

KIC 006437719

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})
006437719-01	OBS	No	7.776751	133.624433	17.1	20.076	8.4	9.3	1.72	6602	0.81	701.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006437719-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

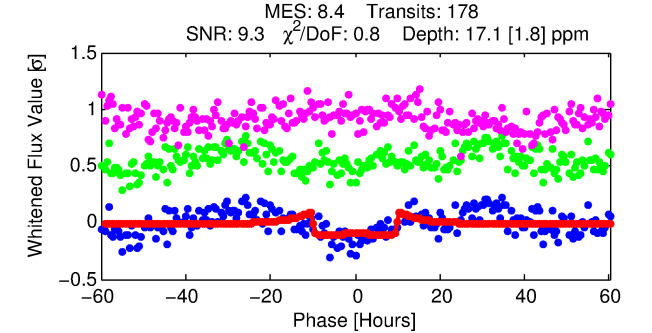
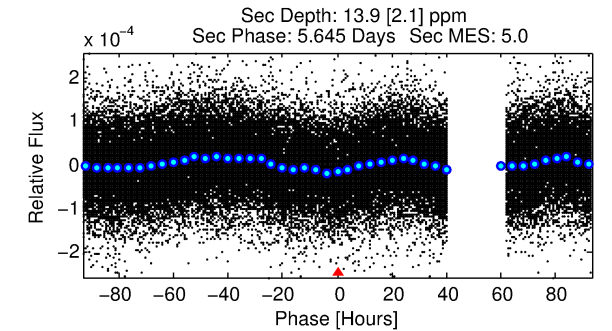
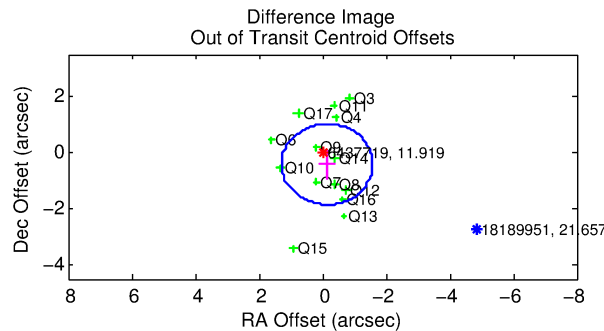
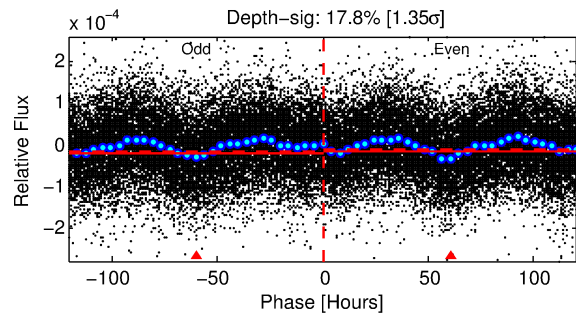
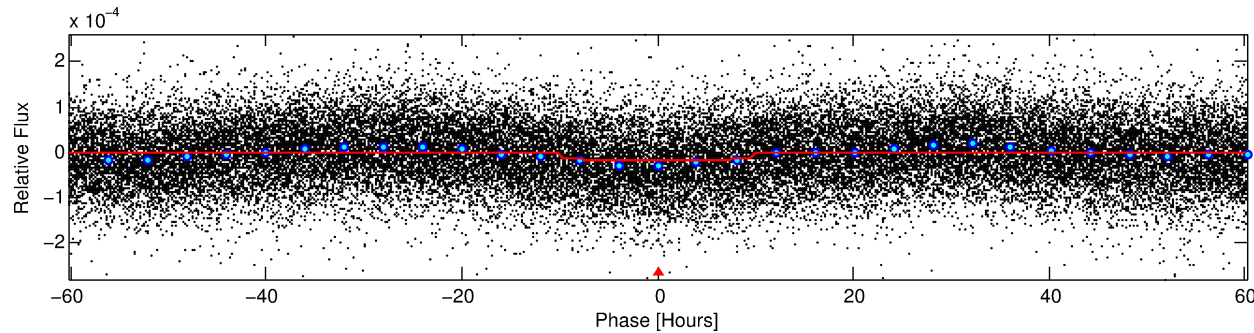
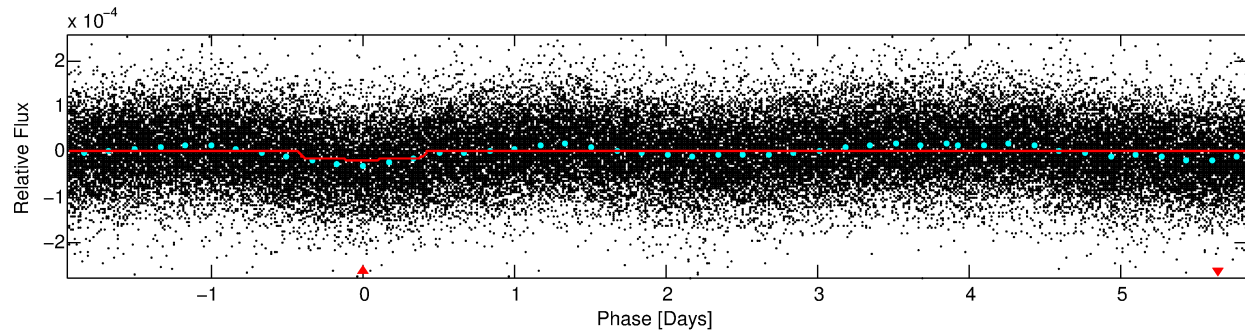
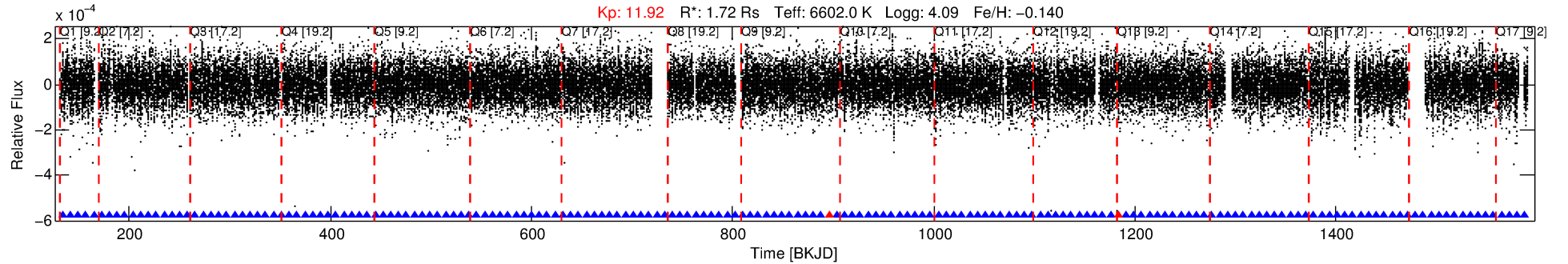
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006437719-01

No Significant Match Found

DV One-Page Summary

KIC: 6437719 Candidate: 1 of 1 Period: 7.777 d



DV Fit Results:

Period = 7.77675 [0.00012] d
Epoch = 133.6244 [0.0118] BKJD
Rp/R* = 0.0043 [0.0004]
a/R* = 1.72 [0.54]
b = 0.88 [0.13]
Seff = 701.80 [312.47]
Teq = 1312 [146] K
Rp = 0.81 [0.26] Re
a = 0.0845 [0.0229] AU
Ag = 82.77 [40.37] [2.03 σ]
Teffp = 6121 [447] K [10.22 σ]

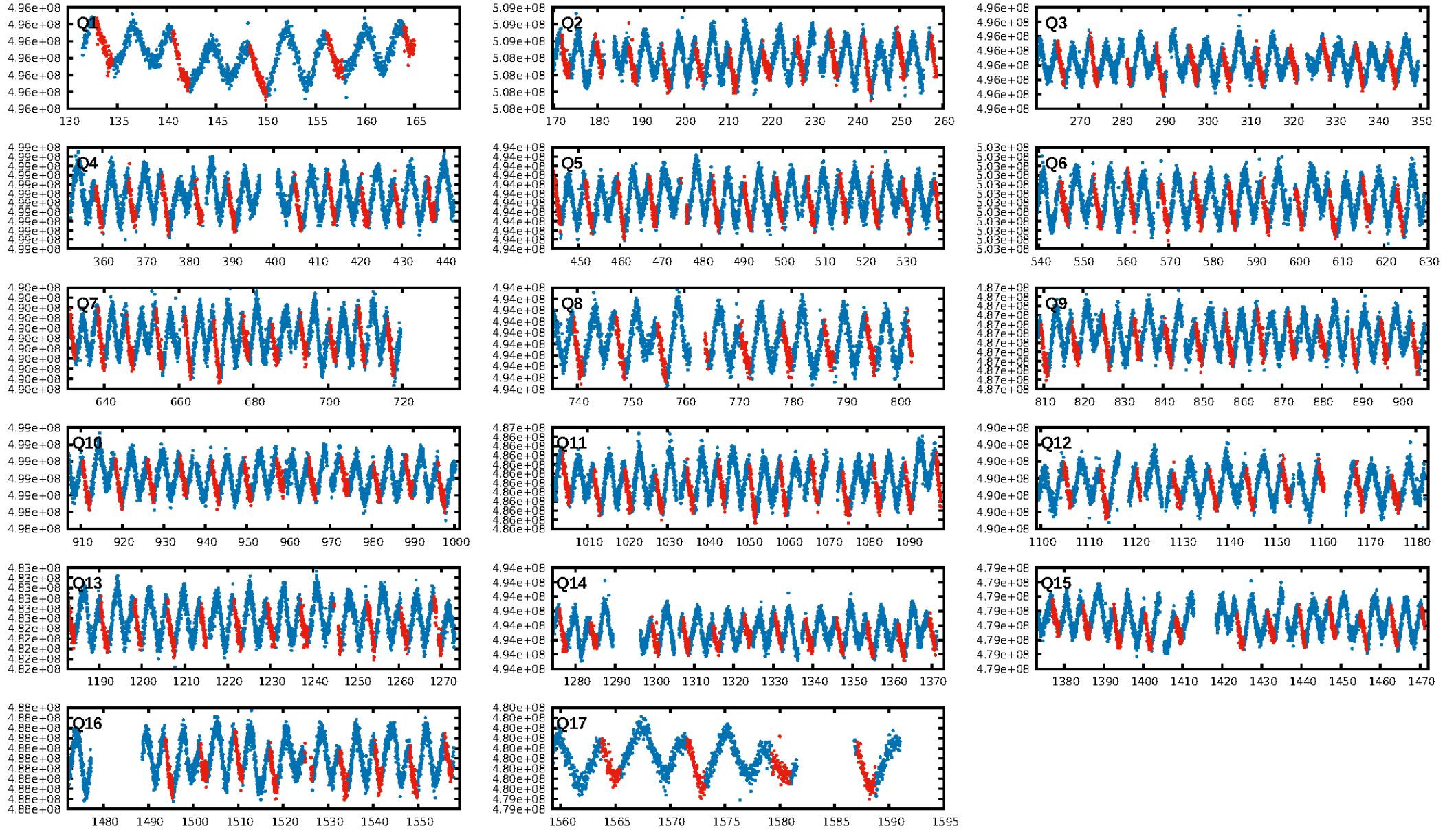
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.10e-12
RollingBand-fgm: 0.99 [167/169]
GhostDiagnostic-chr: 0.7523
Centroid-sig: 50.0%
Centroid-so: 0.627 arcsec [0.73 σ]
OotOffset-rm: 0.441 arcsec [0.92 σ]
KicOffset-rm: 0.321 arcsec [0.65 σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [17/17]

