

KIC 009790355

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})
009790355-01	OBS	No	14.560257	139.482911	1362.4	23.524	48.4	55.3	0.90	5915	6.30	77.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009790355-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

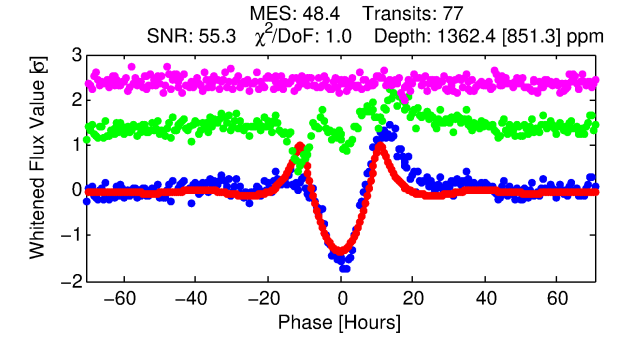
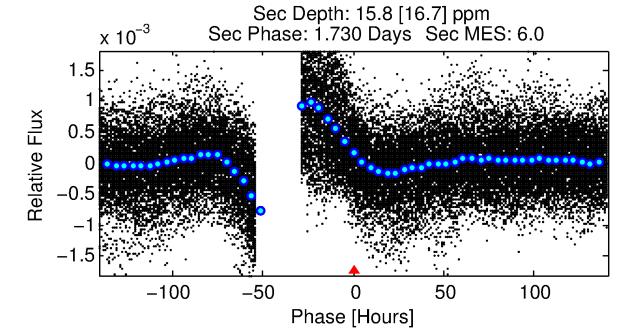
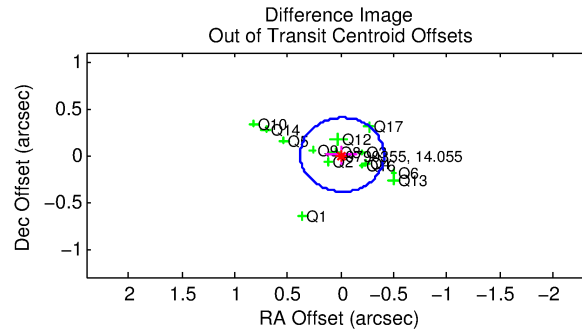
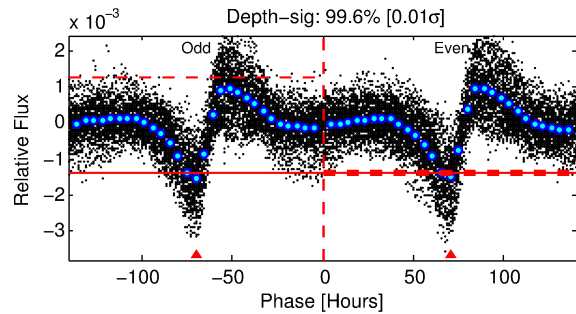
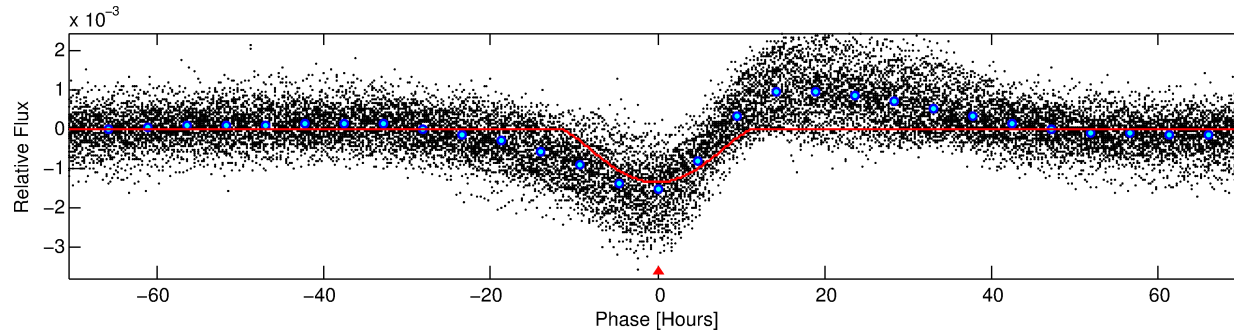
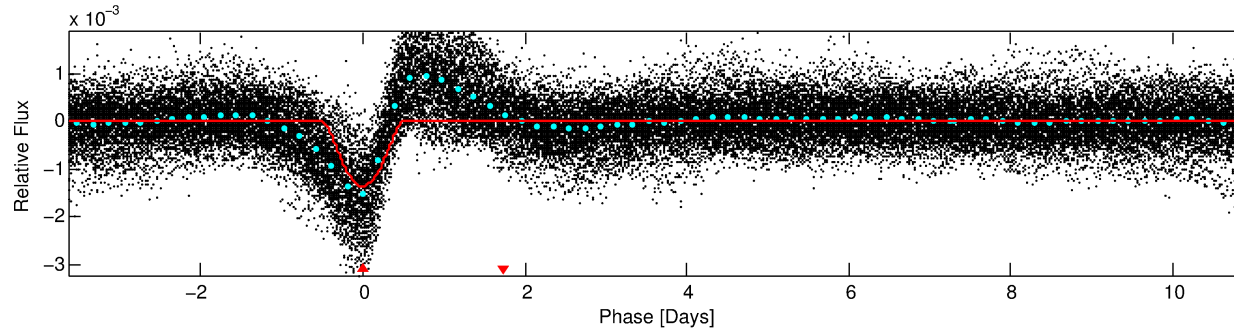
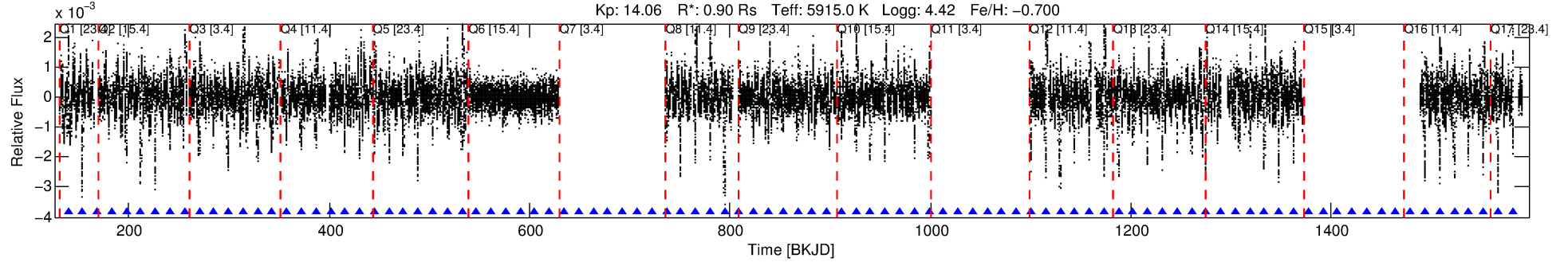
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009790355-01

No Significant Match Found

DV One-Page Summary

KIC: 9790355 Candidate: 1 of 1 Period: 14.560 d



DV Fit Results:

Period = 14.56026 [0.00011] d
Epoch = 139.4829 [0.0057] BKJD
Rp/R* = 0.0639 [0.0146]
a/R* = 2.00 [0.07]
b = 1.00 [0.05]
Seff = 77.37 [25.85]
Teff = 756 [63] K
Rp = 6.30 [2.12] Re
a = 0.1076 [0.0229] AU
Ag = 2.54 [3.03] [0.51σ]
Teffp = 1476 [427] K [1.67σ]

