

KIC 006631721

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})
006631721-01	OBS	0160.01	13.738080	134.437919	659.6	3.361	63.5	65.4	1.18	6375	3.78	163.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006631721-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

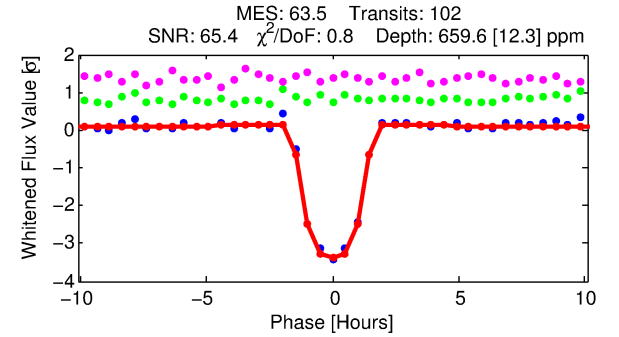
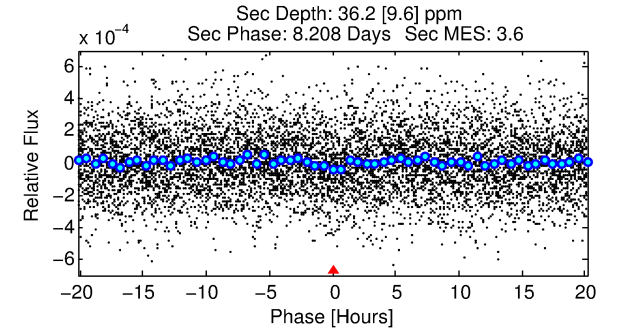
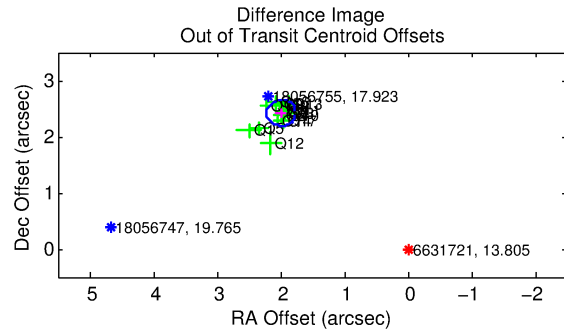
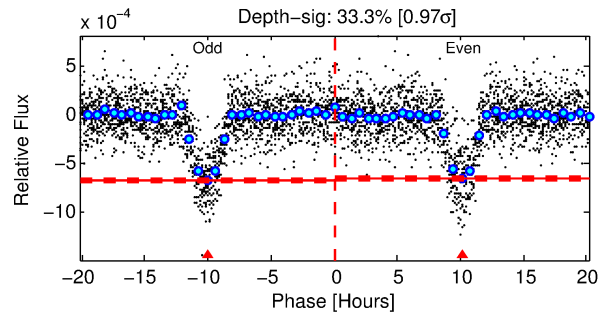
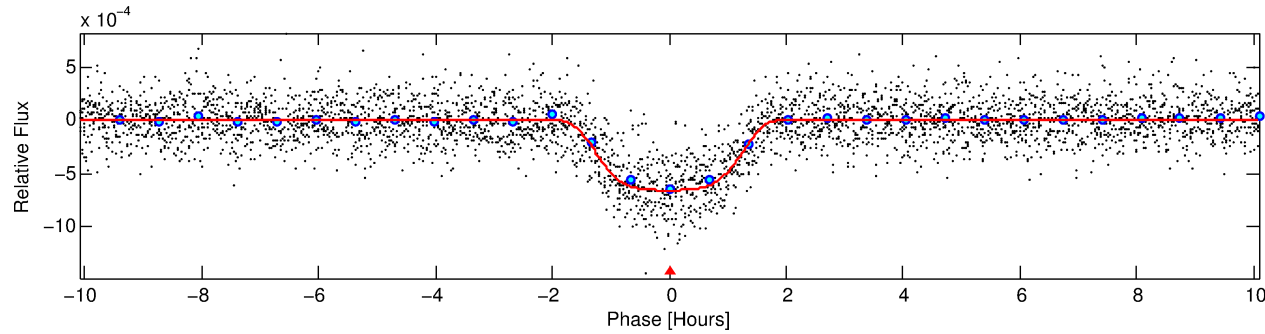
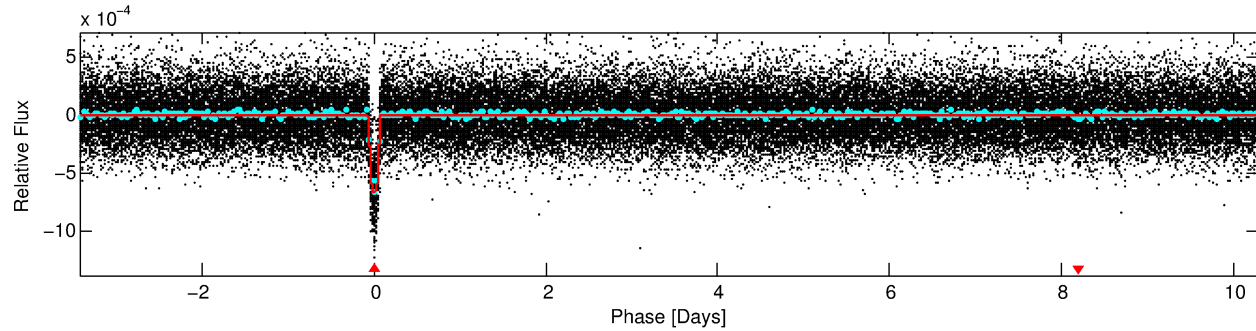
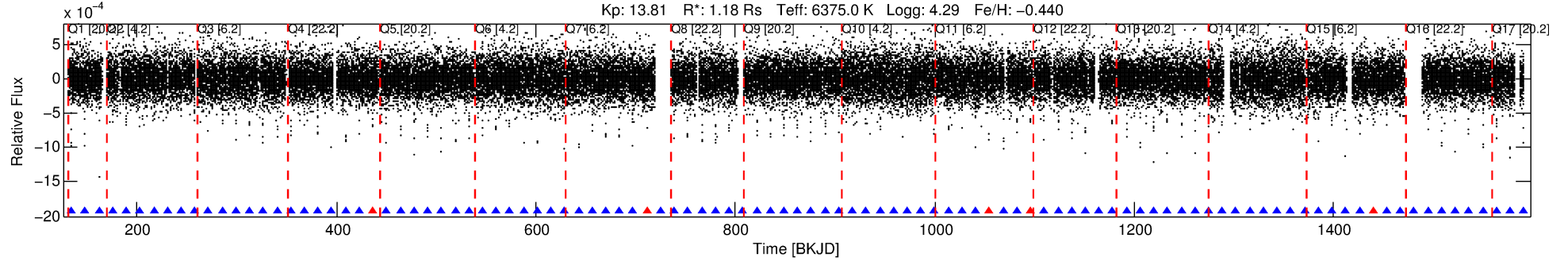
Ephemeris Match Information For 006631721-01

No Significant Match Found

DV One-Page Summary

KIC: 6631721 Candidate: 1 of 1 Period: 13.738 d

KOI: K00160.01 Corr: 0.996



DV Fit Results:

Period = 13.73808 [0.00002] d
Epoch = 134.4379 [0.0012] BKJD
Rp/R* = 0.0294 [0.0005]
a/R* = 12.03 [0.60]
b = 0.96 [0.00]
Seff = 163.81 [59.33]
Teq = 912 [83] K
Rp = 3.78 [1.08] Re
a = 0.1120 [0.0264] AU
Ag = 17.45 [7.51] [2.19 σ]
Teffp = 2883 [214] K [8.59 σ]

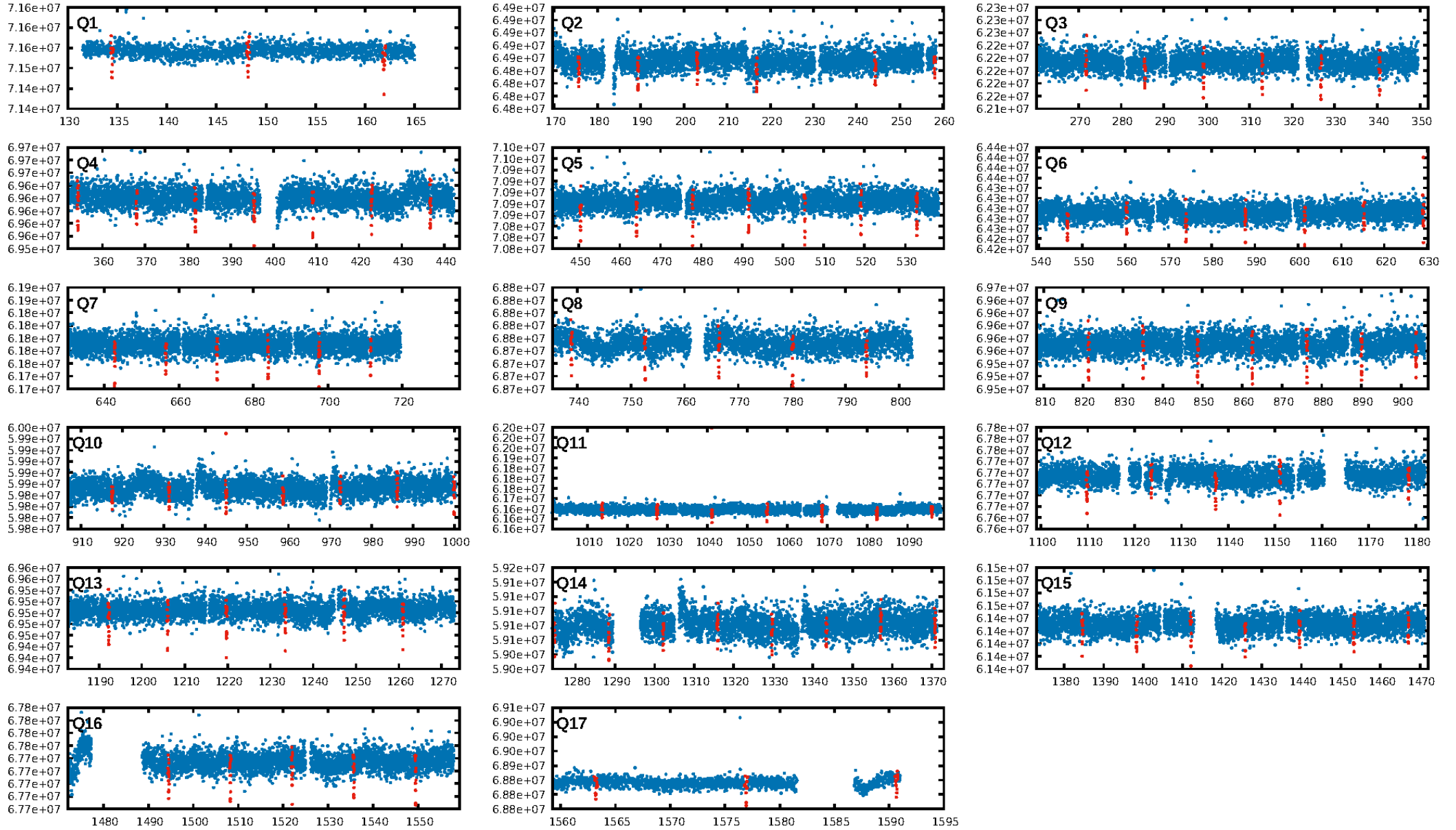
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.95 [91/96]
GhostDiagnostic-chr: 1.171
Centroid-sig: 0.0%
Centroid-so: 3.975 arcsec [20.47 σ]
OotOffset-rm: 3.133 arcsec [41.29 σ]
KicOffset-rm: 3.470 arcsec [45.58 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]

