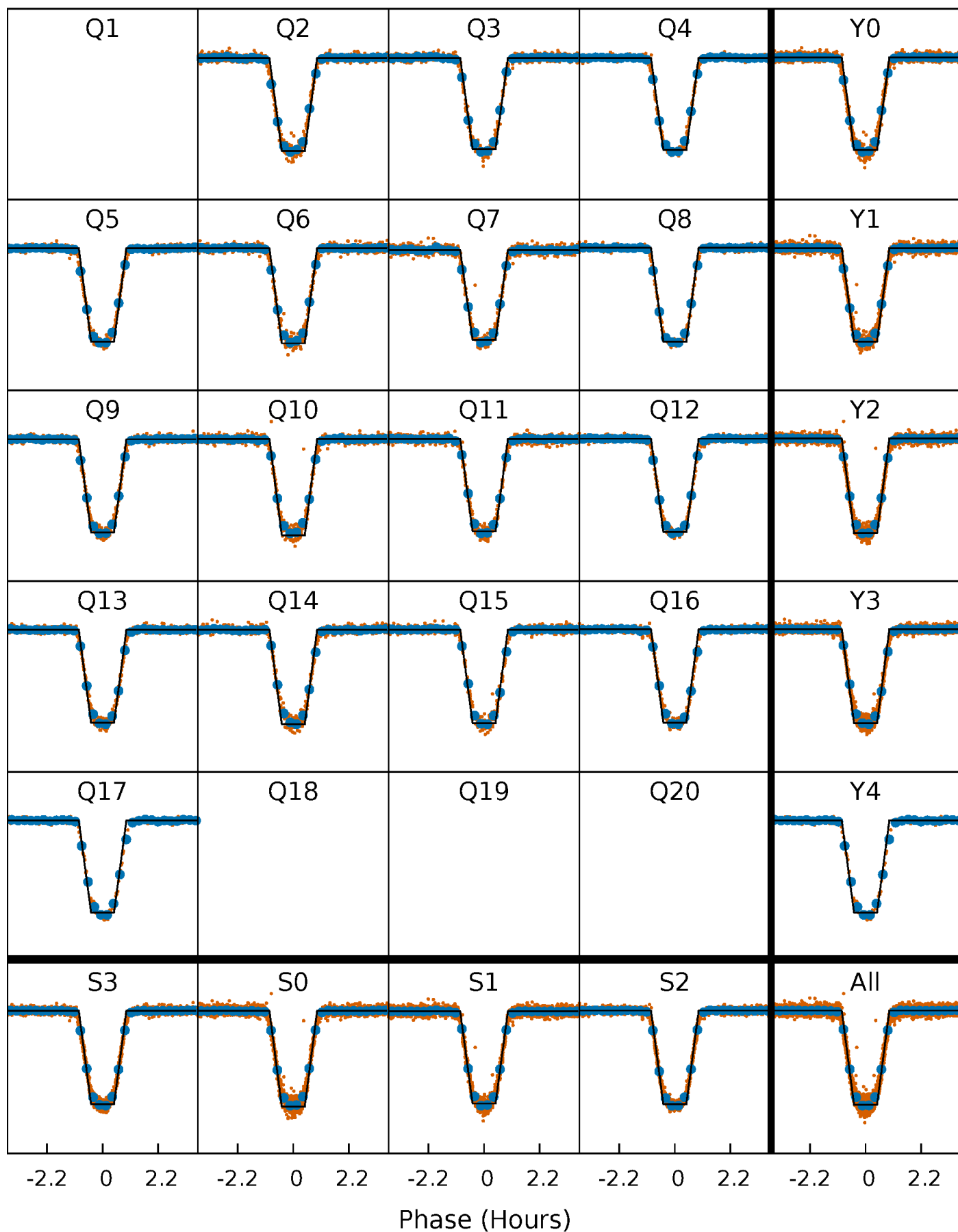
DV Quarter-Phased Transit Curves

TCE 003749365-01 P= 1.973756 Days $T_0=133.294502$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

