

KIC 008524481

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})
008524481-01	OBS	No	1.326457	131.900456	47.9	9.079	13.0	13.7	1.00	5780	0.68	1790.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008524481-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

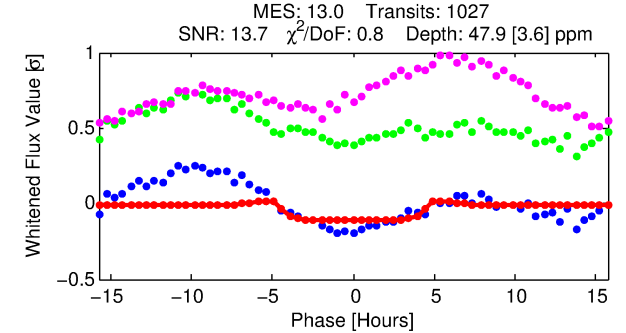
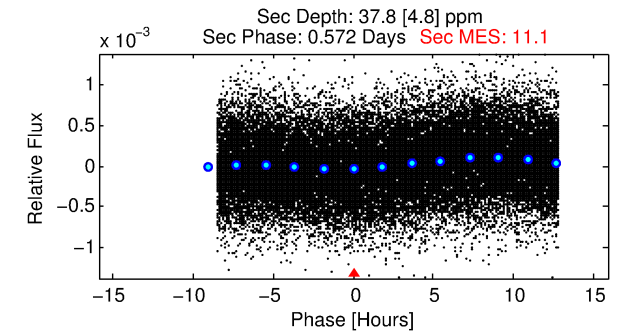
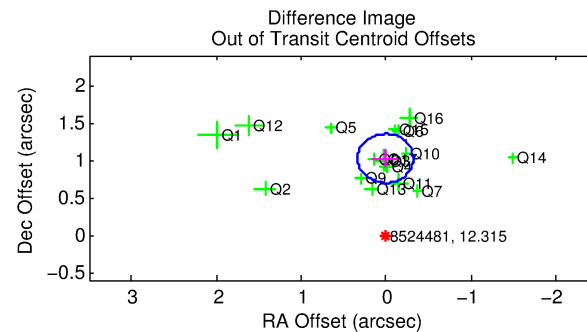
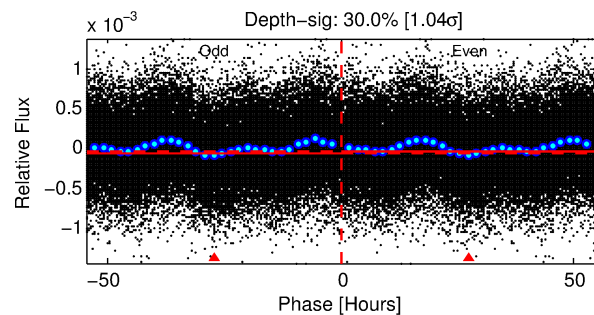
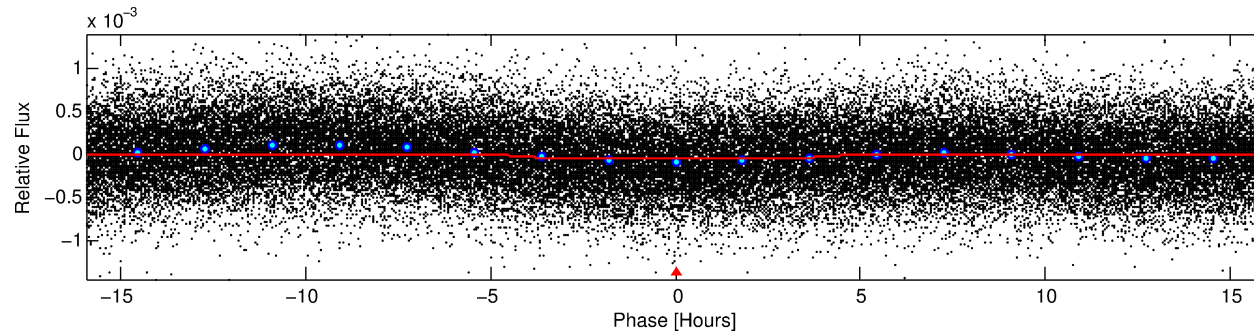
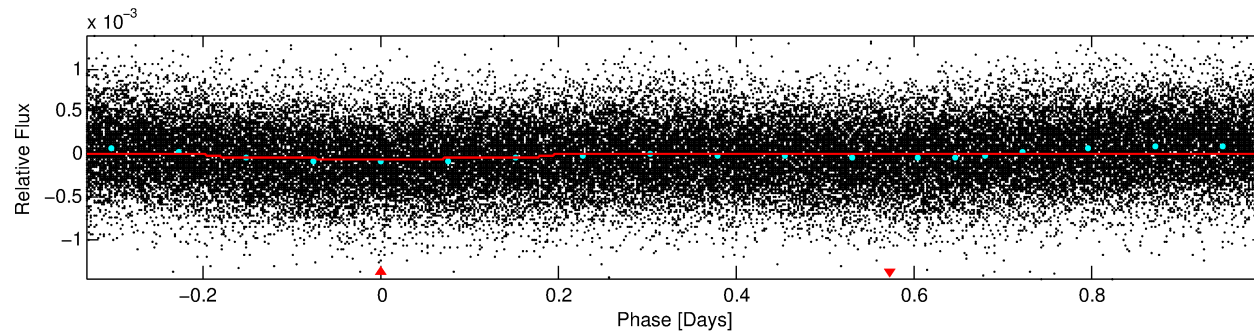
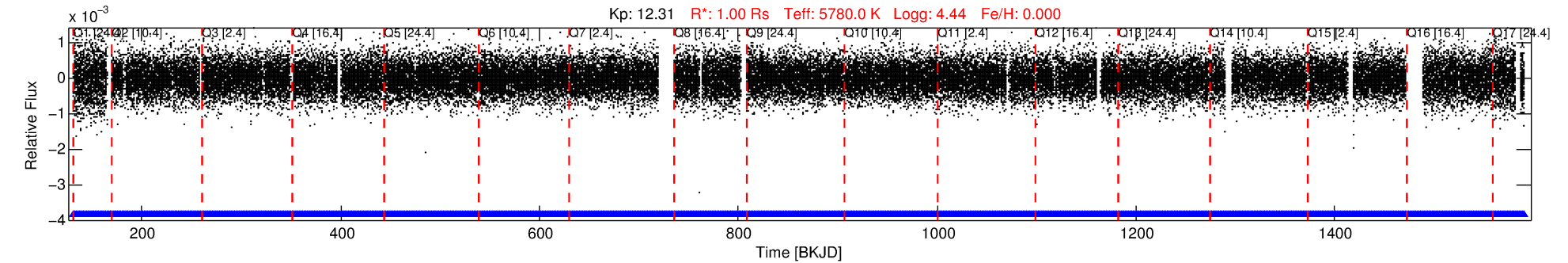
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008524481-01

No Significant Match Found

DV One-Page Summary

KIC: 8524481 Candidate: 1 of 1 Period: 1.326 d



DV Fit Results:

Period = 1.32646 [0.00002] d
Epoch = 131.9005 [0.0058] BKJD
Rp/R* = 0.0063 [0.0066]
a/R* = 1.29 [2.38]
b = 0.02 [286.62]
Seff = 1790.67 [0.03]
Teq = 1659 [0] K
Rp = 0.68 [0.73] Re
a = 0.0236 [0.0000] AU
Ag = 24.77 [52.60] [0.45 σ]
Teffp = 5721 [3037] K [1.34 σ]