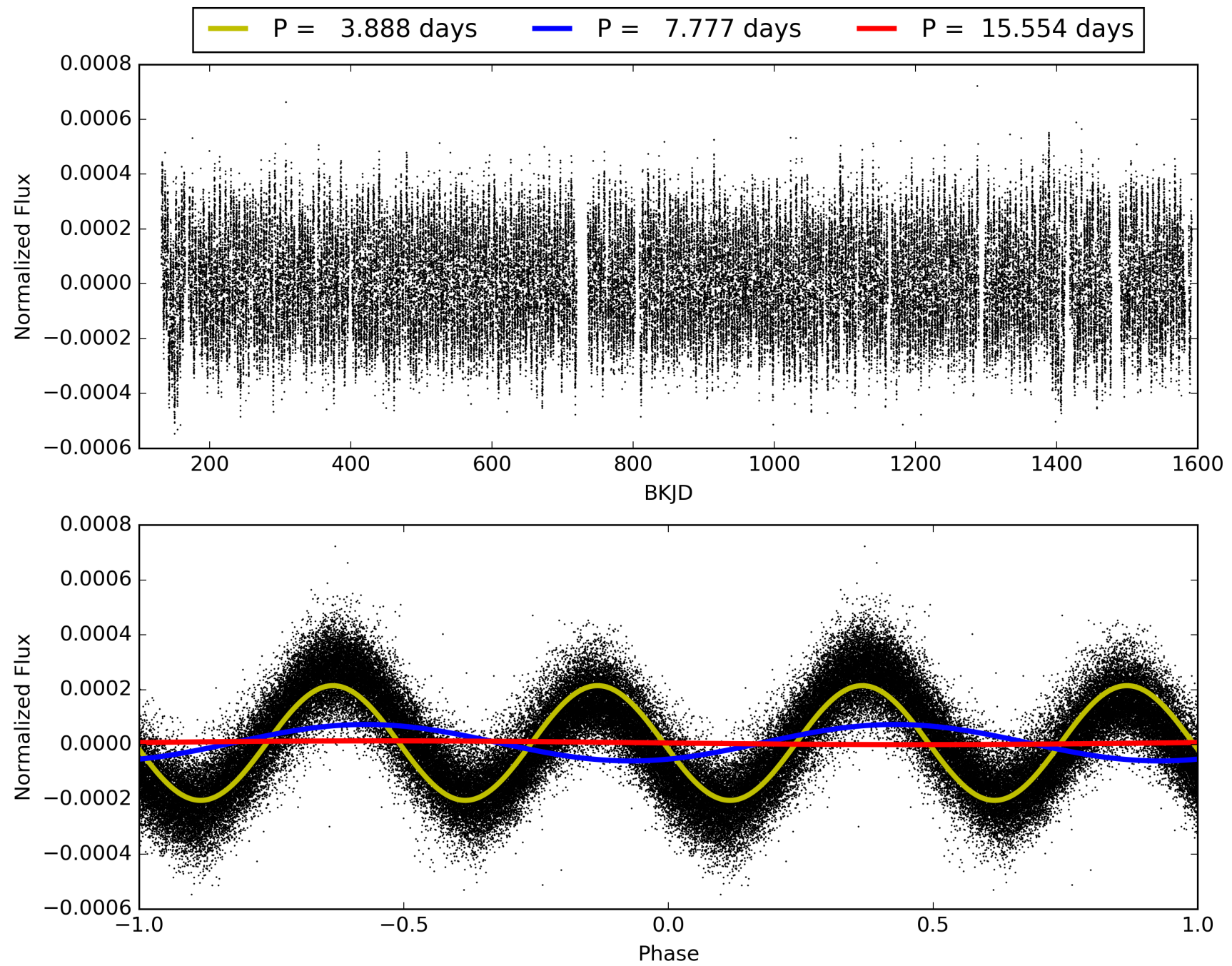
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:46:07 Z

