

KIC 003550434

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})
003550434-01	OBS	3854.01	1.191042	132.077767	1095.9	1.163	46.0	59.8	0.69	5089	2.80	782.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003550434-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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

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

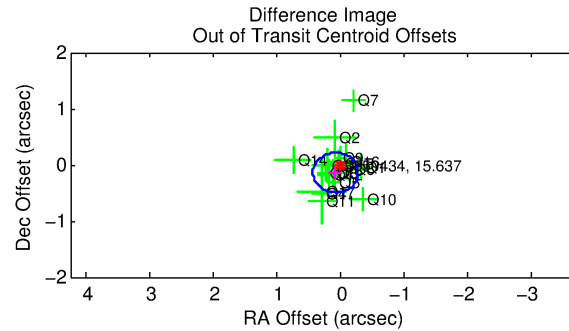
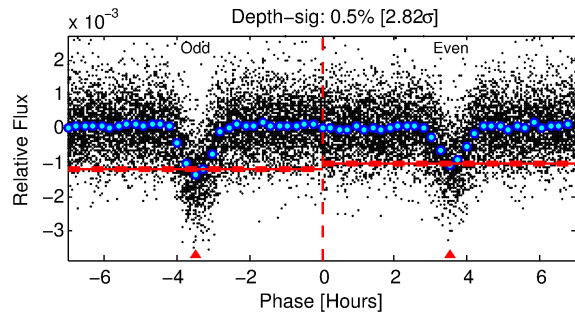
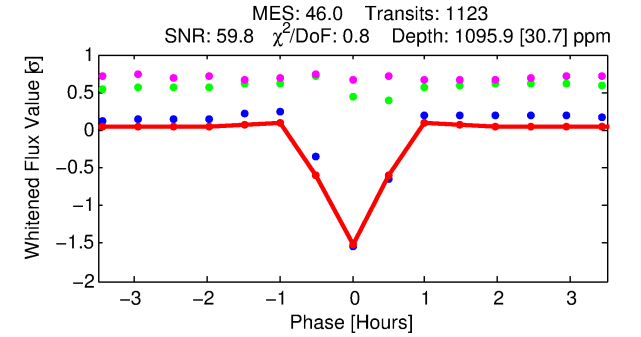
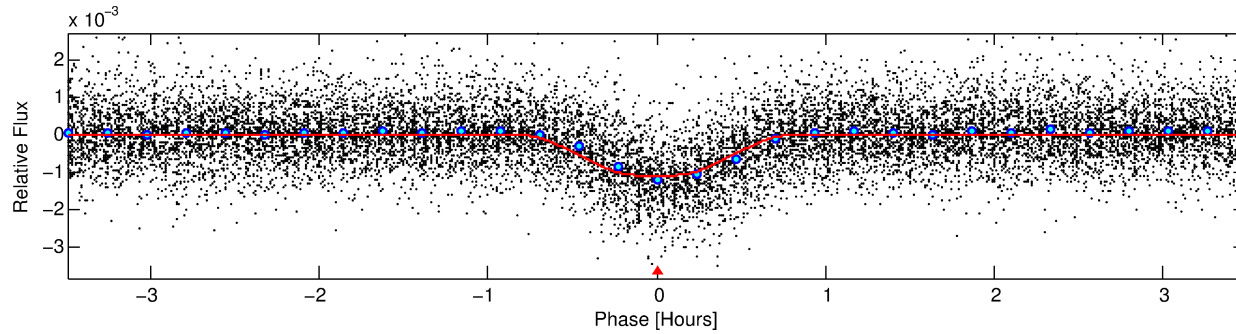
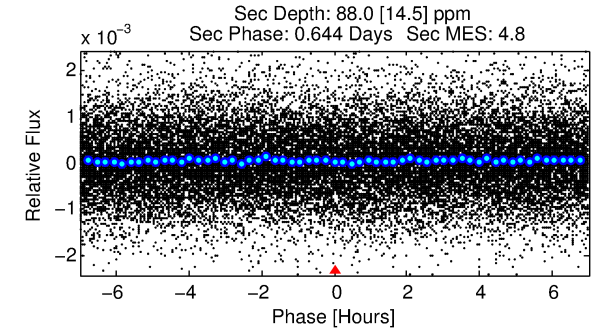
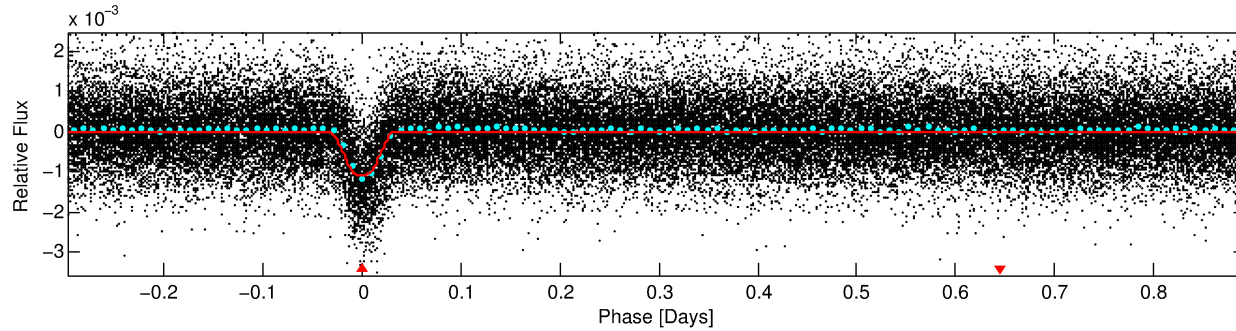
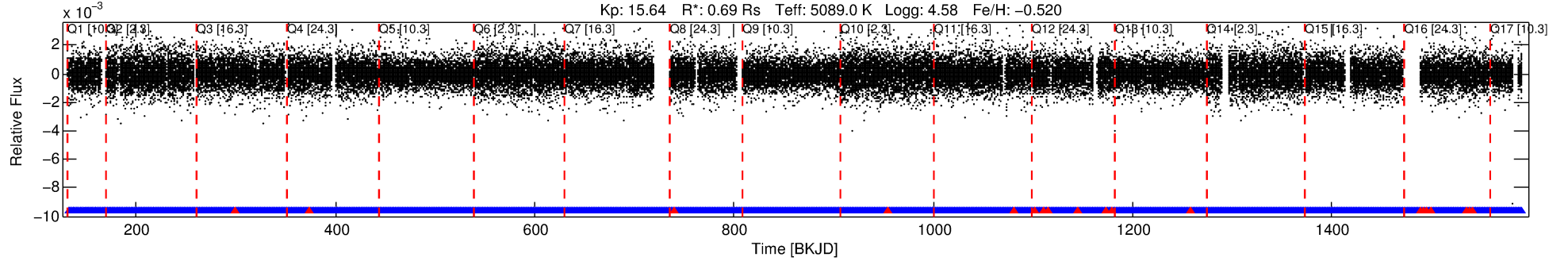
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003550434-01

No Significant Match Found

DV One-Page Summary

KIC: 3550434 Candidate: 1 of 1 Period: 1.191 d
KOI: K03854.01 Corr: 0.918



DV Fit Results:

Period = 1.19104 [0.00000] d
Epoch = 132.0778 [0.0003] BKJD
Rp/R* = 0.0370 [0.0034]
a/R* = 4.14 [1.36]
b = 0.90 [0.08]
Seff = 782.25 [144.07]
Teq = 1349 [62] K
Rp = 2.80 [0.39] Re
a = 0.0192 [0.0018] AU
Ag = 2.28 [0.65] [1.98σ]
Teffp = 2562 [177] K [6.48σ]

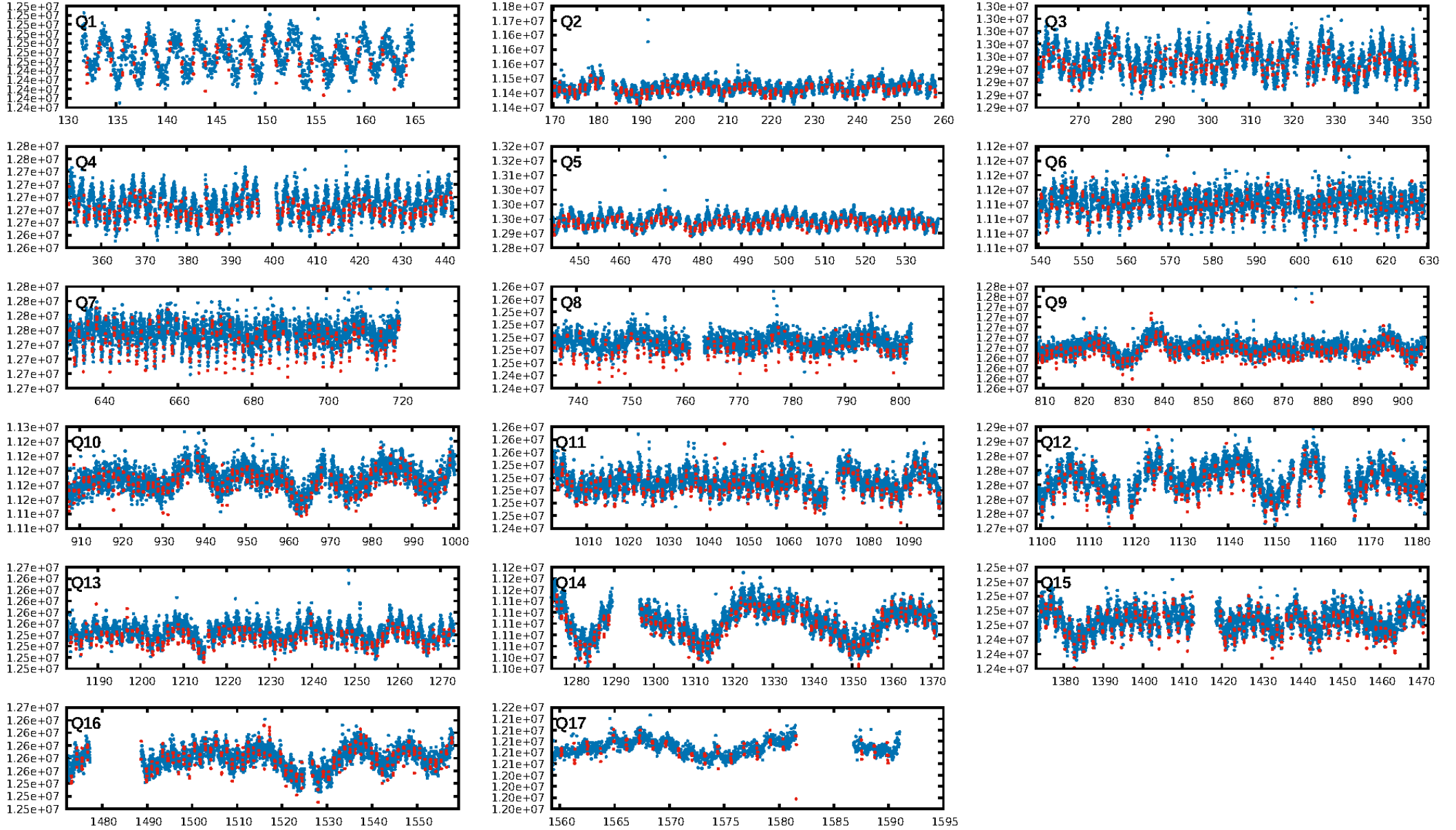
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [1054/1073]
GhostDiagnostic-chr: 2.653
Centroid-sig: 3.0%
Centroid-so: 0.552 arcsec [2.48σ]
OotOffset-rm: 0.164 arcsec [1.38σ]
KicOffset-rm: 0.236 arcsec [2.12σ]
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]

