

KIC 009174536

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})
009174536-01	OBS	No	1.771866	132.336525	11.4	14.593	10.2	2.9	1.06	6185	0.36	1853.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009174536-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

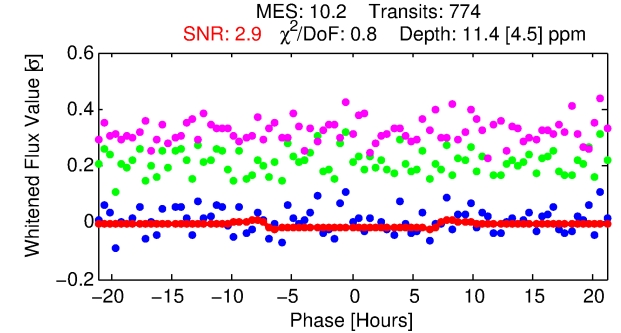
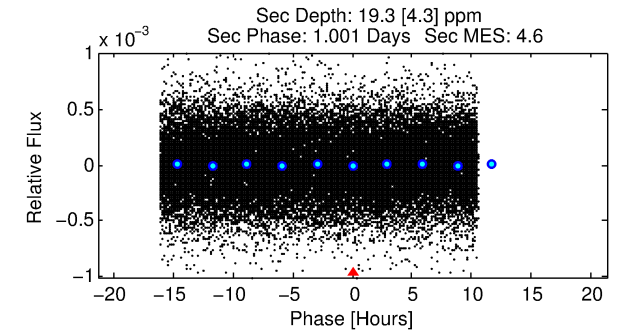
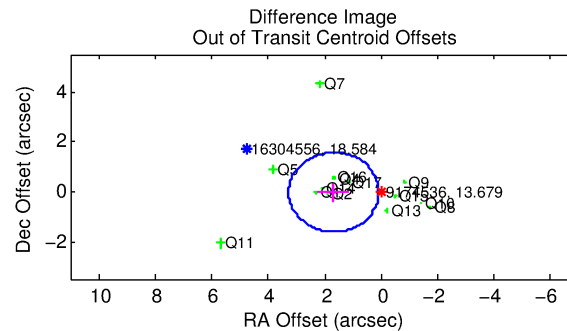
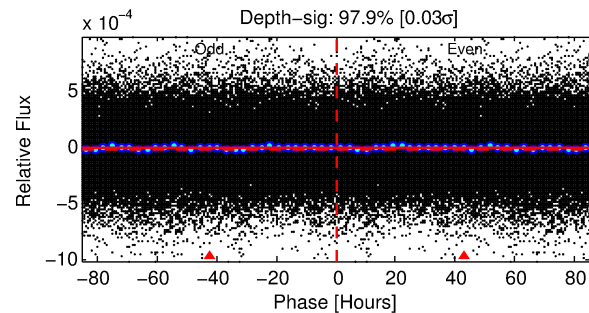
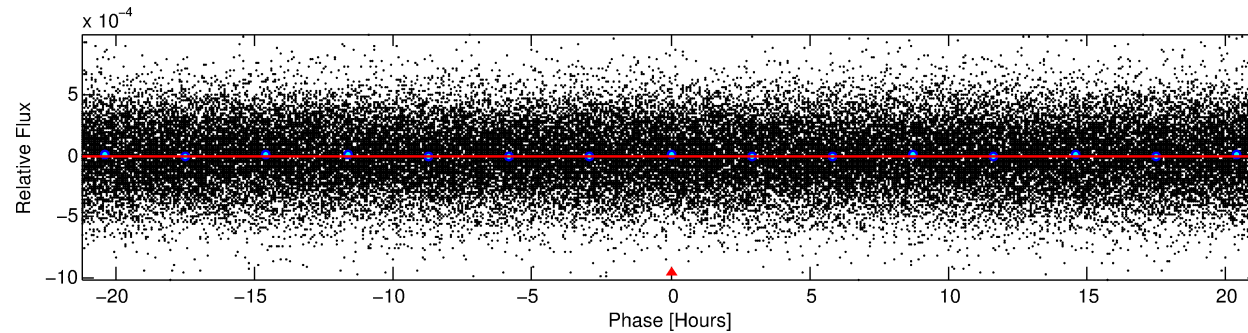
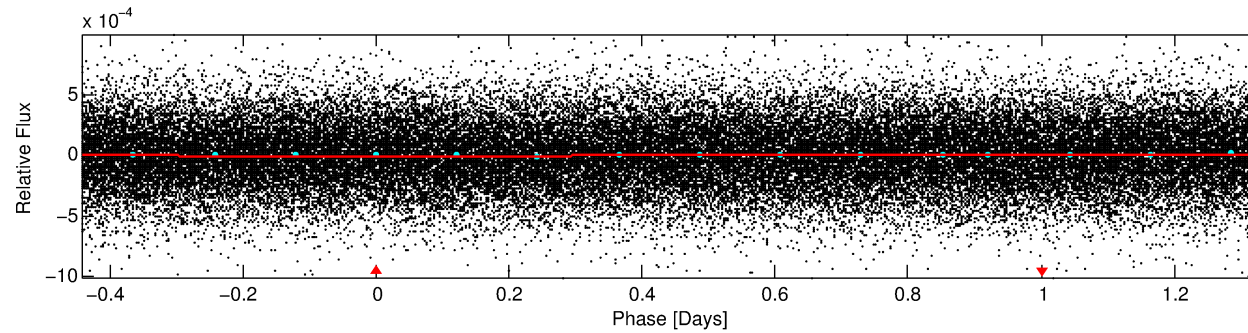
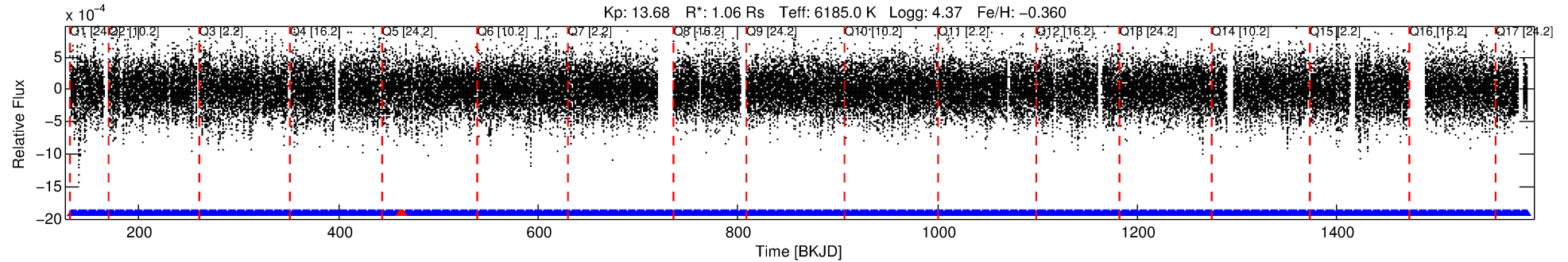
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009174536-01

No Significant Match Found

DV One-Page Summary

KIC: 9174536 Candidate: 1 of 1 Period: 1.772 d



DV Fit Results:

Period = 1.77187 [0.00008] d
Epoch = 132.3365 [0.0178] BKJD
Rp/R* = 0.0031 [0.0068]
a/R* = 1.14 [2.96]
b = 0.05 [235.40]
Seff = 1853.15 [722.09]
Teq = 1673 [163] K
Rp = 0.36 [0.80] Re
a = 0.0283 [0.0071] AU
Ag = 65.63 [289.12] [0.22σ]
Teffp = 7362 [8084] K [0.70σ]

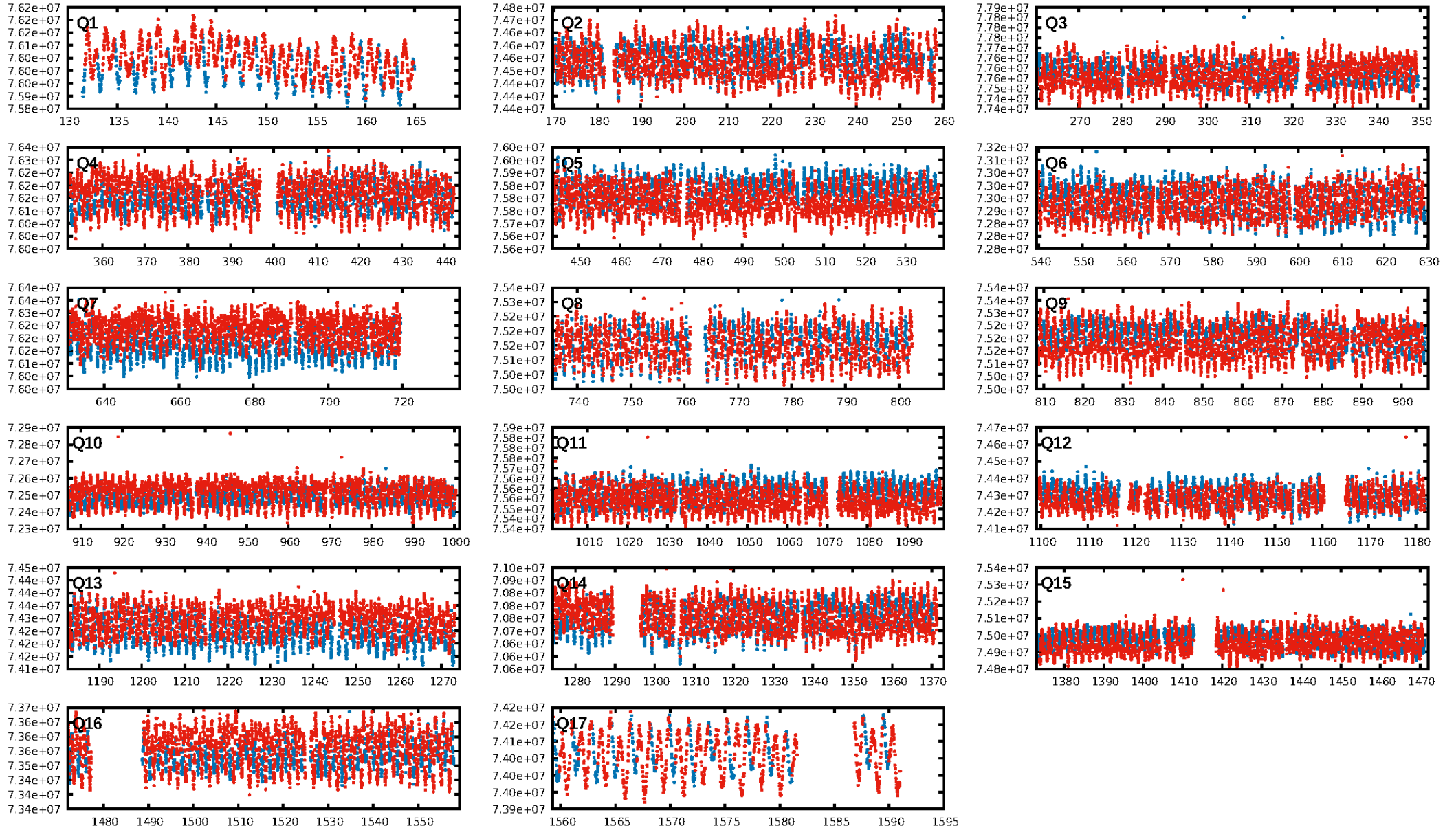
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [736/739]
GhostDiagnostic-chr: -0.6104
Centroid-sig: 10.4%
Centroid-so: 2.761 arcsec [1.34σ]
OotOffset-rm: 1.682 arcsec [3.16σ]
KicOffset-rm: 1.517 arcsec [3.00σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