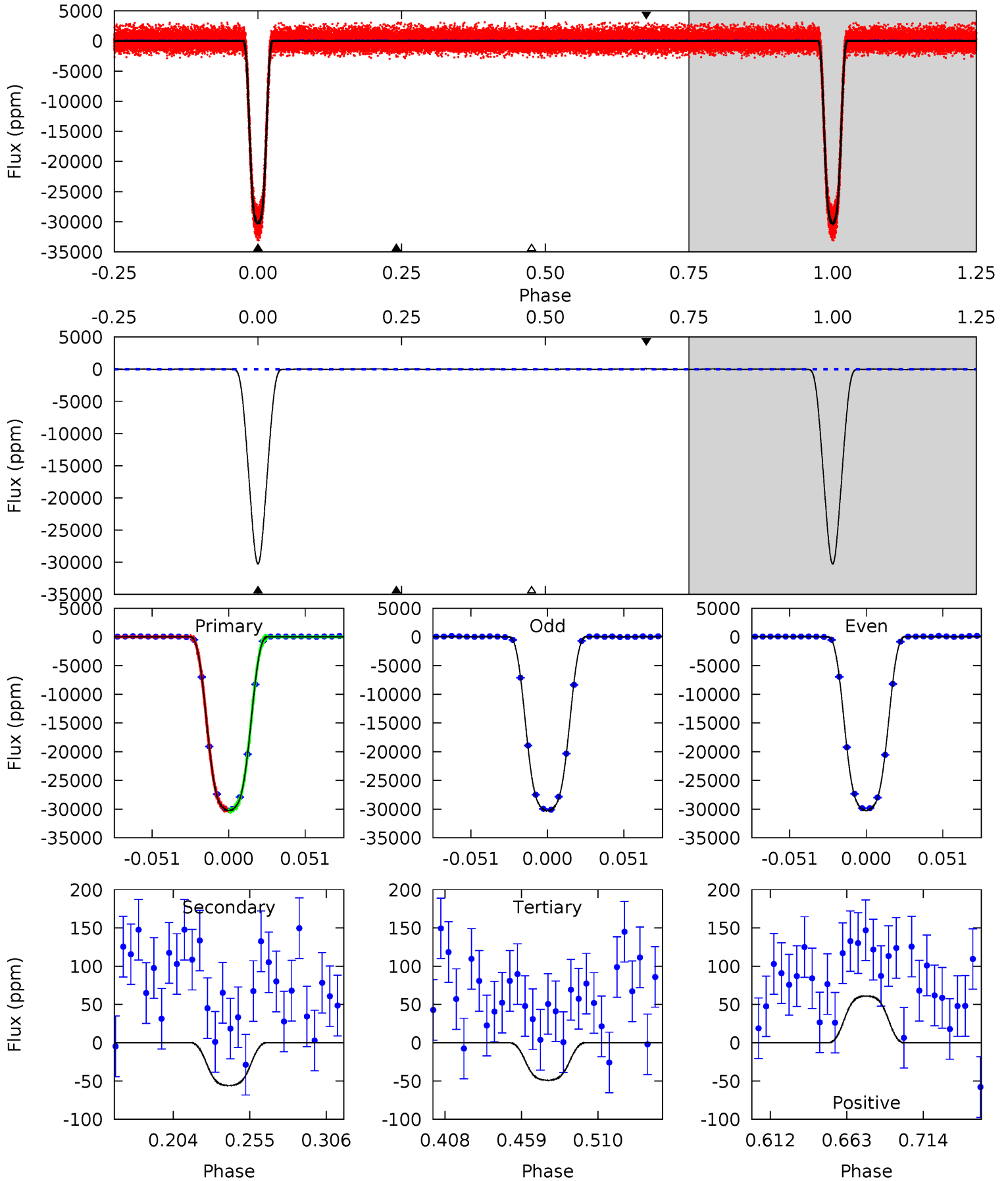
TCE 003749365-01 P= 1.973757 Days $T_0=133.294252$ (BKJD)