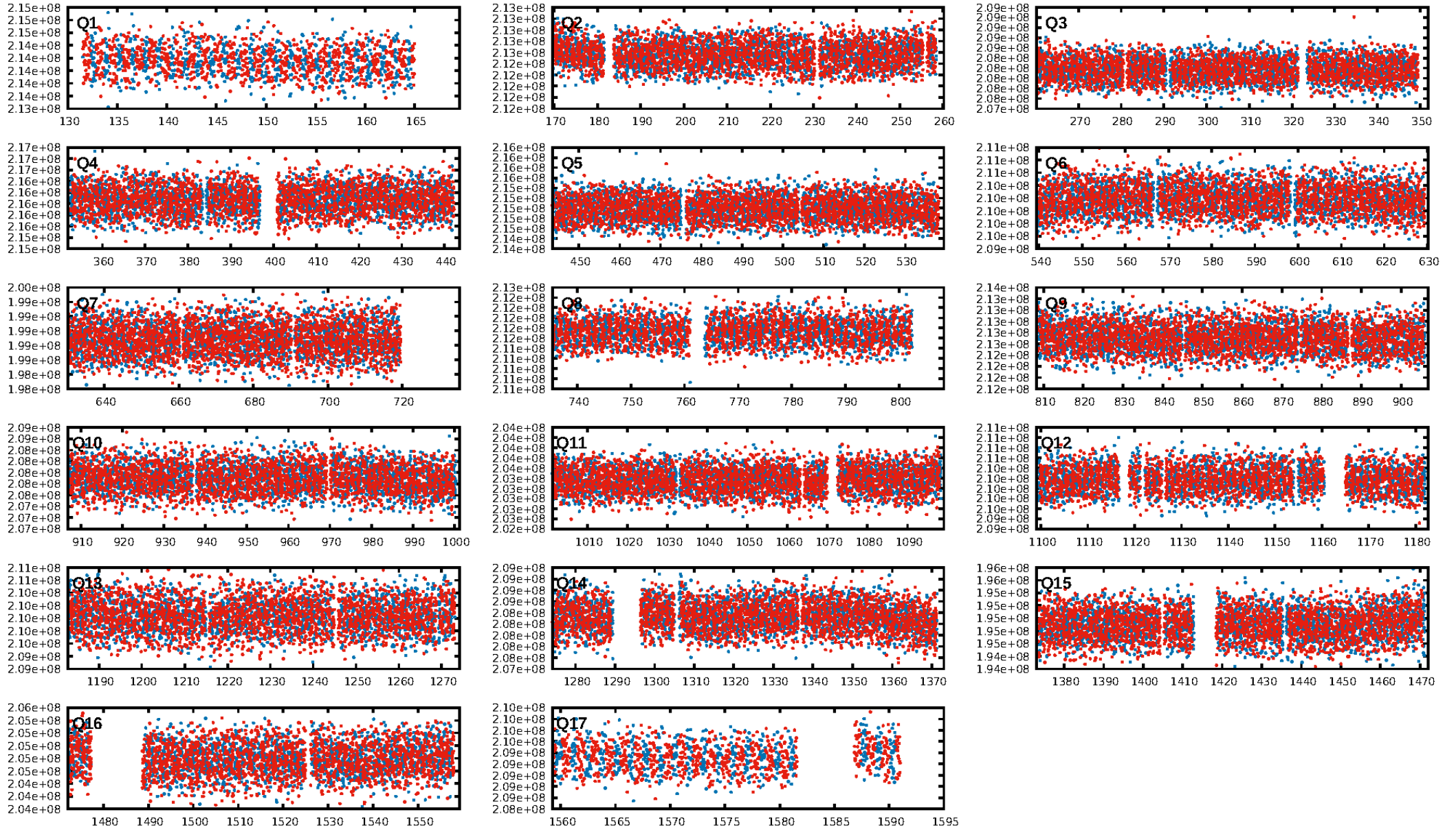
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.93e-42
RollingBand-fgt: 1.00 [979/979]
GhostDiagnostic-chr: 1.869
Centroid-sig: 0.0%
Centroid-so: 2.545 arcsec [6.62 σ]
OotOffset-rm: 1.023 arcsec [9.38 σ]
KicOffset-rm: 0.825 arcsec [7.25 σ]
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]

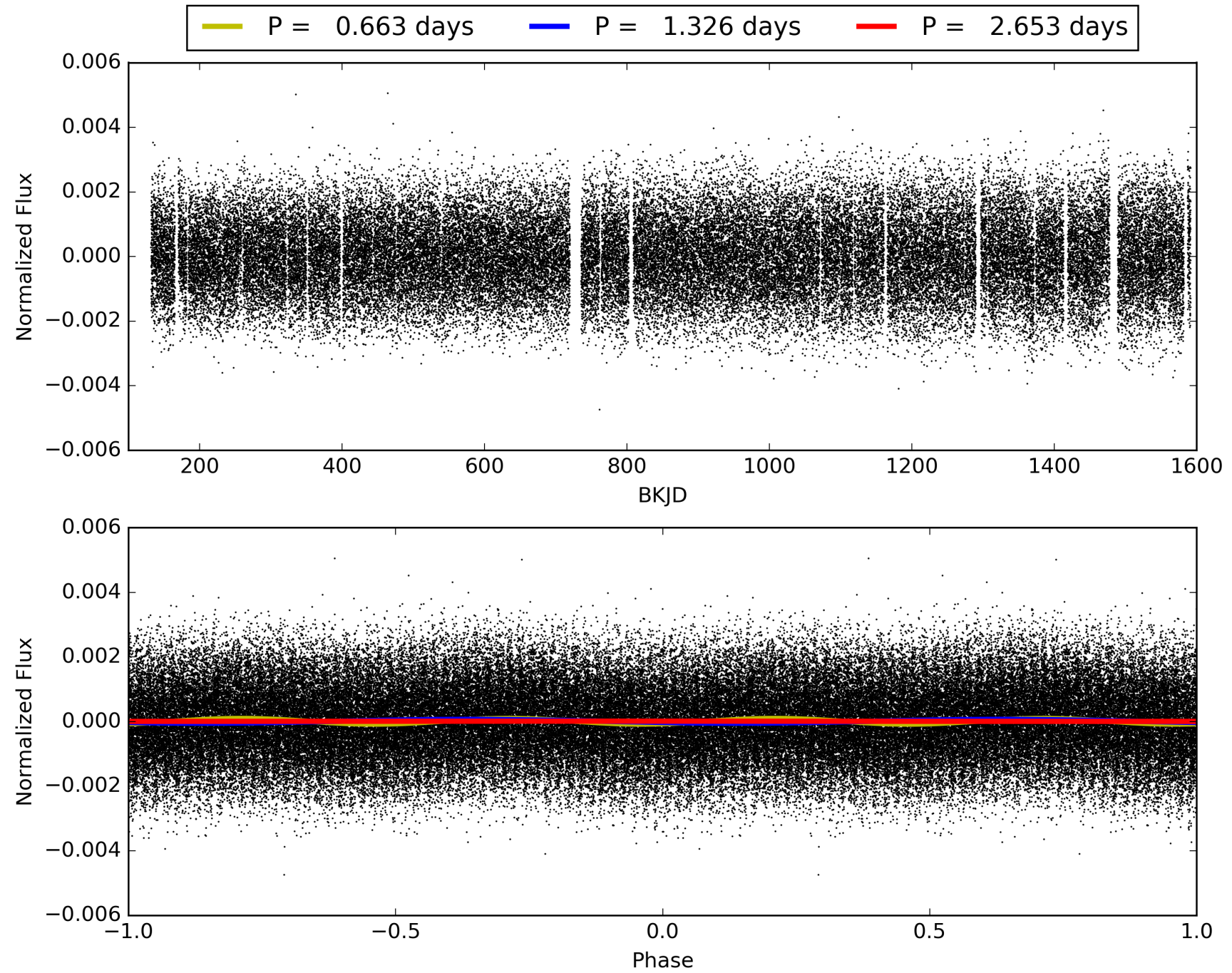
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:40:53 Z

