

KIC 005436338

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})
005436338-01	OBS	2835.01	6.309223	133.995557	687.2	1.426	18.7	22.6	0.53	4380	1.68	31.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005436338-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 005436338-01

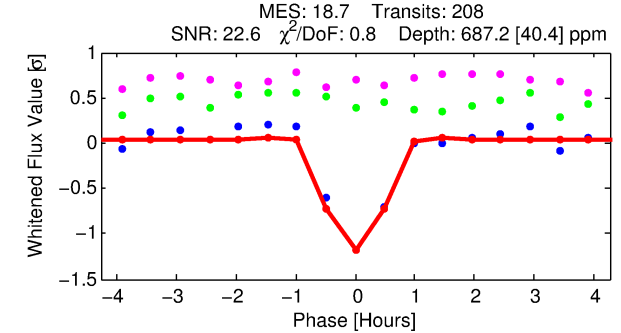
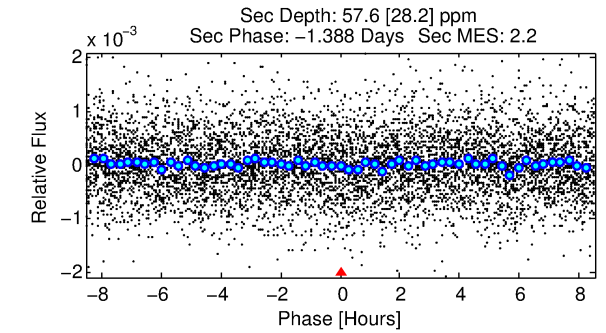
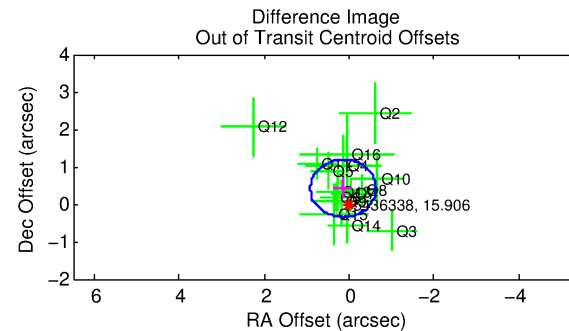
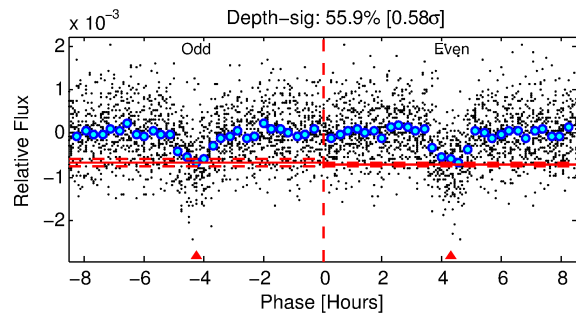
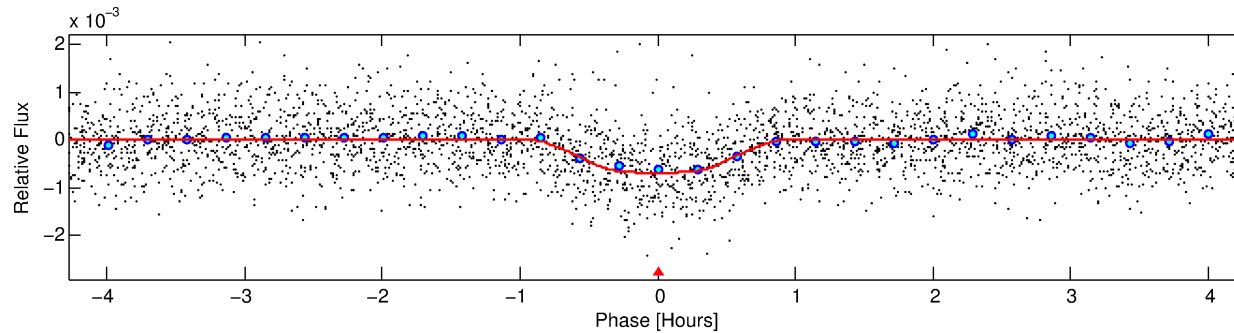
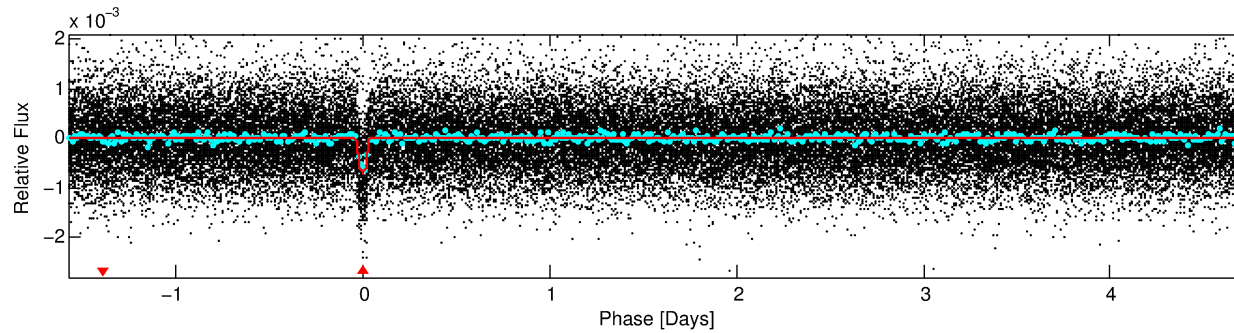
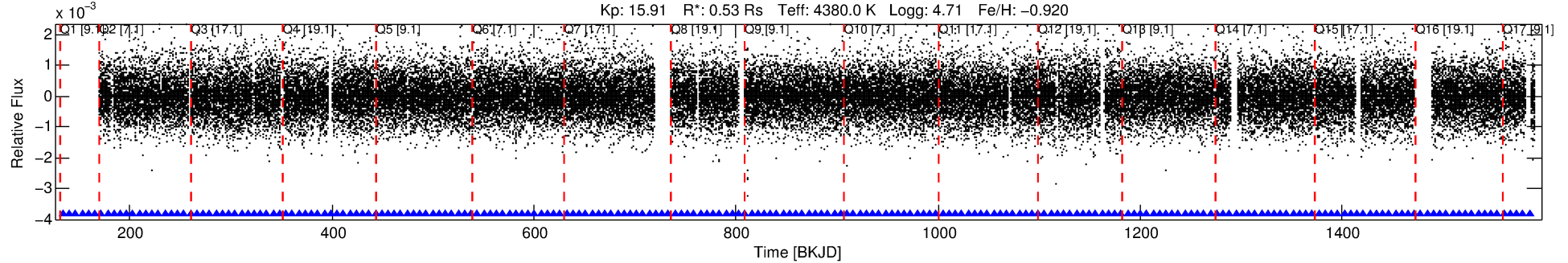
No Significant Match Found

DV One-Page Summary

KIC: 5436338 Candidate: 1 of 1 Period: 6.309 d

KOI: K02835.01 Corr: 0.948

Kp: 15.91 R*: 0.53 Rs Teff: 4380.0 K Logg: 4.71 Fe/H: -0.920



DV Fit Results:

Period = 6.30922 [0.00001] d
Epoch = 133.9956 [0.0015] BKJD
Rp/R* = 0.0290 [0.0073]
a/R* = 16.91 [17.78]
b = 0.90 [0.23]
Seff = 31.84 [5.37]
Teq = 606 [26] K
Rp = 1.68 [0.45] Re
a = 0.0539 [0.0039] AU
Ag = 32.69 [23.21] [1.37σ]
Teffp = 2239 [400] K [4.08σ]

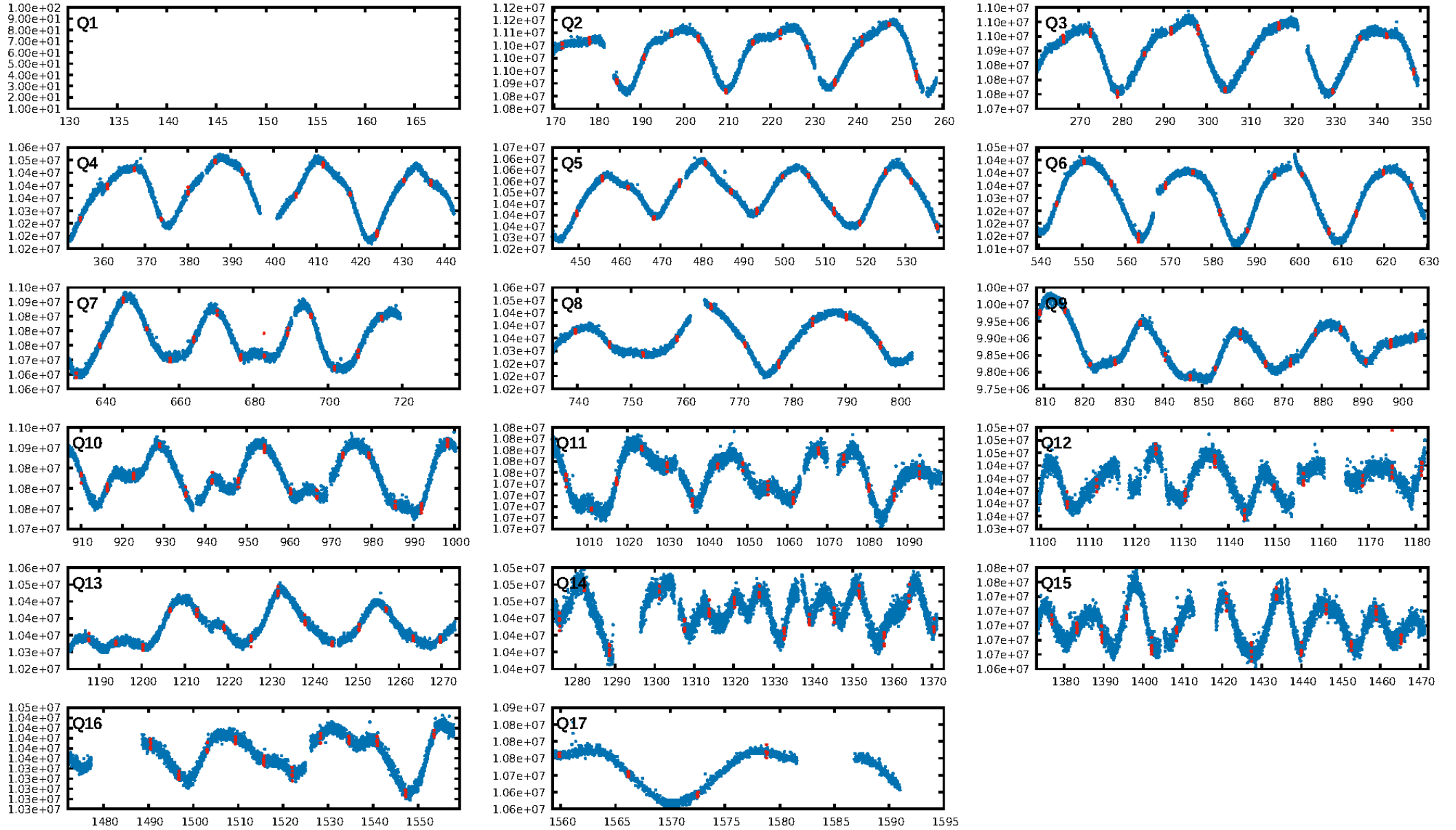
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.36e-76
RollingBand-fgt: 1.00 [204/204]
GhostDiagnostic-chr: 1.934
Centroid-sig: 64.5%
Centroid-so: 0.420 arcsec [0.63σ]
OotOffset-rm: 0.441 arcsec [1.72σ]
KicOffset-rm: 0.571 arcsec [2.24σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [16/16]