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

TCE 006437719-01, PDC Light Curves

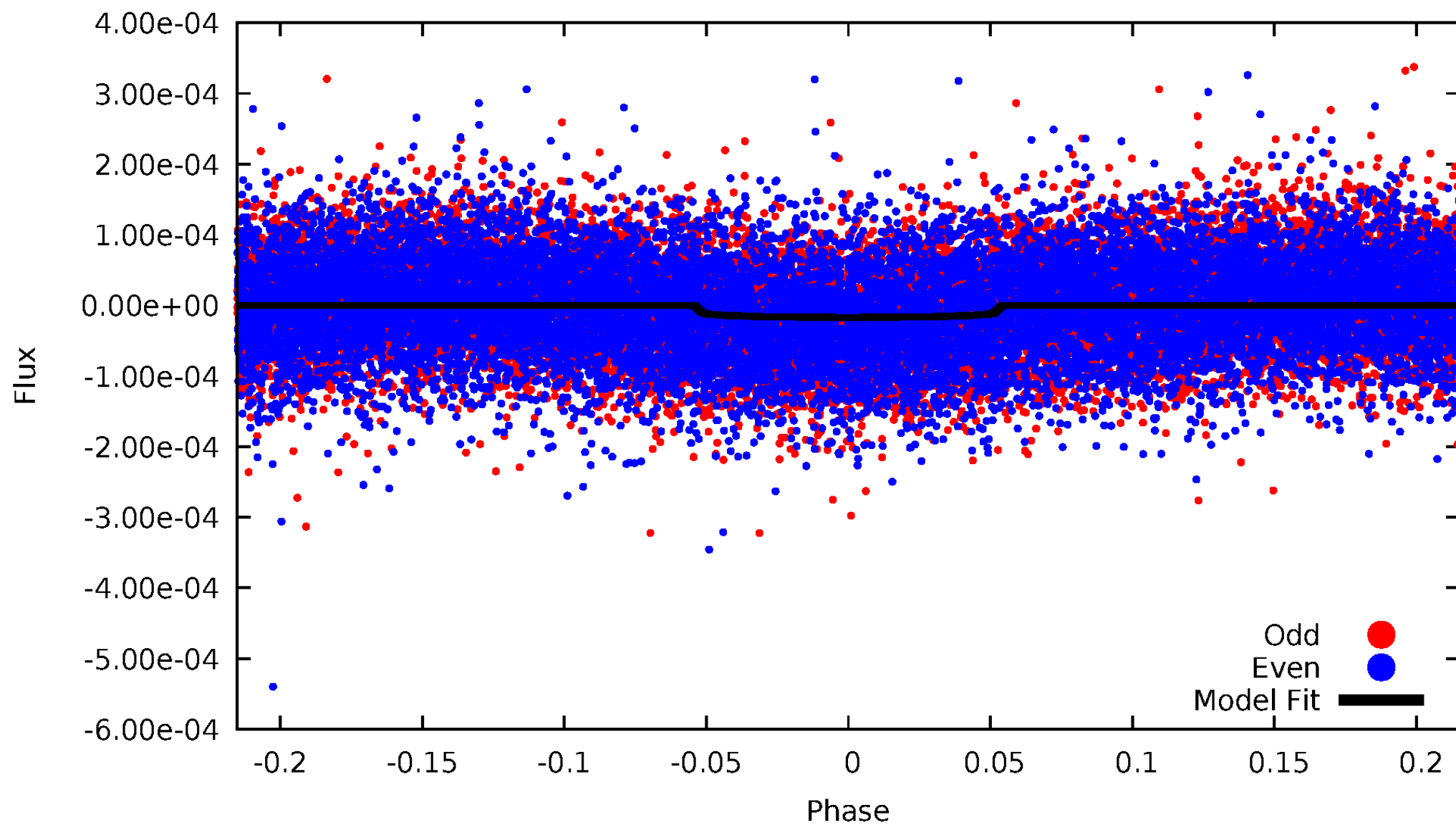


TCE 006437719-01



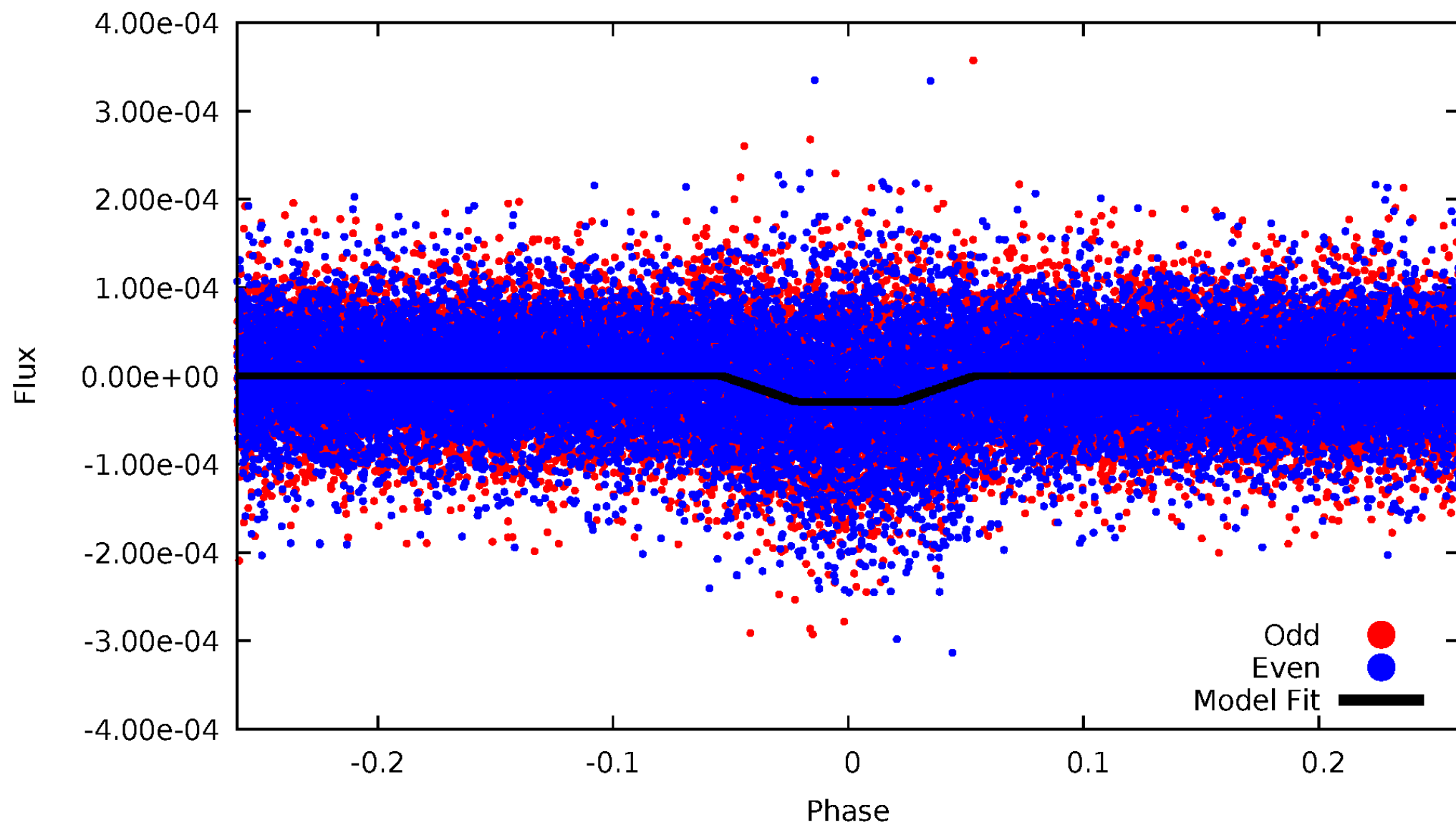
DV Odd/Even

TCE 006437719-01



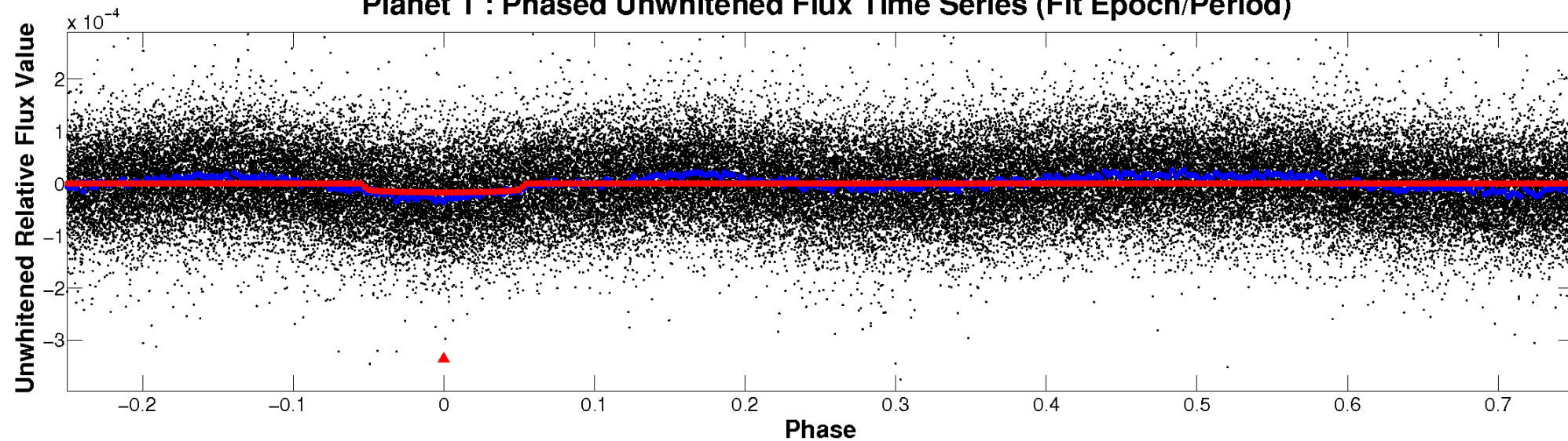
ALT Odd/Even

TCE 006437719-01

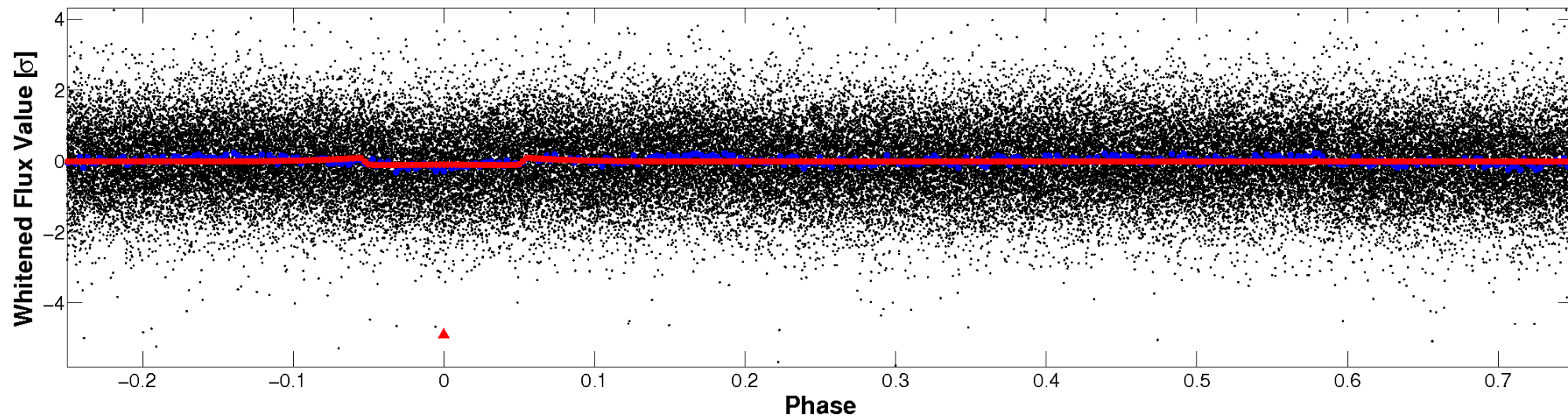


Non-Whitened Vs. Whitened Light Curve

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