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

TCE 008524481-01, PDC Light Curves

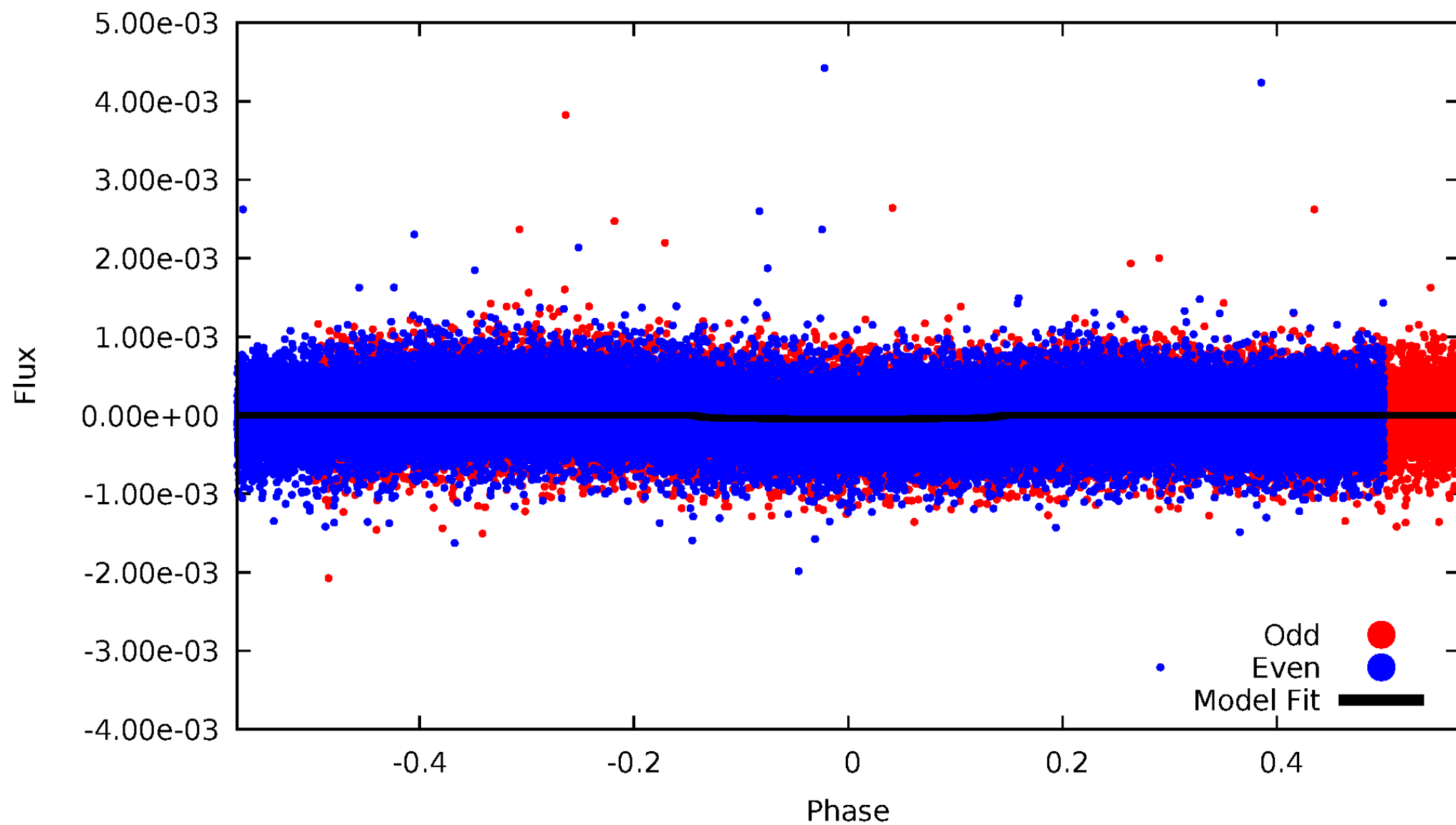


TCE 008524481-01



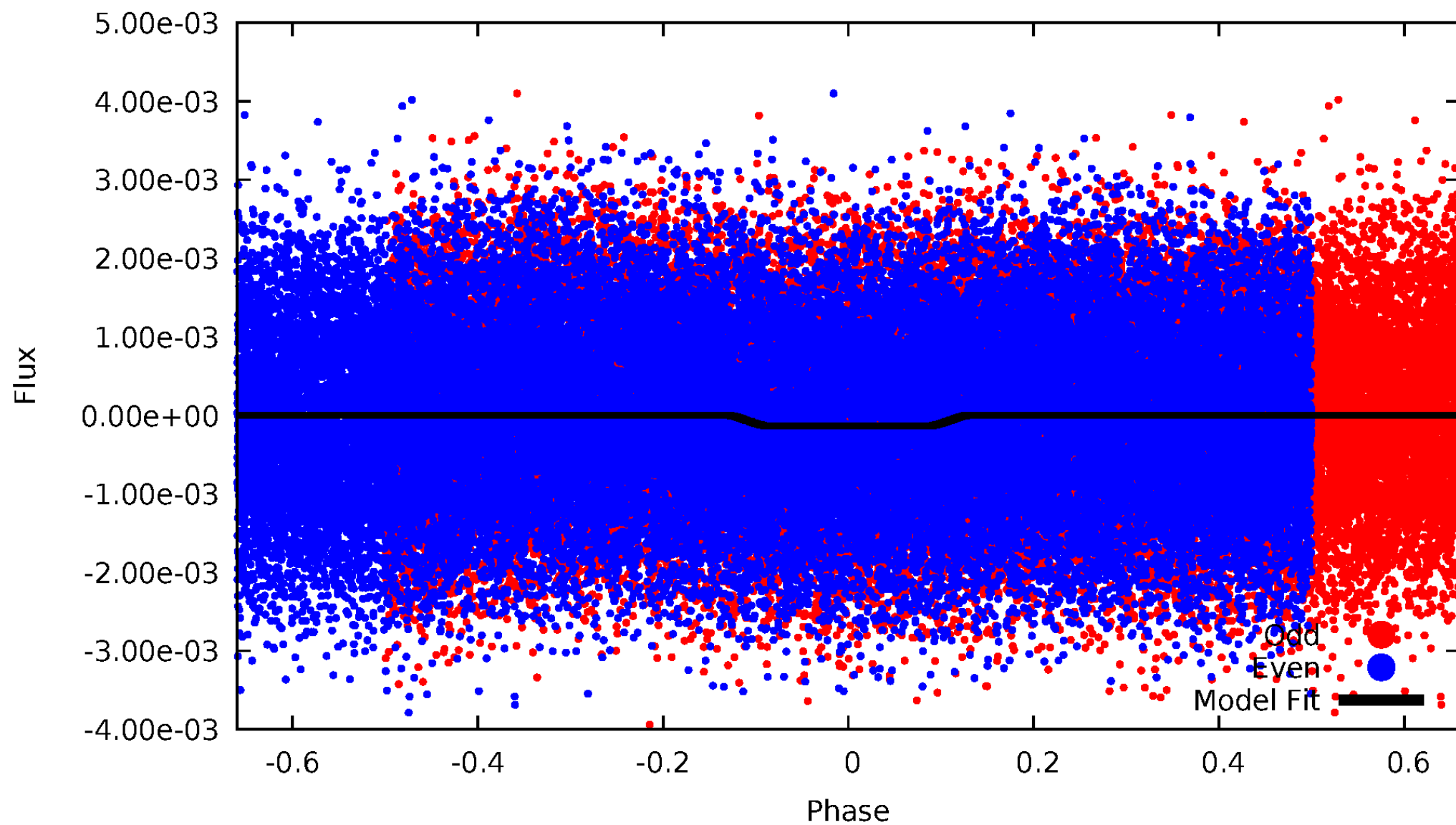
DV Odd/Even

TCE 008524481-01

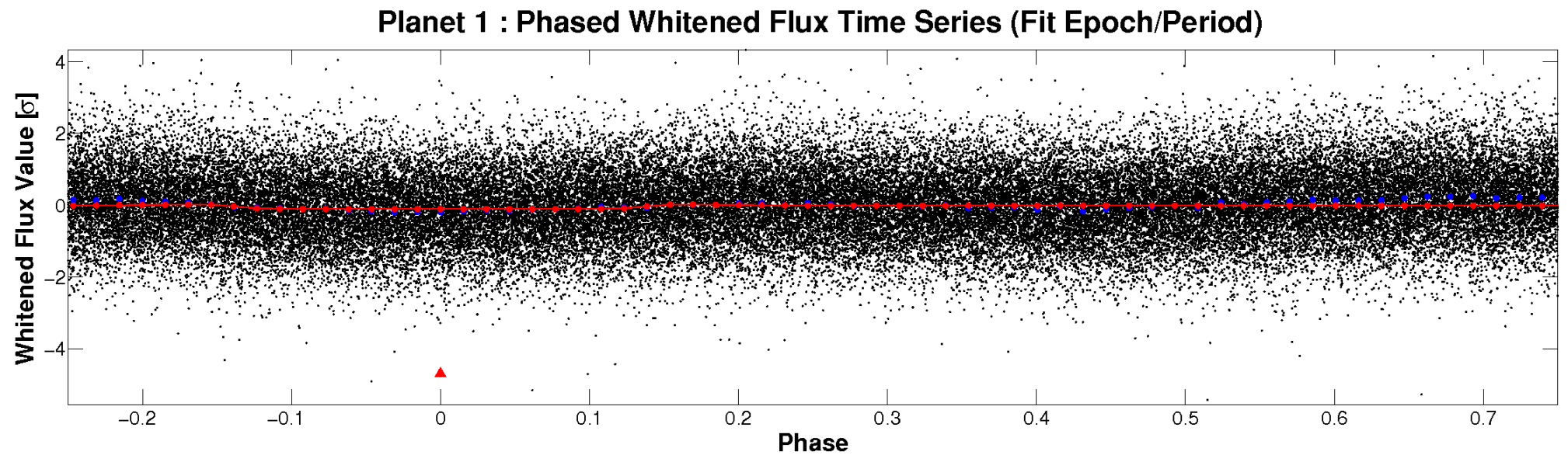
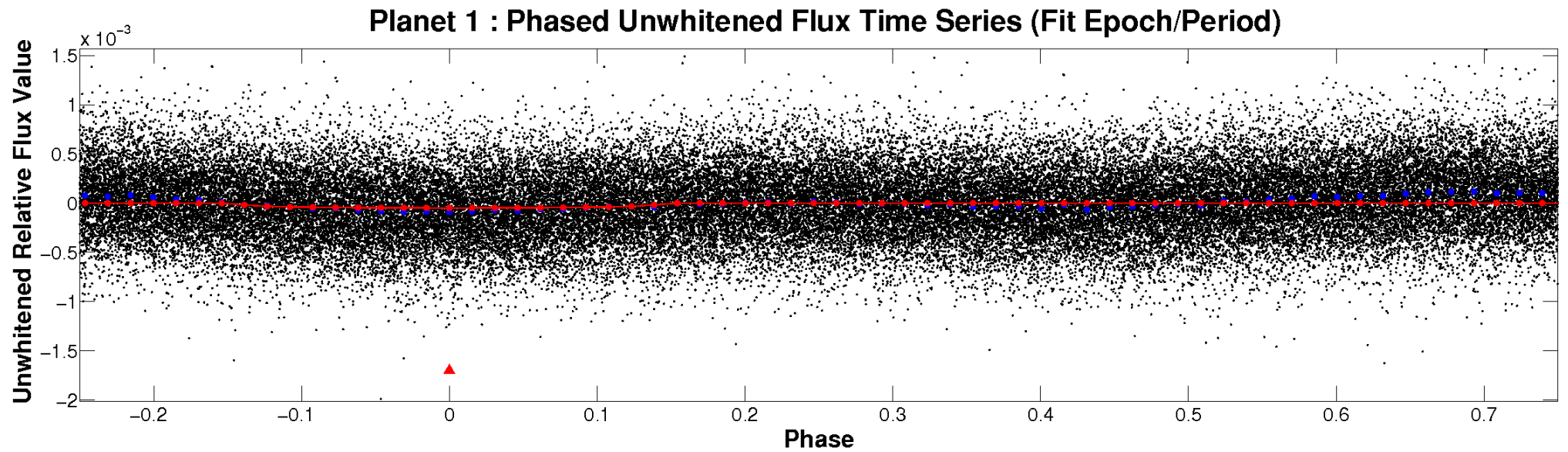