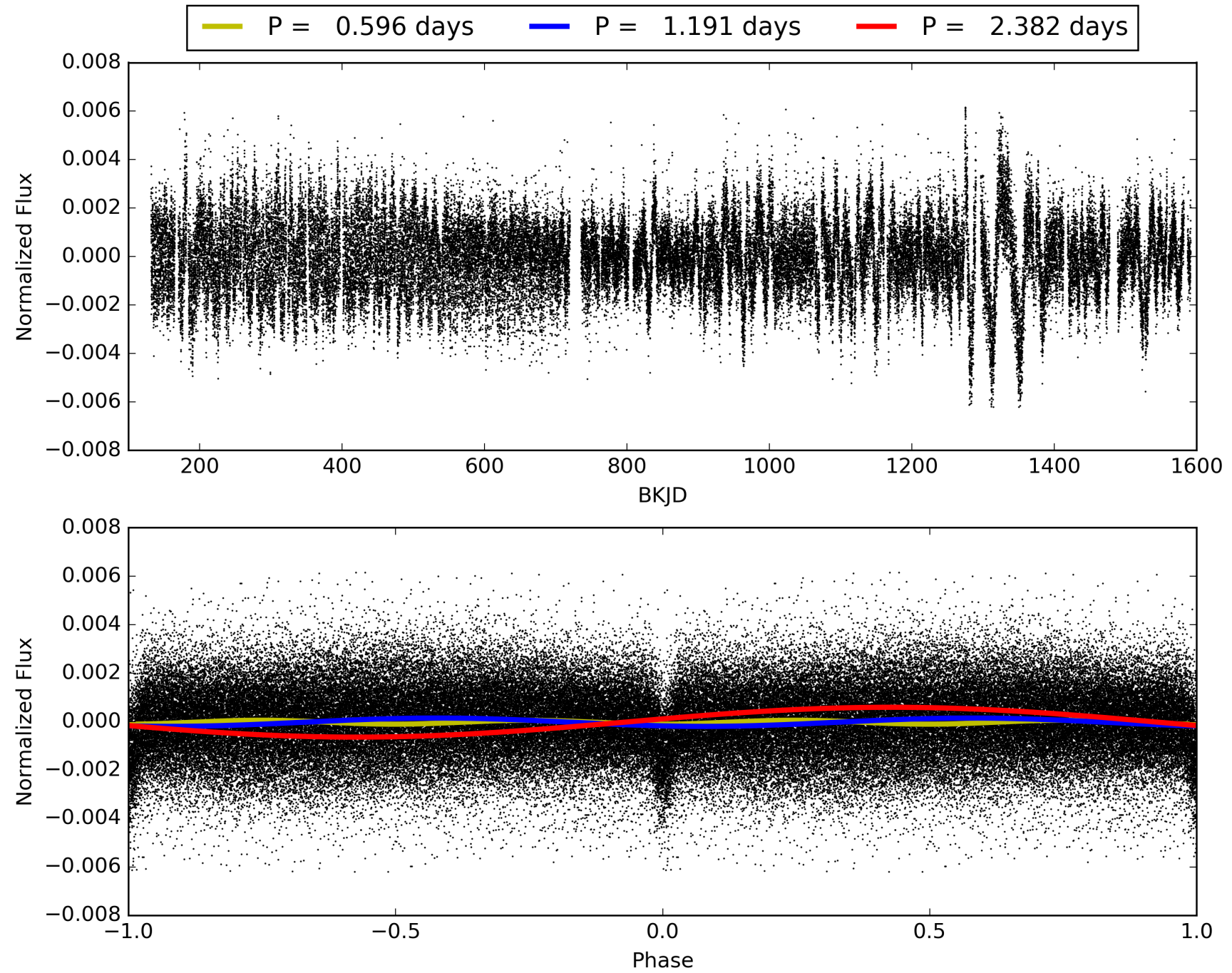
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:33:59 Z

