

KIC 005566448

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})
005566448-01	OBS	No	3.276754	134.746265	32.3	5.362	7.2	7.2	1.85	5038	1.28	1129.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005566448-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

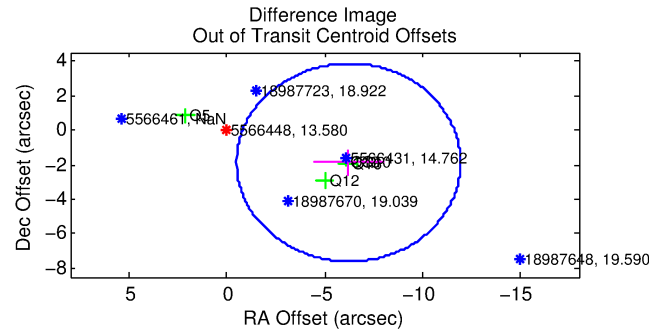
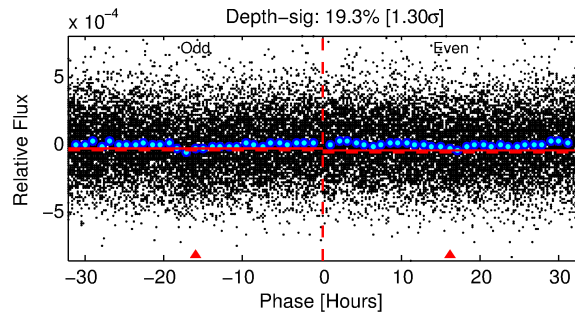
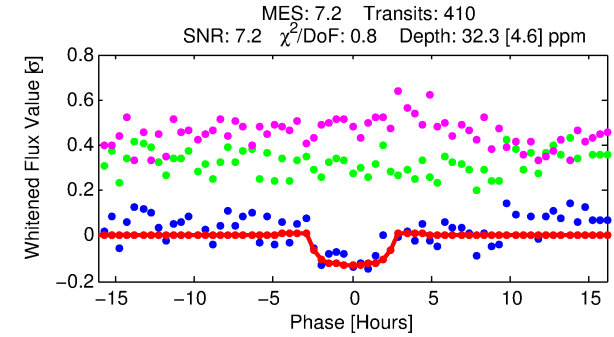
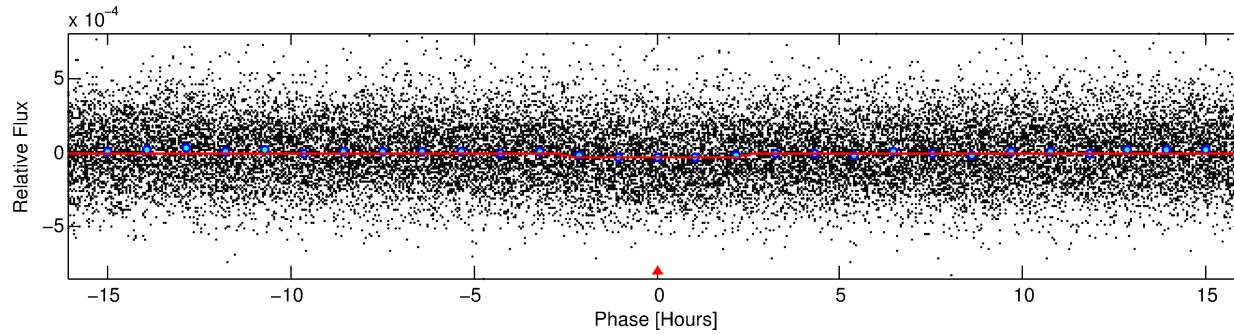
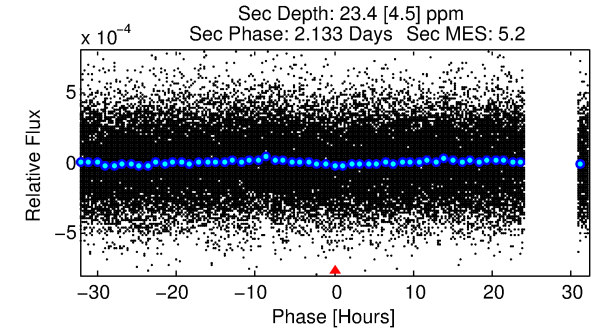
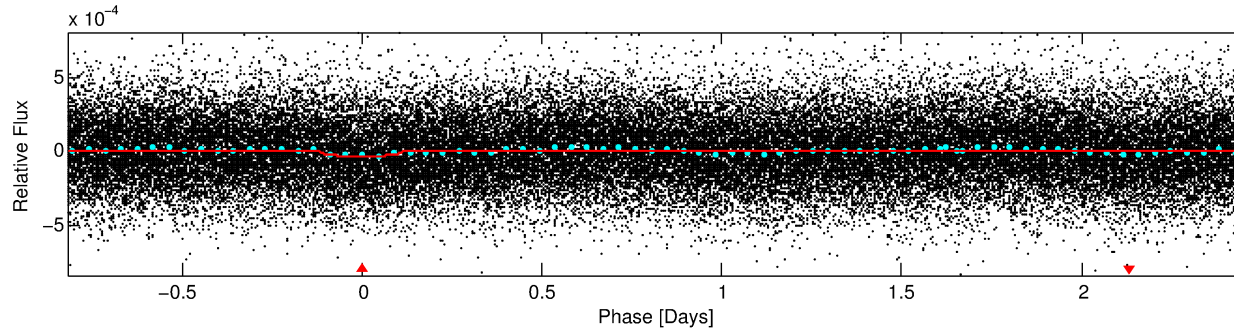
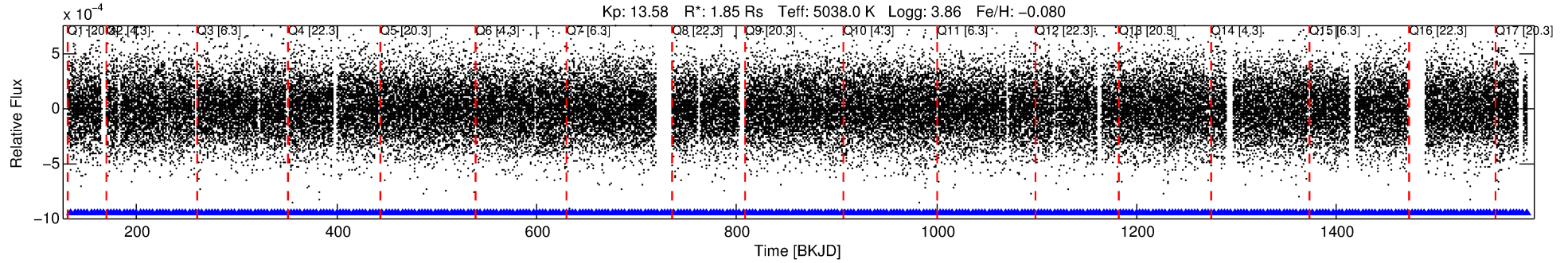
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005566448-01

No Significant Match Found

DV One-Page Summary

KIC: 5566448 Candidate: 1 of 1 Period: 3.277 d



DV Fit Results:

Period = 3.27675 [0.00004] d
Epoch = 134.7463 [0.0088] BKJD
Rp/R* = 0.0063 [0.0038]
a/R* = 2.29 [4.62]
b = 0.90 [0.53]
Seff = 1129.34 [1411.99]
Teq = 1478 [462] K
Rp = 1.28 [1.11] Re
a = 0.0417 [0.0301] AU
Ag = 13.80 [23.90] [0.54σ]
Teffp = 4405 [1332] K [2.08σ]

