

KIC 007744634

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})
007744634-01	OBS	No	3.050363	133.075588	43.0	24.815	8.2	10.9	1.15	6414	0.76	1076.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007744634-01	OBS	FP	0.00	1	0	1	0	LPP_DV—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.

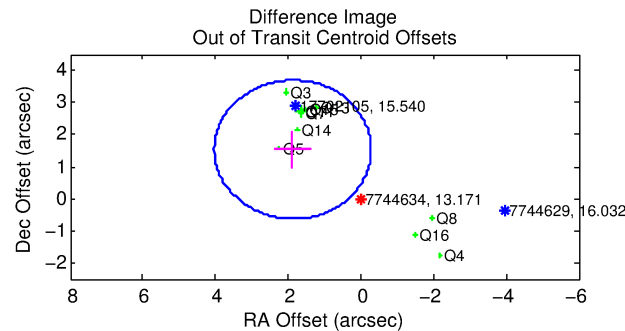
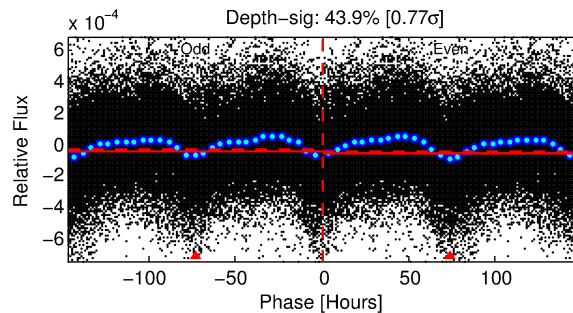
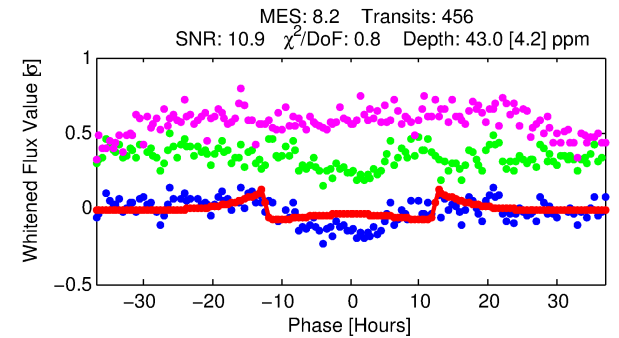
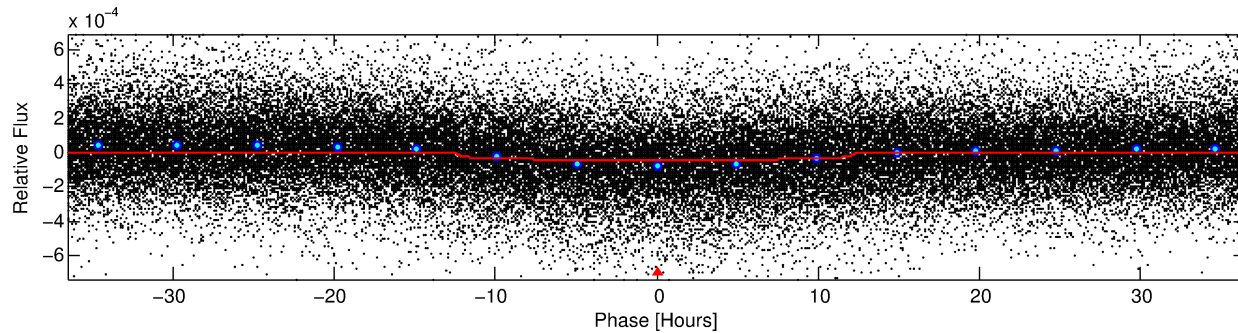
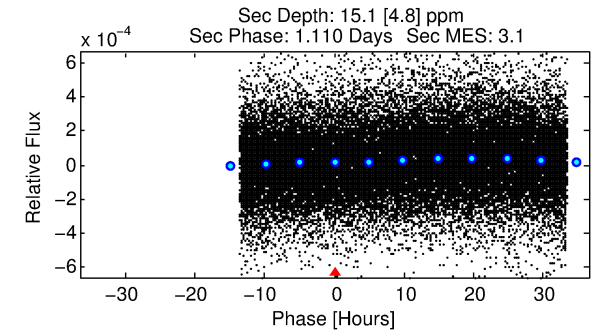
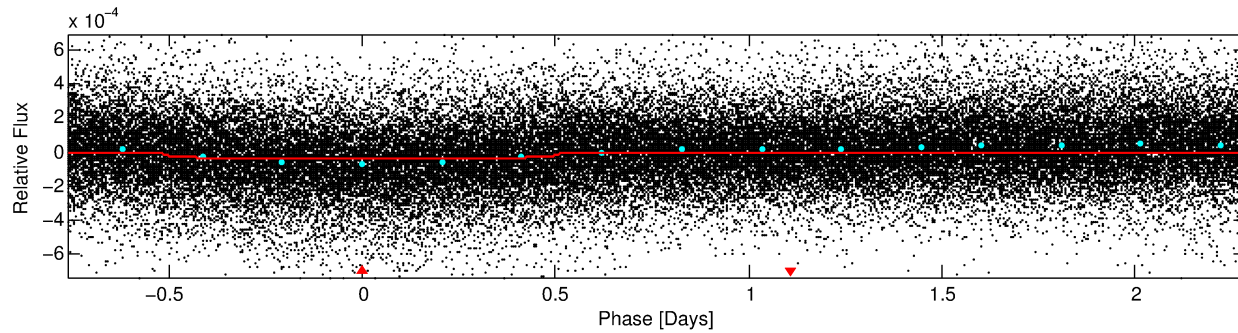
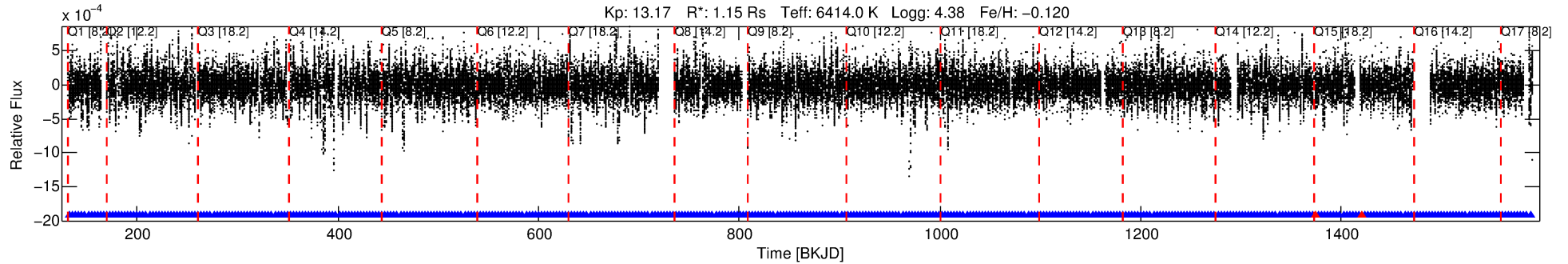
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007744634-01

No Significant Match Found

DV One-Page Summary

KIC: 7744634 Candidate: 1 of 1 Period: 3.050 d



DV Fit Results:

Period = 3.05036 [0.00003] d
Epoch = 133.0756 [0.0052] BKJD
Rp/R* = 0.0061 [0.0018]
a/R* = 1.13 [0.40]
b = 0.35 [4.07]
Seff = 1076.42 [446.88]
Teq = 1461 [152] K
Rp = 0.76 [0.34] Re
a = 0.0431 [0.0120] AU
Ag = 26.49 [20.66] [1.23σ]
Teffp = 5123 [879] K [4.11σ]

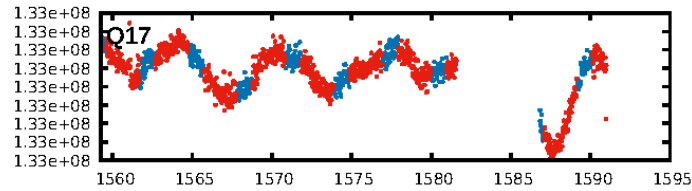
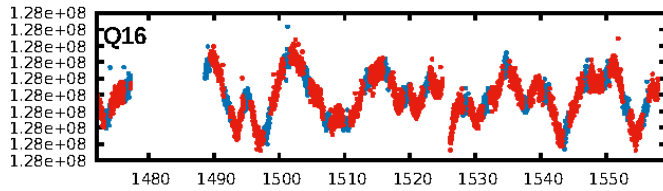
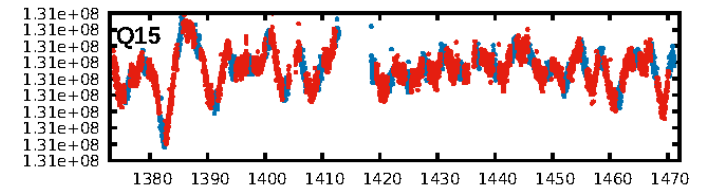
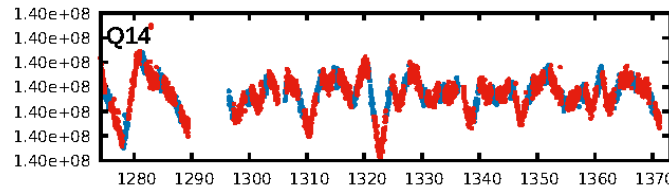
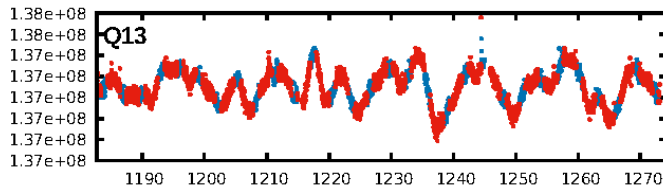
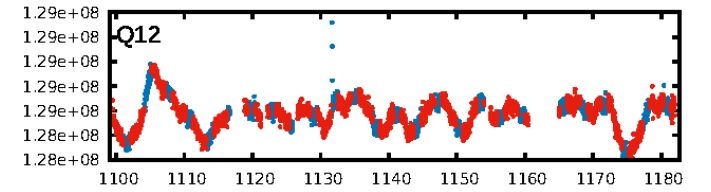
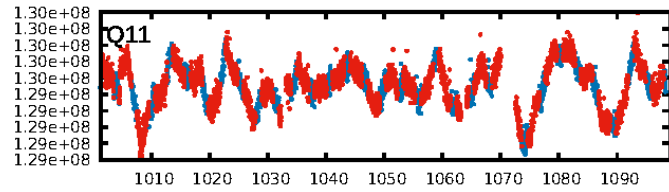
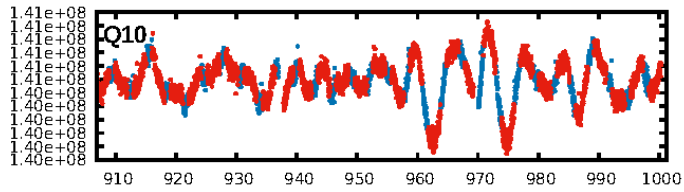
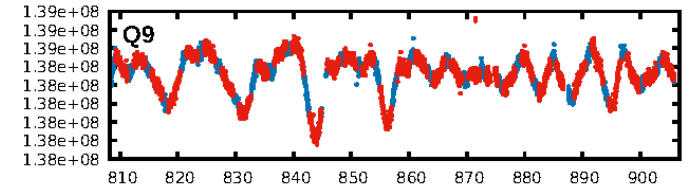
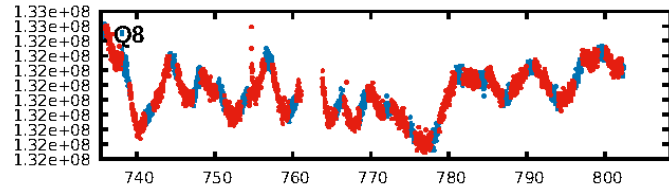
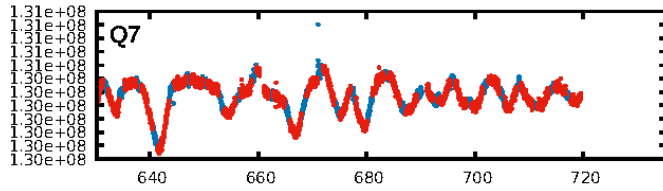
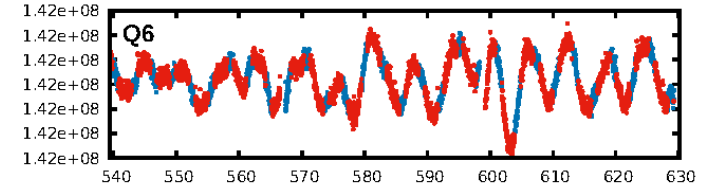
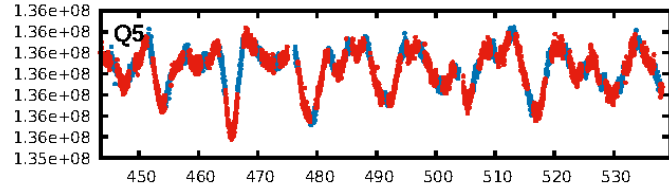
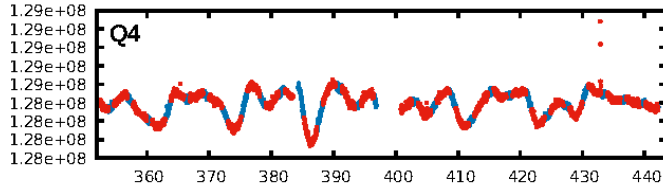
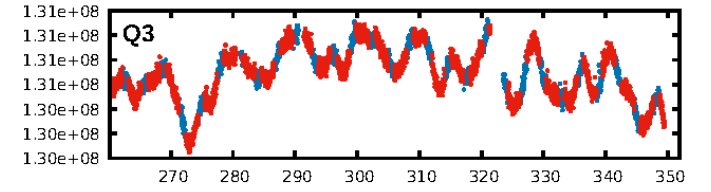
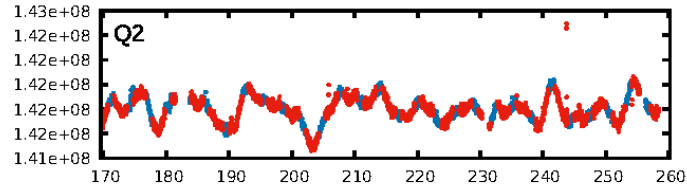
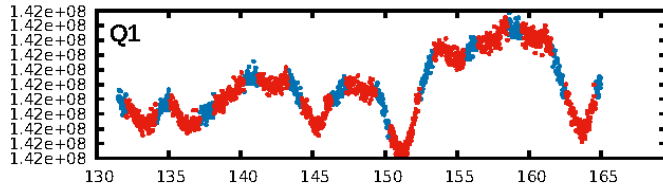
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [433/435]
GhostDiagnostic-chr: 0.3714
Centroid-sig: 0.0%
Centroid-so: 3.588 arcsec [9.25σ]
OotOffset-rm: 2.426 arcsec [3.37σ]
KicOffset-rm: 2.165 arcsec [3.28σ]
OotOffset-st: 1/4/3/2 [10]
KicOffset-st: 1/4/3/2 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [17/17]