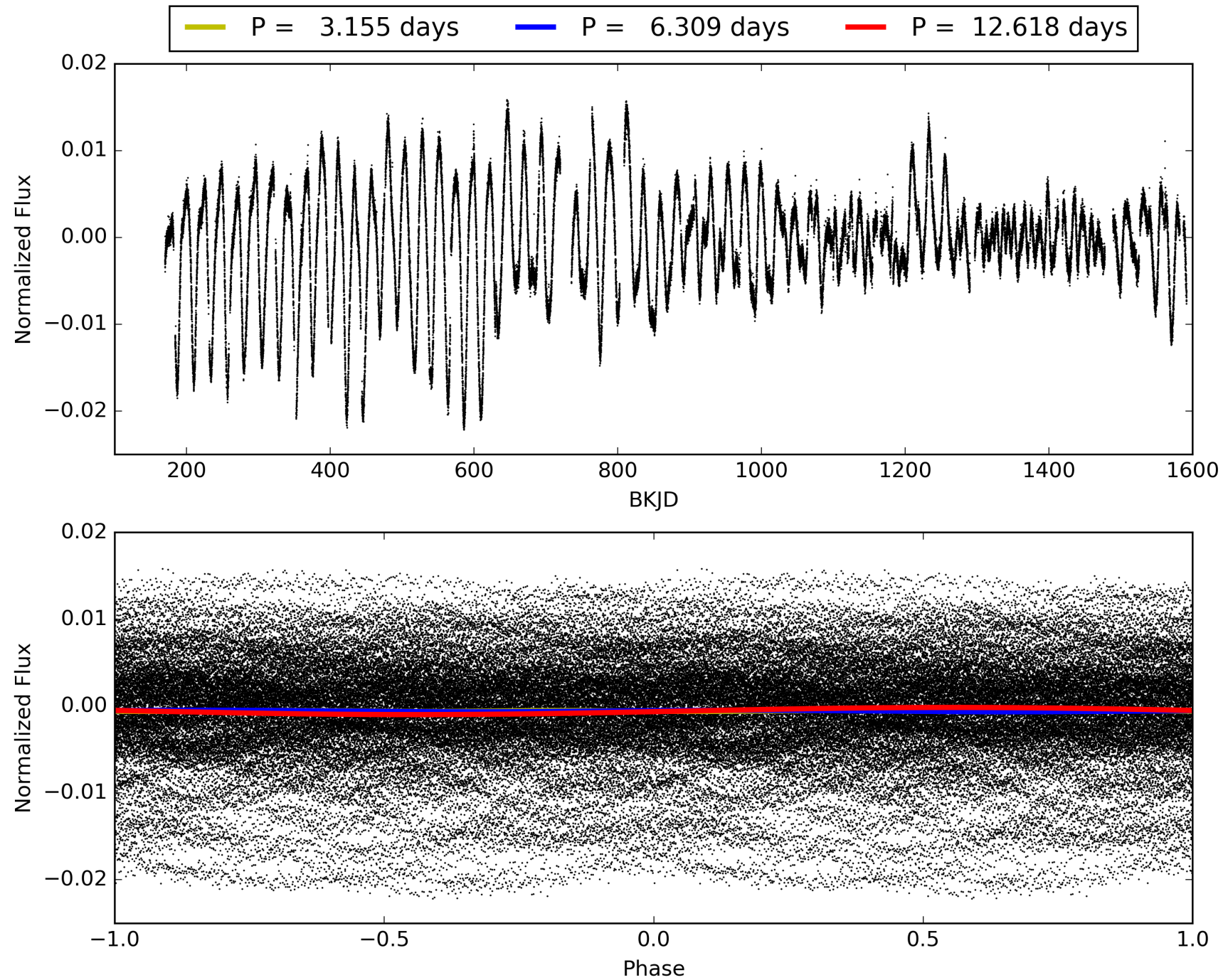
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:19:43 Z