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

TCE 003550434-01, PDC Light Curves

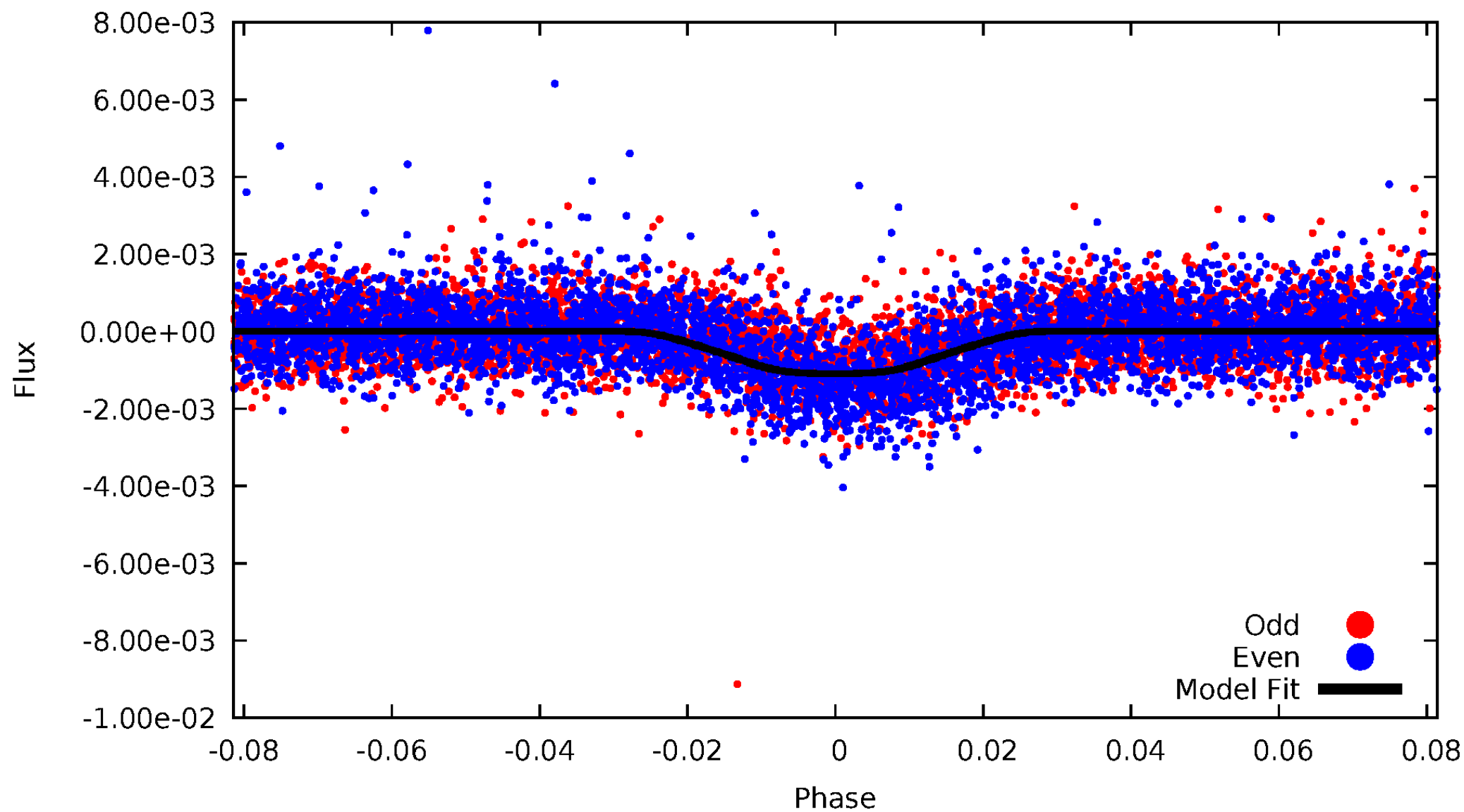


TCE 003550434-01



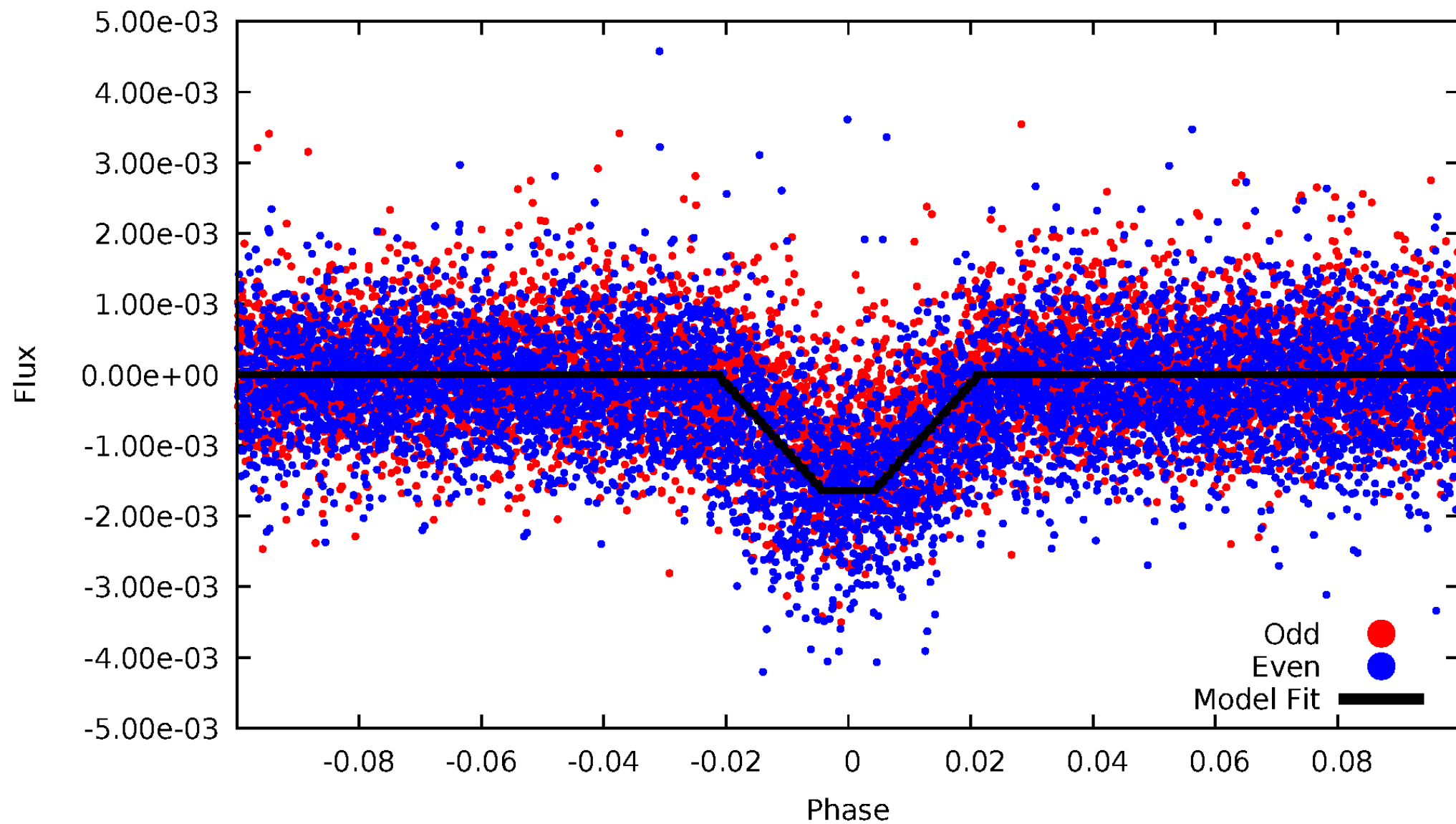
DV Odd/Even

TCE 003550434-01



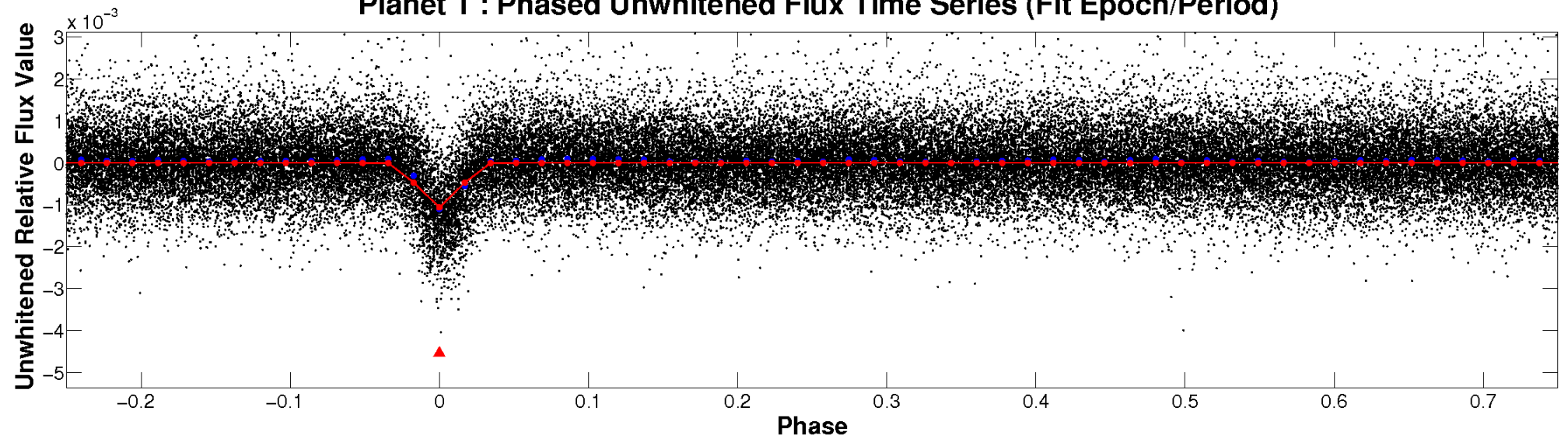
ALT Odd/Even

TCE 003550434-01

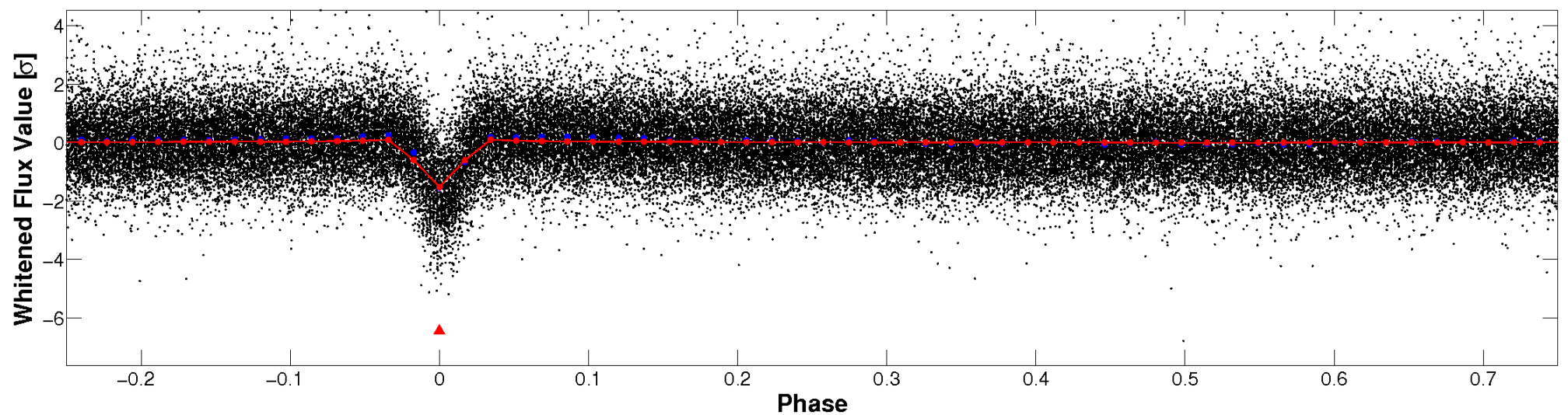


Non-Whitened Vs. Whitened Light Curve

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