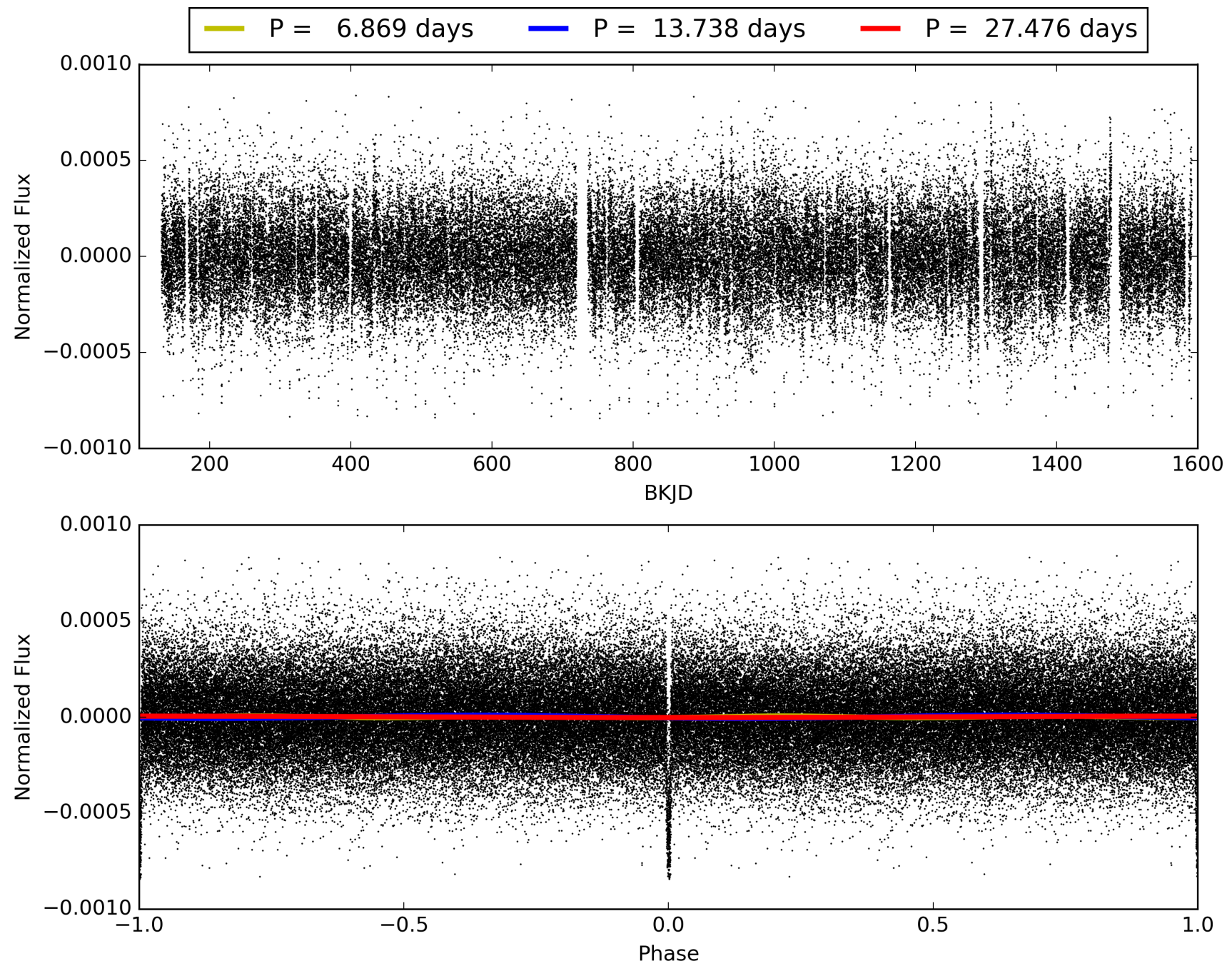
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:33:49 Z