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

TCE 005436338-01, PDC Light Curves

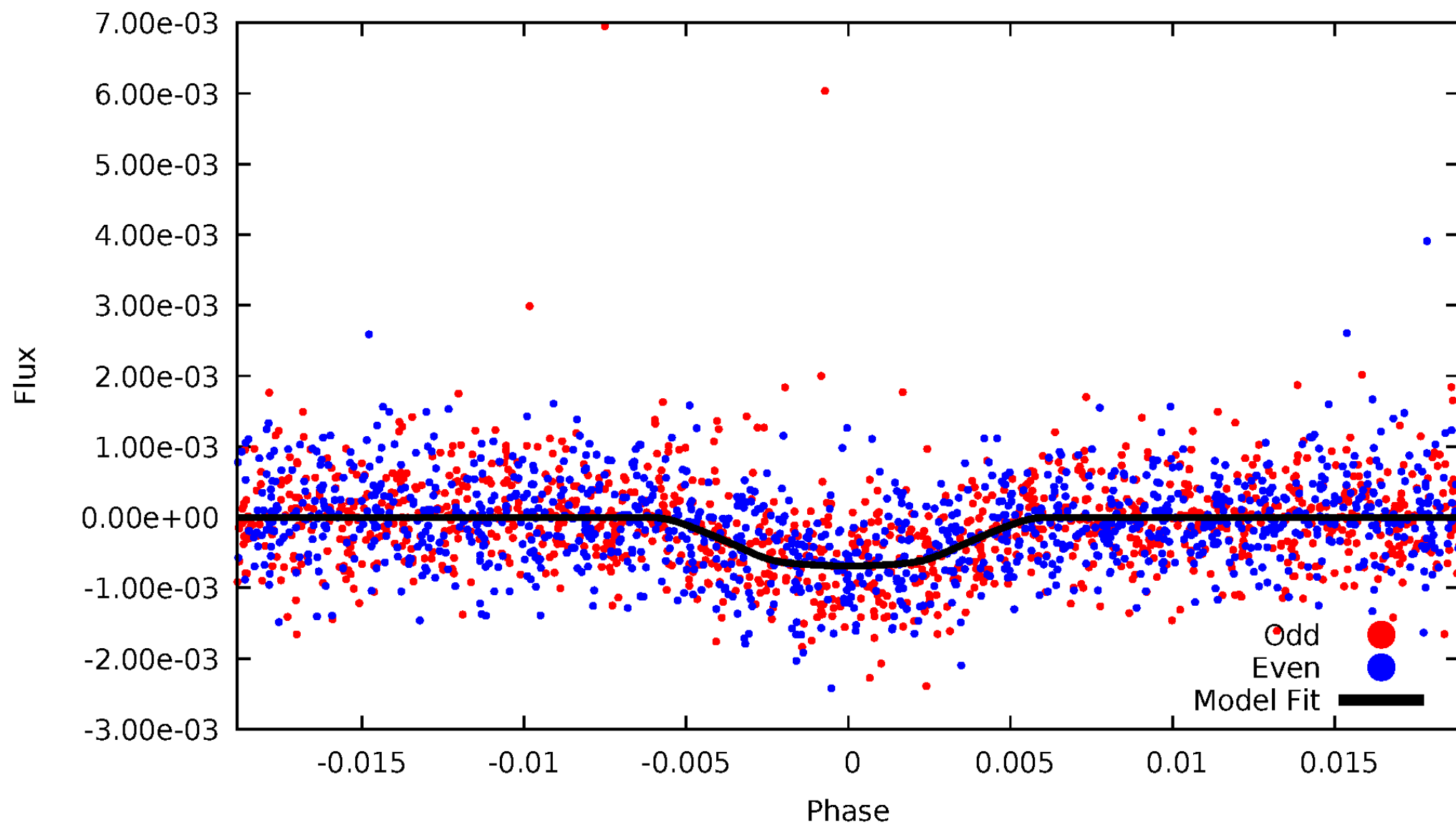


TCE 005436338-01



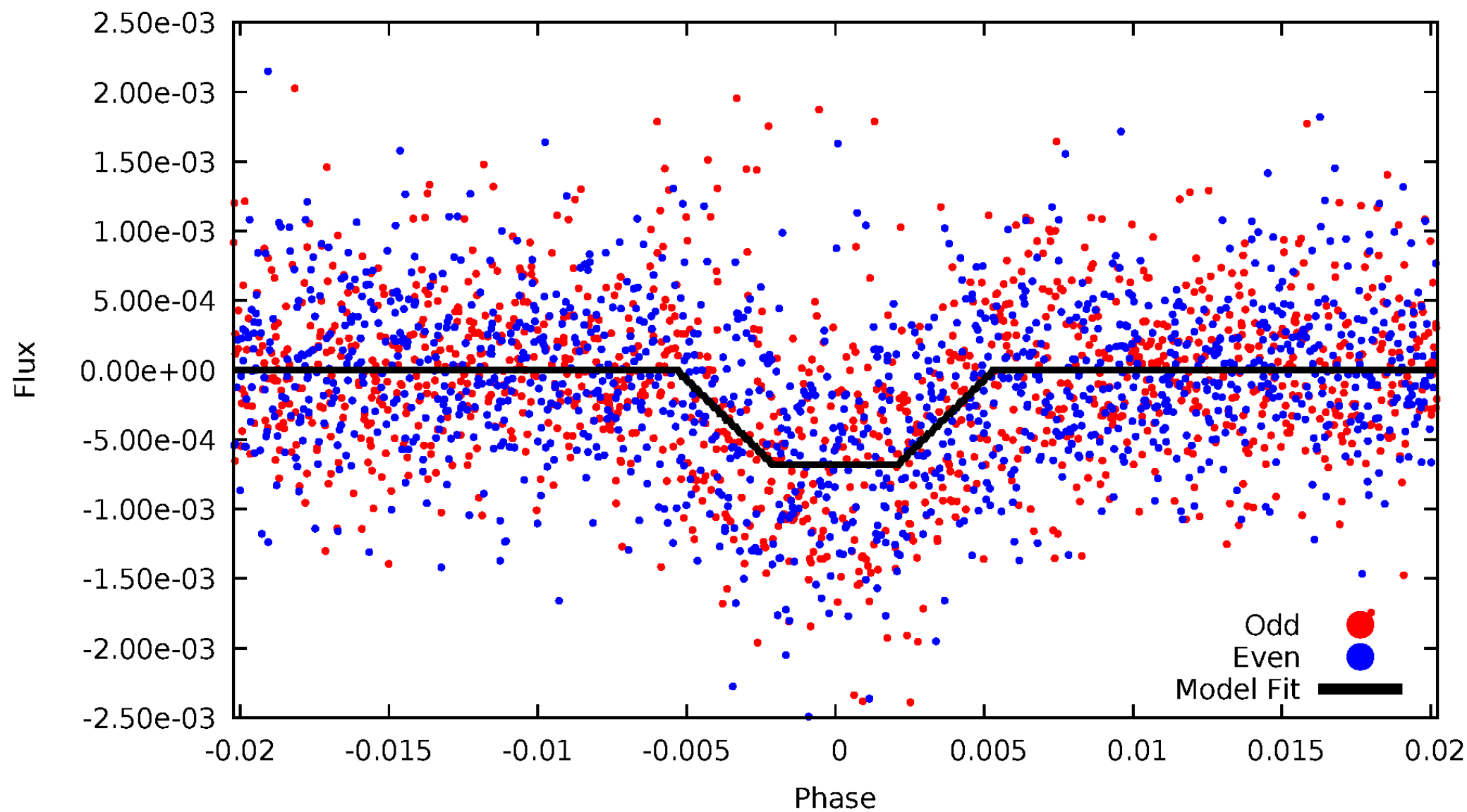
DV Odd/Even

TCE 005436338-01

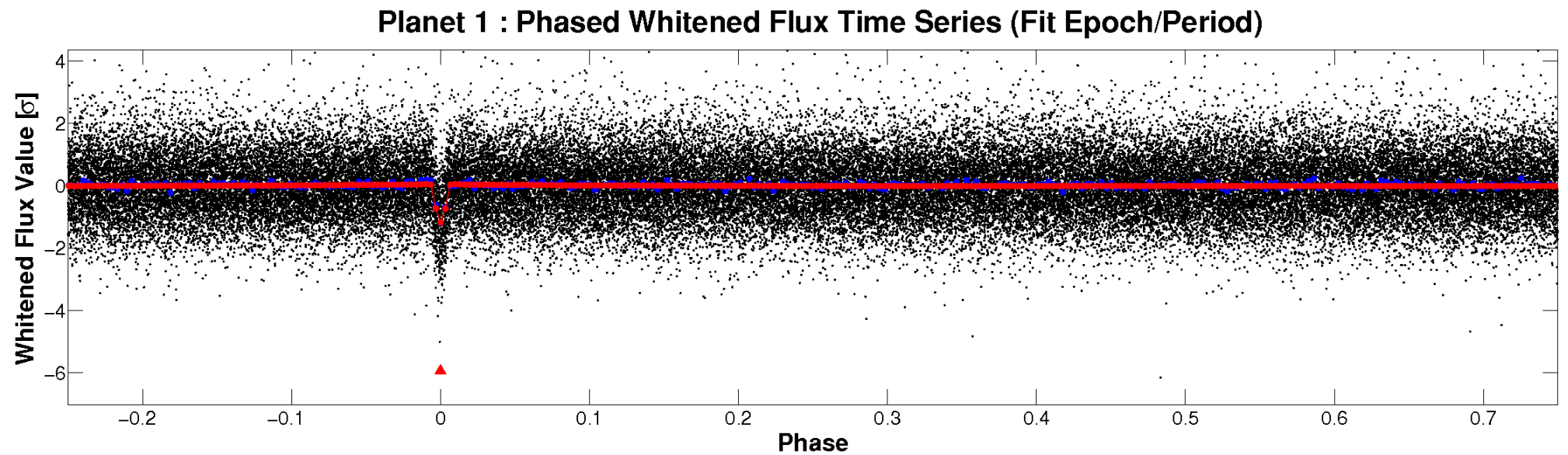
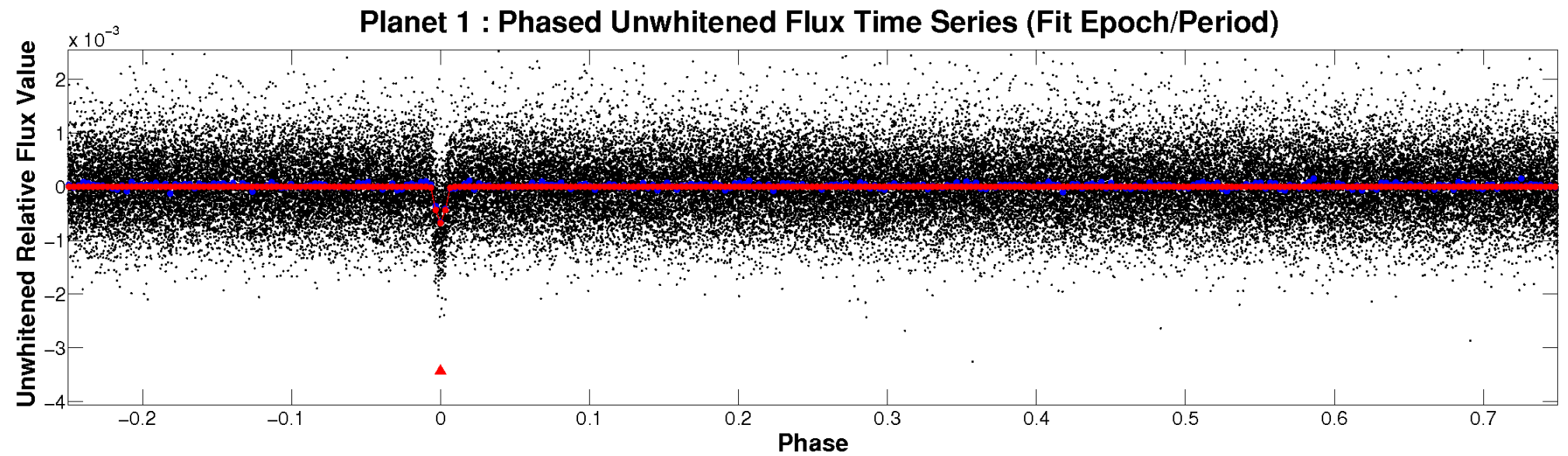