DV Model-Shift Uniqueness Test

003749365-01, P = 1.973756 Days, E = 133.294502 Days

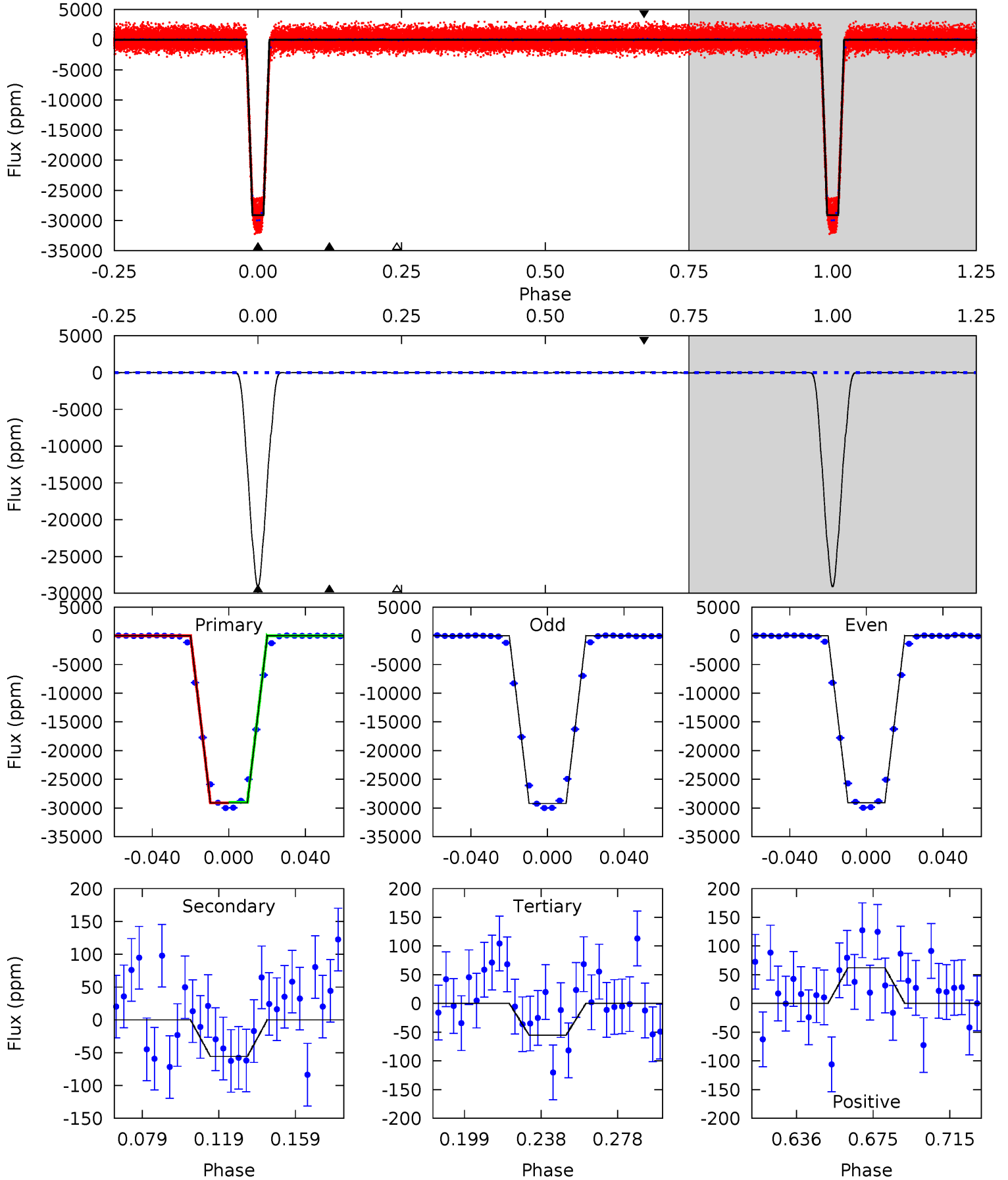
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2217	4.09	3.59	4.48	4.70	1.95	1.59	2213	2213	0.50	-0.39	3.16	1.00	0.00	4.69



Alt Model-Shift Uniqueness Test

003749365-01, P = 1.973757 Days, E = 133.294252 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1872	3.59	3.54	4.00	4.75	2.06	1.37	1868	1868	0.05	-0.41	4.96	1.00	0.00	3.41



Stellar Parameters For KIC 003749365

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3807^{+291}_{-291}	$4.762^{+0.120}_{-0.080}$	$-0.060^{+0.200}_{-0.200}$	$0.503^{+0.082}_{-0.122}$	$0.534^{+0.081}_{-0.132}$	$5.905^{+4.274}_{-1.806}$
	+8%/-8%	+3%/-2%	+333%/-333%	+16%/-24%	+15%/-25%	+72%/-31%
Source	SPE5	SPE5	SPE5	DSEP		

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

Secondary Eclipse Parameters for KIC 003749365-01 / KOI 1176.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-56 ± 14	$9.33^{+0.82}_{-1.25}$	1045^{+89}_{-92}	-1582^{+2621}_{-126}	$0.228^{+0.072}_{-0.066}$
Alt.	-56 ± 16	$9.42^{+0.90}_{-1.16}$	1042^{+92}_{-89}	-1602^{+343}_{-121}	$0.217^{+0.078}_{-0.067}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

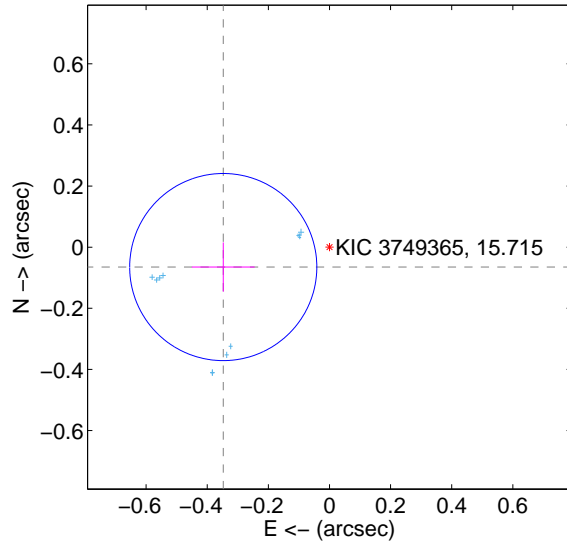
Supplemental centroid analysis for 003749365-01. Kepler magnitude: 15.71. Transit SNR 1276.79