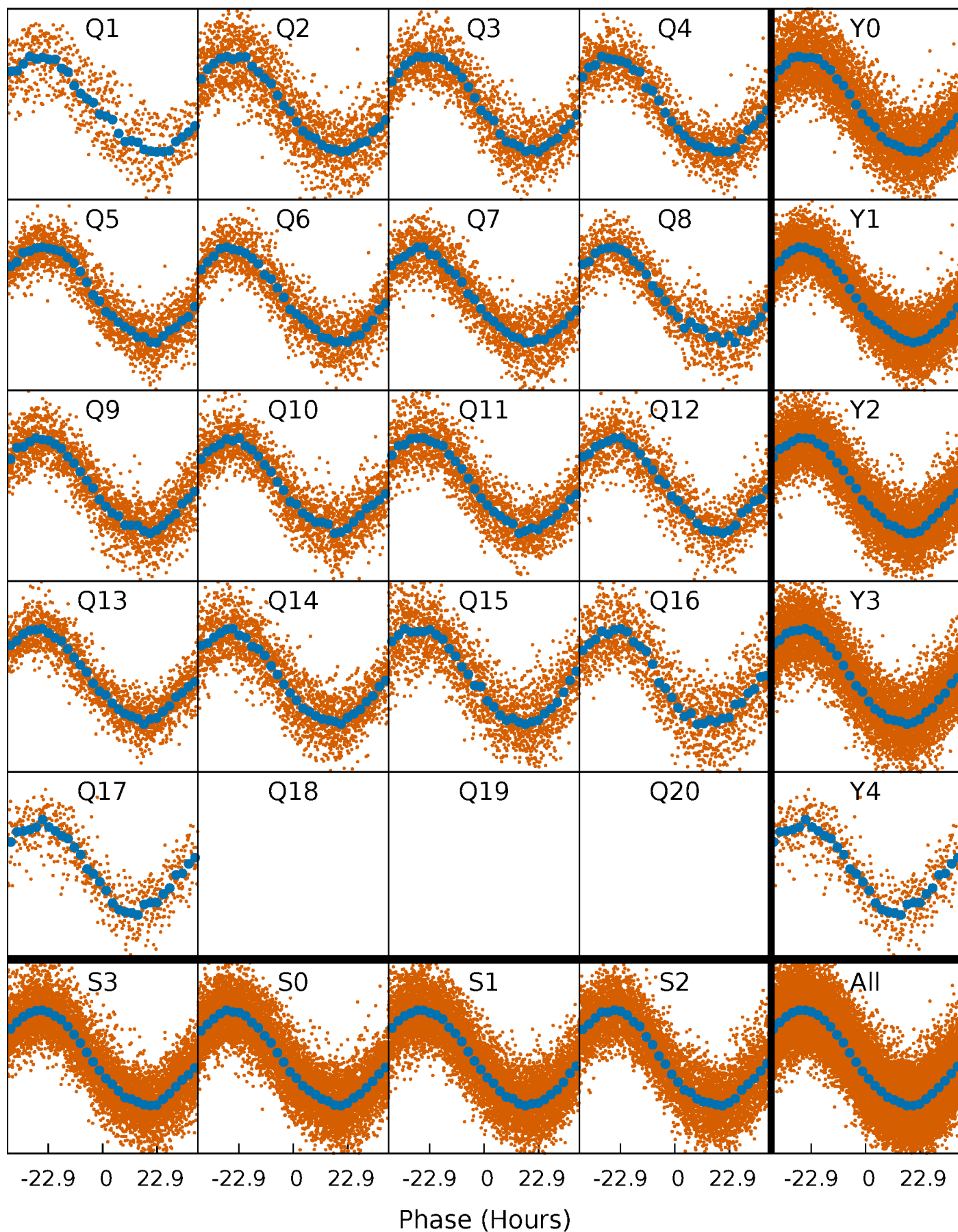


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



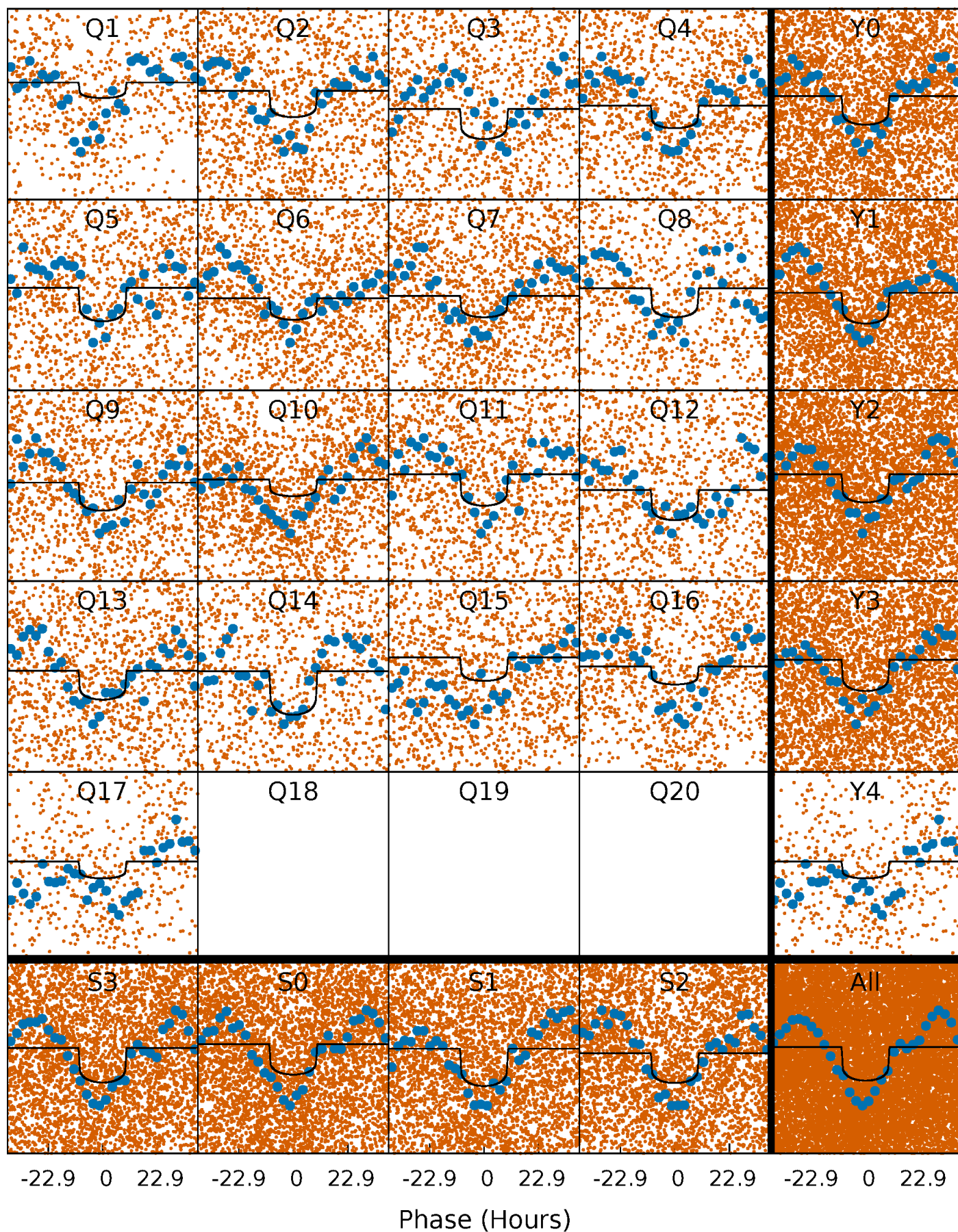
PDC Quarter-Phased Transit Curves

TCE 006437719-01 P= 7.776751 Days $T_0=133.624433$ (BKJD)



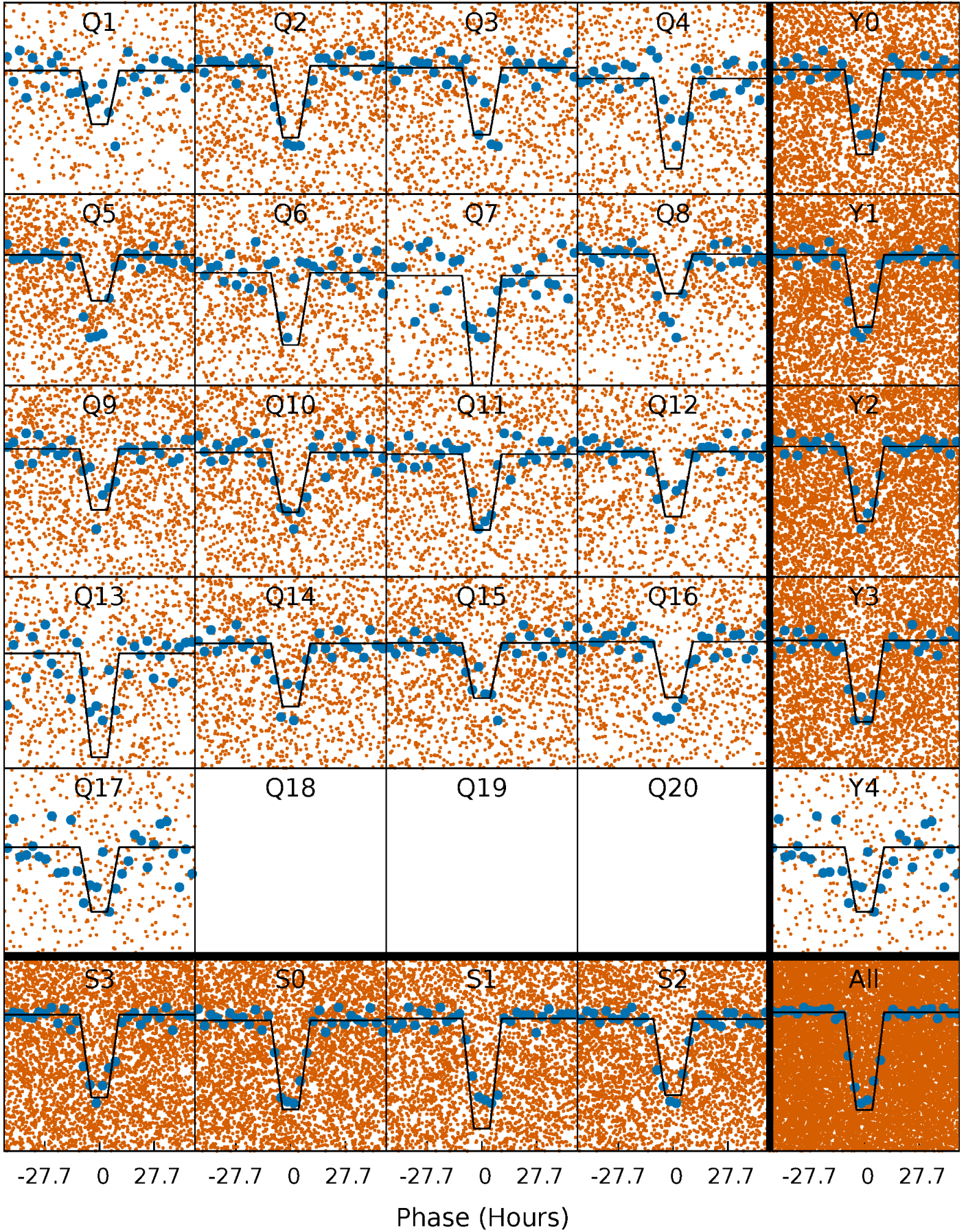
DV Quarter-Phased Transit Curves

TCE 006437719-01 P= 7.776751 Days $T_0=133.624433$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

