

KIC 002446436

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})
002446436-01	OBS	No	0.800464	132.209111	328.4	2.000	7.9	-1.0	1.20	6063	2.18	6633.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002446436-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

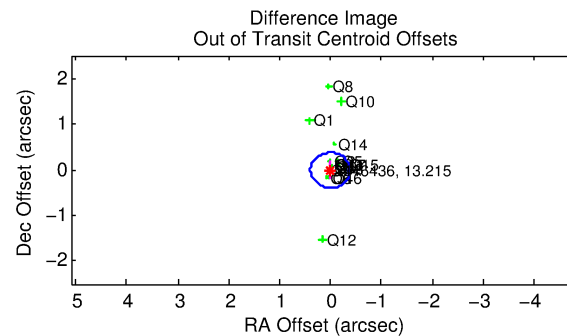
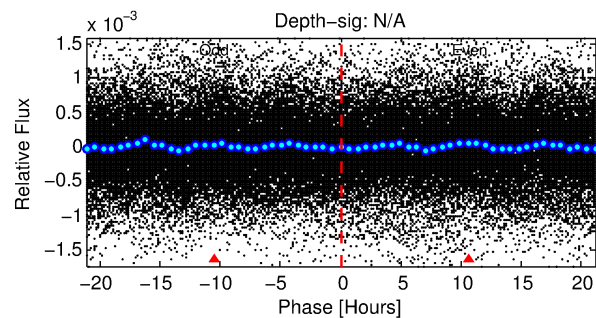
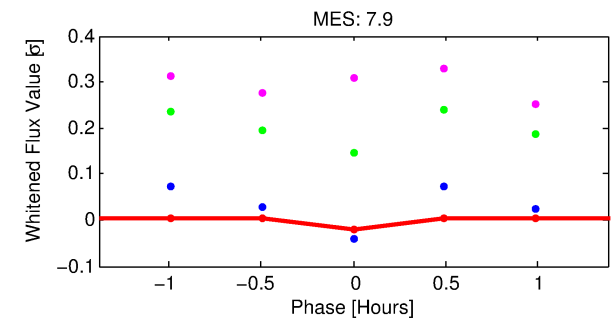
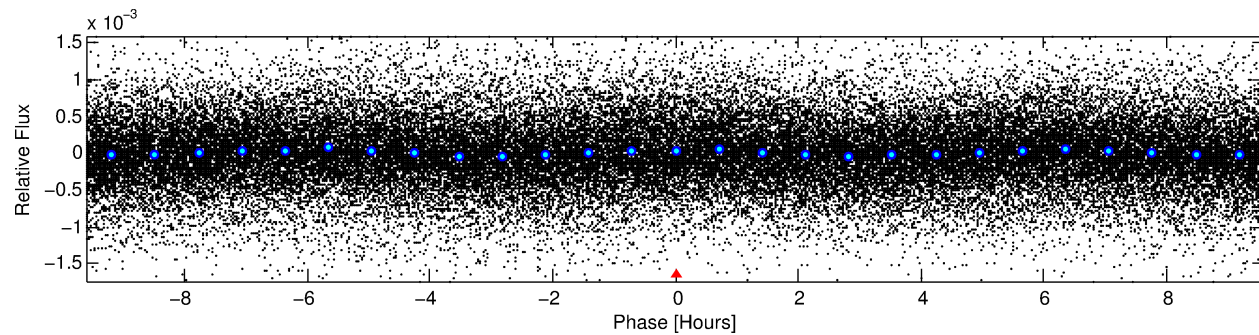
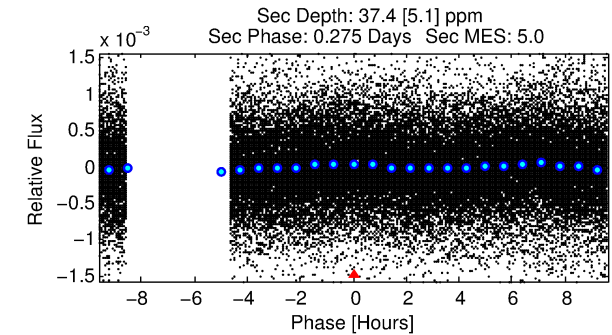
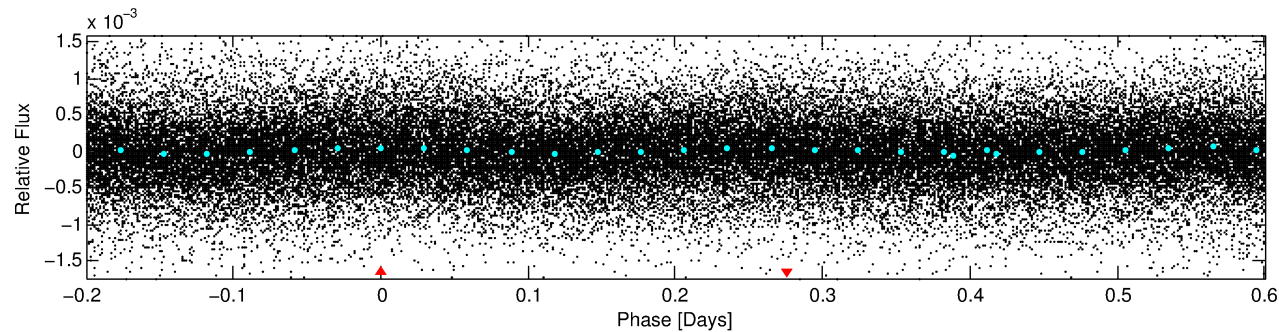
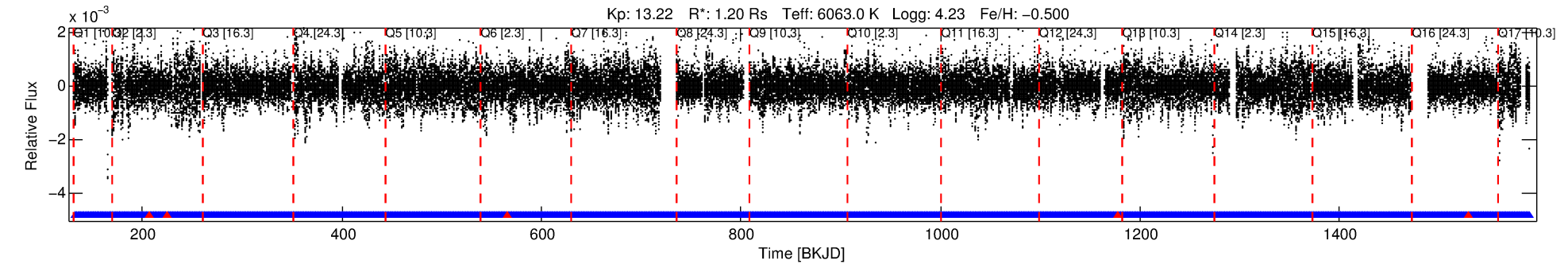
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002446436-01