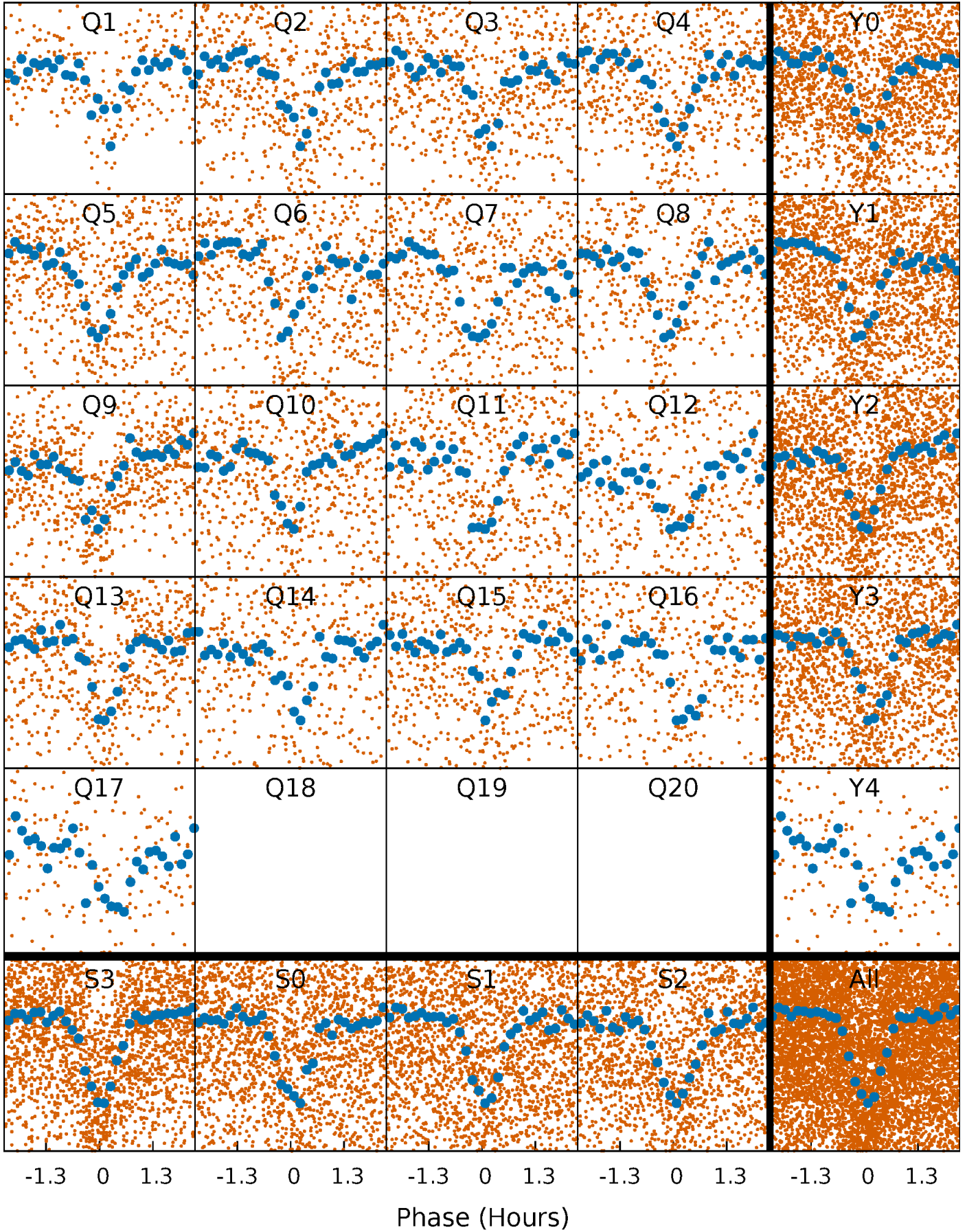


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



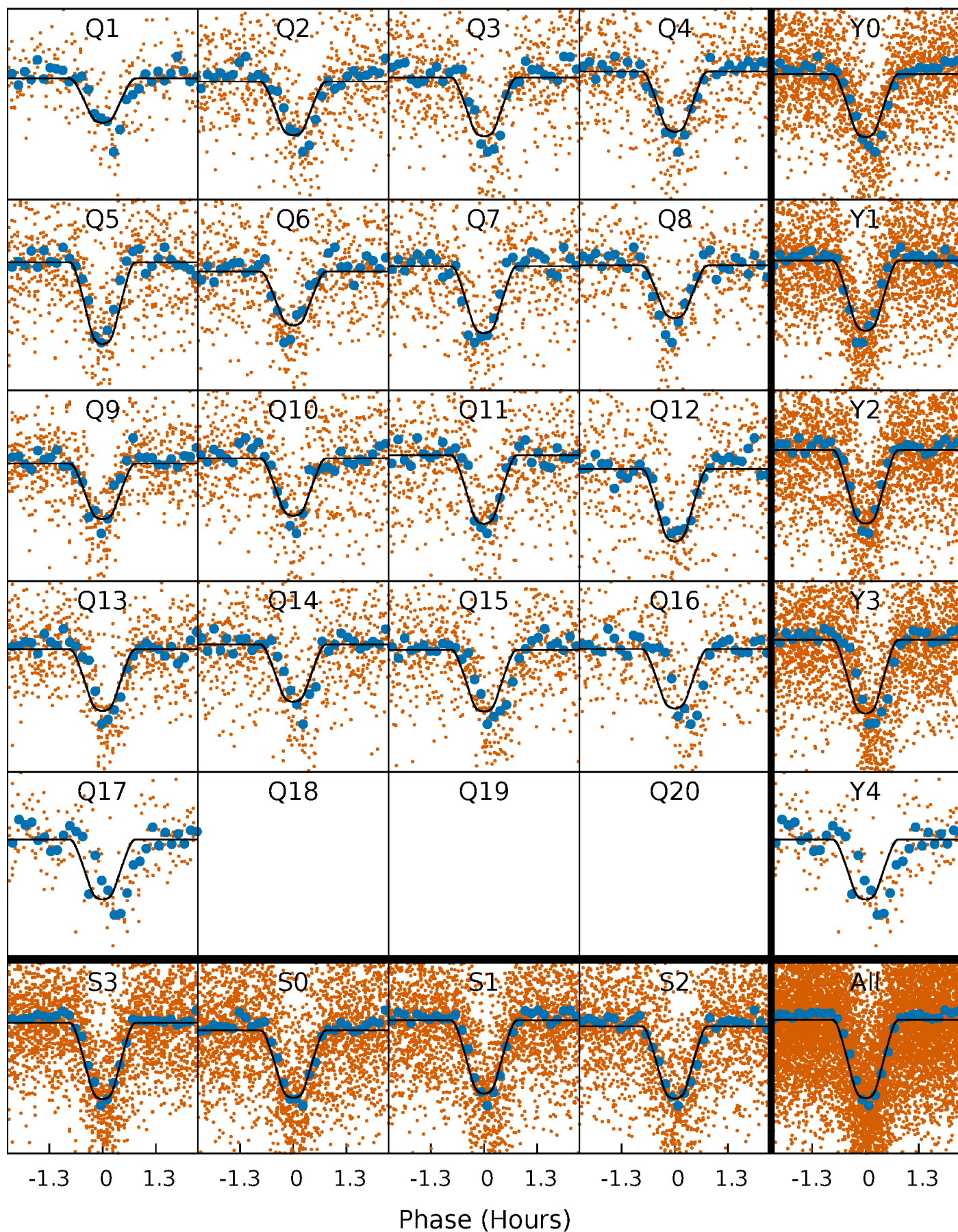
PDC Quarter-Phased Transit Curves

TCE 003550434-01 P= 1.191042 Days $T_0=132.077767$ (BKJD)



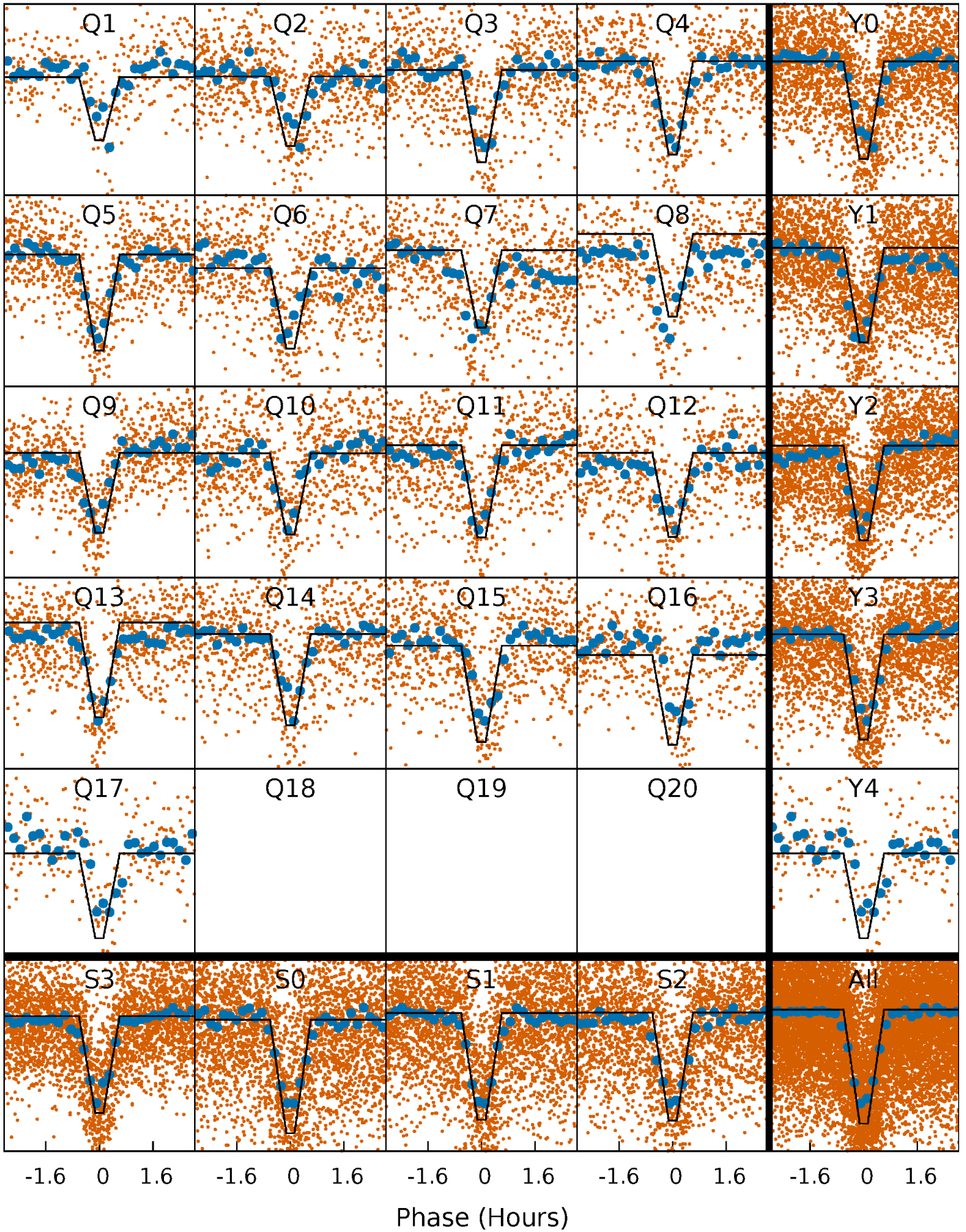
DV Quarter-Phased Transit Curves

TCE 003550434-01 P= 1.191042 Days $T_0=132.077767$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

