

KIC 003439031

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})
003439031-01	OBS	4980.01	2.976024	132.967992	435132.2	6.718	120049.7	50832.2	1.08	6572	77.68	1123.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003439031-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_SATURATED

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 003439031-01

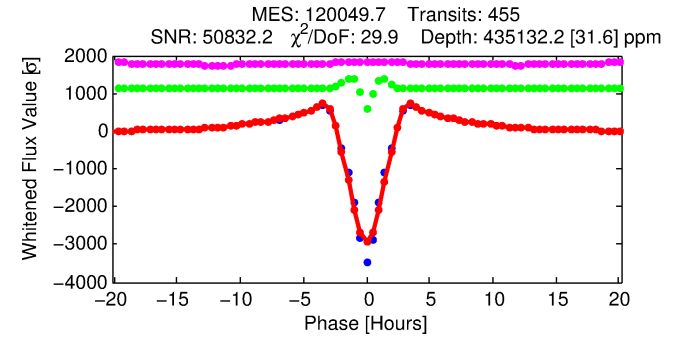
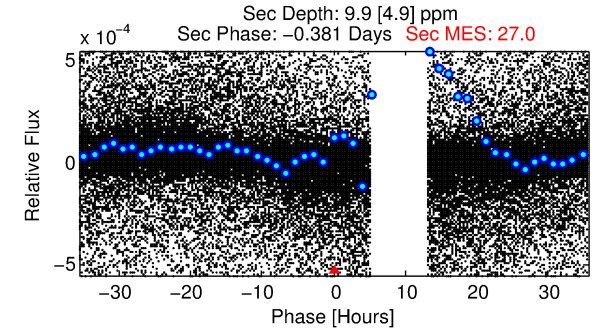
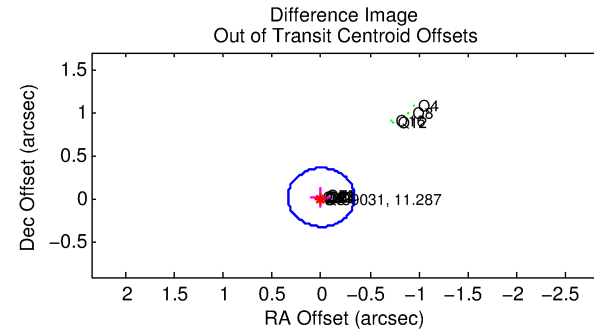
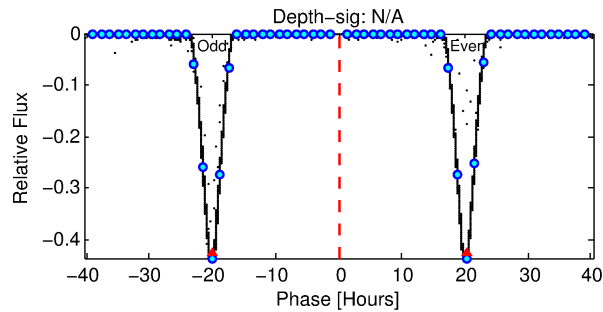
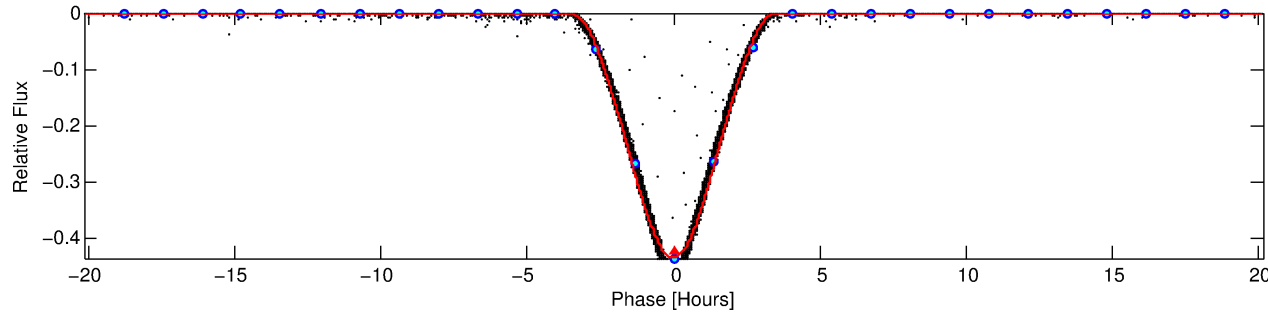
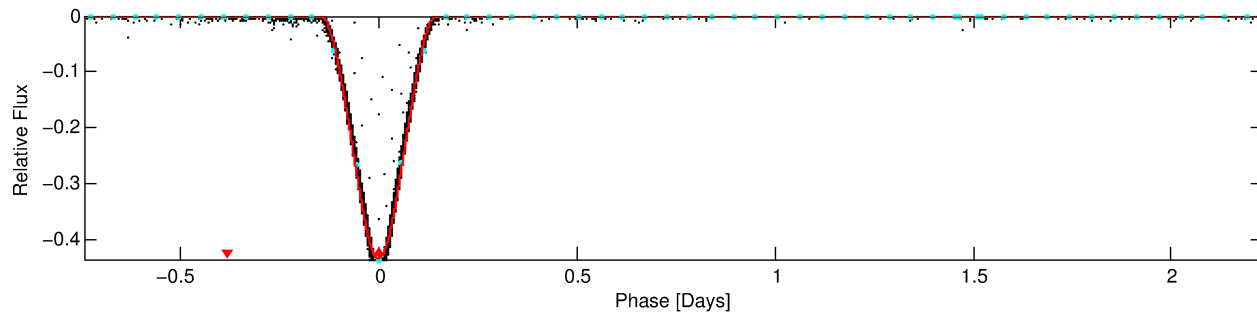
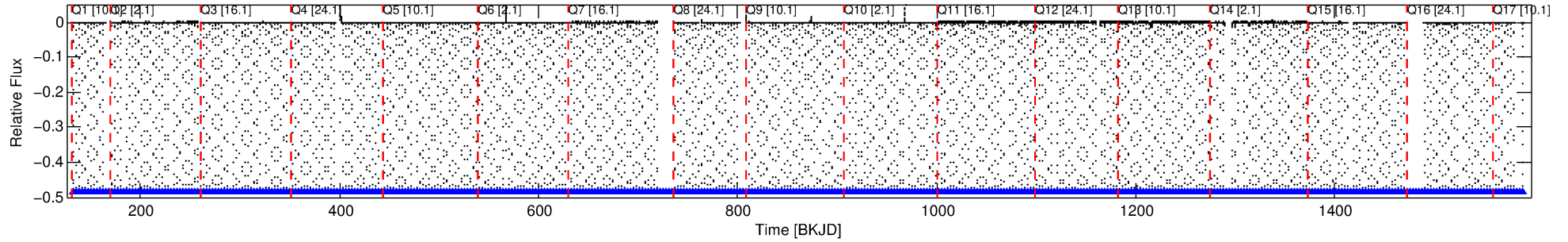
No Significant Match Found

DV One-Page Summary

KIC: 3439031 Candidate: 1 of 1 Period: 2.976 d

KOI: K04980.01 Corr: 0.986

Kp: 11.29 R*: 1.08 Rs Teff: 6572.0 K Logg: 4.41 Fe/H: -0.420



DV Fit Results:

Period = 2.97602 [0.00000] d
Epoch = 132.9680 [0.0000] BKJD
Rp/R* = 0.6591 [0.0005]
a/R* = 5.52 [0.00]
b = 0.43 [0.00]
Seff = 1123.19 [325.46]
Teq = 1476 [107] K
Rp = 77.68 [16.90] Re
a = 0.0417 [0.0077] AU
Ag = 0.00 [0.00] [-1128.13σ]
Teffp = 454 [58] K [-8.4σ]

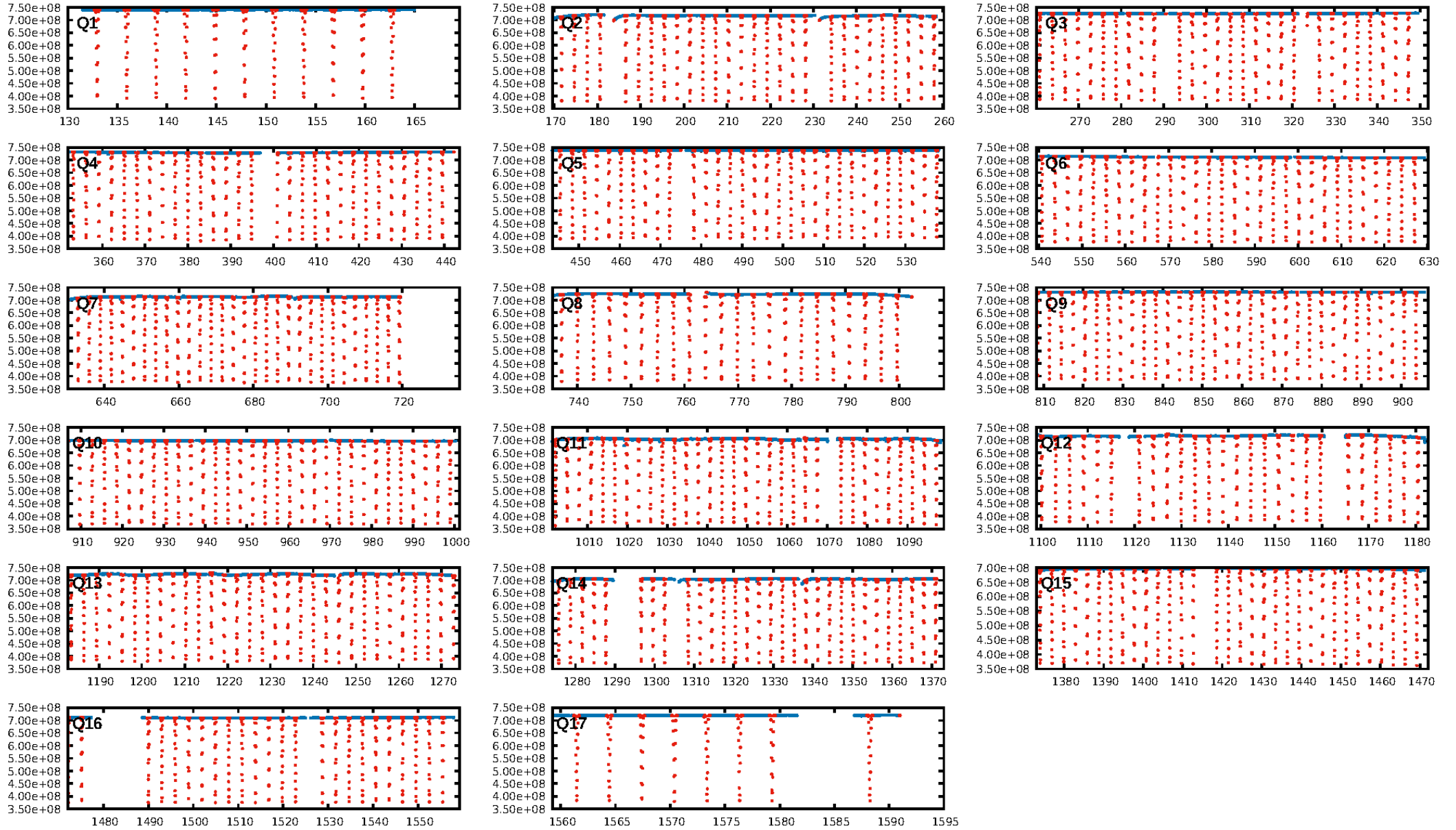
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [436/436]
GhostDiagnostic-chr: 1.831
Centroid-sig: N/A
Centroid-so: 0.296 arcsec [1682.22σ]
OotOffset-rm: 0.022 arcsec [0.19σ]
KicOffset-rm: 0.065 arcsec [0.49σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