No Significant Match Found

DV One-Page Summary

KIC: 2446436 Candidate: 1 of 1 Period: 0.800 d



TPS TCE Results:

Period = 0.80046 d
Epoch = 132.2091 BKJD

DV fit results are unavailable

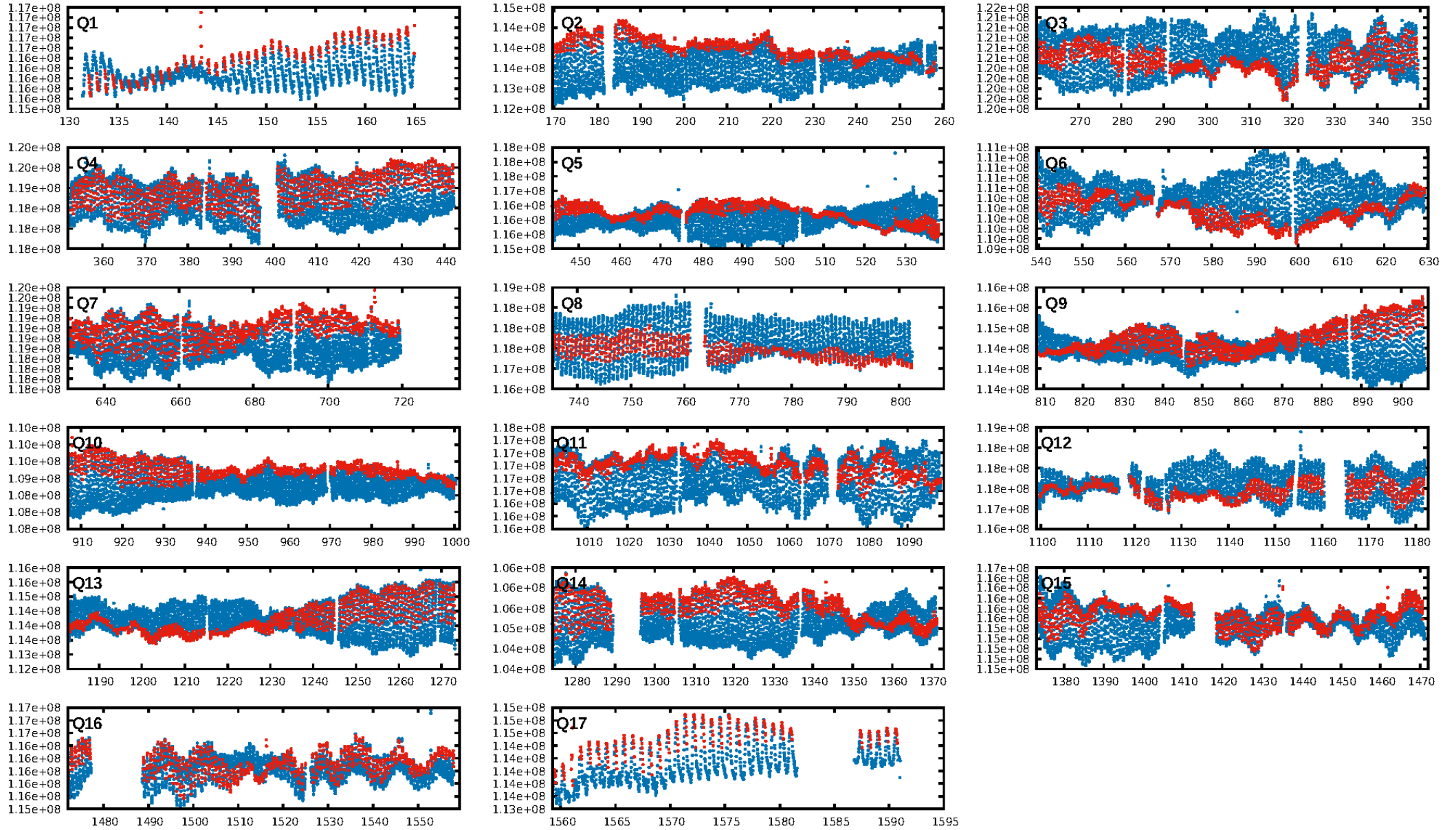
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.65e-14
RollingBand-fgt: 1.00 [1594/1599]
GhostDiagnostic-chr: 37.02
Centroid-sig: 2.7%
Centroid-so: 0.113 arcsec [0.64σ]
OotOffset-rm: 0.016 arcsec [0.12σ]
KicOffset-rm: 0.075 arcsec [0.91σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