ALT Odd/Even

TCE 008524481-01

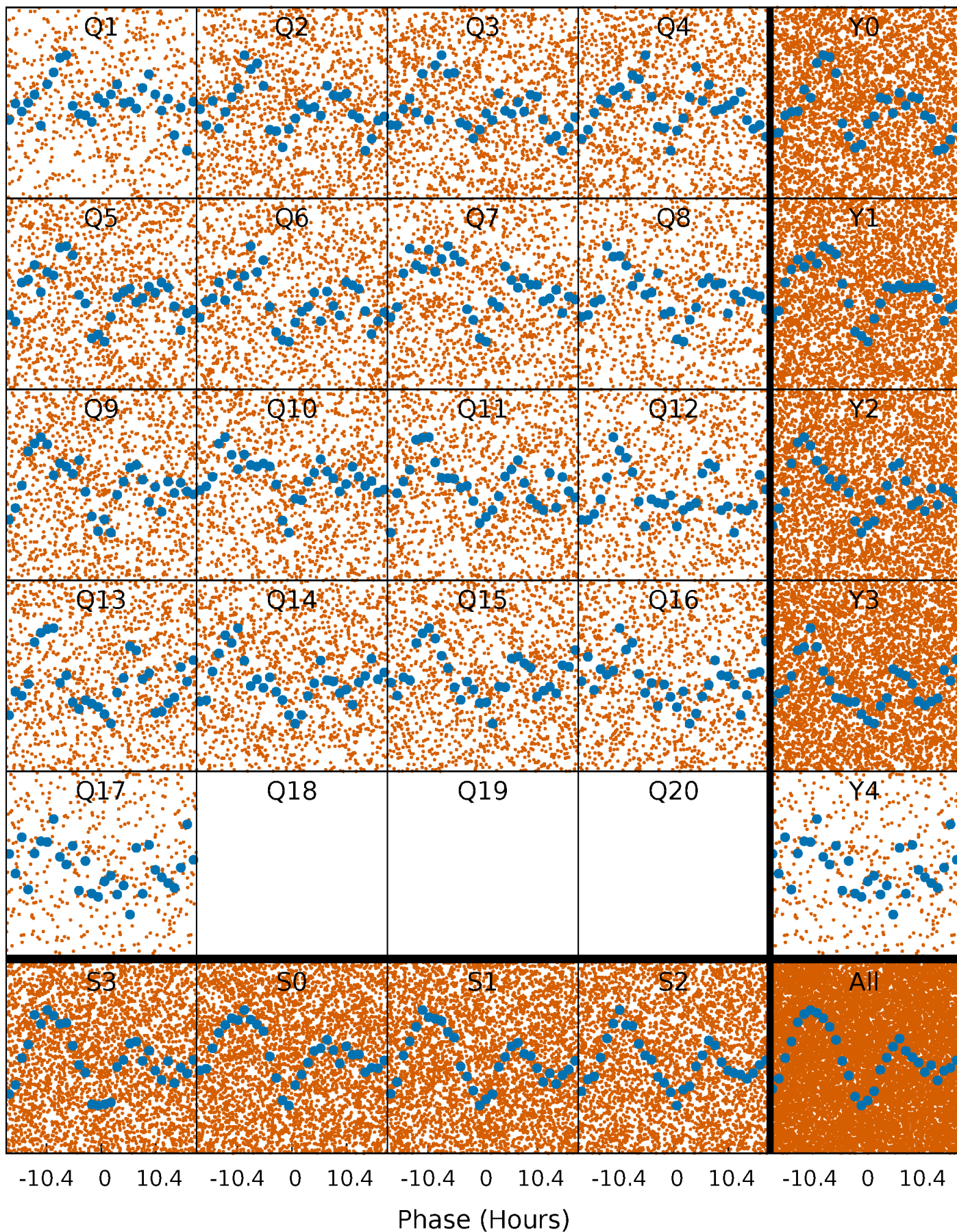


Non-Whitened Vs. Whitened Light Curve



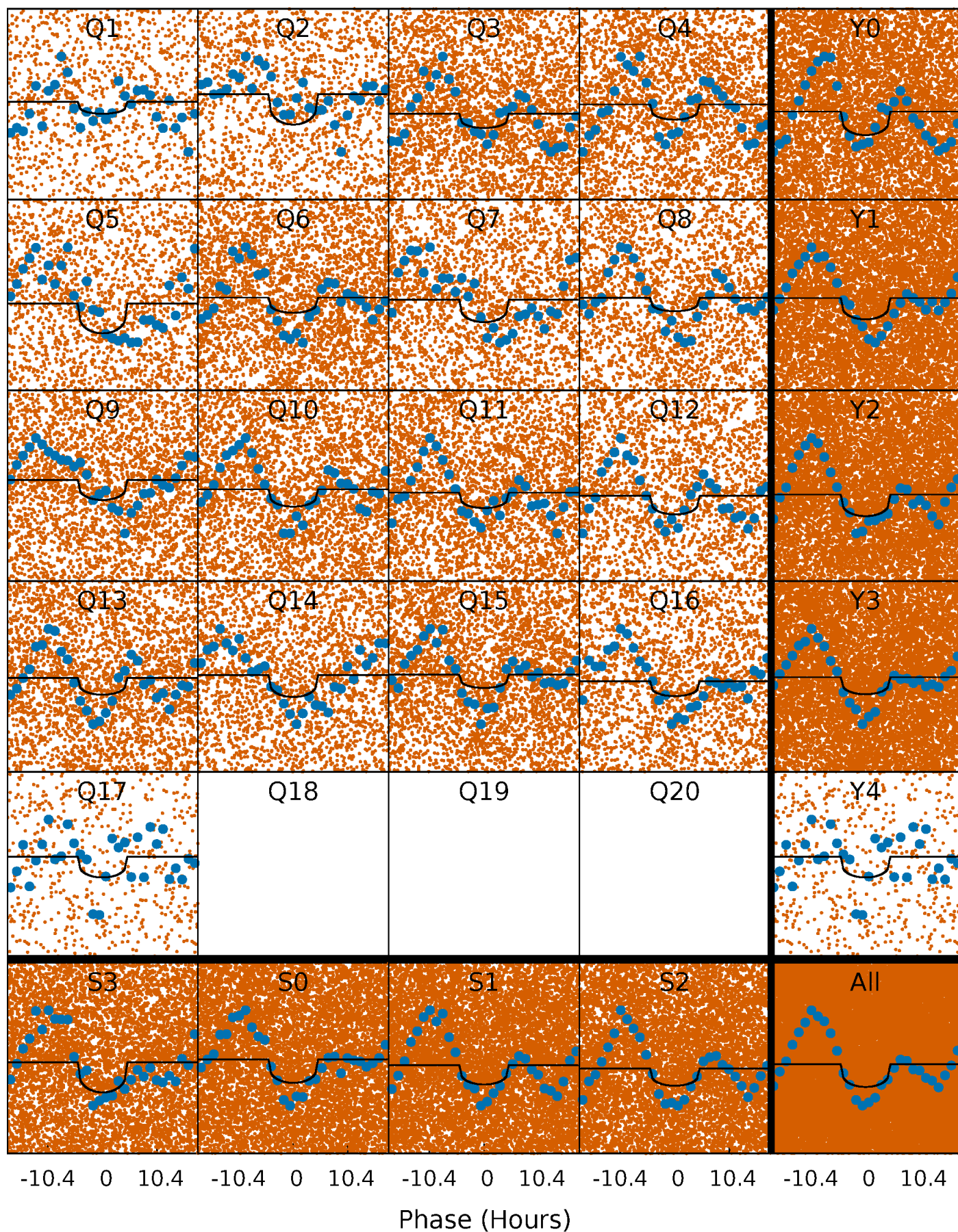
PDC Quarter-Phased Transit Curves

TCE 008524481-01 P= 1.326457 Days $T_0=131.900456$ (BKJD)