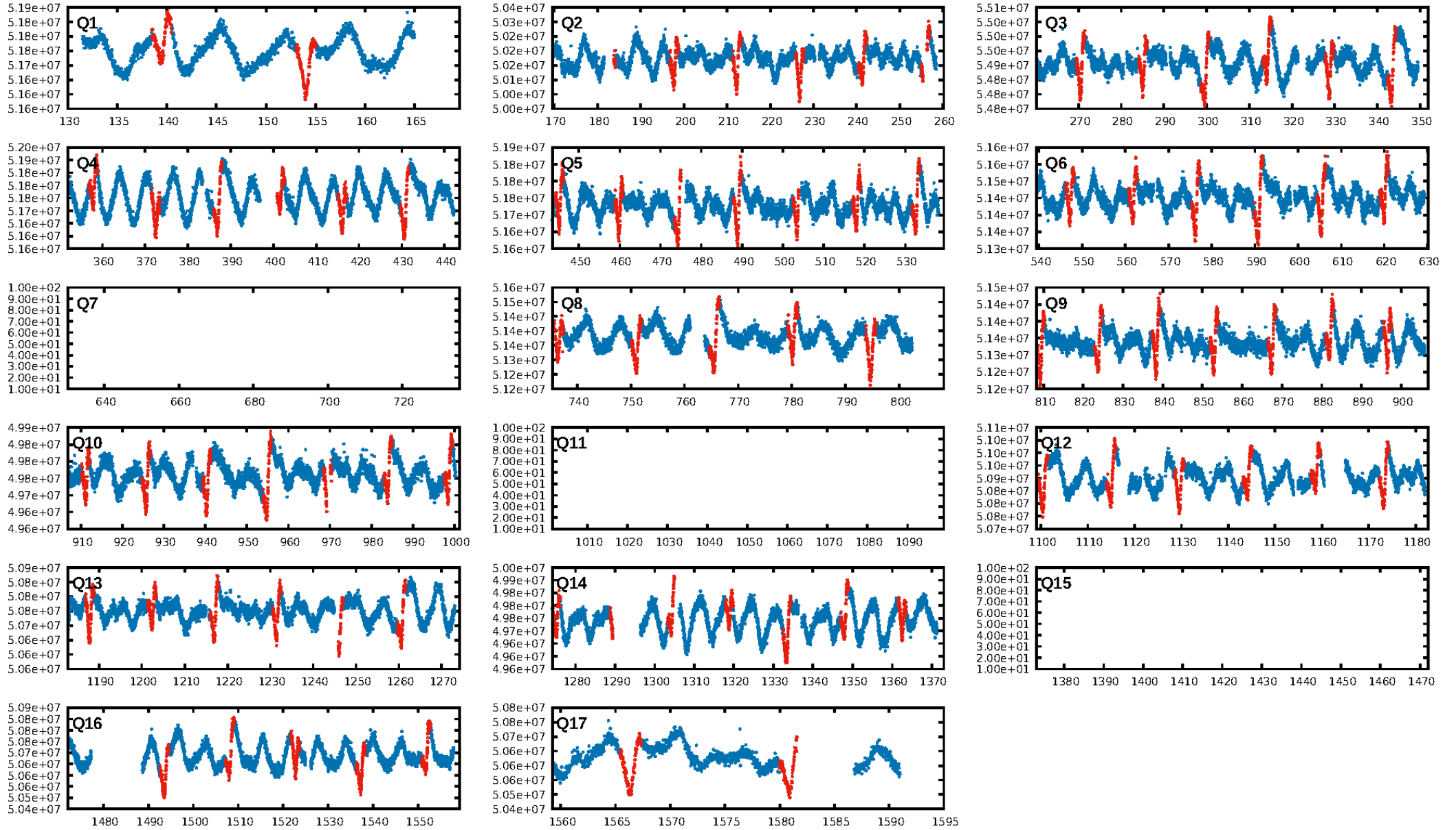
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [73/73]
GhostDiagnostic-chr: 1.631
Centroid-sig: 0.0%
Centroid-so: 0.051 arcsec [0.65σ]
OotOffset-rm: 0.015 arcsec [0.12σ]
KicOffset-rm: 0.061 arcsec [0.52σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

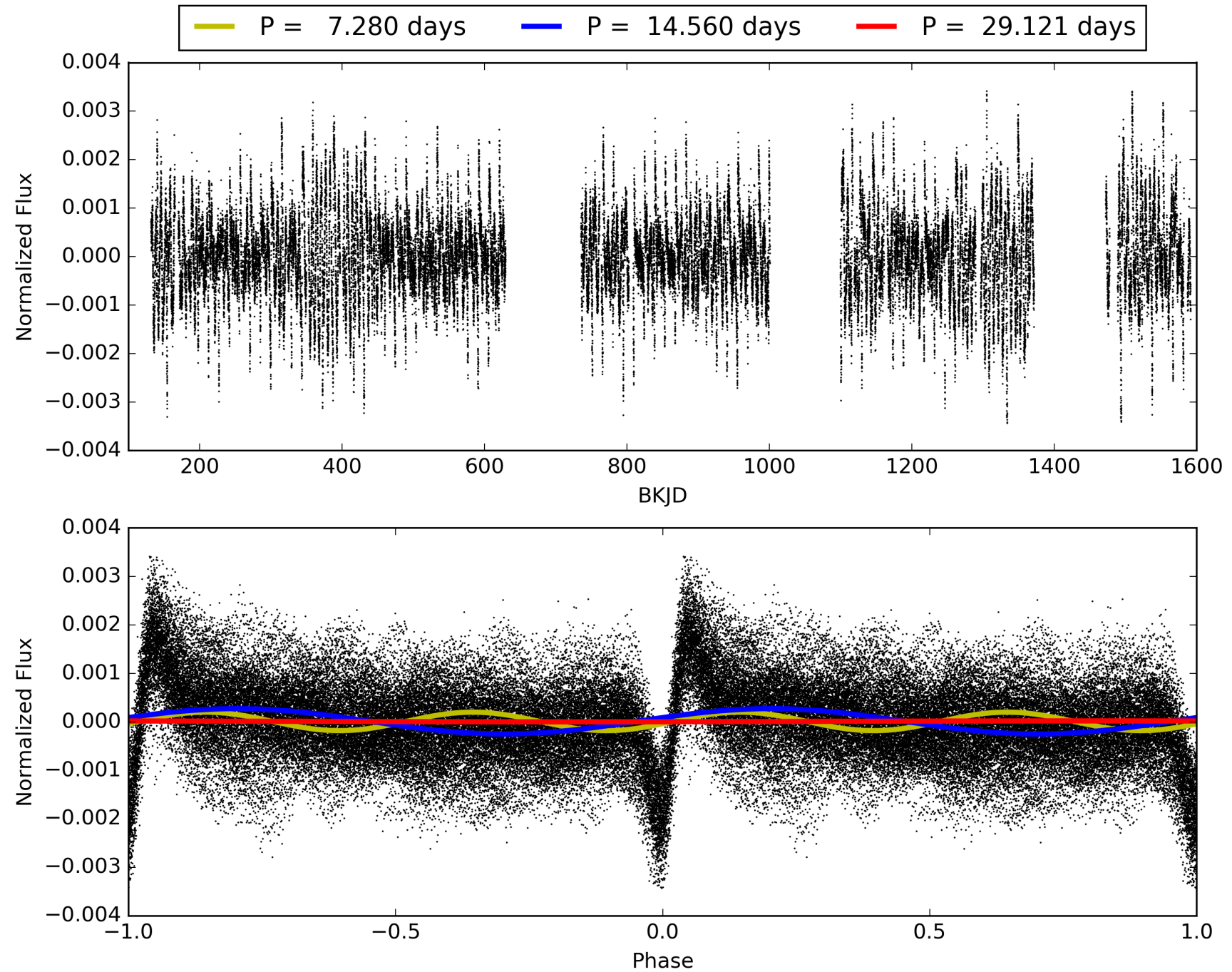
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:44:26 Z