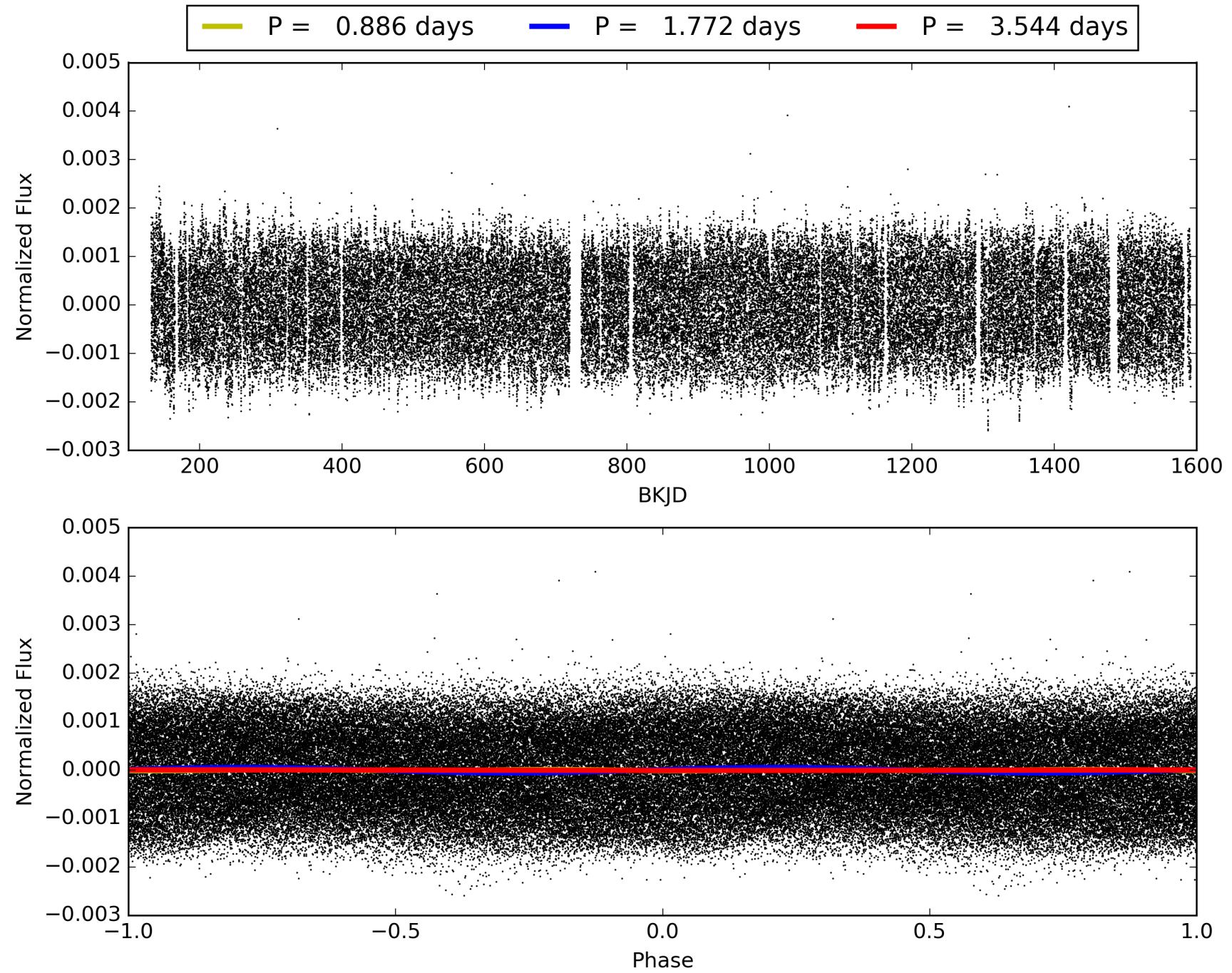
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:35:30 Z