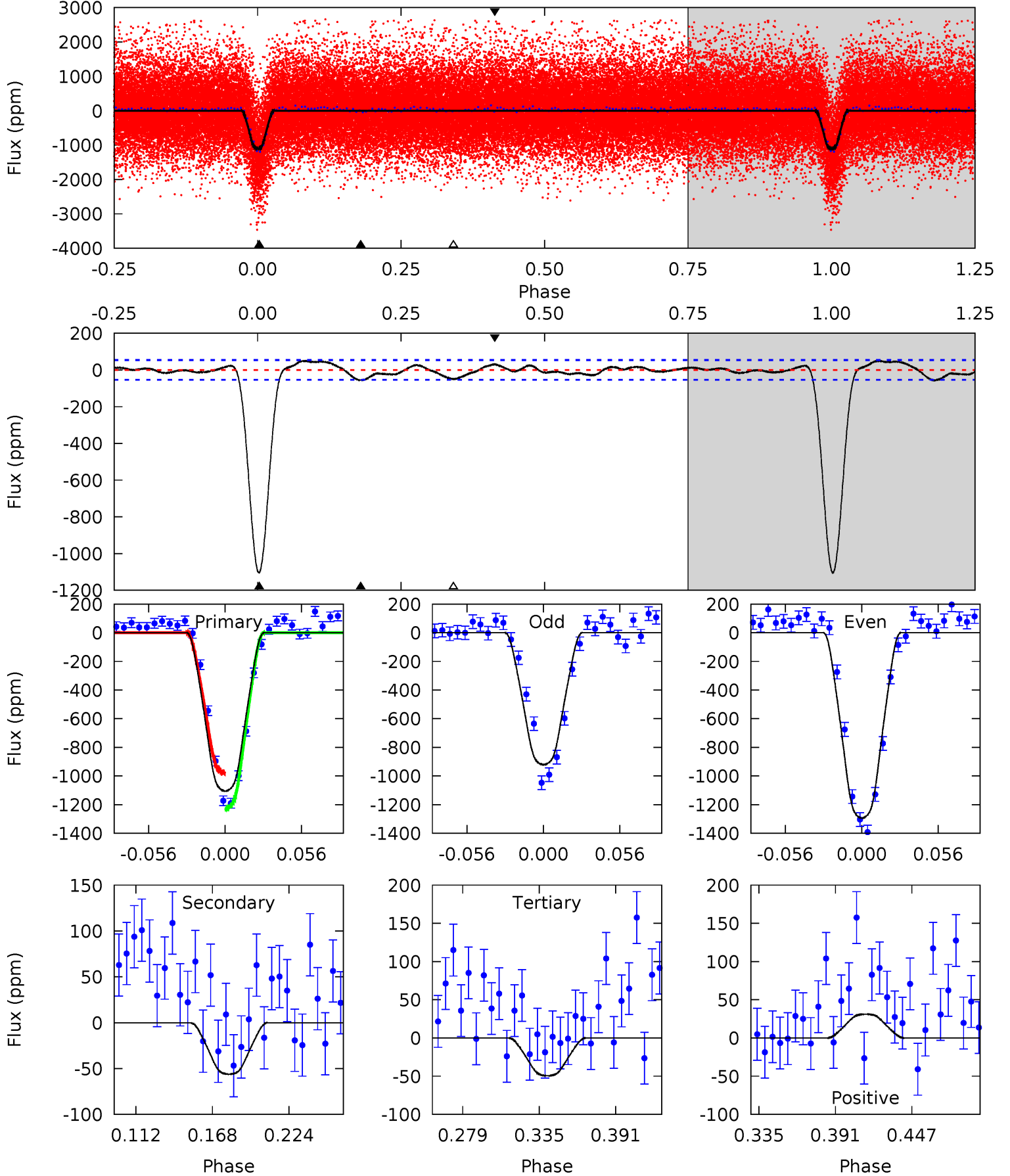
TCE 003550434-01 P= 1.191048 Days $T_0=132.077345$ (BKJD)



DV Model-Shift Uniqueness Test

003550434-01, P = 1.191042 Days, E = 130.886725 Days

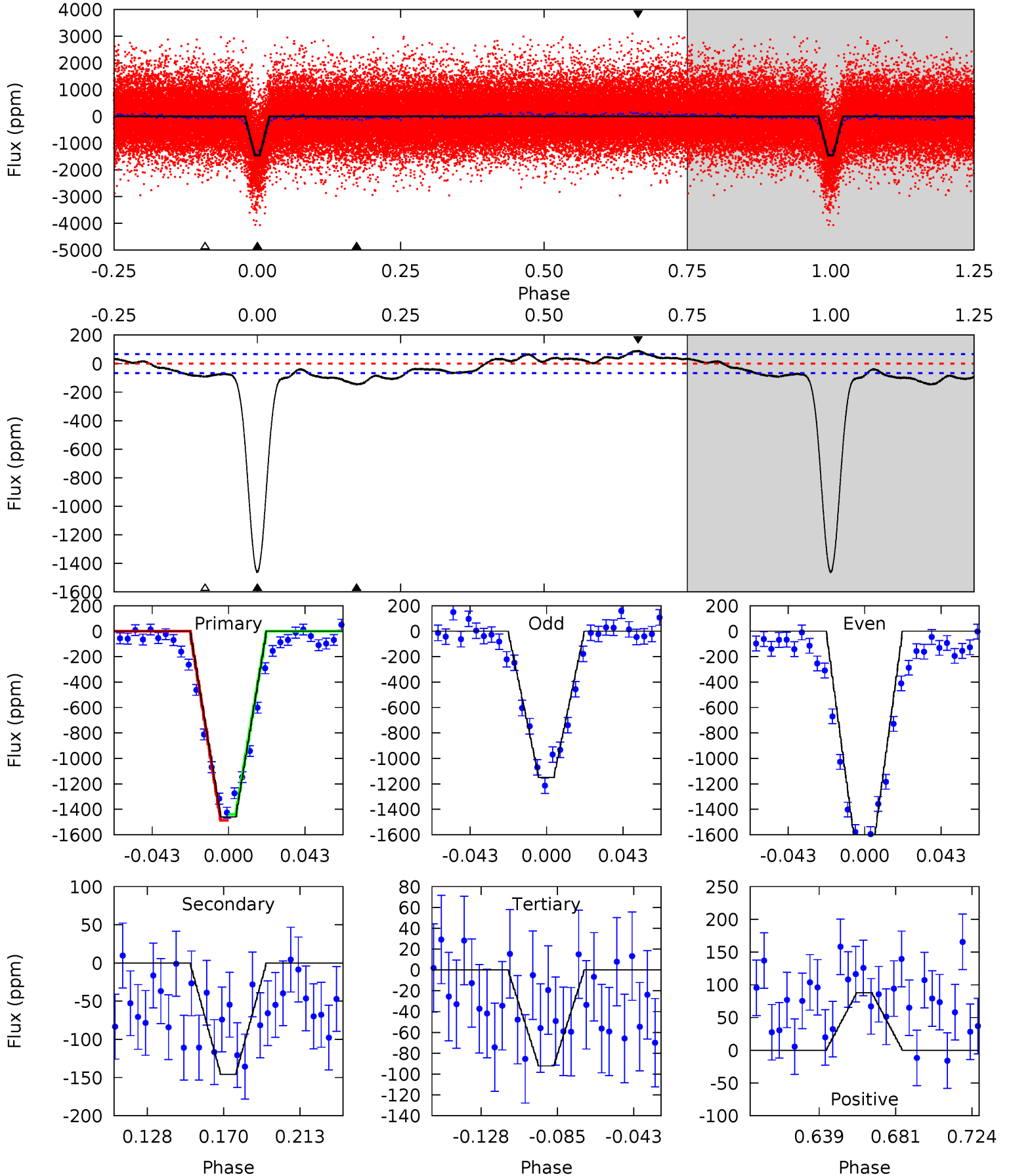
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
96.4	4.90	4.31	2.72	4.69	1.91	1.76	92.1	93.7	0.59	2.18	16.4	0.98	0.04	10.9



Alt Model-Shift Uniqueness Test

003550434-01, P = 1.191048 Days, E = 130.886297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
103.9	10.4	6.56	6.26	4.74	2.03	3.90	97.4	97.7	3.82	4.12	22.6	1.00	0.06	1.61



Stellar Parameters For KIC 003550434

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5089^{+154}_{-138}	$4.580^{+0.078}_{-0.045}$	$-0.520^{+0.300}_{-0.300}$	$0.693^{+0.073}_{-0.067}$	$0.666^{+0.087}_{-0.037}$	$2.818^{+0.894}_{-0.472}$
	+3%/-3%	+2%/-1%	+58%/-58%	+11%/-10%	+13%/-6%	+32%/-17%
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 003550434-01 / KOI 3854.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-56 ± 11	$2.78^{+0.31}_{-0.30}$	1873^{+69}_{-66}	2846^{+148}_{-139}	$1.478^{+0.485}_{-0.380}$
Alt.	-146 ± 14	$3.03^{+0.33}_{-0.30}$	1872^{+72}_{-72}	3259^{+119}_{-124}	$3.258^{+0.846}_{-0.576}$