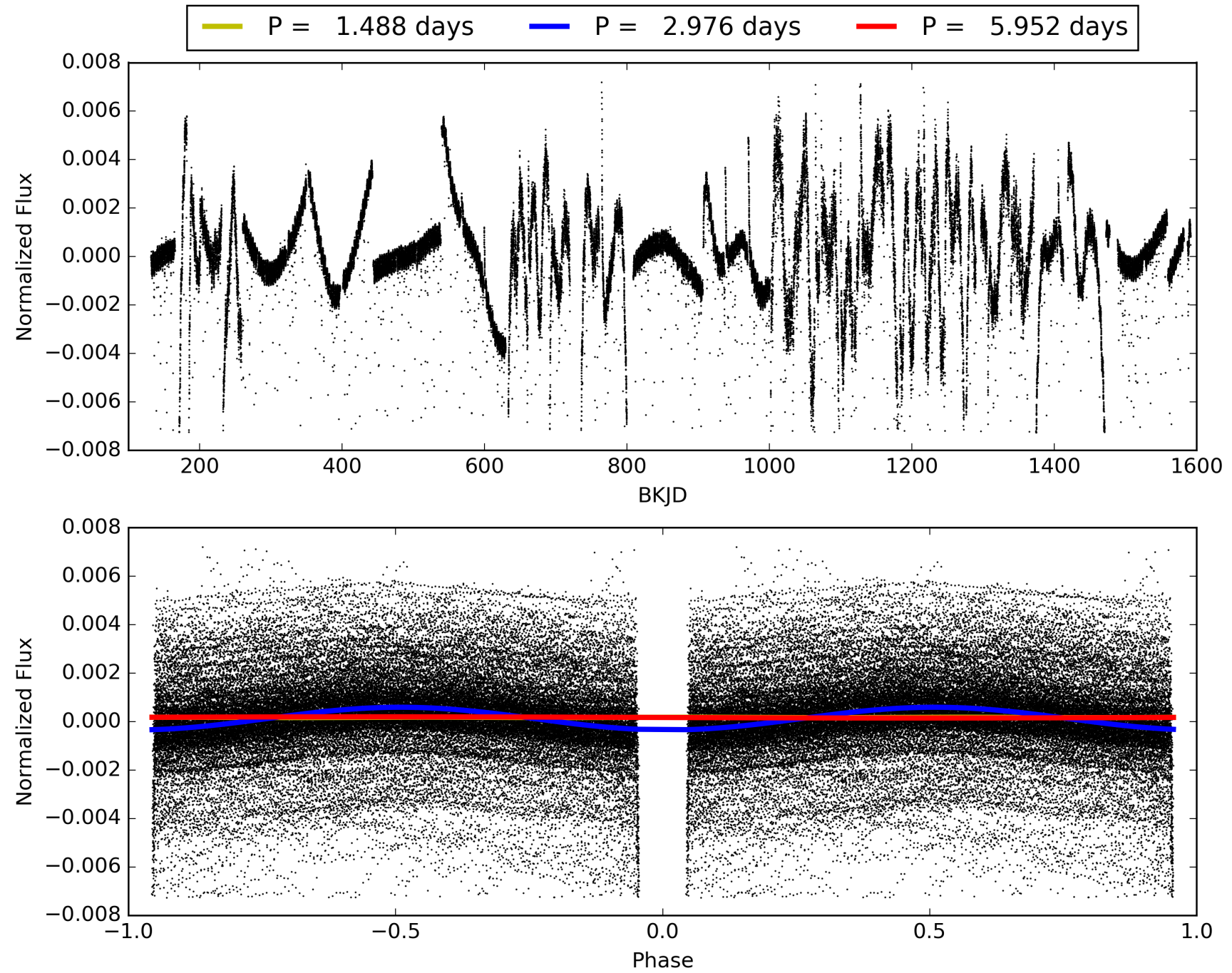
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:47:41 Z