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

TCE 009174536-01, PDC Light Curves

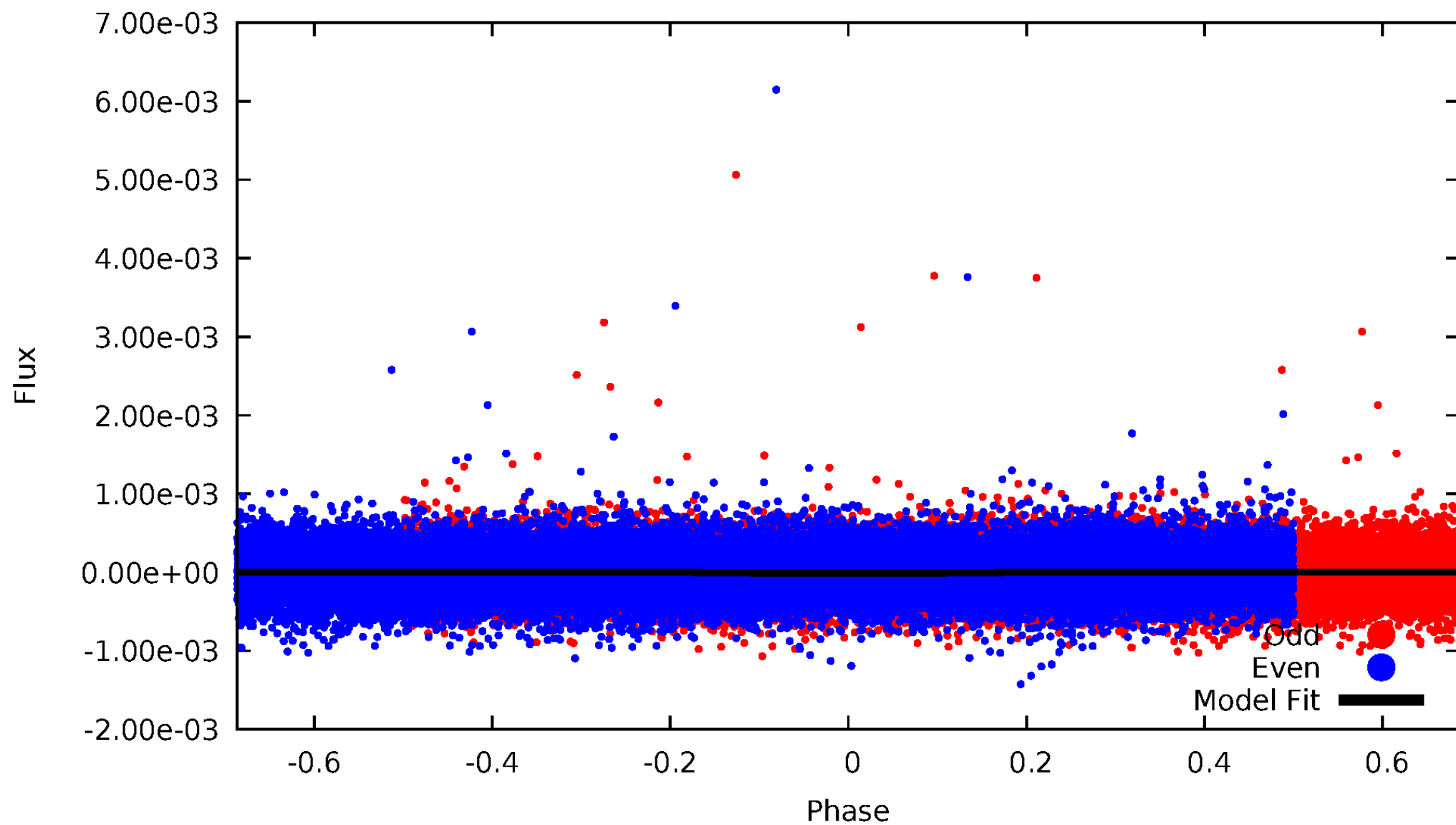


TCE 009174536-01



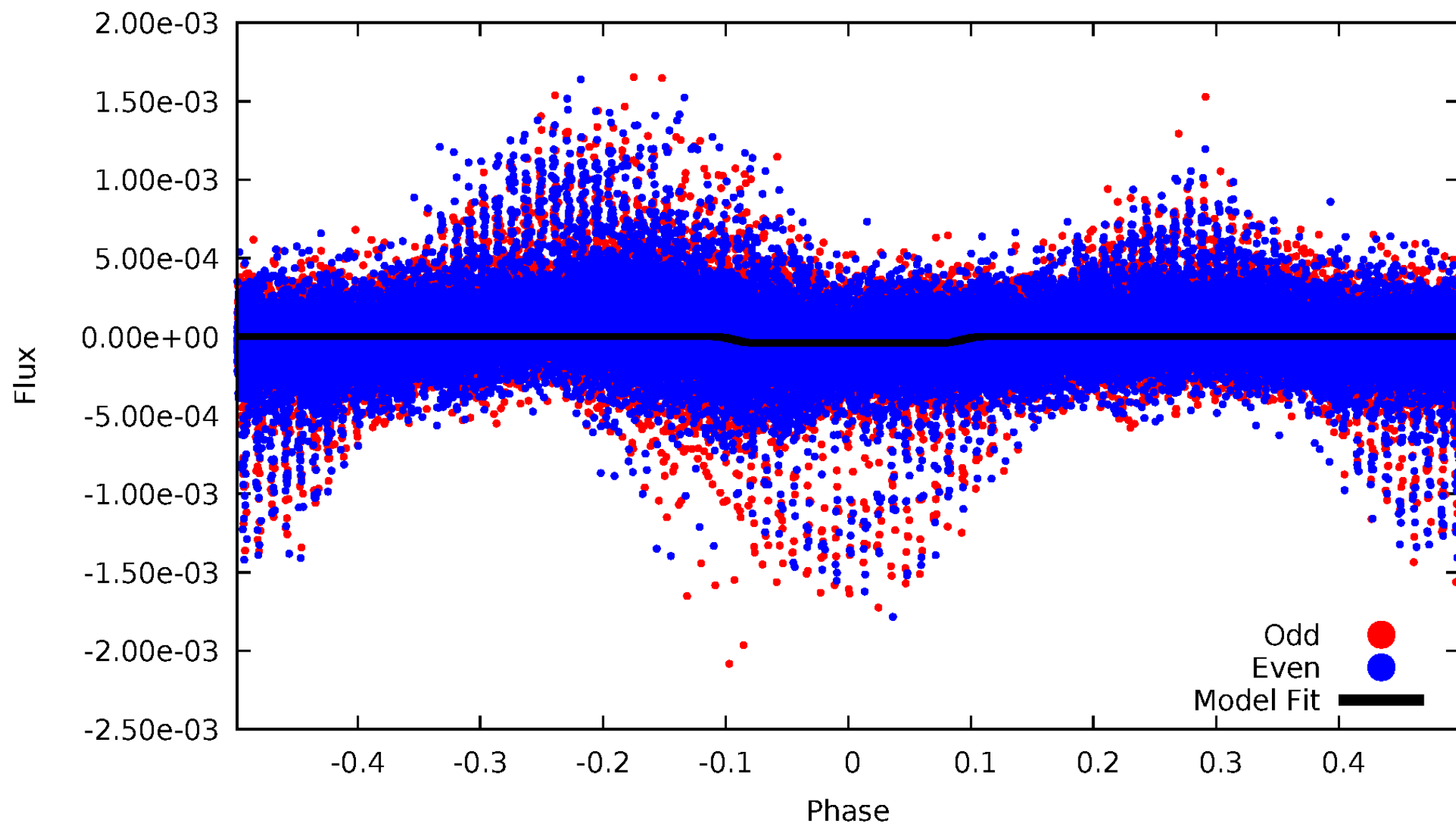
DV Odd/Even

TCE 009174536-01

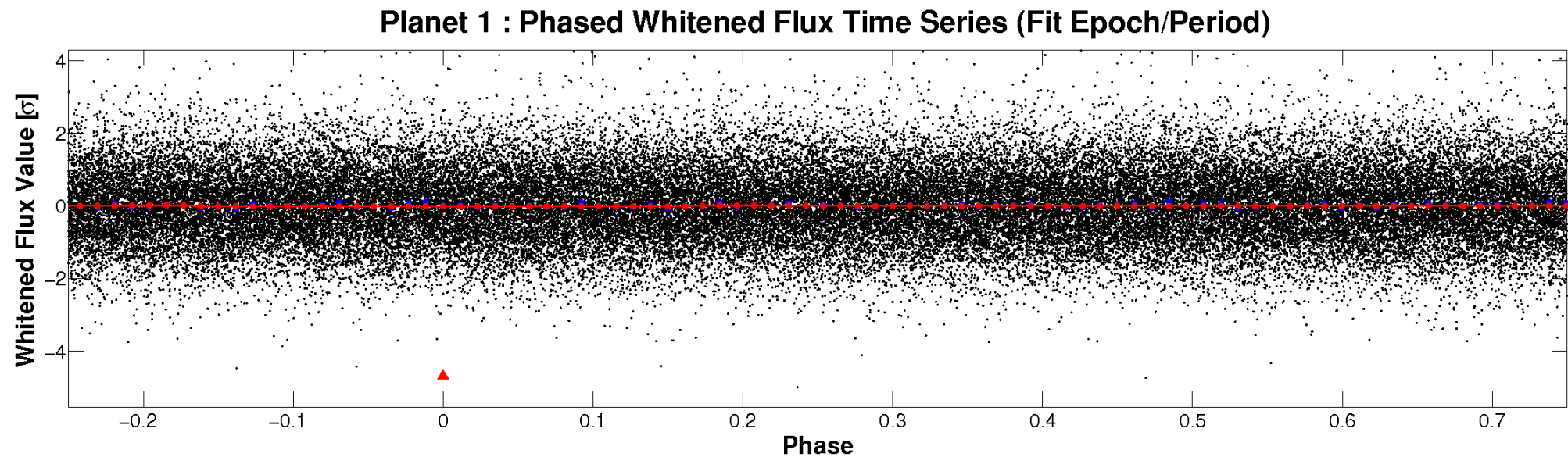
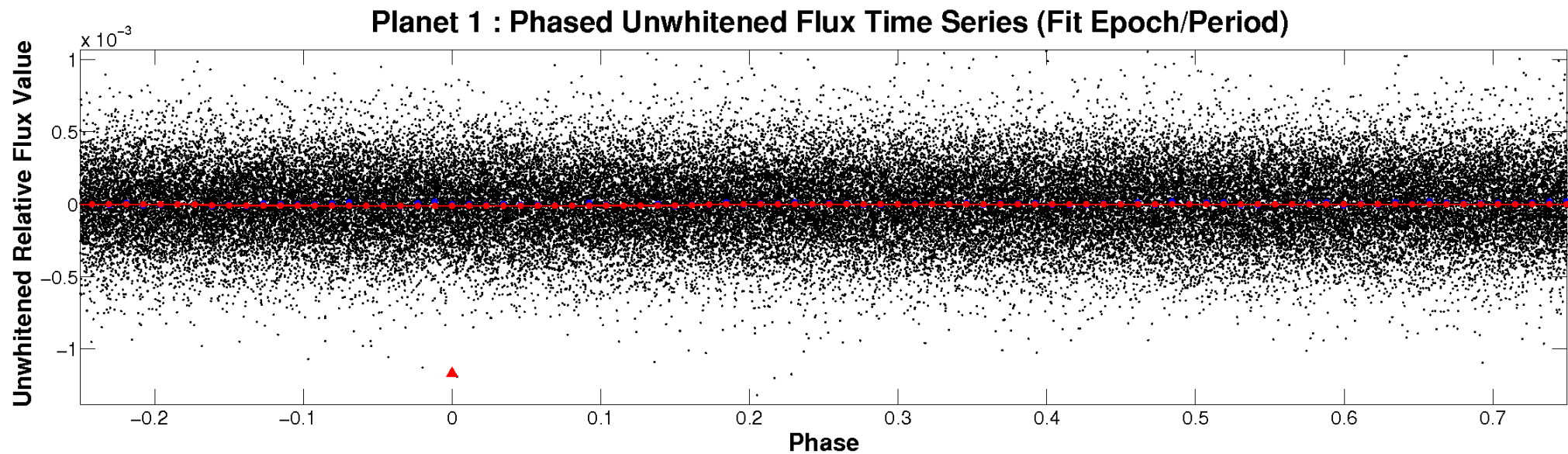


ALT Odd/Even

TCE 009174536-01

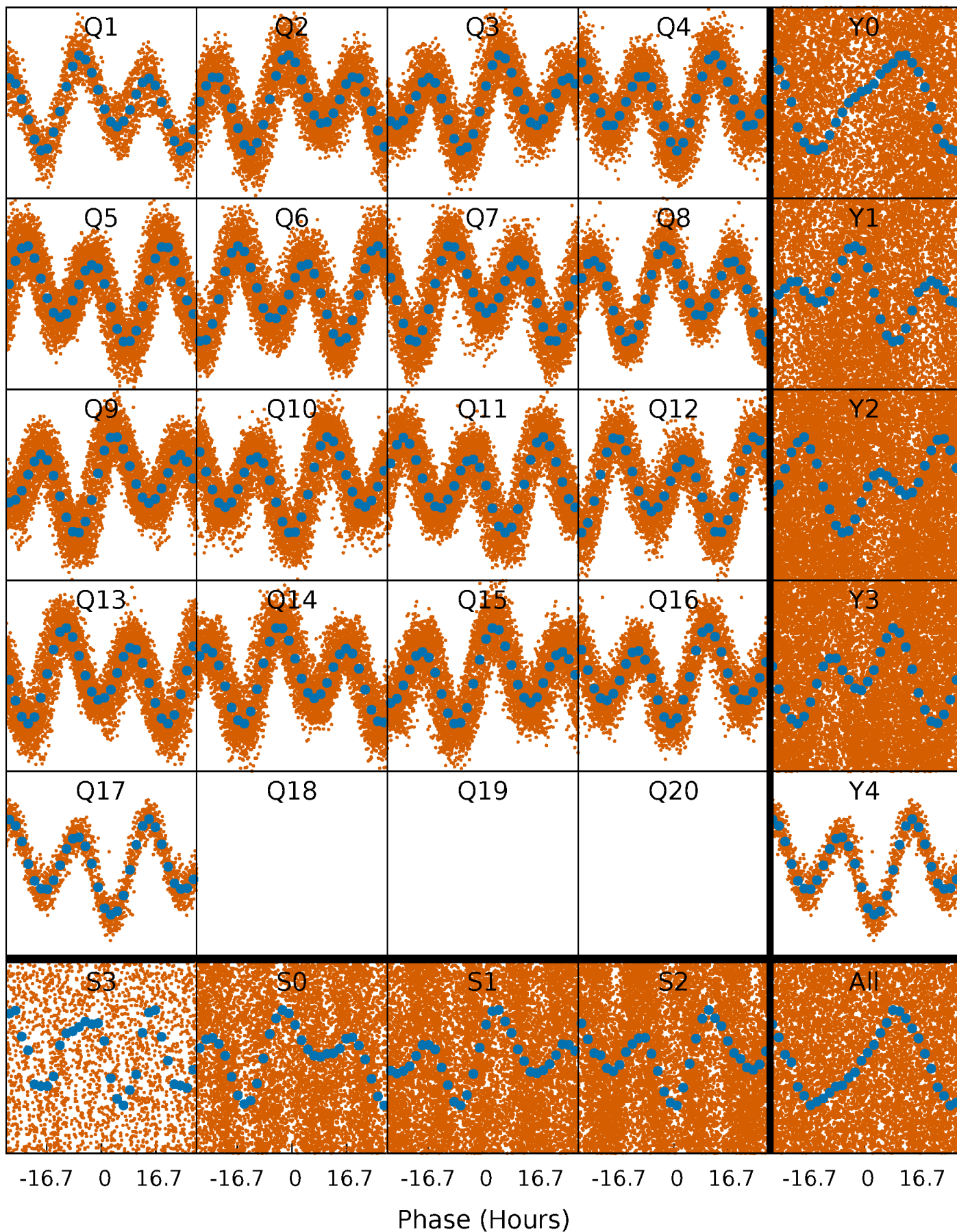


Non-Whitened Vs. Whitened Light Curve



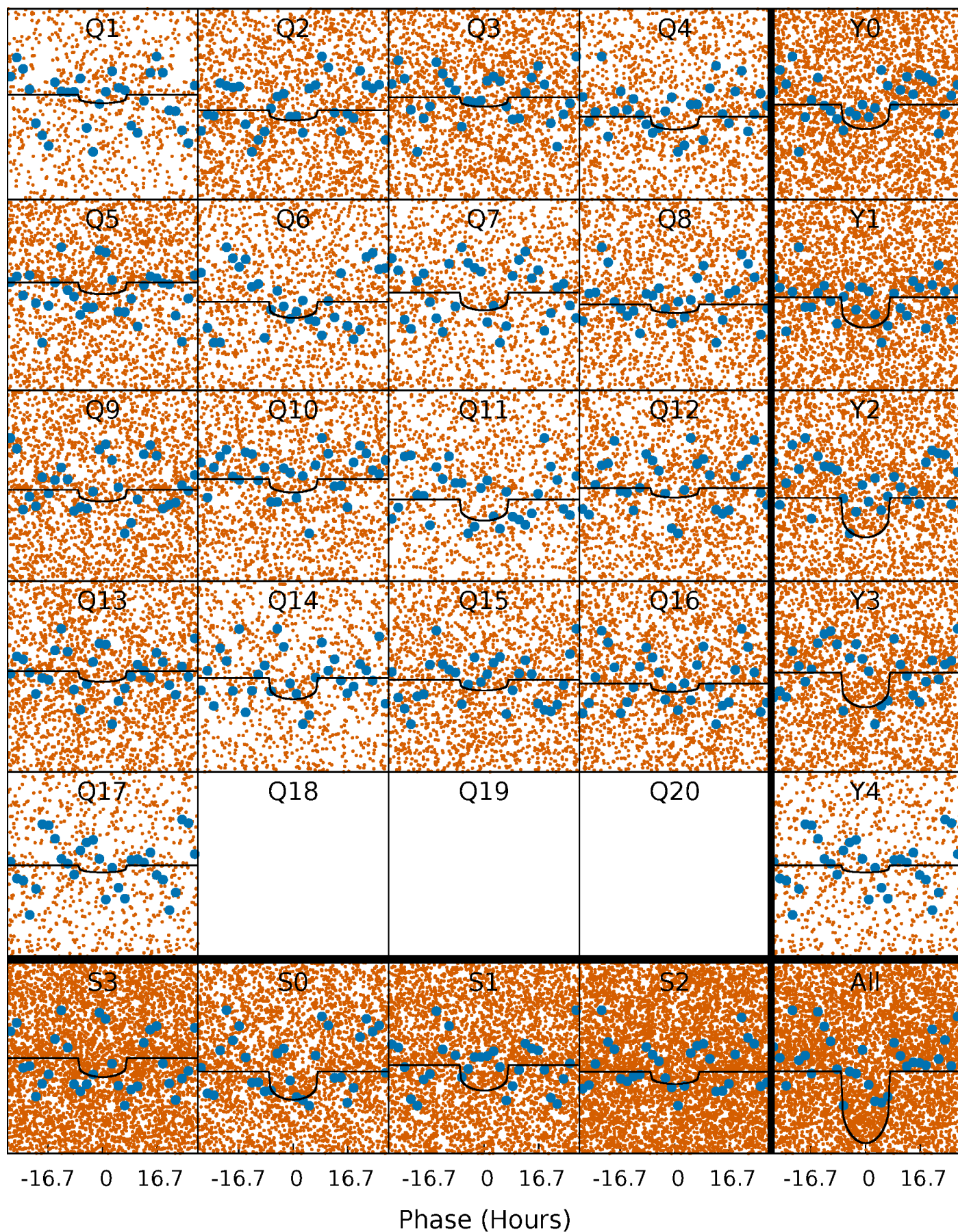
PDC Quarter-Phased Transit Curves

TCE 009174536-01 P= 1.771866 Days $T_0=132.336525$ (BKJD)