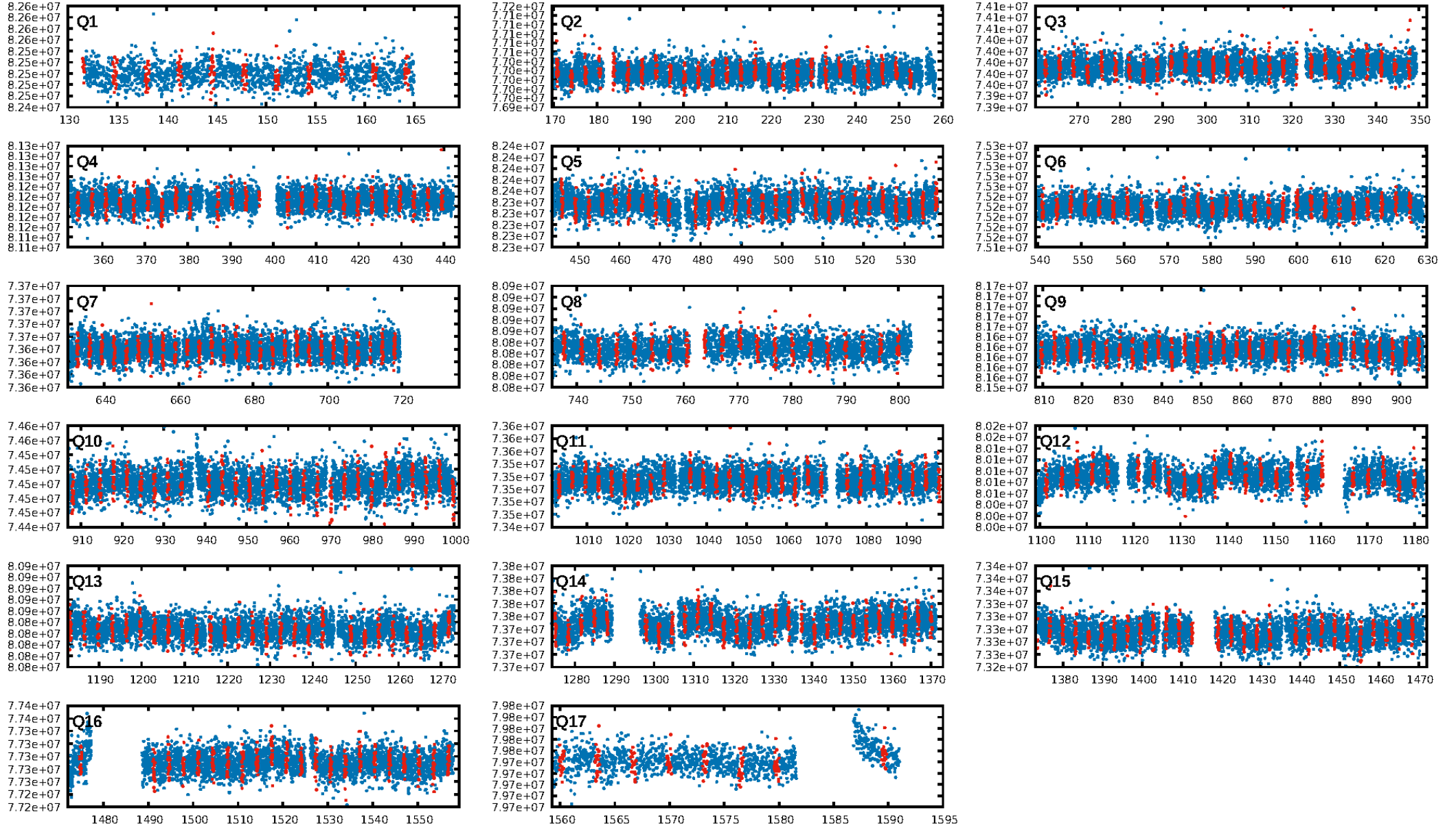
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.07e-13
RollingBand-fgt: 1.00 [391/391]
GhostDiagnostic-chr: 0.211
Centroid-sig: 0.0%
Centroid-so: 6.060 arcsec [2.90σ]
OotOffset-rm: 6.509 arcsec [3.41σ]
KicOffset-rm: 6.565 arcsec [3.79σ]
OotOffset-st: 1/0/2/2 [5]
KicOffset-st: 1/0/2/2 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [17/17]

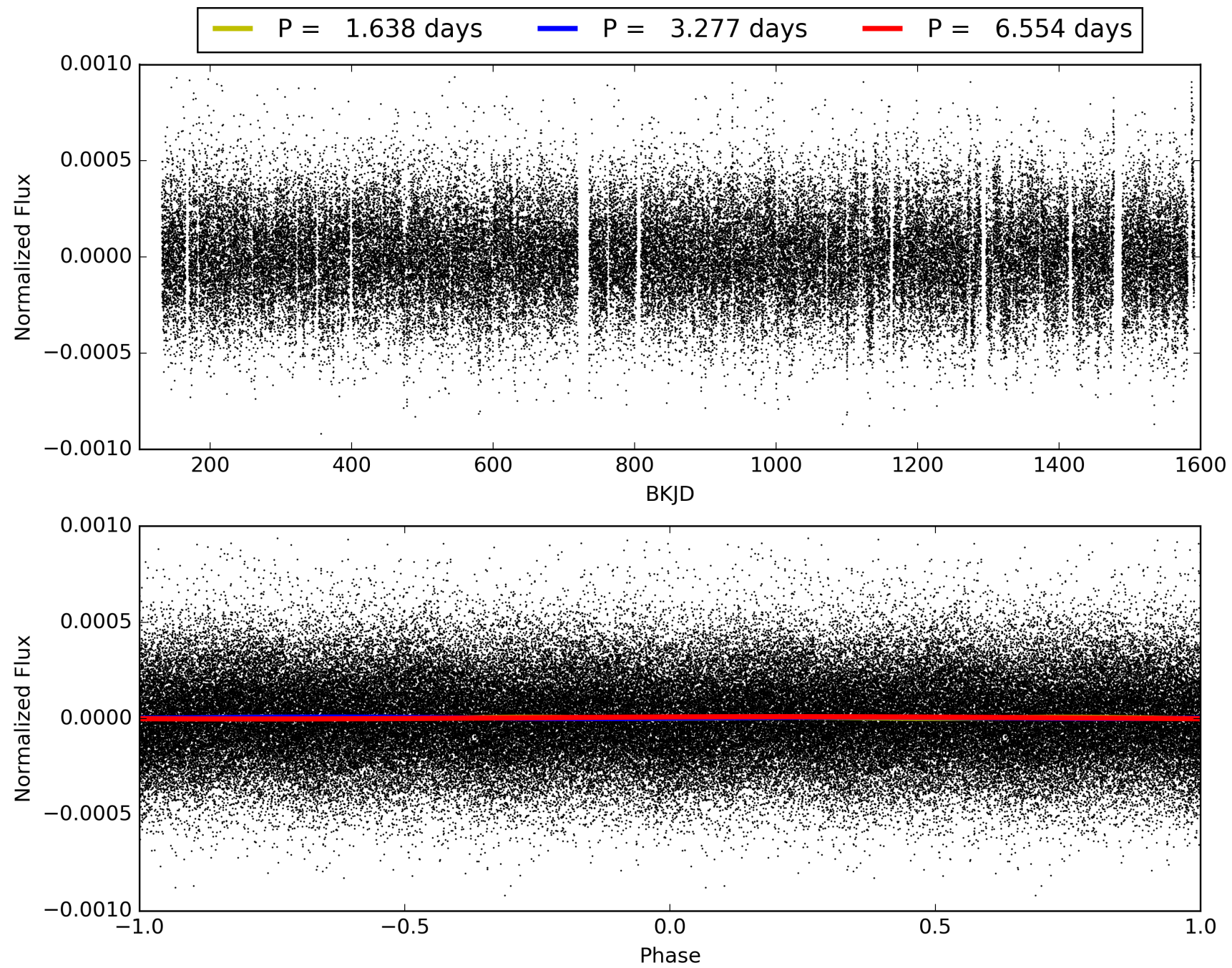
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:47:53 Z