ALT Odd/Even

TCE 005436338-01

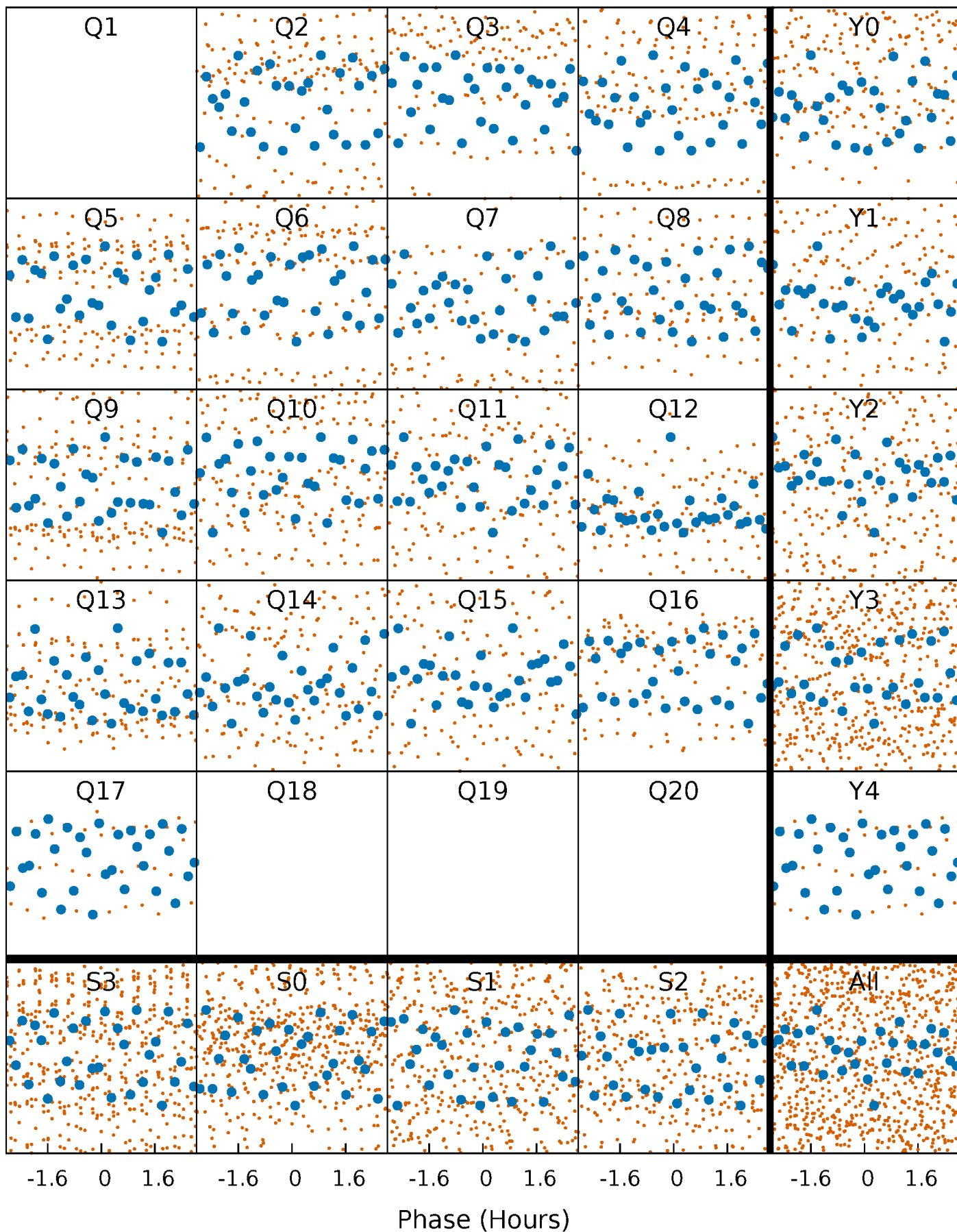


Non-Whitened Vs. Whitened Light Curve



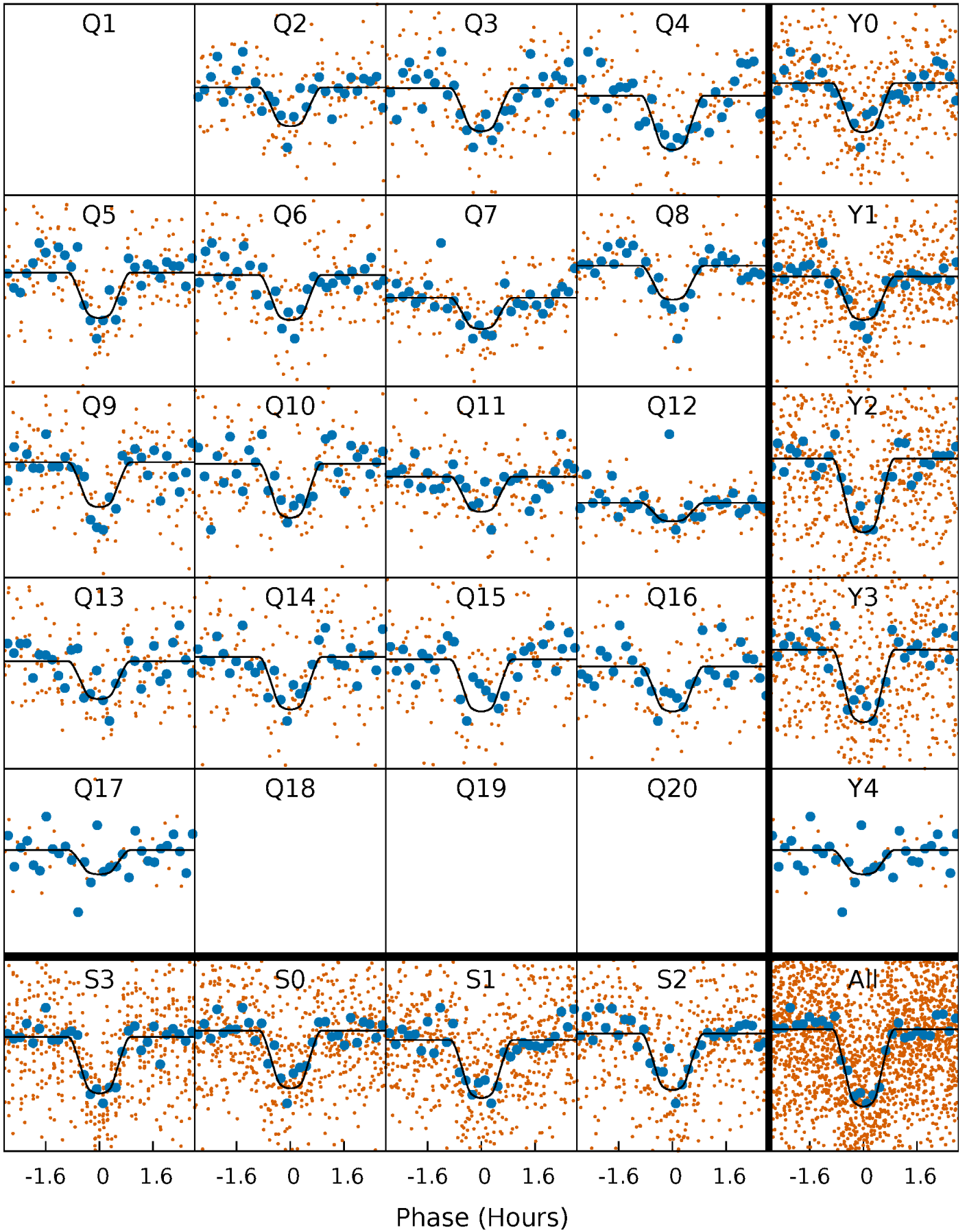
PDC Quarter-Phased Transit Curves

TCE 005436338-01 P= 6.309223 Days $T_0=133.995556$ (BKJD)



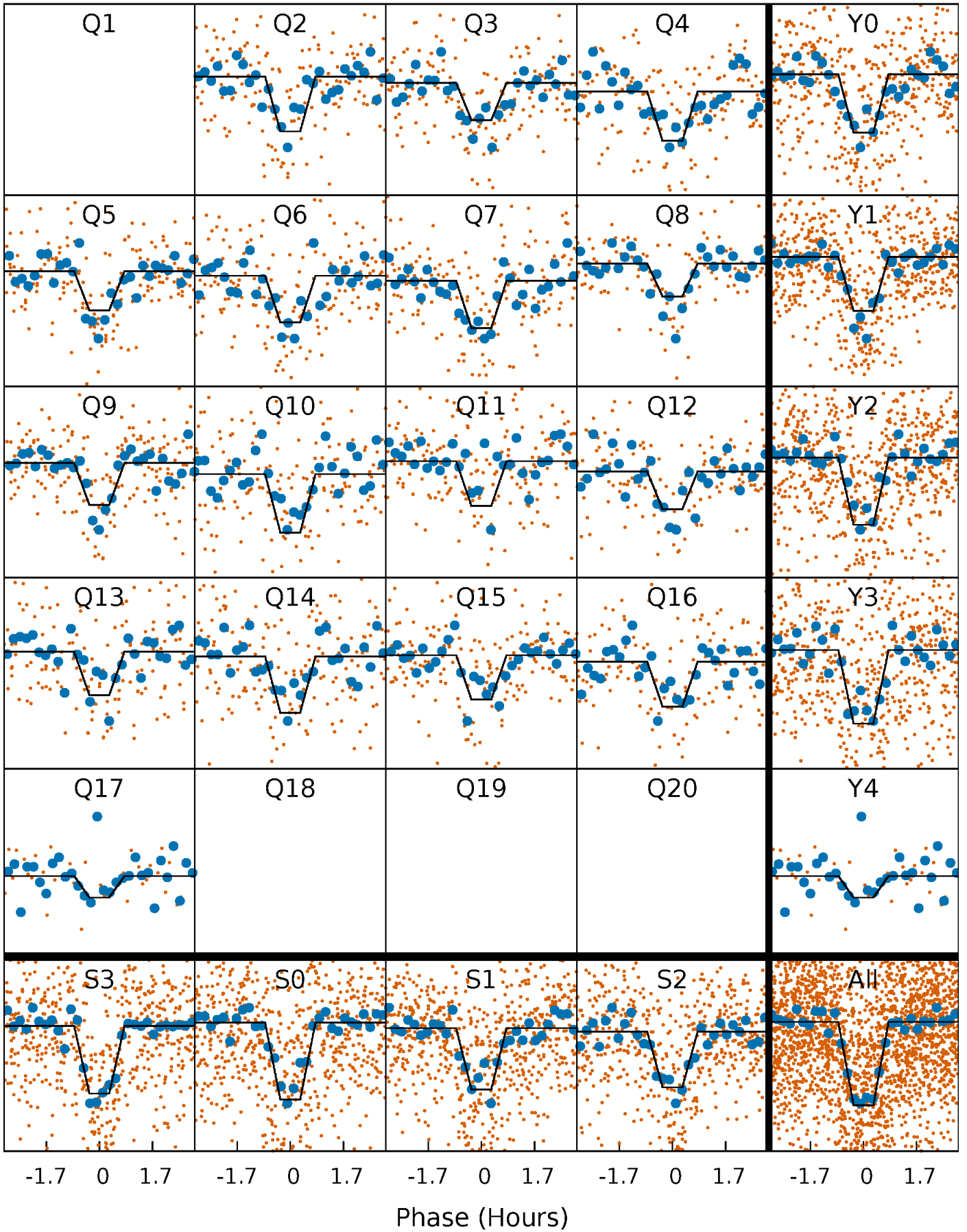
DV Quarter-Phased Transit Curves

TCE 005436338-01 P= 6.309223 Days $T_0=133.995556$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

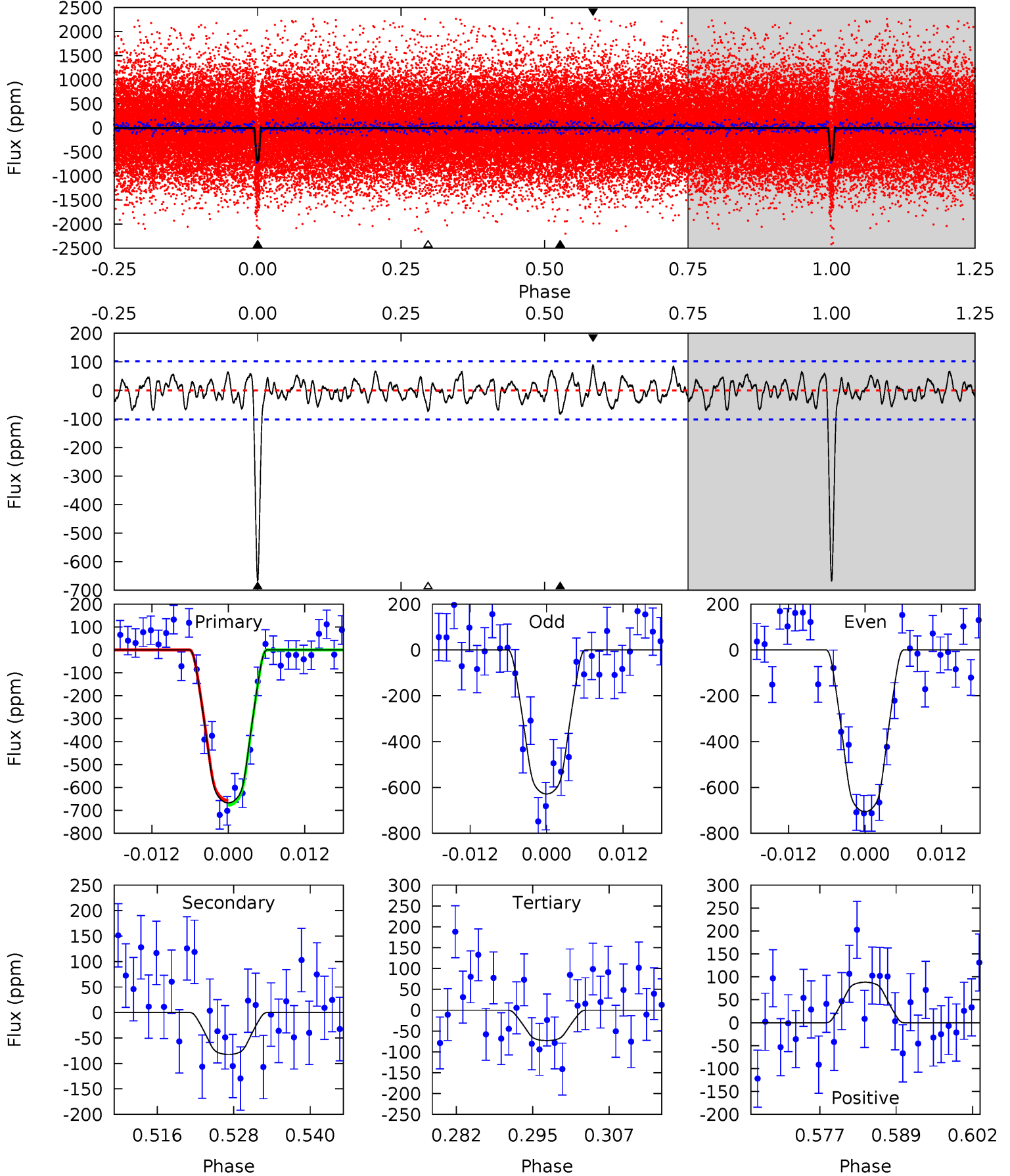
TCE 005436338-01 P= 6.309204 Days $T_0=133.998166$ (BKJD)