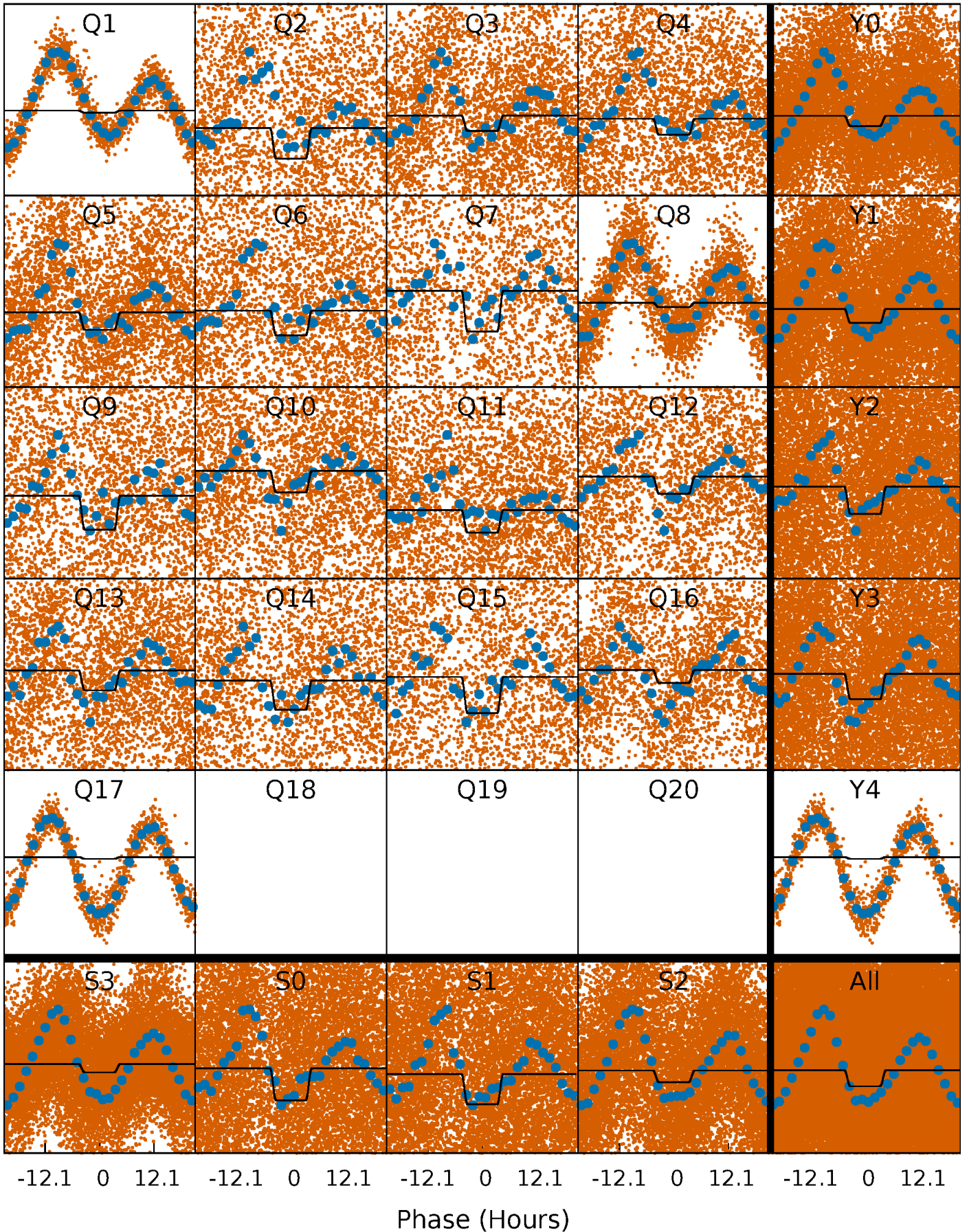
DV Quarter-Phased Transit Curves

TCE 009174536-01 P= 1.771866 Days $T_0=132.336525$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

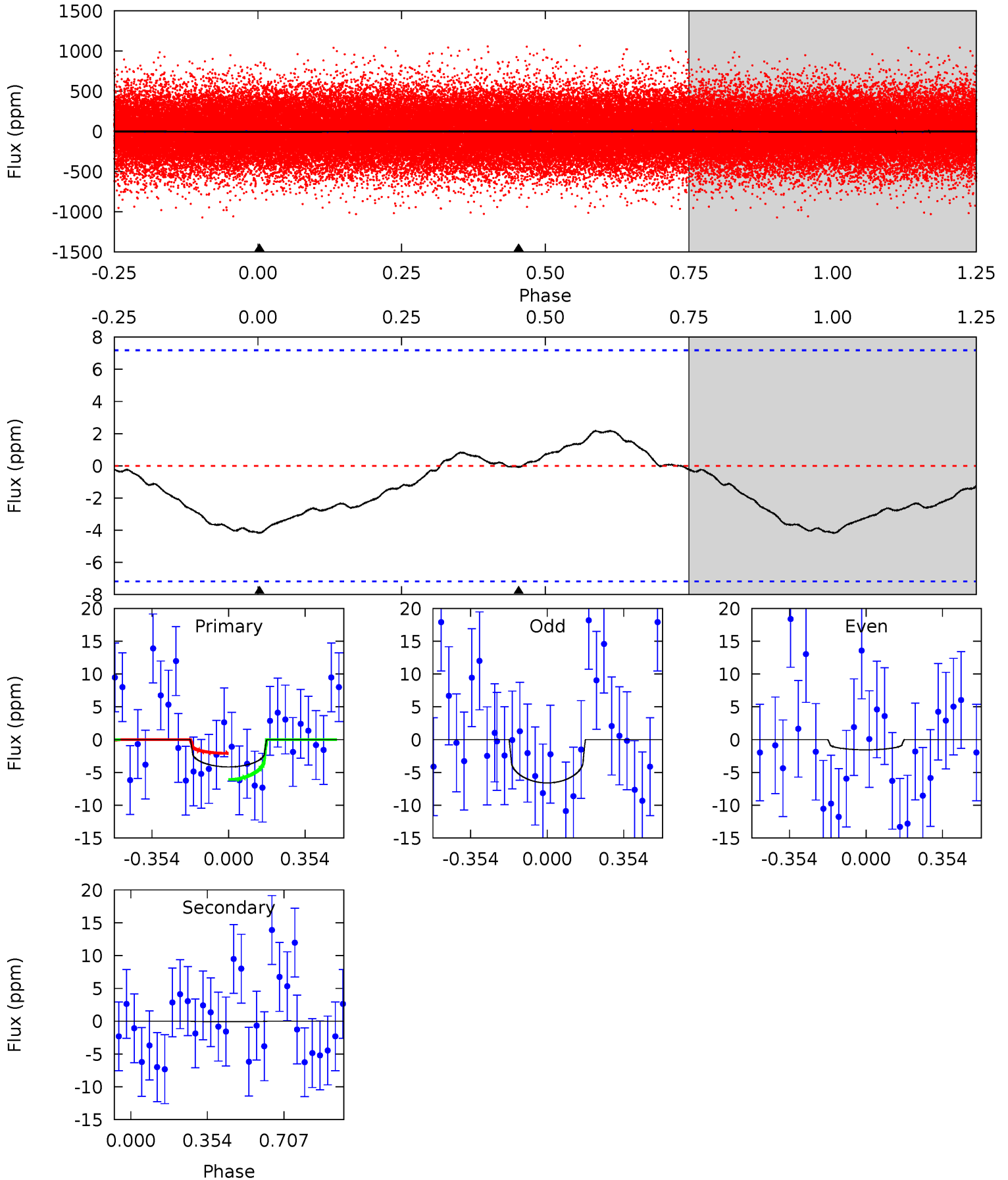
TCE 009174536-01 P= 1.777413 Days $T_0=132.411836$ (BKJD)



DV Model-Shift Uniqueness Test

009174536-01, P = 1.771866 Days, E = 130.564659 Days

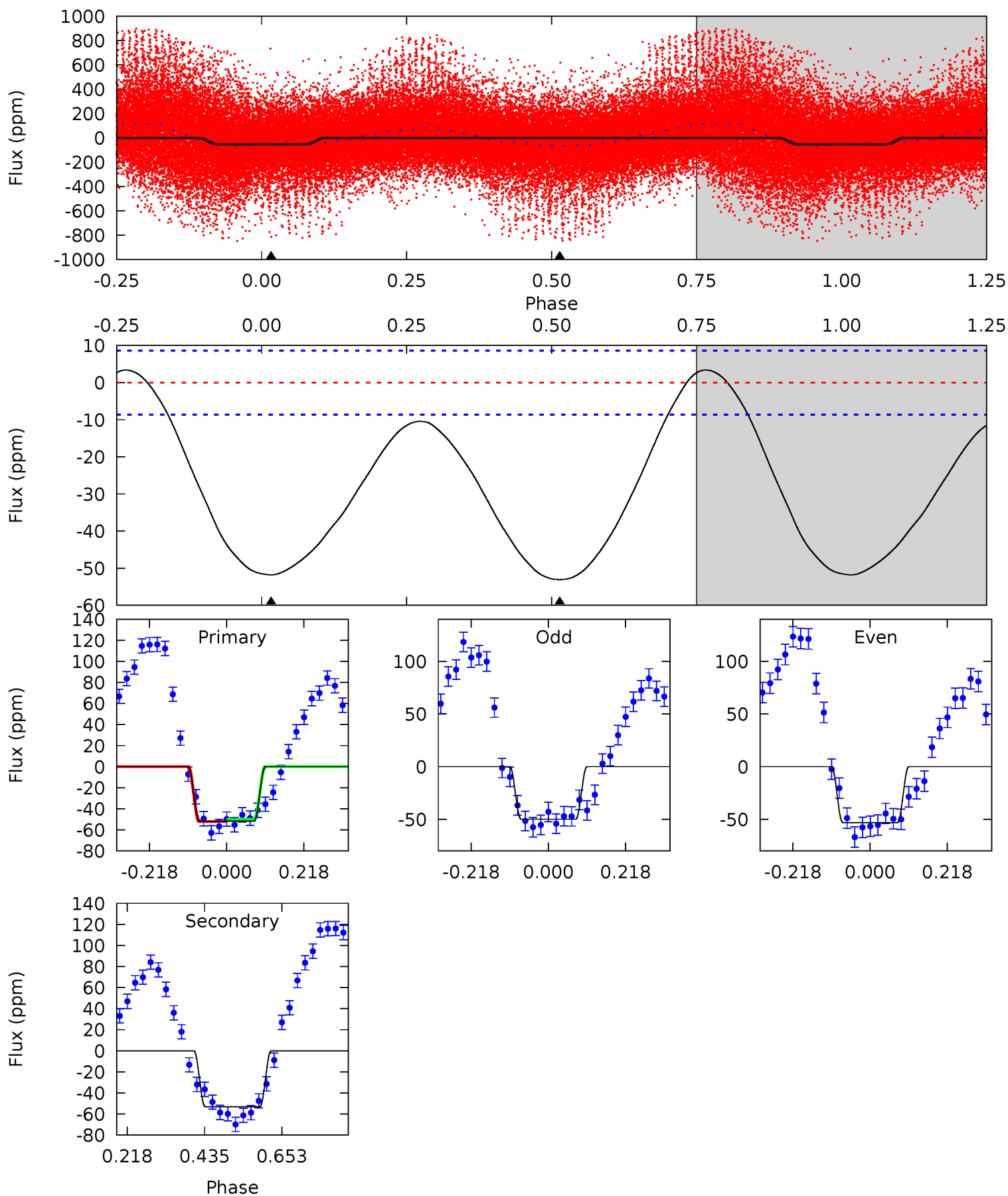
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.49	0.04	0	0	4.29	0.93	0.20	2.49	2.49	0.04	0.04	1.52	0.98	0.34	1.17