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

TCE 005566448-01, PDC Light Curves

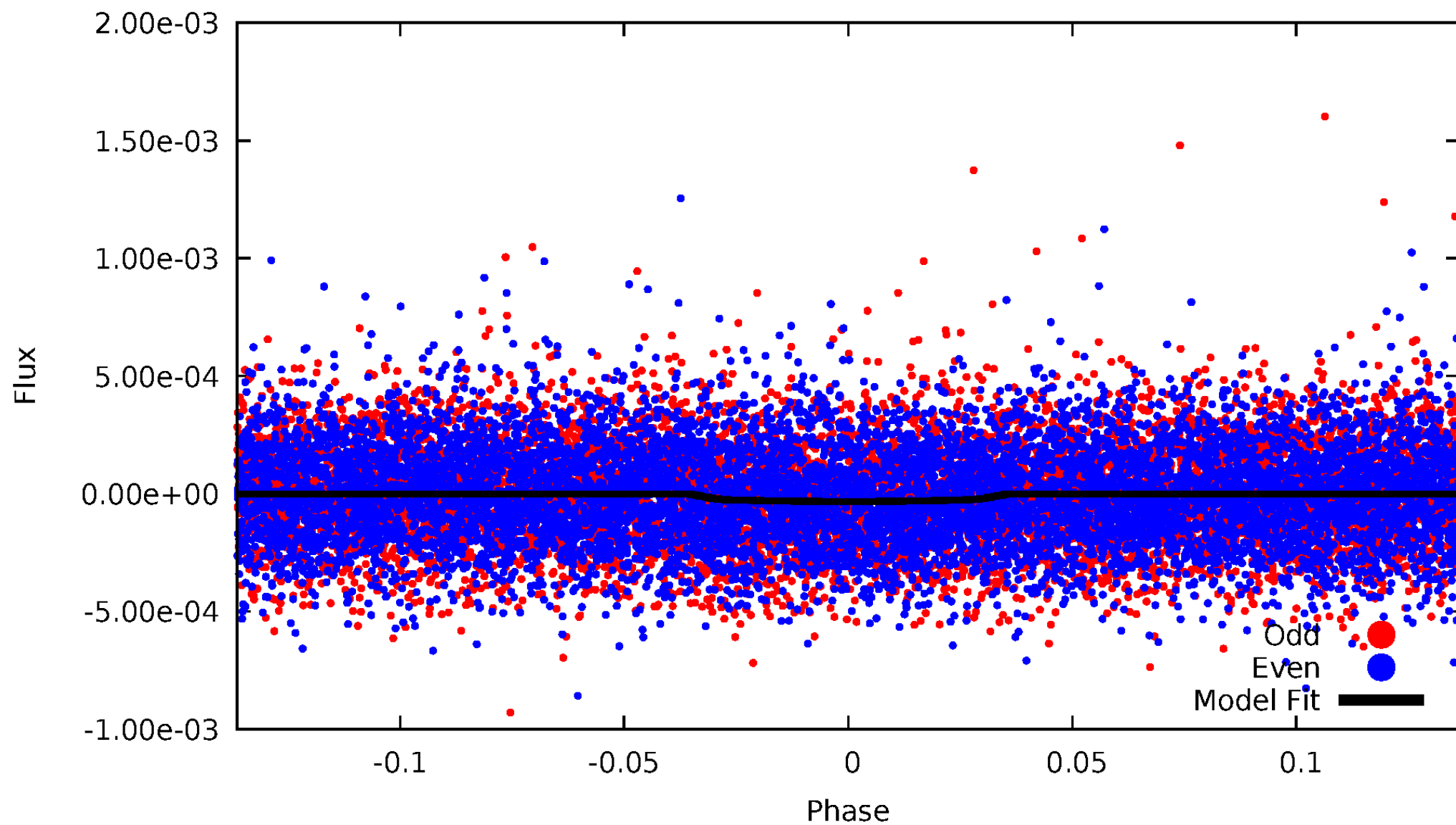


TCE 005566448-01



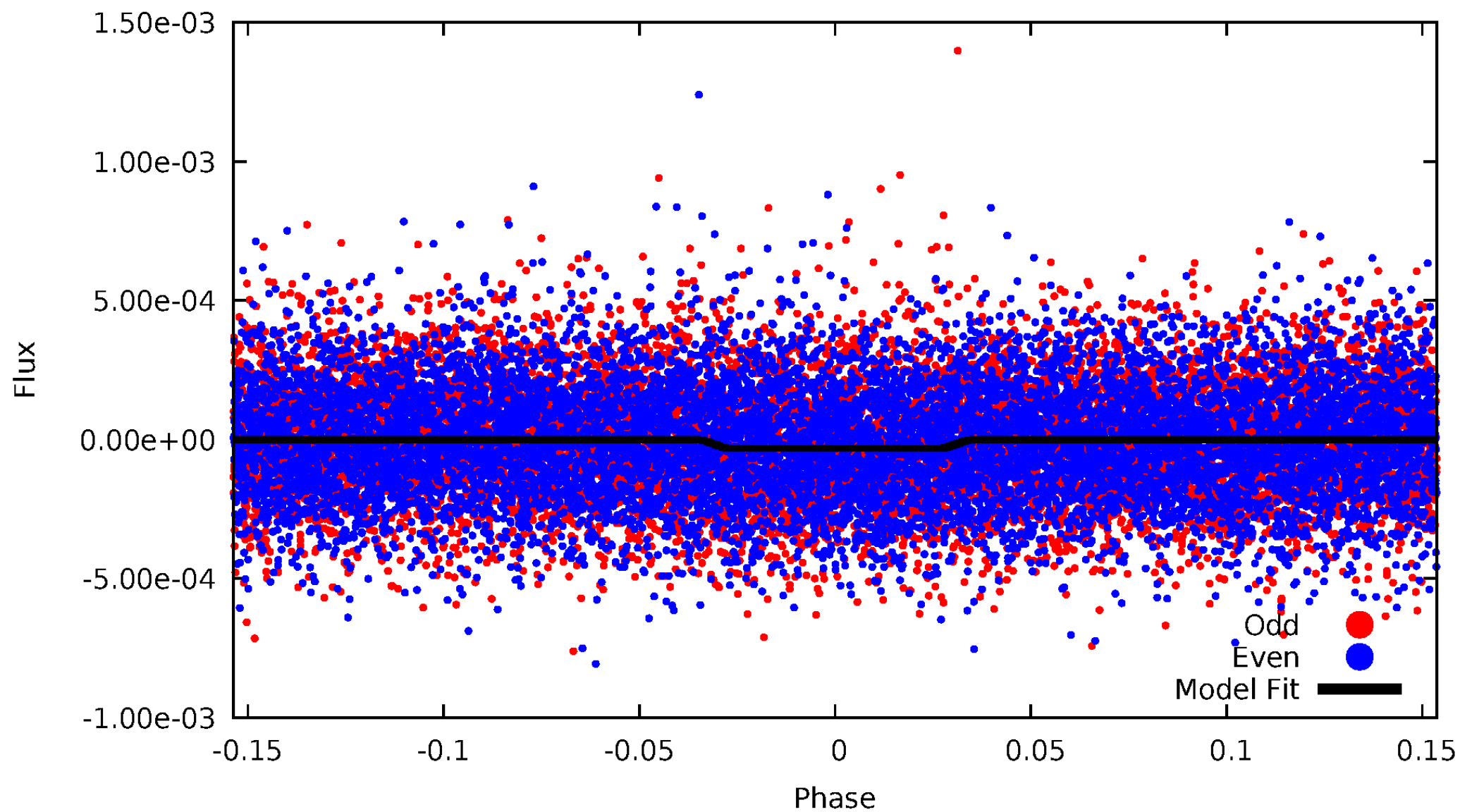
DV Odd/Even

TCE 005566448-01



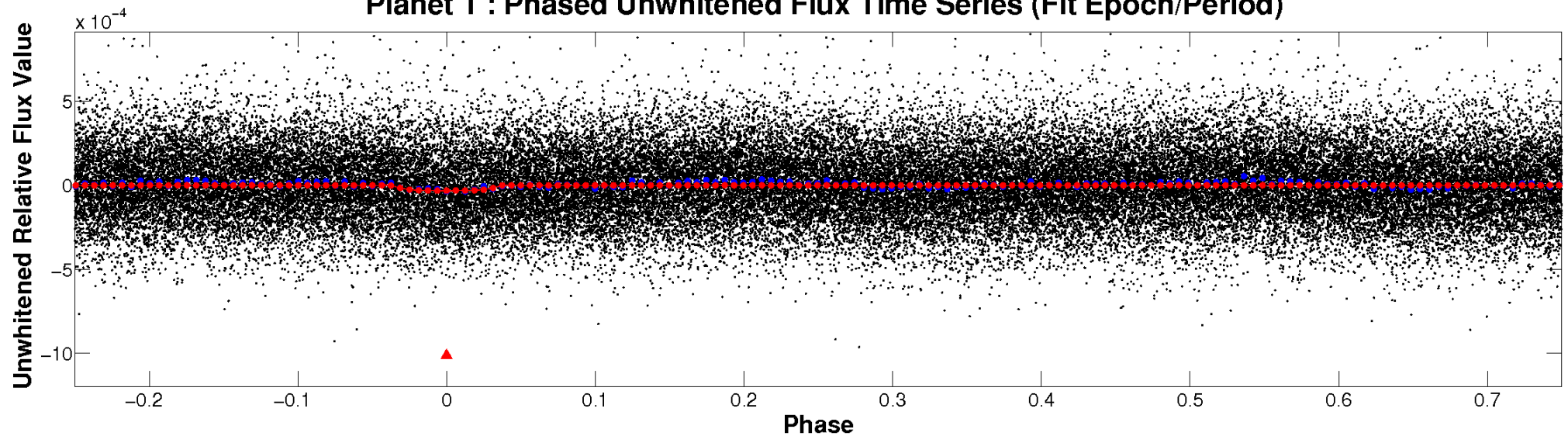
ALT Odd/Even

TCE 005566448-01

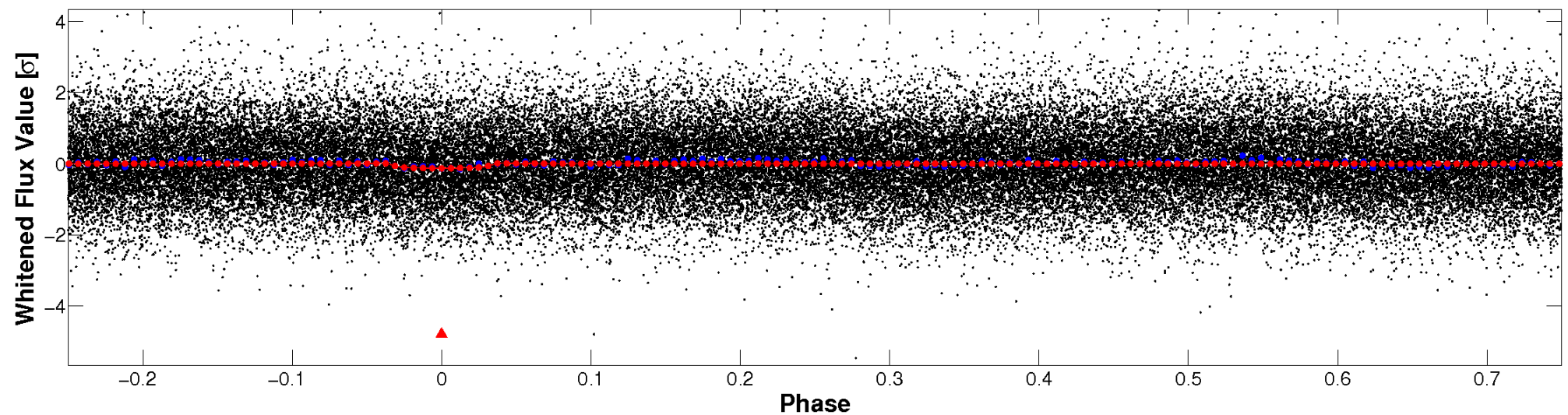


Non-Whitened Vs. Whitened Light Curve

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