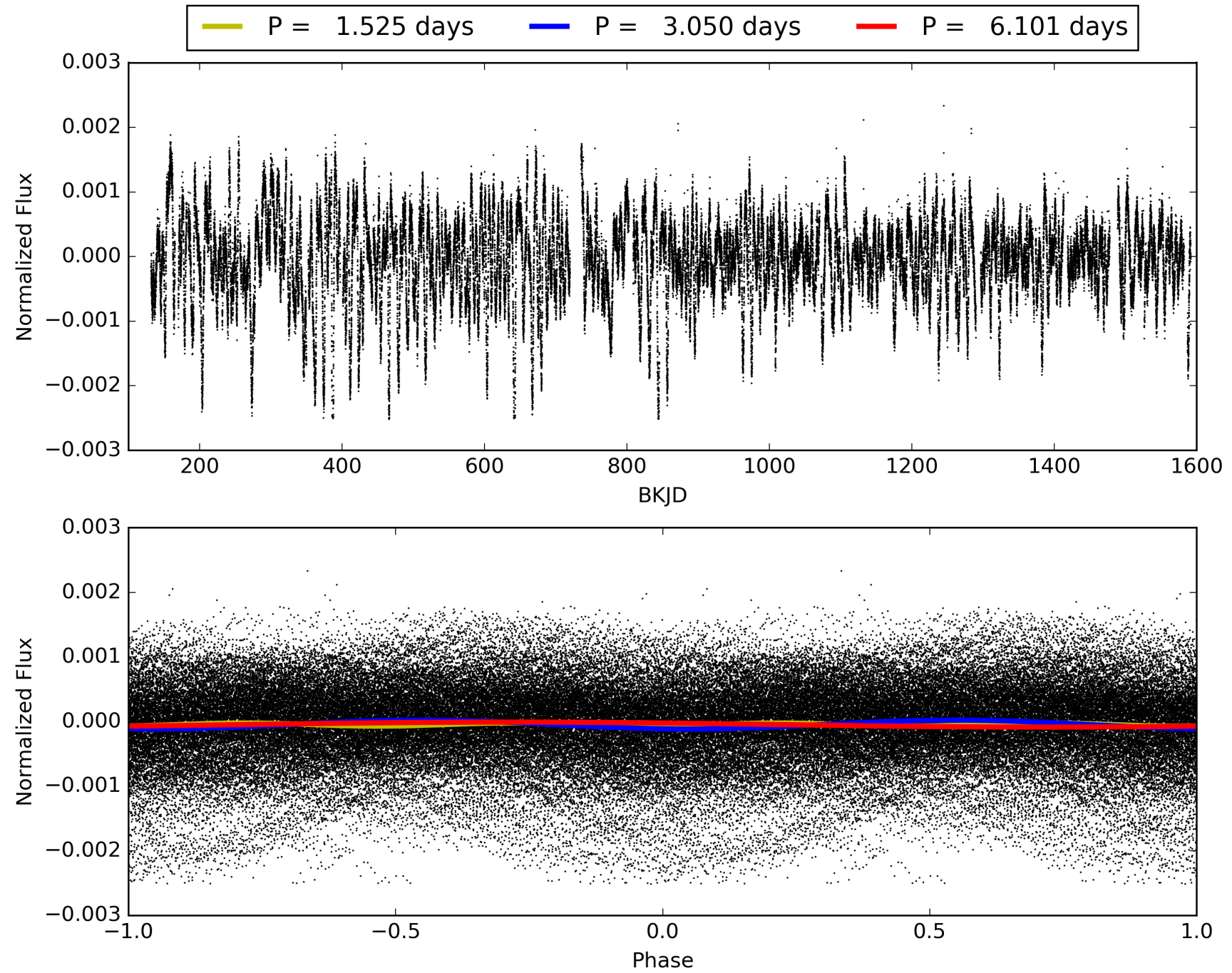
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:29:28 Z