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

TCE 006631721-01, PDC Light Curves

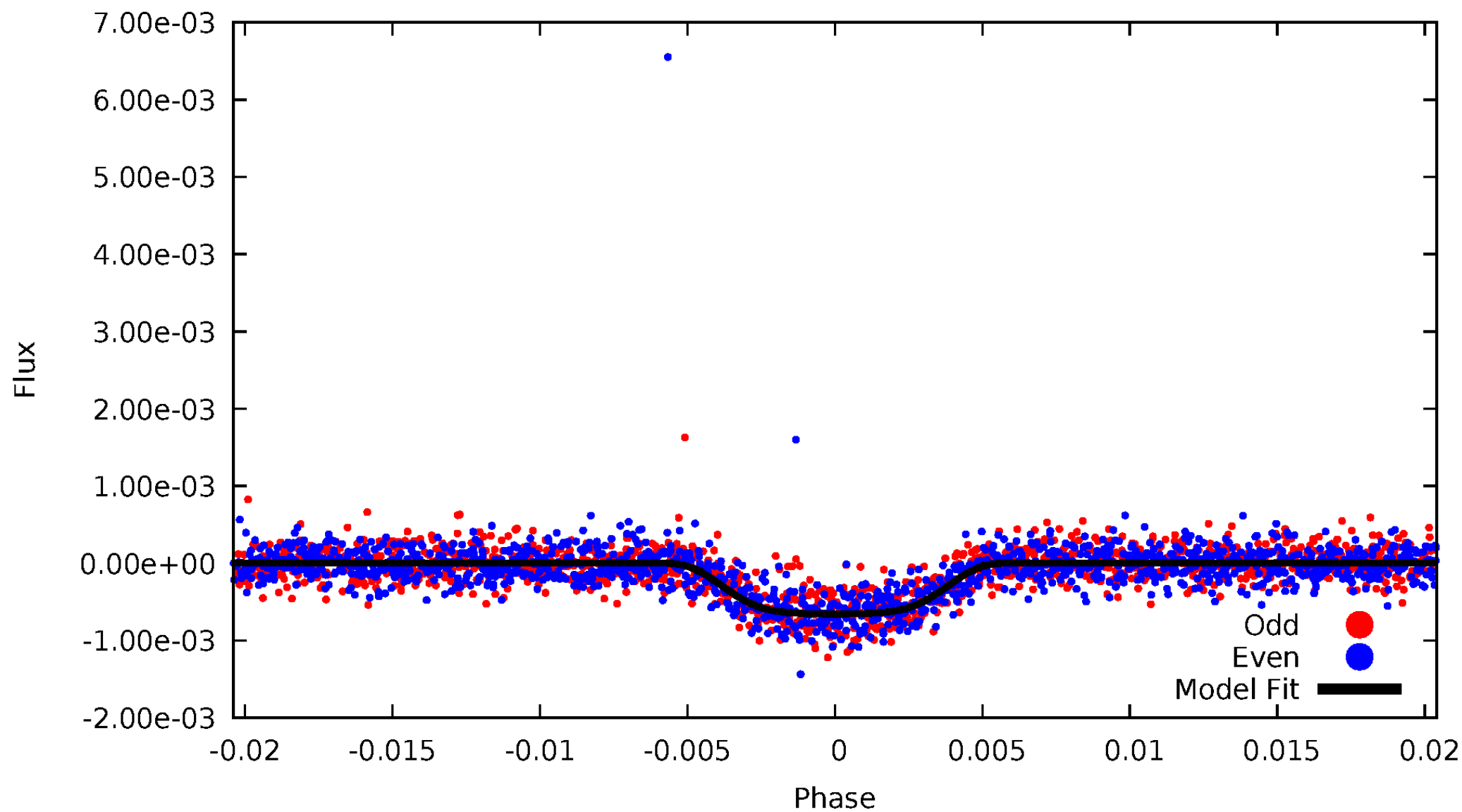


TCE 006631721-01



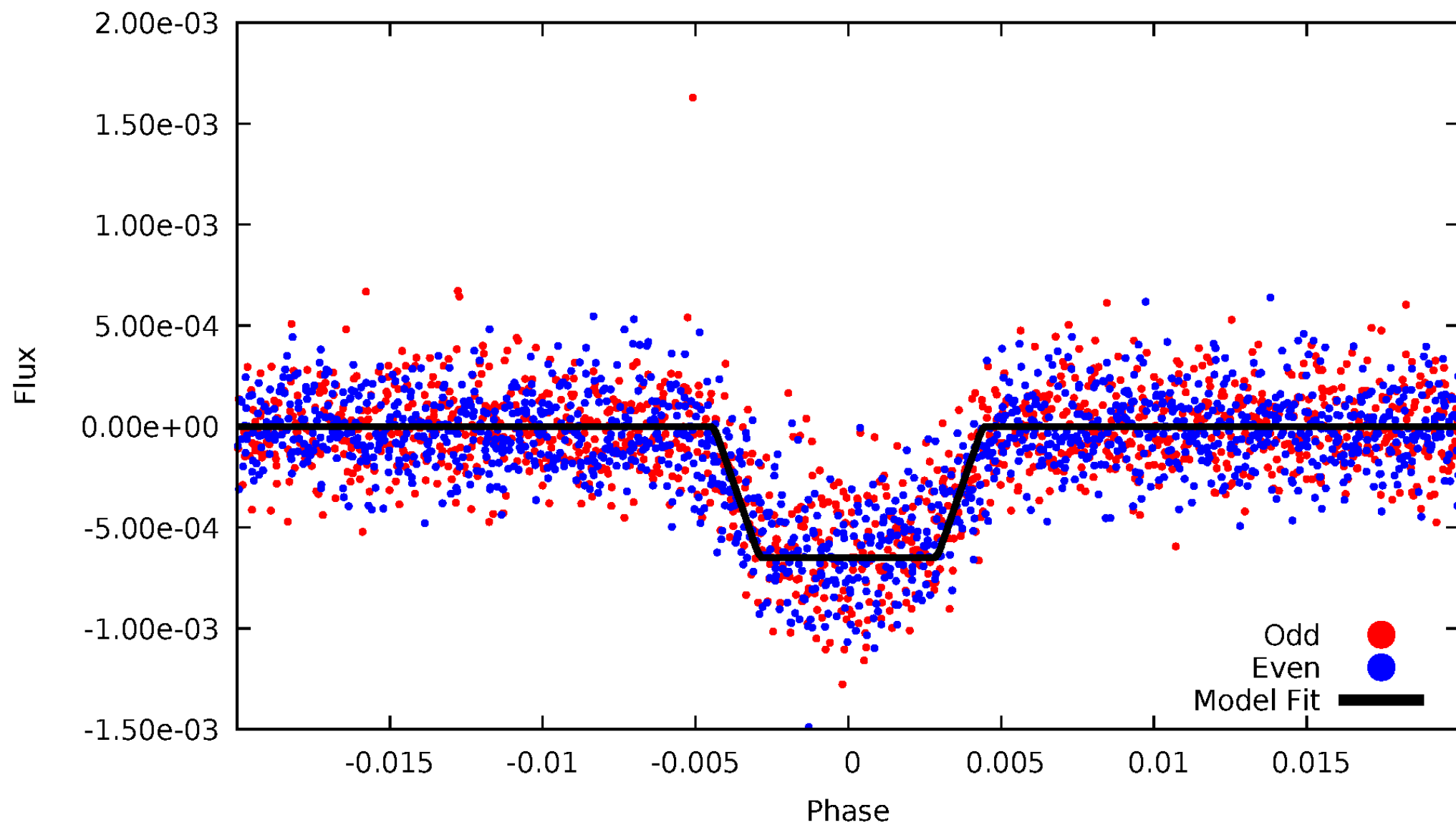
DV Odd/Even

TCE 006631721-01



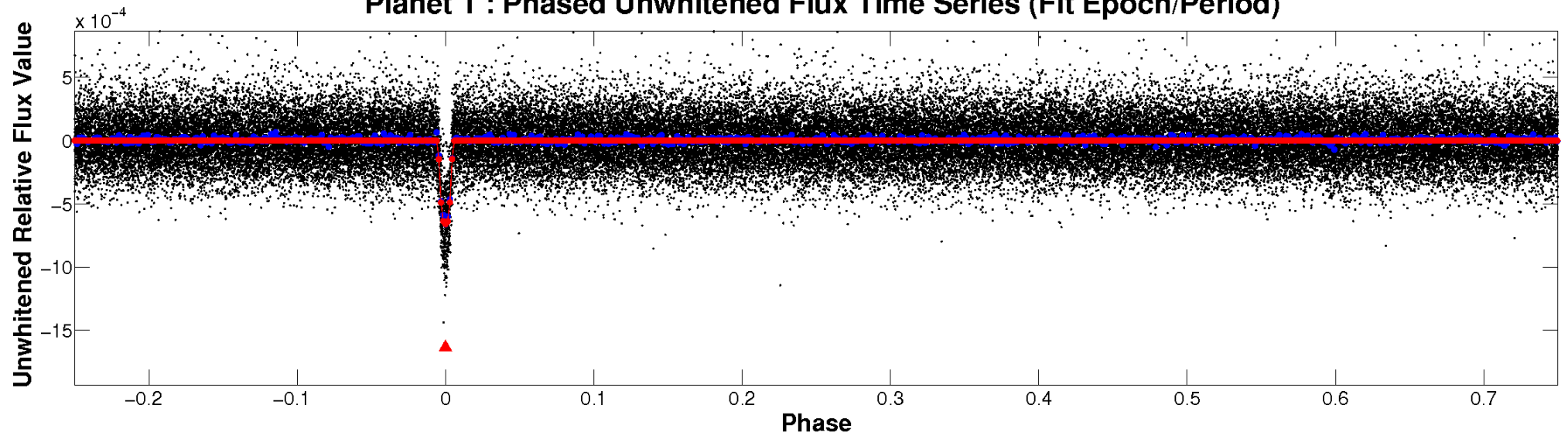
ALT Odd/Even

TCE 006631721-01

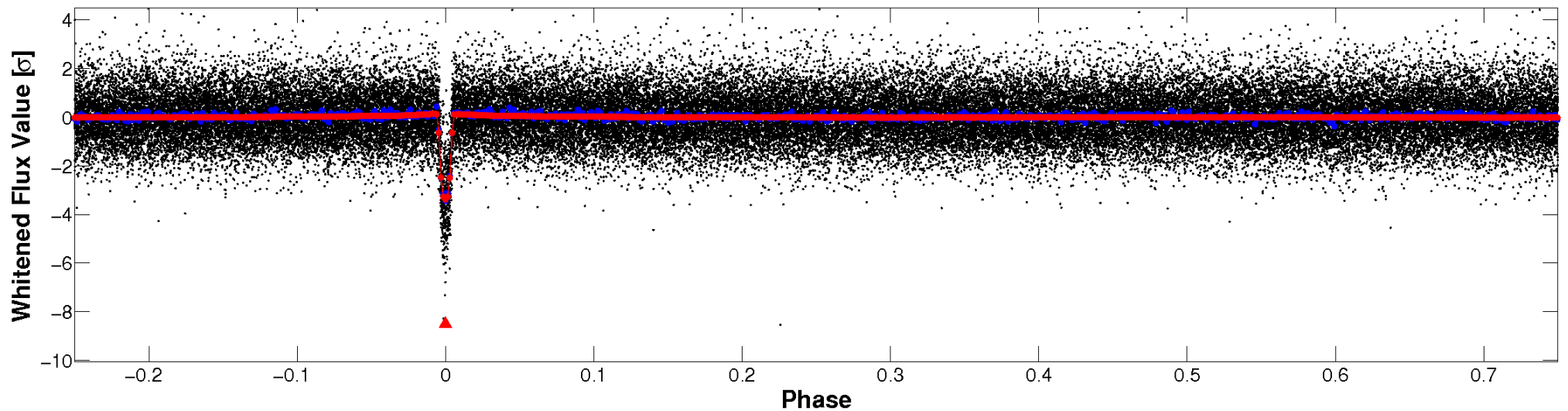


Non-Whitened Vs. Whitened Light Curve

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

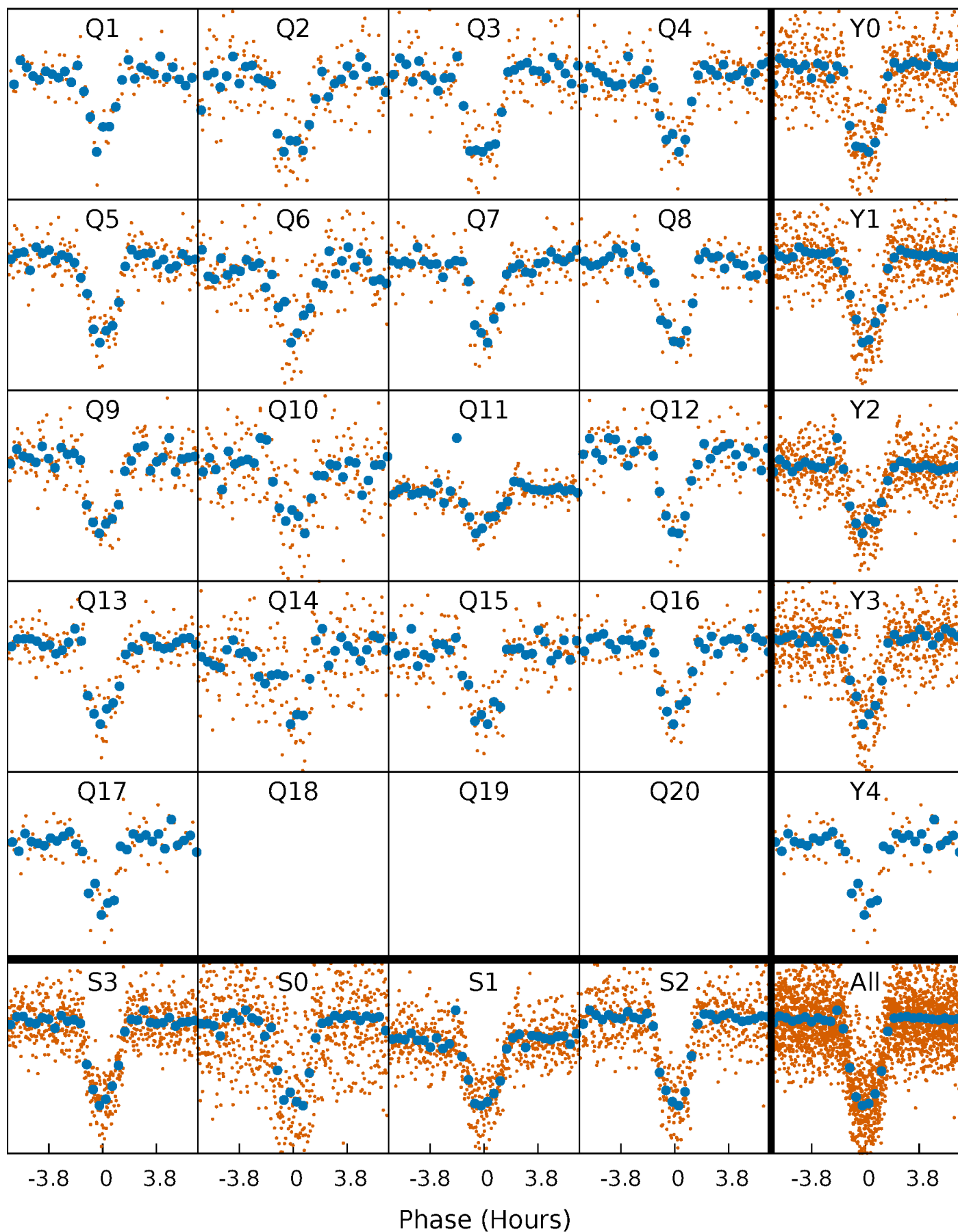


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



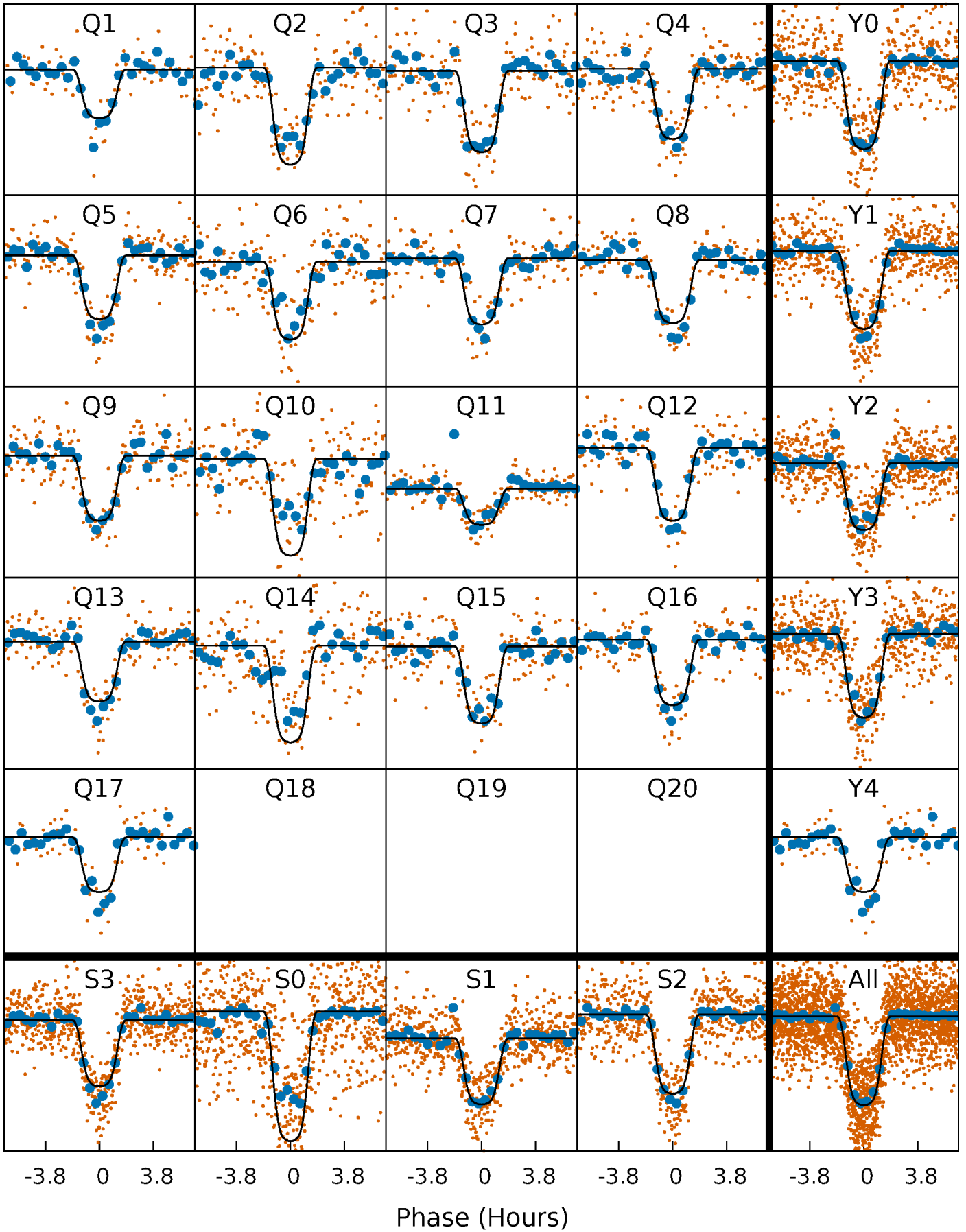
PDC Quarter-Phased Transit Curves

TCE 006631721-01 P= 13.738080 Days $T_0=134.437919$ (BKJD)