Alt Model-Shift Uniqueness Test

009174536-01, P = 1.777413 Days, E = 130.634423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	27.1	0	0	4.40	1.23	3.50	26.5	26.5	27.1	27.1	0.86	1.65	0.06	0.57



Stellar Parameters For KIC 009174536

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6185^{+169}_{-206}	$4.368^{+0.124}_{-0.201}$	$-0.360^{+0.300}_{-0.300}$	$1.065^{+0.315}_{-0.170}$	$0.963^{+0.148}_{-0.111}$	$1.124^{+0.632}_{-0.545}$
	+3%/-3%	+3%/-5%	+83%/-83%	+30%/-16%	+15%/-12%	+56%/-48%
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 009174536-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0 ± 2	$0.71^{+0.66}_{-0.51}$	2353^{+170}_{-142}	-2660^{+6256}_{-981}	$0.045^{+2.562}_{-2.180}$
Alt.	-53 ± 2	$0.92^{+0.75}_{-0.56}$	2354^{+172}_{-140}	5981^{+4450}_{-1399}	27^{+149}_{-19}

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

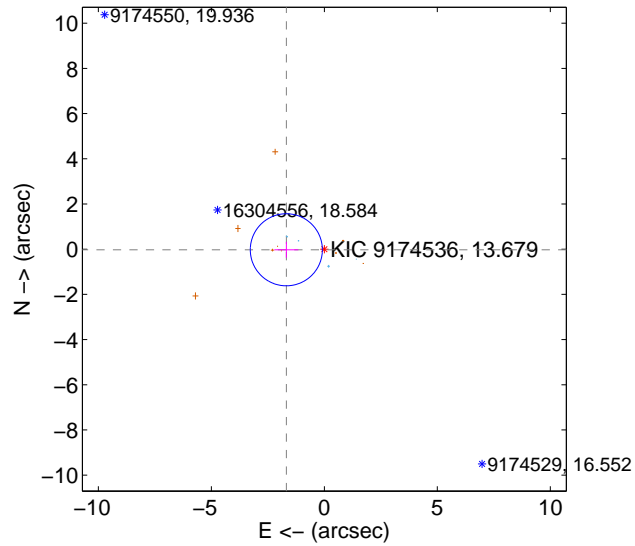
Supplemental centroid analysis for 009174536-01. Kepler magnitude: 13.68. Transit SNR 2.95

There are 5 quarters with good PRF difference image offsets

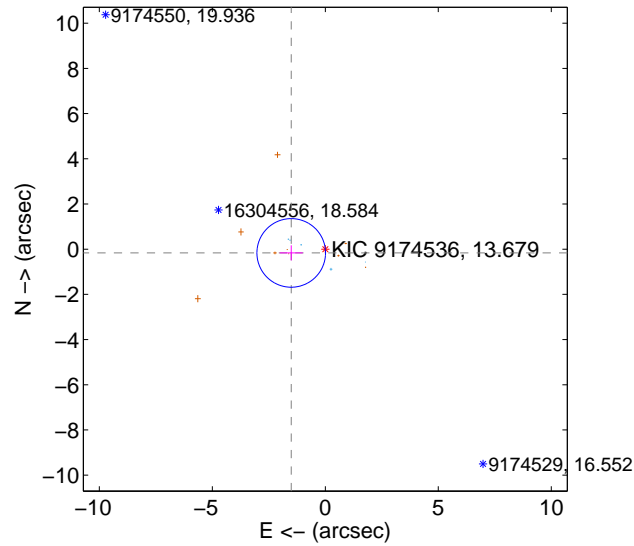
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.682 ± 0.532	3.16	1.681 ± 0.532	-0.027 ± 0.351
PRF-fit source offset from KIC position	1.517 ± 0.506	3.00	1.508 ± 0.511	-0.166 ± 0.335
photometric centroid source offset	2.76 ± 2.05	1.34	0.85 ± 1.99	-2.63 ± 2.06

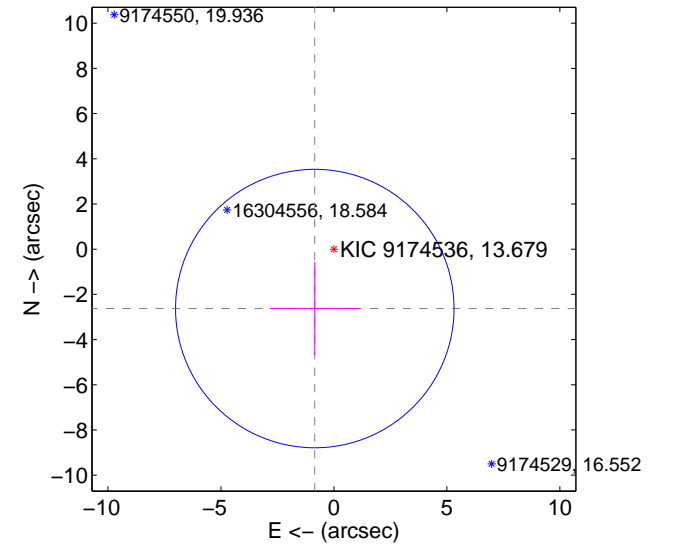
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

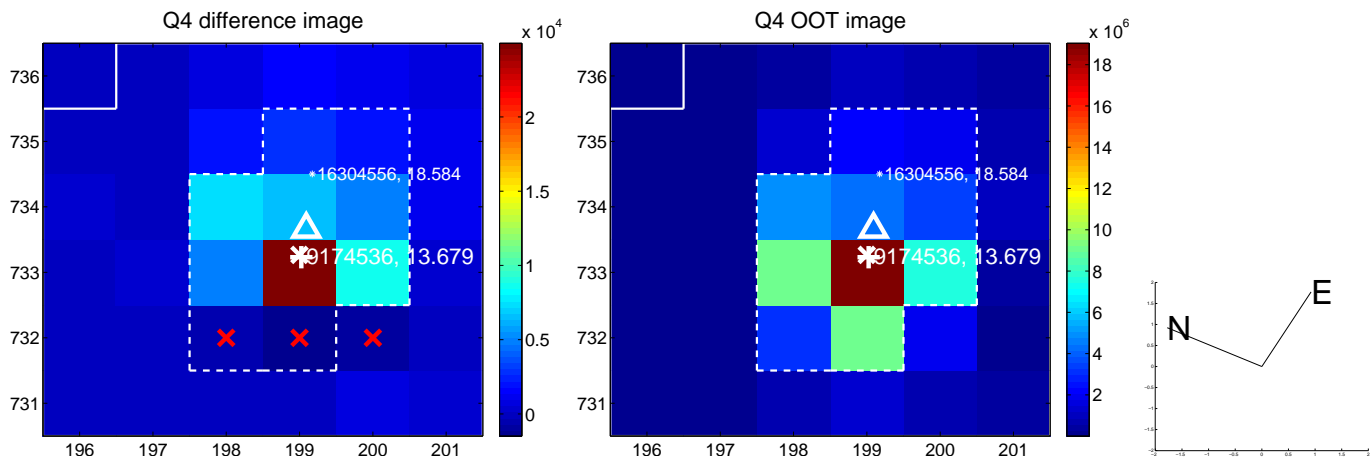
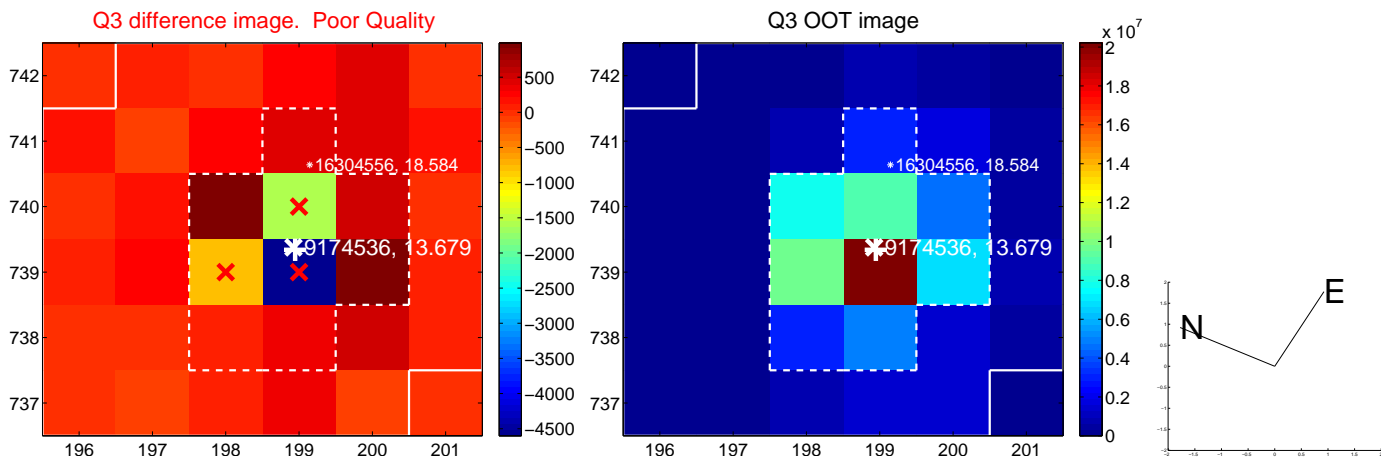
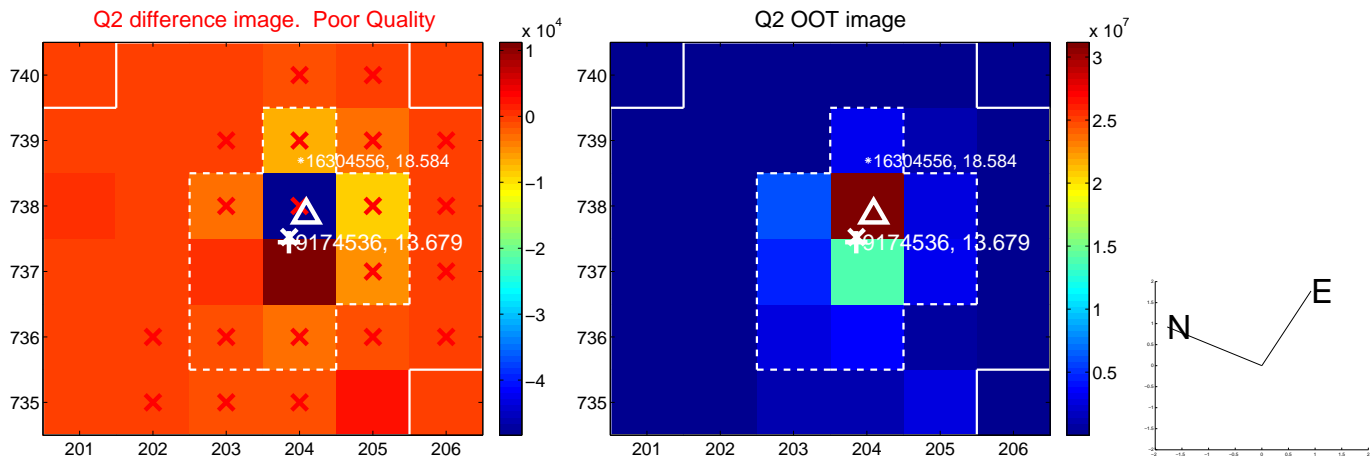
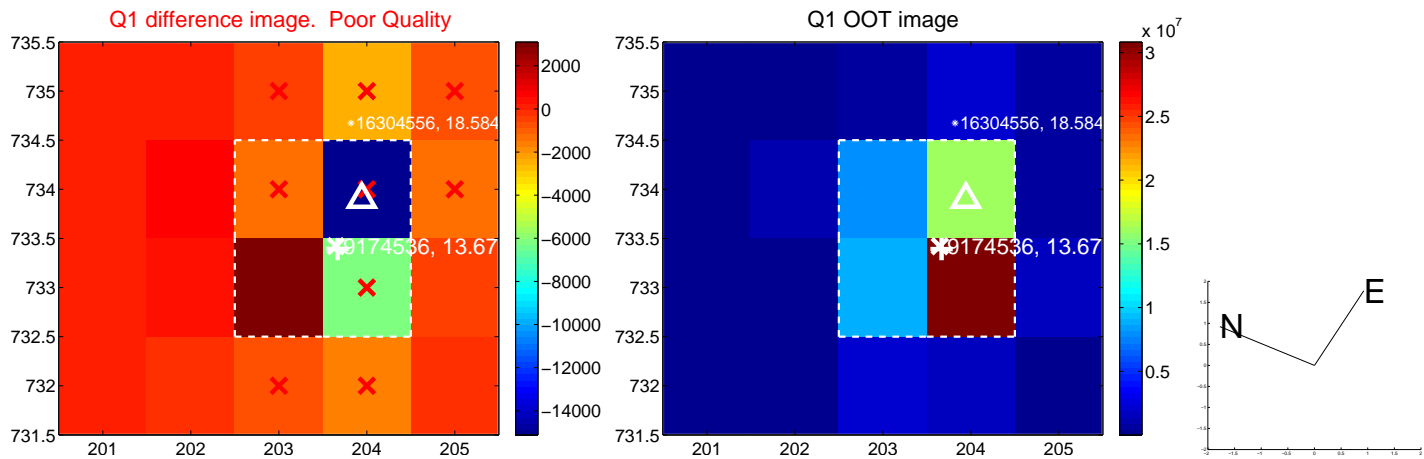