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

TCE 007744634-01, PDC Light Curves

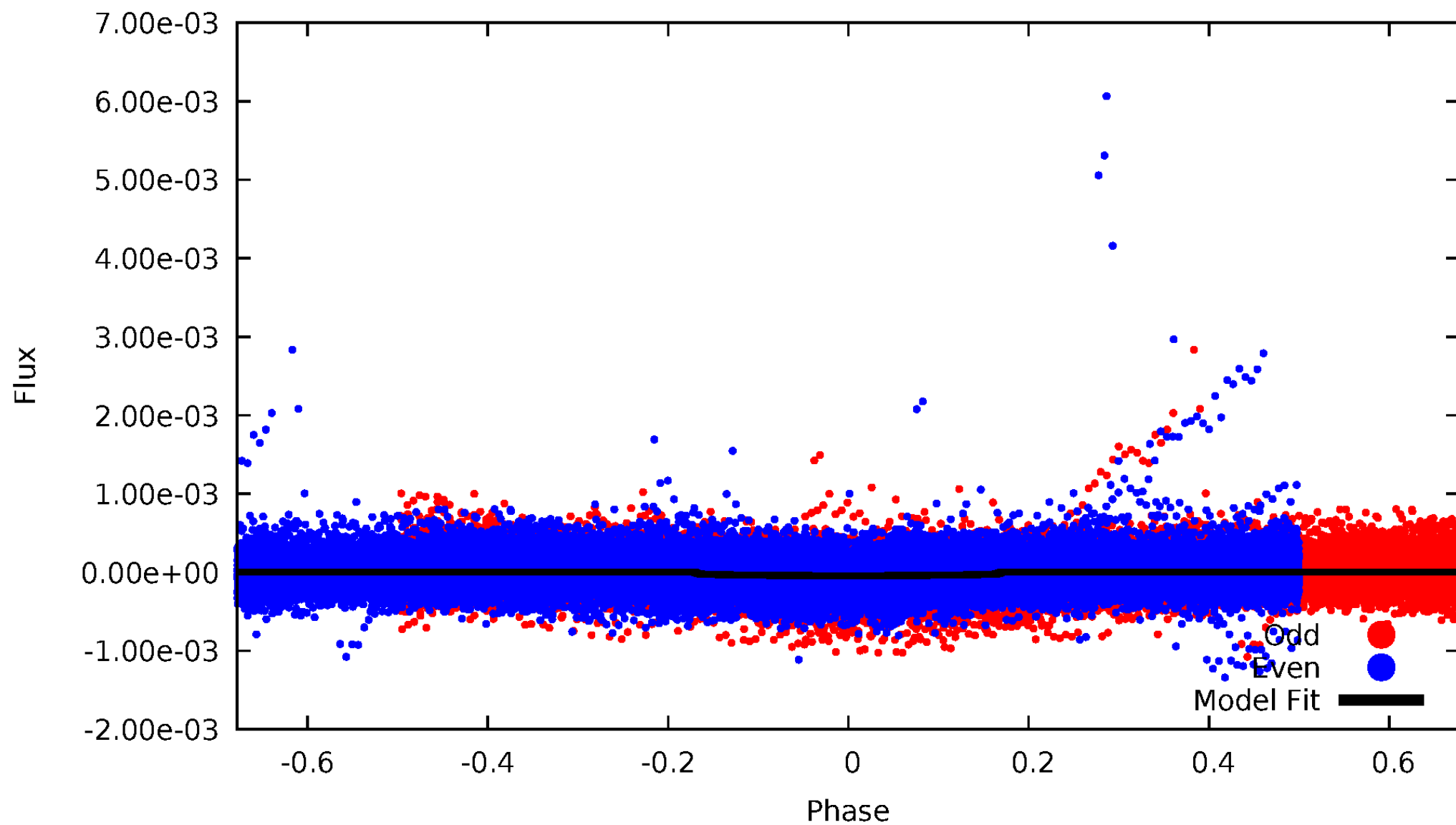


TCE 007744634-01



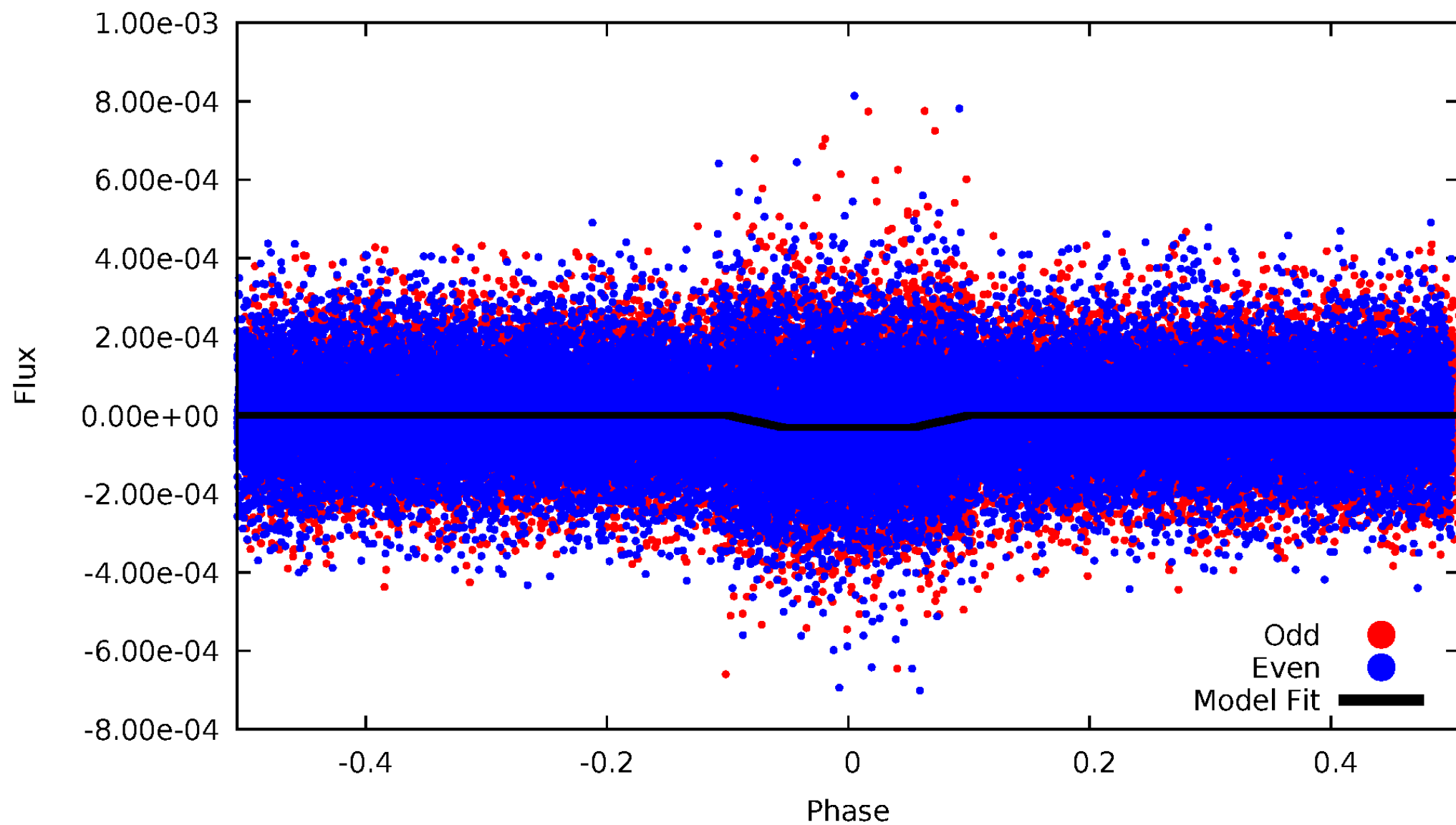
DV Odd/Even

TCE 007744634-01

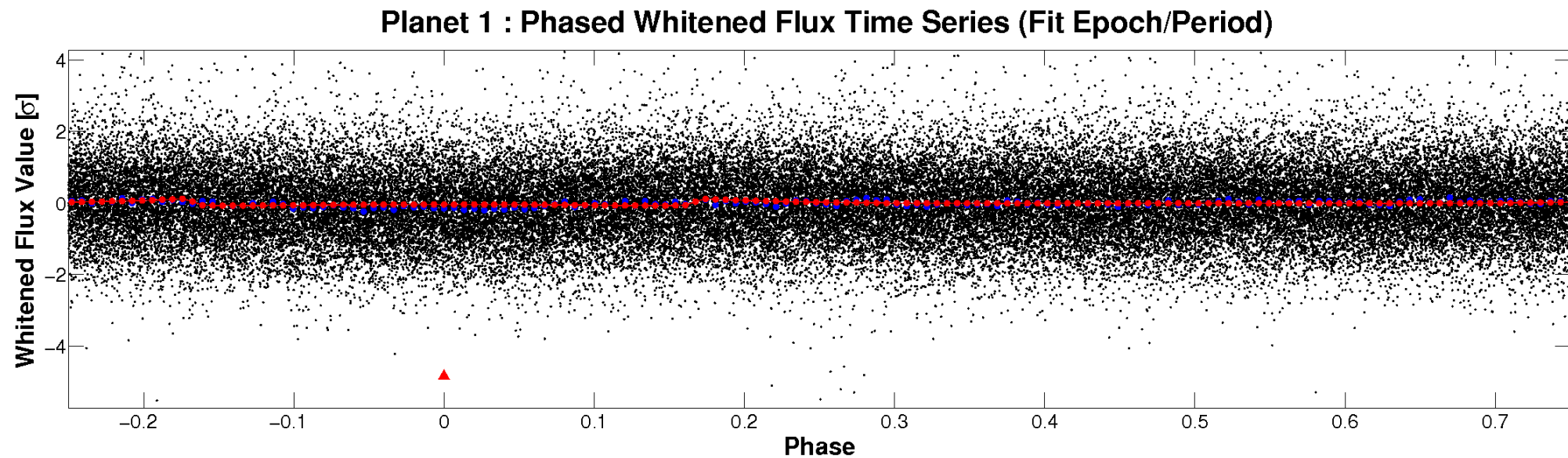
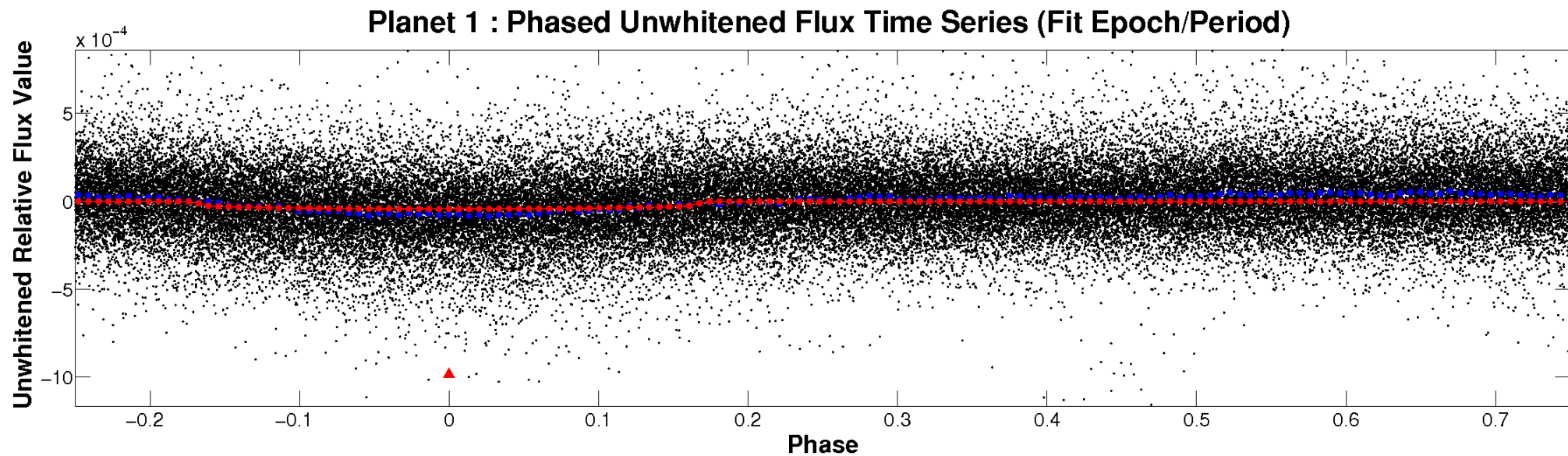