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

TCE 003439031-01, PDC Light Curves

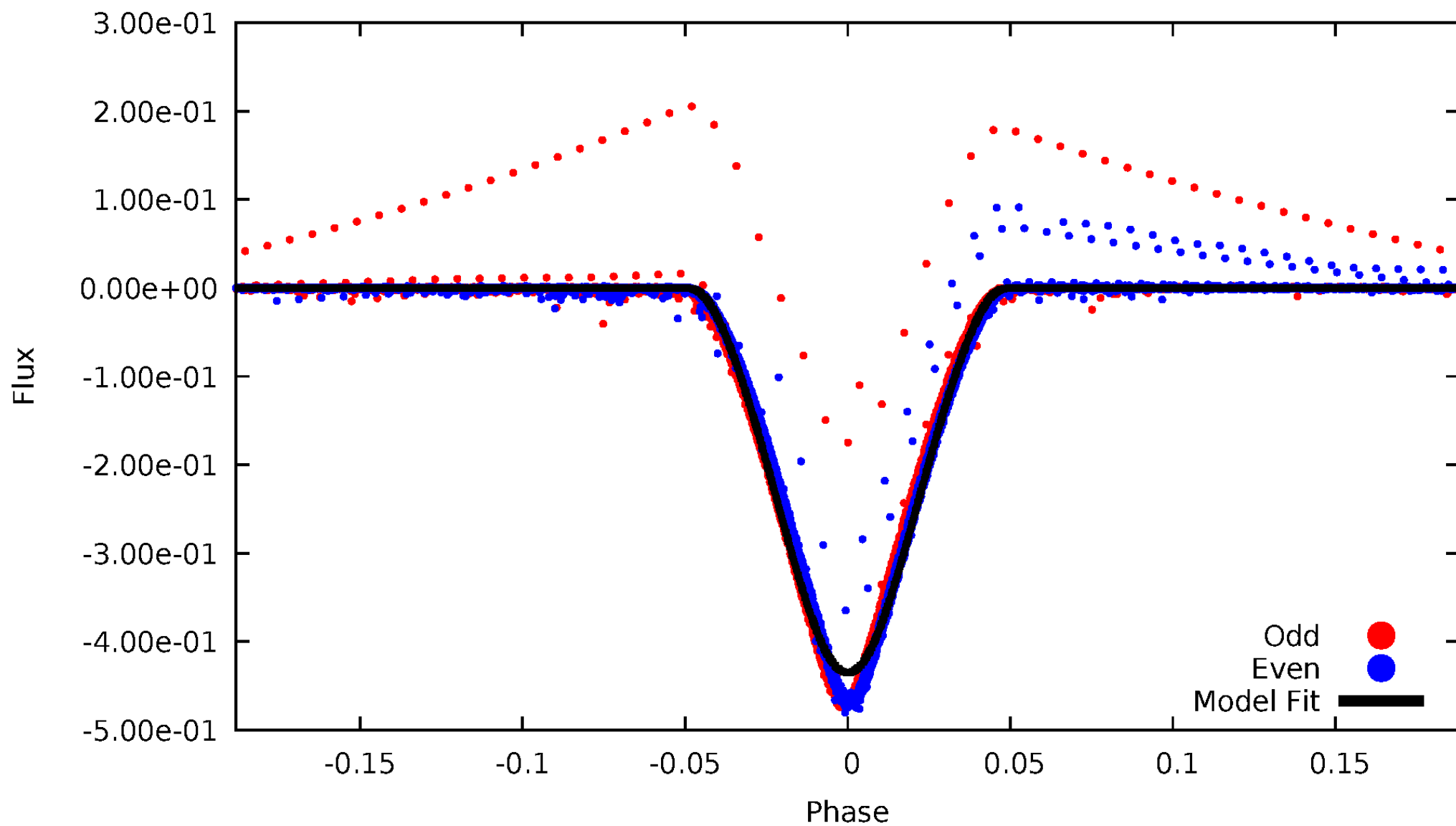


TCE 003439031-01



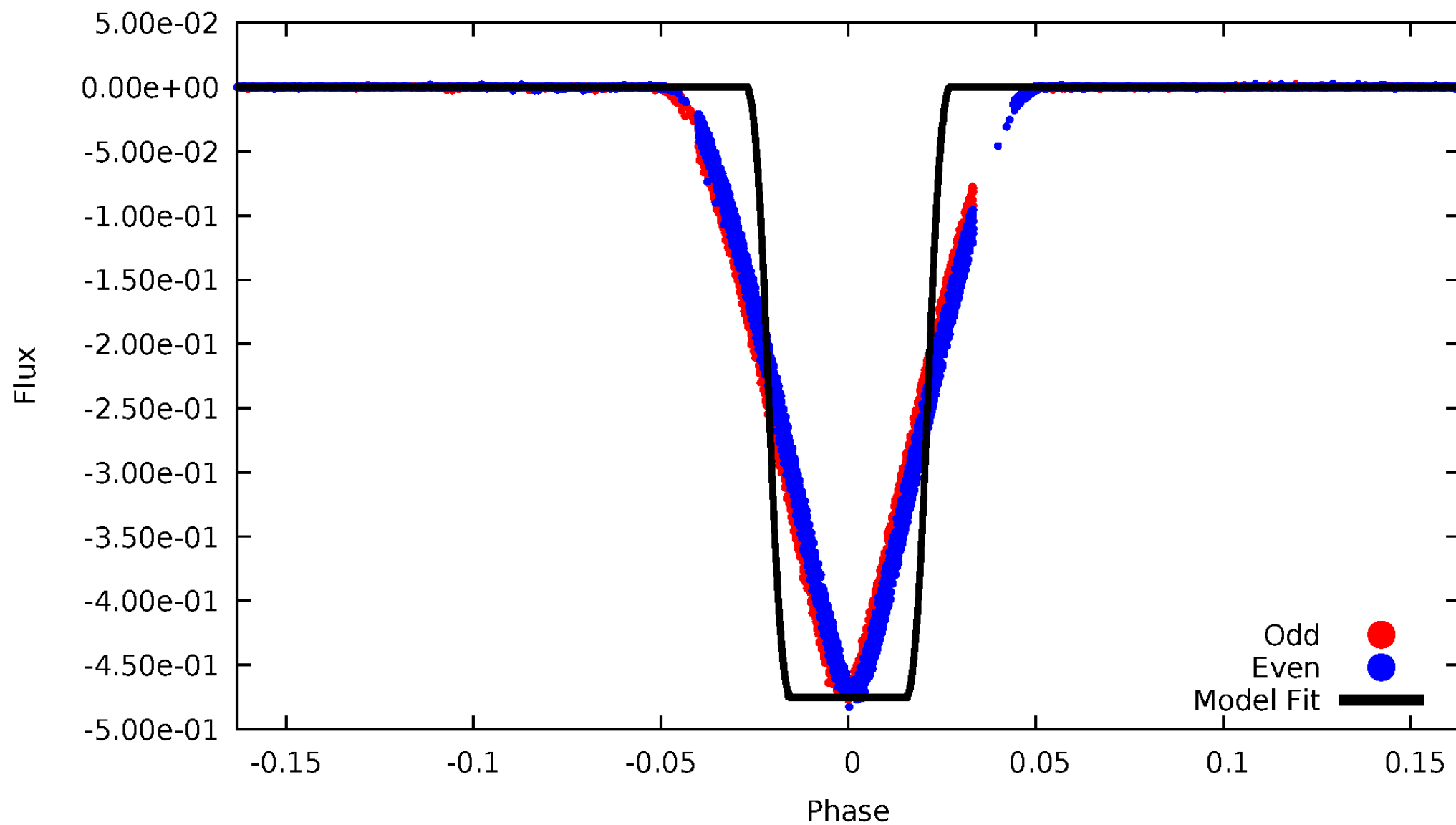
DV Odd/Even

TCE 003439031-01



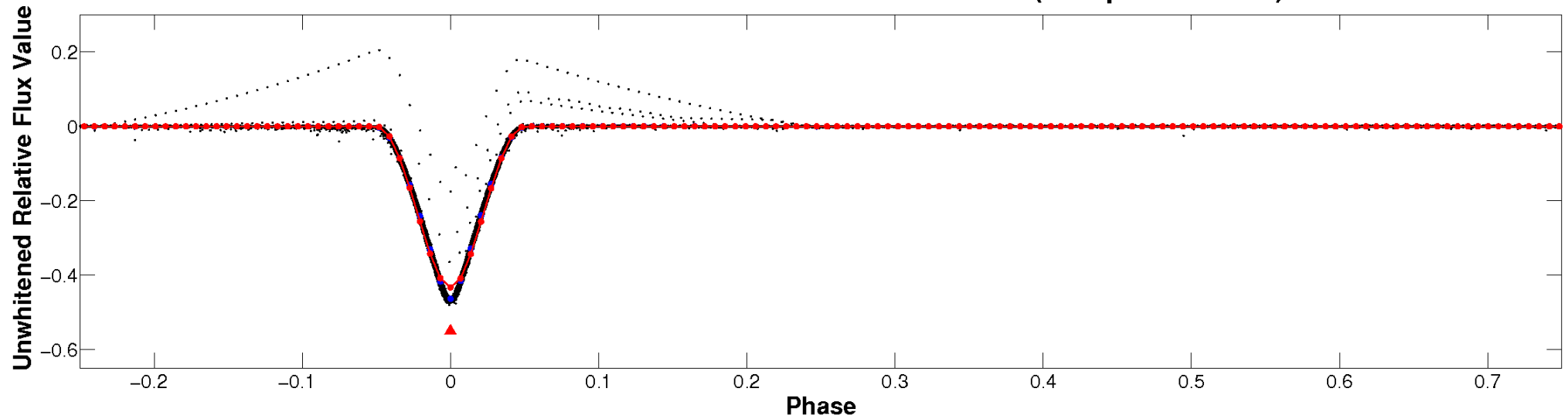
ALT Odd/Even

TCE 003439031-01

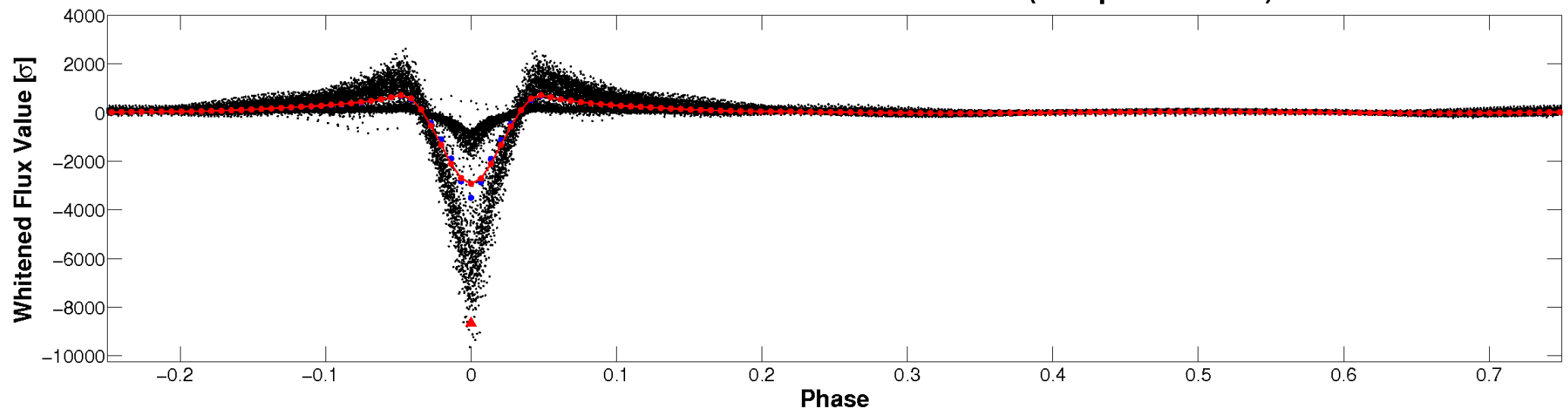


Non-Whitened Vs. Whitened Light Curve

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