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 $A_{obs} \gg 1.0$

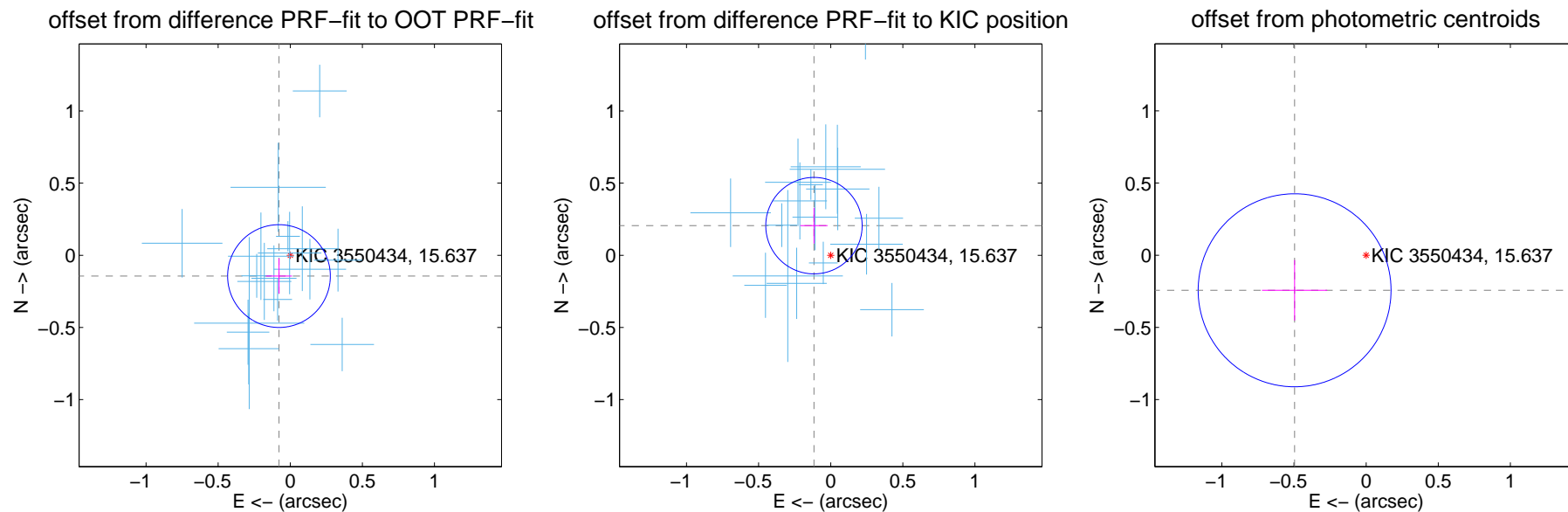
DV Centroid Data

Supplemental centroid analysis for 003550434-01. Kepler magnitude: 15.64. Transit SNR 59.80

There are 17 quarters with good PRF difference image offsets

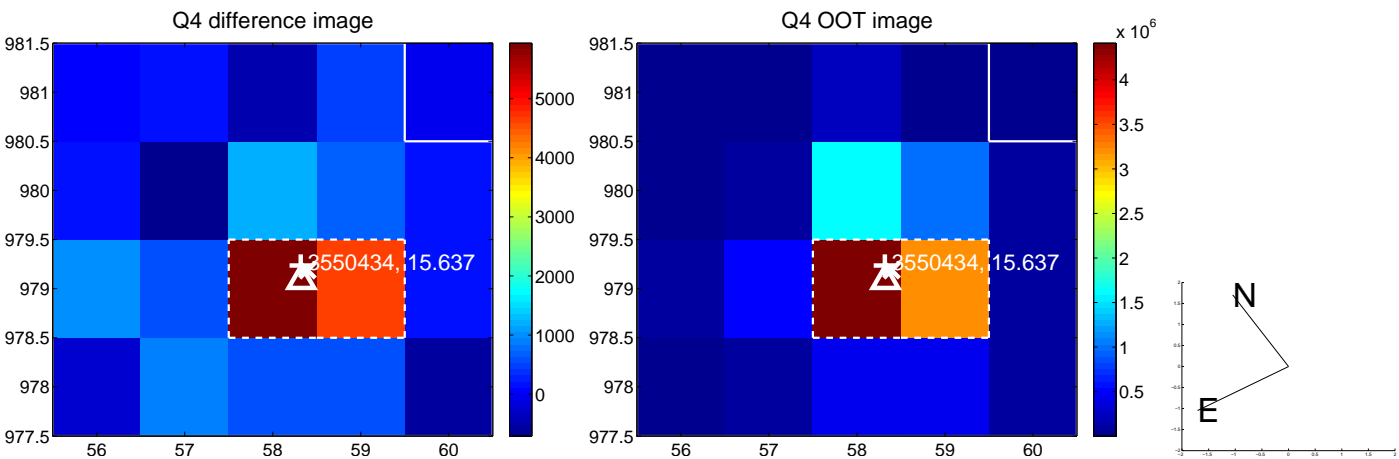
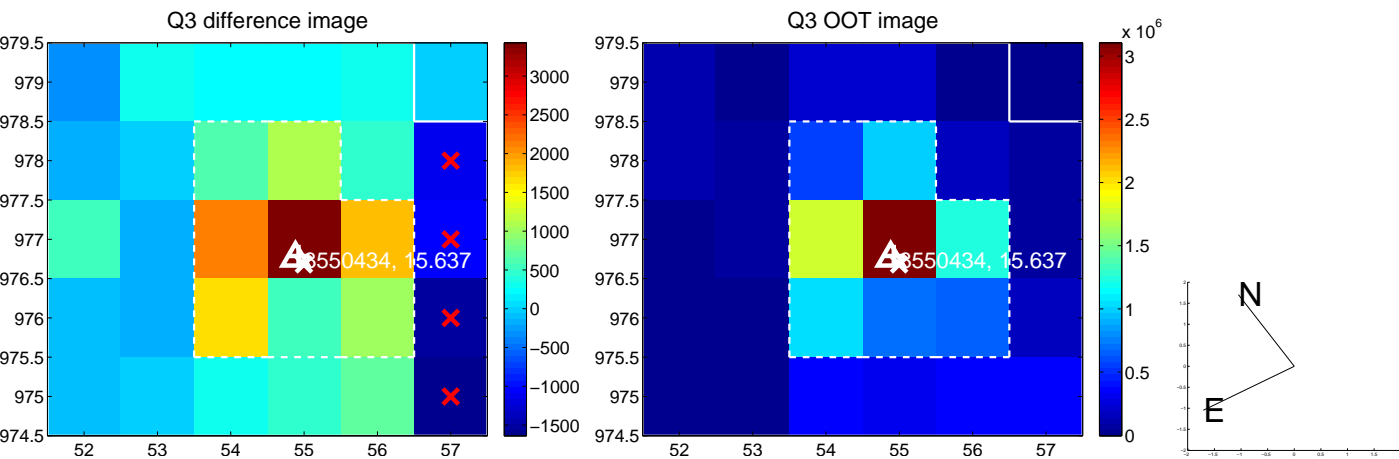
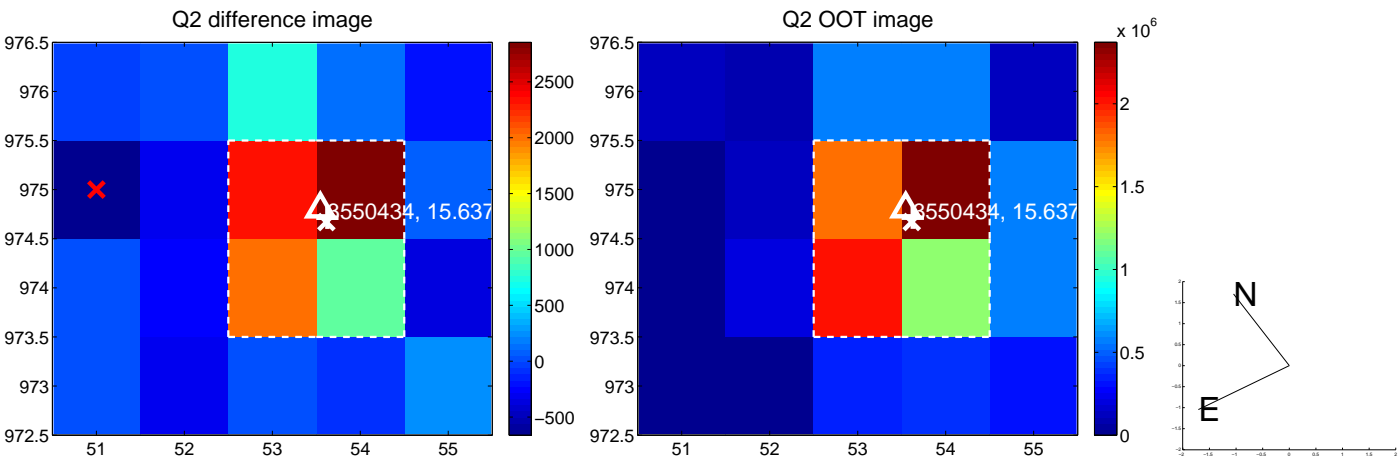
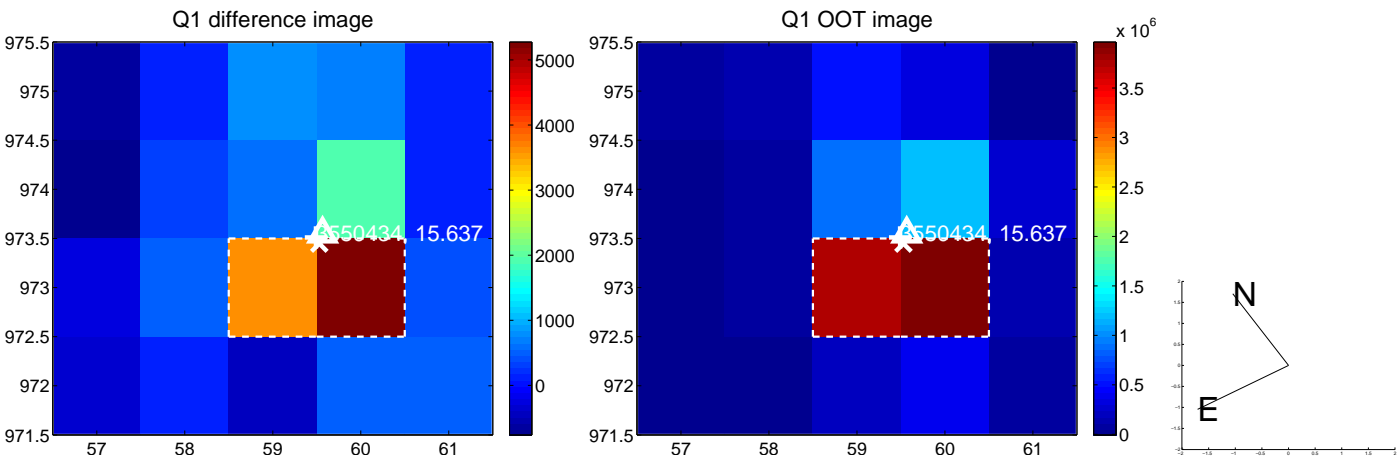
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.164 ± 0.119	1.38	0.078 ± 0.090	-0.144 ± 0.122
PRF-fit source offset from KIC position	0.236 ± 0.111	2.12	0.116 ± 0.095	0.205 ± 0.124
photometric centroid source offset	0.55 ± 0.22	2.48	0.50 ± 0.23	-0.24 ± 0.21