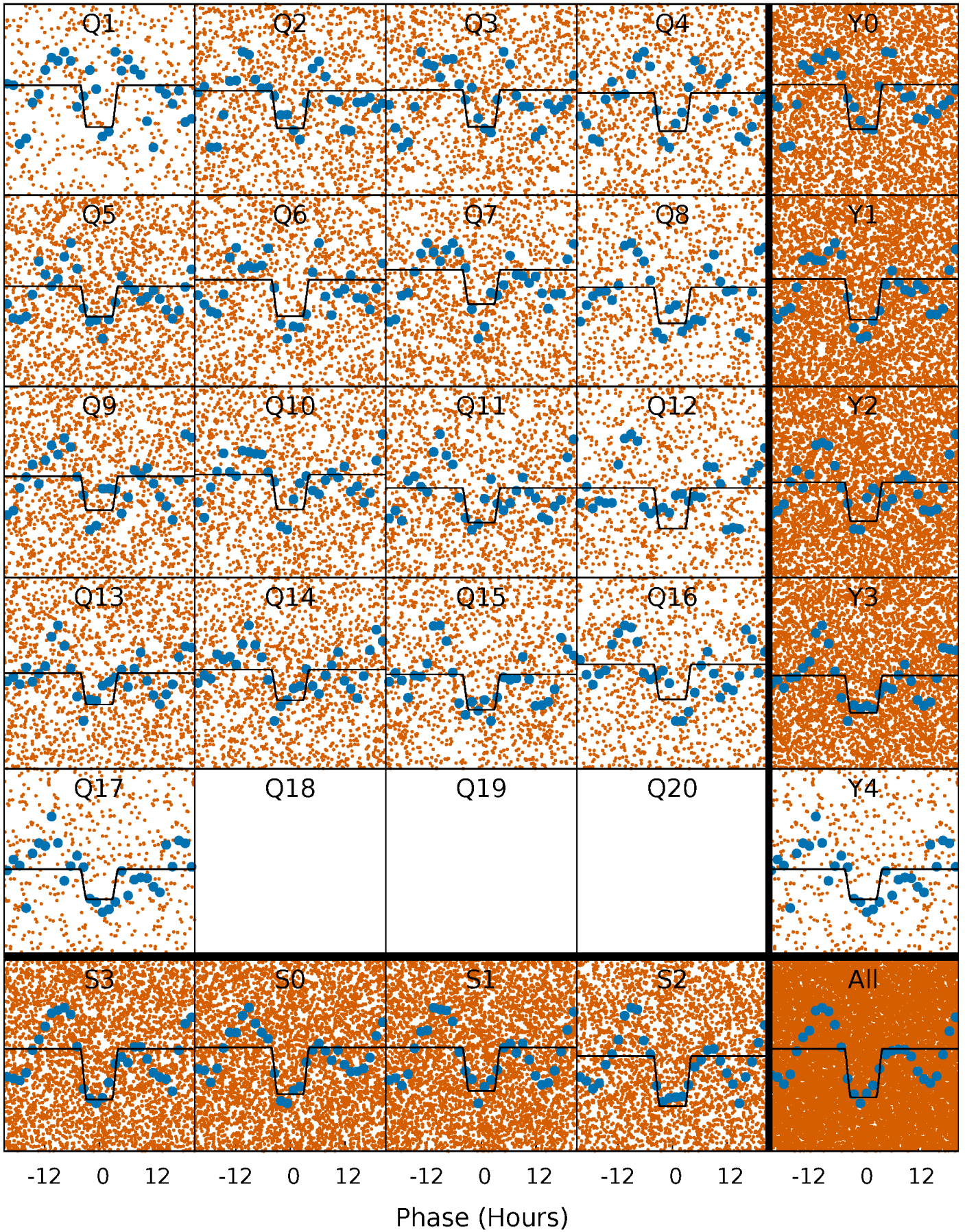
DV Quarter-Phased Transit Curves

TCE 008524481-01 P= 1.326457 Days $T_0=131.900456$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

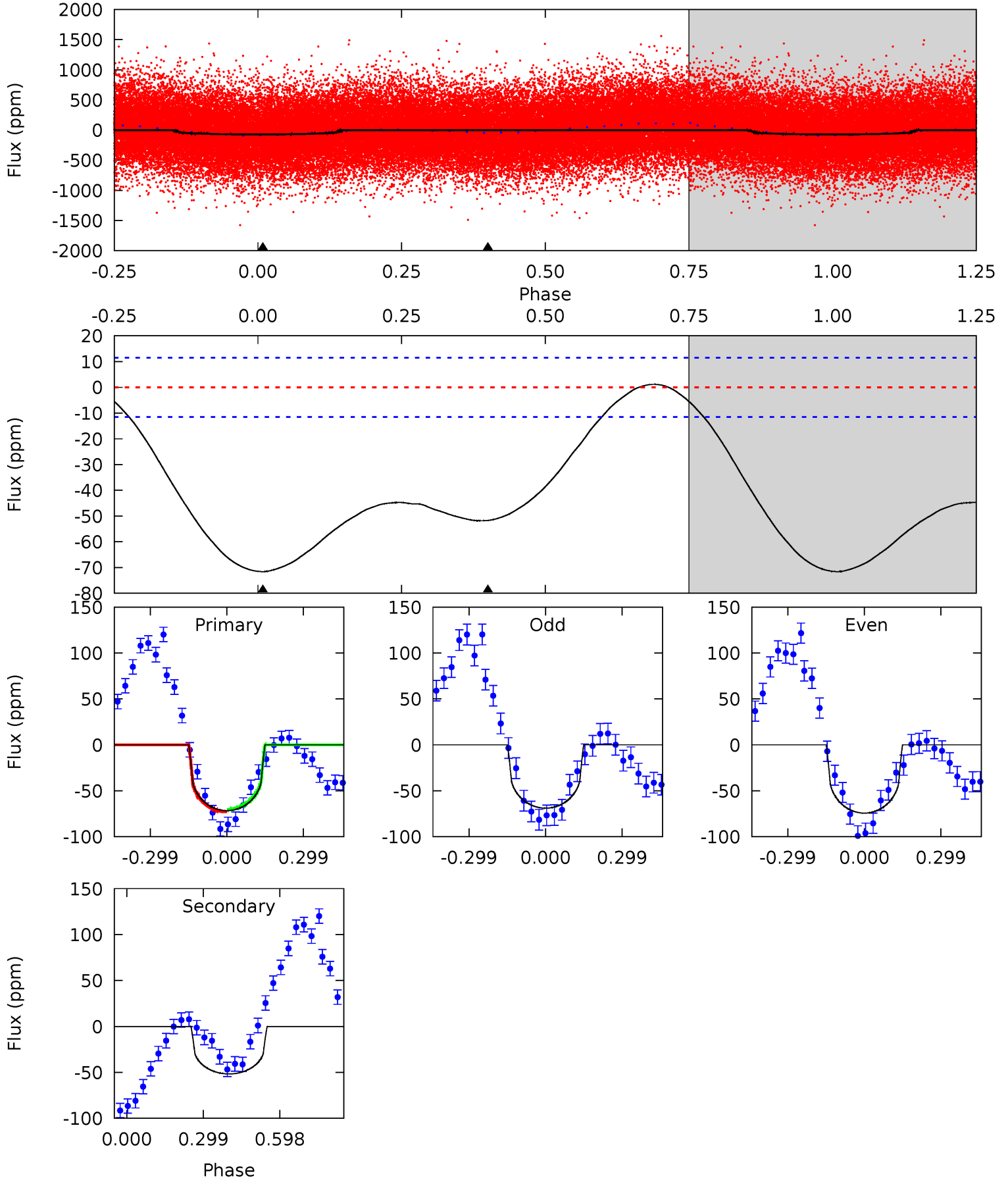
TCE 008524481-01 P= 1.326460 Days $T_0=131.891085$ (BKJD)