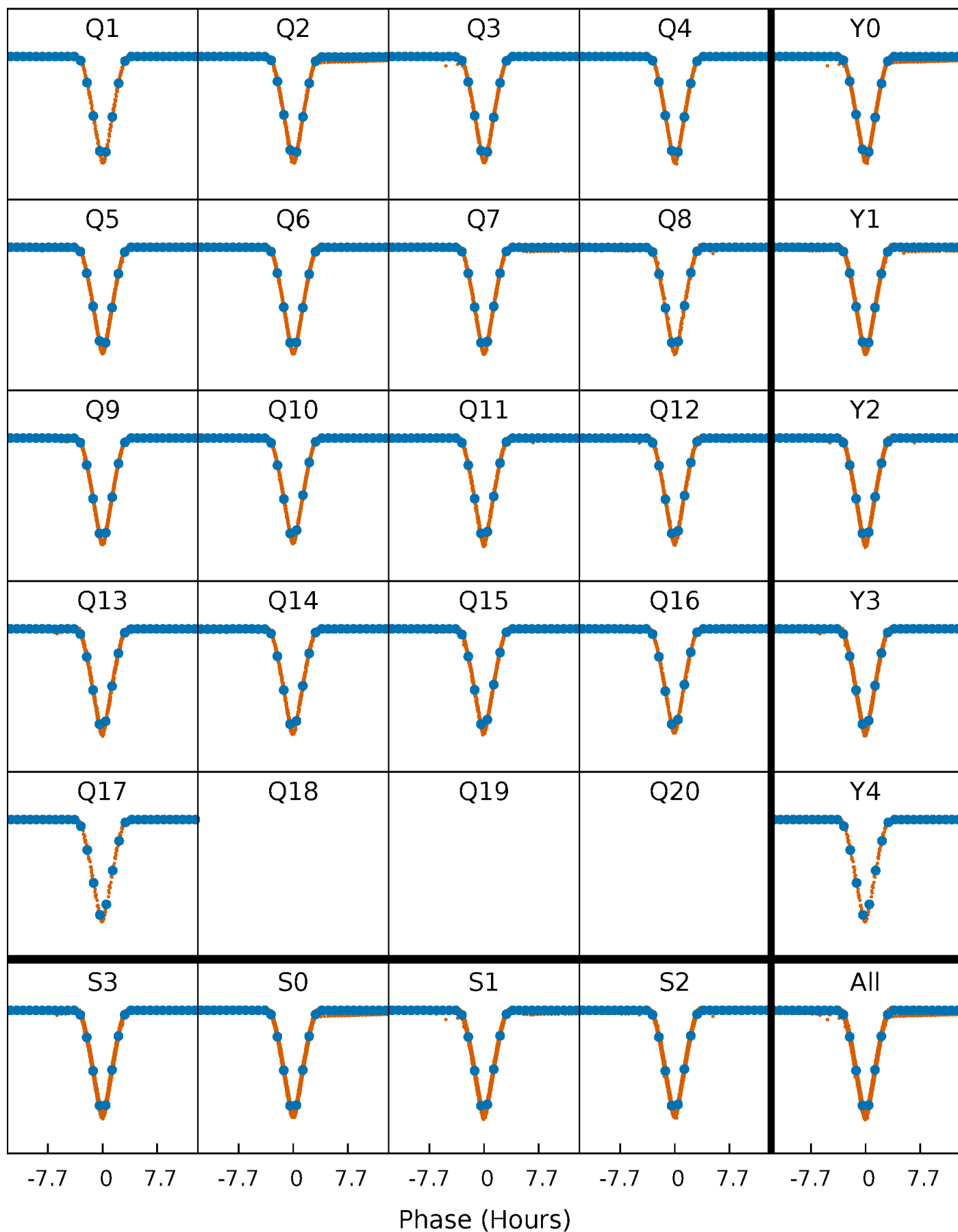


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



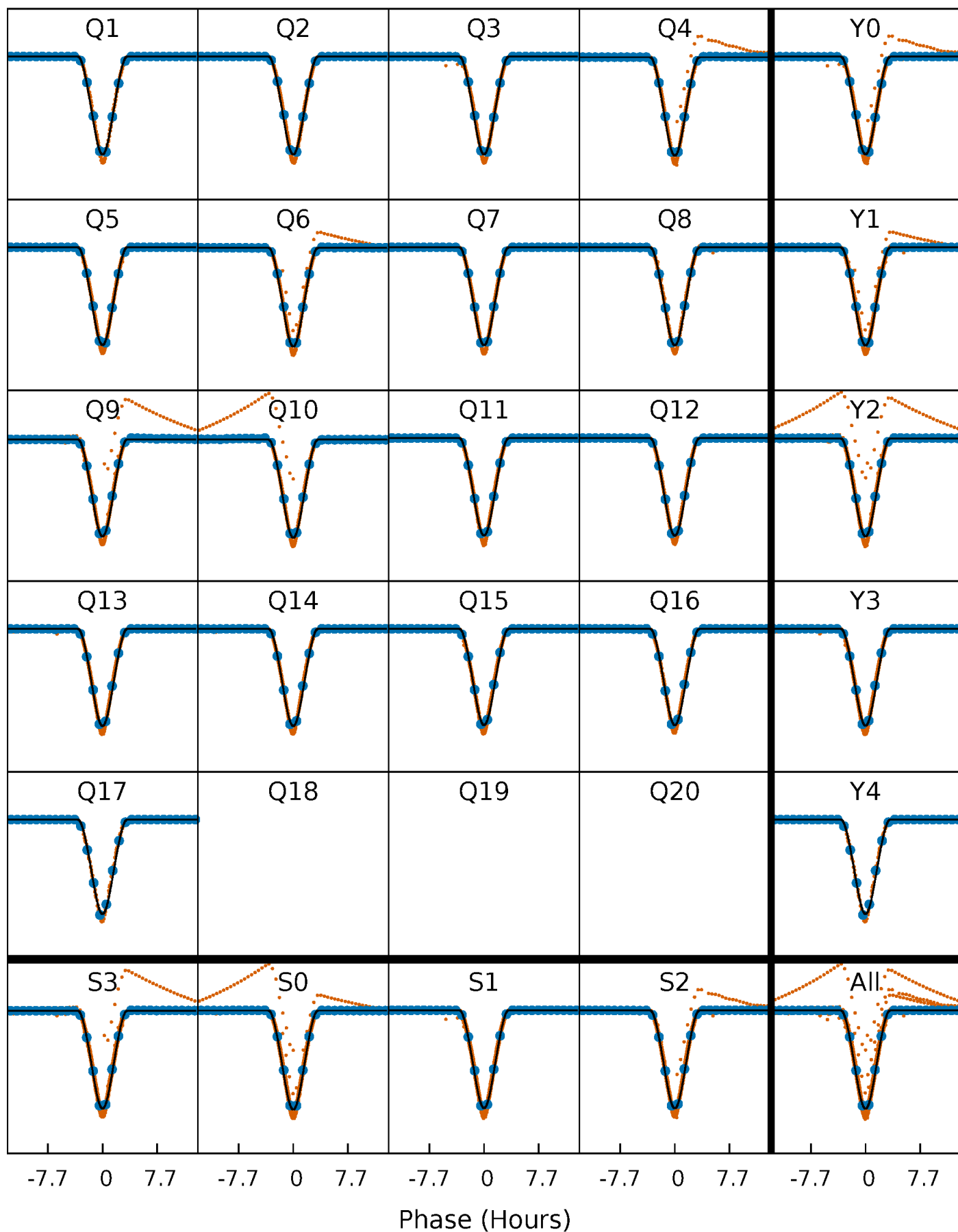
PDC Quarter-Phased Transit Curves

TCE 003439031-01 P= 2.976024 Days $T_0=132.967992$ (BKJD)



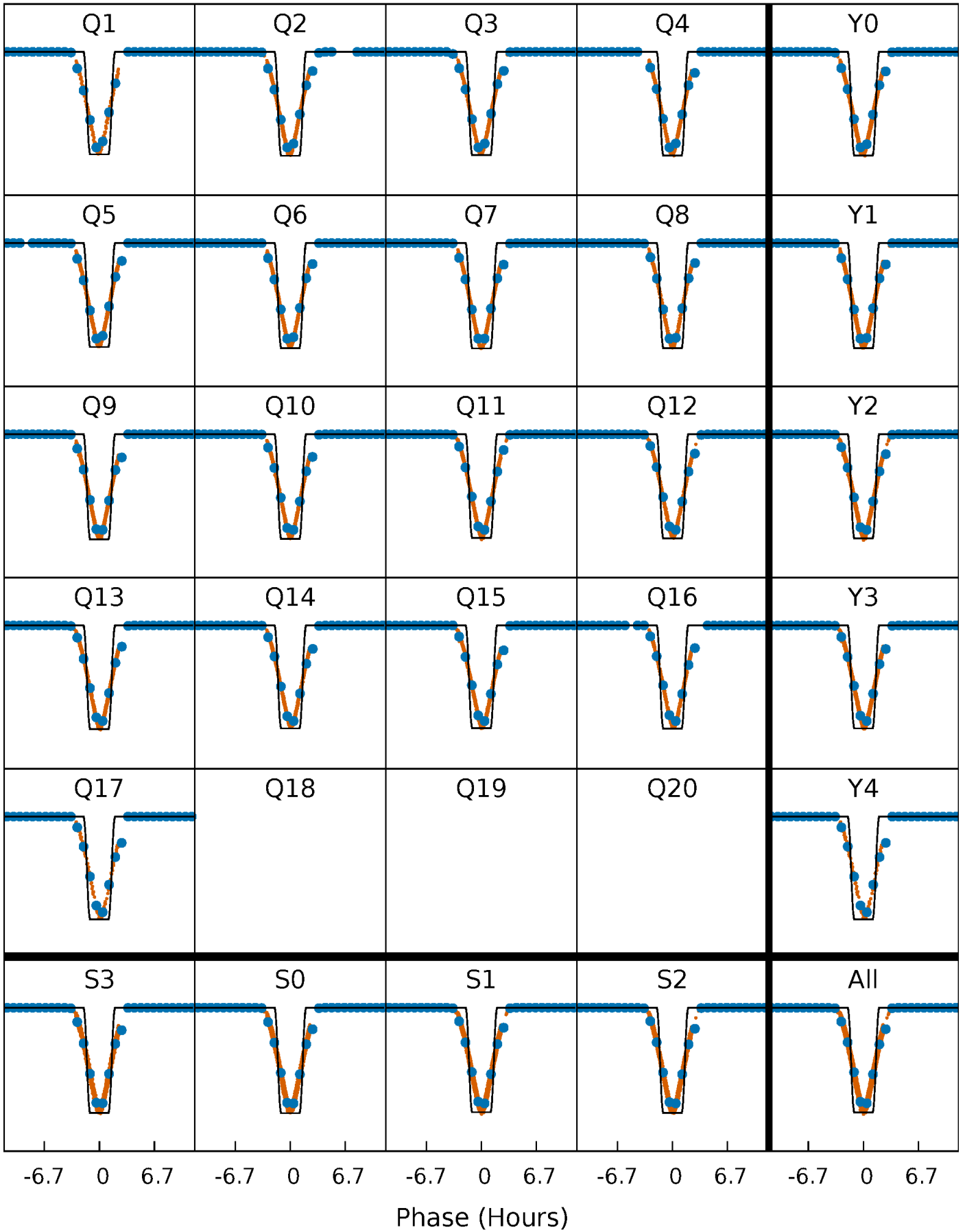
DV Quarter-Phased Transit Curves

TCE 003439031-01 P= 2.976024 Days $T_0=132.967992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