DV Model-Shift Uniqueness Test

005436338-01, P = 6.309223 Days, E = 133.995556 Days

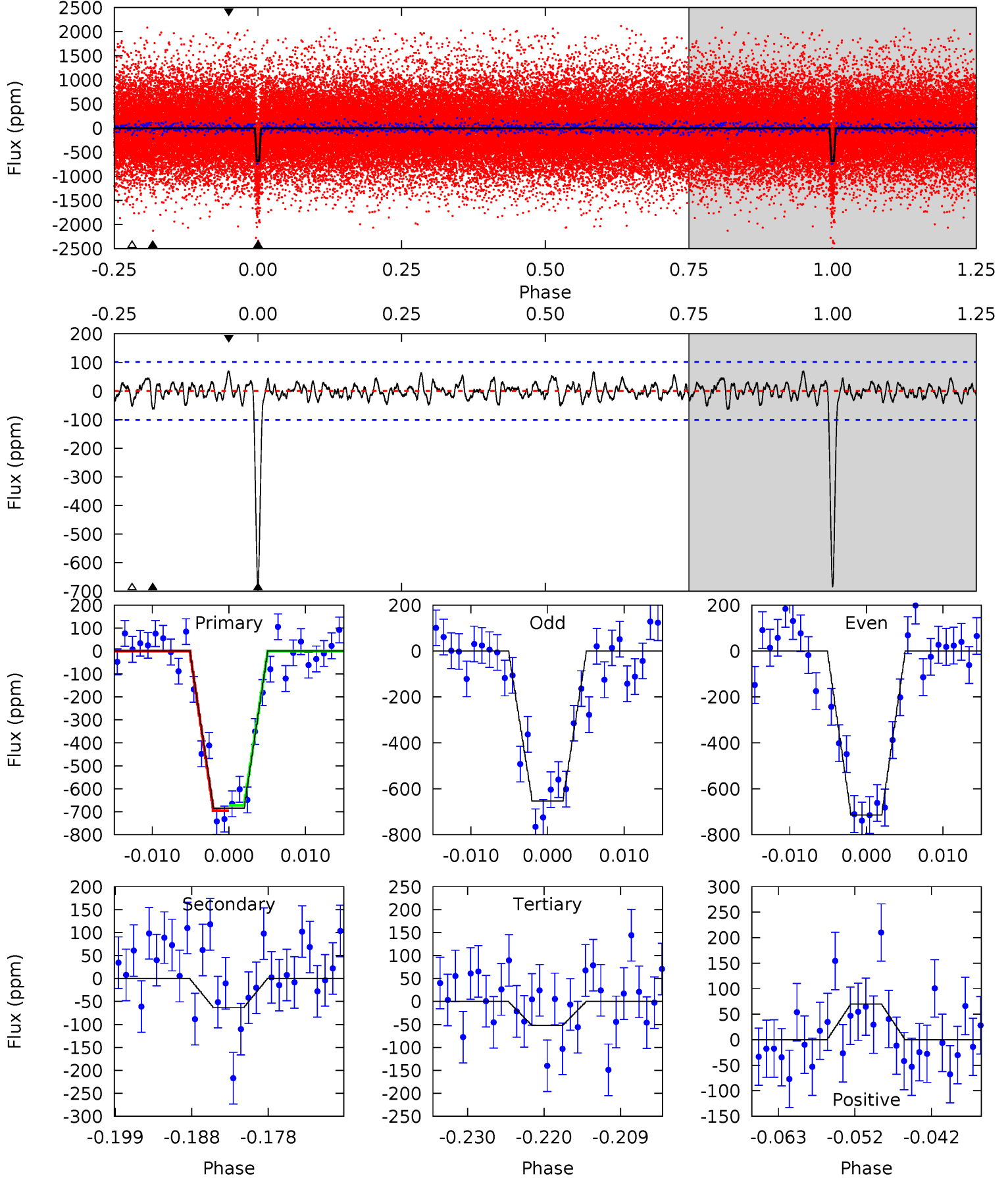
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.6	4.03	3.57	4.32	4.99	2.50	1.47	29.1	28.3	0.46	-0.29	1.89	0.95	0.12	0.50



Alt Model-Shift Uniqueness Test

005436338-01, P = 6.309204 Days, E = 133.998166 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	3.11	2.58	3.46	5.02	2.56	1.08	31.2	30.3	0.53	-0.35	1.50	0.95	0.09	0.60



Stellar Parameters For KIC 005436338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4380^{+130}_{-143}	$4.710^{+0.059}_{-0.032}$	$-0.920^{+0.300}_{-0.300}$	$0.530^{+0.041}_{-0.045}$	$0.524^{+0.045}_{-0.034}$	$4.968^{+1.337}_{-0.677}$
	+3%/-3%	+1%/-1%	+33%/-33%	+8%/-8%	+9%/-6%	+27%/-14%
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 005436338-01 / KOI 2835.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 20	$1.68^{+0.47}_{-0.40}$	841^{+29}_{-31}	2962^{+298}_{-209}	45^{+38}_{-18}
Alt.	-63 ± 20	$1.51^{+0.41}_{-0.43}$	843^{+29}_{-33}	2969^{+344}_{-240}	45^{+48}_{-20}

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

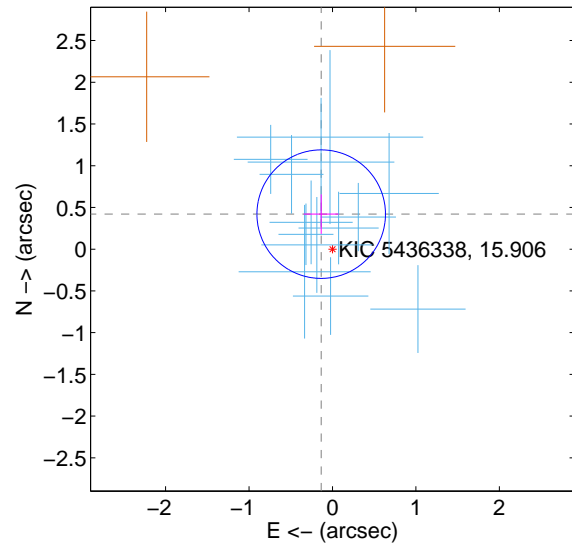
Supplemental centroid analysis for 005436338-01. Kepler magnitude: 15.91. Transit SNR 22.58

There are 13 quarters with good PRF difference image offsets

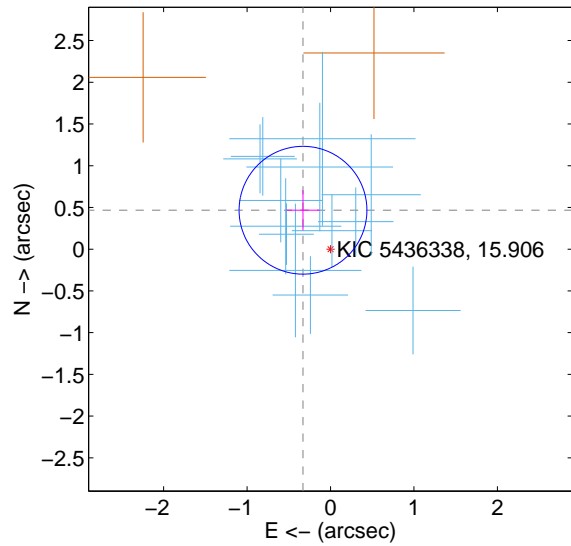
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.441 ± 0.257	1.72	0.135 ± 0.208	0.420 ± 0.237
PRF-fit source offset from KIC position	0.571 ± 0.255	2.24	0.330 ± 0.199	0.467 ± 0.241
photometric centroid source offset	0.42 ± 0.67	0.63	0.38 ± 0.68	-0.17 ± 0.60

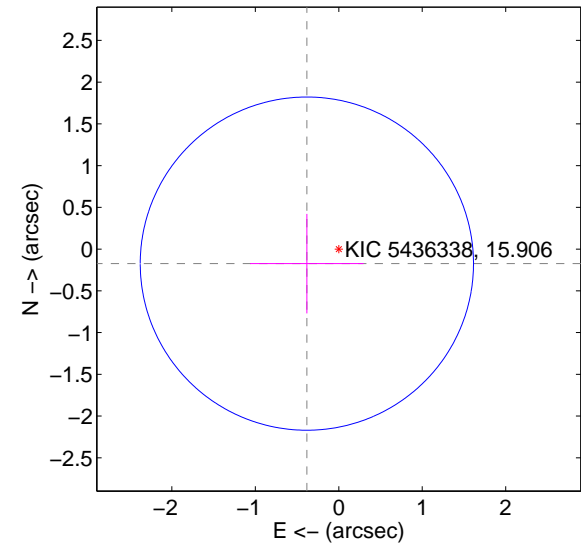
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