offset from photometric centroids

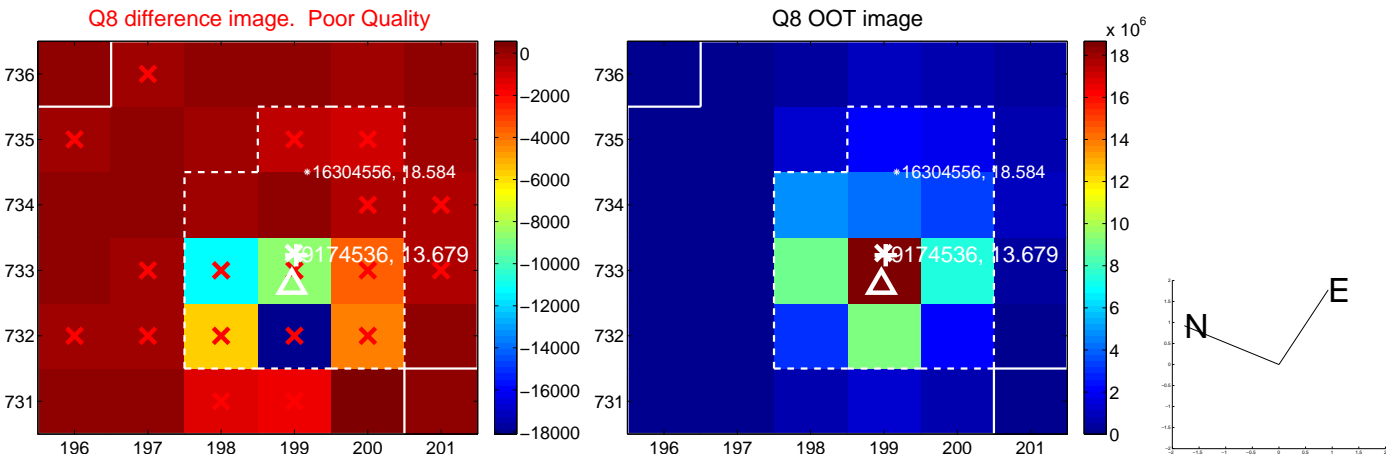
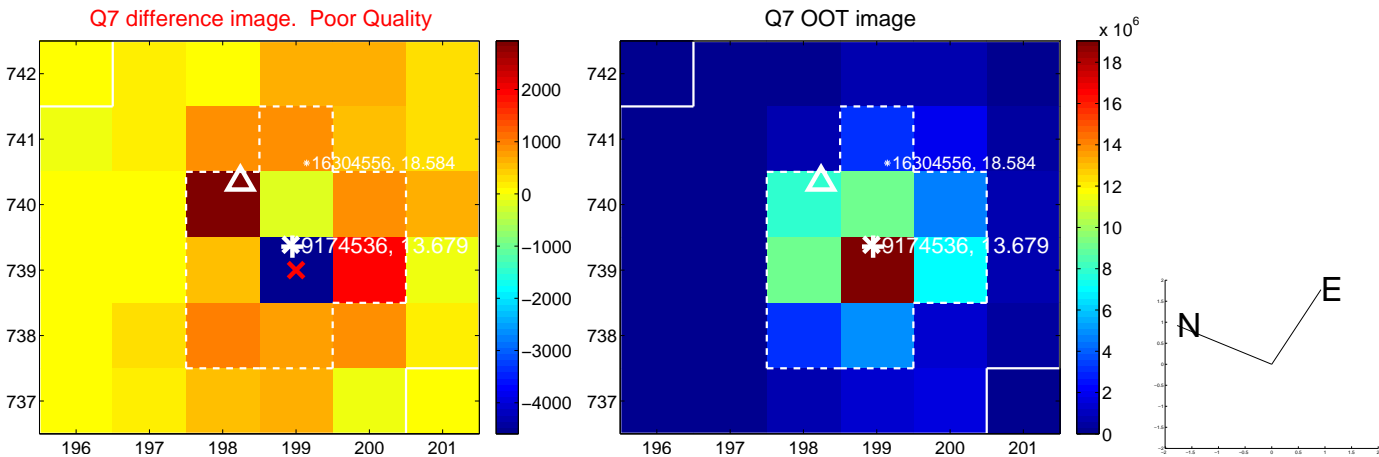
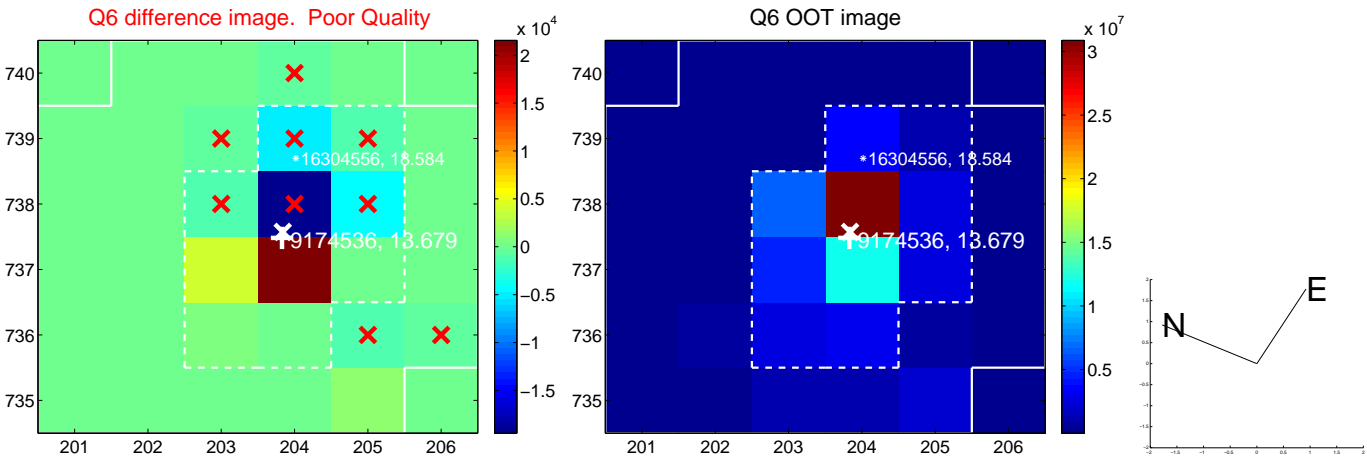
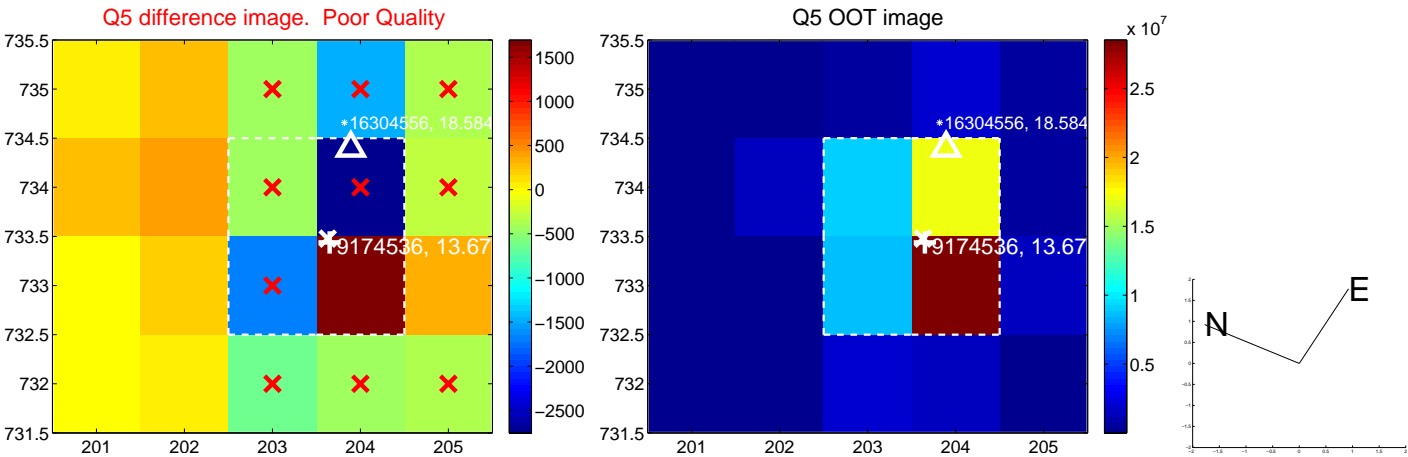