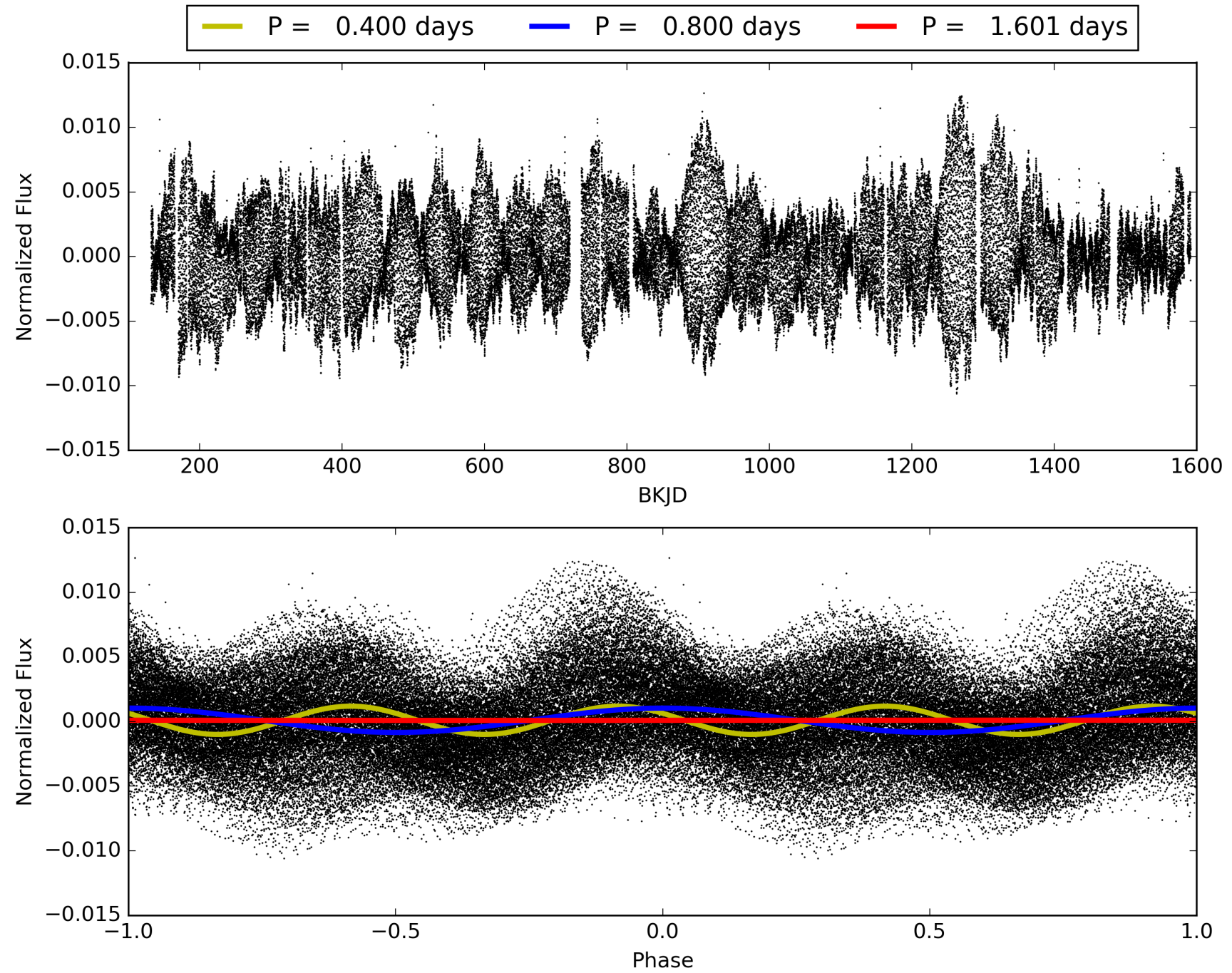
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:51:47 Z