ALT Odd/Even

TCE 007744634-01

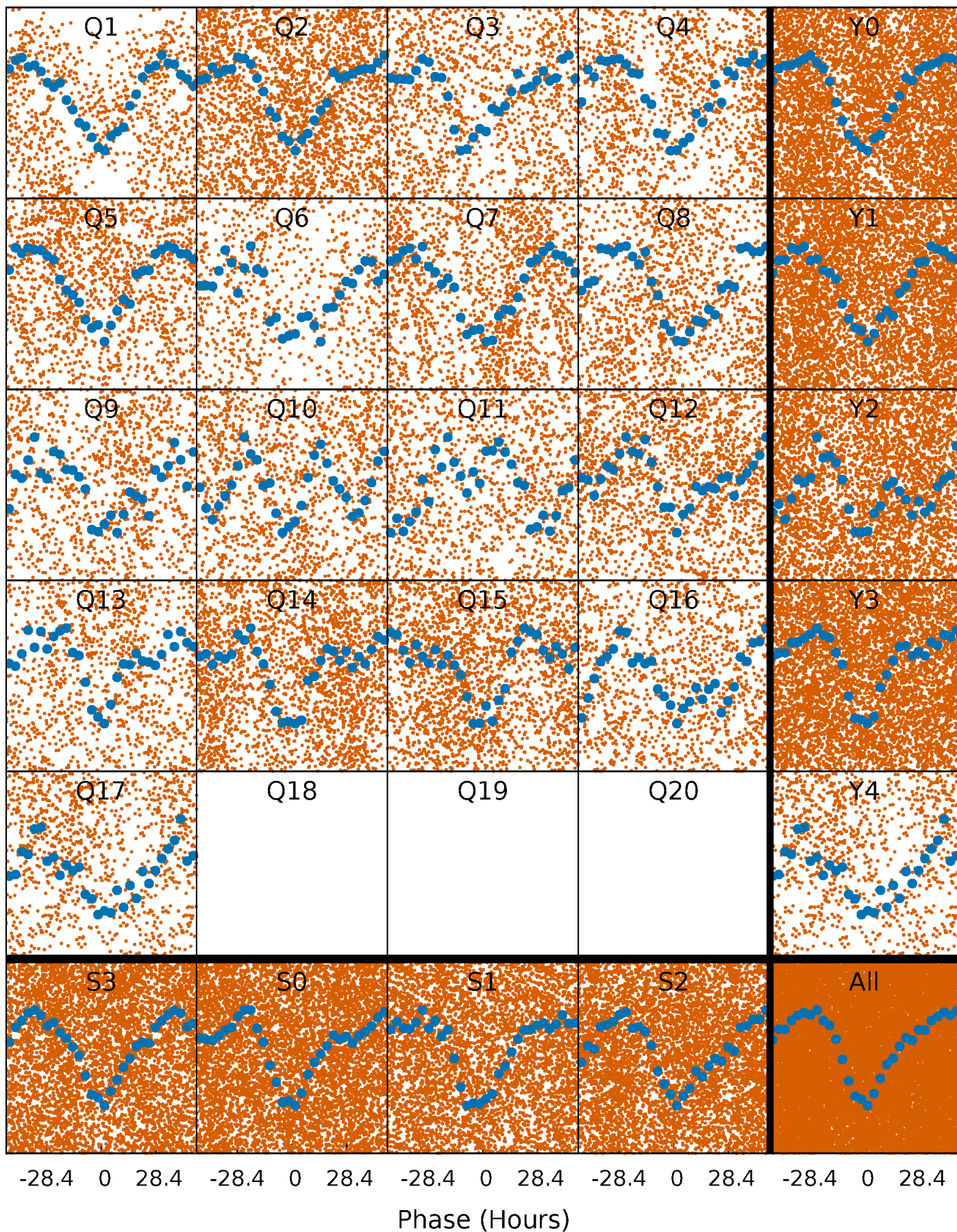


Non-Whitened Vs. Whitened Light Curve



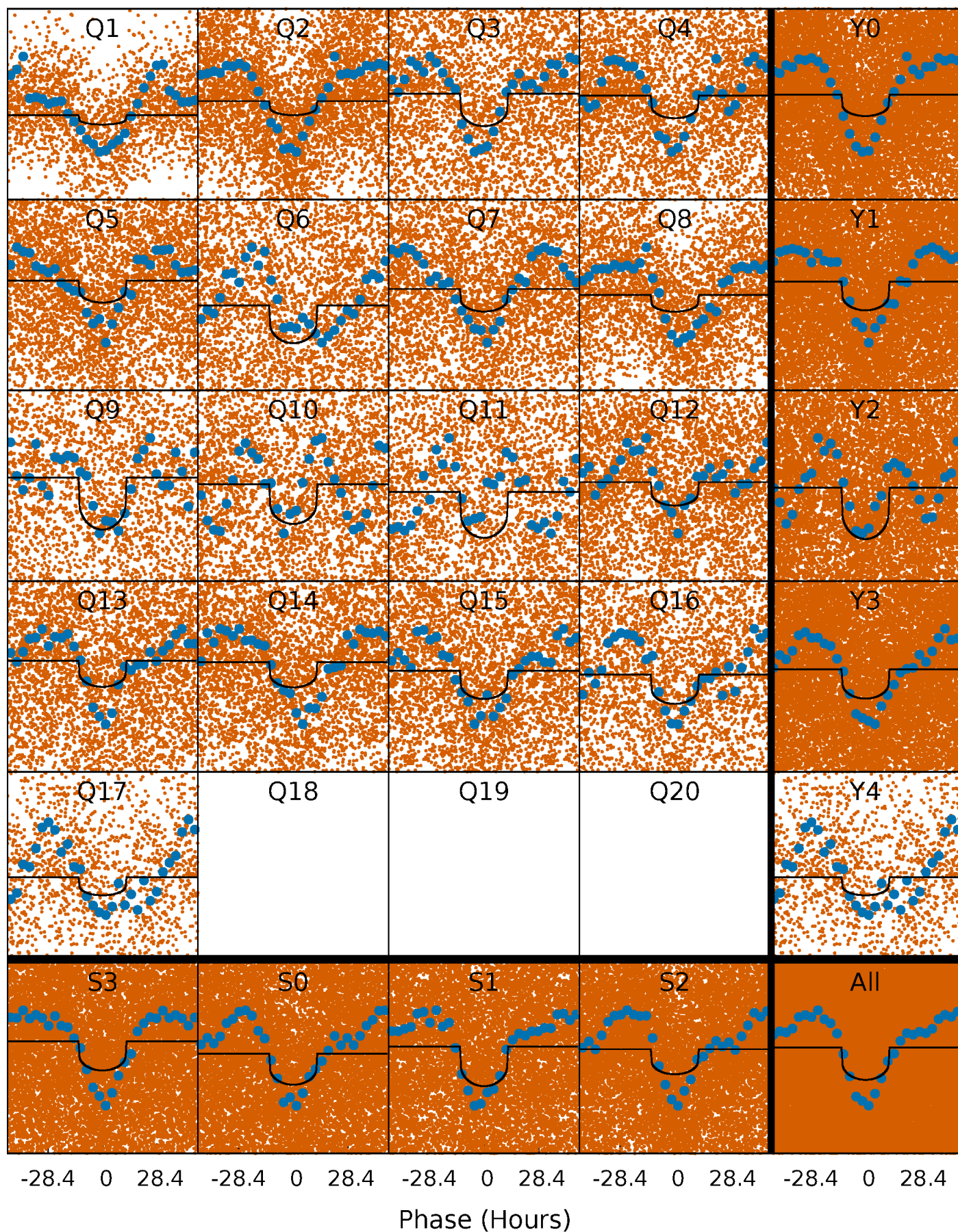
PDC Quarter-Phased Transit Curves

TCE 007744634-01 P= 3.050363 Days $T_0=133.075588$ (BKJD)



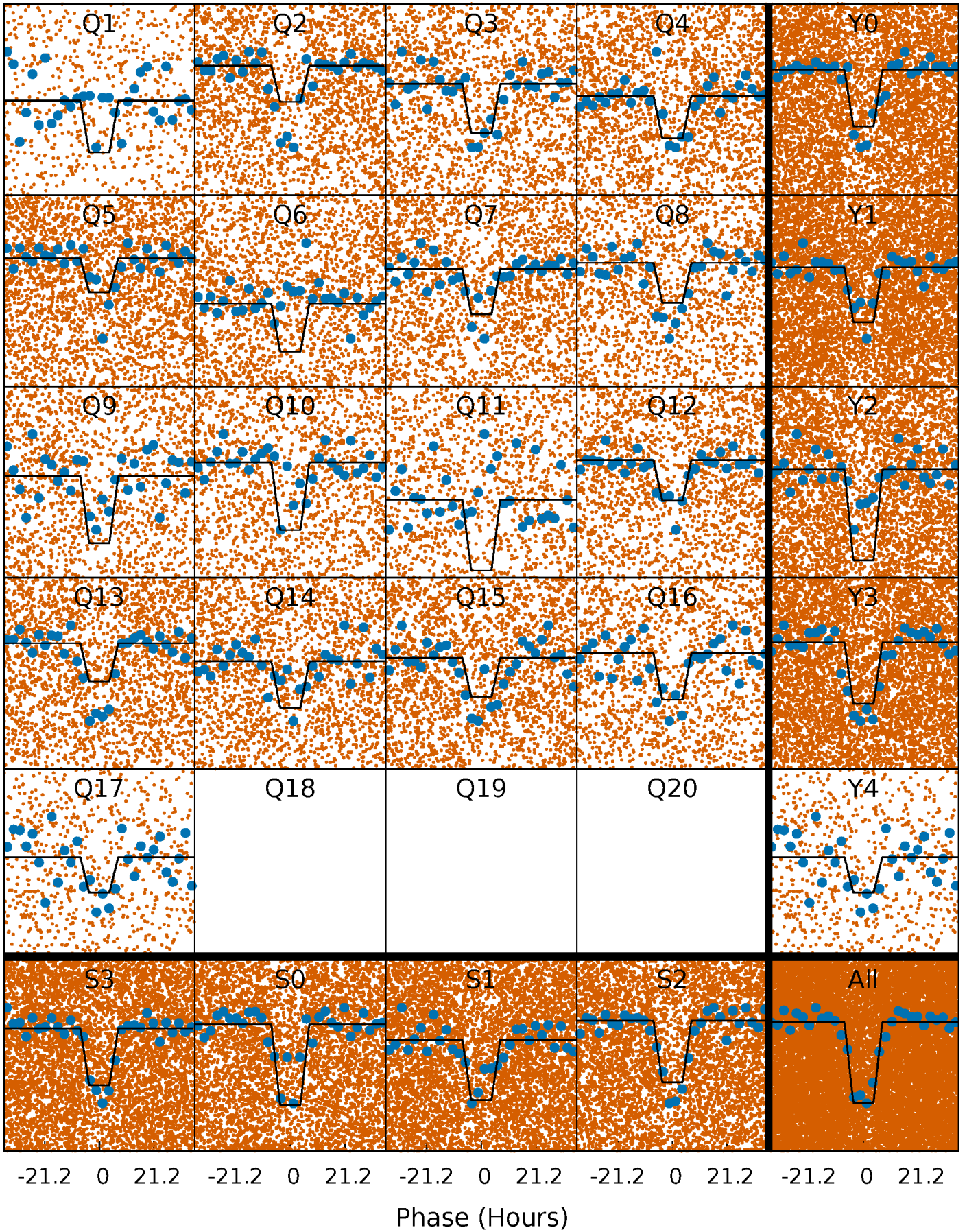
DV Quarter-Phased Transit Curves

TCE 007744634-01 P= 3.050363 Days $T_0=133.075588$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

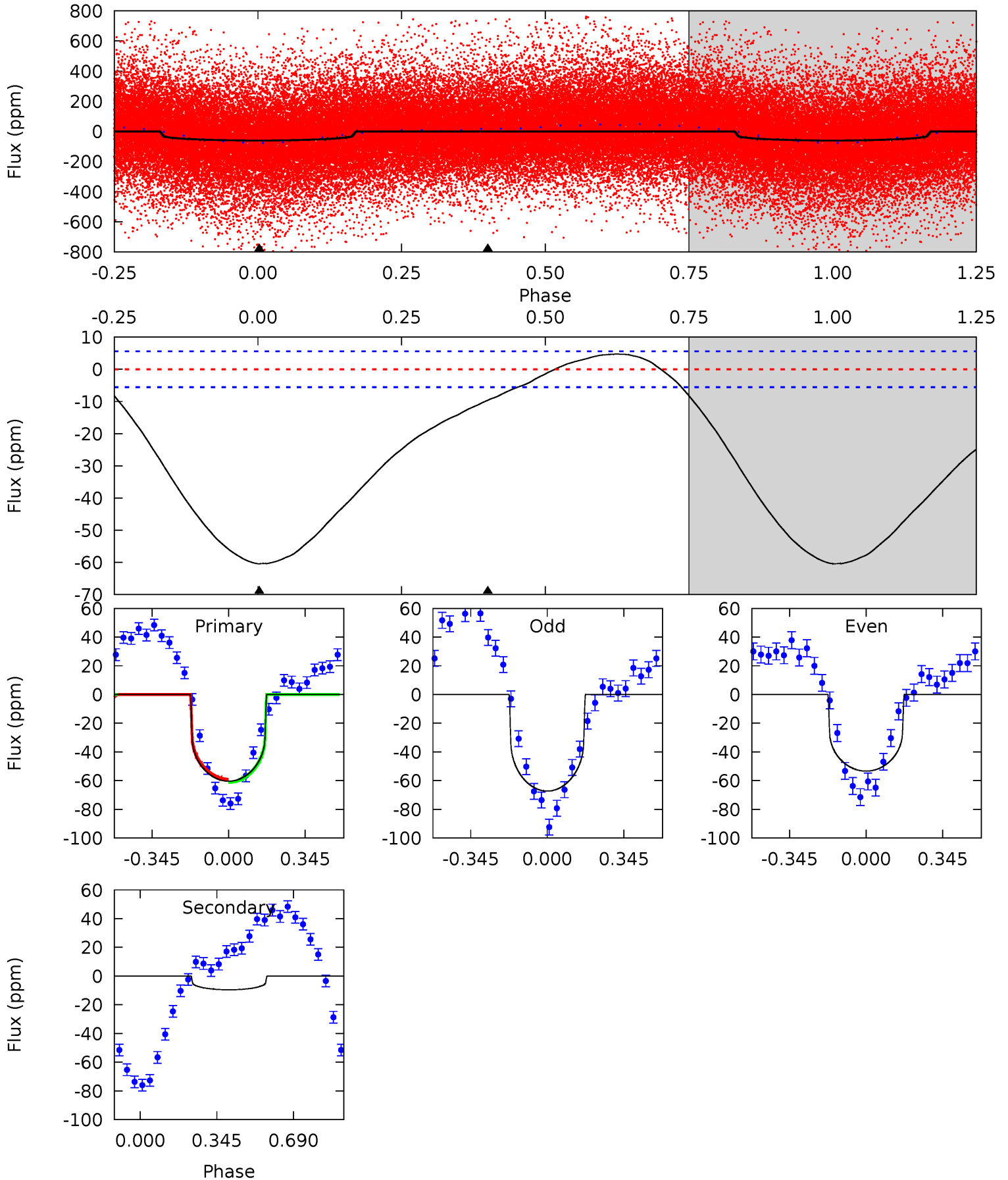
TCE 007744634-01 P= 3.050189 Days $T_0=133.117909$ (BKJD)