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

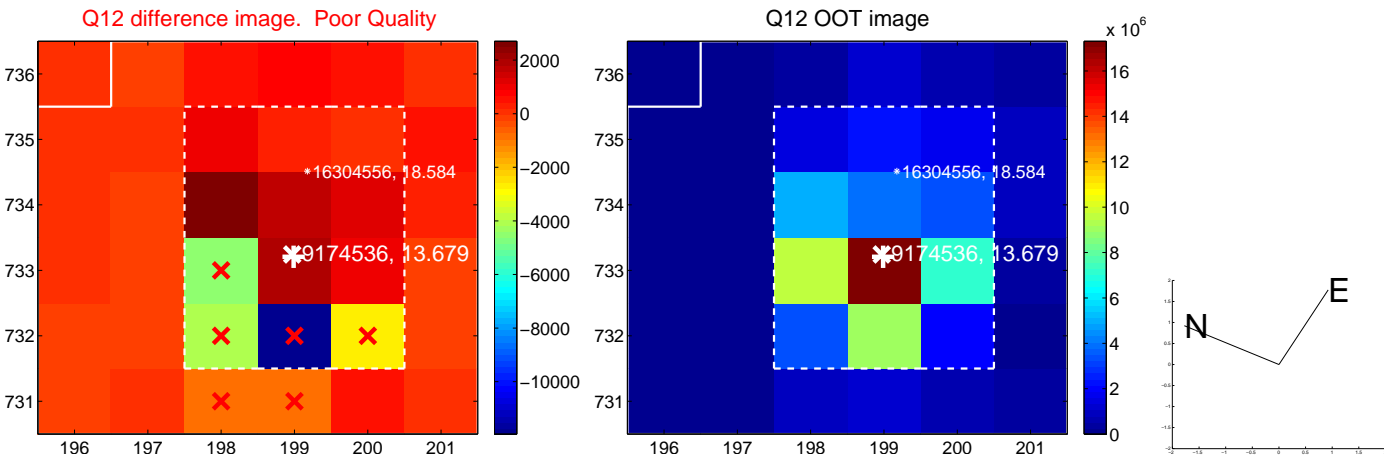
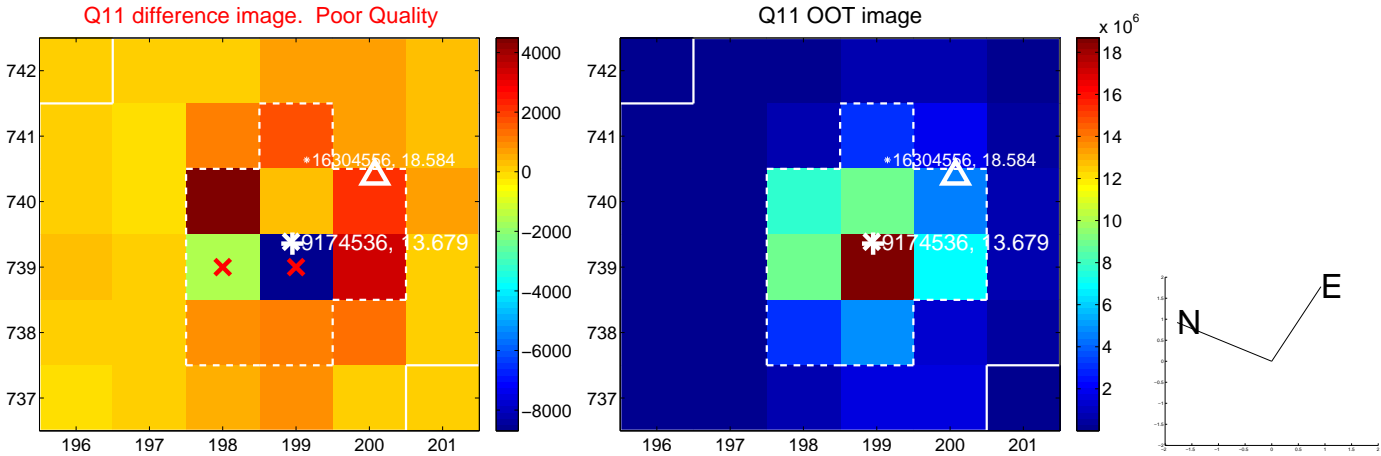
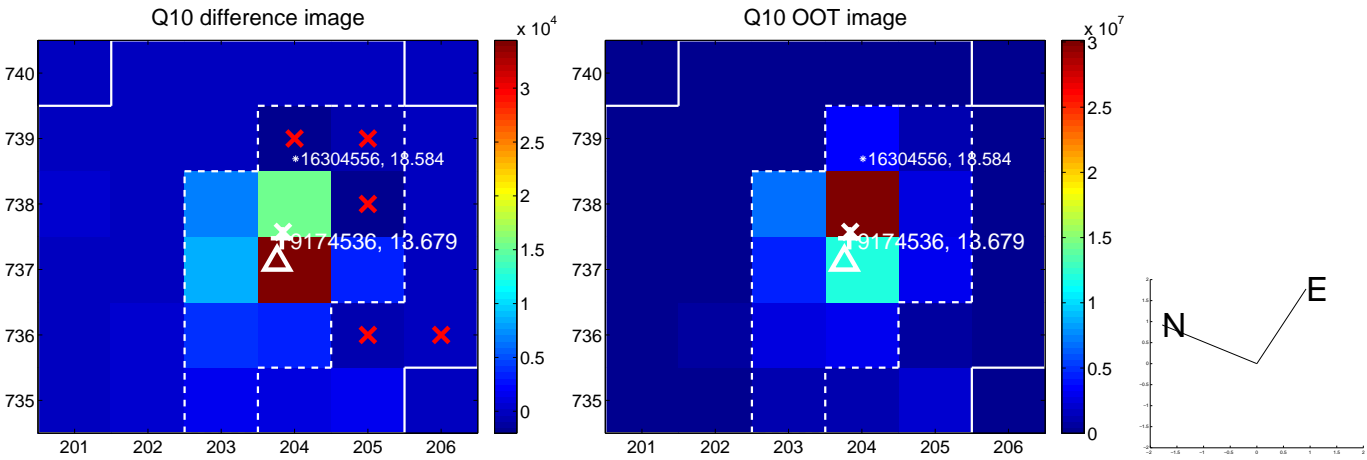
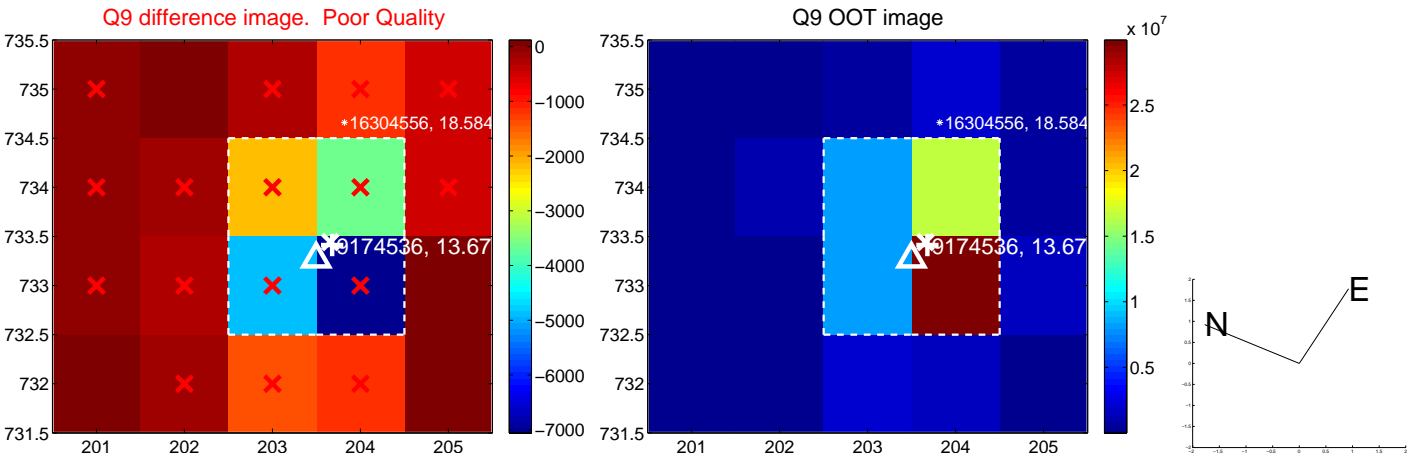
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