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

TCE 002446436-01, PDC Light Curves

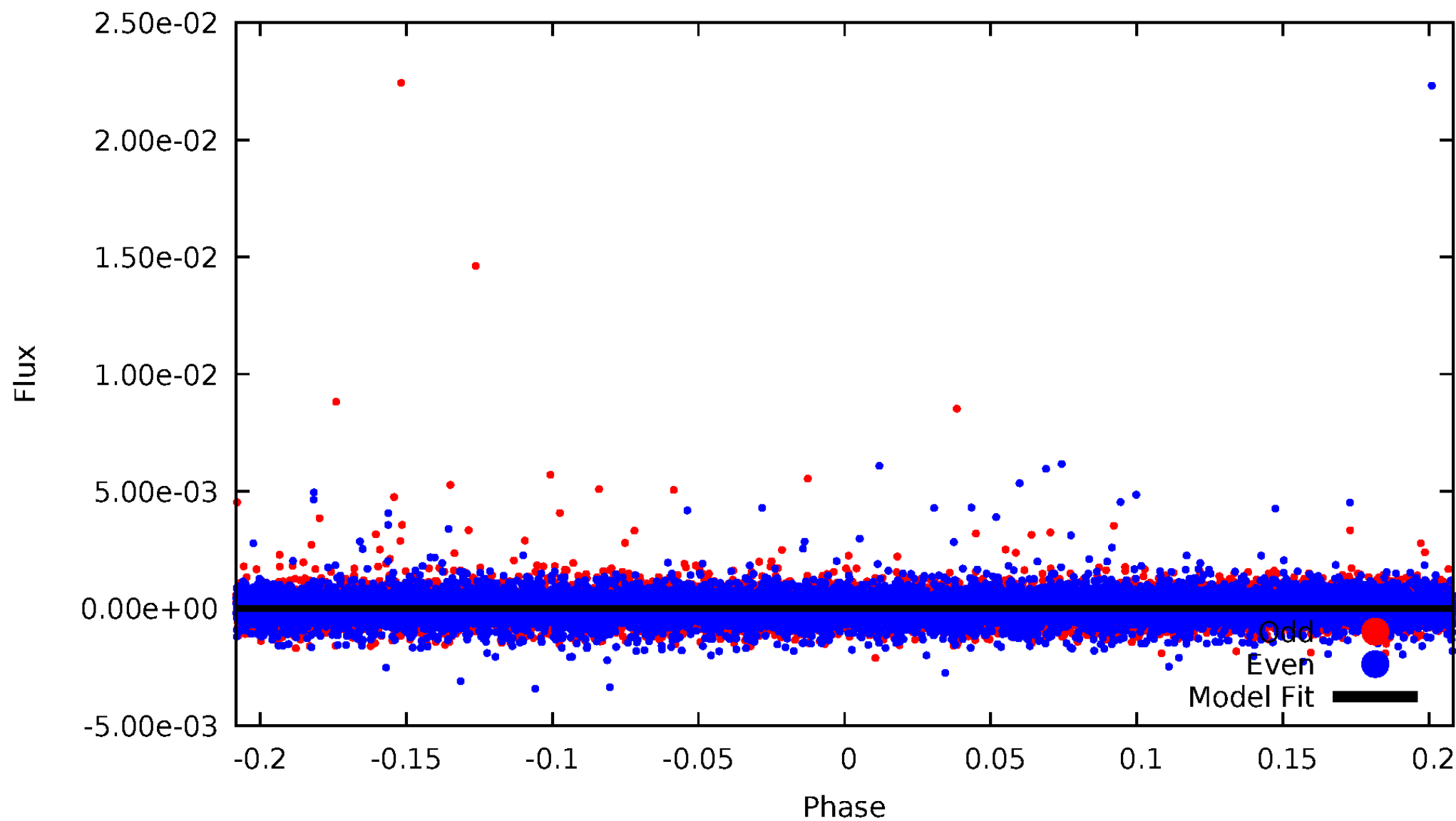