DV Model-Shift Uniqueness Test

007744634-01, P = 3.050363 Days, E = 130.025225 Days

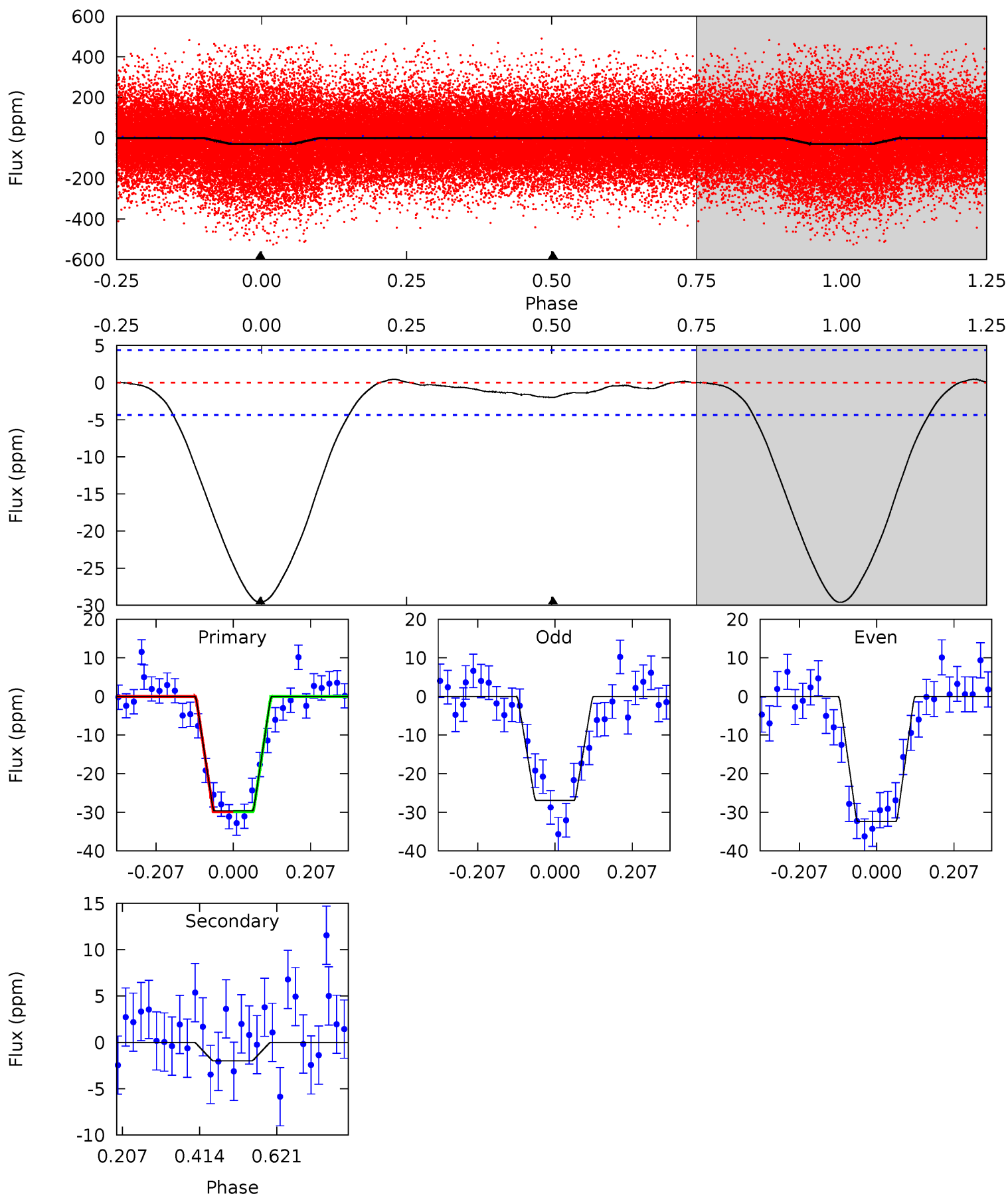
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.6	7.40	0	0	4.30	0.94	2.96	46.6	46.6	7.40	7.40	5.37	1.34	0.07	0.84



Alt Model-Shift Uniqueness Test

007744634-01, P = 3.050189 Days, E = 130.067720 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	2.01	0	0	4.41	1.26	0.22	30.0	30.0	2.01	2.01	2.78	1.05	0.01	0.02



Stellar Parameters For KIC 007744634

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6414^{+153}_{-211}	$4.377^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.147^{+0.389}_{-0.130}$	$1.141^{+0.185}_{-0.135}$	$1.065^{+0.330}_{-0.596}$
	+2%/-3%	+2%/-5%	+208%/-250%	+34%/-11%	+16%/-12%	+31%/-56%
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 007744634-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 1	$0.78^{+0.28}_{-0.23}$	2064^{+156}_{-98}	4698^{+804}_{-506}	16^{+17}_{-7}
Alt.	-2 ± 1	$0.74^{+0.23}_{-0.25}$	2072^{+147}_{-108}	3552^{+600}_{-527}	$3.447^{+5.140}_{-2.049}$

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

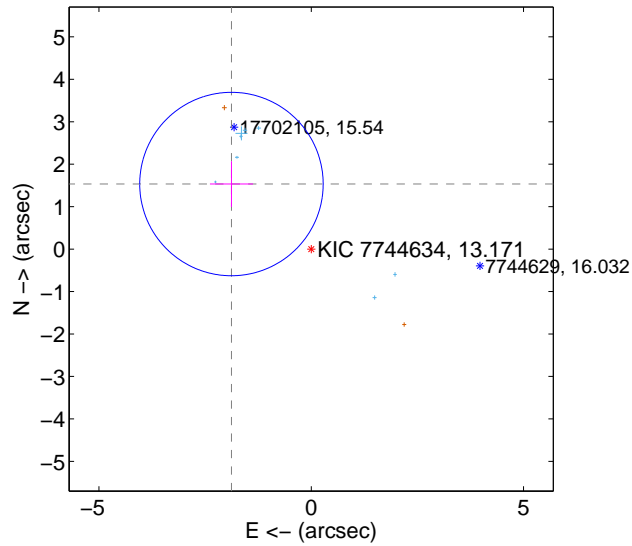
Supplemental centroid analysis for 007744634-01. Kepler magnitude: 13.17. Transit SNR 10.94

There are 8 quarters with good PRF difference image offsets

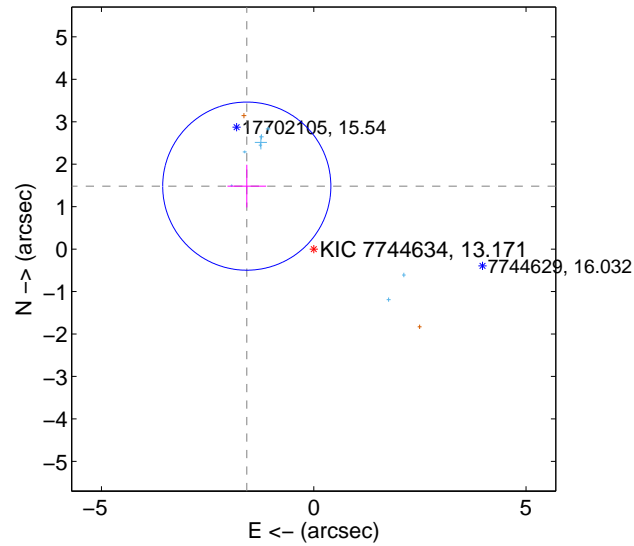
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.426 ± 0.720	3.37	1.880 ± 0.508	1.533 ± 0.539
PRF-fit source offset from KIC position	2.165 ± 0.660	3.28	1.577 ± 0.456	1.483 ± 0.503
photometric centroid source offset	3.59 ± 0.39	9.25	1.80 ± 0.34	3.11 ± 0.40

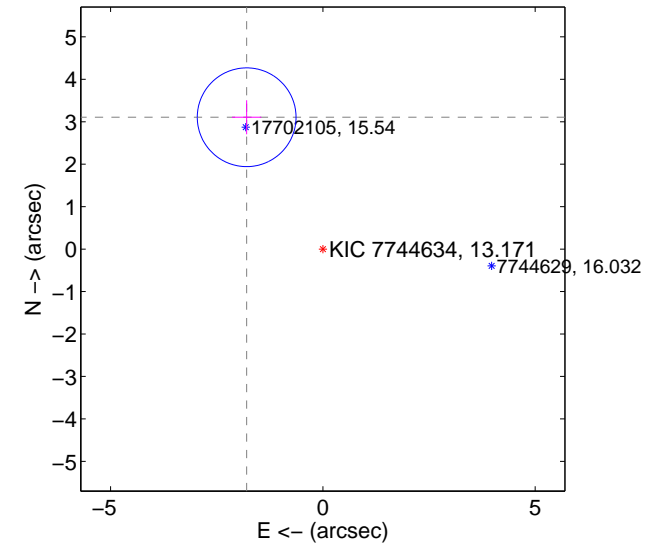
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