There are 16 quarters with good PRF difference image offsets

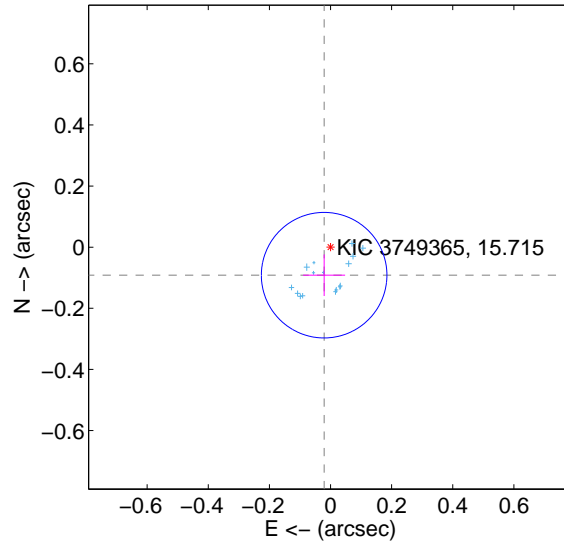
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.354 ± 0.102	3.46	0.348 ± 0.103	-0.065 ± 0.081
PRF-fit source offset from KIC position	0.094 ± 0.068	1.37	0.021 ± 0.069	-0.092 ± 0.068
photometric centroid source offset	0.50 ± 0.01	65.37	-0.50 ± 0.01	0.06 ± 0.01

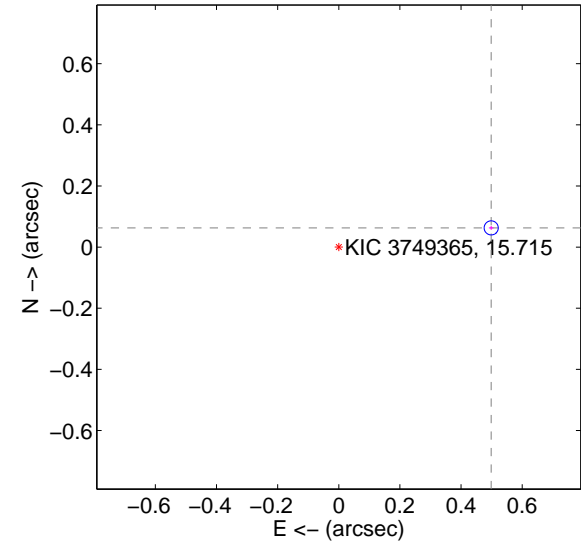
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