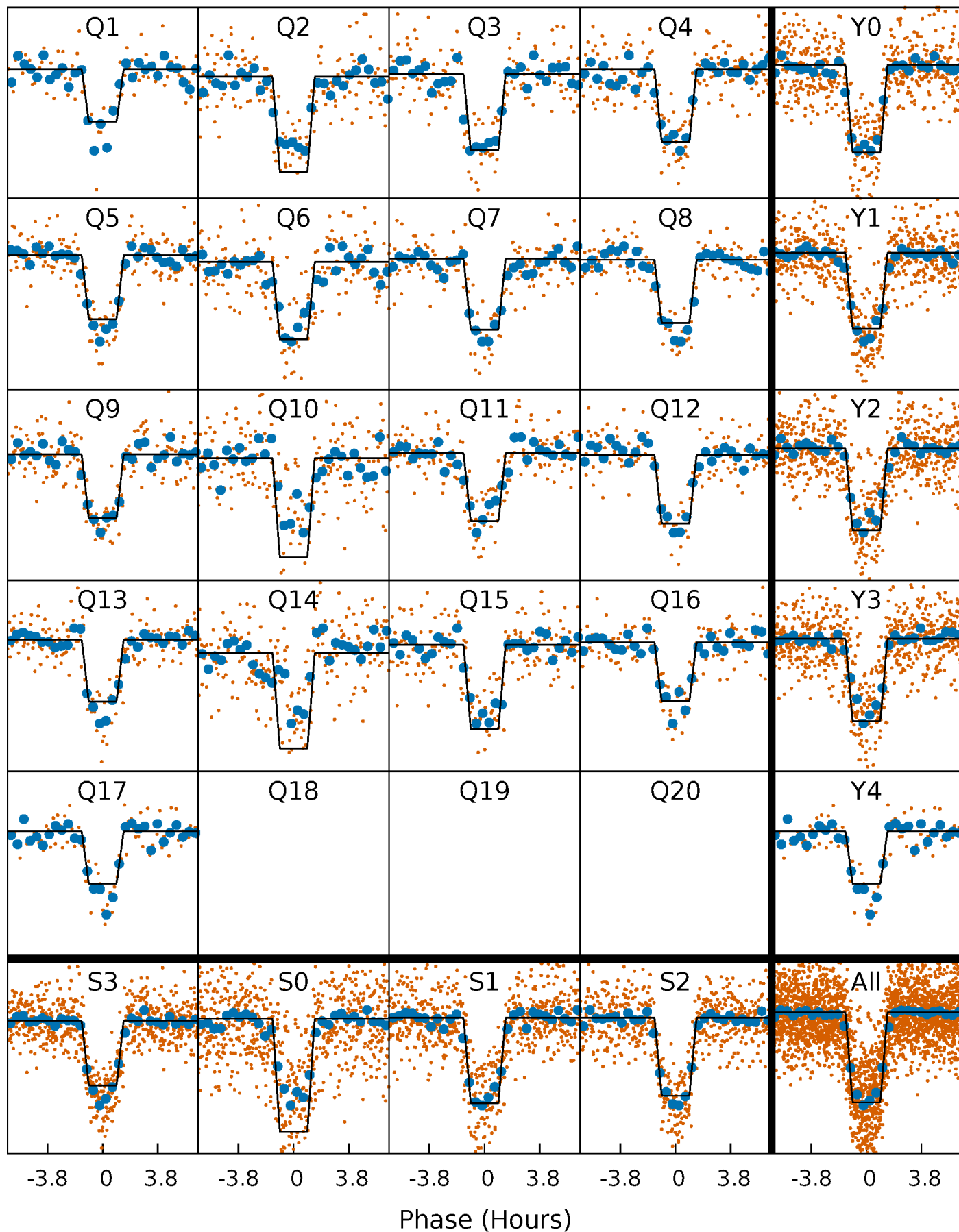
DV Quarter-Phased Transit Curves

TCE 006631721-01 P= 13.738080 Days $T_0=134.437919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

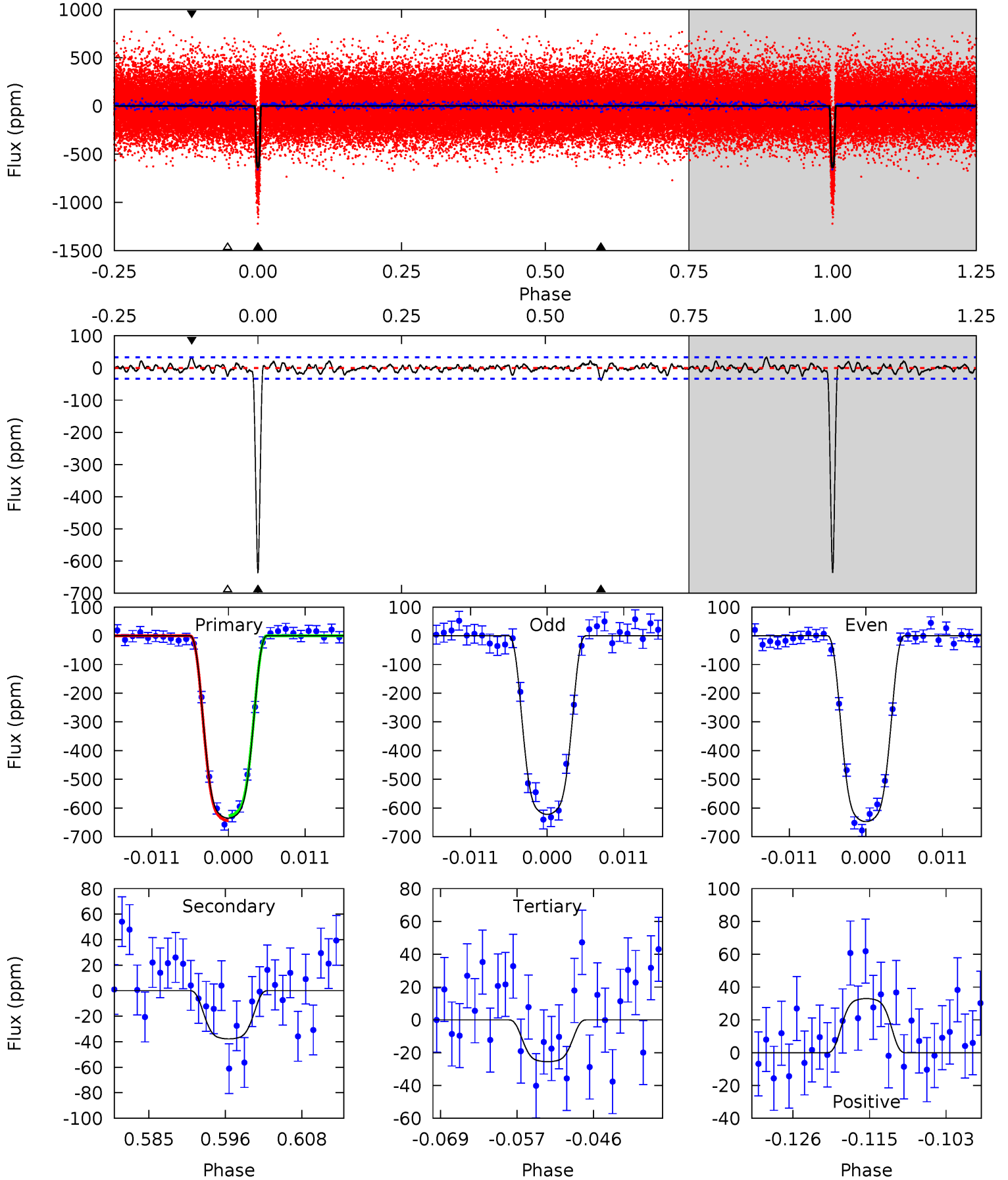
TCE 006631721-01 P= 13.738049 Days $T_0=134.439699$ (BKJD)



DV Model-Shift Uniqueness Test

006631721-01, $P = 13.738080$ Days, $E = 120.699839$ Days

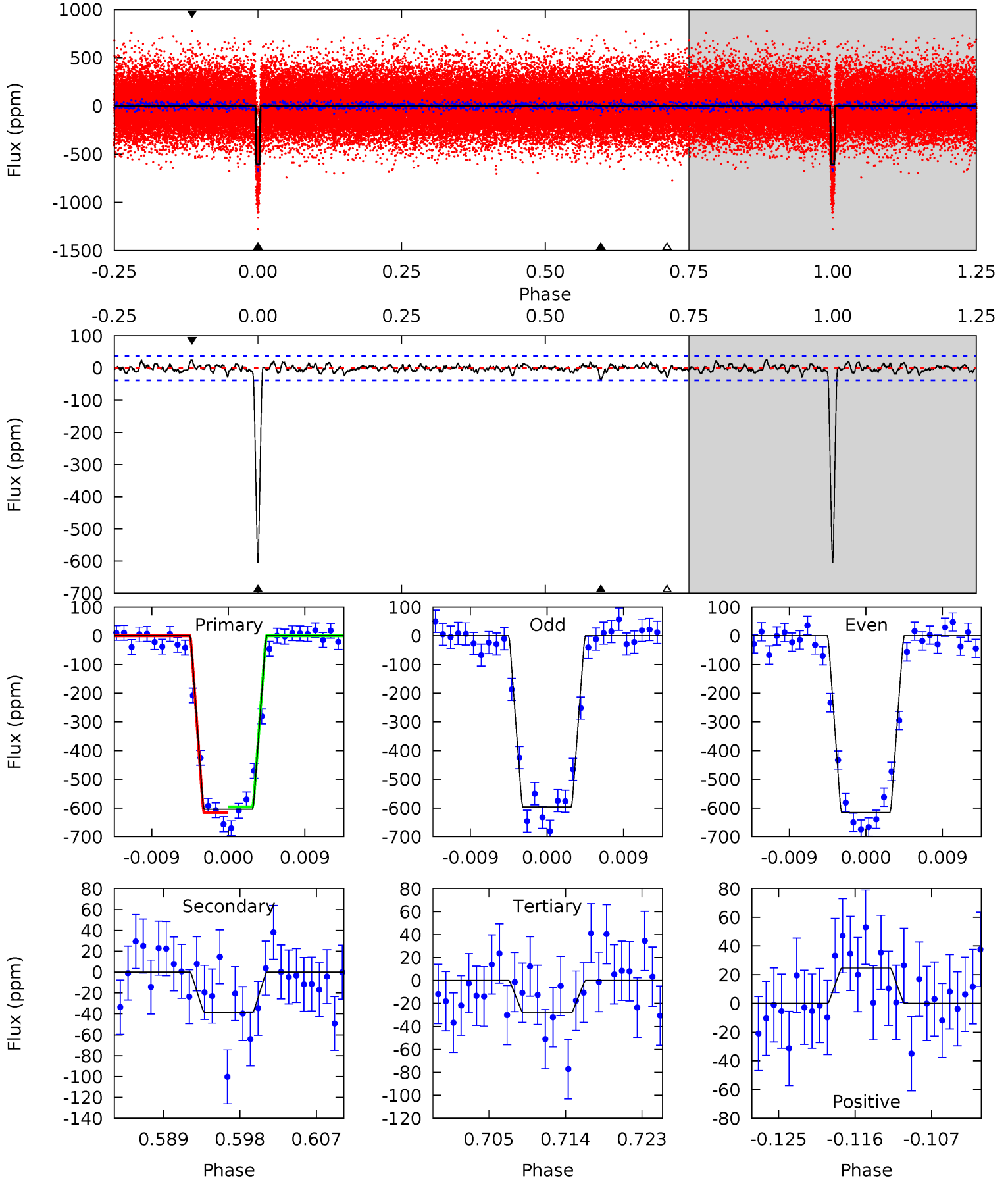
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
94.7	5.63	3.80	4.92	5.00	2.53	1.25	90.9	89.8	1.83	0.72	1.89	0.98	0.05	1.28