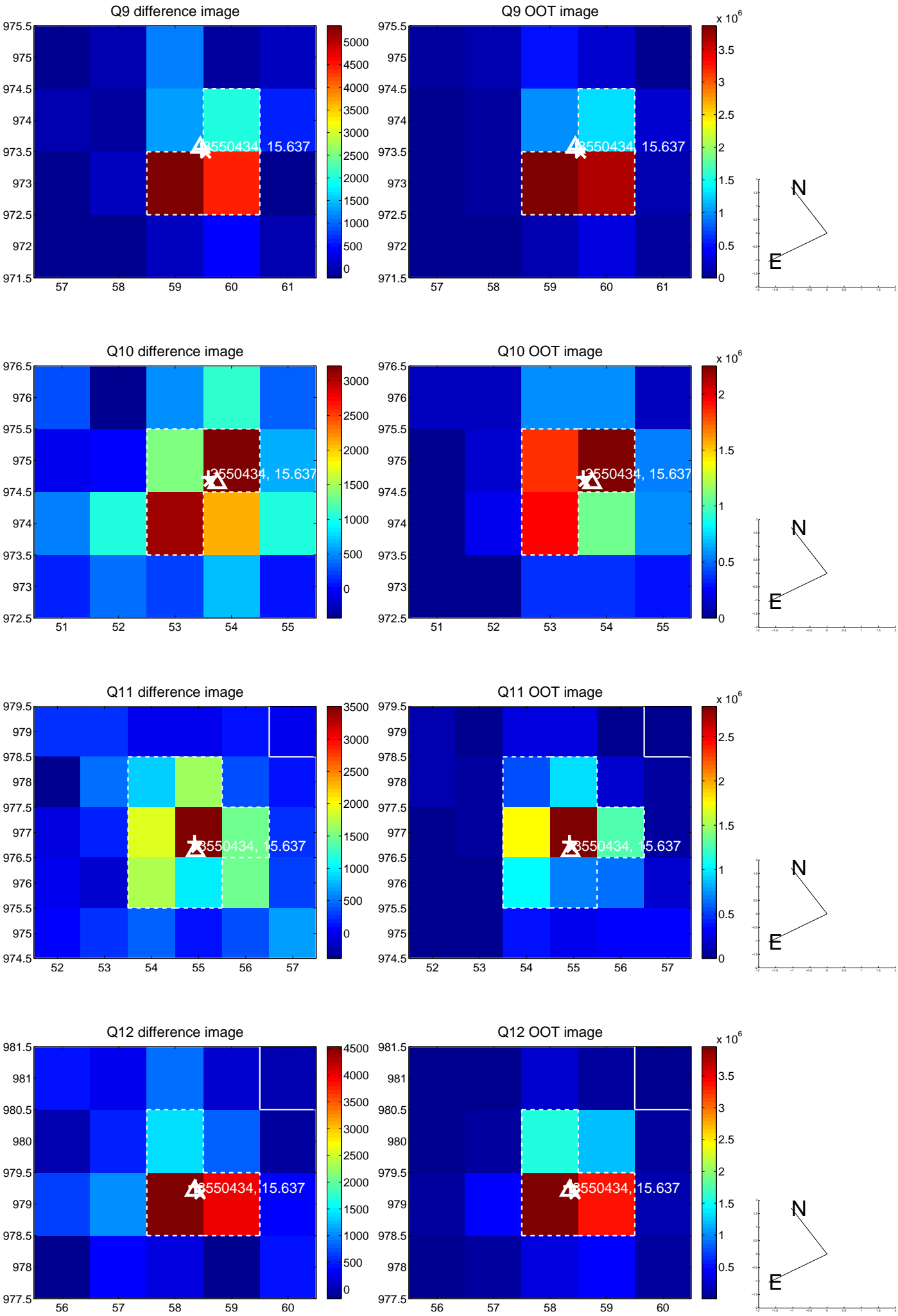


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

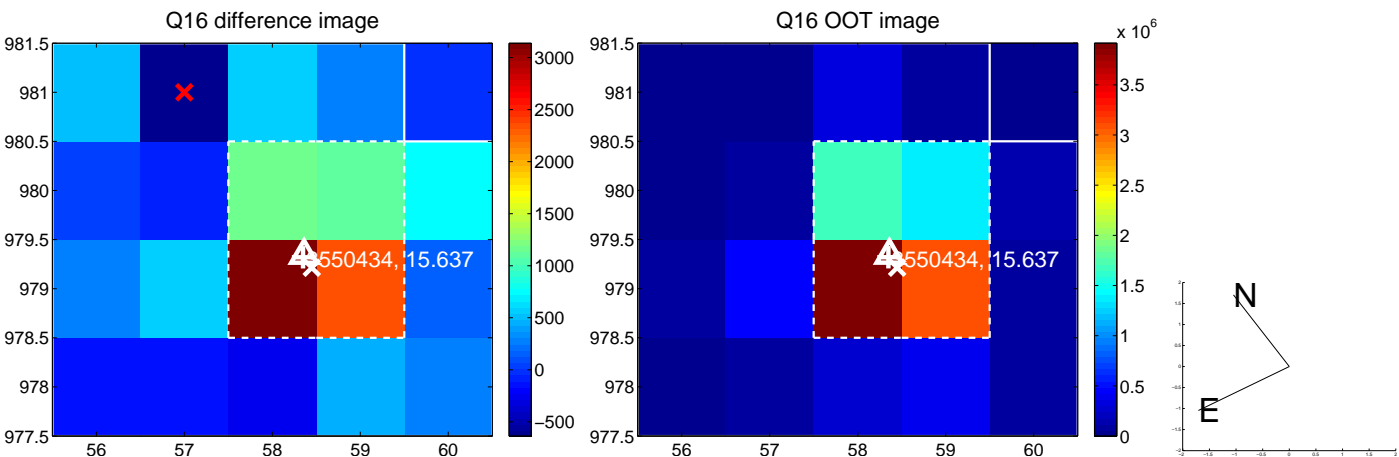
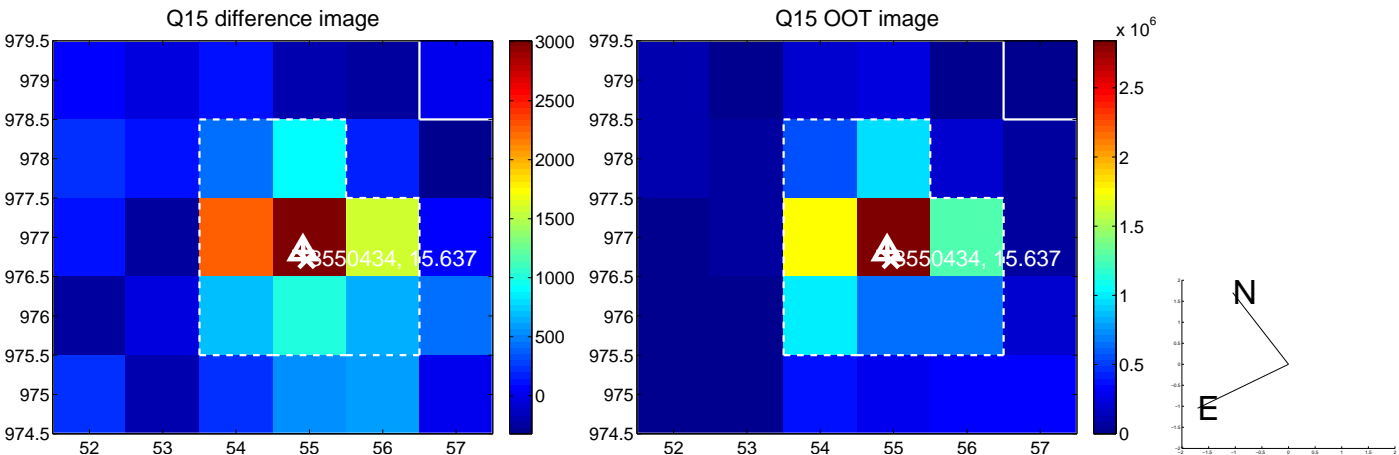
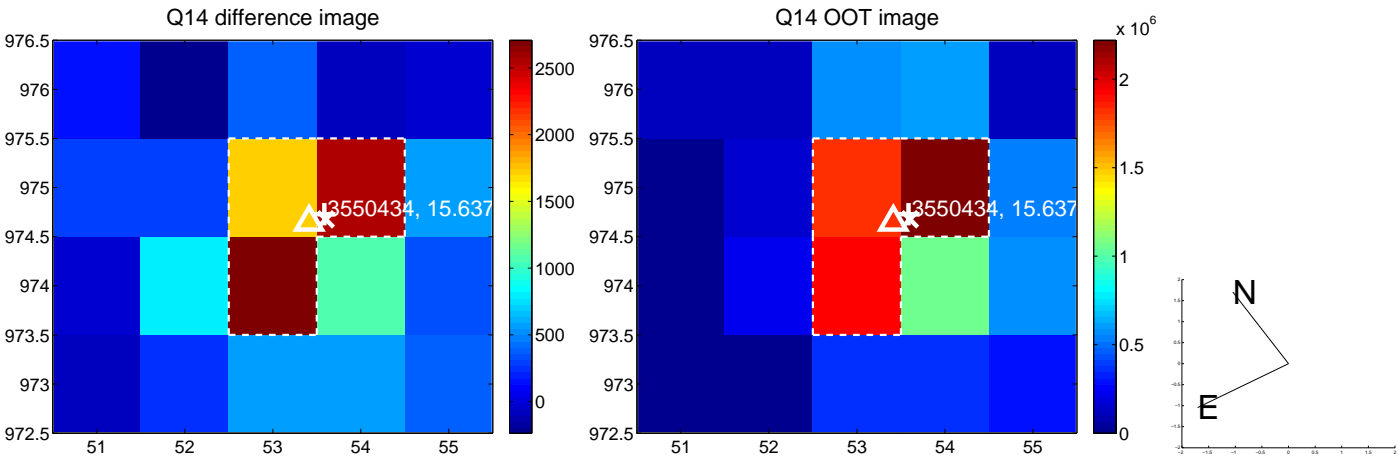
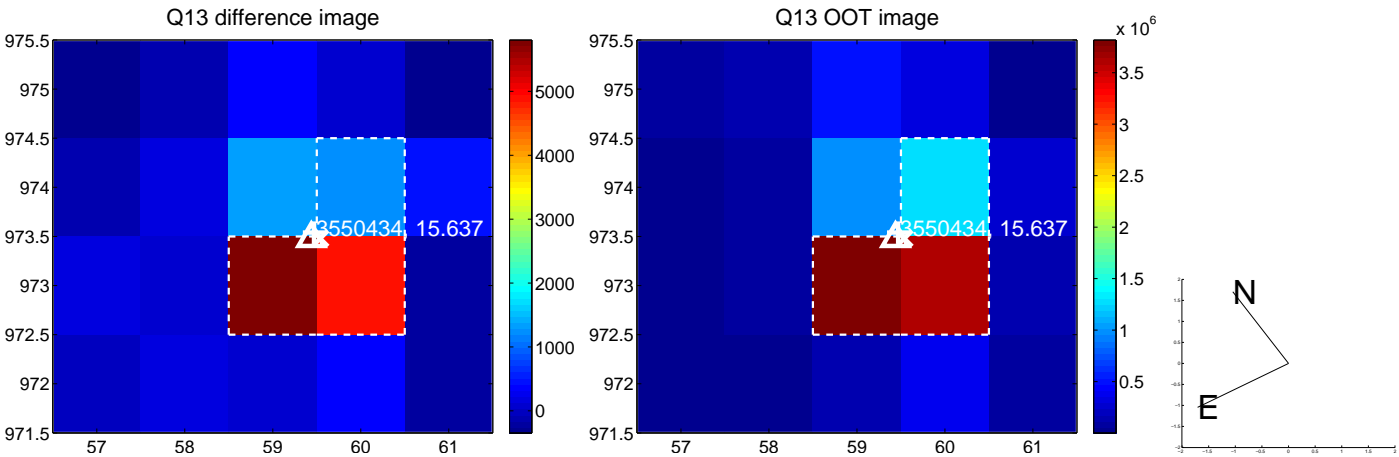
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