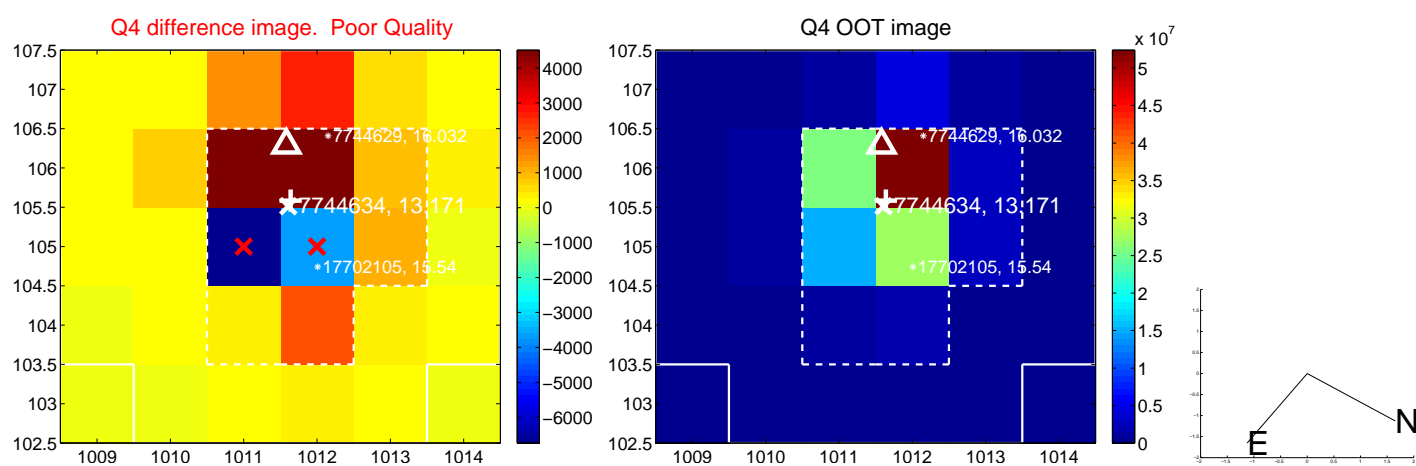
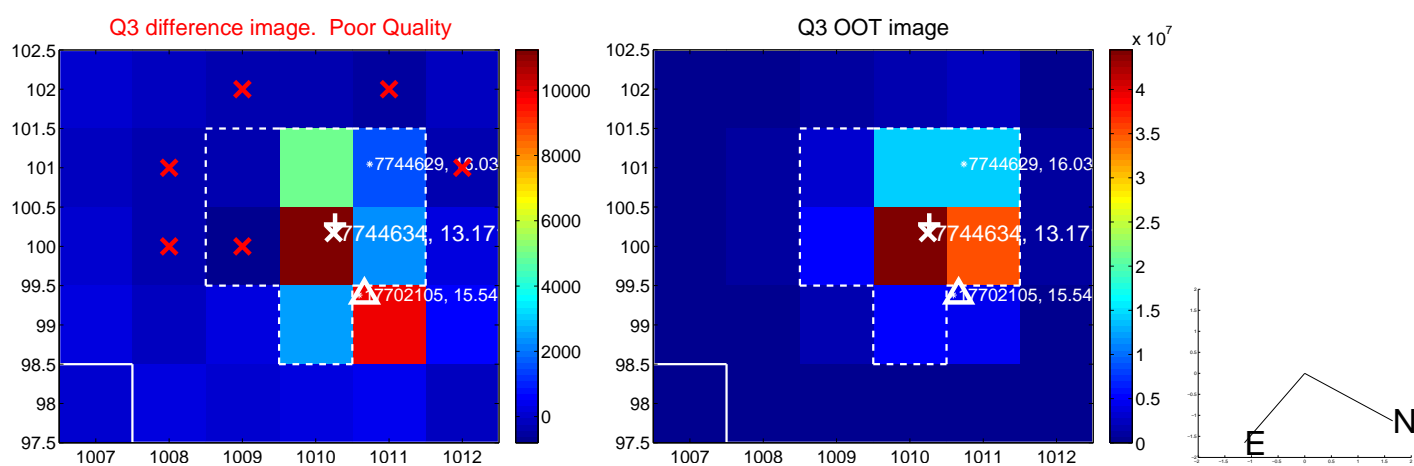
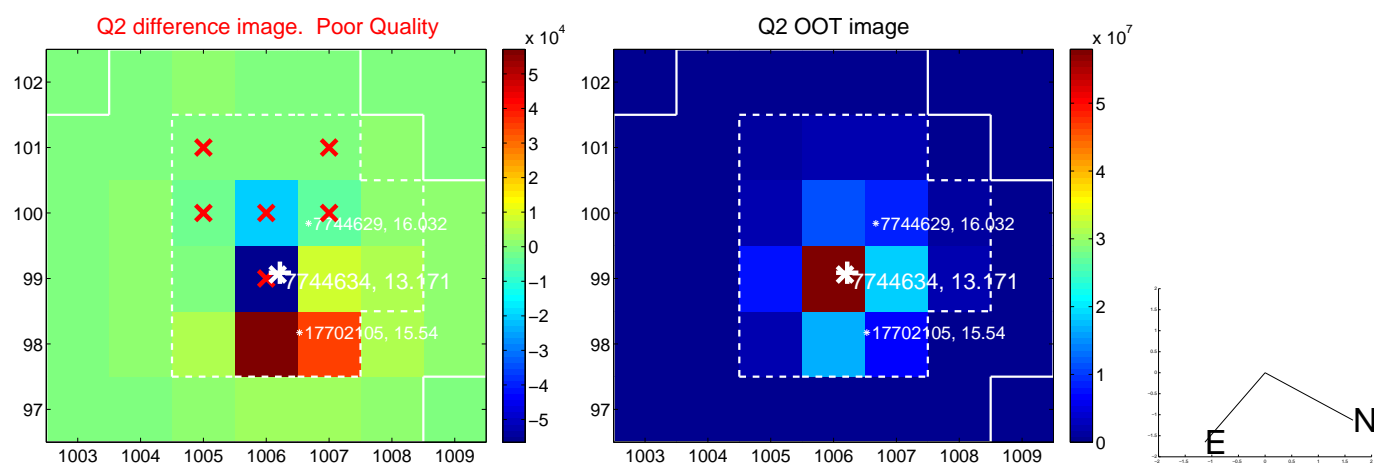
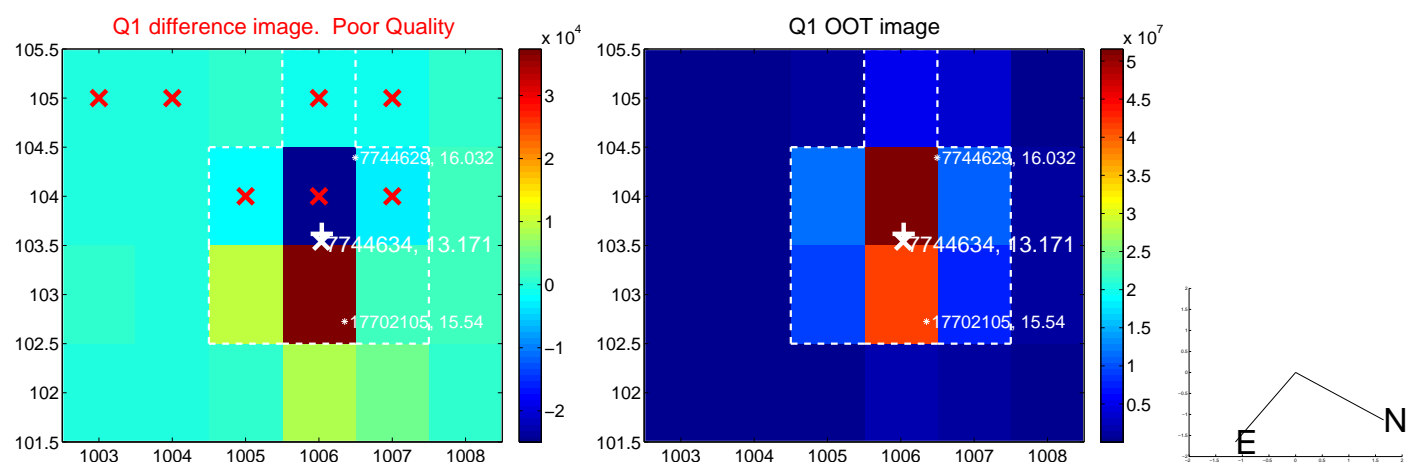


offset from photometric centroids

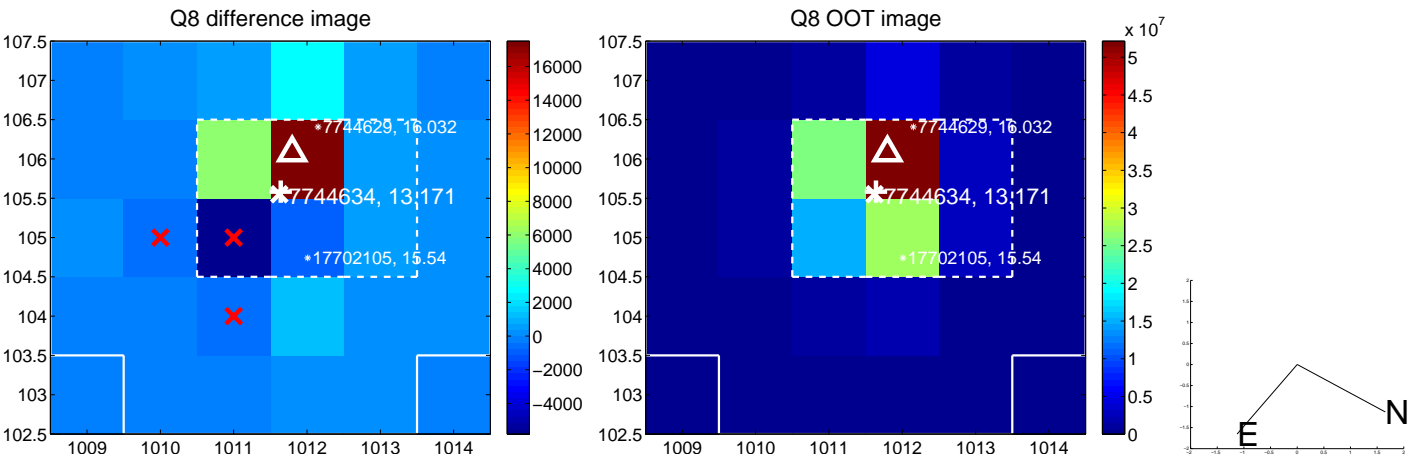
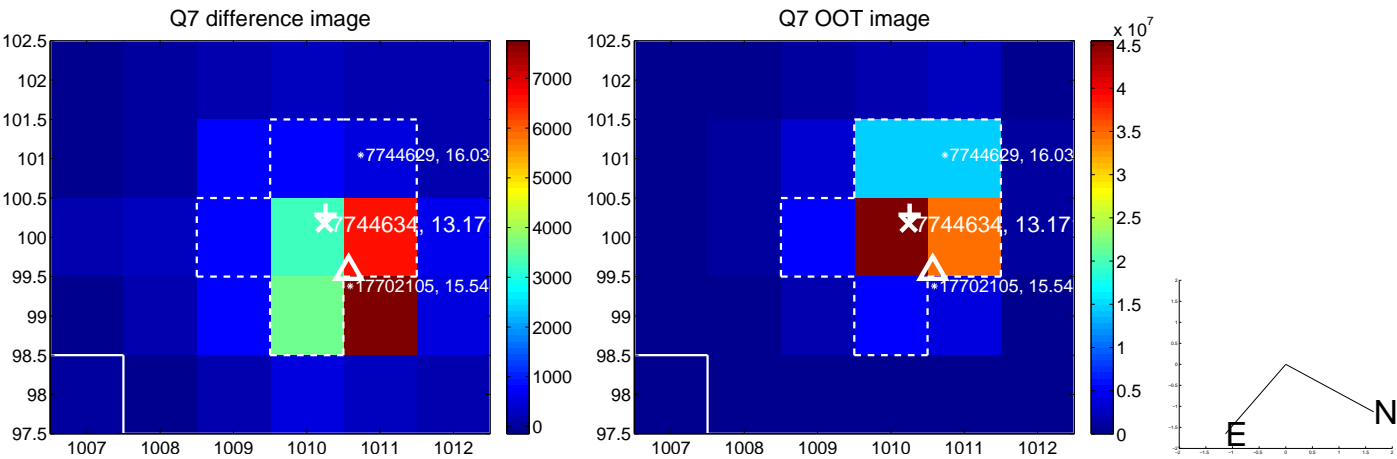
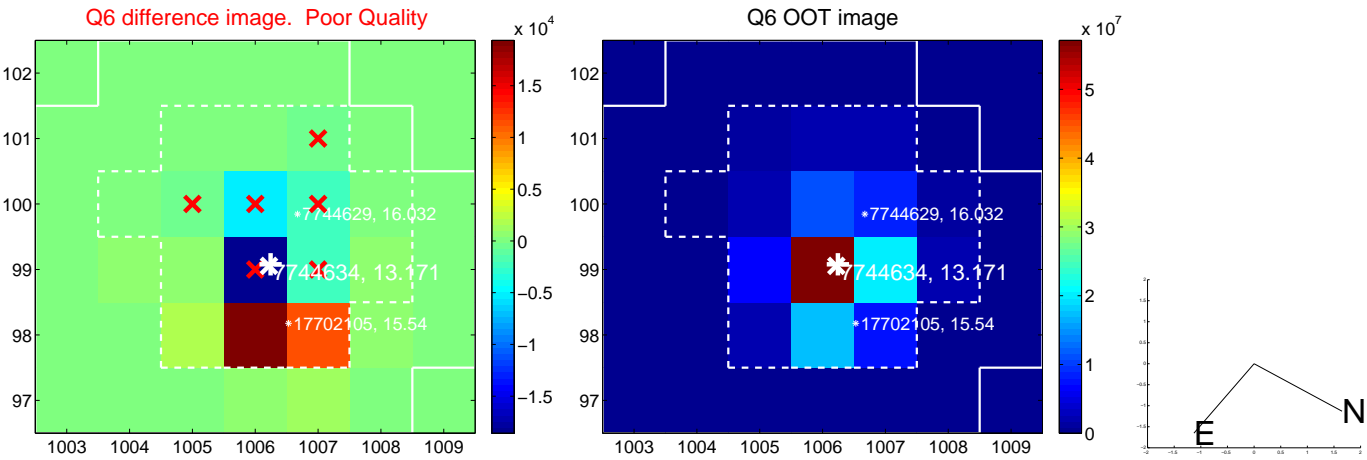
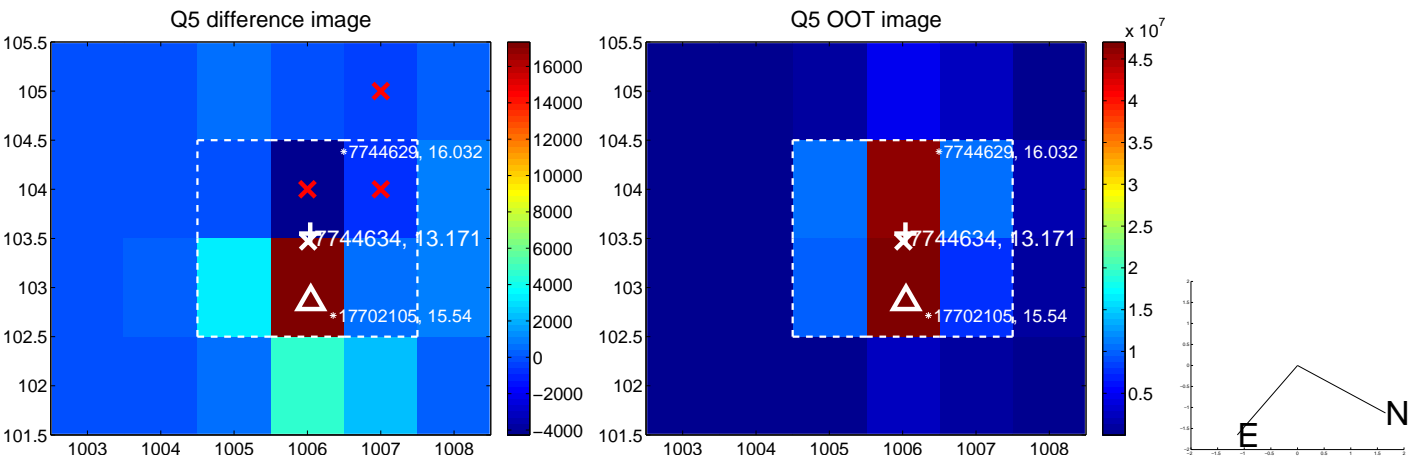