Alt Model-Shift Uniqueness Test

006631721-01, P = 13.738049 Days, E = 120.701650 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
79.8	5.07	3.70	3.25	5.05	2.61	1.06	76.1	76.6	1.37	1.82	1.26	0.95	0.04	1.30



Stellar Parameters For KIC 006631721

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6375^{+171}_{-209}	$4.292^{+0.149}_{-0.182}$	$-0.440^{+0.300}_{-0.300}$	$1.178^{+0.335}_{-0.223}$	$0.991^{+0.156}_{-0.099}$	$0.854^{+0.624}_{-0.422}$
	+3%/-3%	+3%/-4%	+68%/-68%	+28%/-19%	+16%/-10%	+73%/-49%
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 006631721-01 / KOI 0160.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-38 ± 7	$3.78^{+0.59}_{-0.35}$	1275^{+90}_{-77}	3413^{+115}_{-131}	18^{+6}_{-5}
Alt.	-38 ± 8	$3.31^{+0.48}_{-0.37}$	1276^{+92}_{-83}	3591^{+131}_{-148}	24^{+9}_{-7}

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

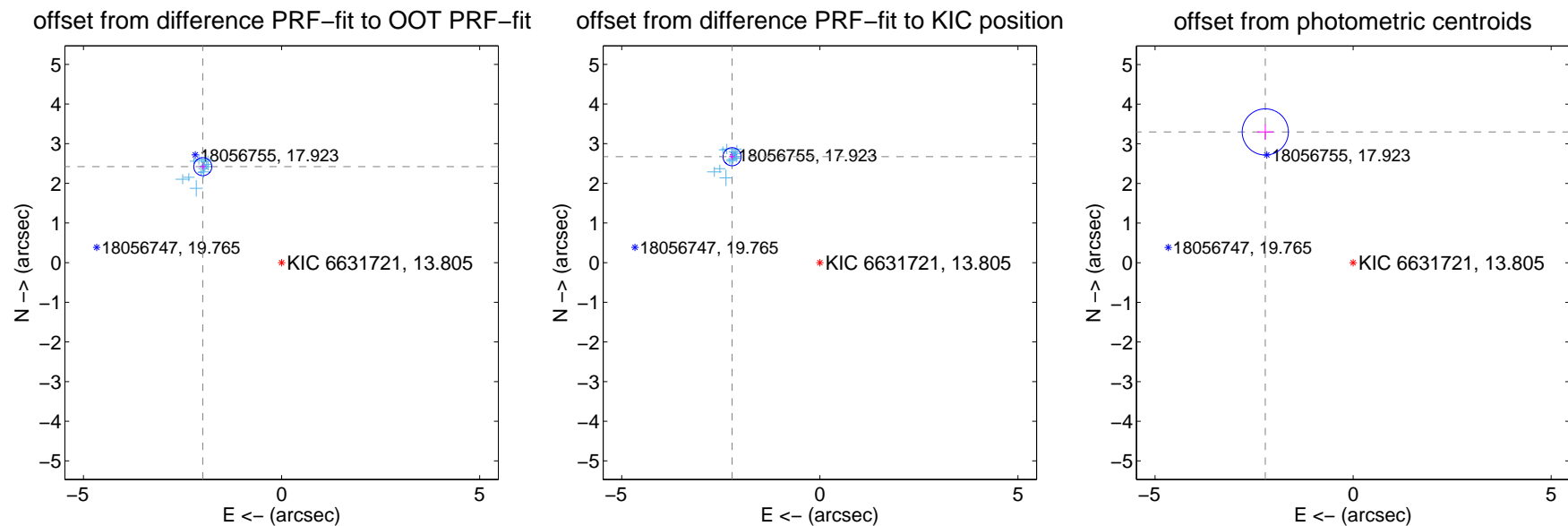
DV Centroid Data

Supplemental centroid analysis for 006631721-01. Kepler magnitude: 13.80. Transit SNR 65.44

There are 17 quarters with good PRF difference image offsets

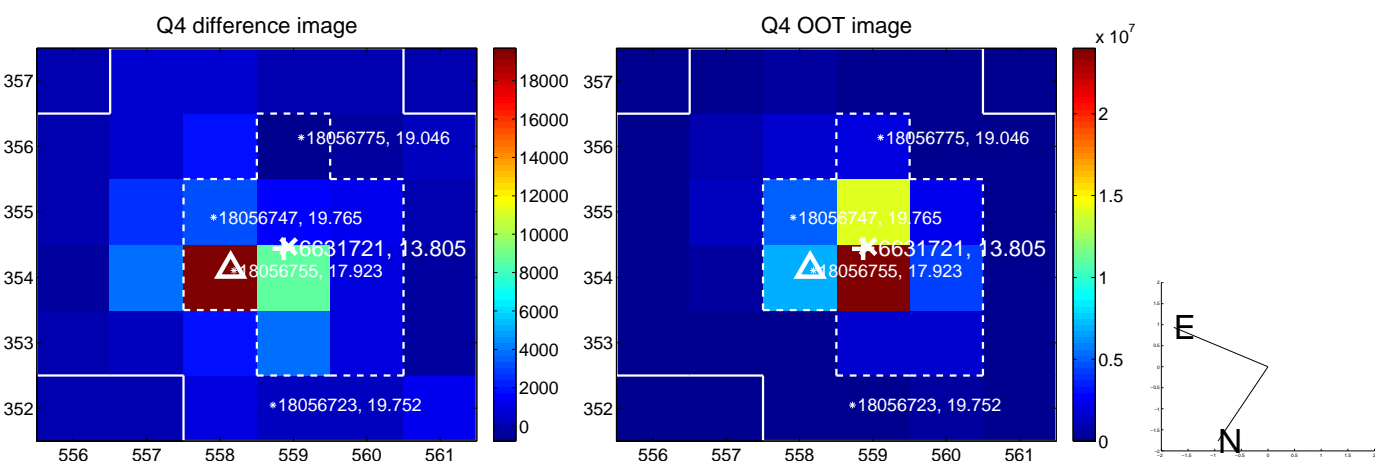
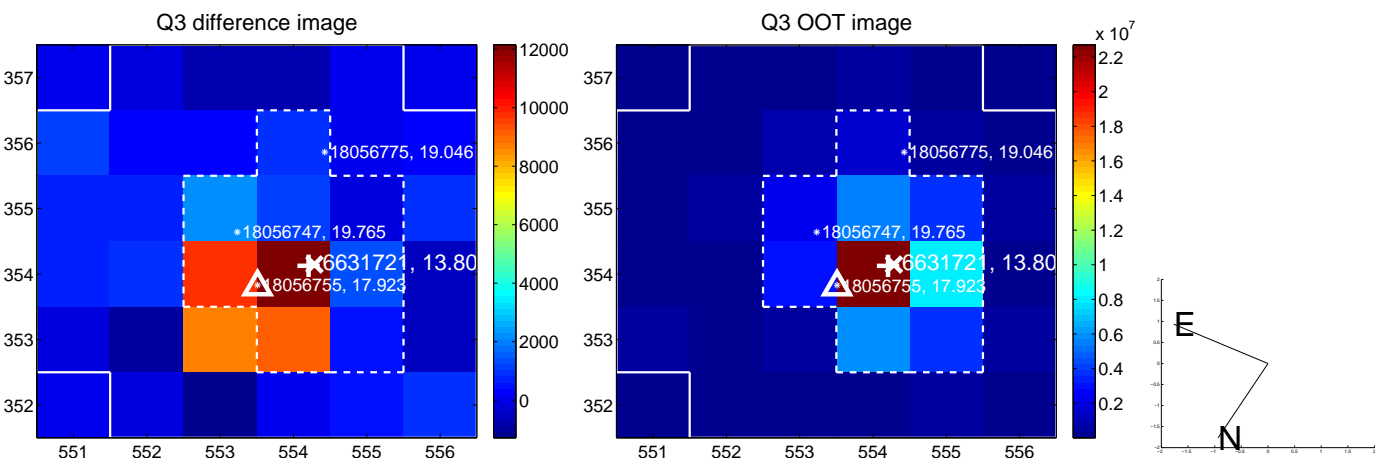
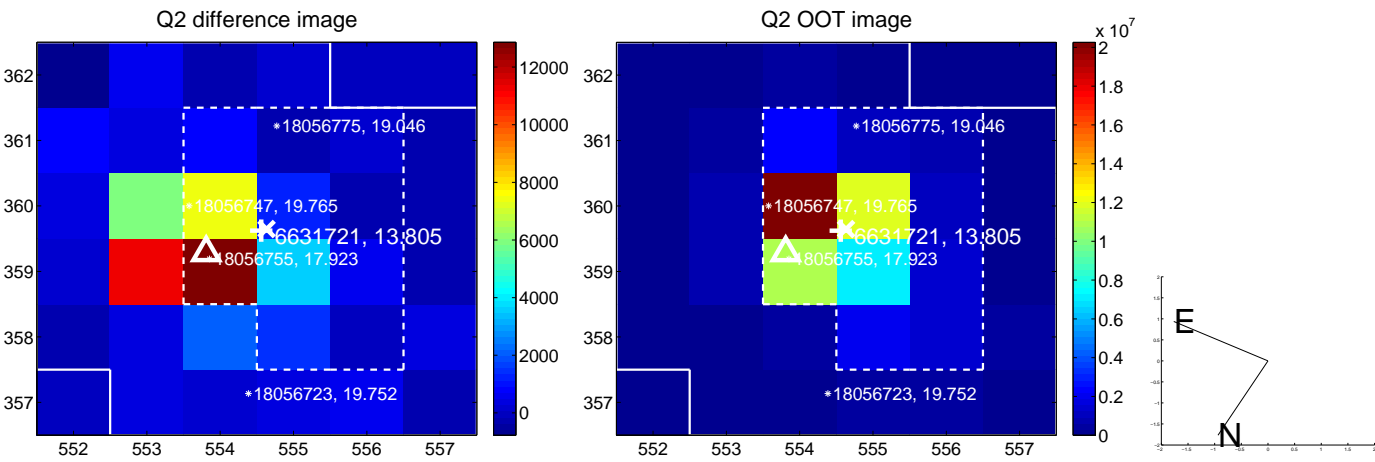
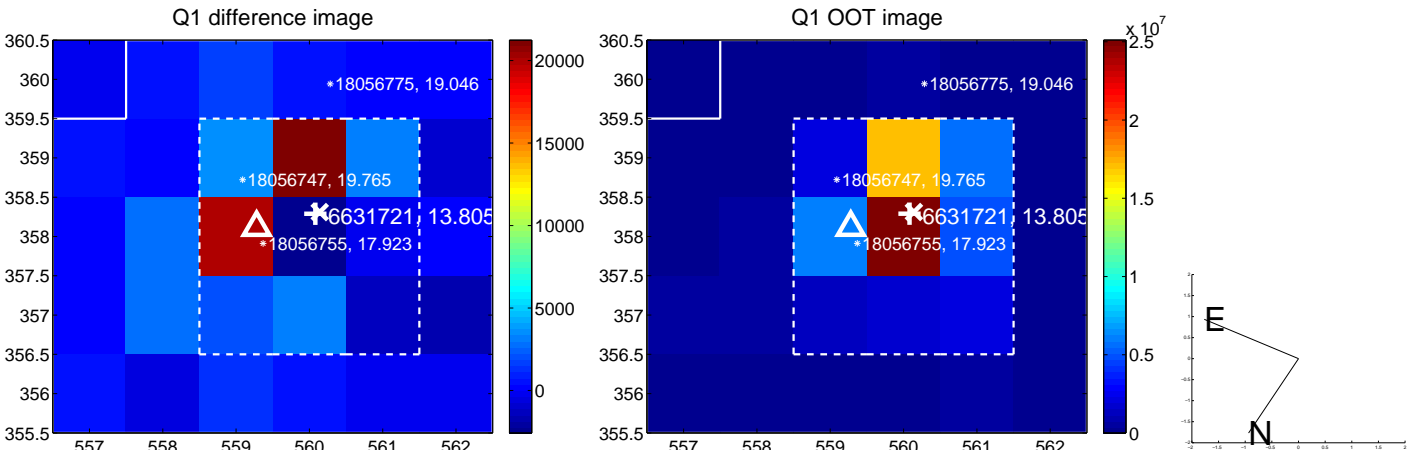
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.133 \pm 0.076	41.29	1.988 \pm 0.074	2.421 \pm 0.077
PRF-fit source offset from KIC position	3.470 \pm 0.076	45.58	2.215 \pm 0.074	2.671 \pm 0.078
photometric centroid source offset	3.97 \pm 0.19	20.47	2.22 \pm 0.20	3.30 \pm 0.19