DV Model-Shift Uniqueness Test

008524481-01, P = 1.326457 Days, E = 130.573999 Days

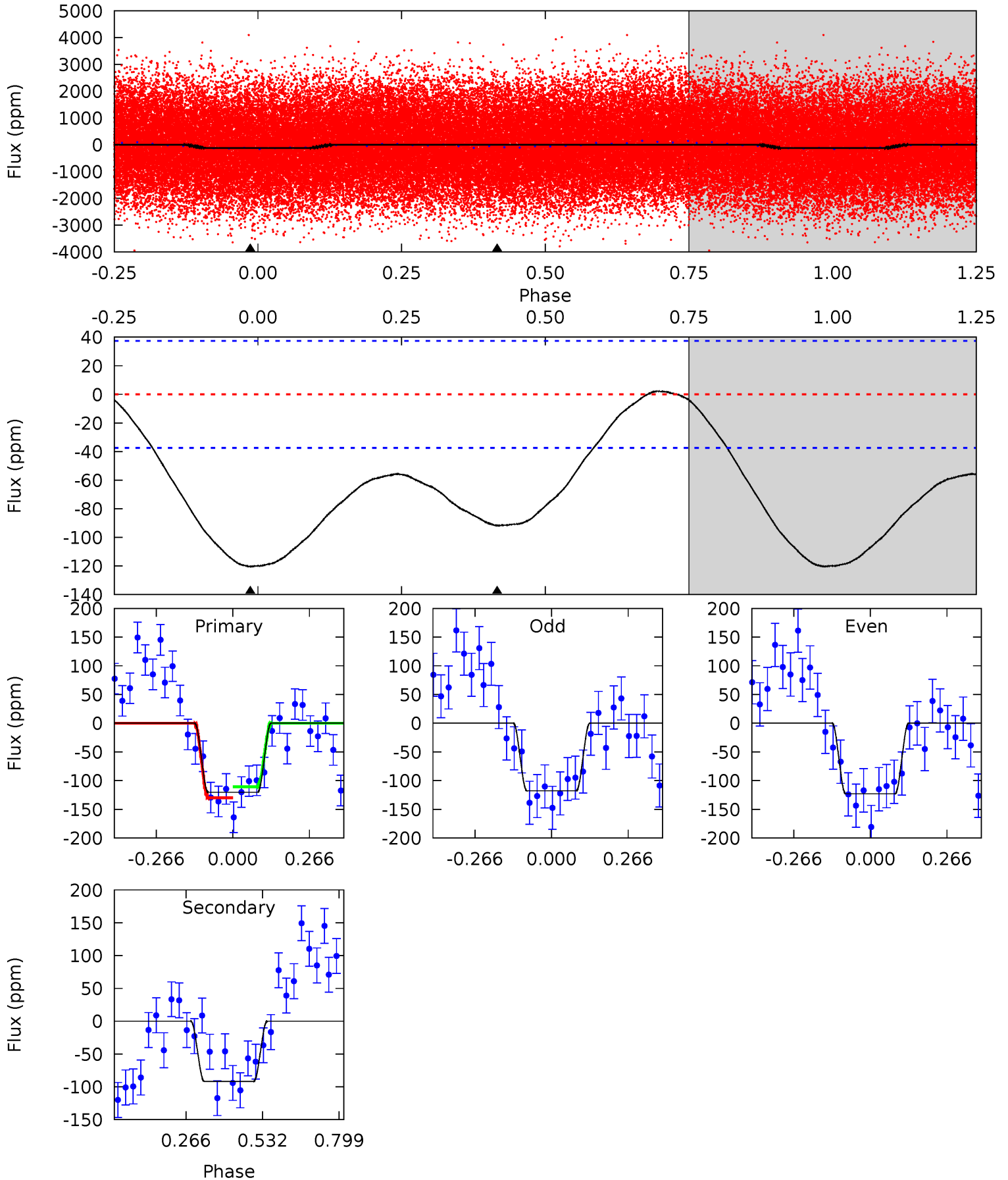
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	19.5	0	0	4.33	1.04	0.82	27.0	27.0	19.5	19.5	1.01	1.01	0.02	0.55



Alt Model-Shift Uniqueness Test

008524481-01, P = 1.326460 Days, E = 130.564625 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	10.7	0	0	4.35	1.11	0.31	14.0	14.0	10.7	10.7	0.31	1.05	0.02	1.12



Stellar Parameters For KIC 008524481

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 008524481-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 3	$0.86^{+0.69}_{-0.53}$	2314^{+120}_{-102}	5501^{+4120}_{-1212}	22^{+123}_{-15}
Alt.	-92 ± 9	$1.30^{+0.74}_{-0.70}$	2319^{+108}_{-108}	5239^{+2510}_{-943}	17^{+60}_{-10}

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

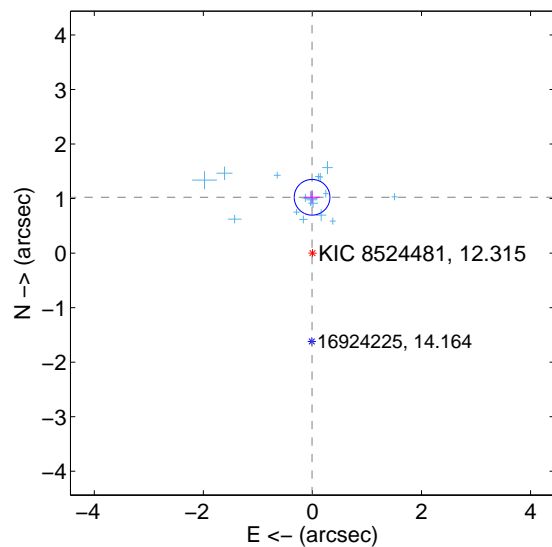
Supplemental centroid analysis for 008524481-01. Kepler magnitude: 12.31. Transit SNR 13.67

There are 17 quarters with good PRF difference image offsets

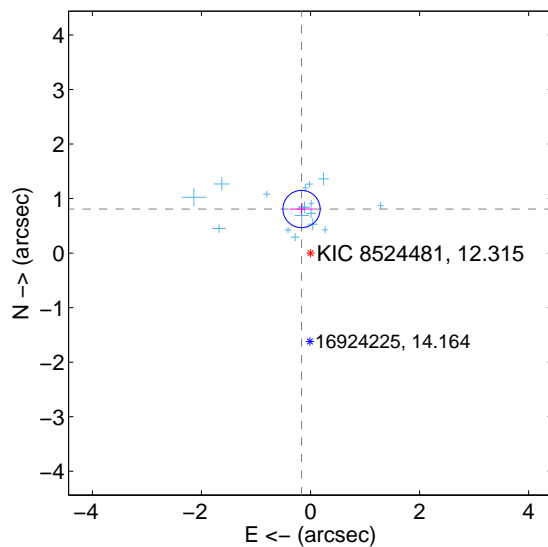
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.023 ± 0.109	9.38	0.007 ± 0.142	1.023 ± 0.109
PRF-fit source offset from KIC position	0.825 ± 0.114	7.25	0.165 ± 0.217	0.808 ± 0.104
photometric centroid source offset	2.54 ± 0.38	6.62	-0.16 ± 0.38	2.54 ± 0.38

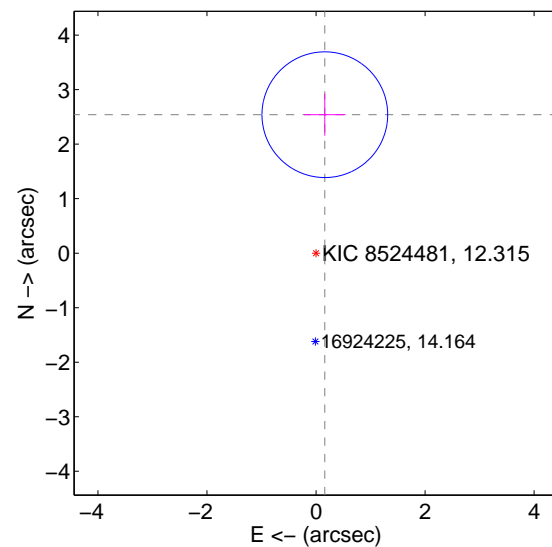
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