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

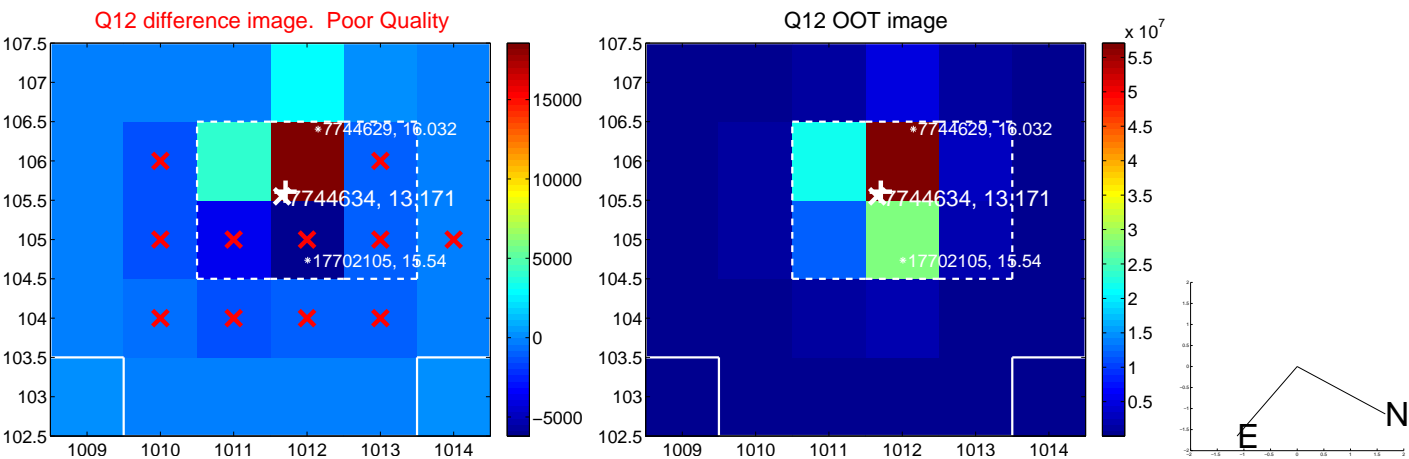
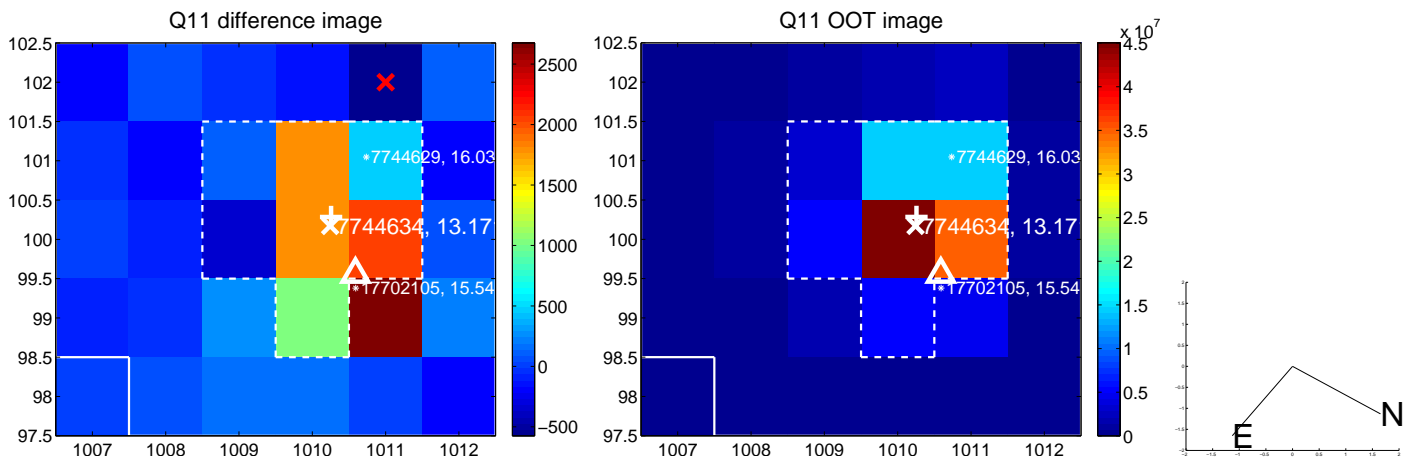
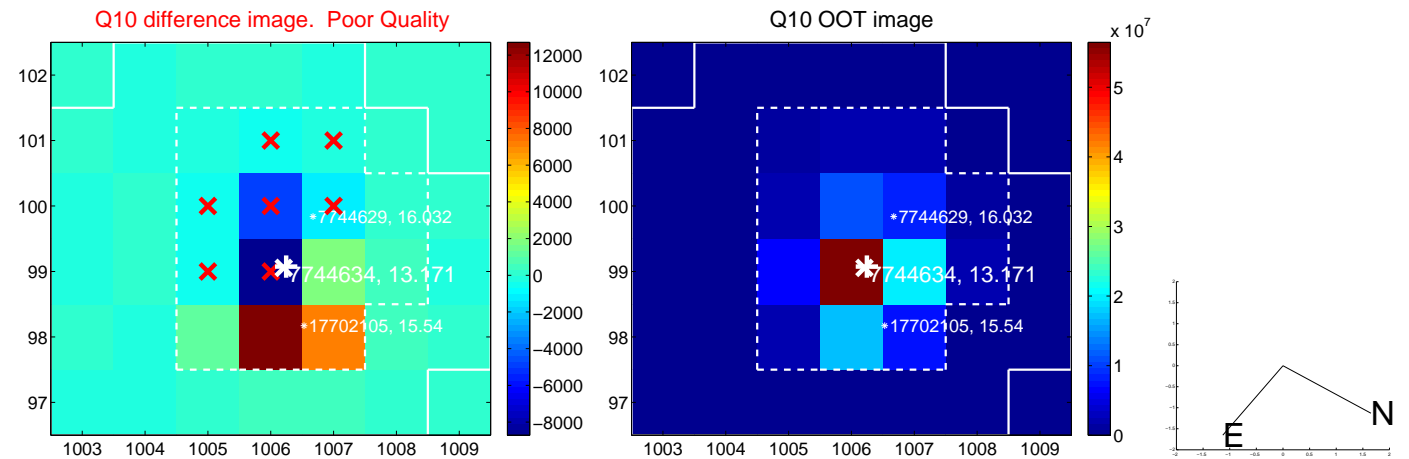
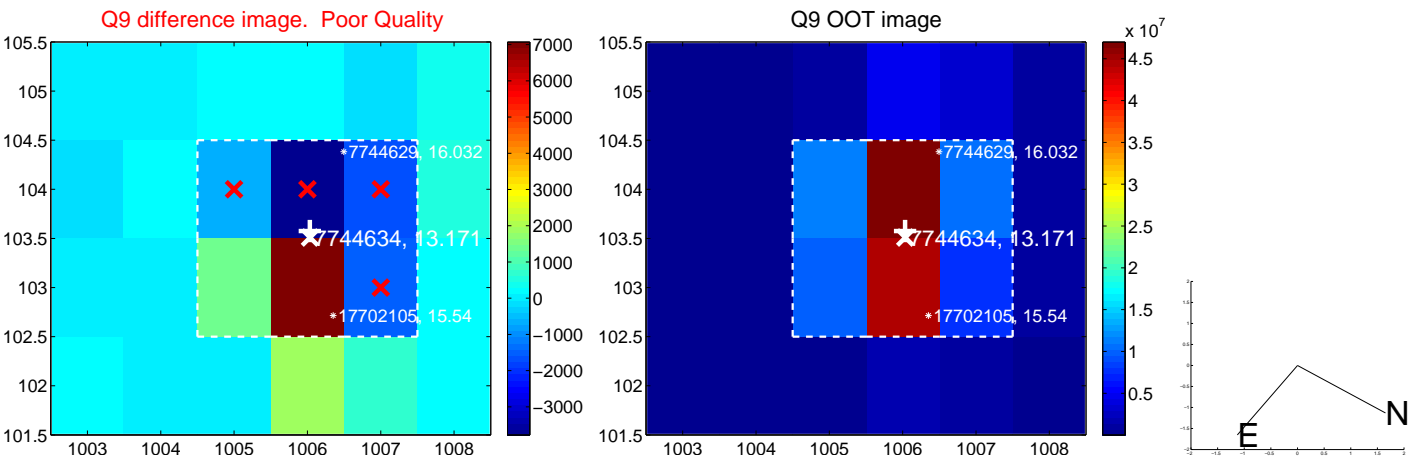
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