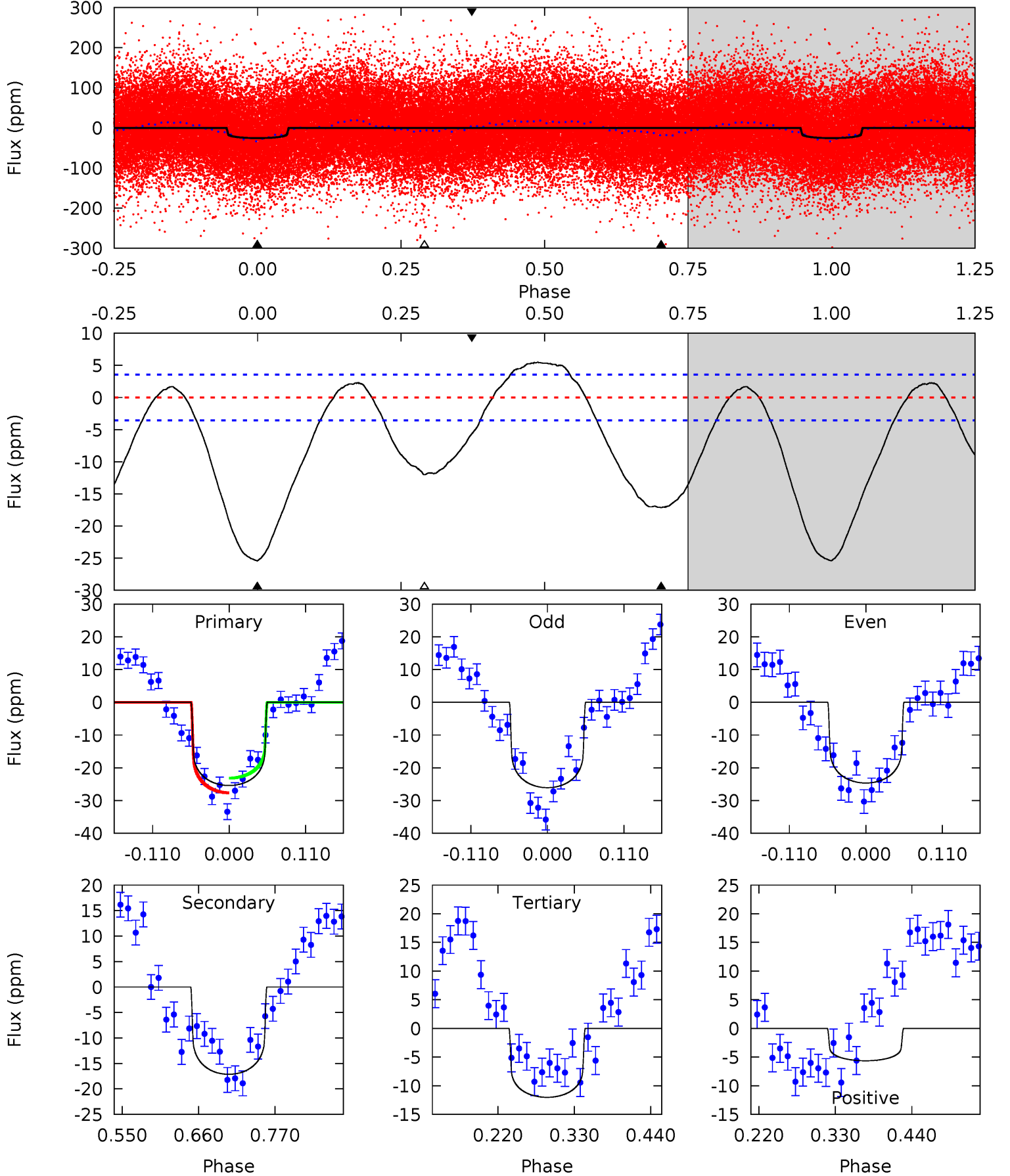
TCE 006437719-01 P= 7.776425 Days $T_0=133.704177$ (BKJD)



DV Model-Shift Uniqueness Test

006437719-01, P = 7.776751 Days, E = 125.847682 Days

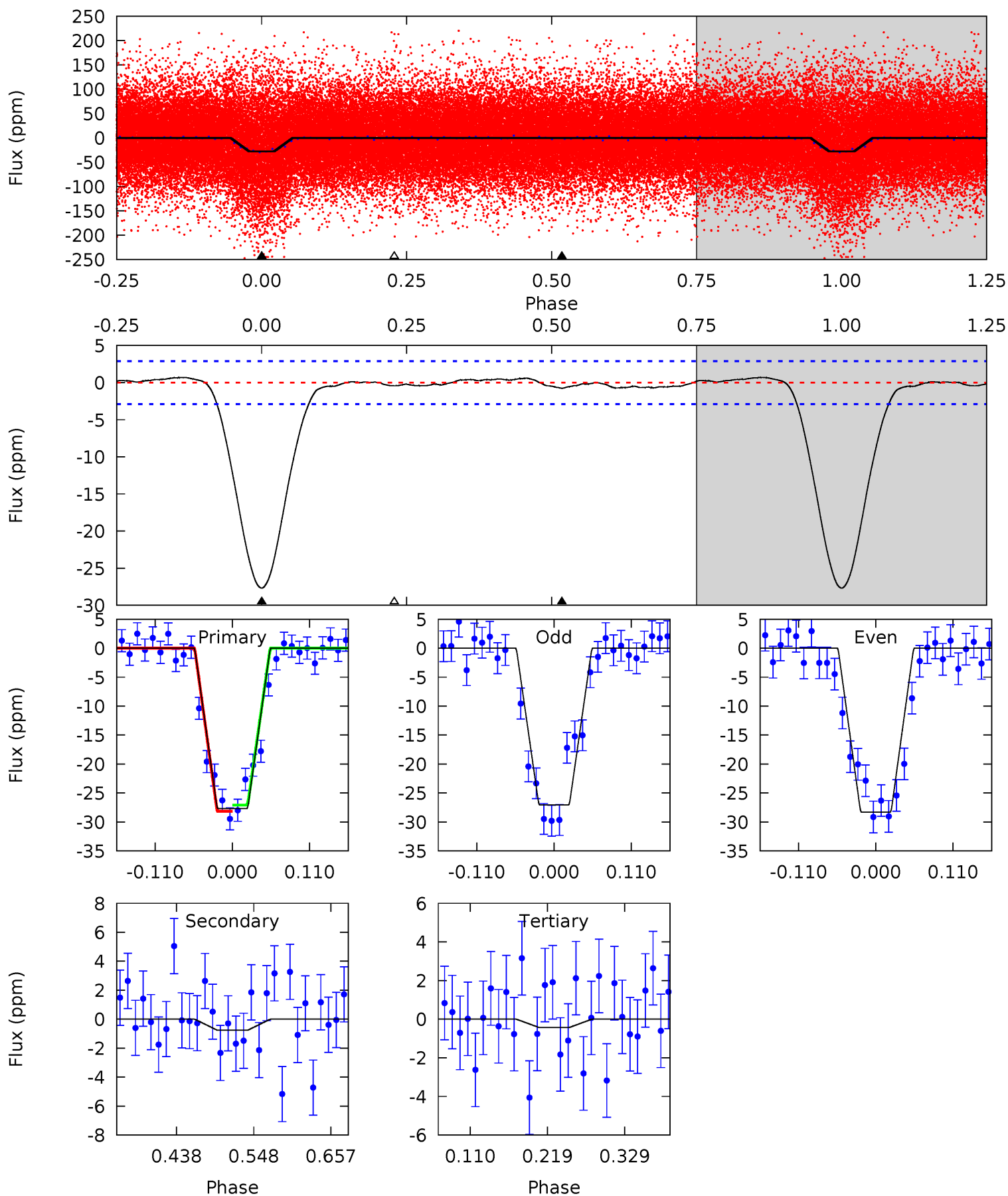
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.4	21.8	15.3	-7.19	4.54	1.60	6.90	17.1	39.6	6.52	29.0	0.91	1.06	0.18	2.88



Alt Model-Shift Uniqueness Test

006437719-01, P = 7.776425 Days, E = 125.927752 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.6	1.20	0.68	0	4.55	1.60	0.63	42.9	43.6	0.52	1.20	0.97	1.24	0.02	0.84



Stellar Parameters For KIC 006437719

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6602^{+181}_{-250}	$4.093^{+0.240}_{-0.180}$	$-0.140^{+0.250}_{-0.300}$	$1.716^{+0.512}_{-0.512}$	$1.337^{+0.193}_{-0.257}$	$0.373^{+0.545}_{-0.181}$
	+3%/-4%	+6%/-4%	+179%/-214%	+30%/-30%	+14%/-19%	+146%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006437719-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 1	$0.80^{+0.17}_{-0.15}$	1813^{+161}_{-153}	6411^{+397}_{-356}	105^{+52}_{-31}
Alt.	-1 ± 1	$1.00^{+0.19}_{-0.16}$	1818^{+141}_{-141}	3190^{+341}_{-712}	$3.011^{+3.018}_{-2.309}$

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

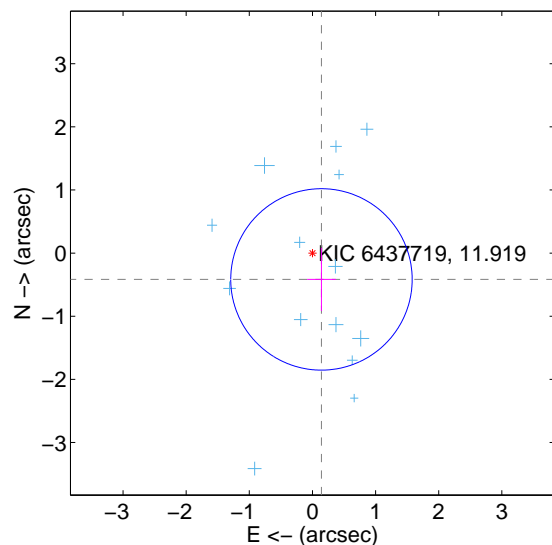
Supplemental centroid analysis for 006437719-01. **Kepler magnitude: 11.92.** Transit SNR 9.29

There are 14 quarters with good PRF difference image offsets

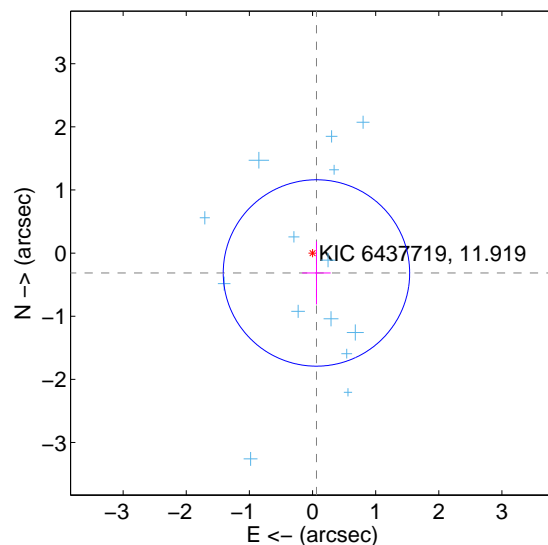
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.441 ± 0.479	0.92	-0.143 ± 0.228	-0.417 ± 0.500
PRF-fit source offset from KIC position	0.321 ± 0.492	0.65	-0.062 ± 0.226	-0.315 ± 0.500
photometric centroid source offset	0.63 ± 0.86	0.73	-0.62 ± 0.86	0.07 ± 0.76