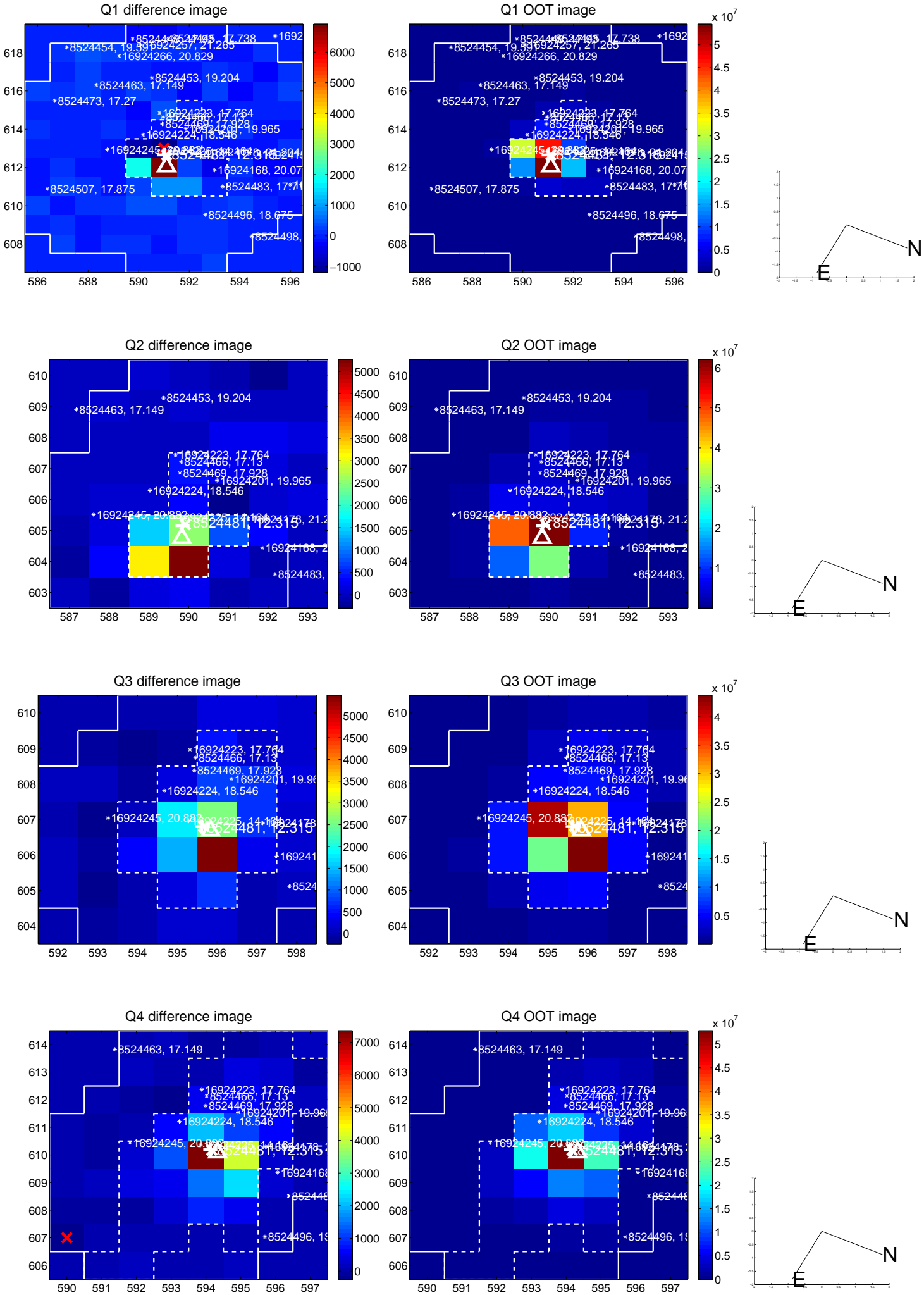


offset from photometric centroids

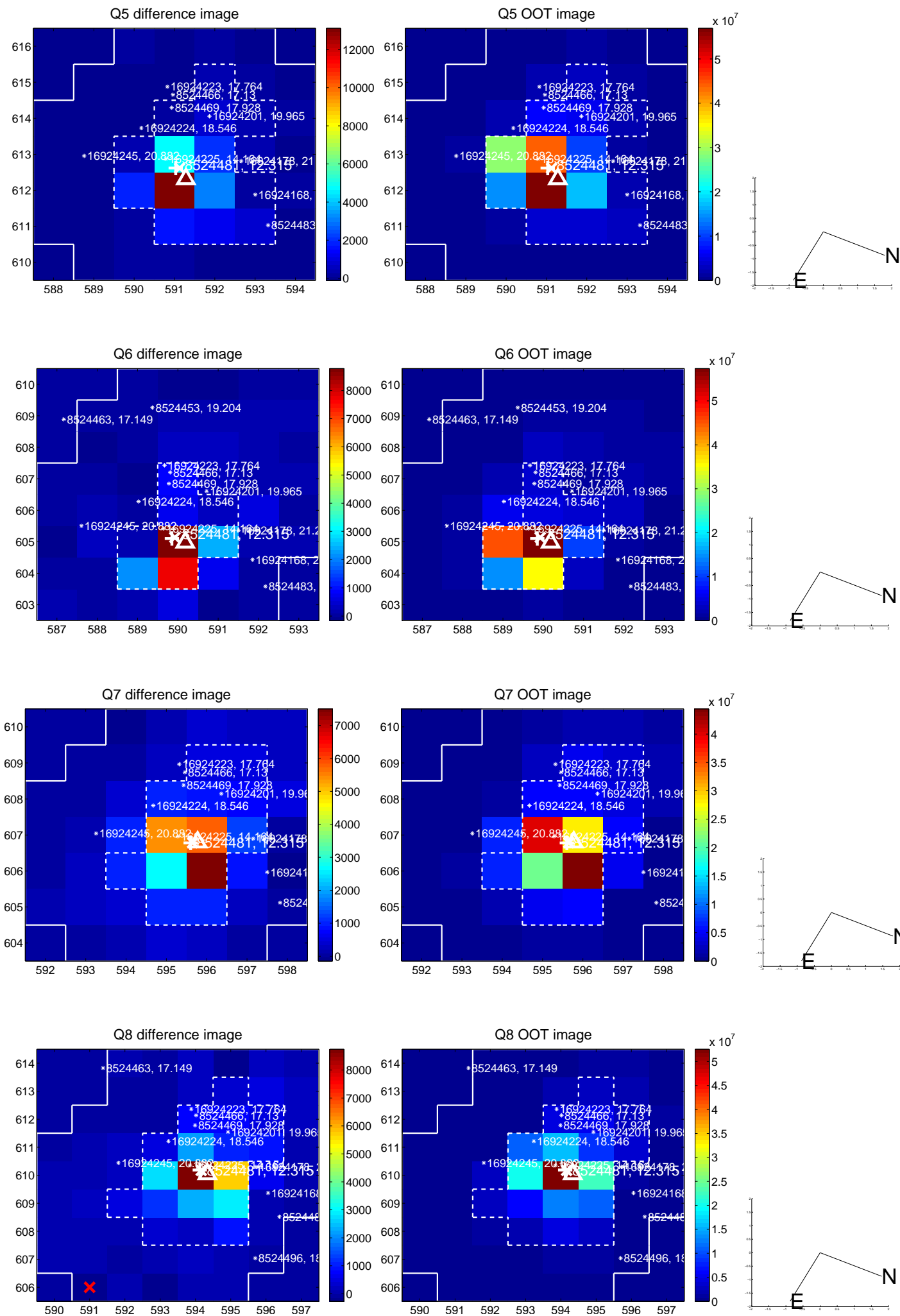


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

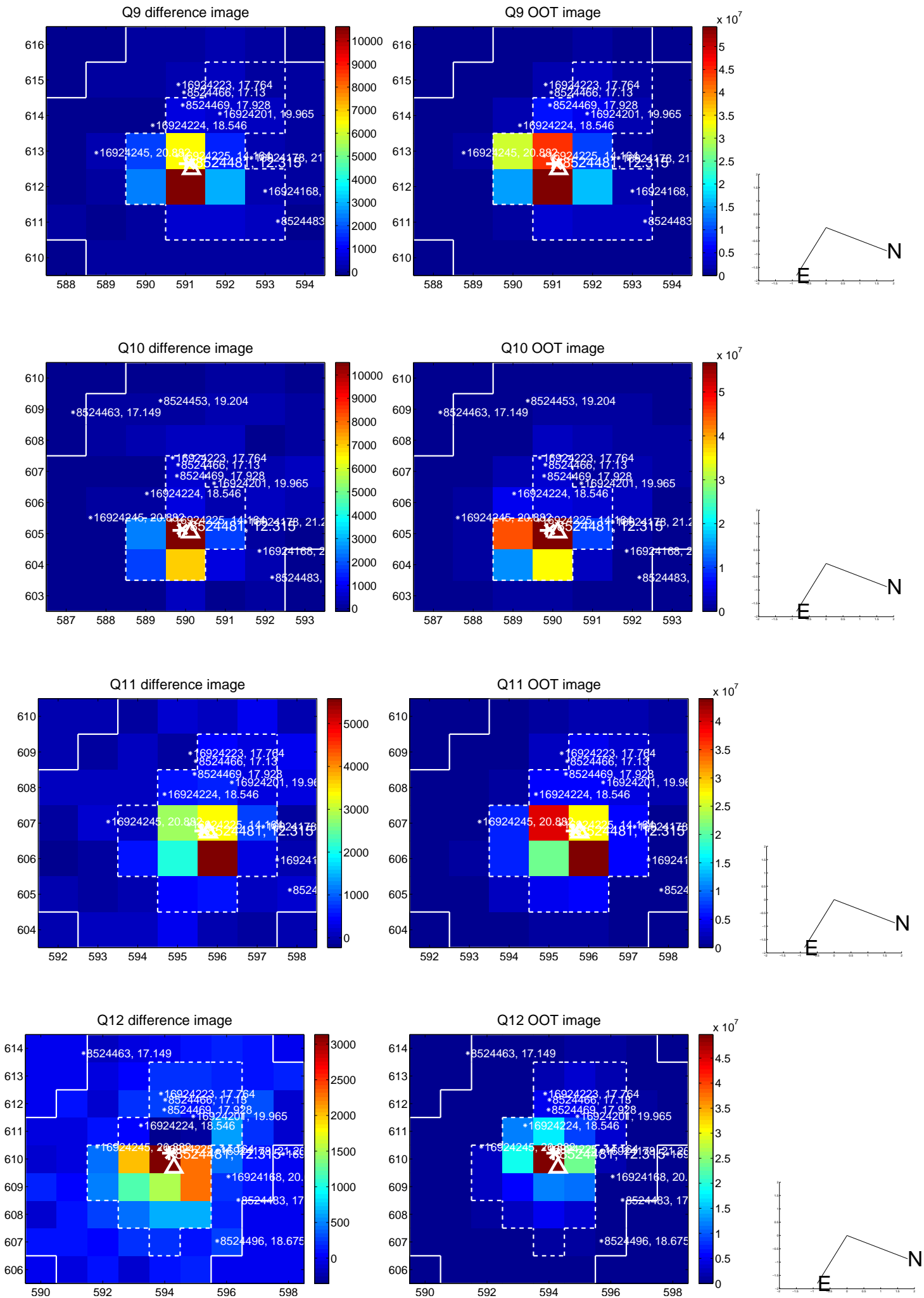
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