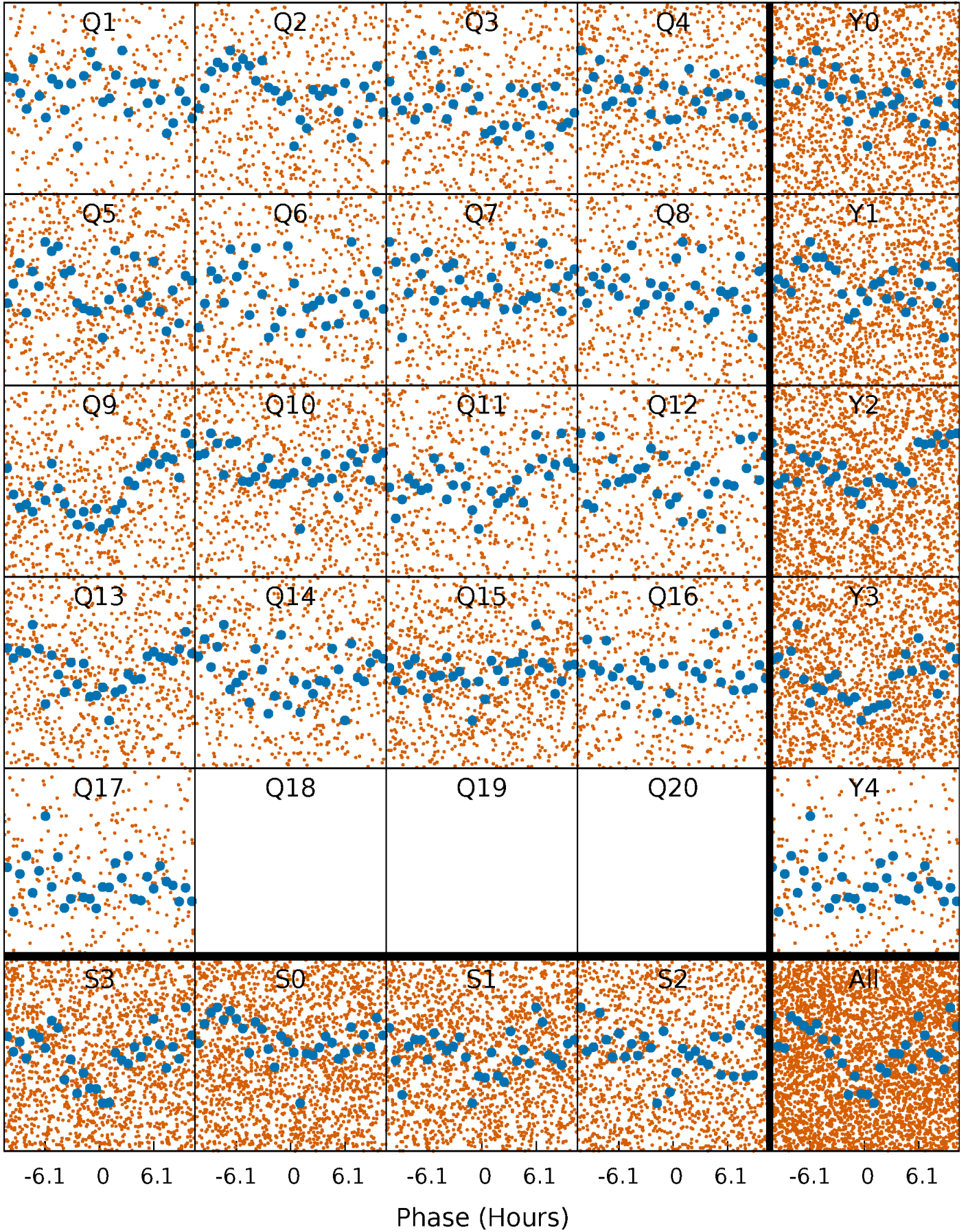


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



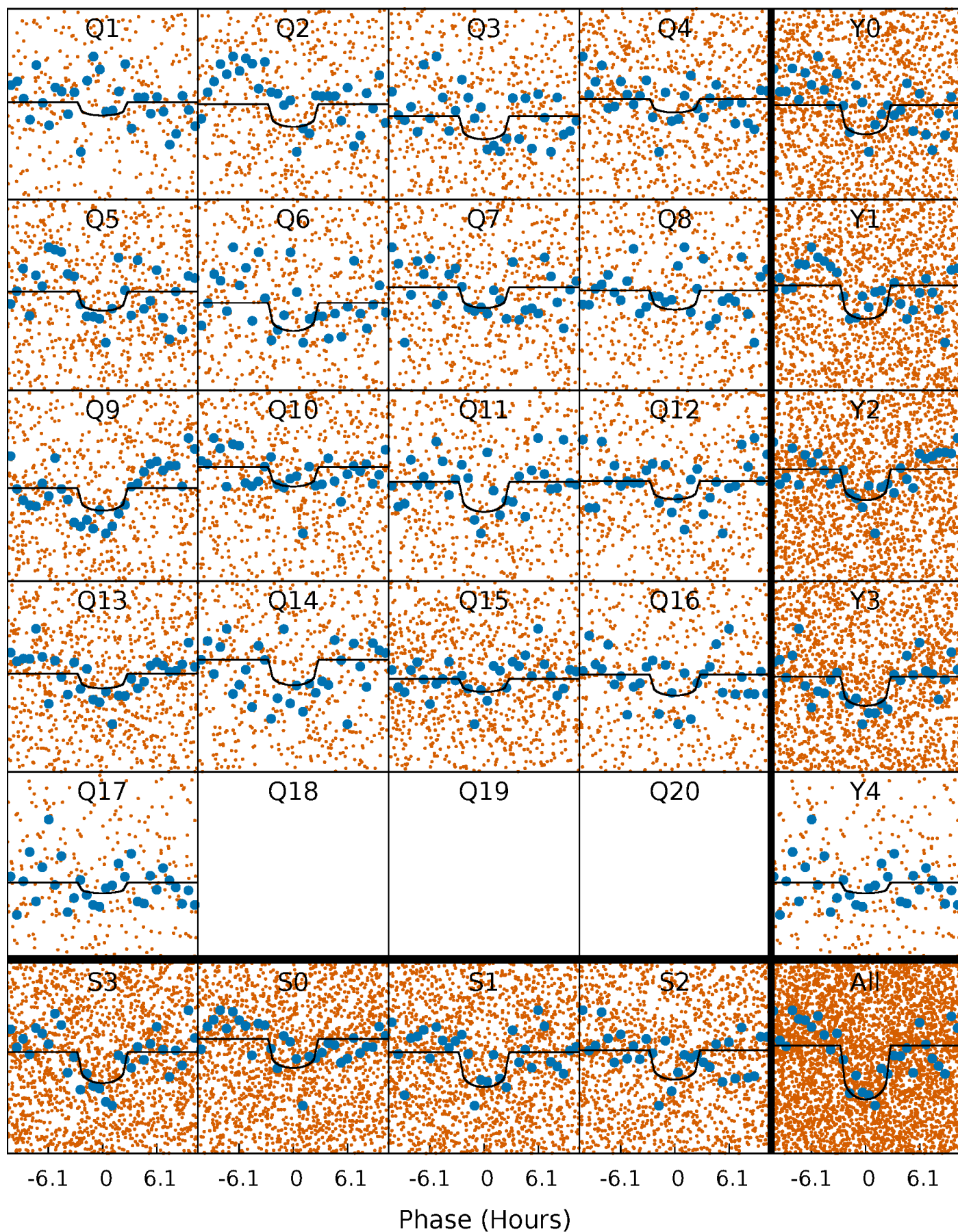
PDC Quarter-Phased Transit Curves

TCE 005566448-01 P= 3.276754 Days $T_0=134.746265$ (BKJD)



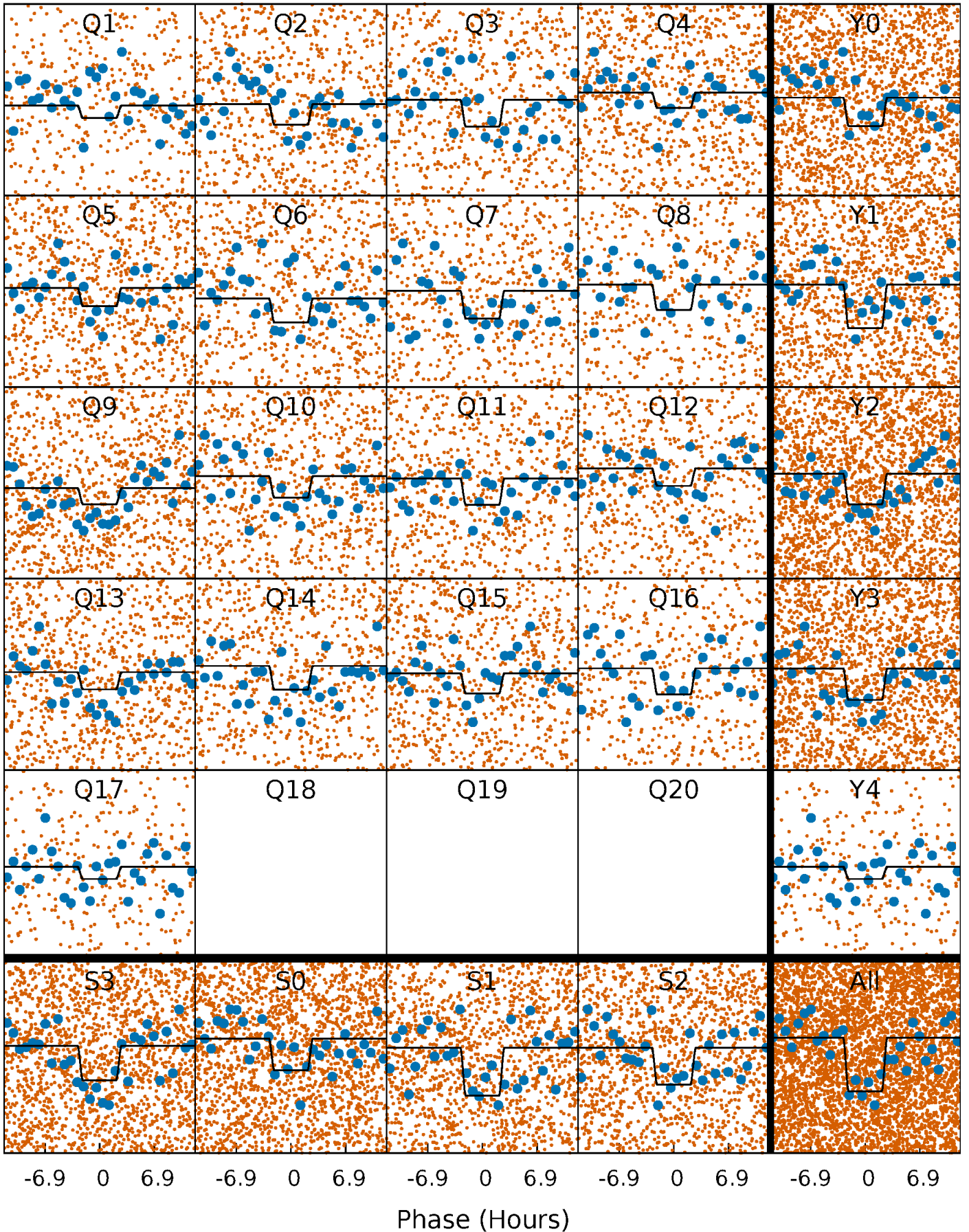
DV Quarter-Phased Transit Curves

TCE 005566448-01 P= 3.276754 Days $T_0=134.746265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