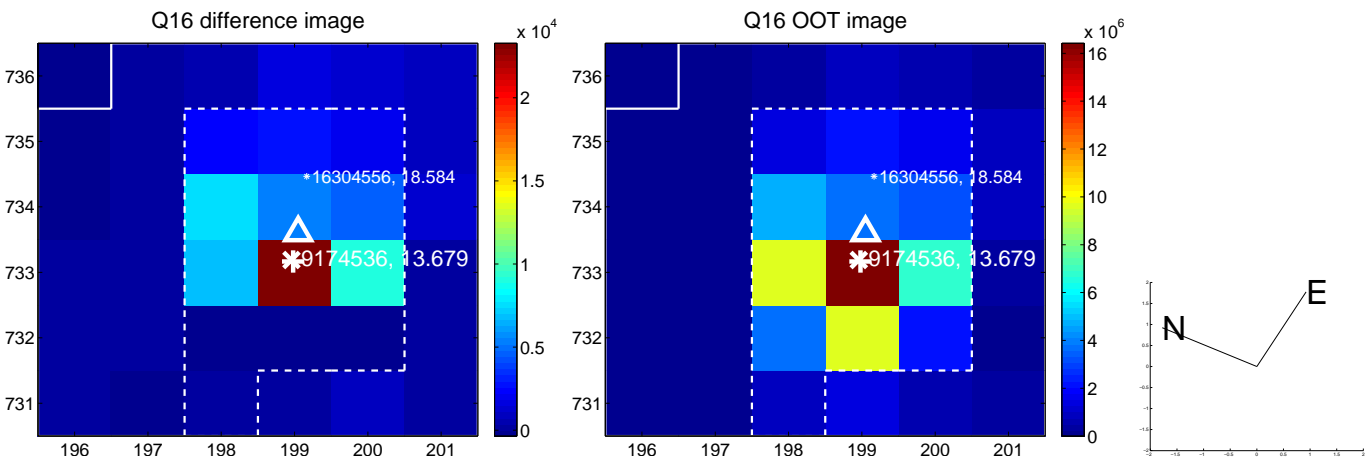
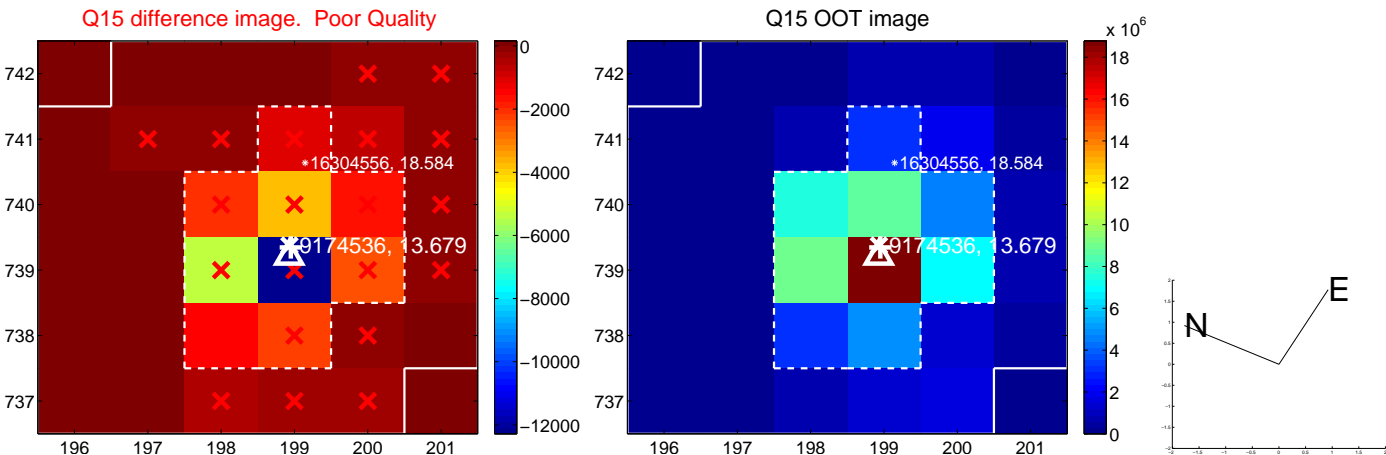
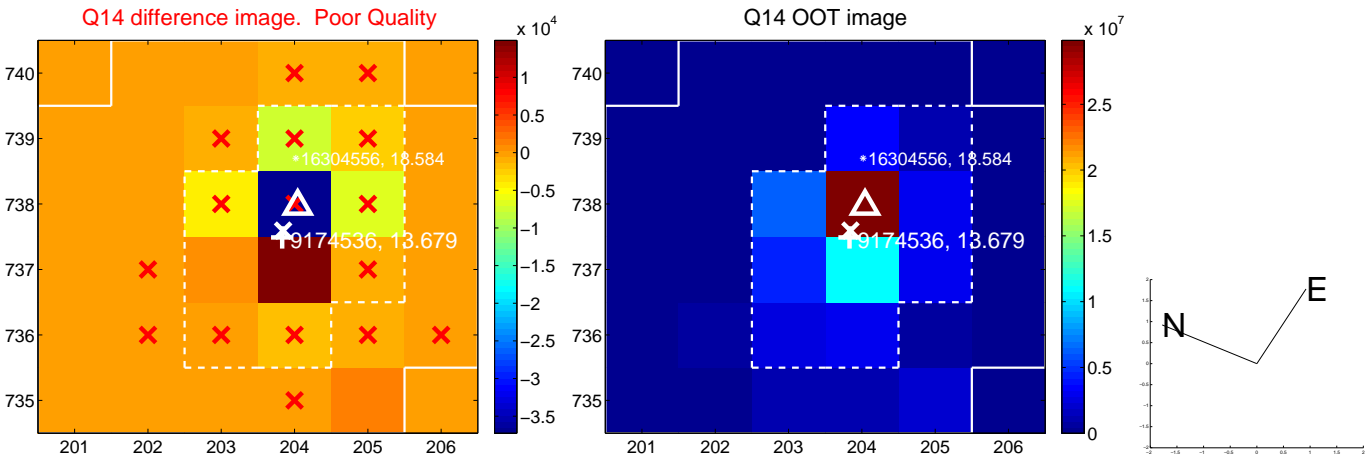
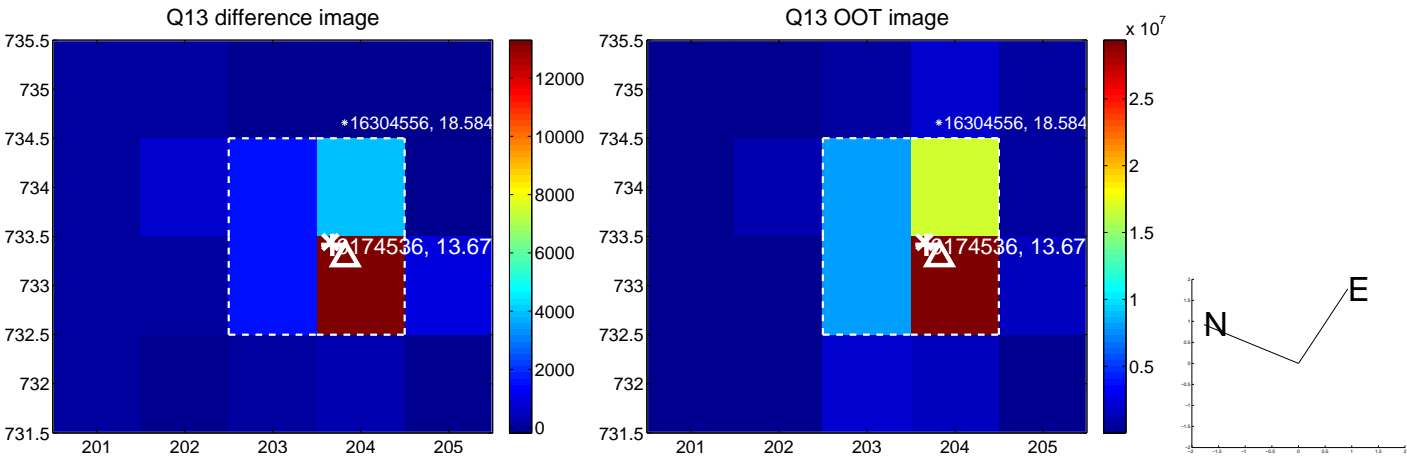
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



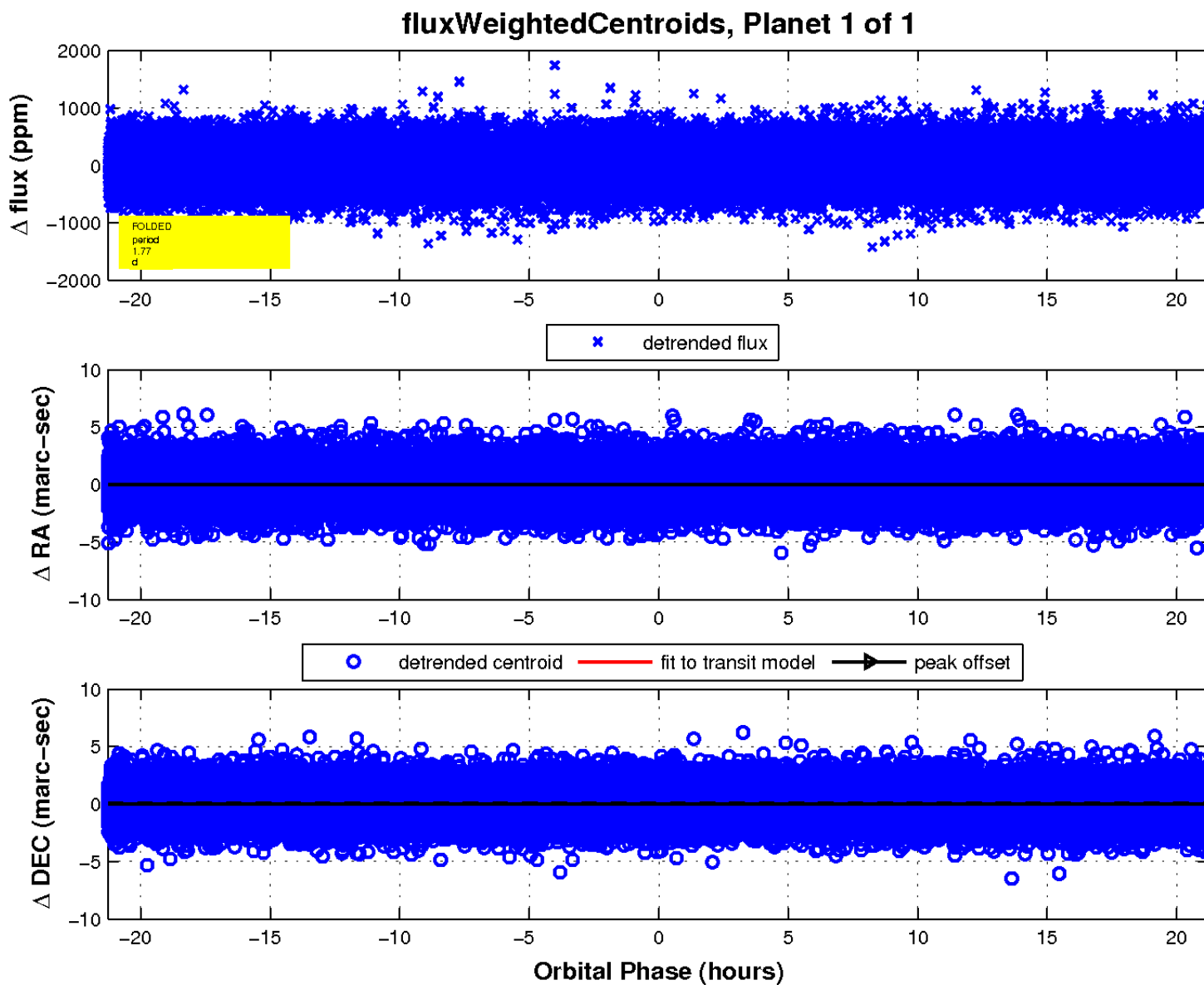
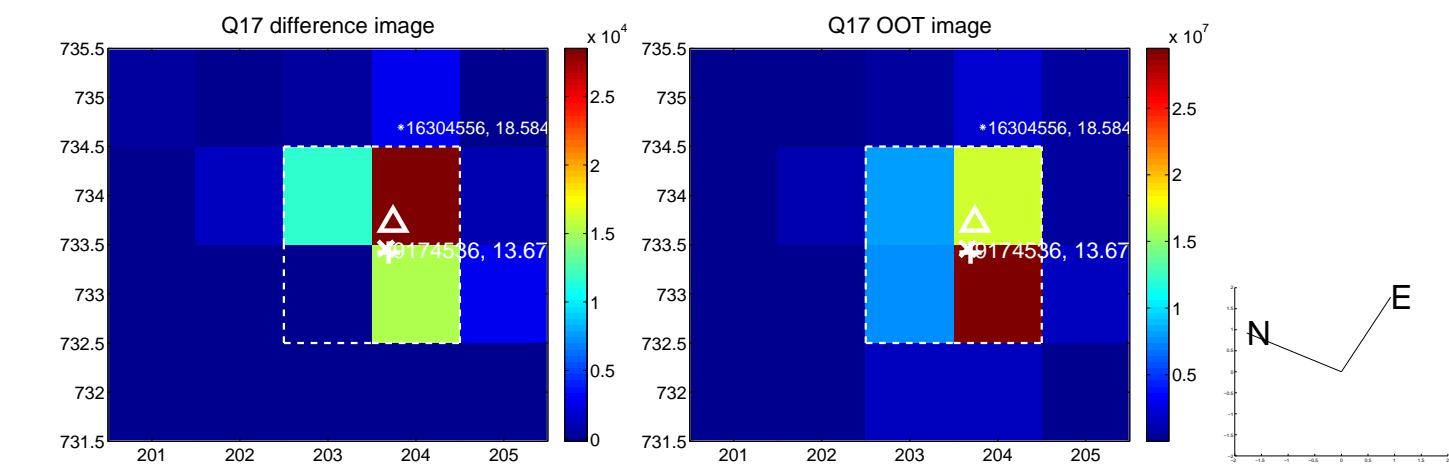
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