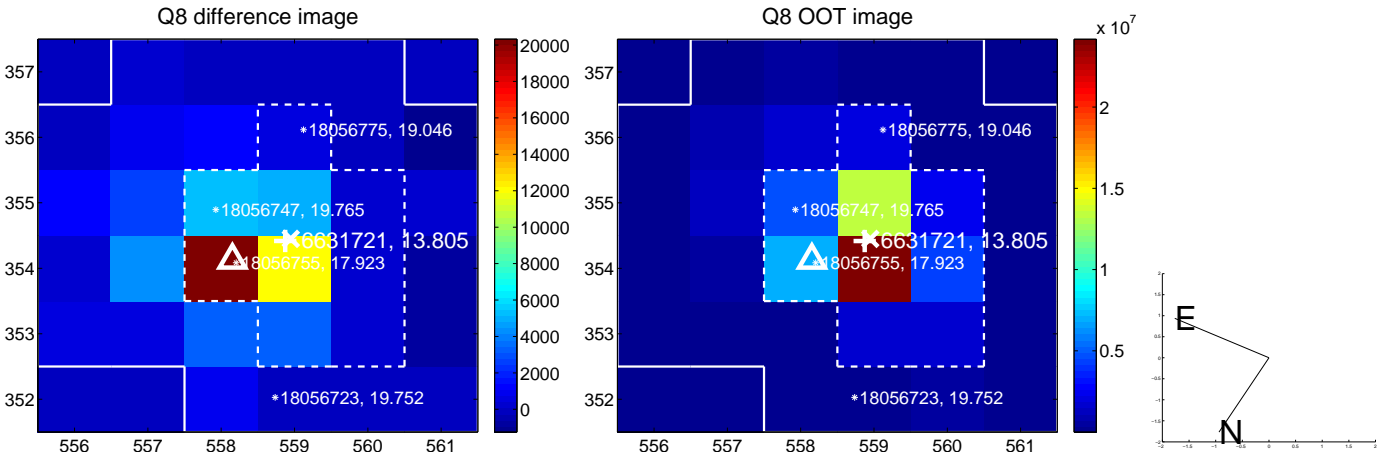
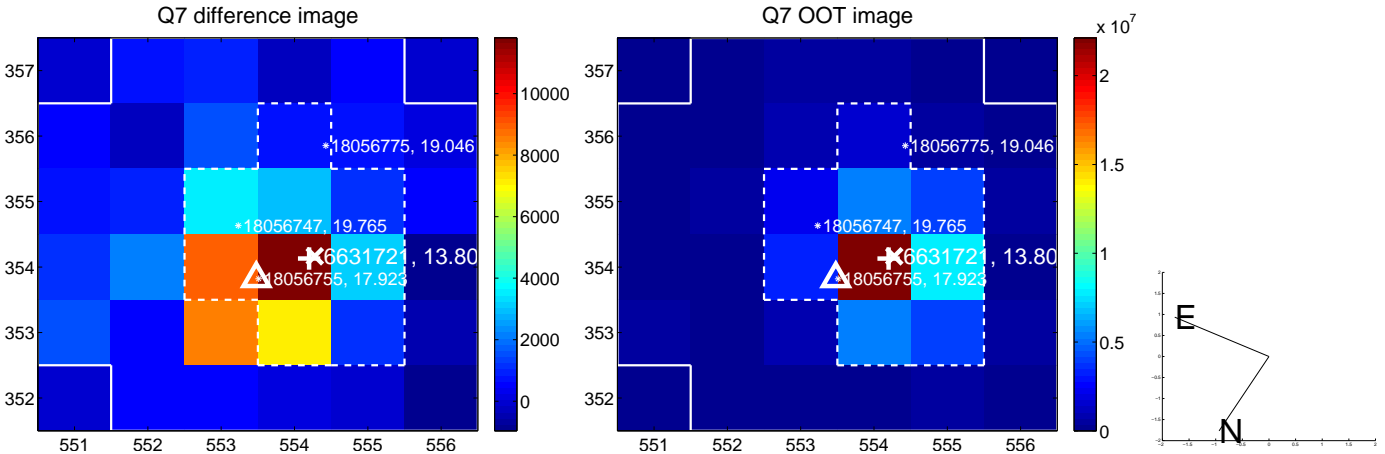
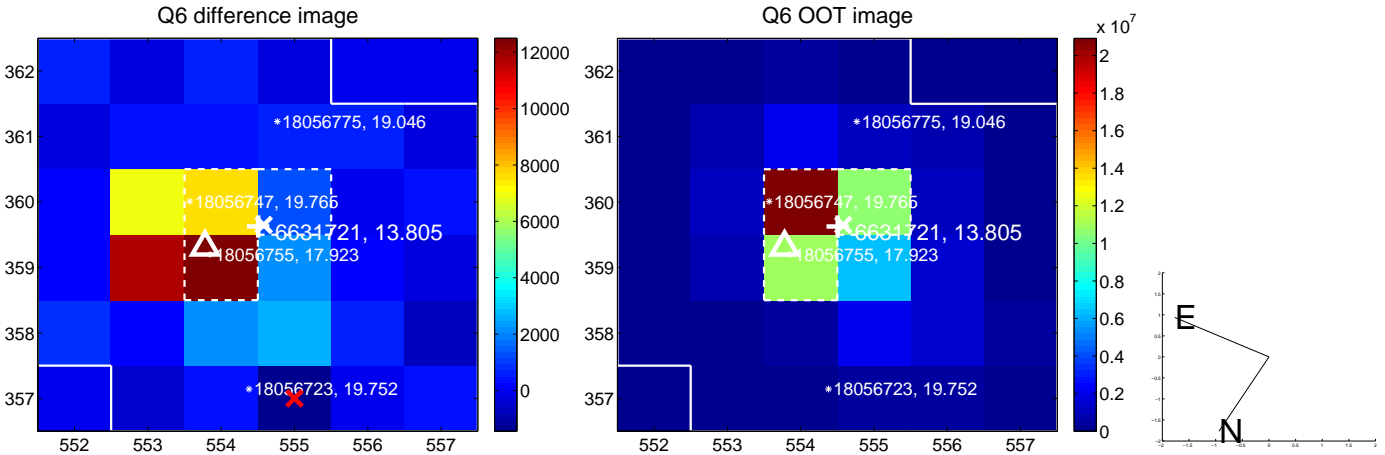
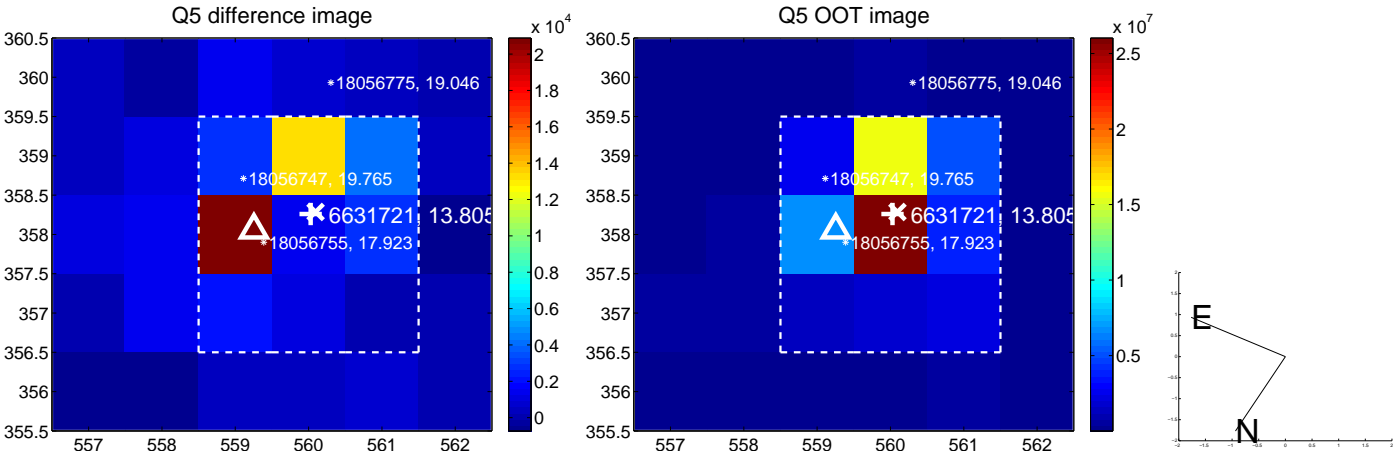