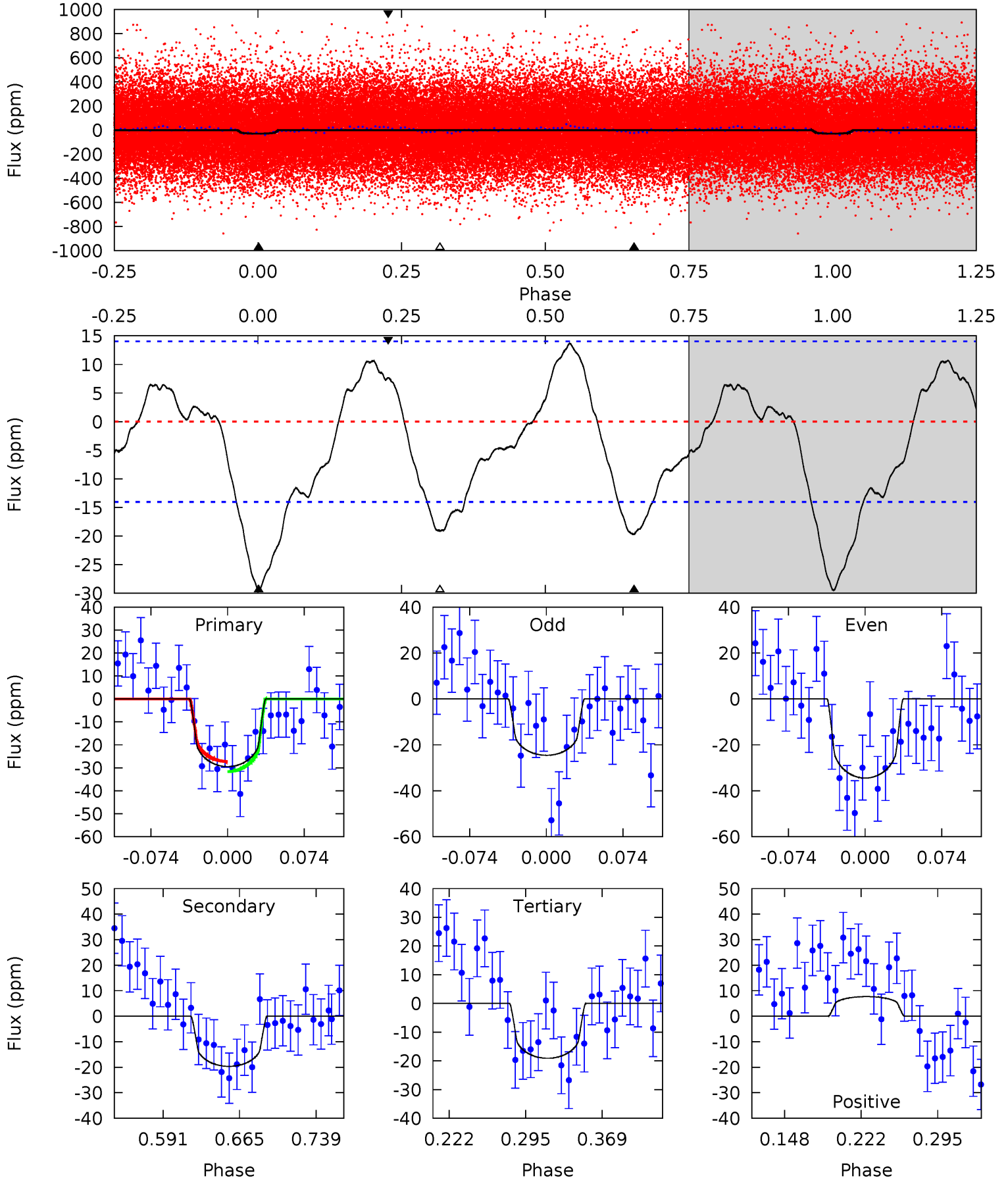
TCE 005566448-01 P= 3.276822 Days $T_0=134.731315$ (BKJD)



DV Model-Shift Uniqueness Test

005566448-01, P = 3.276754 Days, E = 131.469511 Days

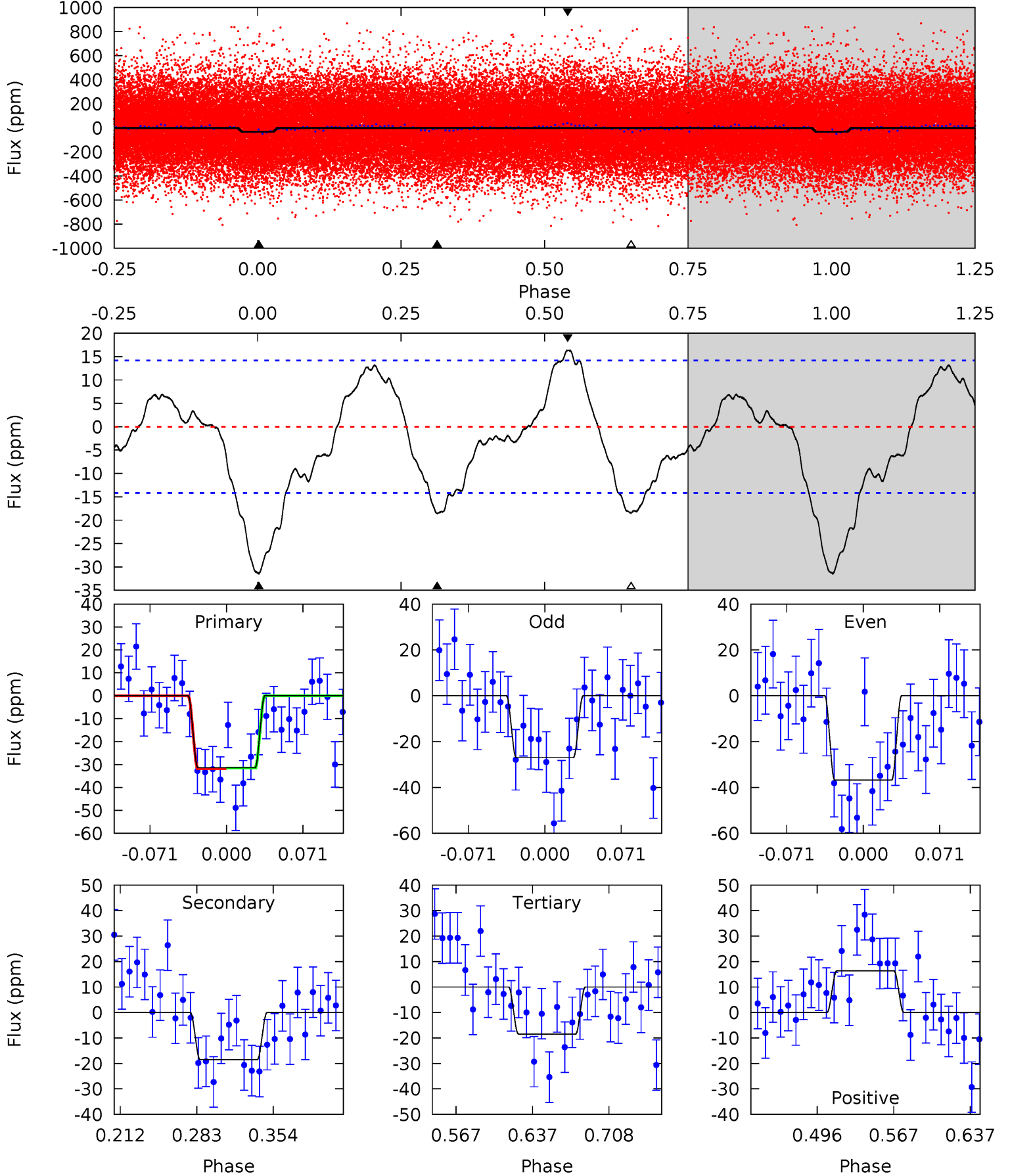
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	6.48	6.30	2.54	4.63	1.79	2.76	3.42	7.18	0.18	3.95	1.64	0.96	0.32	0.73



Alt Model-Shift Uniqueness Test

005566448-01, P = 3.276822 Days, E = 131.454493 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.07	6.04	5.35	4.64	1.81	2.77	4.24	4.92	0.03	0.72	1.60	0.86	0.34	0.05



Stellar Parameters For KIC 005566448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5038^{+151}_{-136}	$3.861^{+0.763}_{-0.327}$	$-0.080^{+0.300}_{-0.250}$	$1.846^{+1.165}_{-1.165}$	$0.902^{+0.247}_{-0.152}$	$0.202^{+2.437}_{-0.155}$
	+3%/-3%	+20%/-8%	+375%/-312%	+63%/-63%	+27%/-17%	+1206%/-77%
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 005566448-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 3	$1.18^{+0.97}_{-0.69}$	2032^{+337}_{-371}	4330^{+1798}_{-703}	13^{+68}_{-9}
Alt.	-19 ± 3	$1.14^{+0.90}_{-0.66}$	2046^{+297}_{-362}	4381^{+1592}_{-698}	14^{+65}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