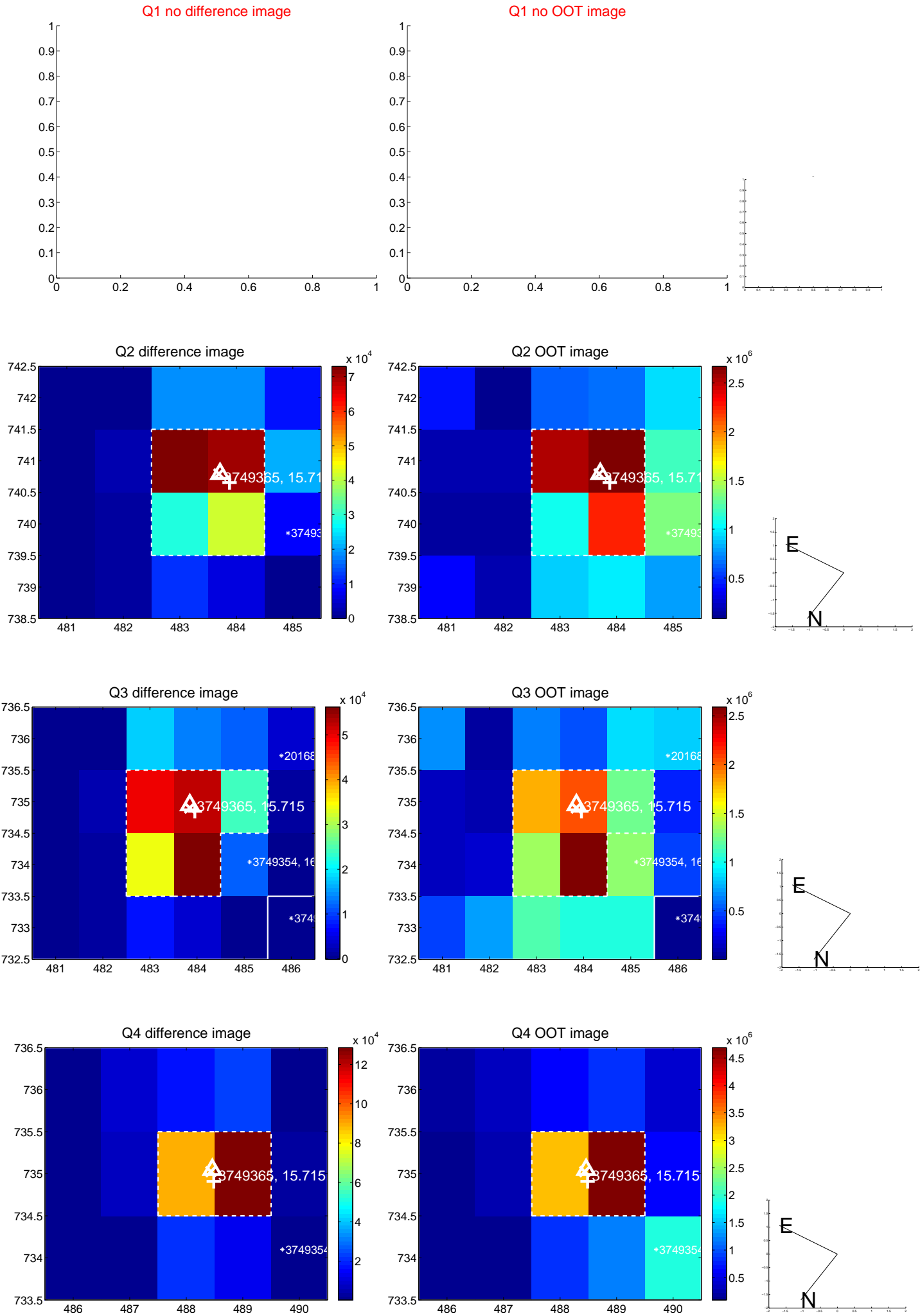


offset from photometric centroids

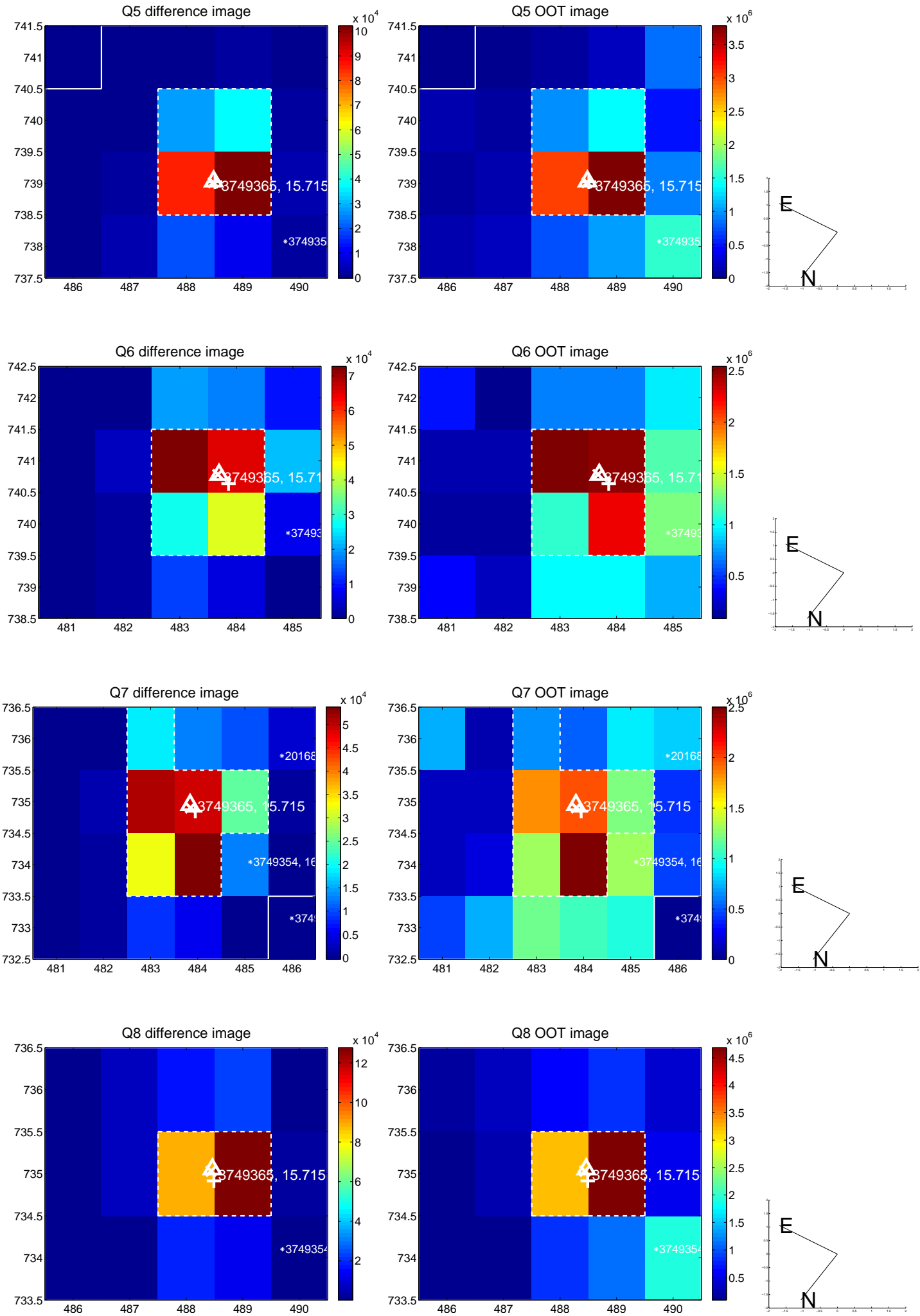