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

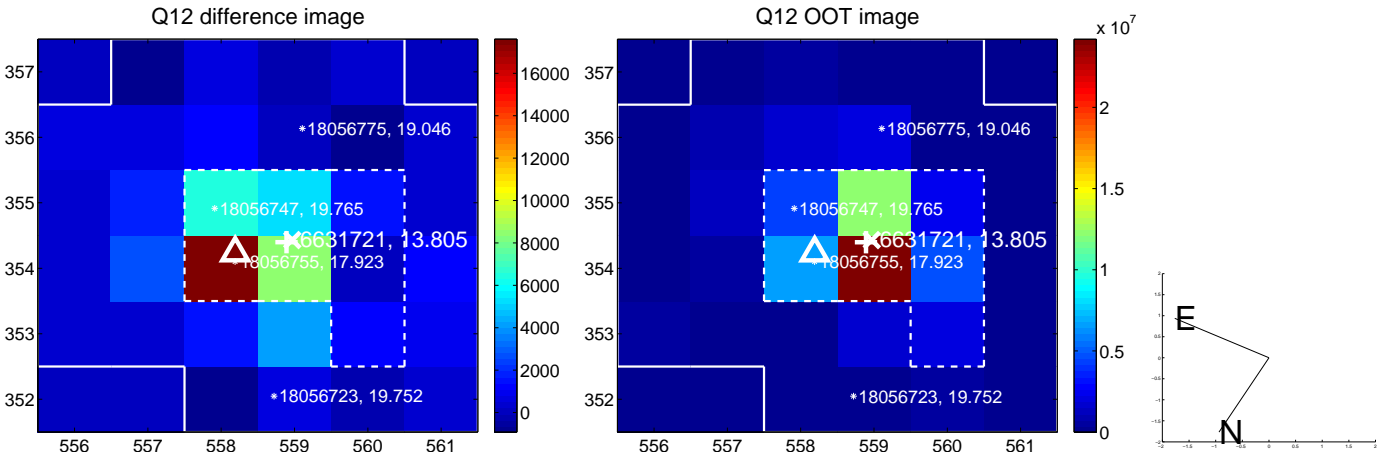
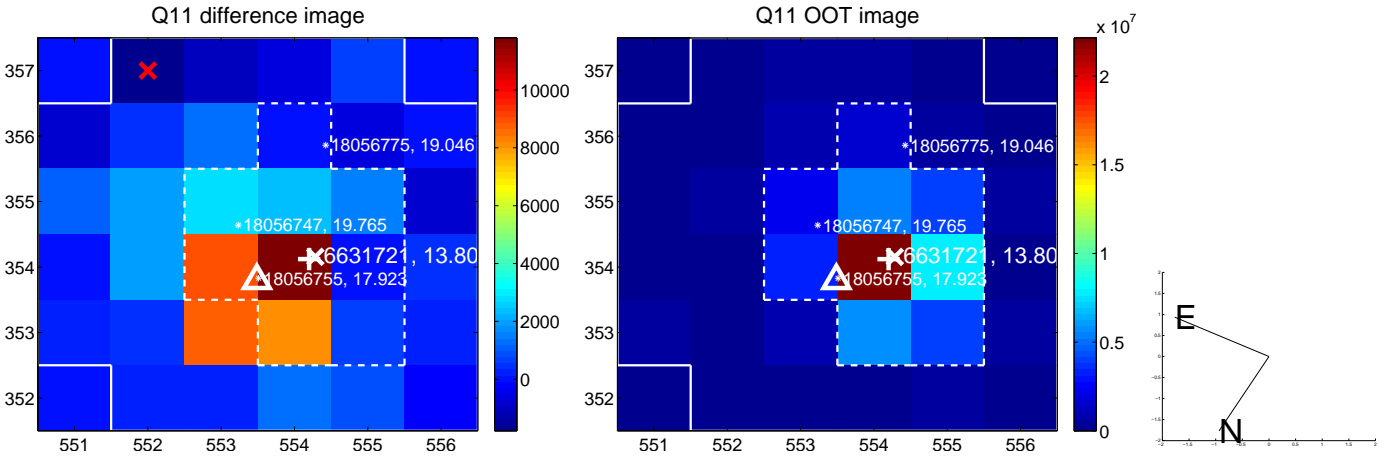
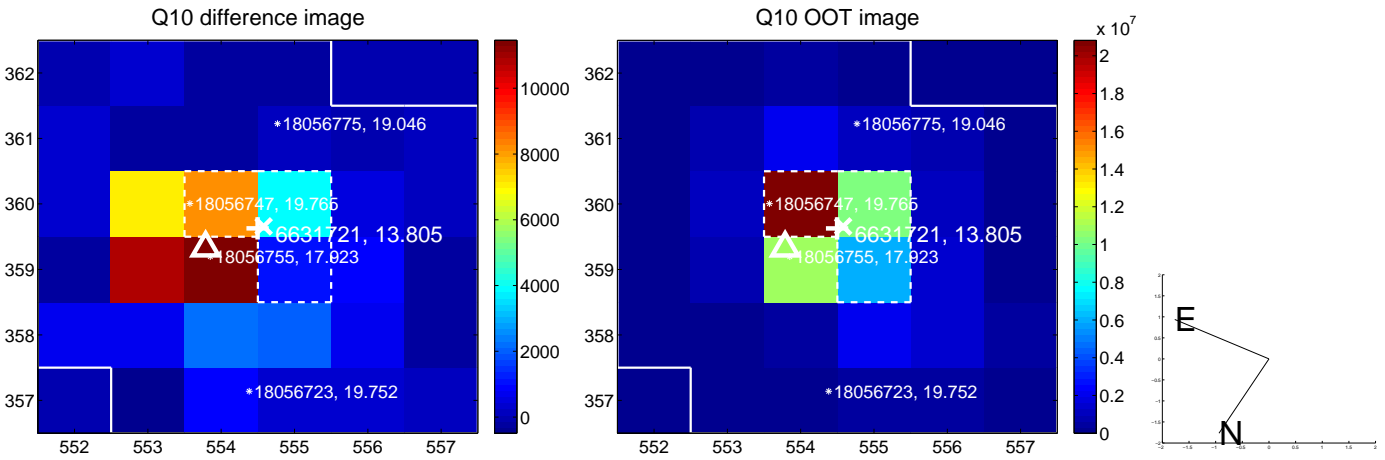
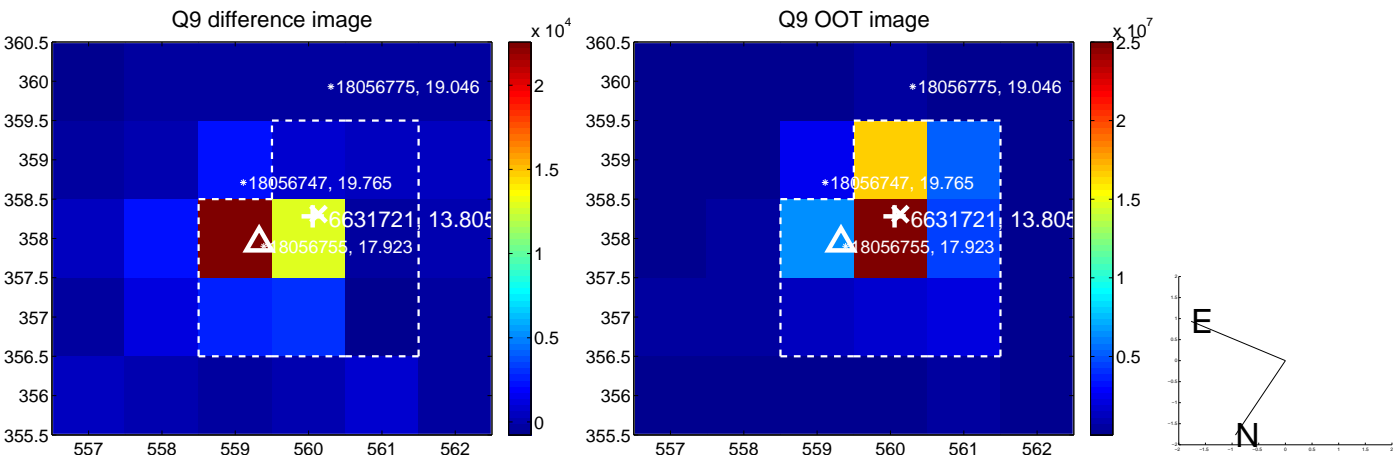
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