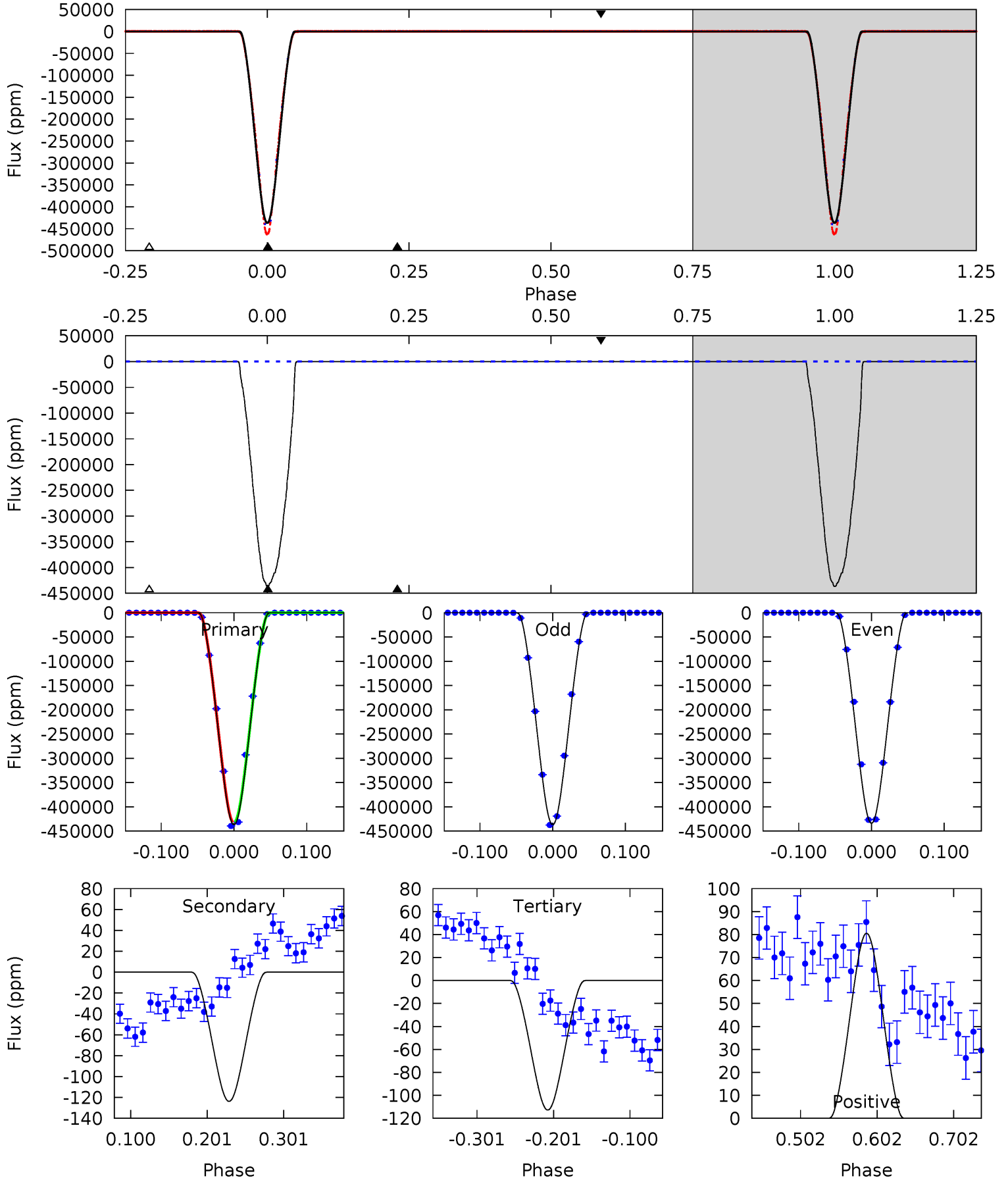
TCE 003439031-01 $P = 2.975994$ Days $T_0 = 132.973688$ (BKJD)



DV Model-Shift Uniqueness Test

003439031-01, P = 2.976024 Days, E = 129.991968 Days

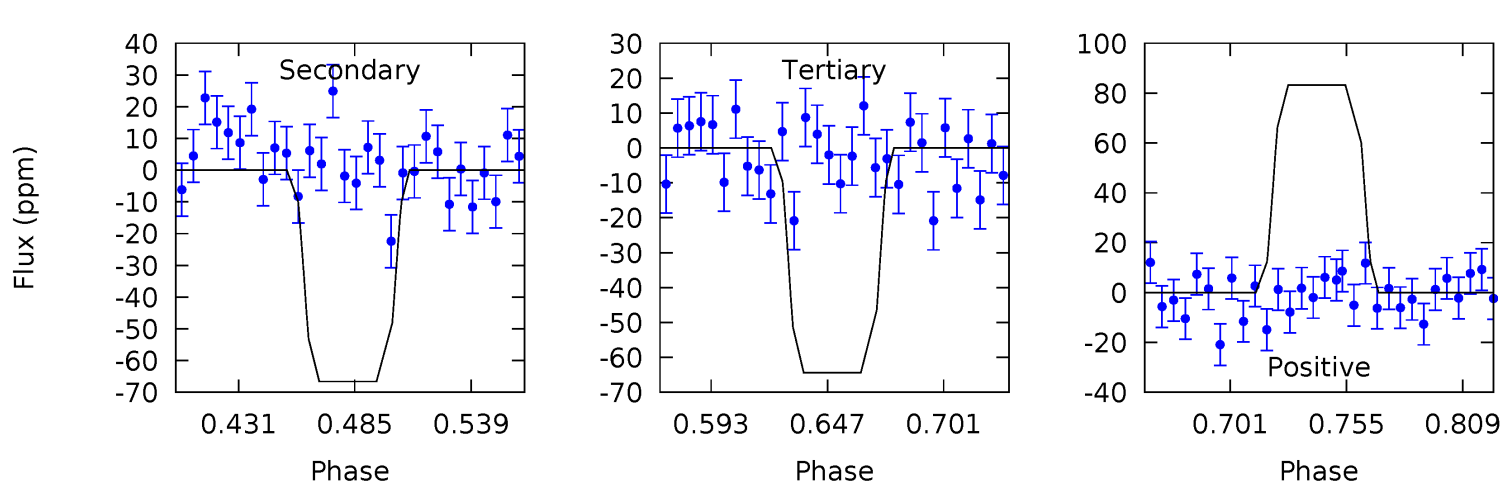
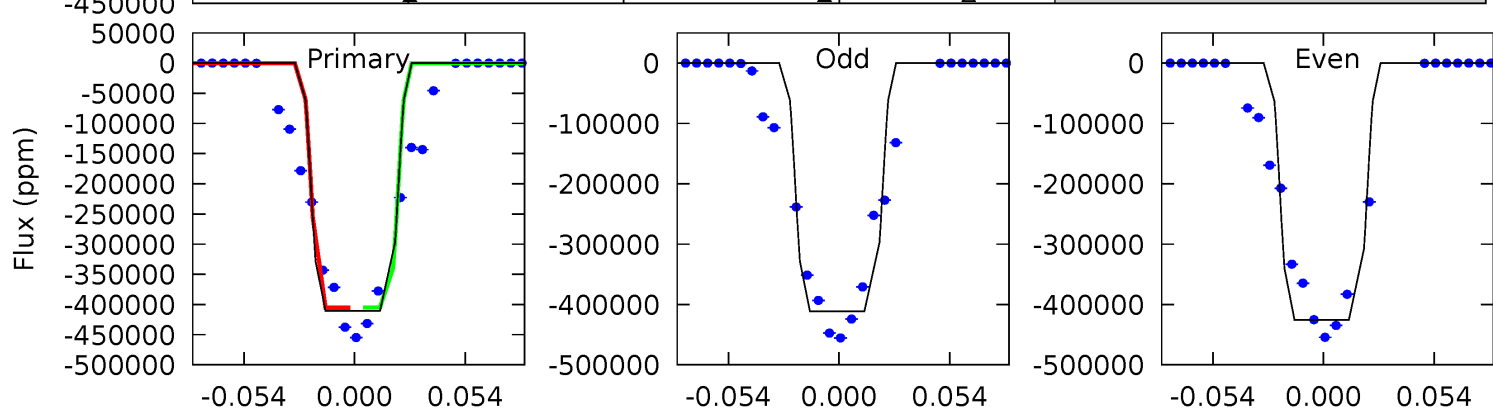
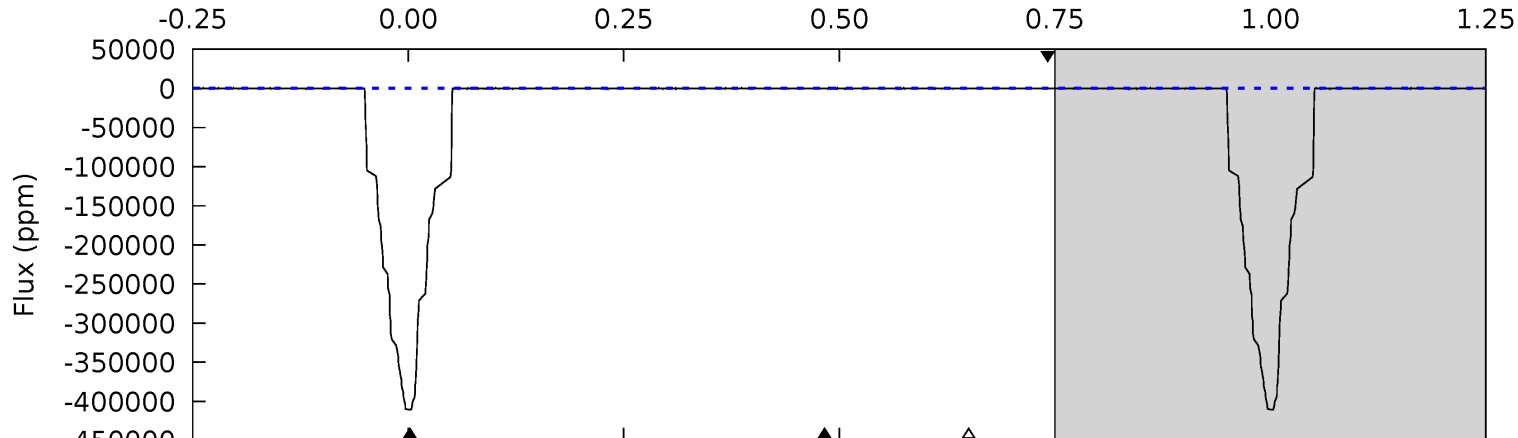
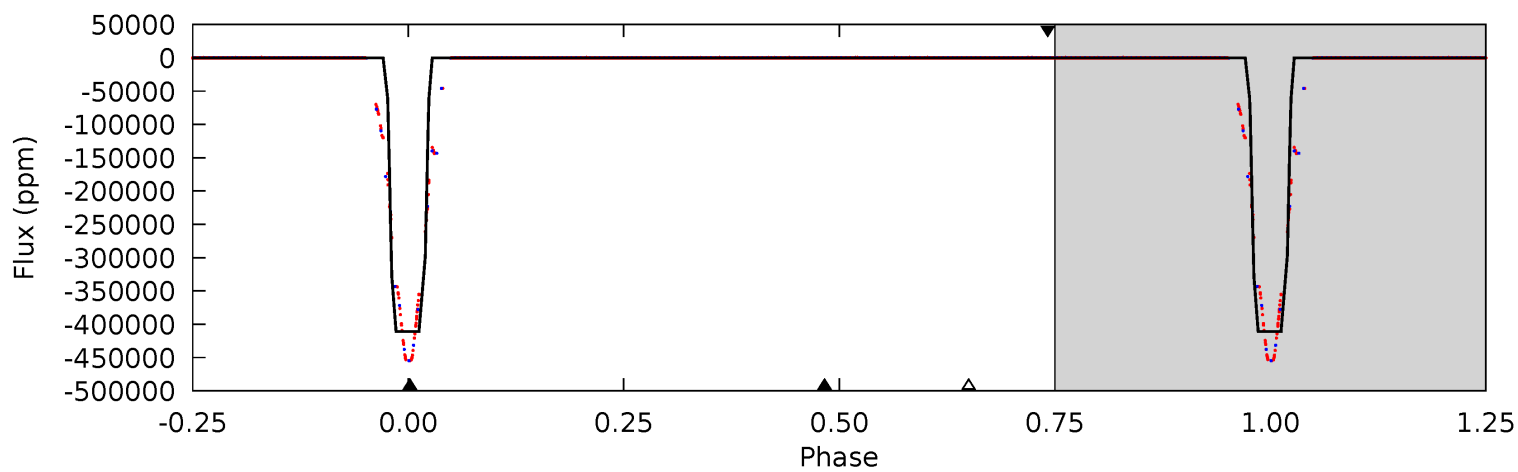
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46153	13.1	11.9	8.51	4.56	1.64	6.77	46141	46144	1.16	4.57	189.7	0.99	0.00	0