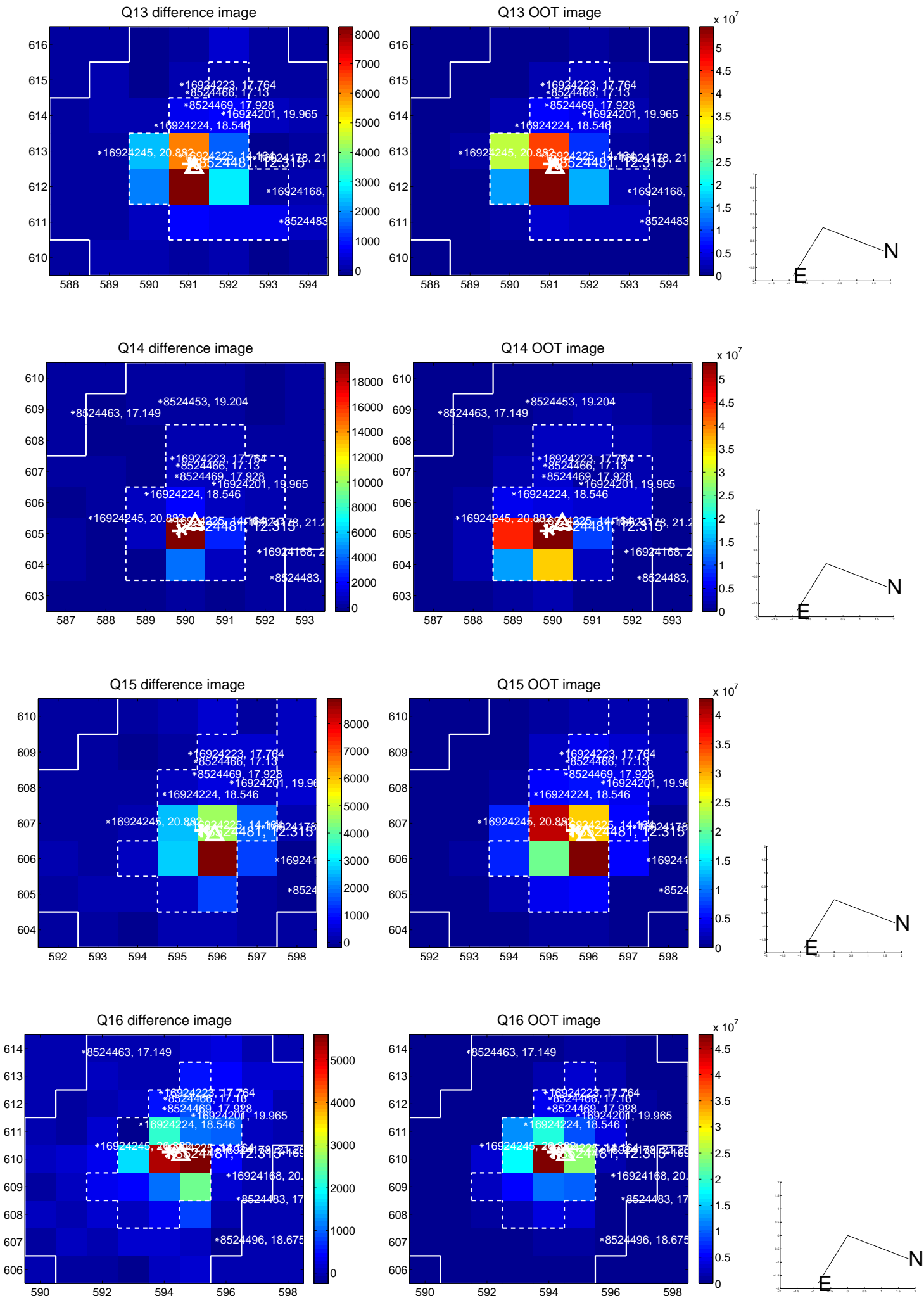
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



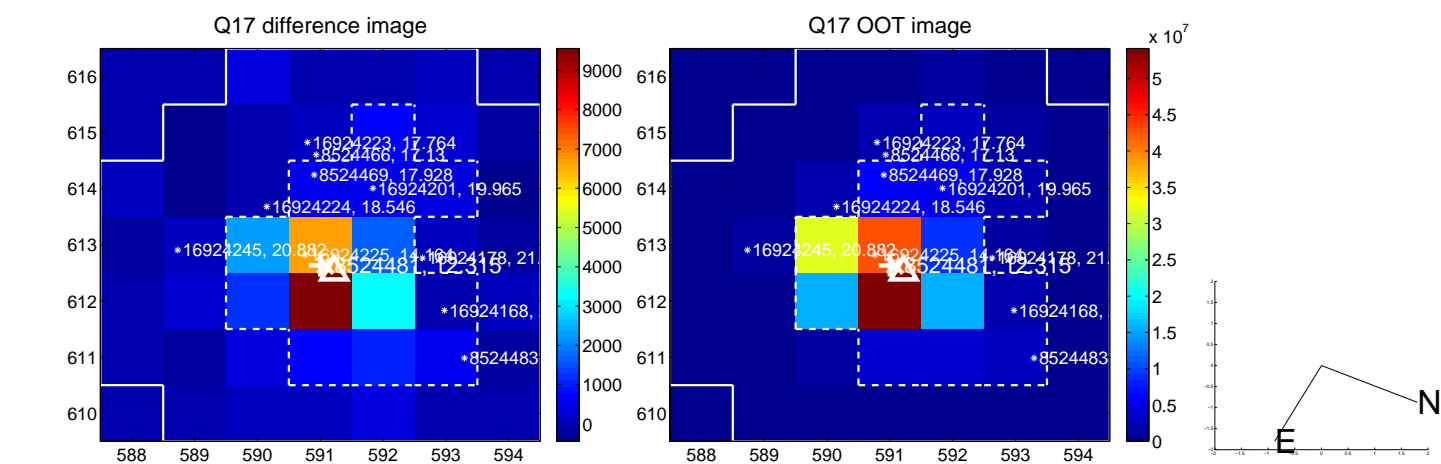
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



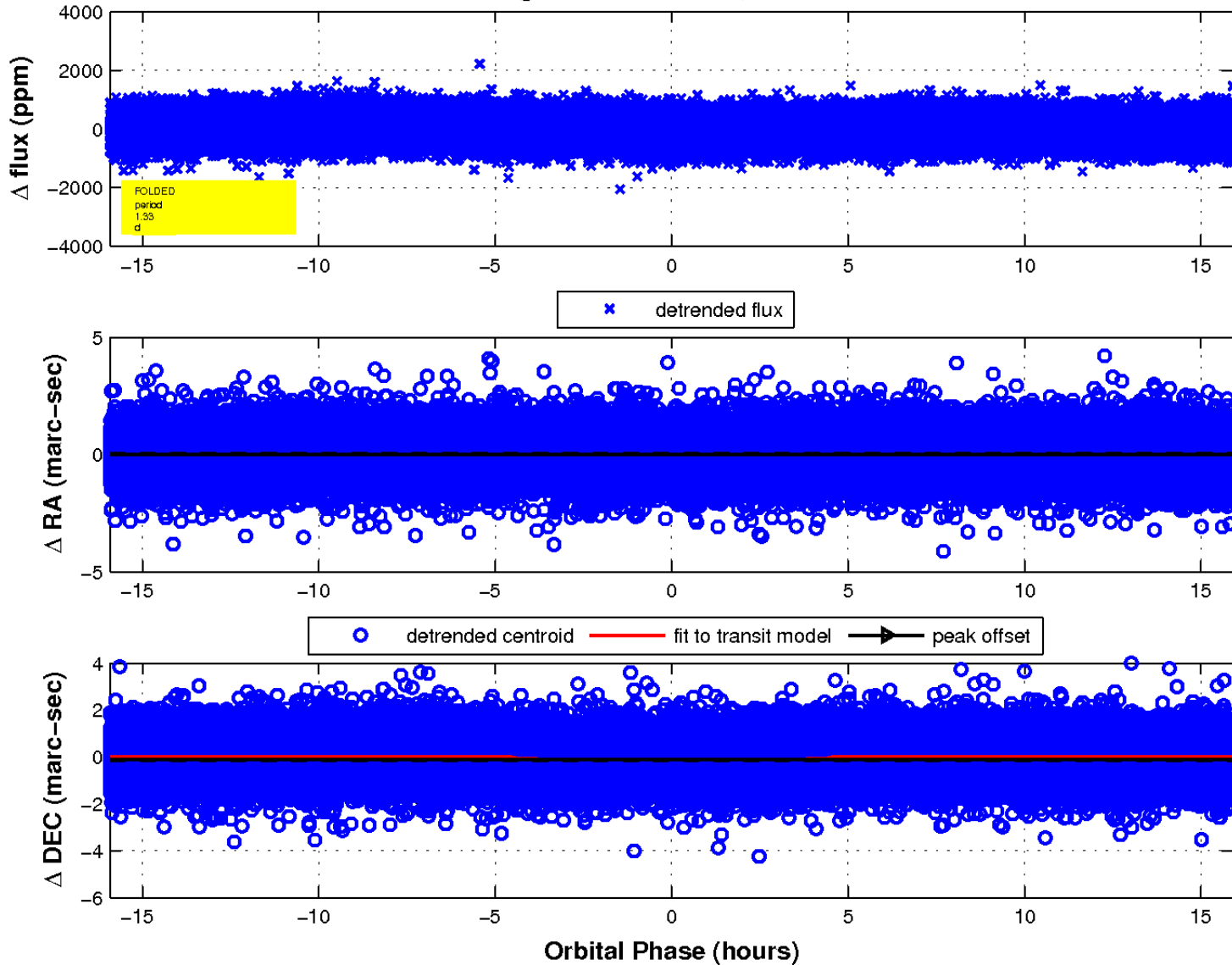
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