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

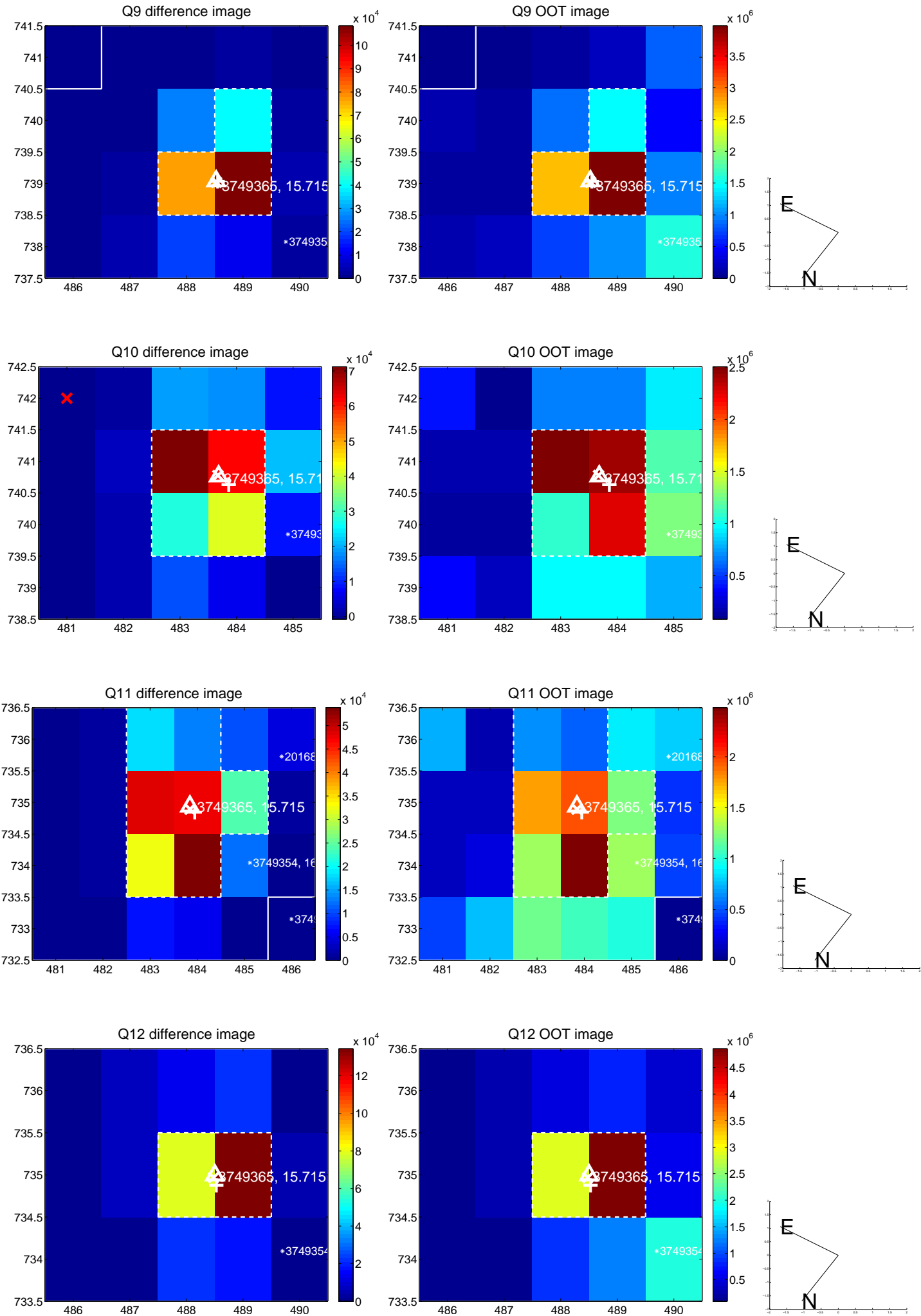
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