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

TCE 009790355-01, PDC Light Curves

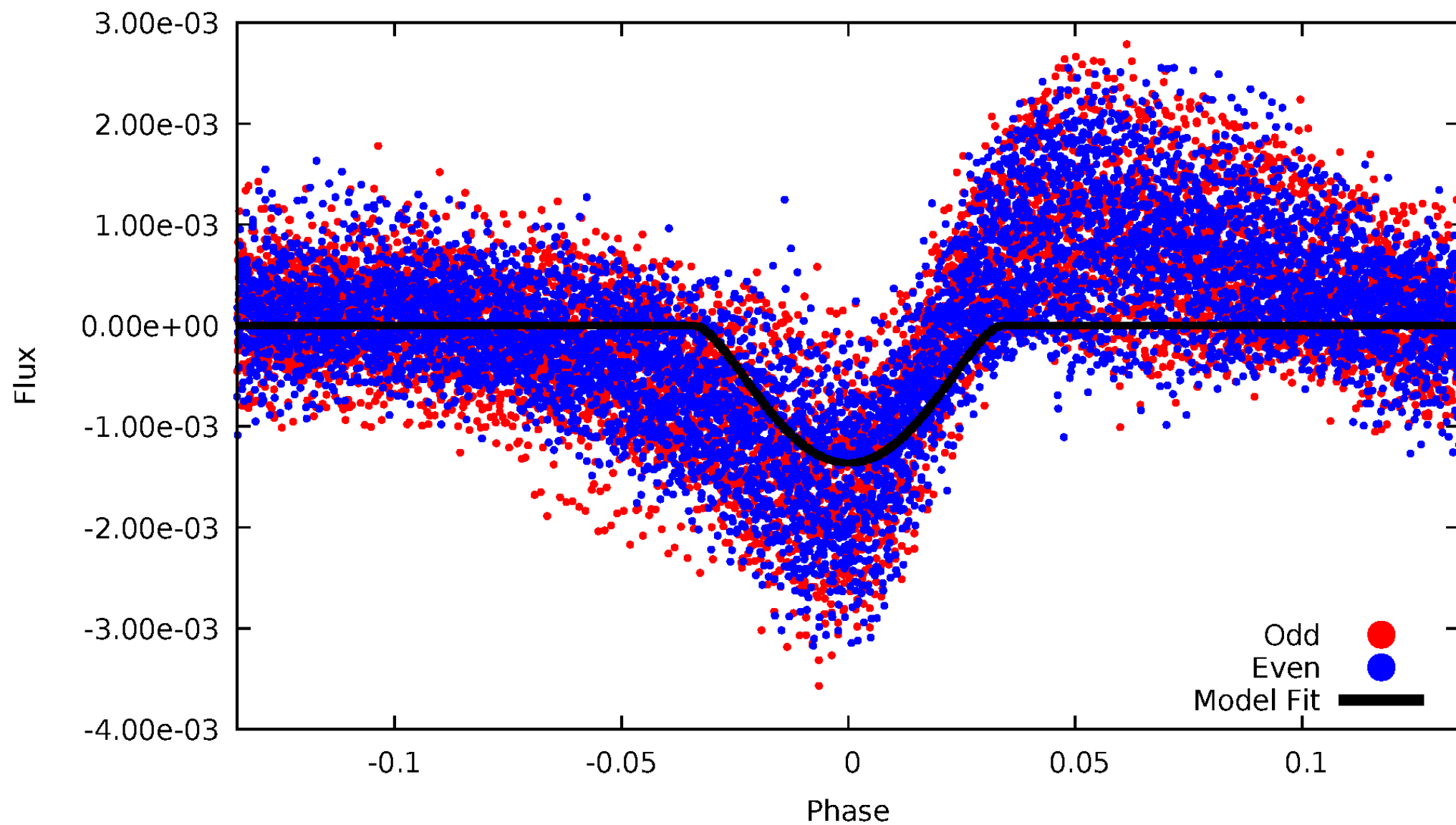


TCE 009790355-01



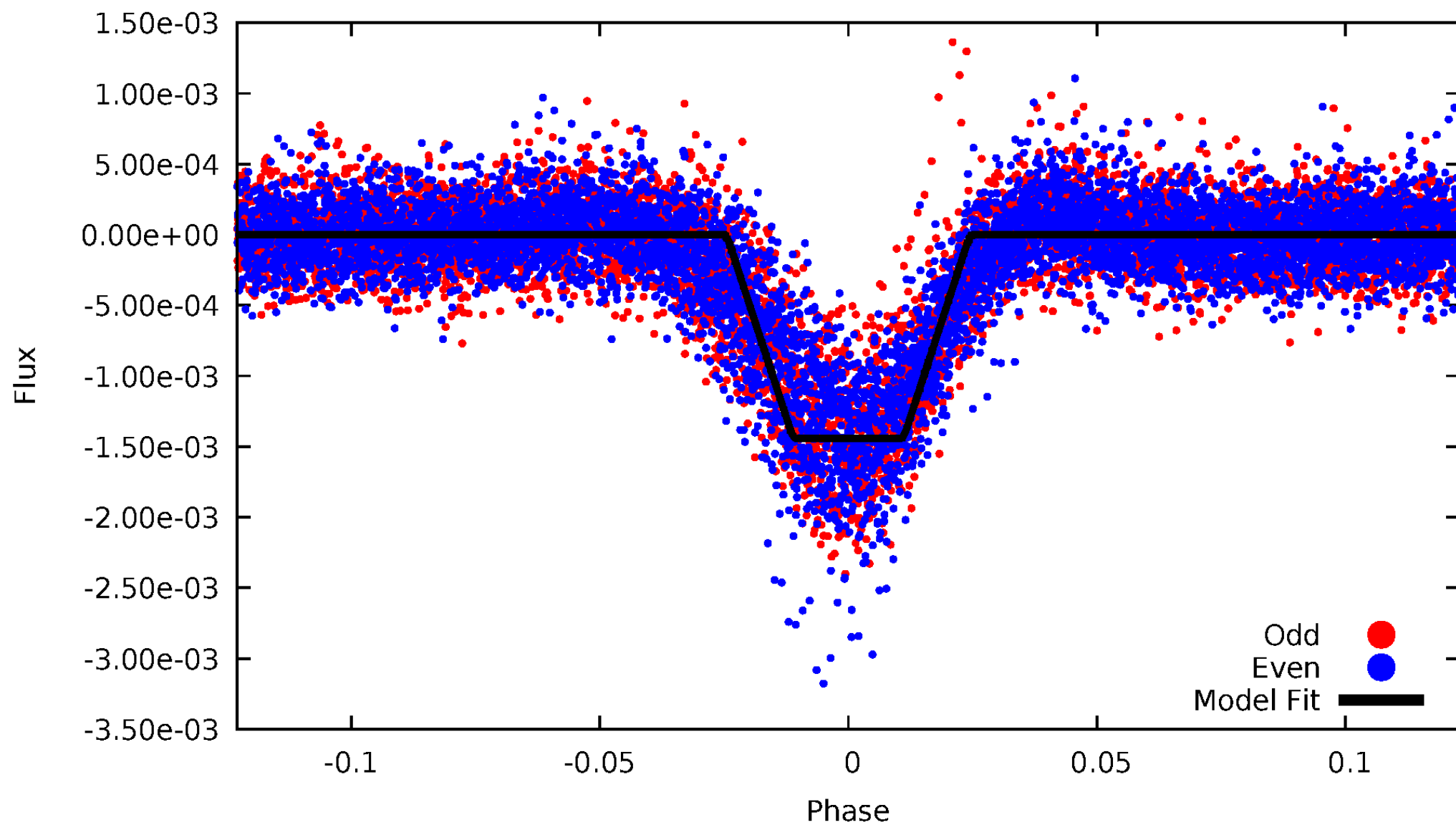
DV Odd/Even

TCE 009790355-01



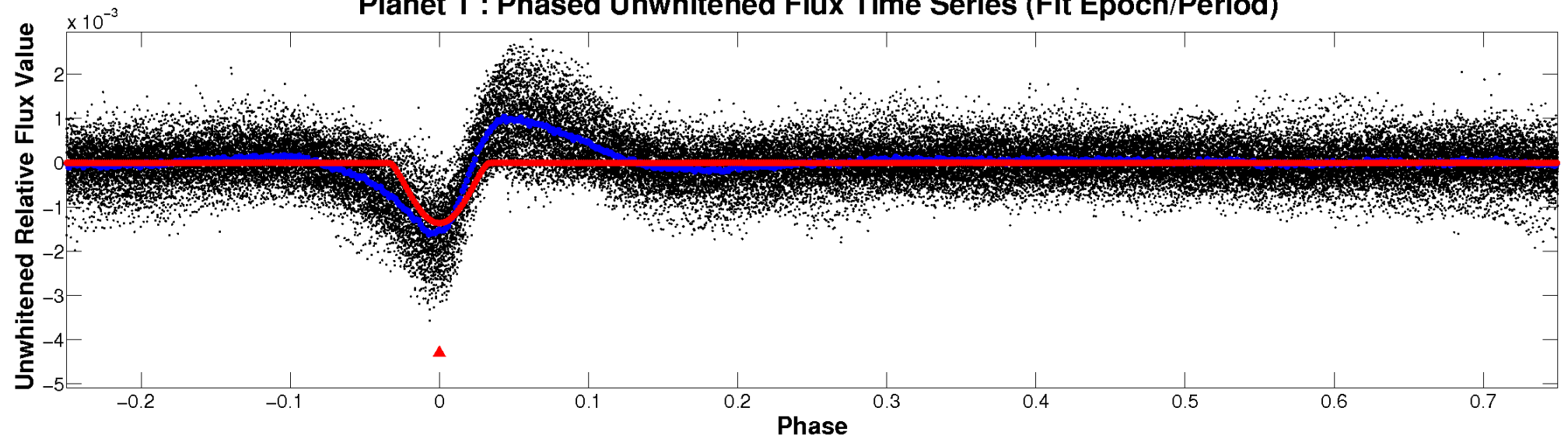
ALT Odd/Even

TCE 009790355-01

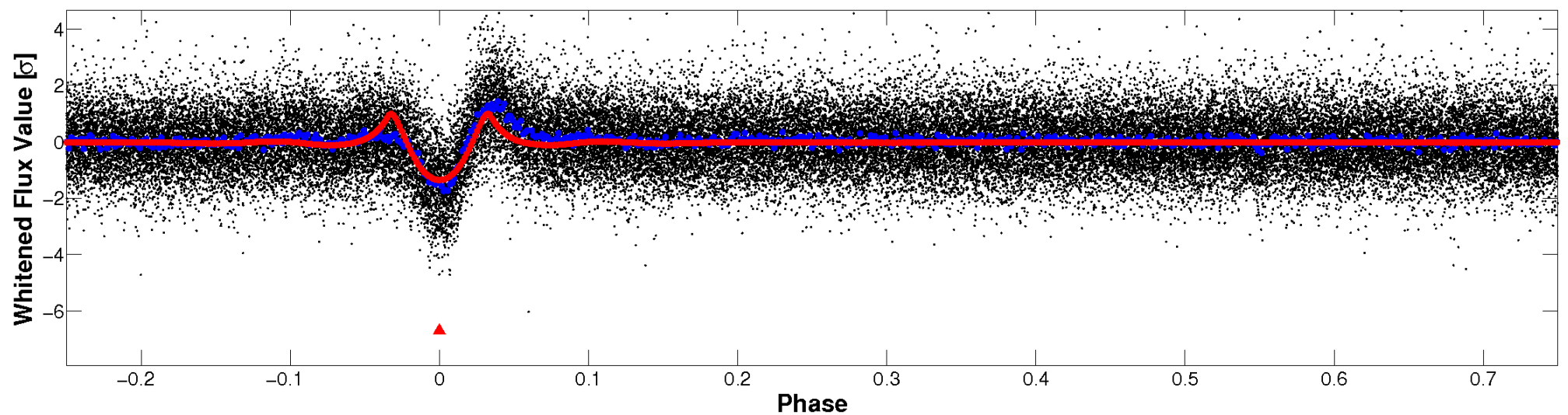