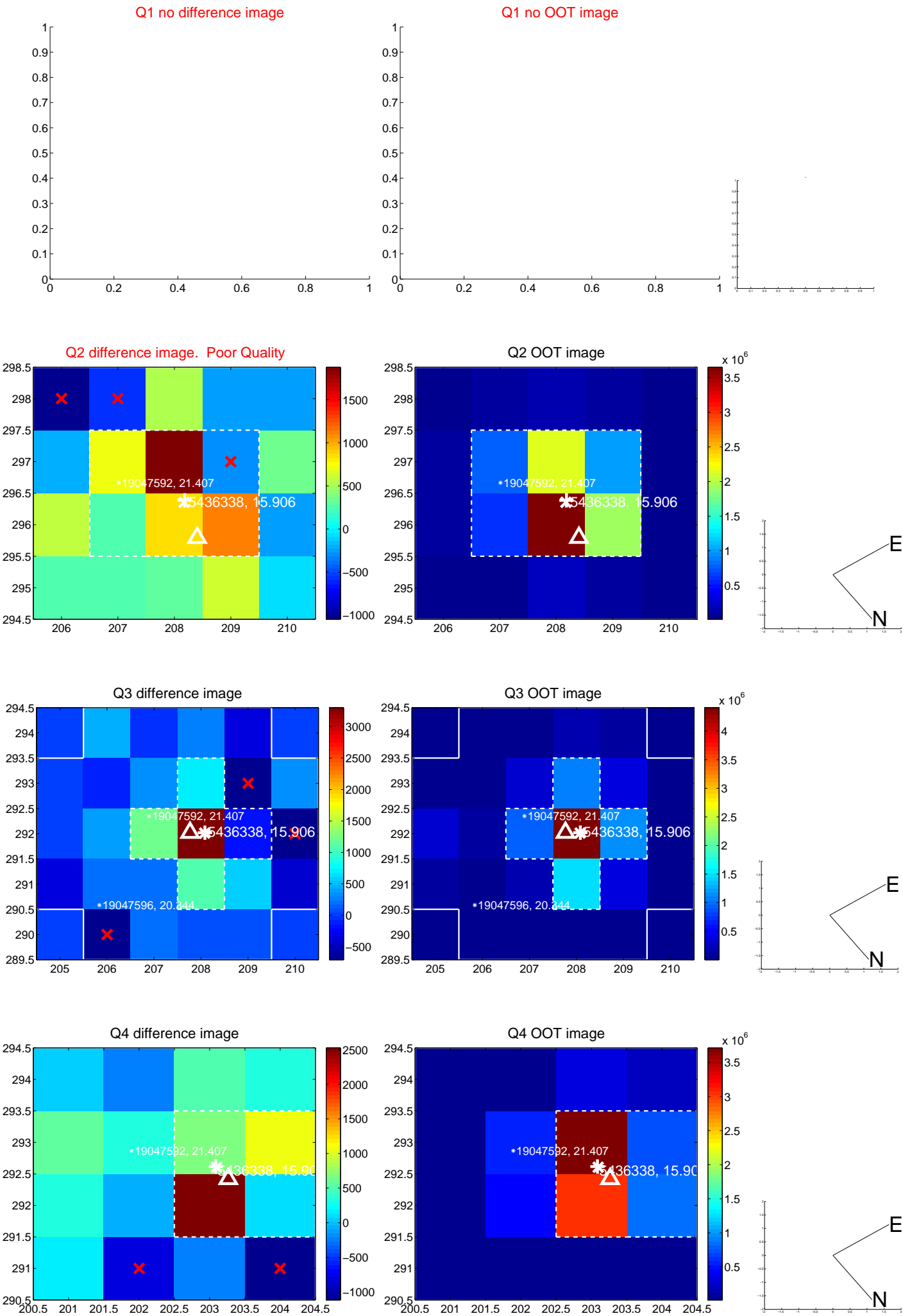


offset from photometric centroids

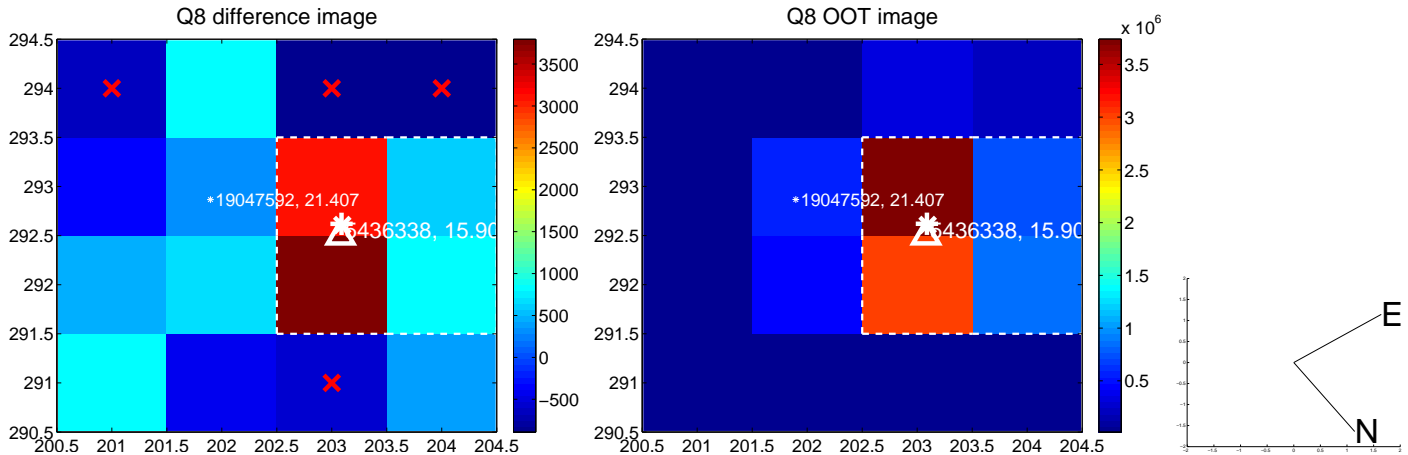
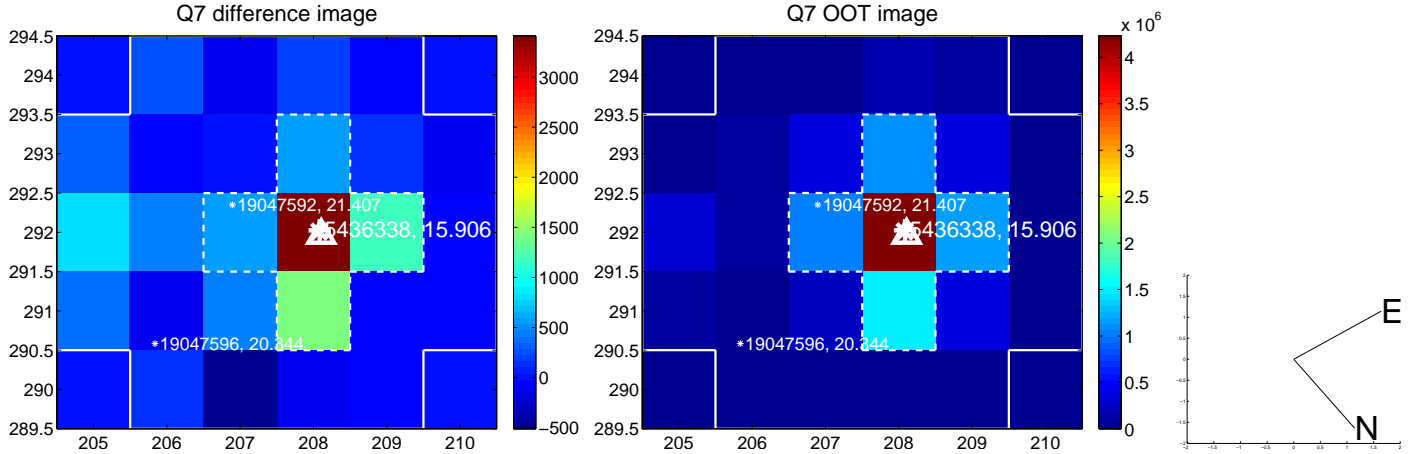
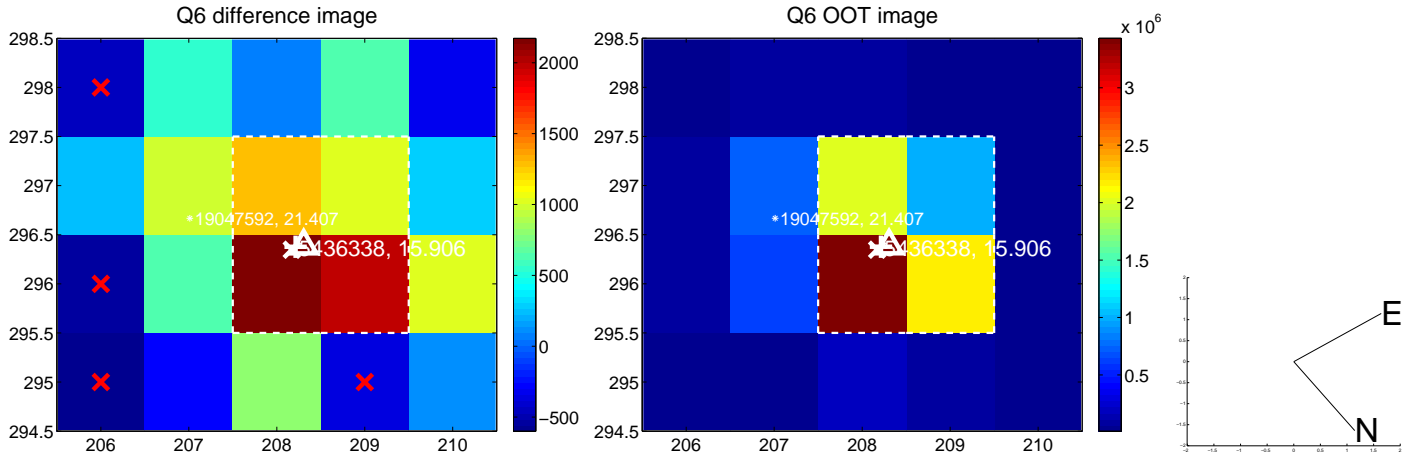
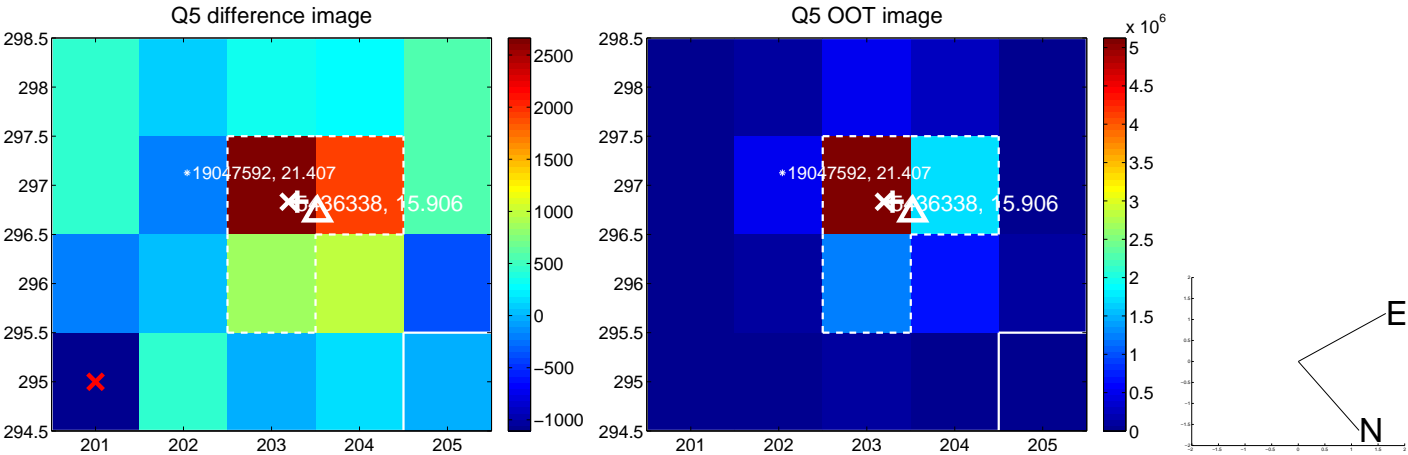