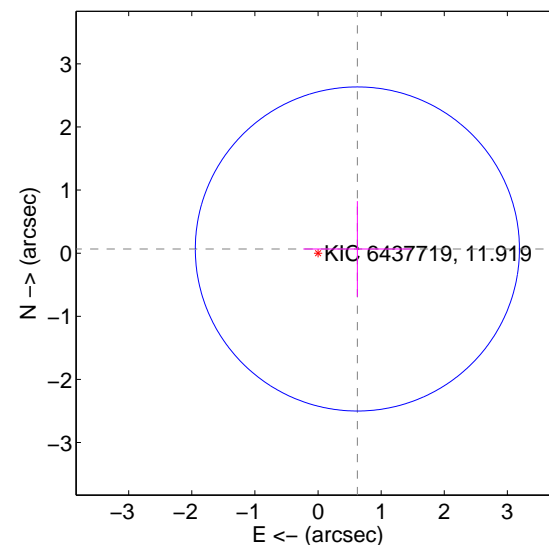
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

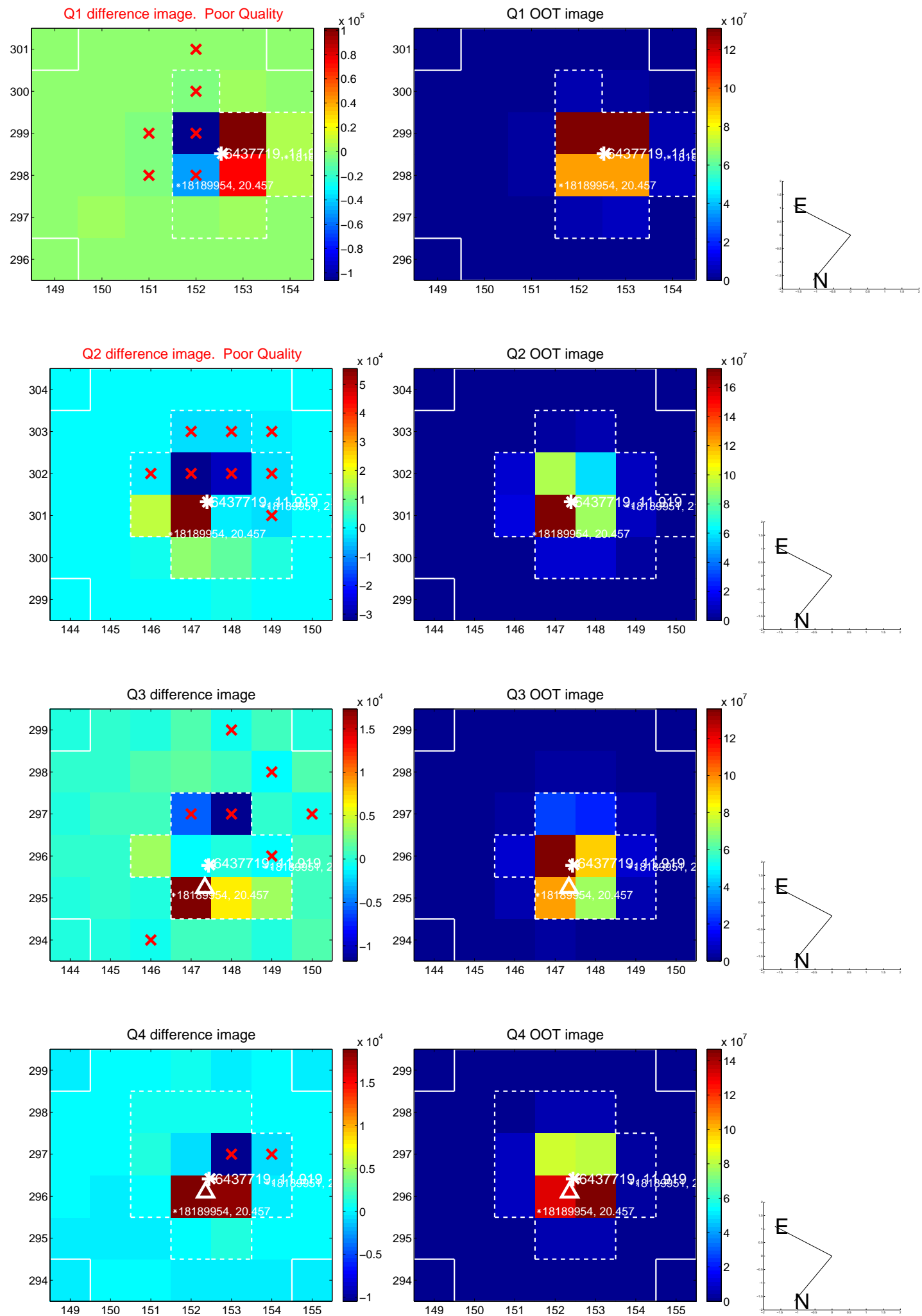


offset from photometric centroids

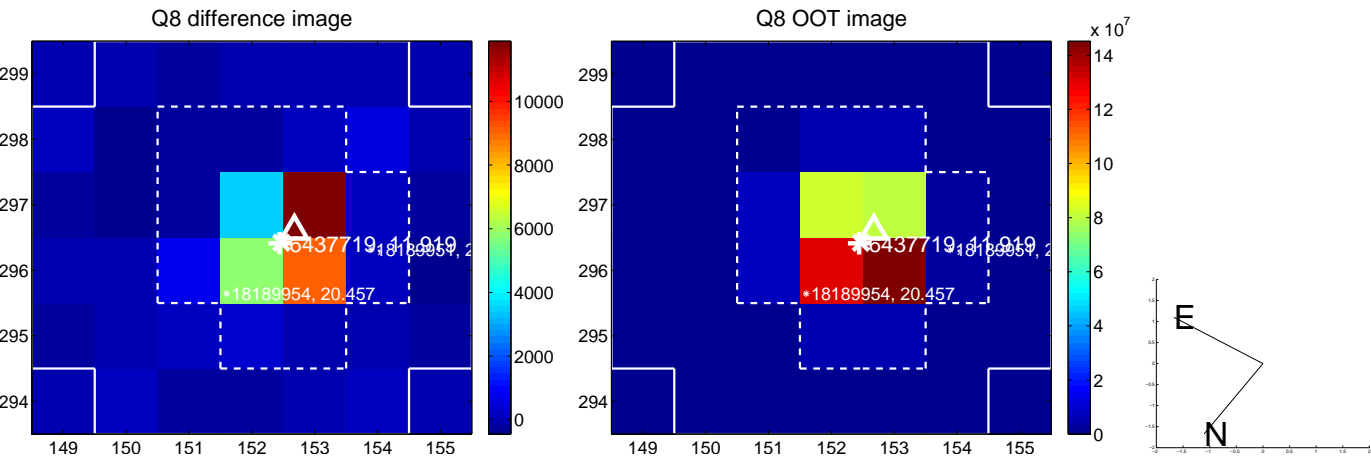
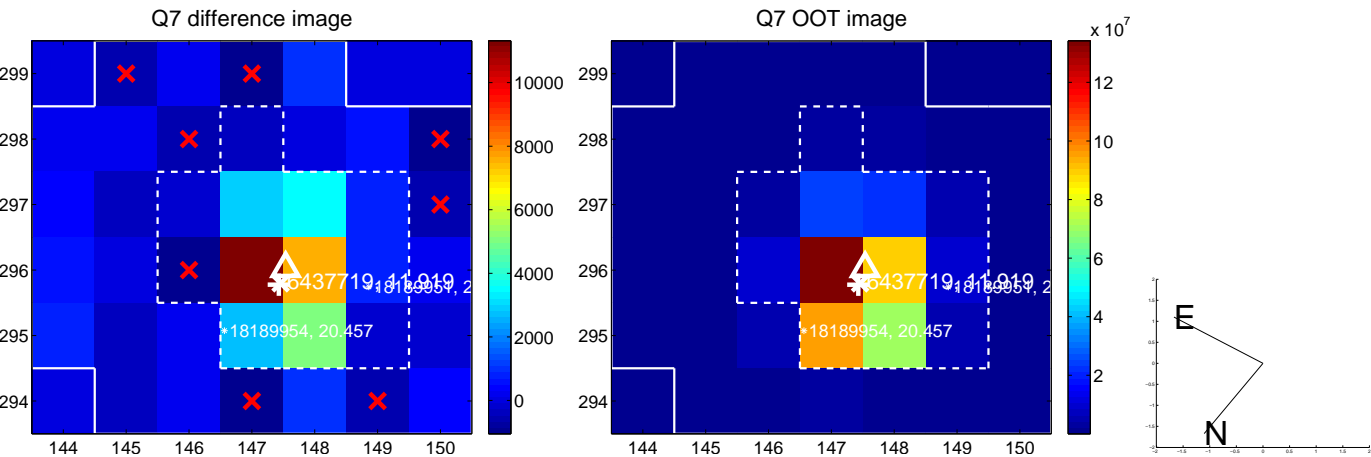
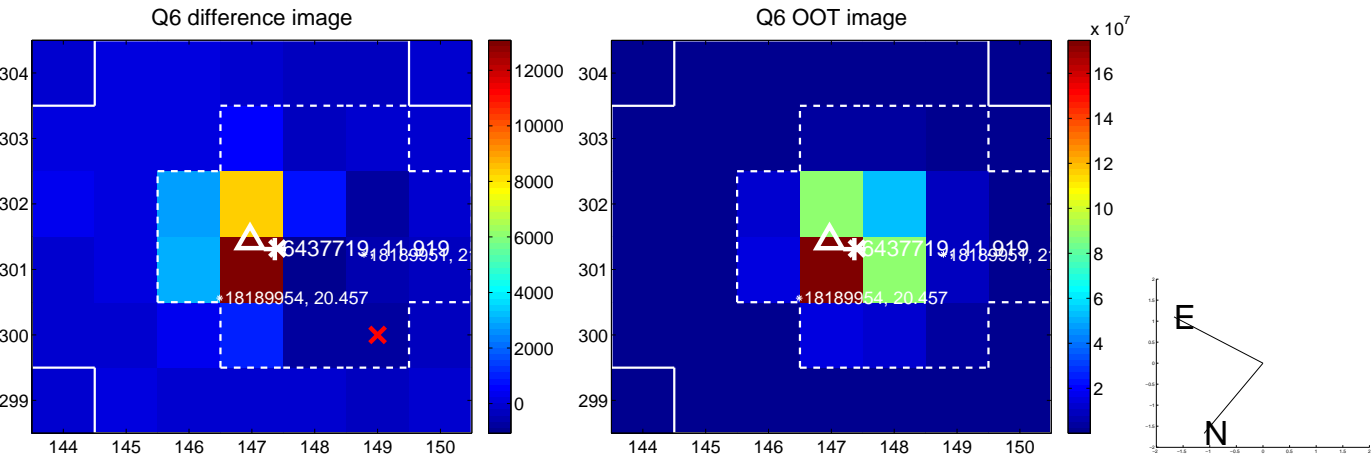
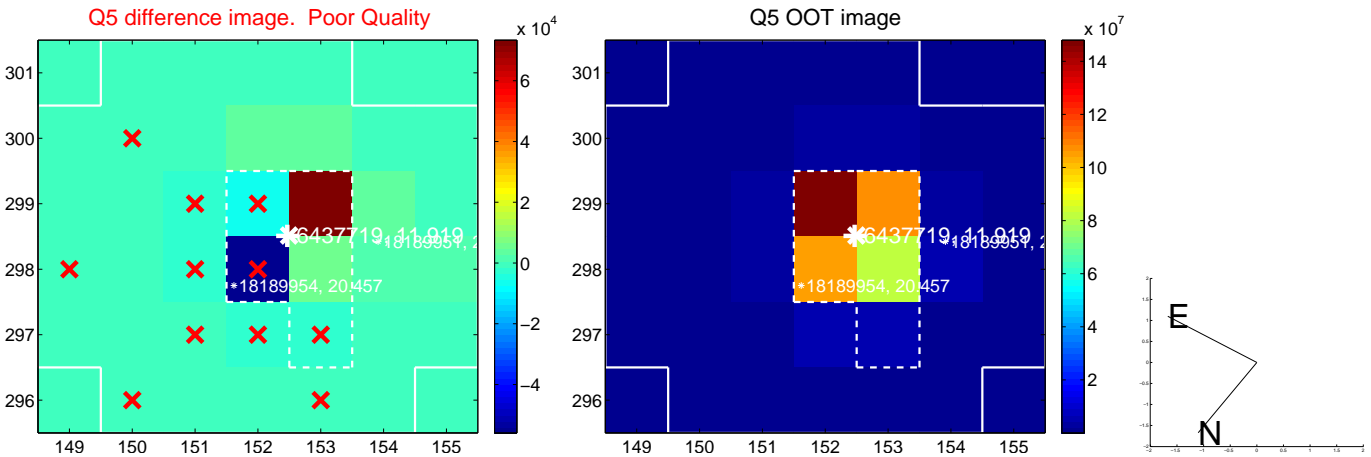