Non-Whitened Vs. Whitened Light Curve

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

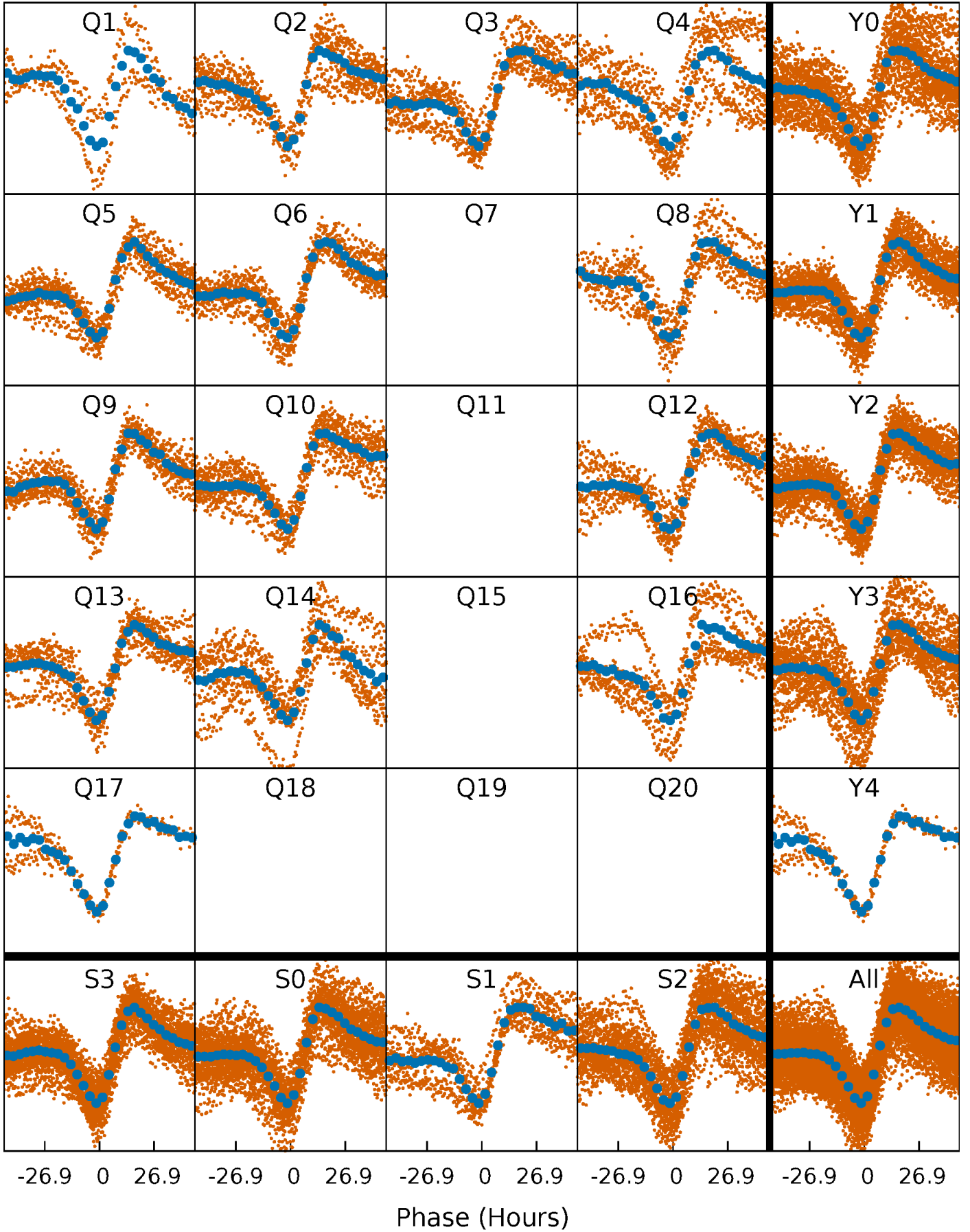


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



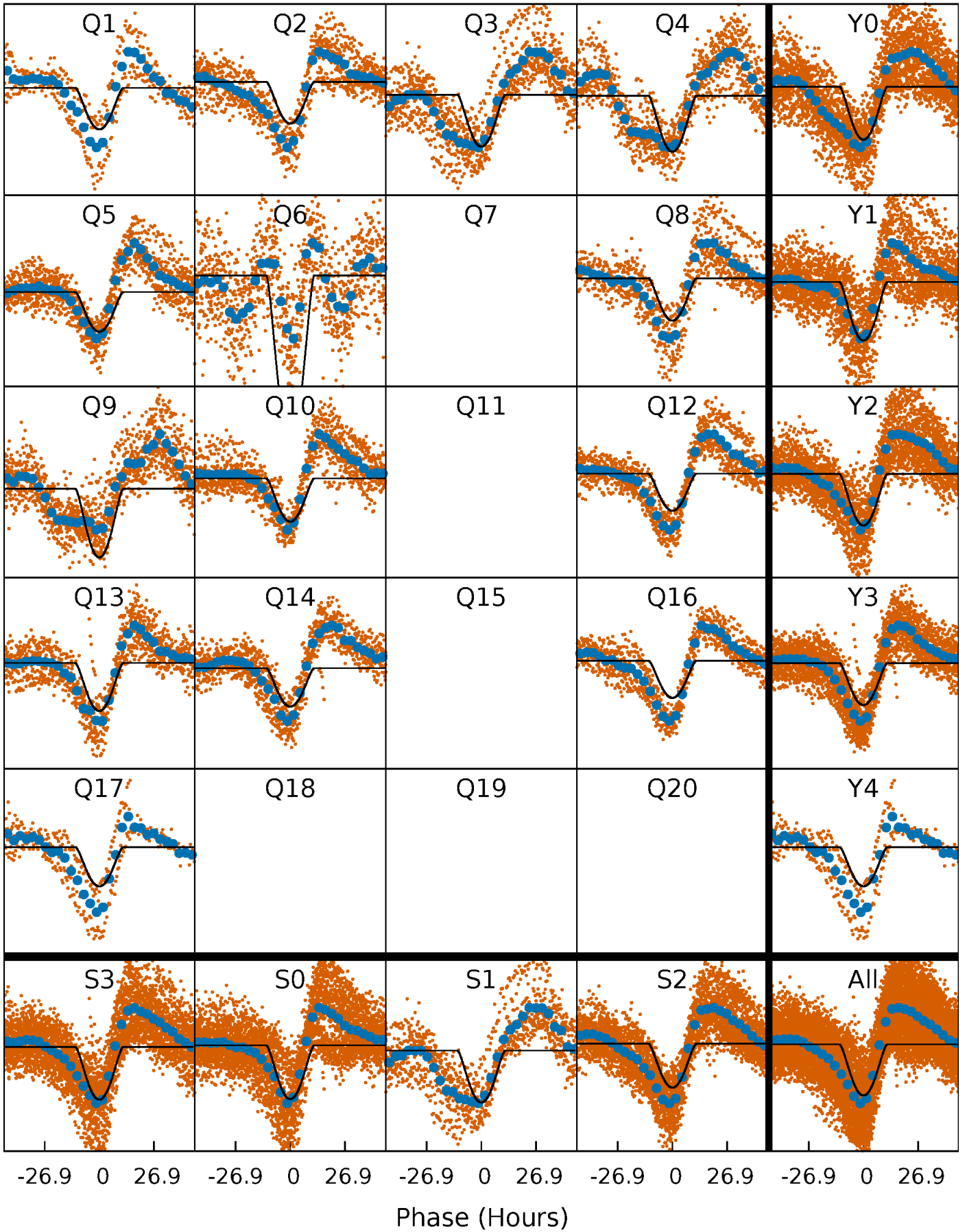
PDC Quarter-Phased Transit Curves

TCE 009790355-01 P= 14.560257 Days $T_0=139.482911$ (BKJD)