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

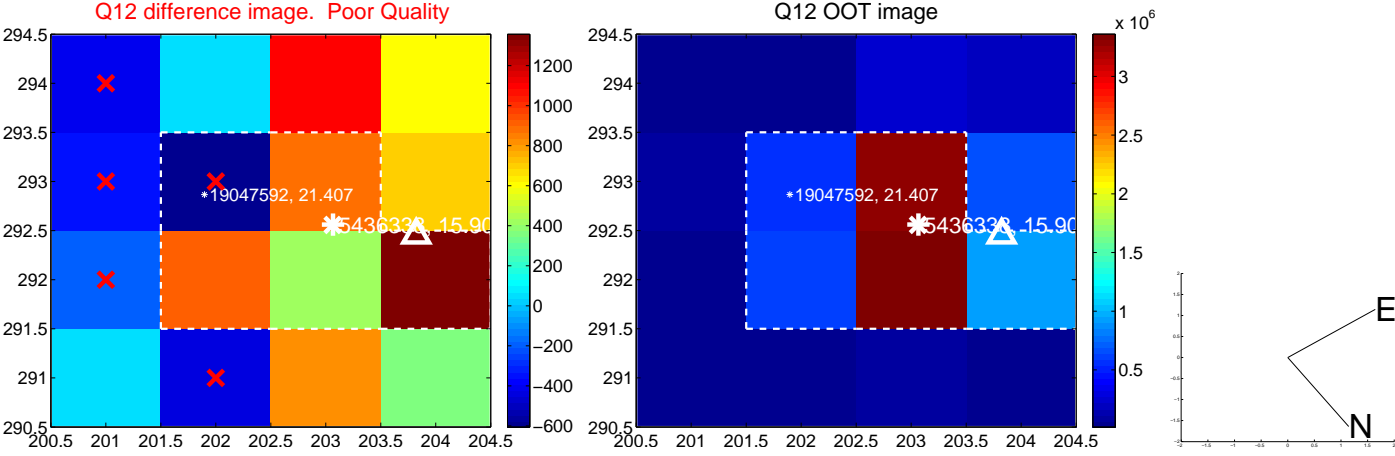
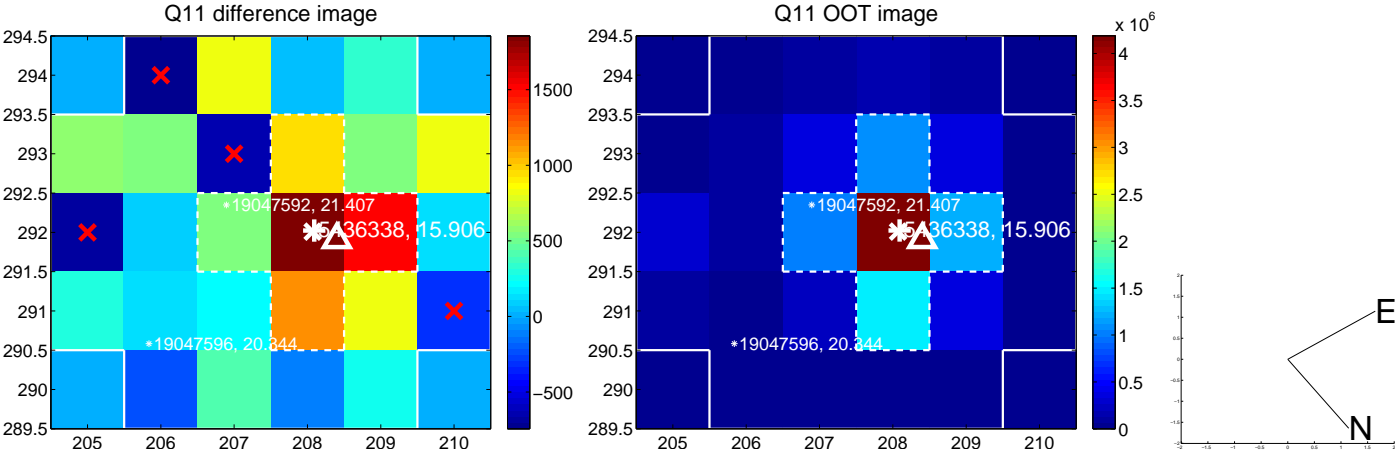
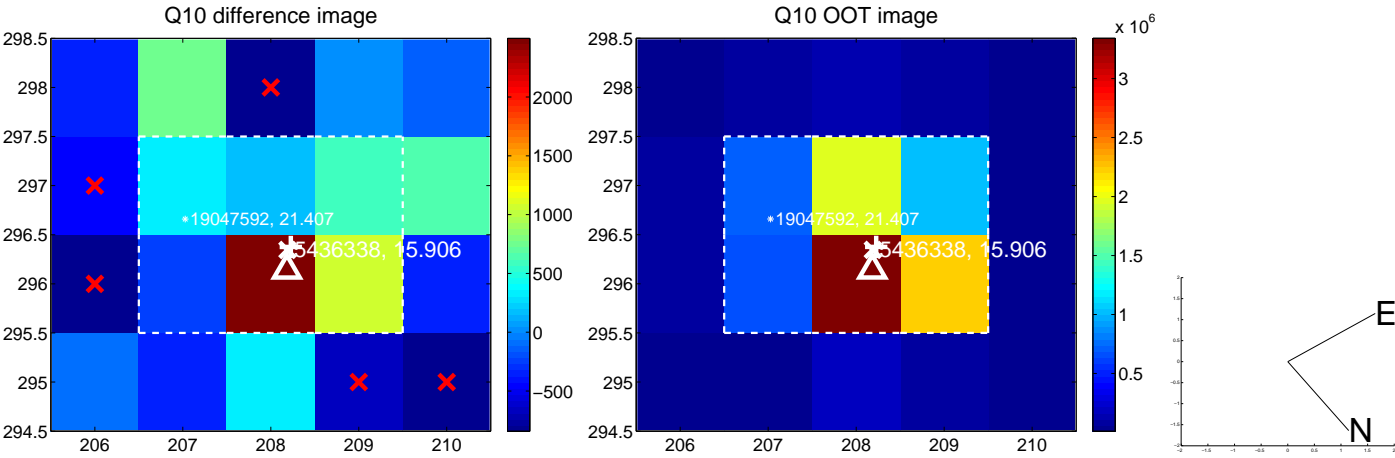
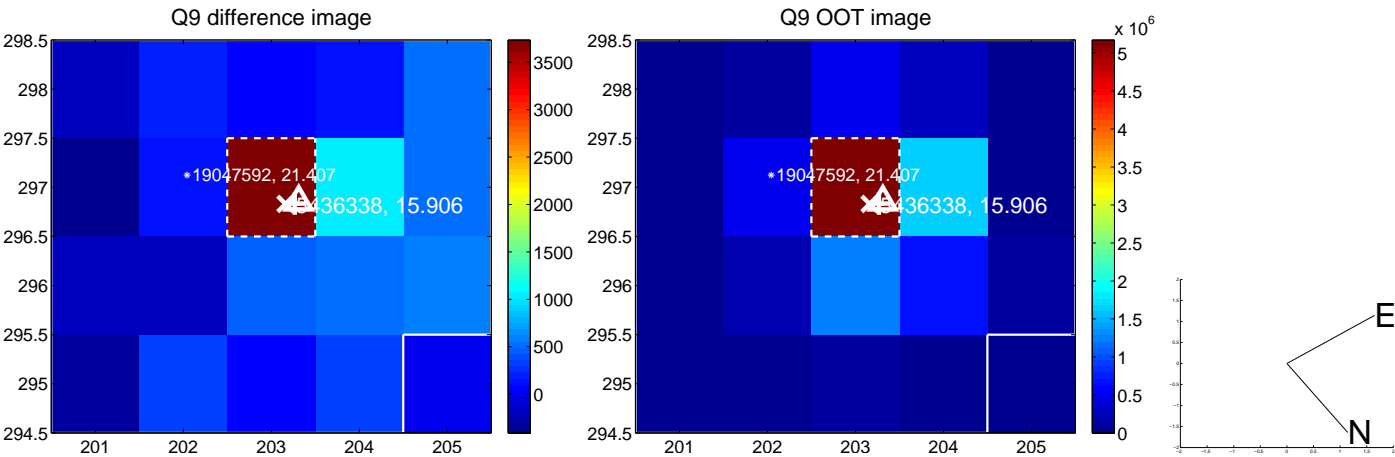
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