Alt Model-Shift Uniqueness Test

003439031-01, P = 2.975994 Days, E = 129.997694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21716	3.52	3.40	4.40	4.69	1.93	1.17	21713	21712	0.12	-0.88	416.1	1.00	0.00	0



Stellar Parameters For KIC 003439031

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6572^{+147}_{-180}	$4.408^{+0.063}_{-0.147}$	$-0.420^{+0.250}_{-0.350}$	$1.080^{+0.235}_{-0.127}$	$1.088^{+0.125}_{-0.137}$	$1.217^{+0.385}_{-0.487}$
	+2%/-3%	+1%/-3%	+60%/-83%	+22%/-12%	+11%/-13%	+32%/-40%
Source	PHO1	FLK73	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 003439031-01 / KOI 4980.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-124 ± 9	$78.49^{+8.84}_{-5.63}$	2087^{+101}_{-85}	-2526^{+52}_{-64}	$0.019^{+0.003}_{-0.003}$
Alt.	-67 ± 19	$82.91^{+9.82}_{-6.33}$	2089^{+112}_{-87}	-2540^{+53}_{-67}	$0.009^{+0.003}_{-0.003}$

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 $A_{\text{obs}} \gg 1.0$

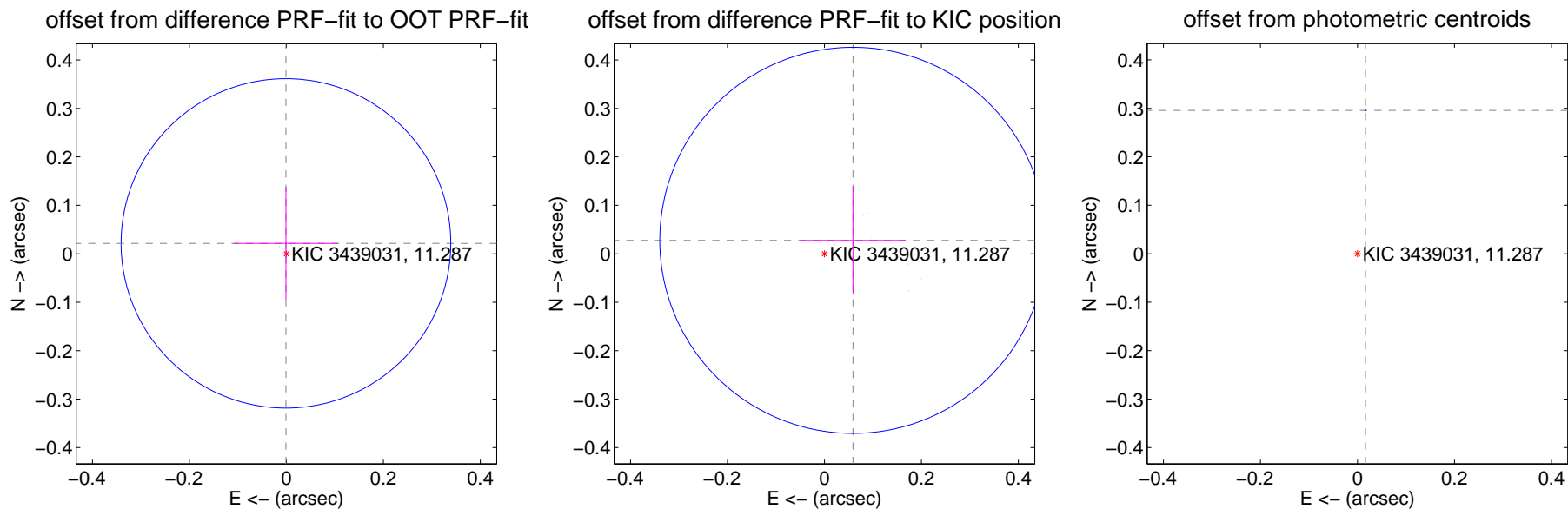
DV Centroid Data

Supplemental centroid analysis for 003439031-01. **Kepler magnitude: 11.29.** Transit SNR 50832.16

There are 17 quarters with good PRF difference image offsets

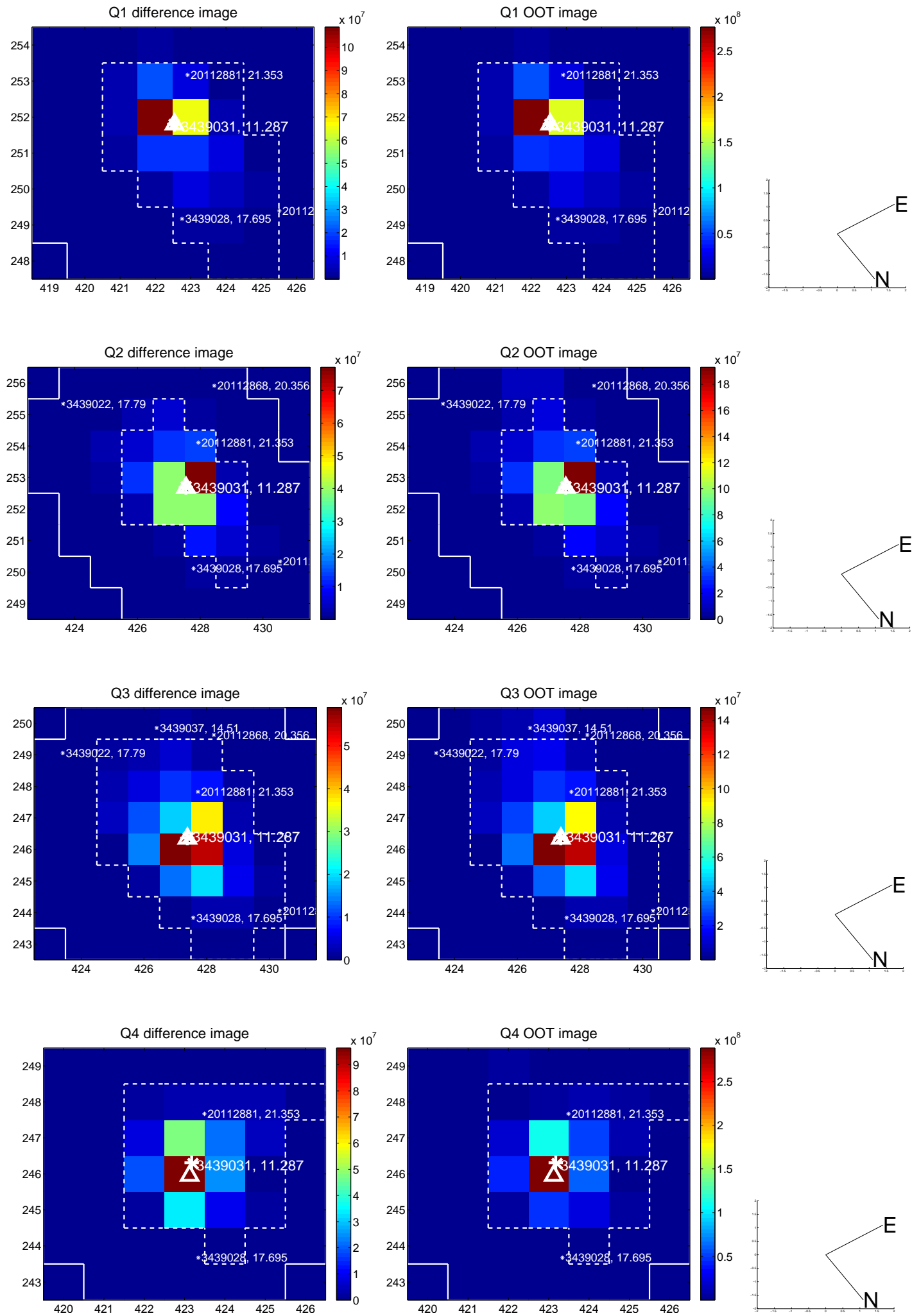
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.113	0.19	0.001 ± 0.107	0.021 ± 0.116
PRF-fit source offset from KIC position	0.065 ± 0.133	0.49	-0.059 ± 0.109	0.028 ± 0.111
photometric centroid source offset	0.30 ± 0.00	1682.22	-0.02 ± 0.00	0.30 ± 0.00