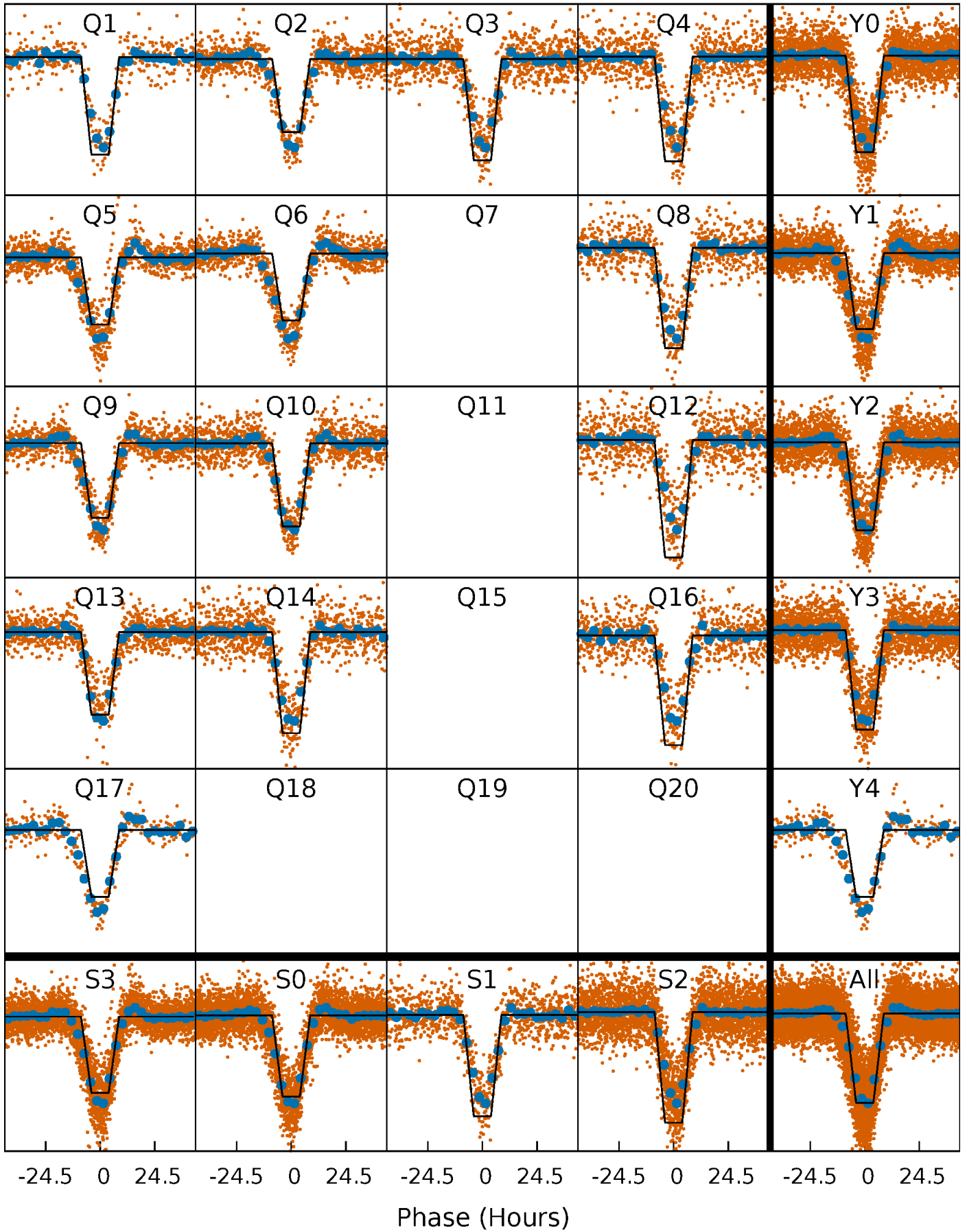
DV Quarter-Phased Transit Curves

TCE 009790355-01 P= 14.560257 Days $T_0=139.482911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

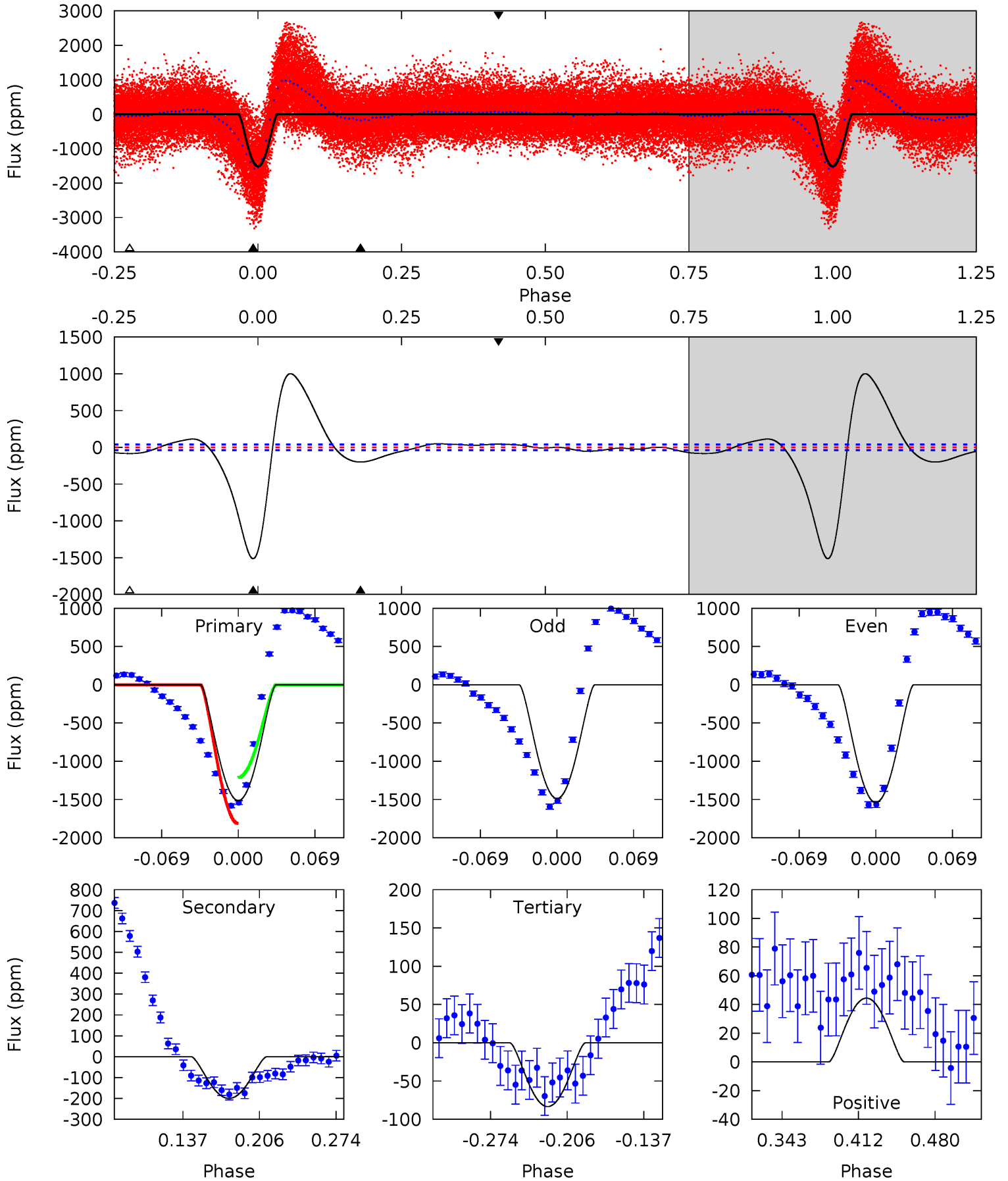
TCE 009790355-01 P= 14.560537 Days $T_0=139.493176$ (BKJD)



DV Model-Shift Uniqueness Test

009790355-01, P = 14.560257 Days, E = 124.922654 Days

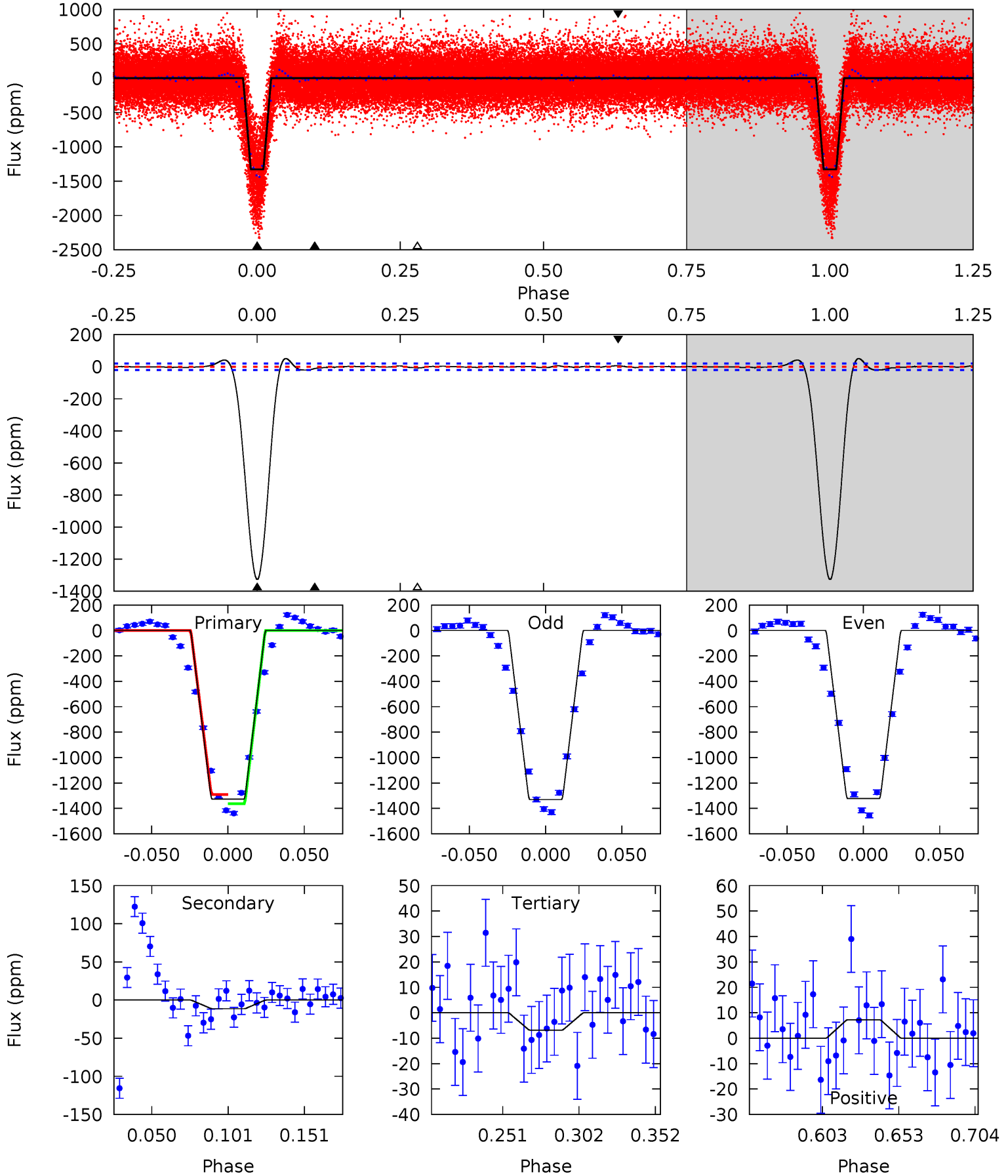
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
188.0	24.8	10.4	5.52	4.64	1.82	23.5	177.7	182.5	14.5	19.3	3.29	0.96	0.40	37.5