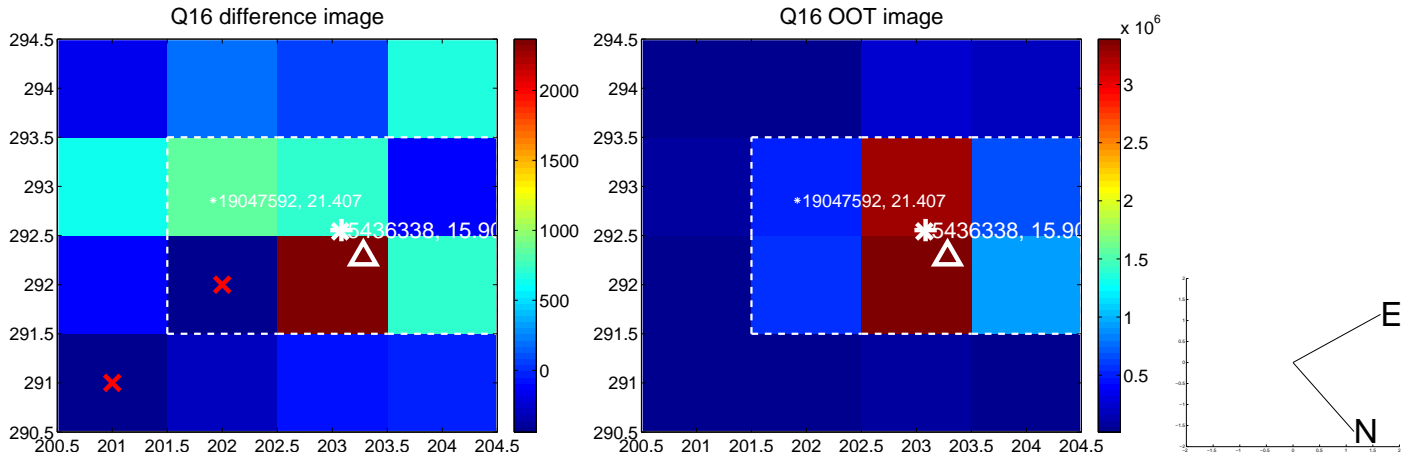
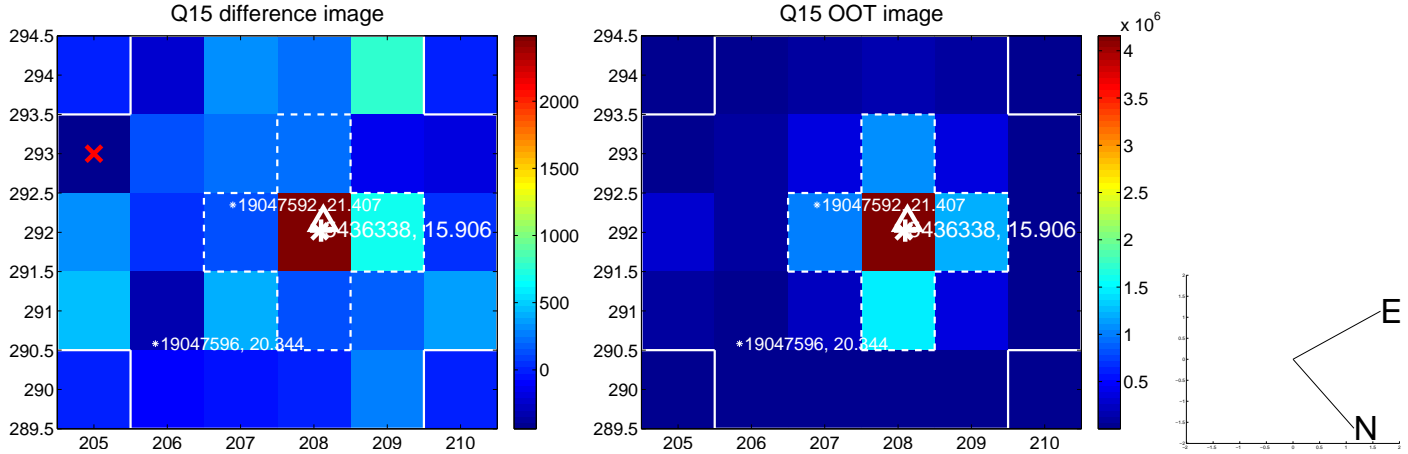
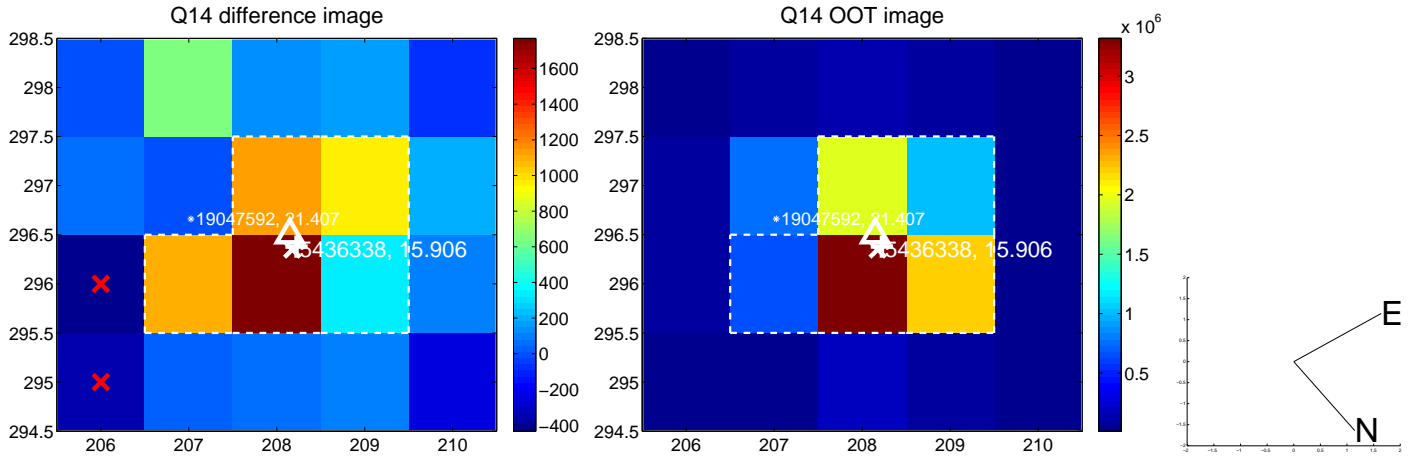
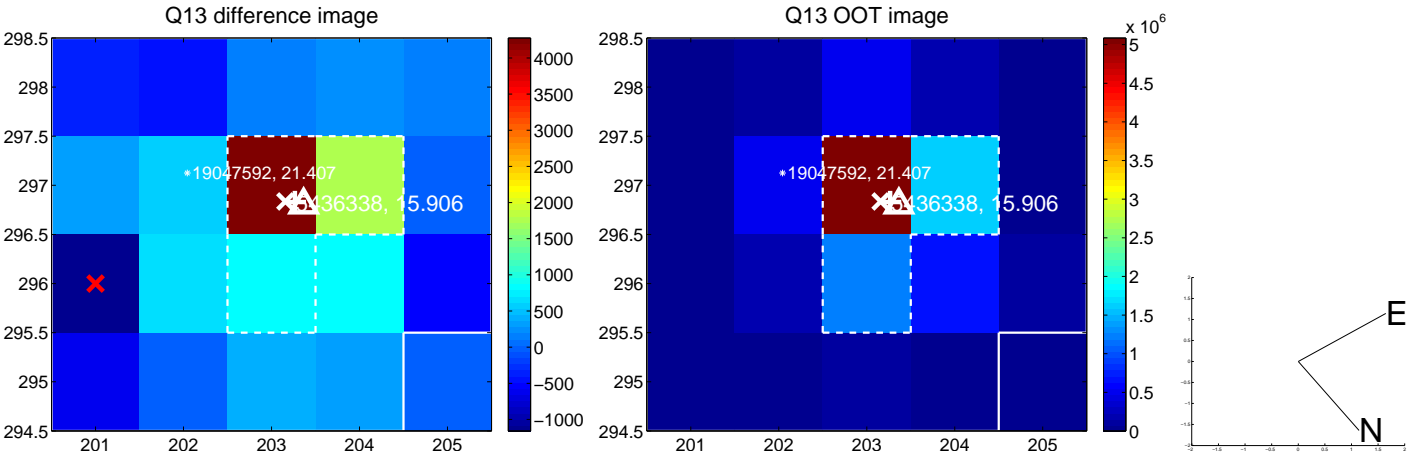
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



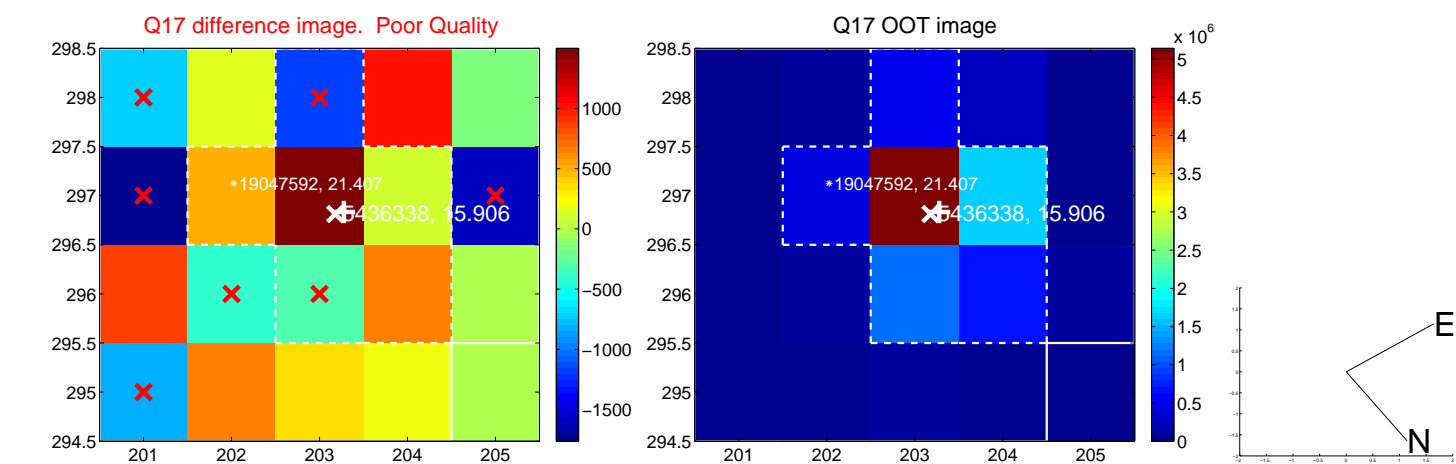
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



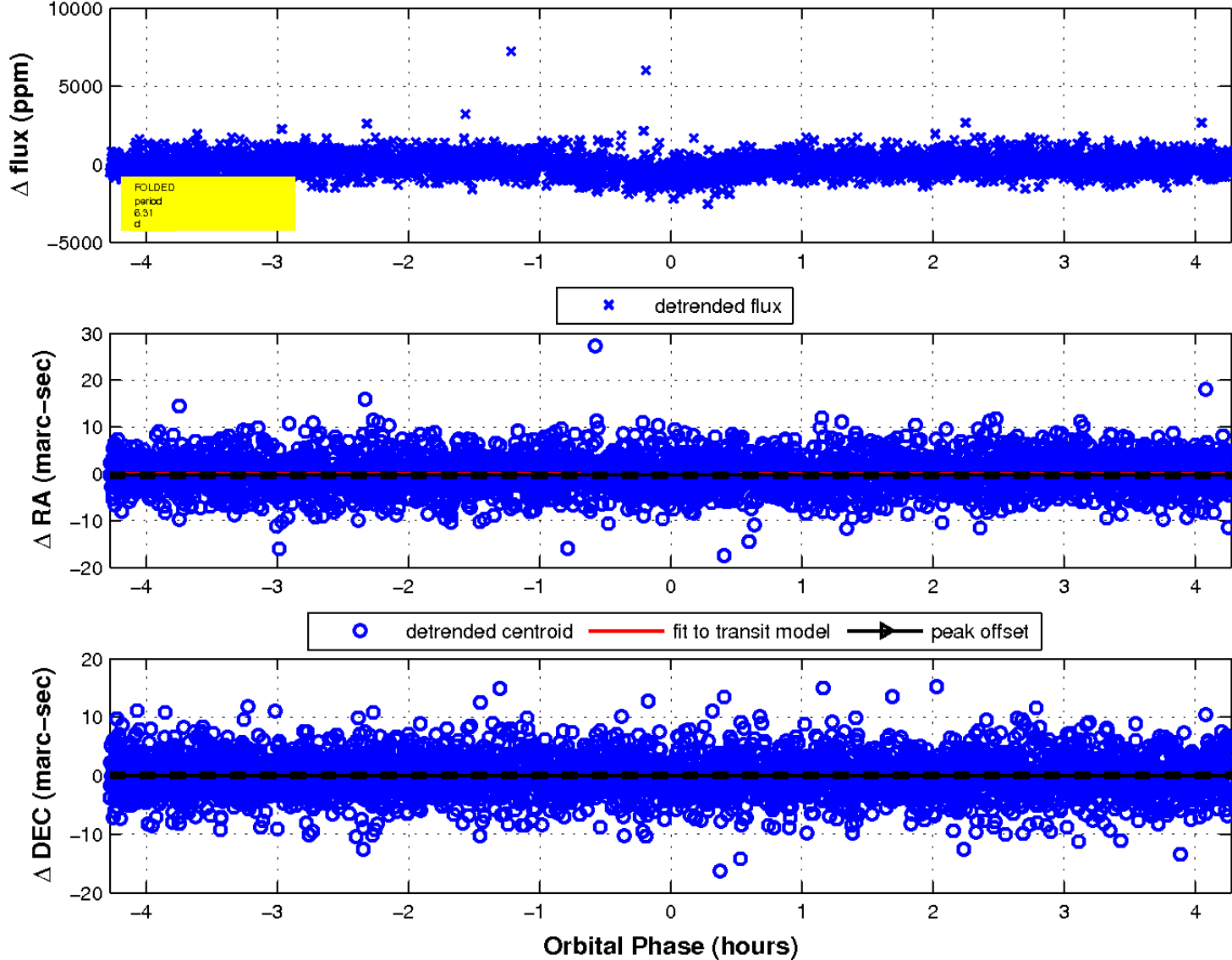
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