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

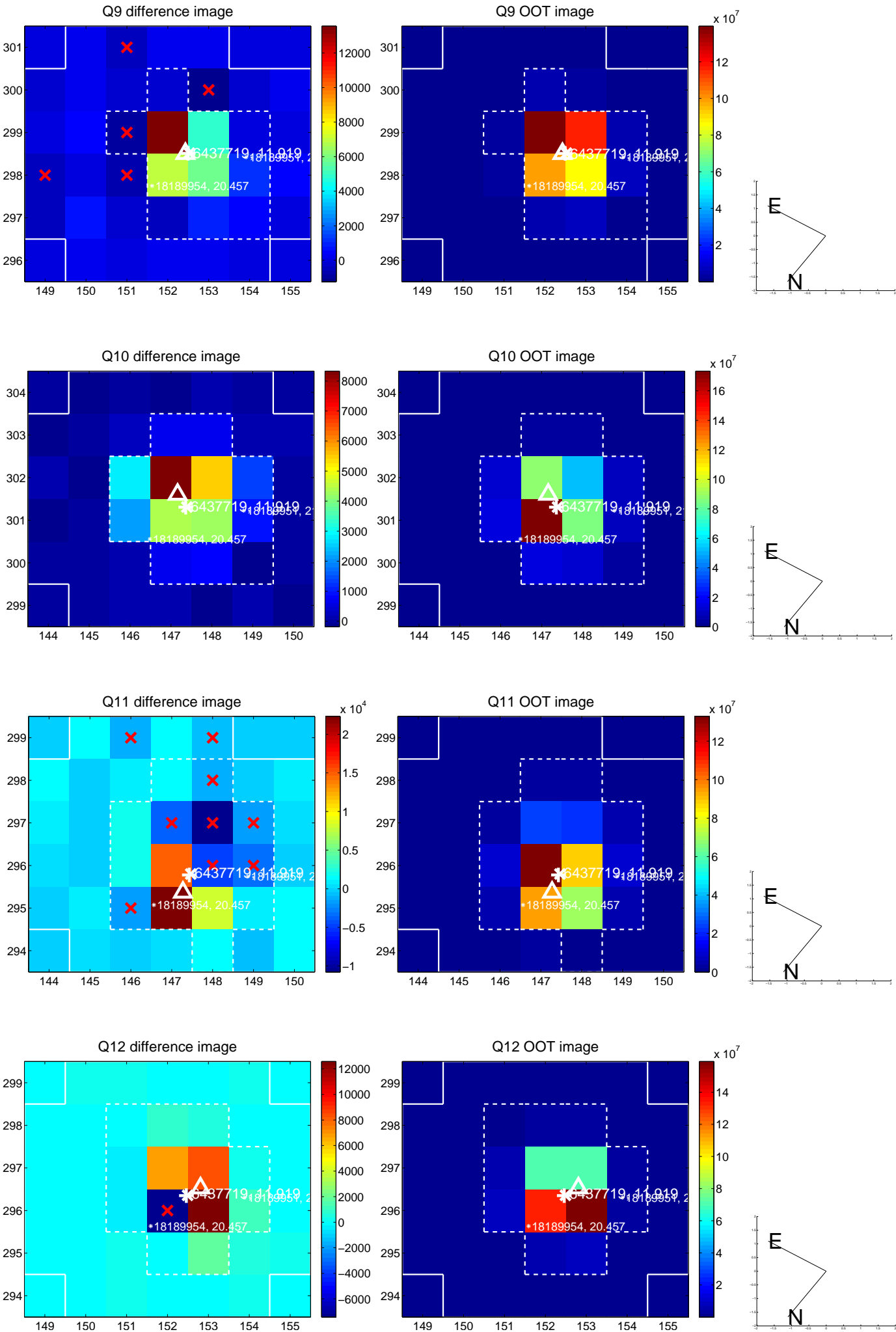
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