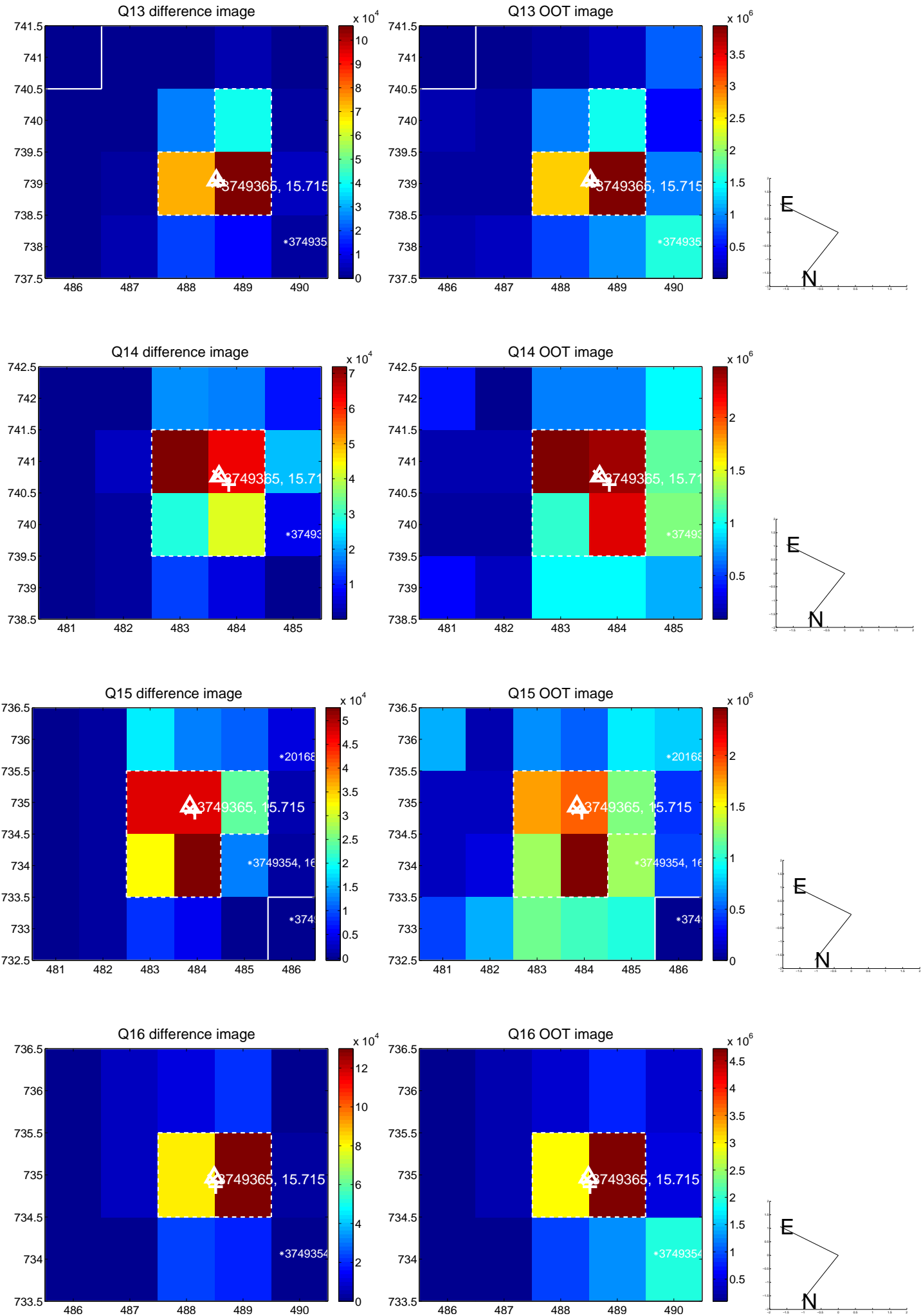
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