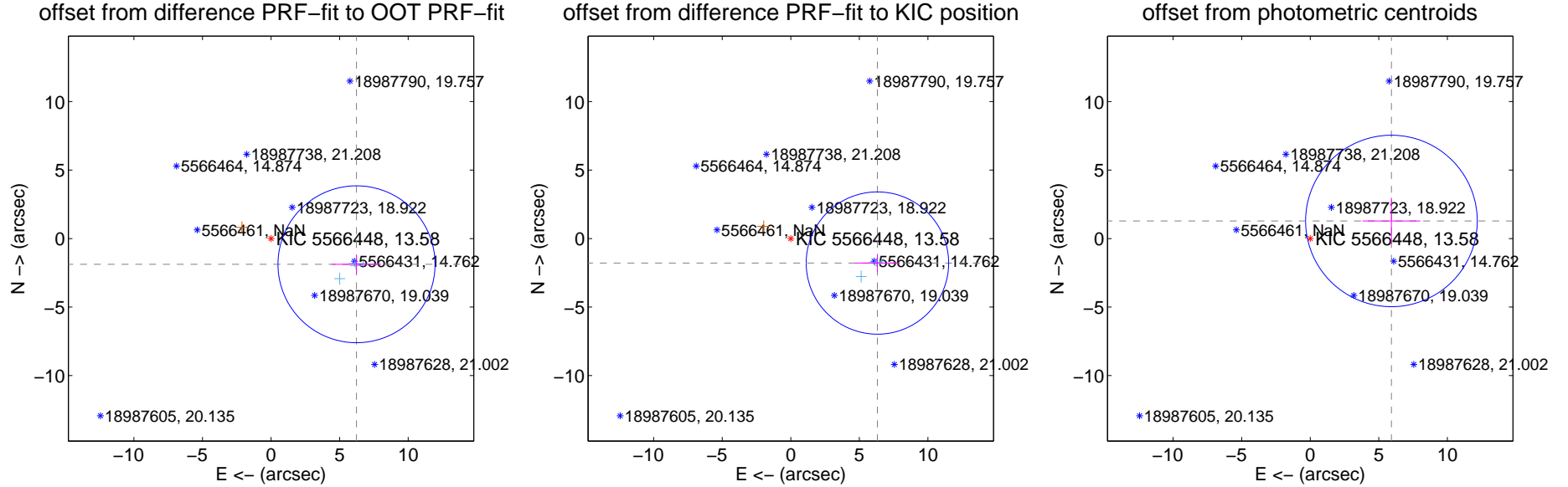
DV Centroid Data

Supplemental centroid analysis for 005566448-01. Kepler magnitude: 13.58. Transit SNR 7.24

There are 4 quarters with good PRF difference image offsets

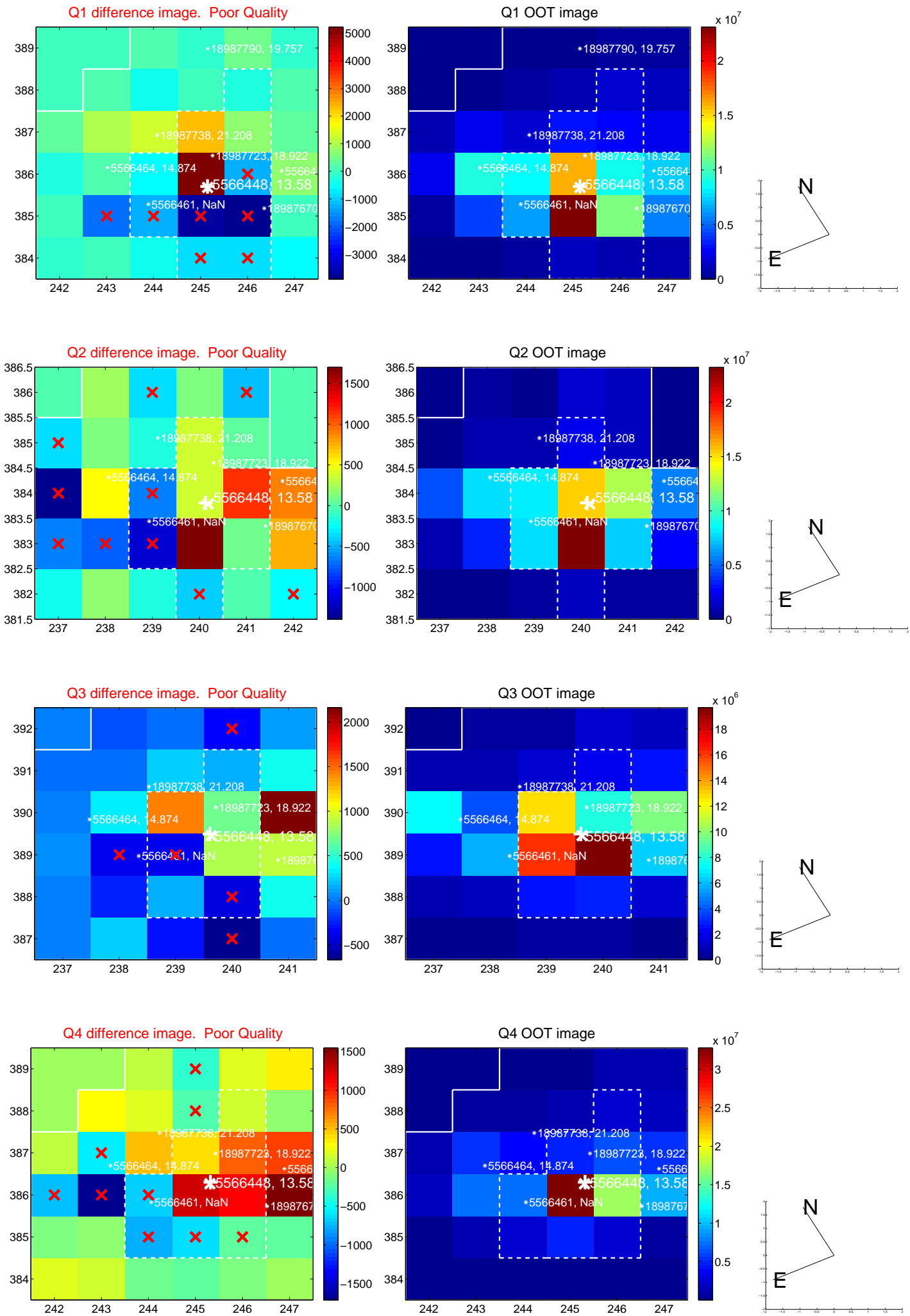
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.509 ± 1.909	3.41	-6.233 ± 1.795	-1.877 ± 0.704
PRF-fit source offset from KIC position	6.565 ± 1.731	3.79	-6.317 ± 1.630	-1.787 ± 0.660
photometric centroid source offset	6.06 ± 2.09	2.90	-5.92 ± 2.10	1.29 ± 1.69