Alt Model-Shift Uniqueness Test

009790355-01, P = 14.560537 Days, E = 124.932639 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
309.8	2.65	1.59	1.69	4.71	1.96	1.53	308.2	308.1	1.06	0.96	0.88	1.00	0.04	8.55



Stellar Parameters For KIC 009790355

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5915^{+159}_{-159}	$4.420^{+0.144}_{-0.176}$	$-0.700^{+0.300}_{-0.300}$	$0.904^{+0.223}_{-0.149}$	$0.782^{+0.098}_{-0.049}$	$1.493^{+0.984}_{-0.688}$
	+3%/-3%	+3%/-4%	+43%/-43%	+25%/-16%	+13%/-6%	+66%/-46%
Source	PHO1	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 009790355-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-200 ± 8	$6.45^{+1.64}_{-1.51}$	1065^{+75}_{-64}	3323^{+291}_{-204}	31^{+21}_{-12}
Alt.	-11 ± 4	$3.80^{+1.65}_{-1.46}$	1057^{+71}_{-54}	2537^{+401}_{-241}	$4.731^{+9.142}_{-2.651}$

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

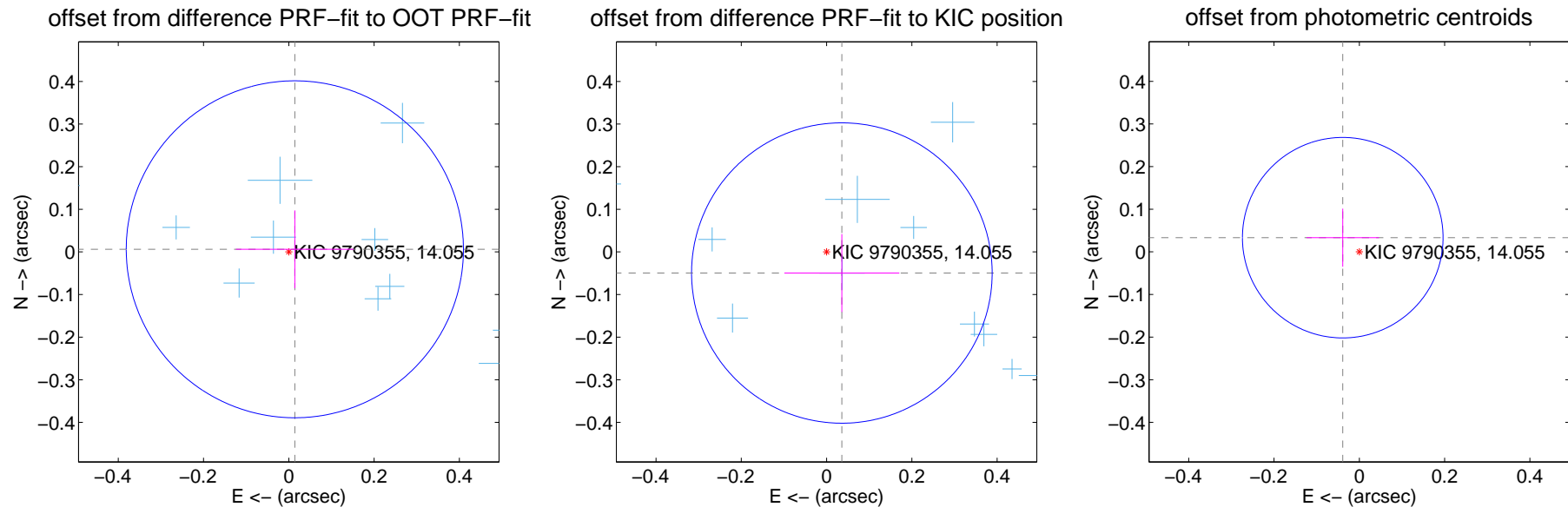
DV Centroid Data

Supplemental centroid analysis for 009790355-01. Kepler magnitude: 14.05. Transit SNR 55.26

There are 14 quarters with good PRF difference image offsets

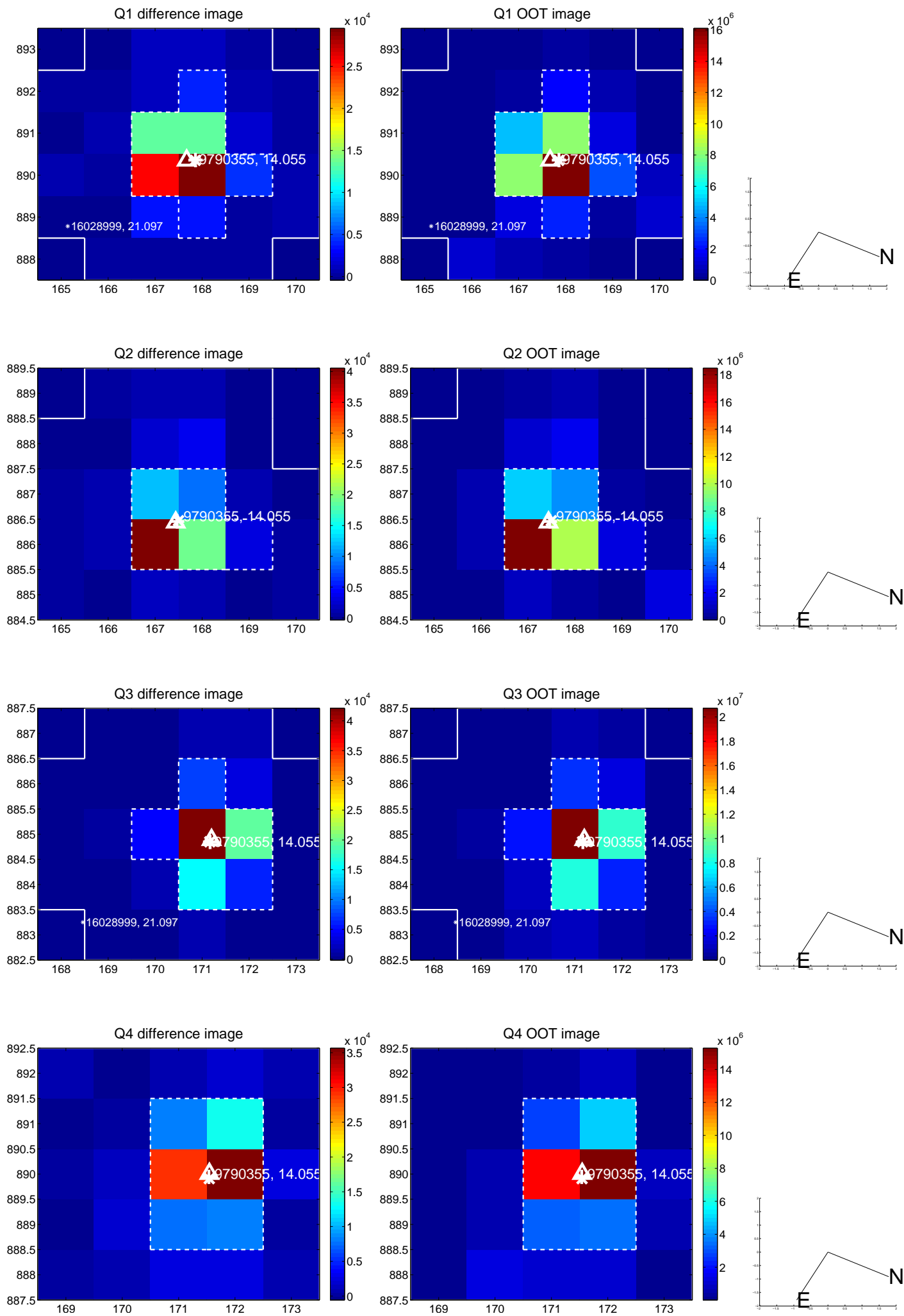
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.132	0.12	-0.014 ± 0.138	0.006 ± 0.091
PRF-fit source offset from KIC position	0.061 ± 0.117	0.52	-0.036 ± 0.135	-0.050 ± 0.091
photometric centroid source offset	0.05 ± 0.08	0.65	0.04 ± 0.09	0.03 ± 0.07