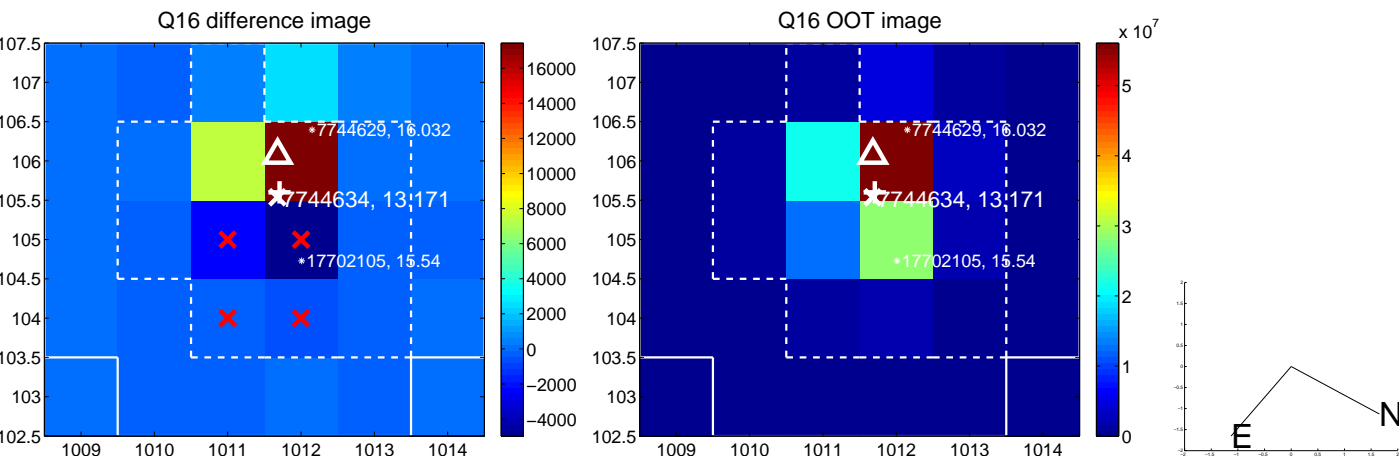
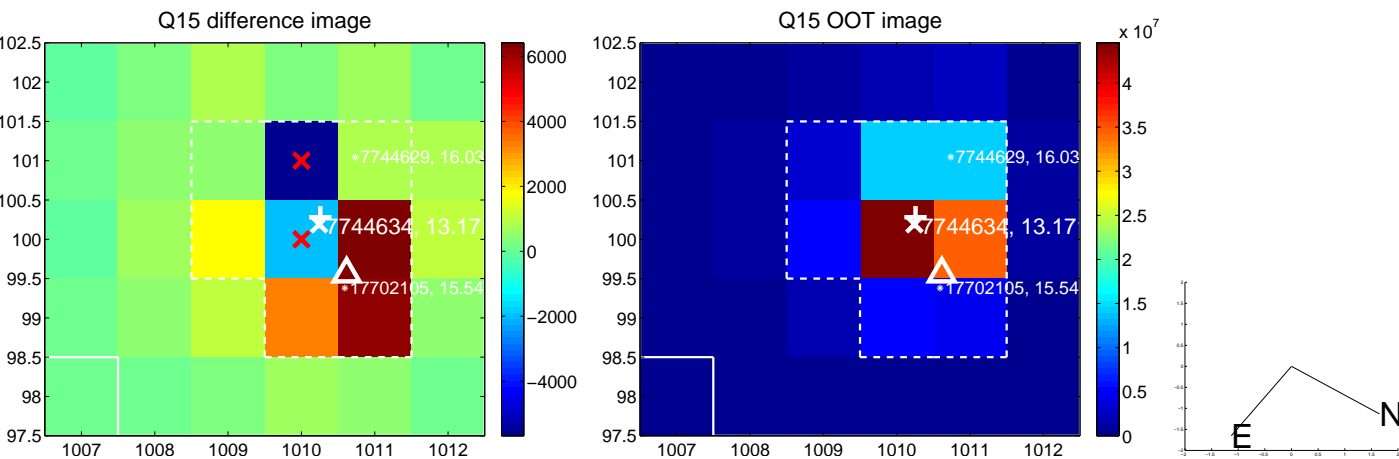
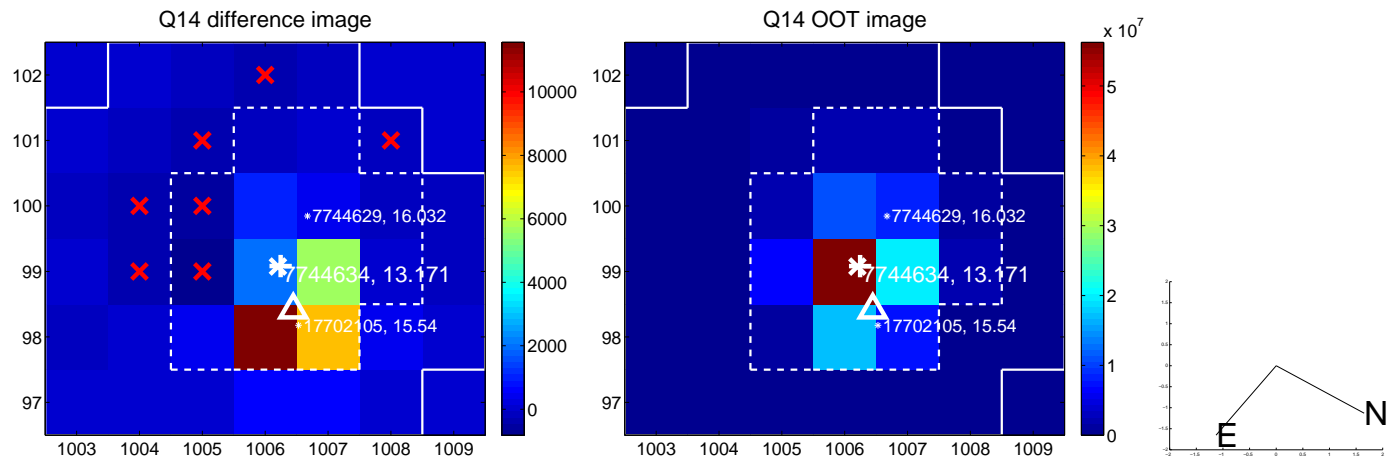
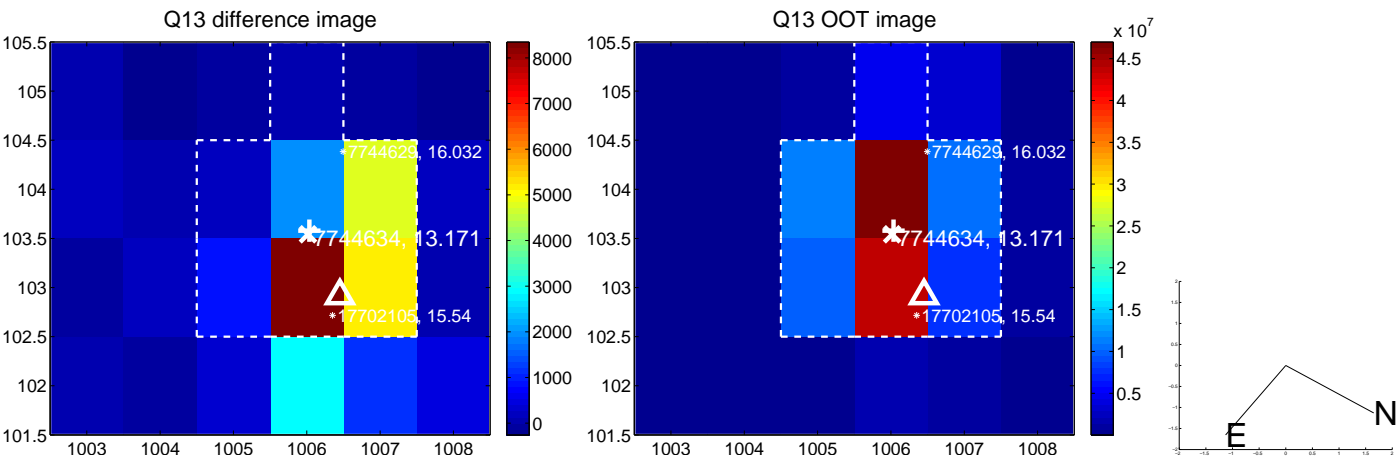
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



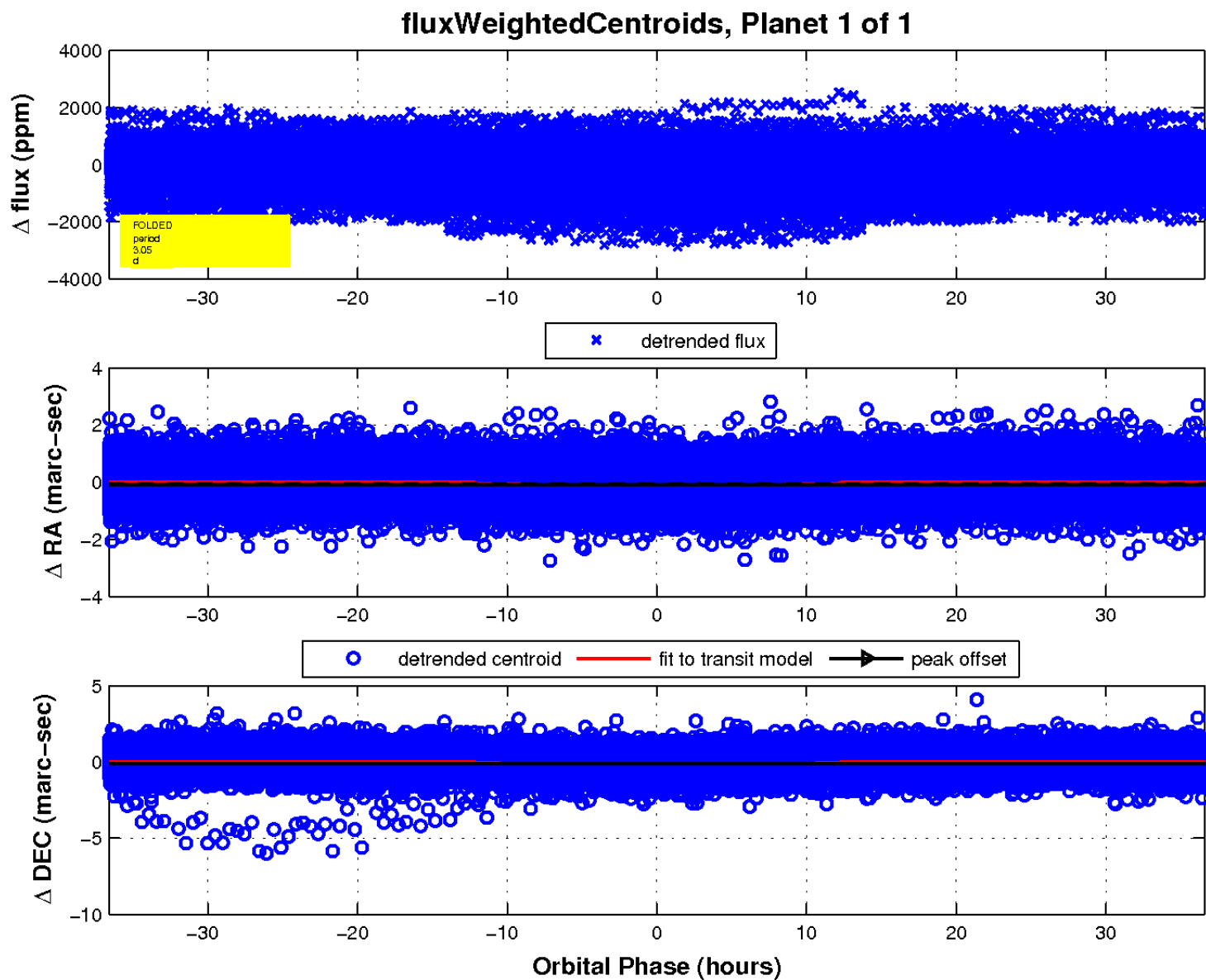
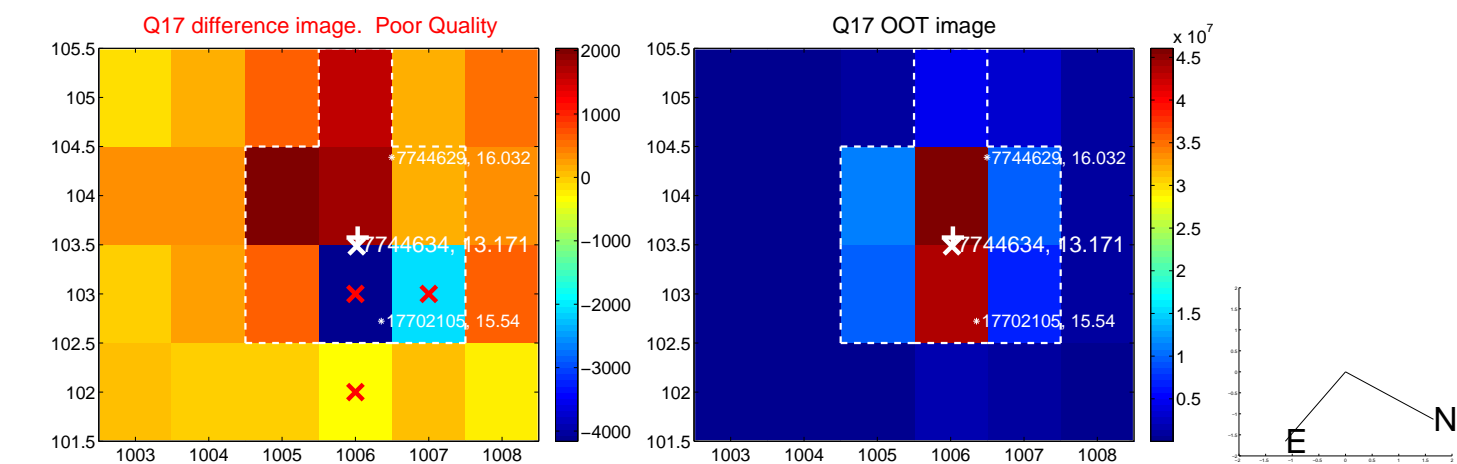
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