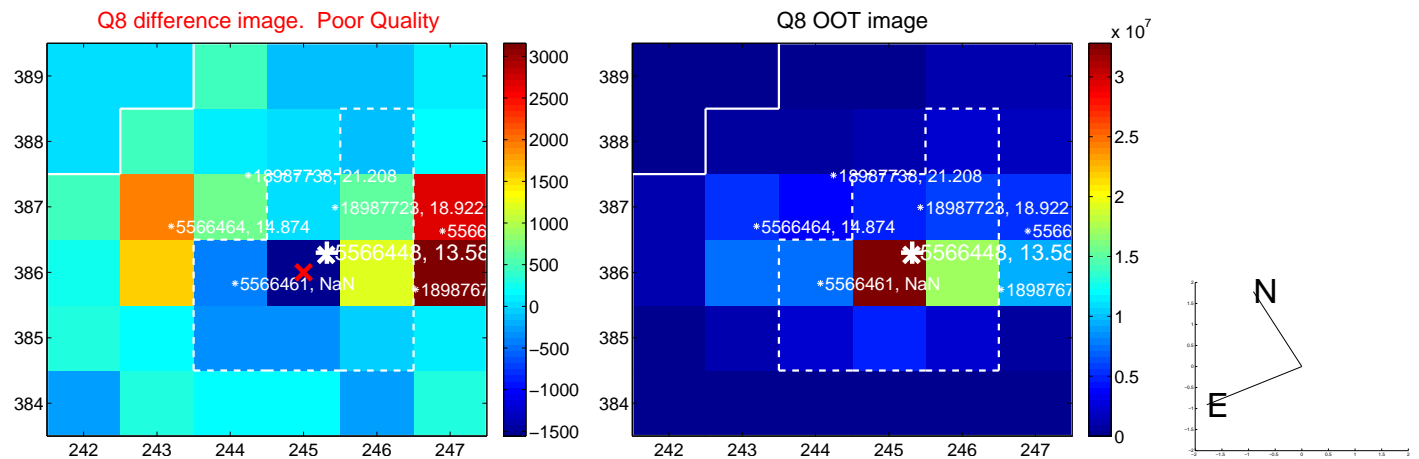
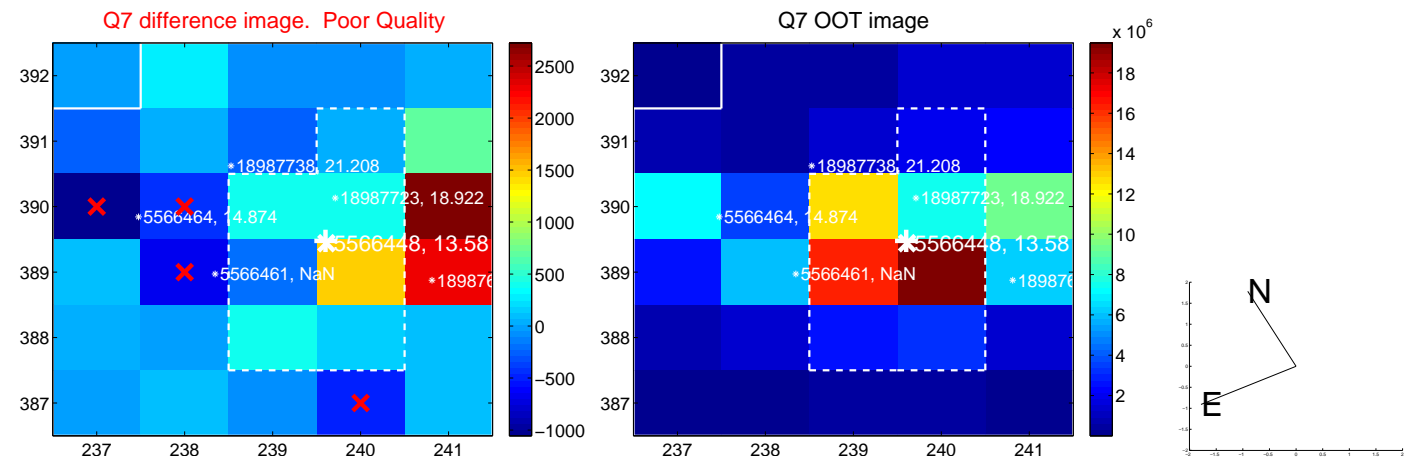
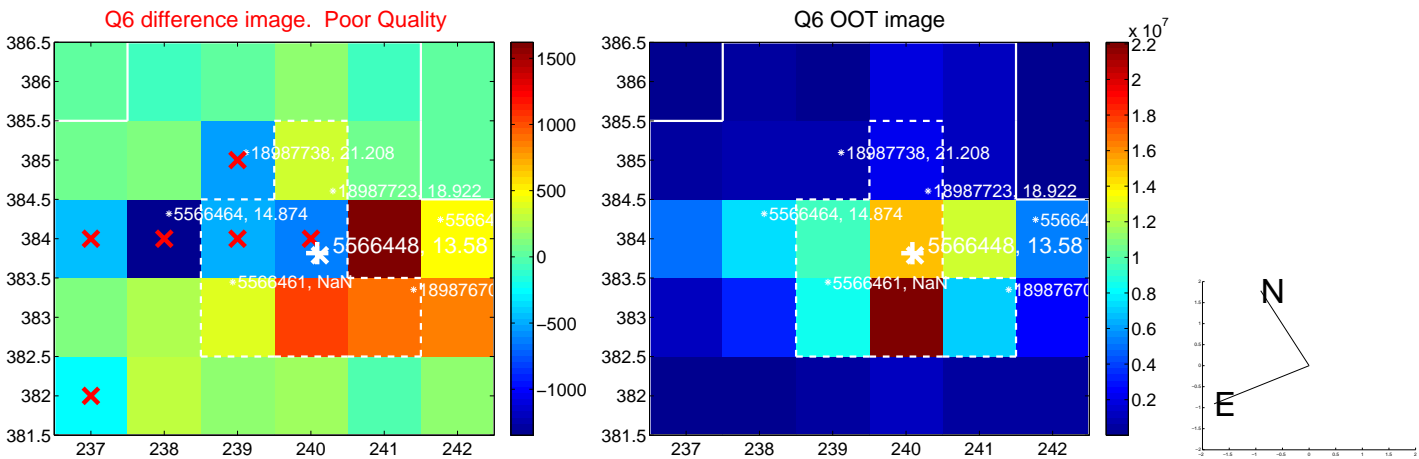
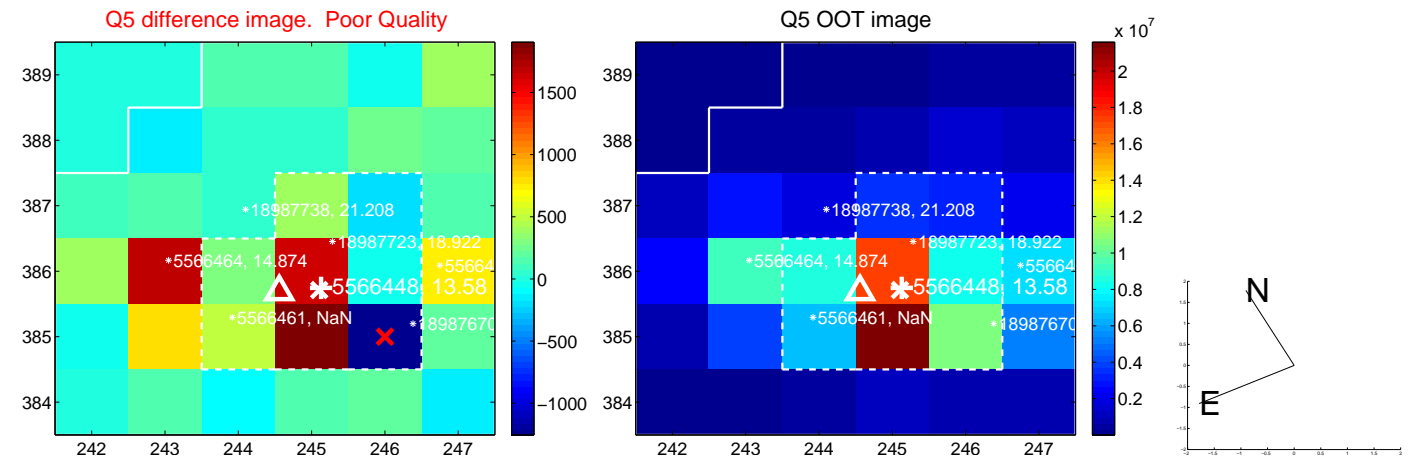


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

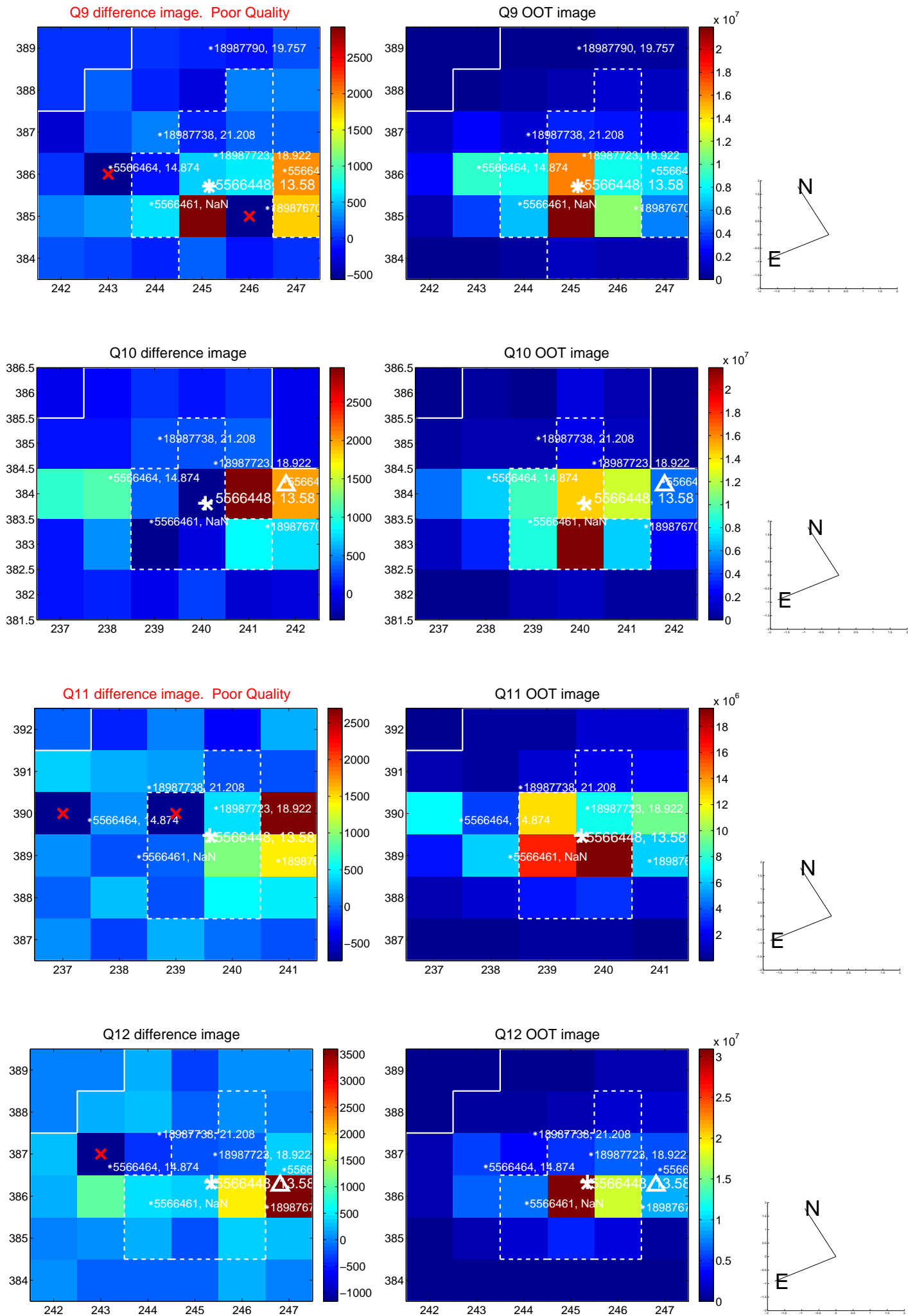
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