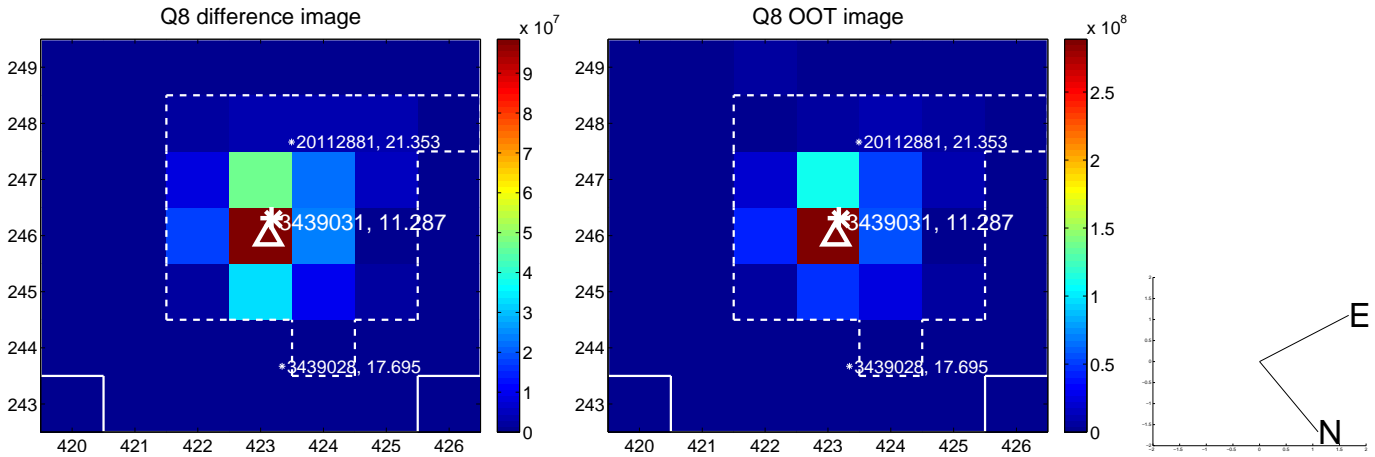
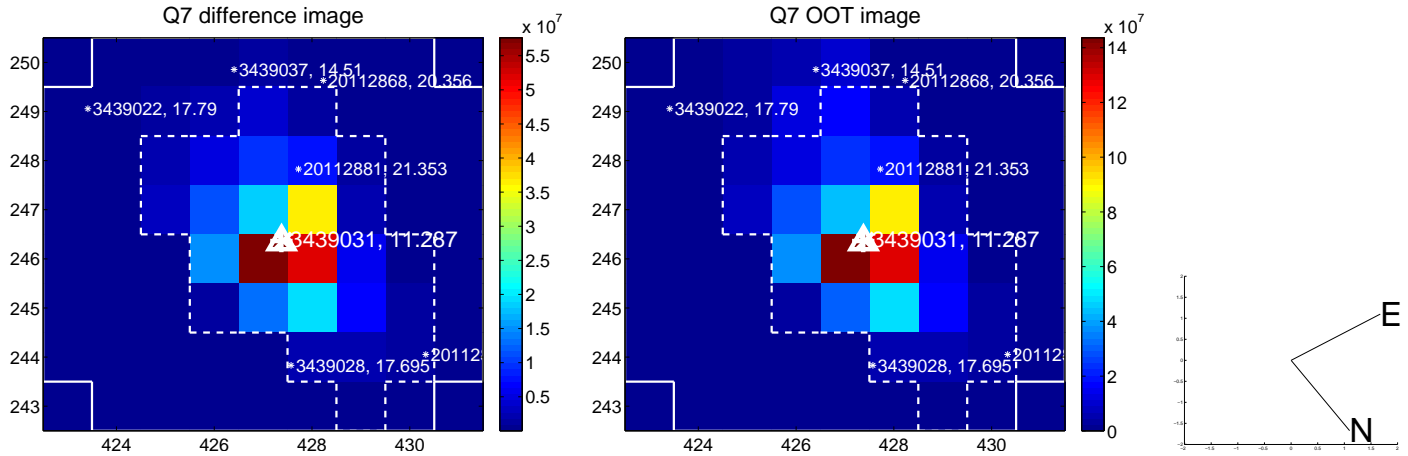
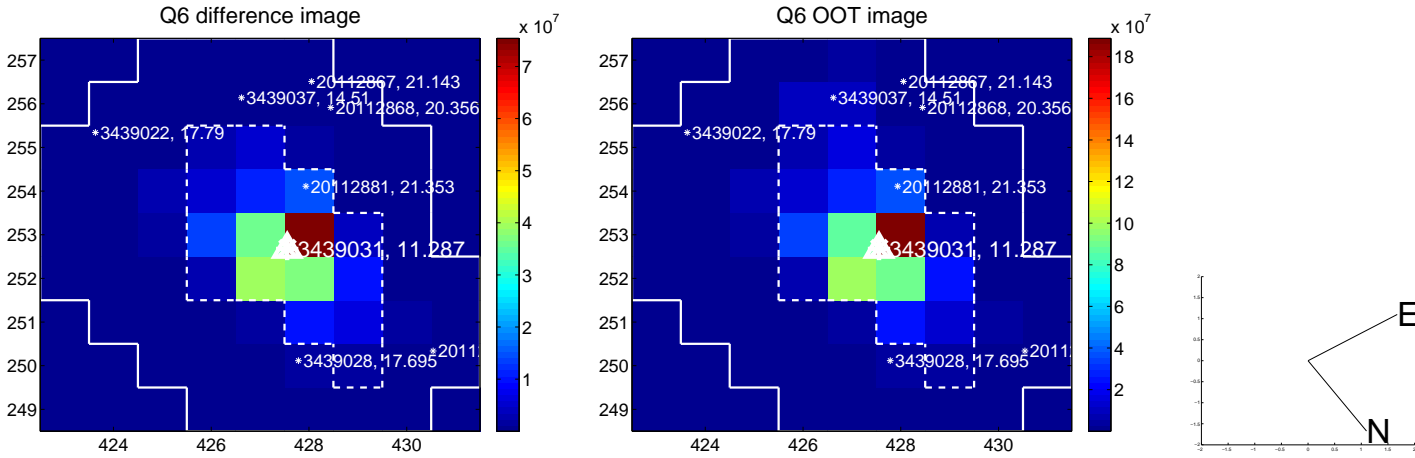
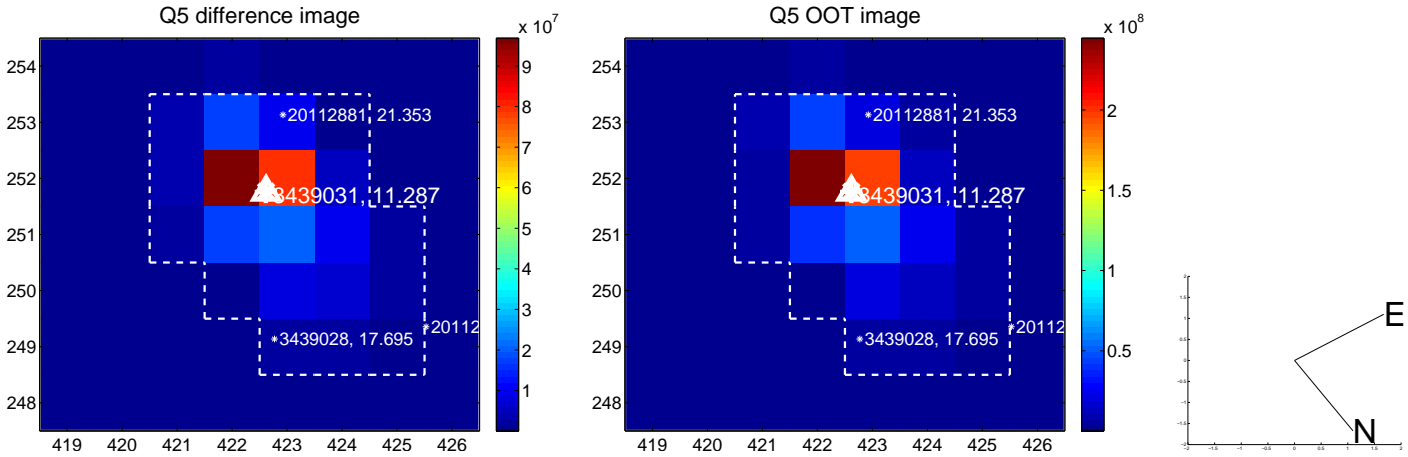