TCE 002446436-01



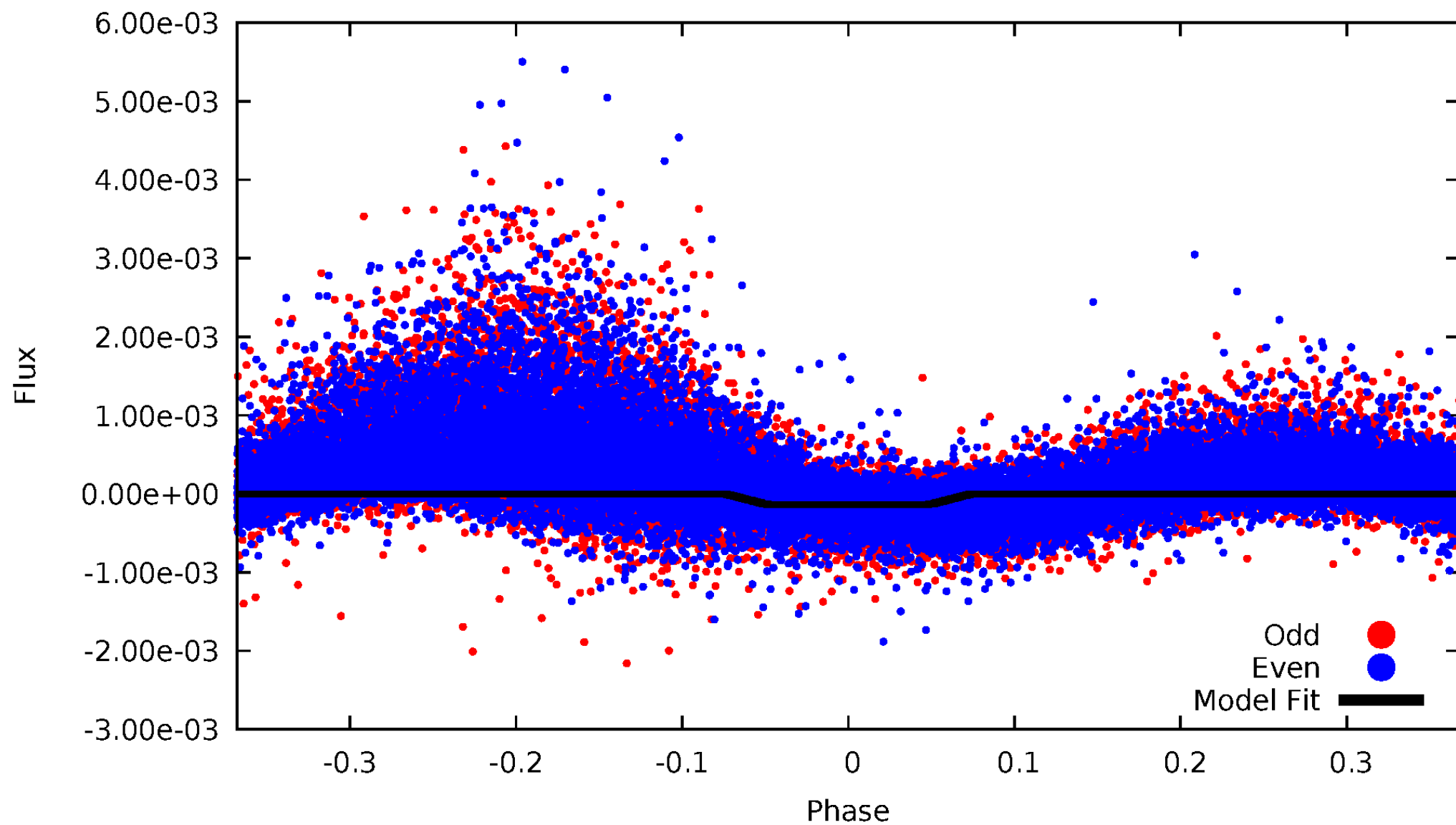
DV Odd/Even

TCE 002446436-01



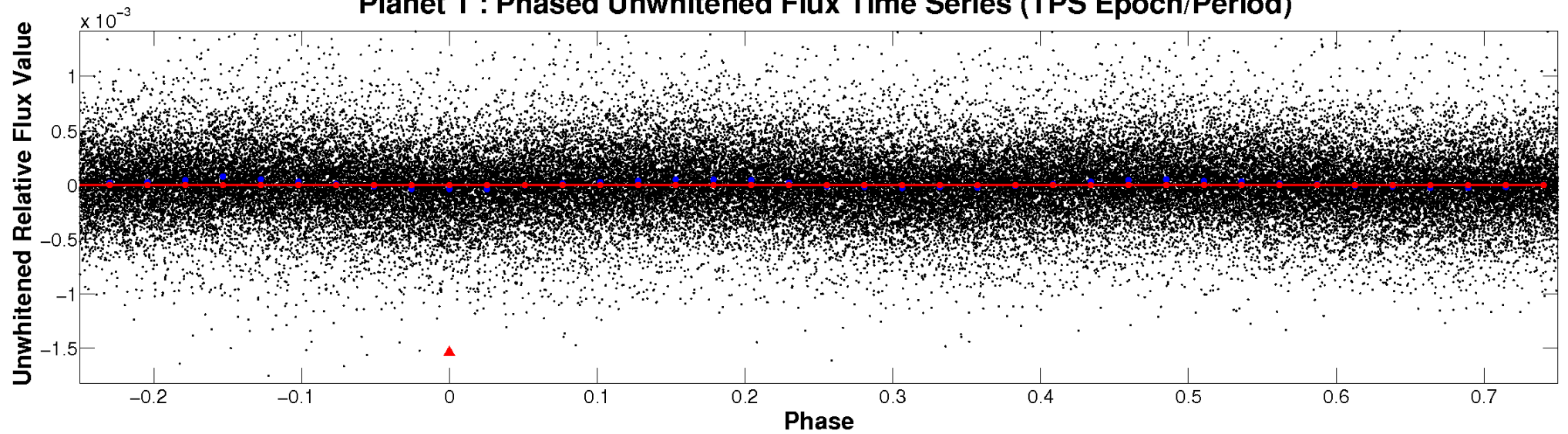