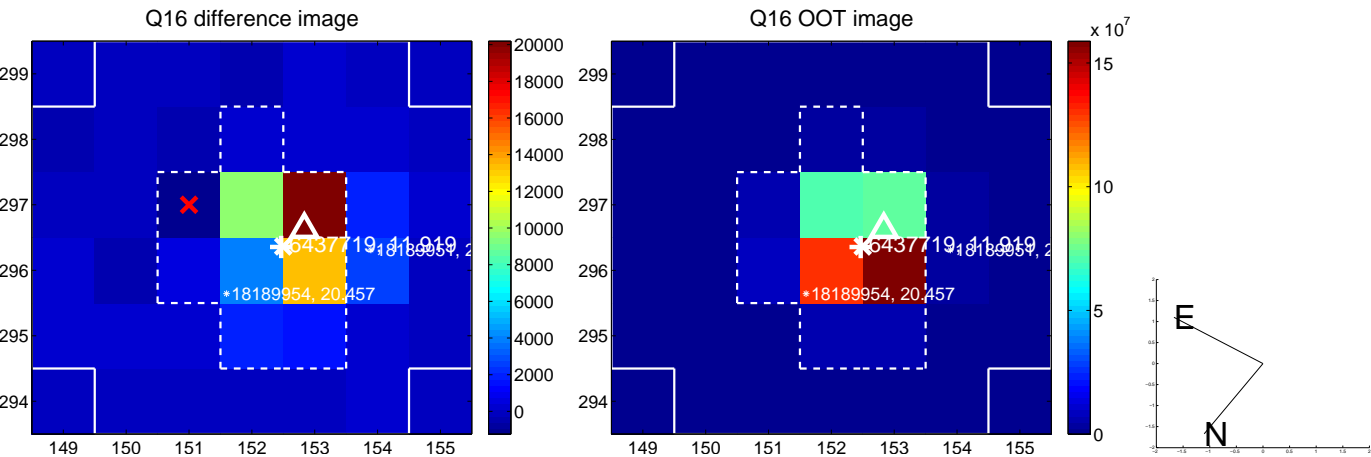
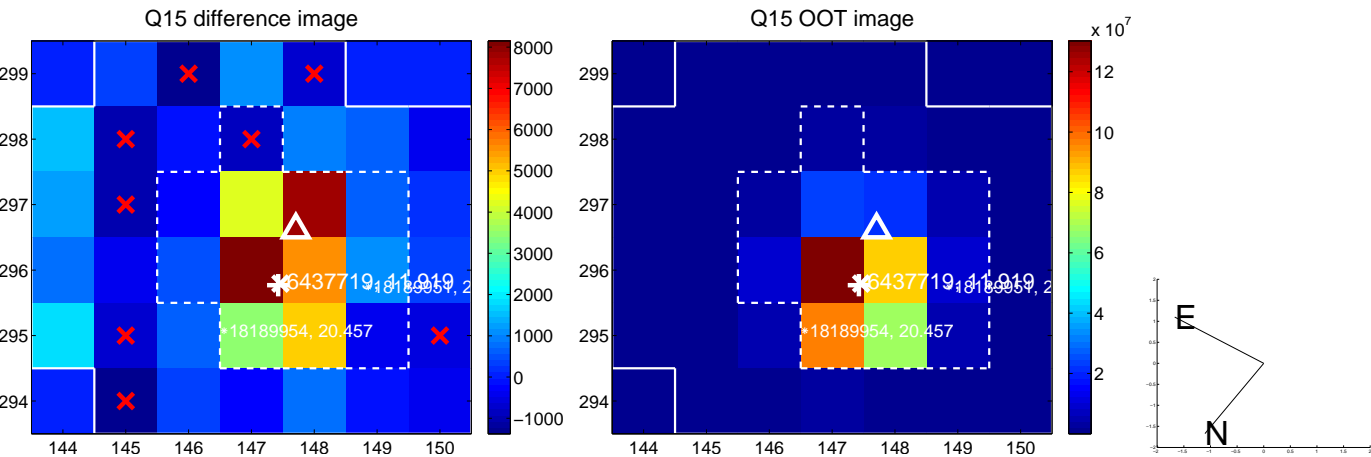
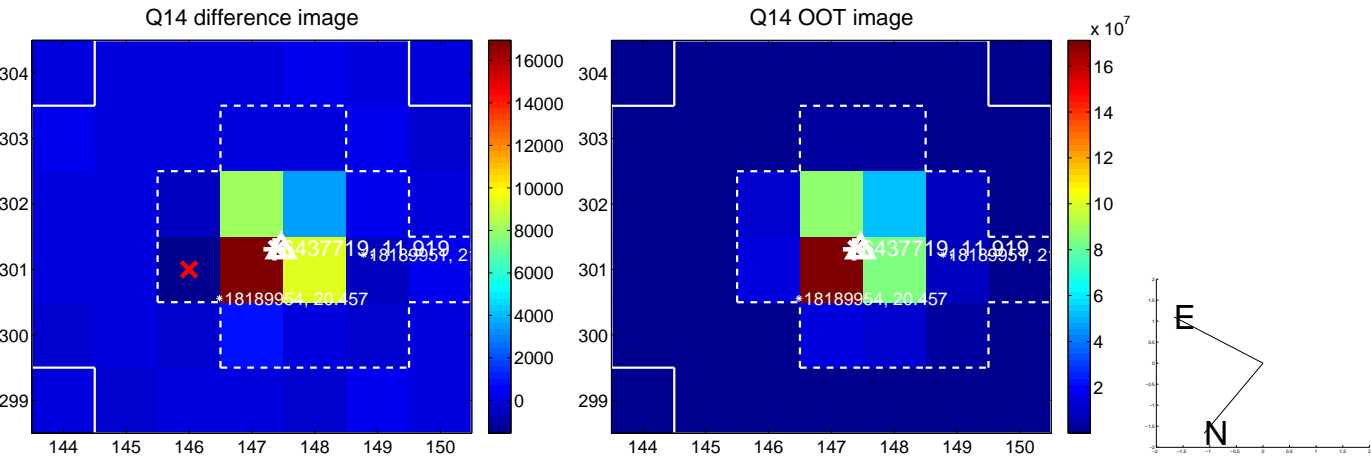
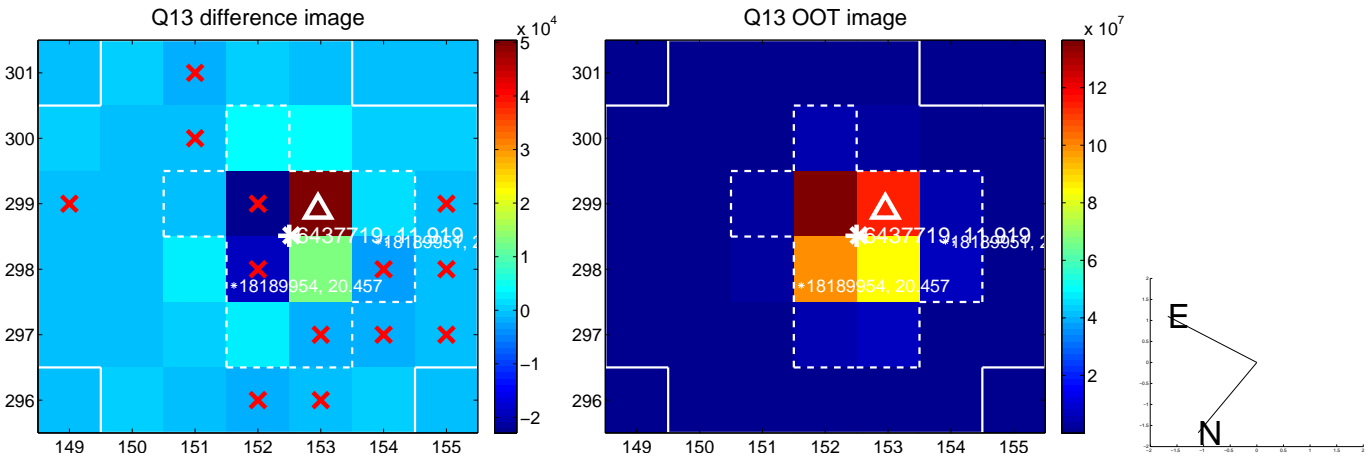
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



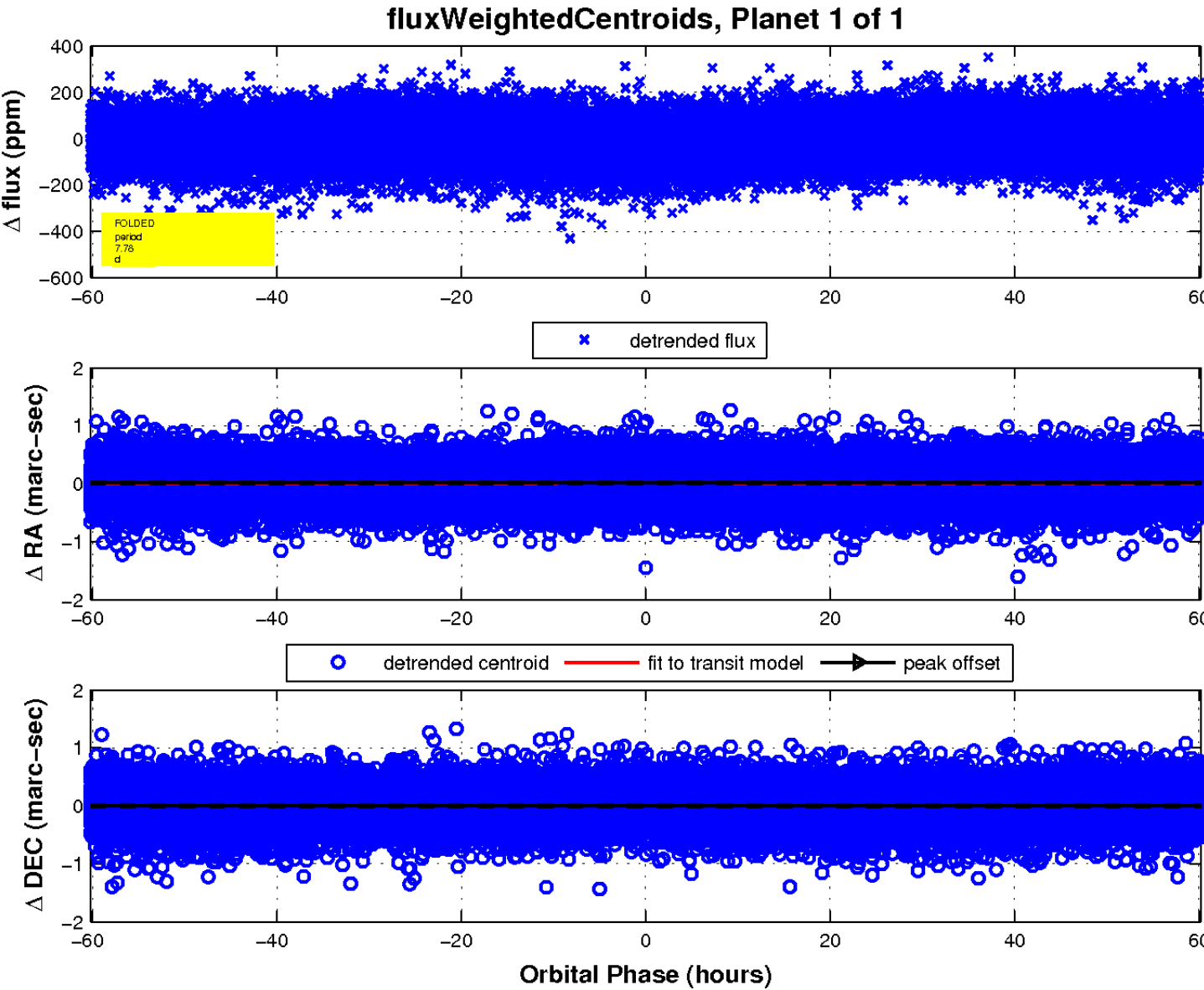
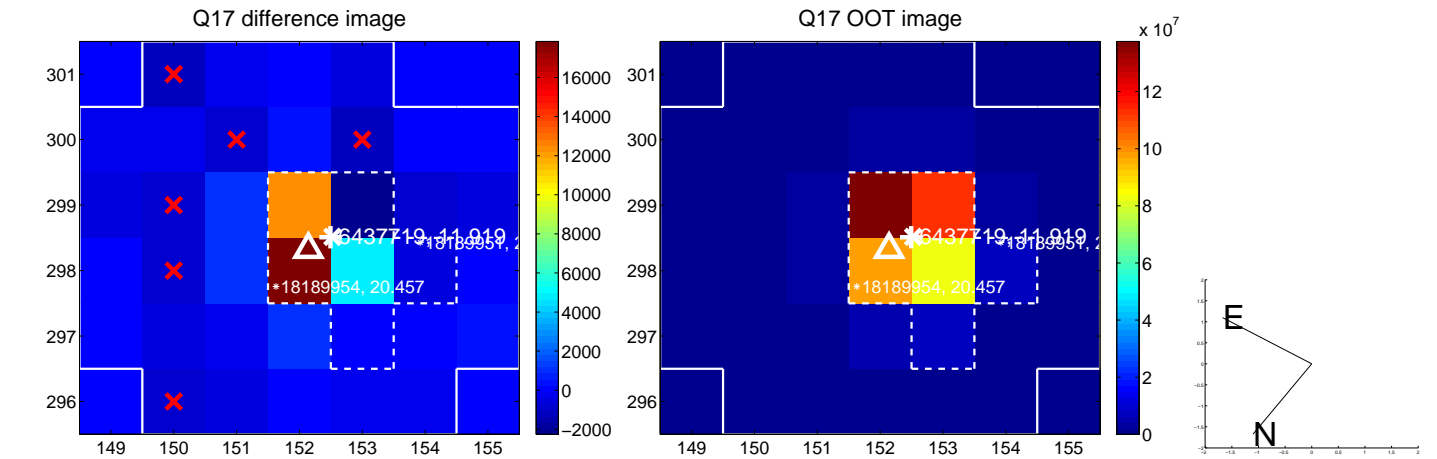
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