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

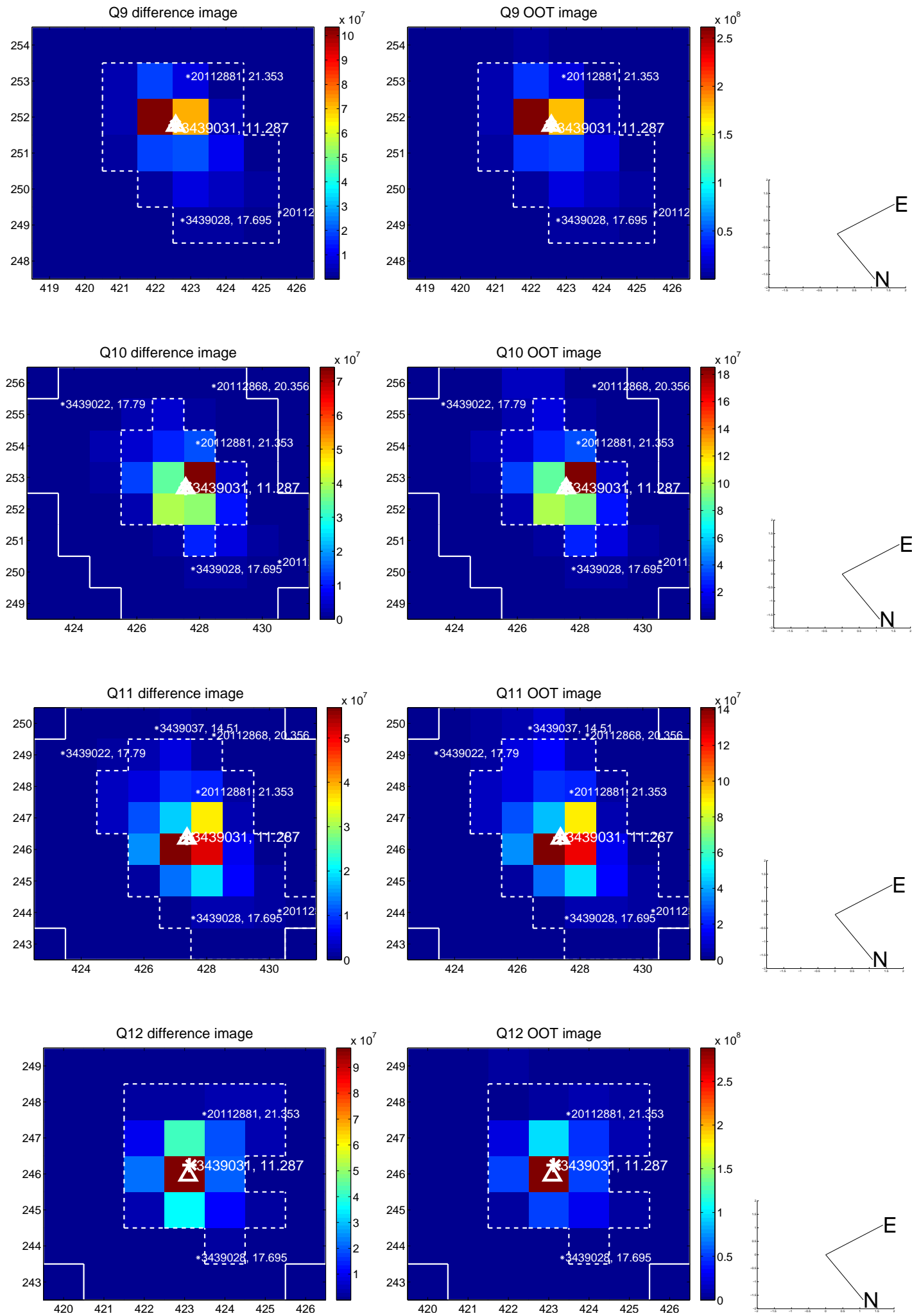
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



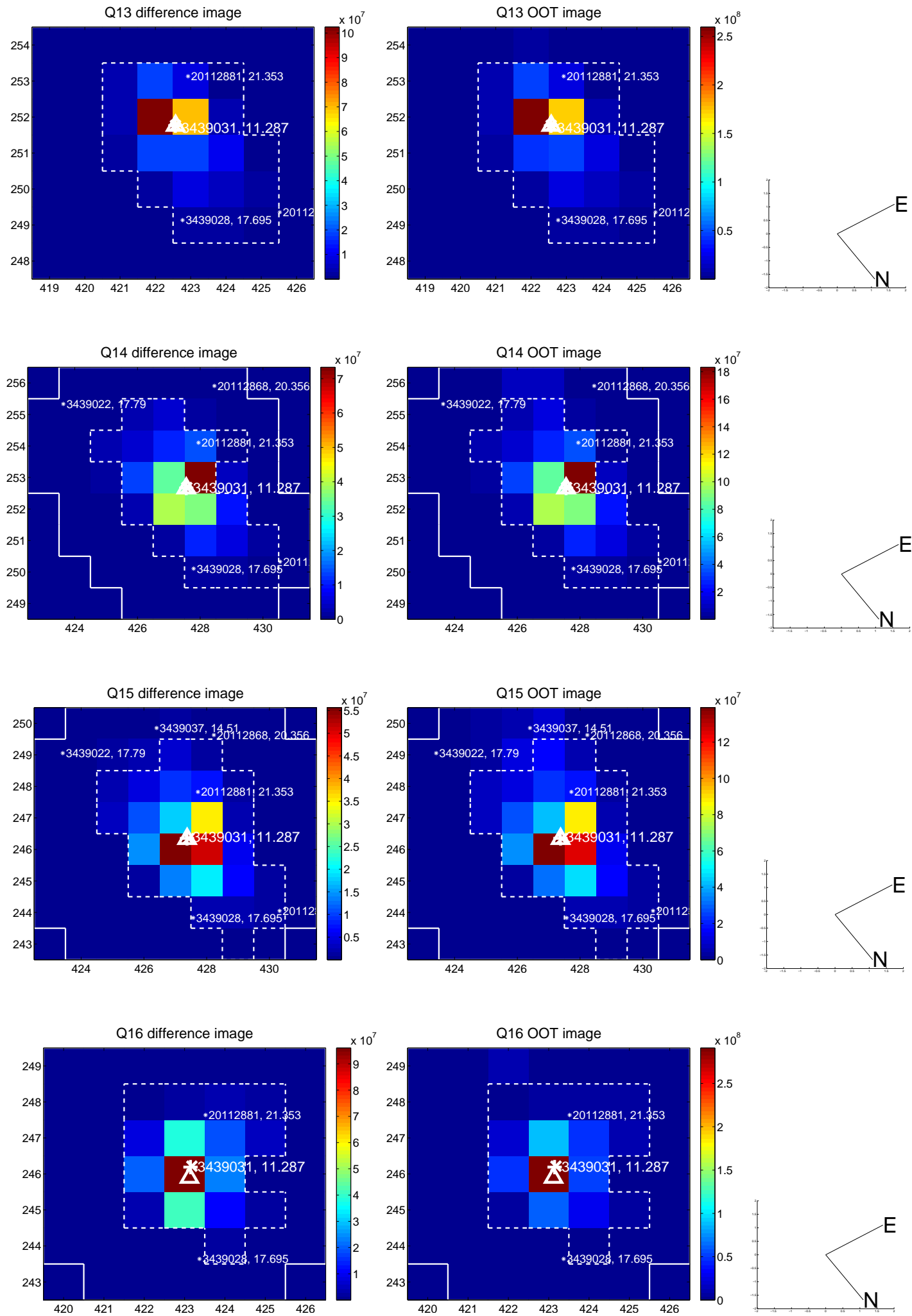
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



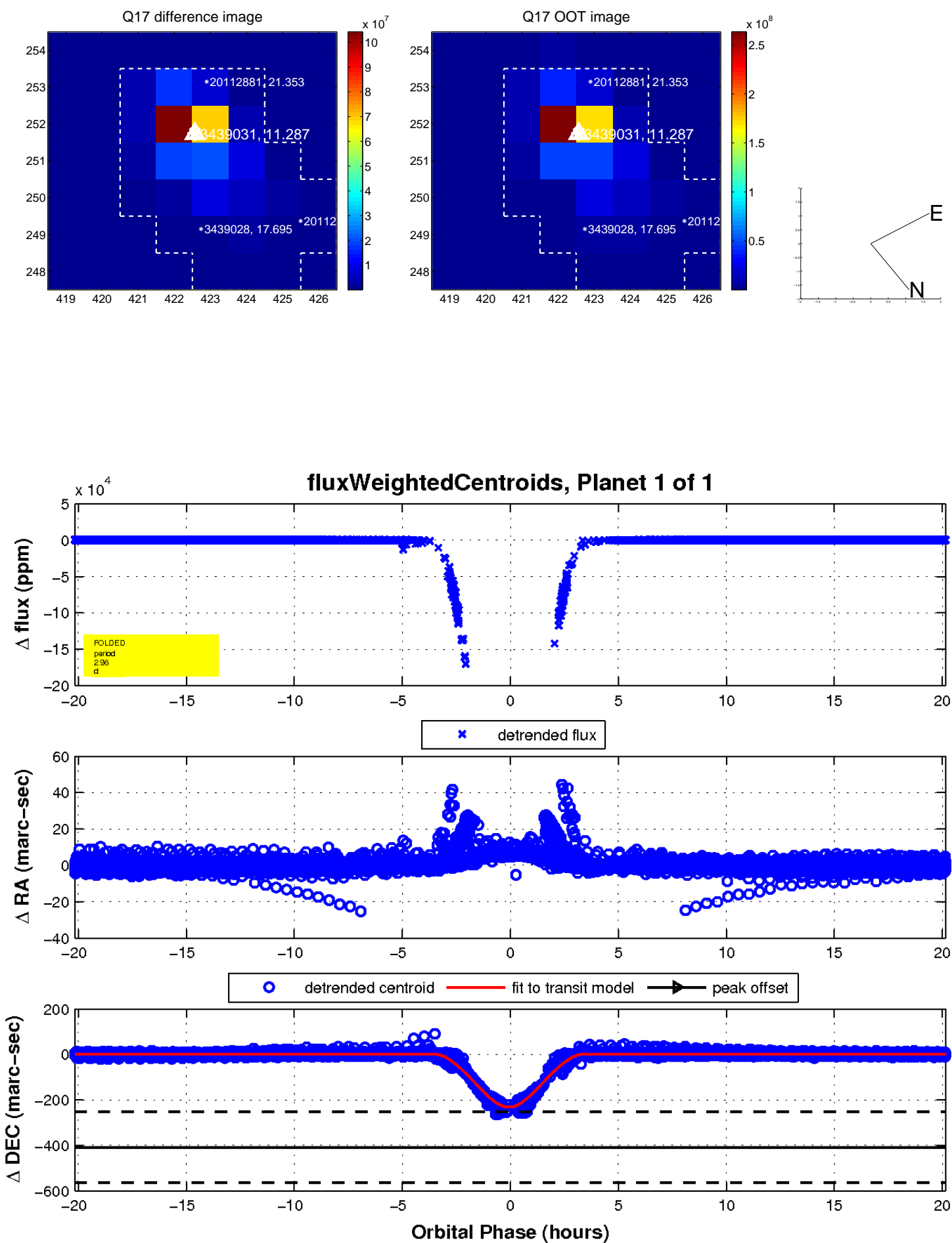
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