ALT Odd/Even

TCE 002446436-01

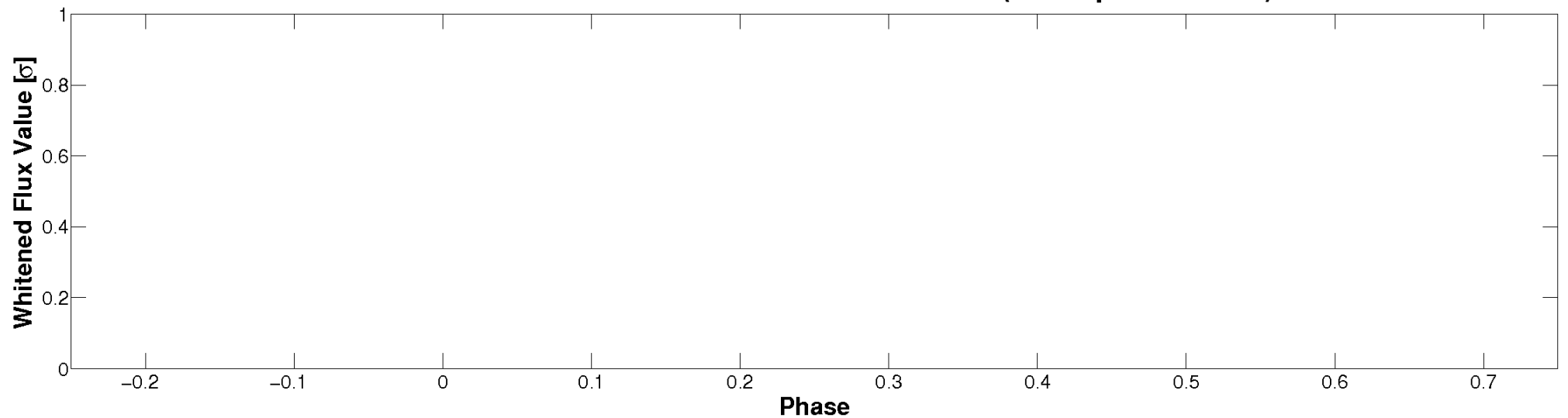


Non-Whitened Vs. Whitened Light Curve