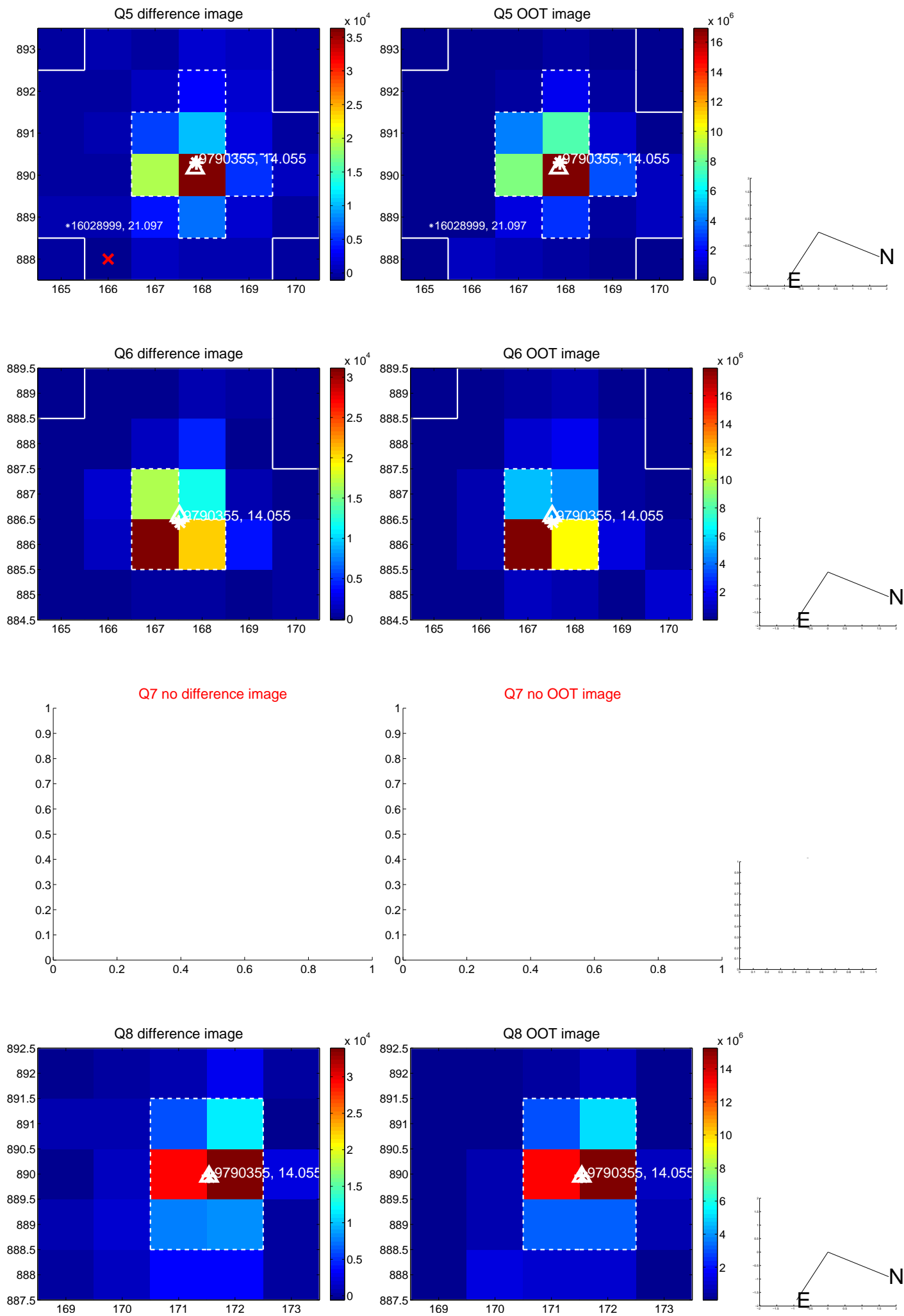


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

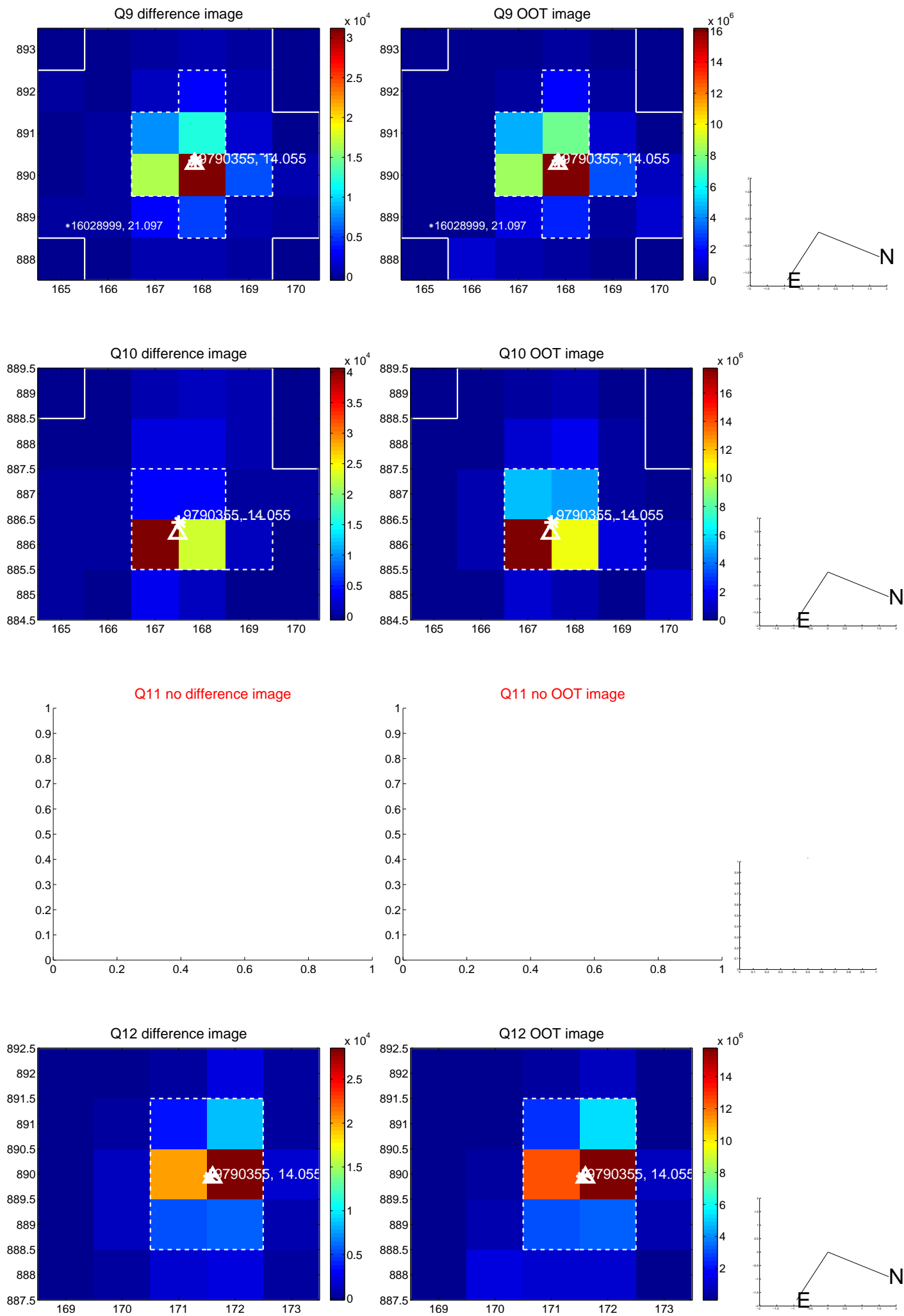
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