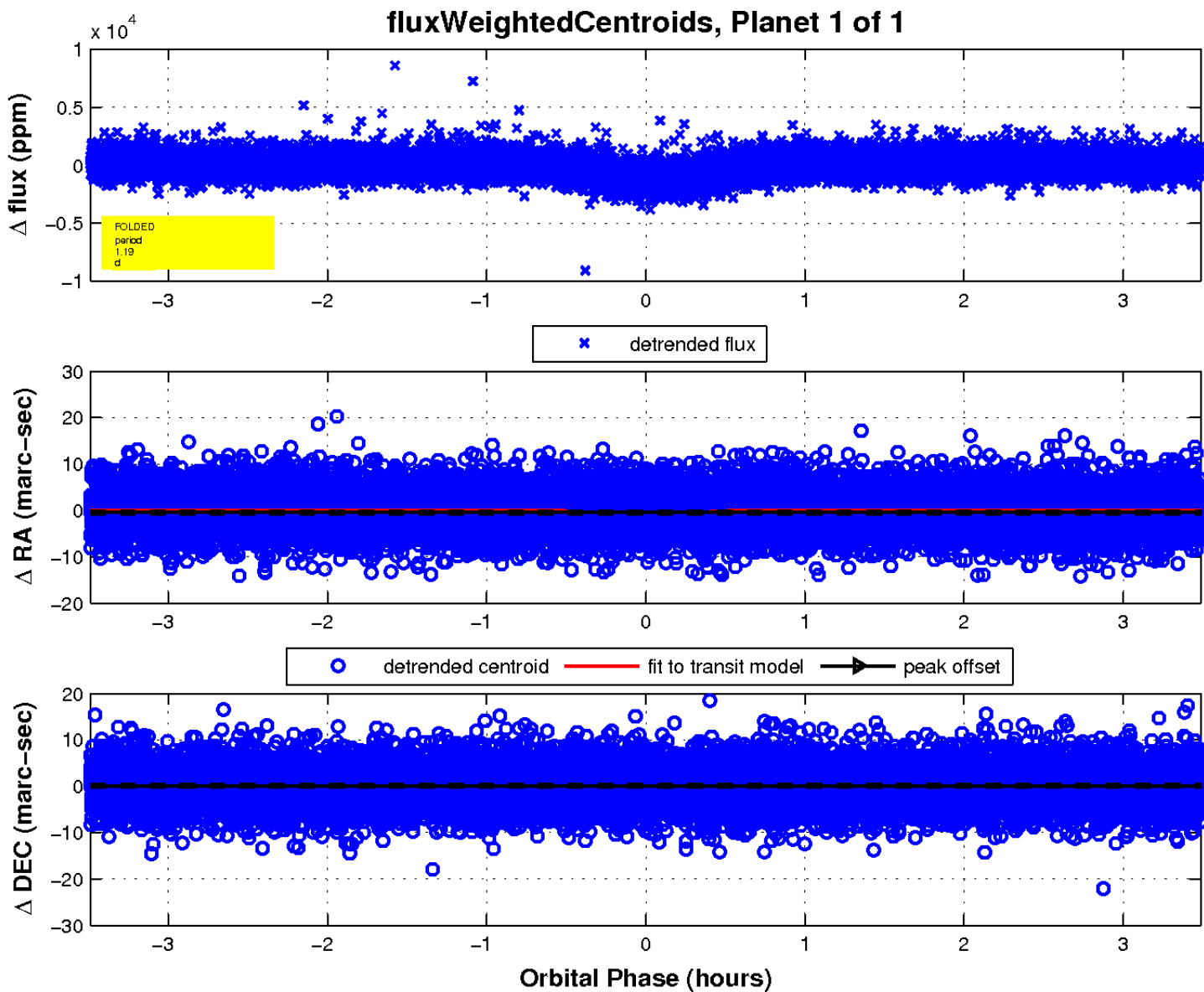
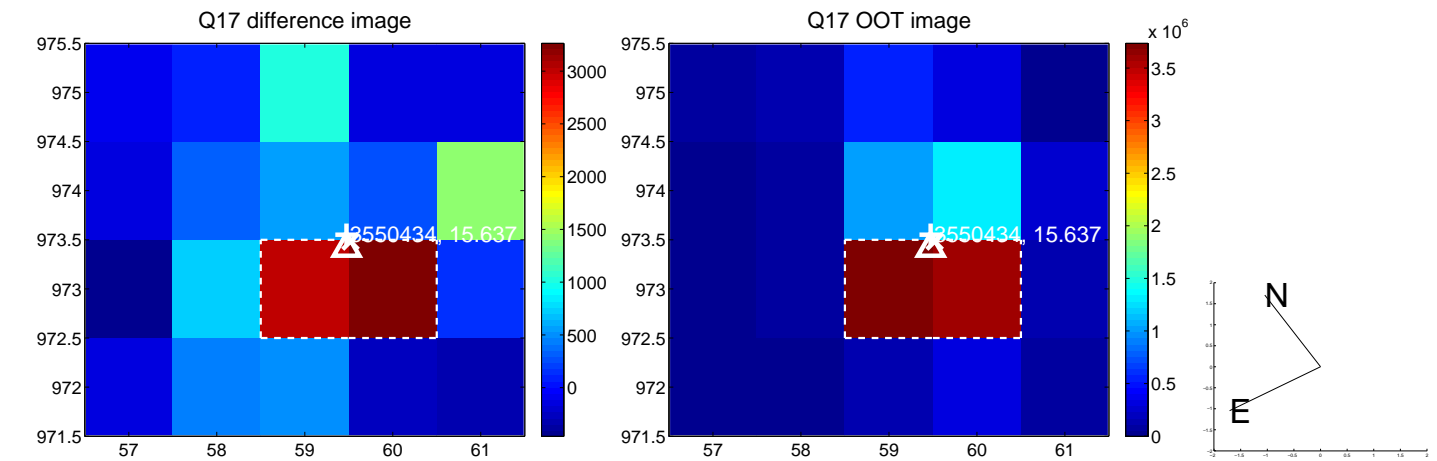
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