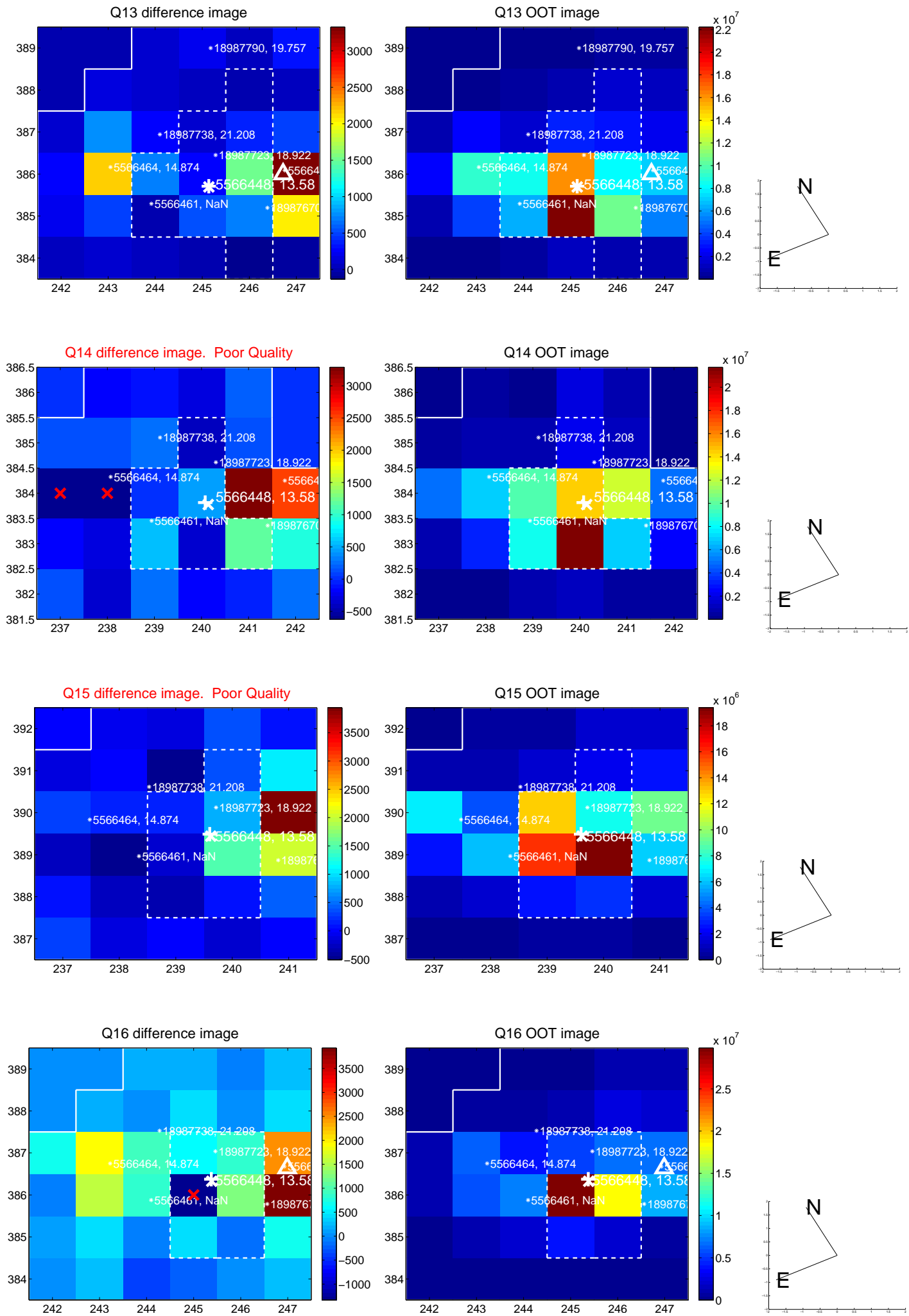
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



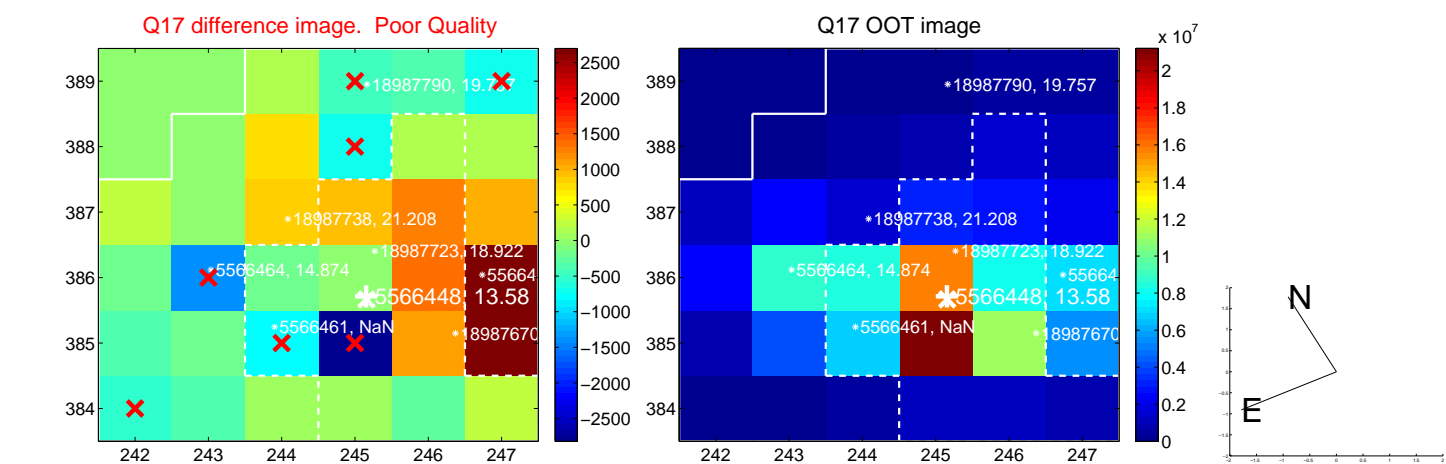
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



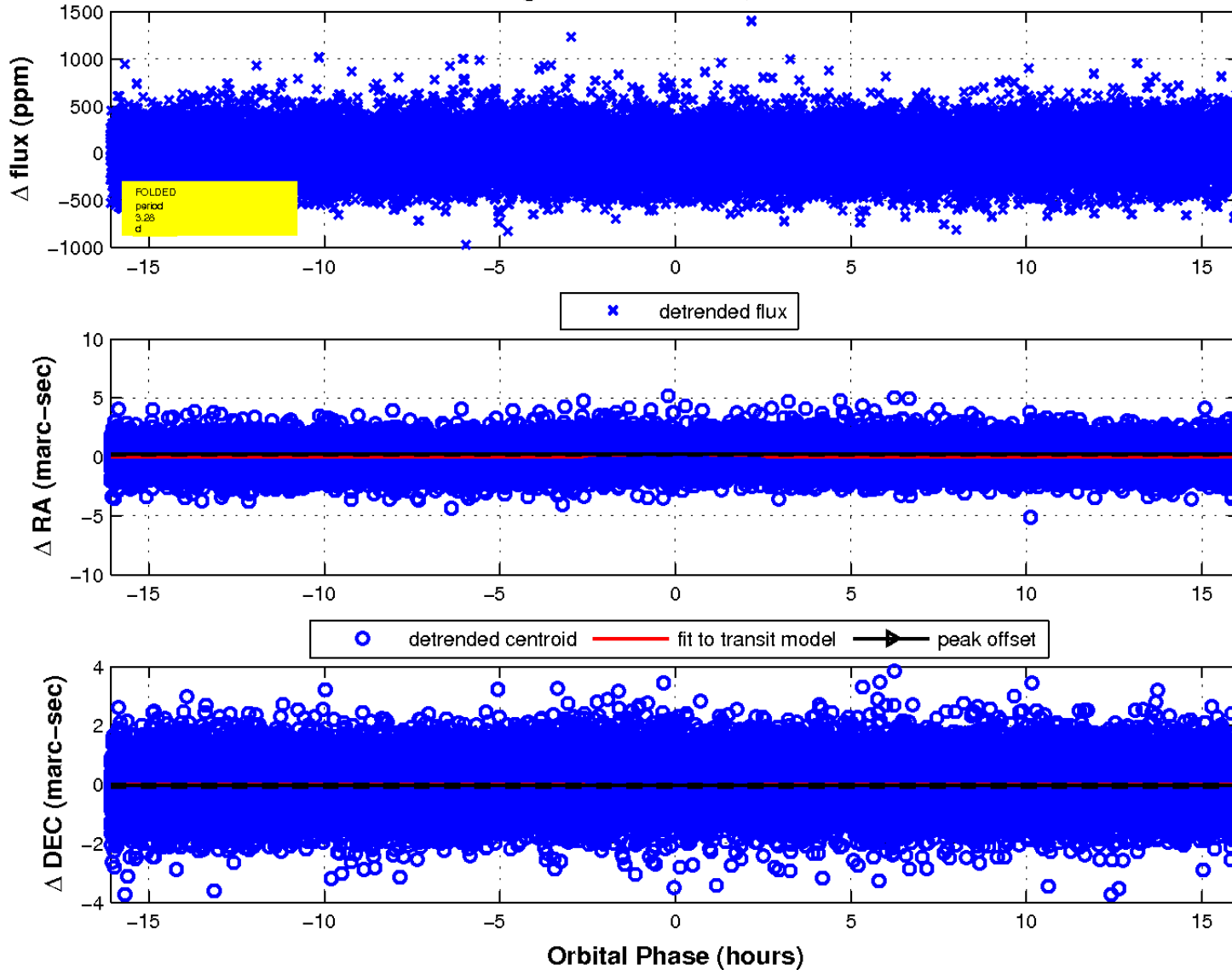
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