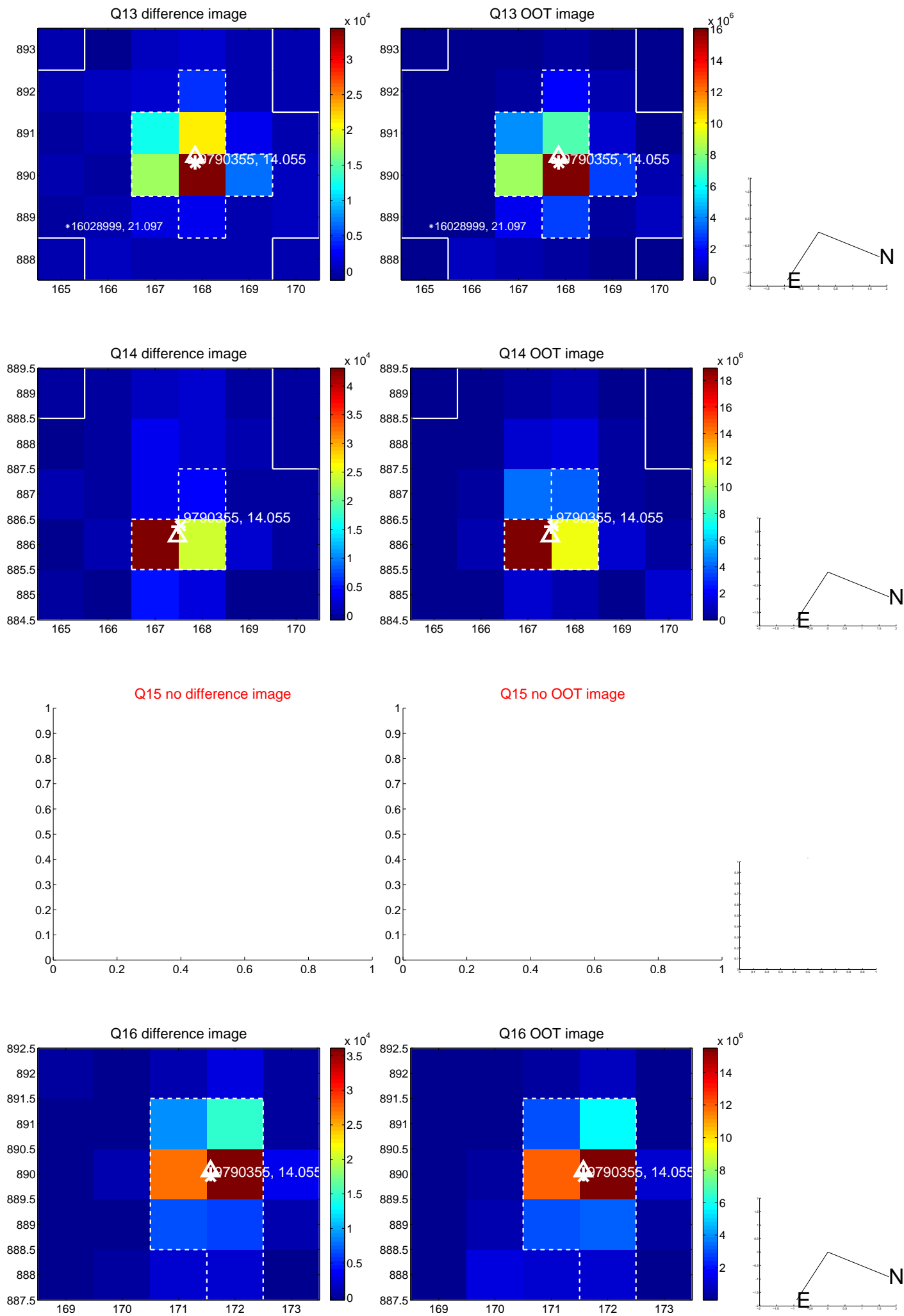
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



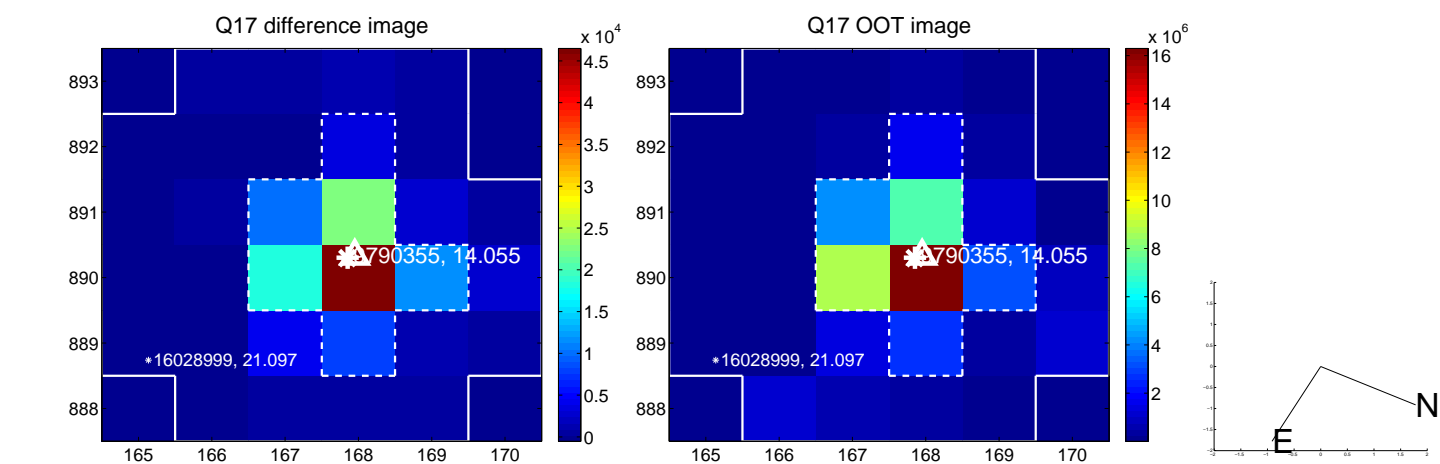
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



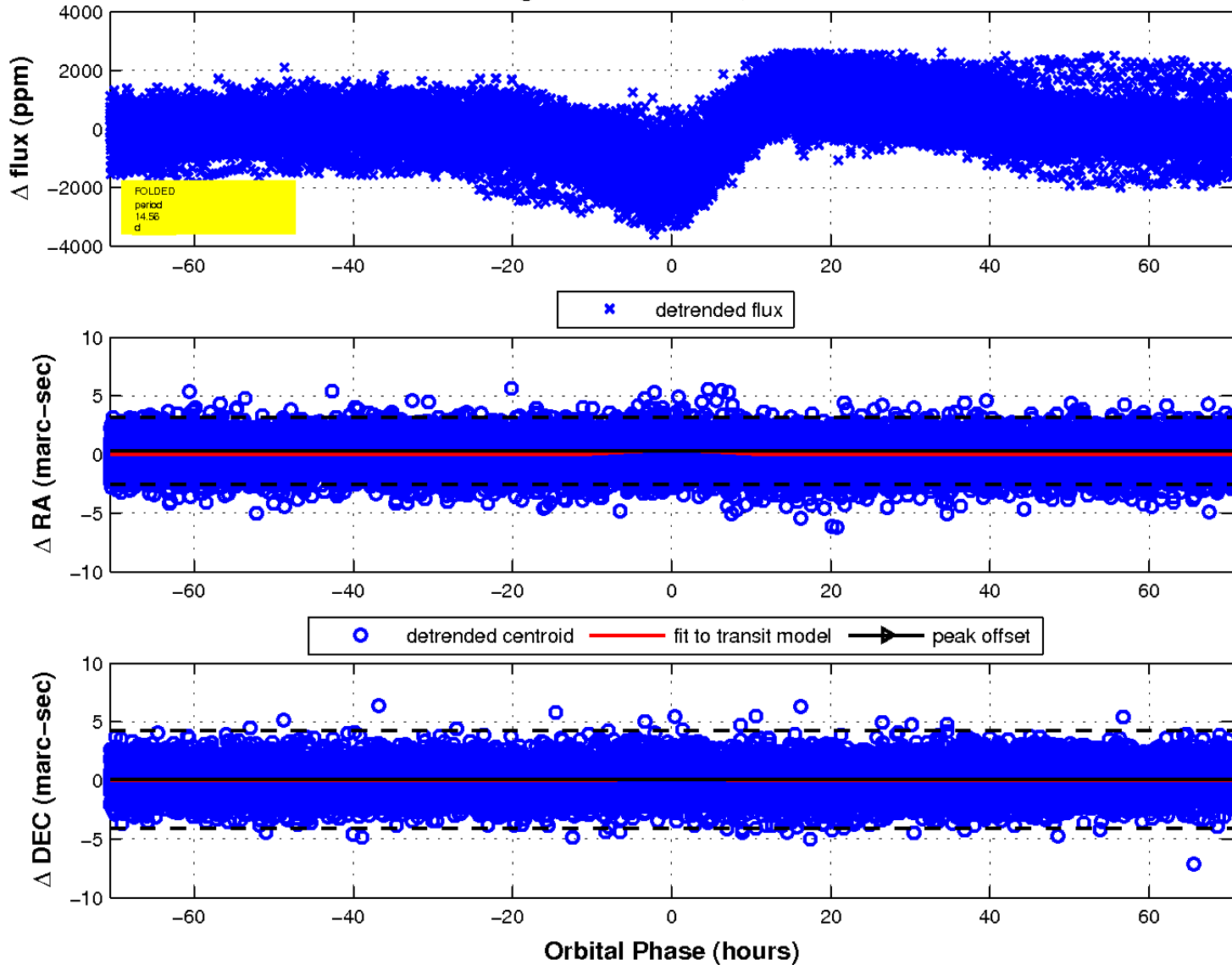
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