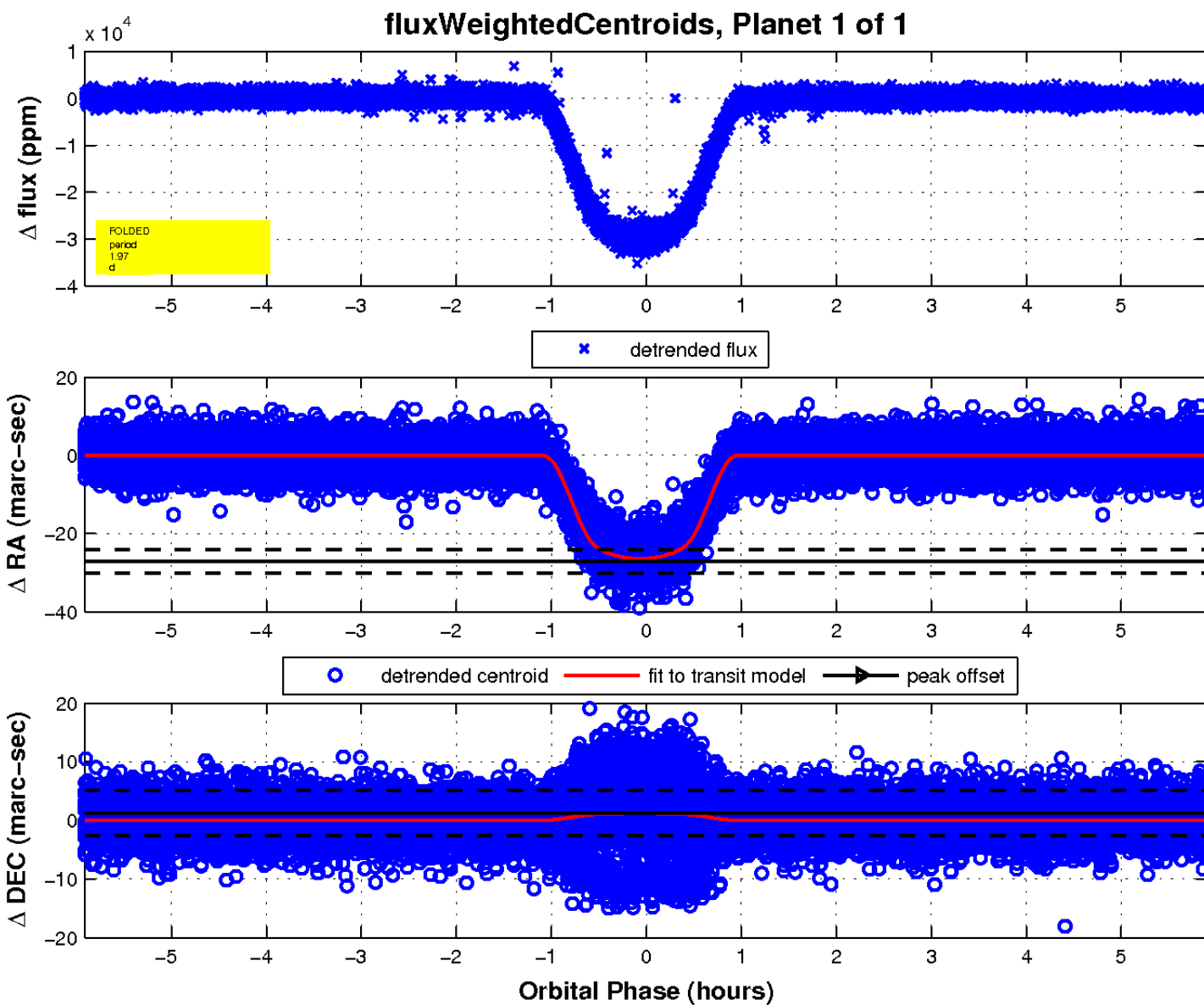
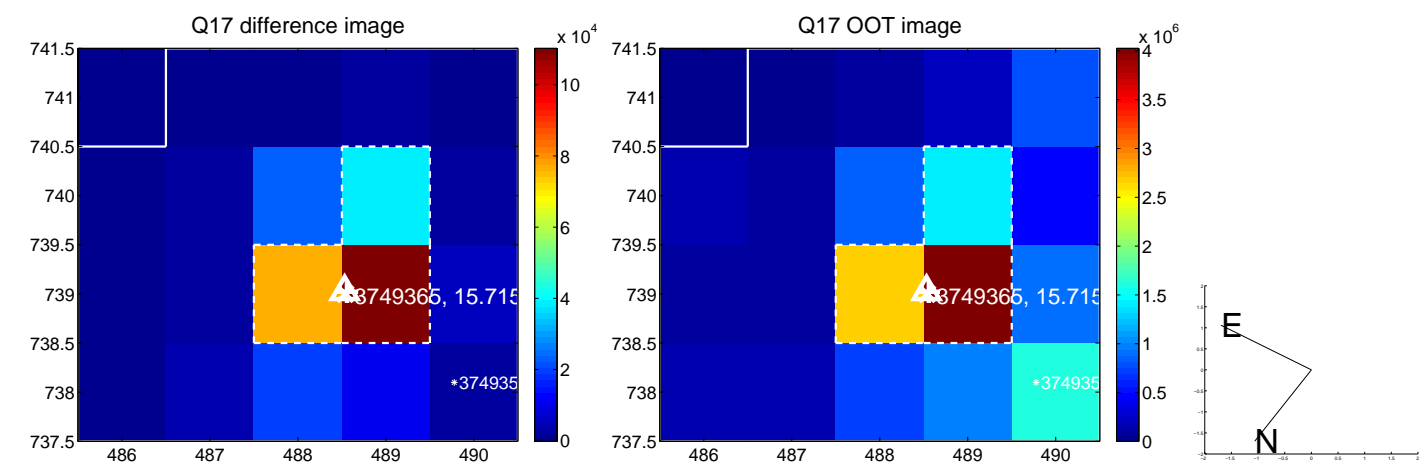
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