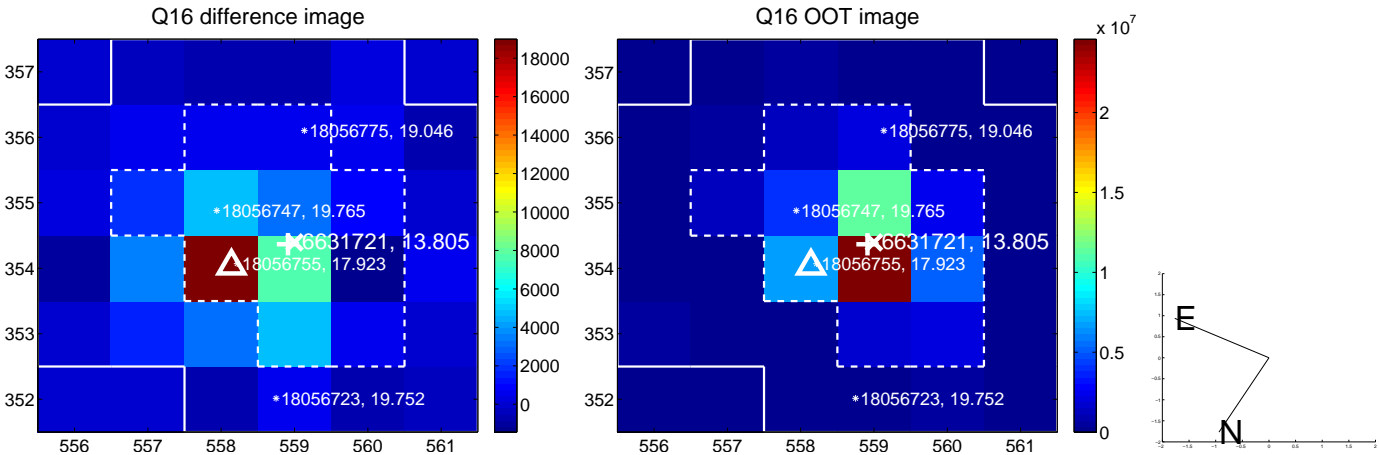
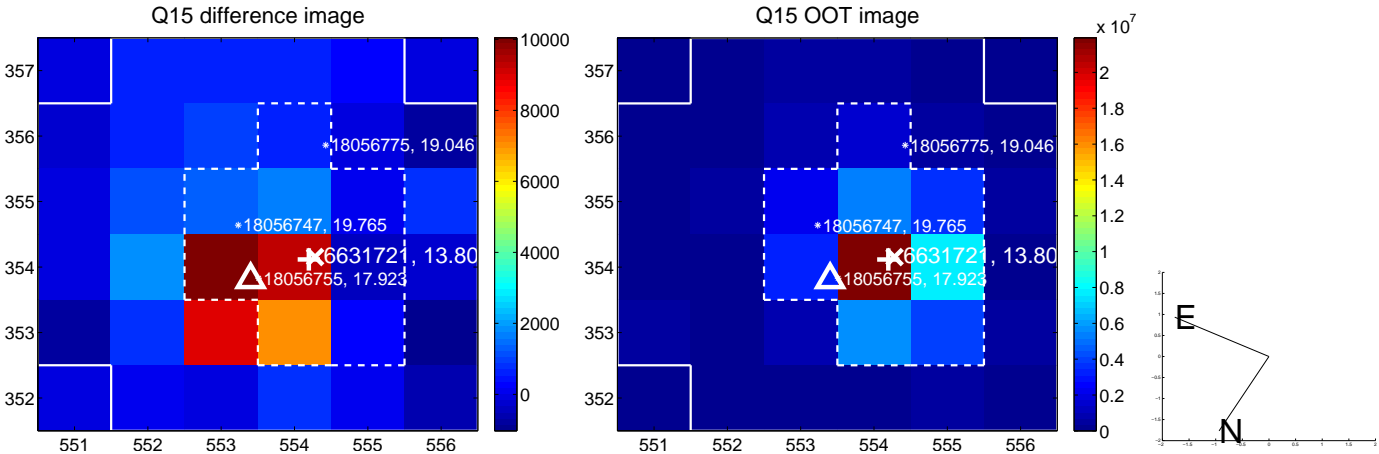
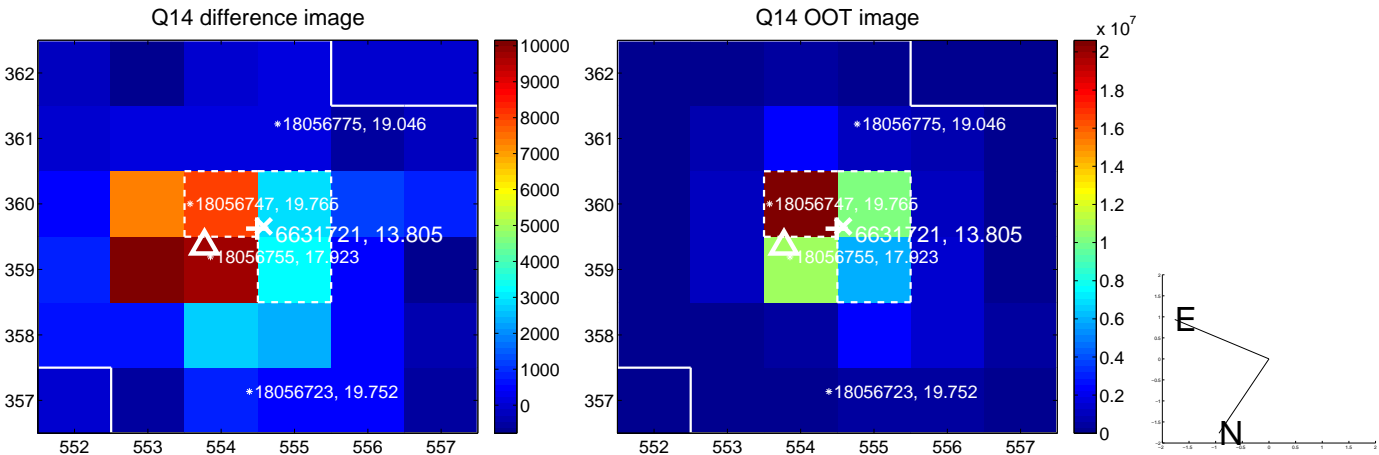
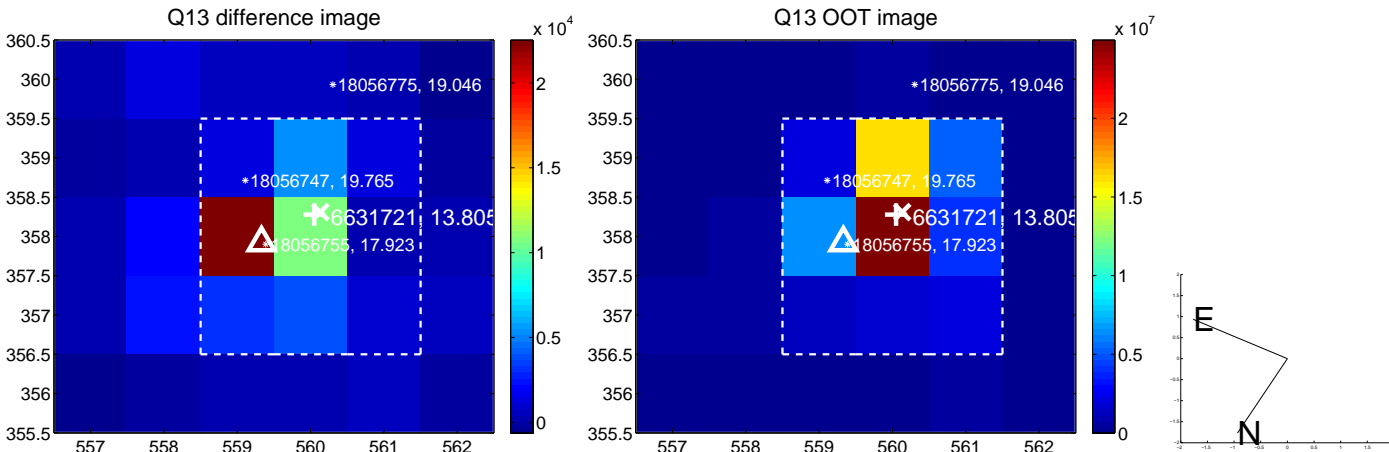
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



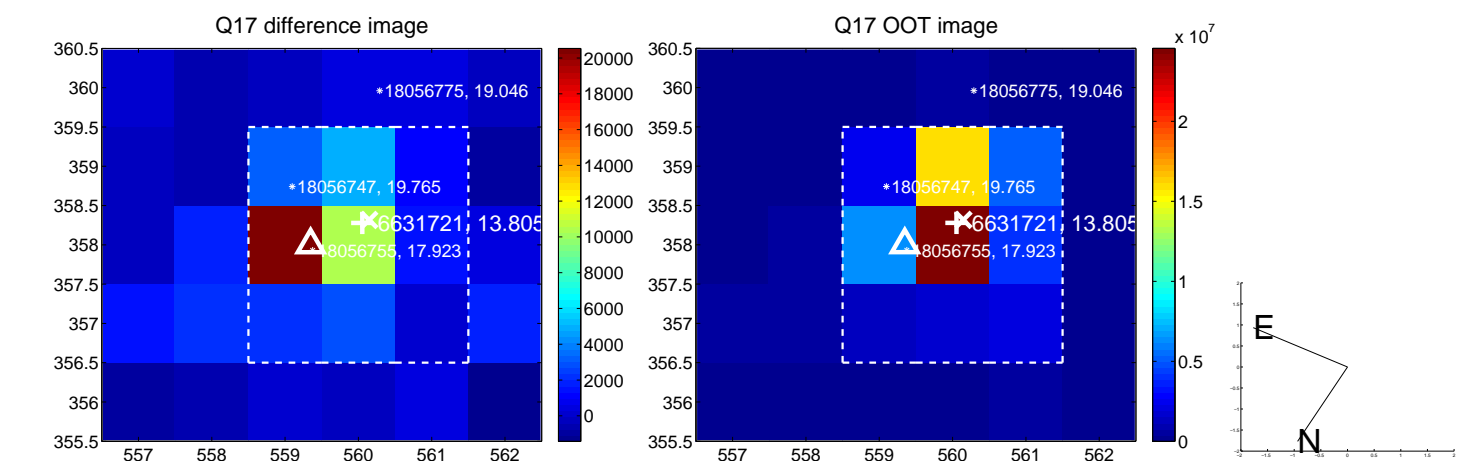
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



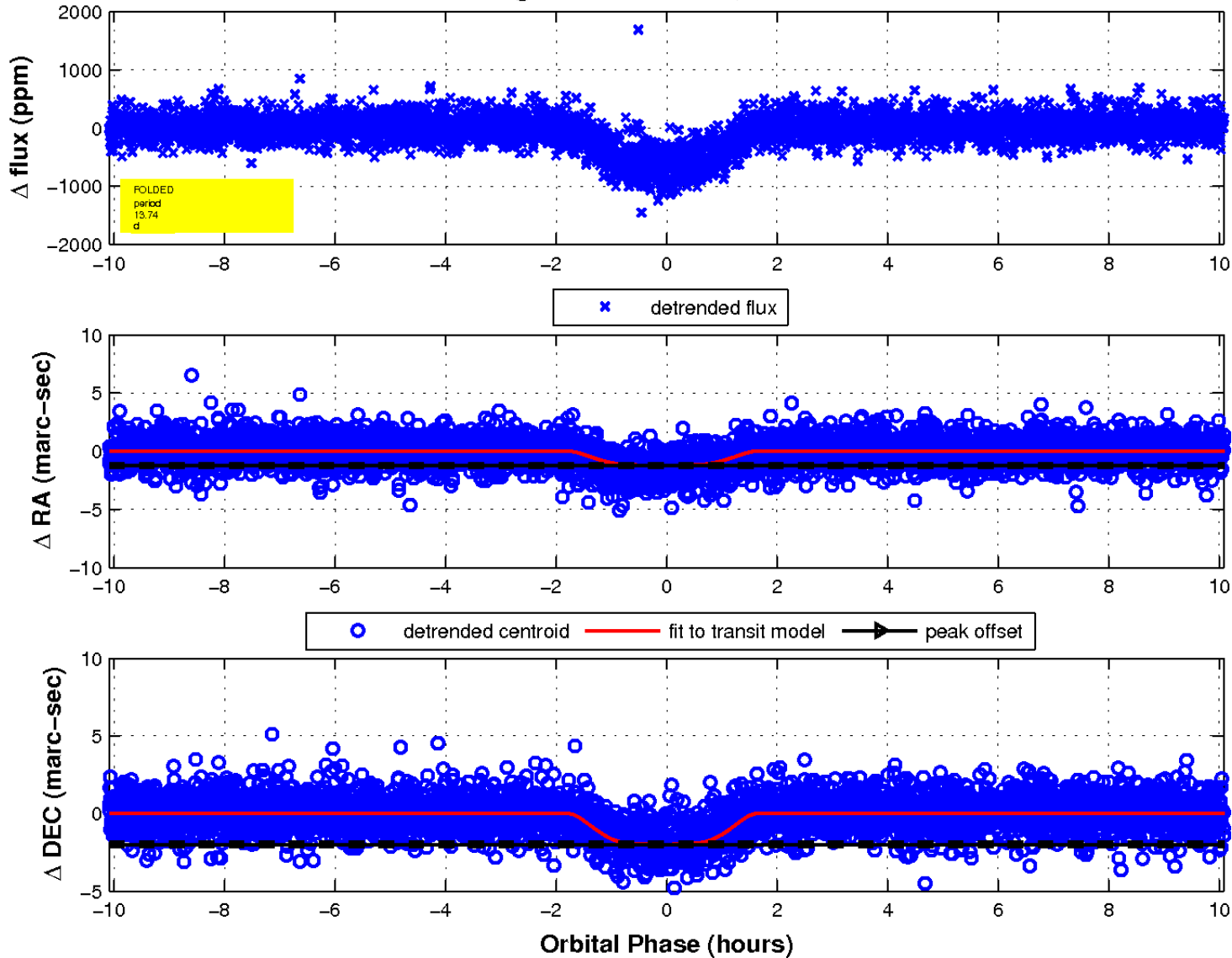
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