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

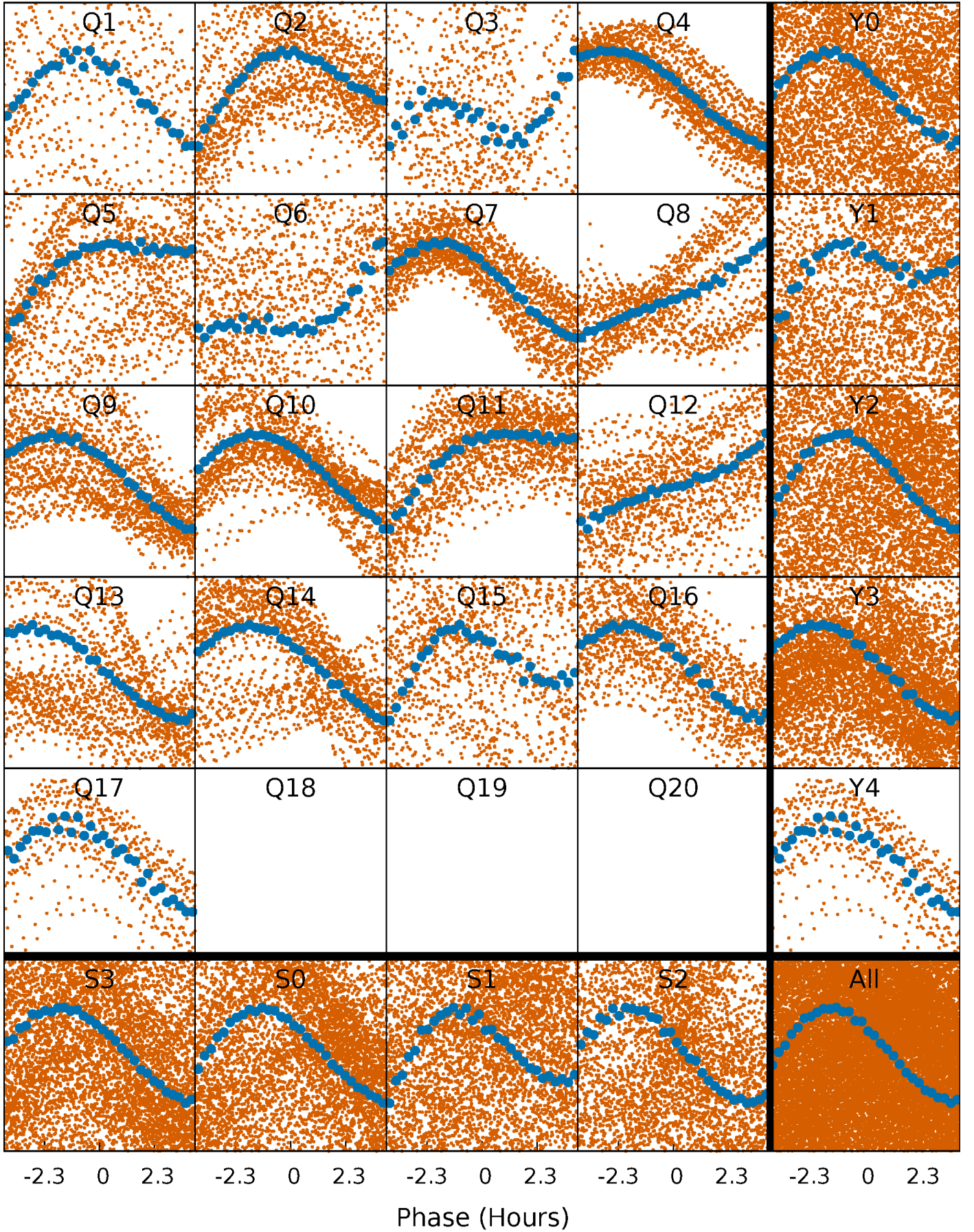


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



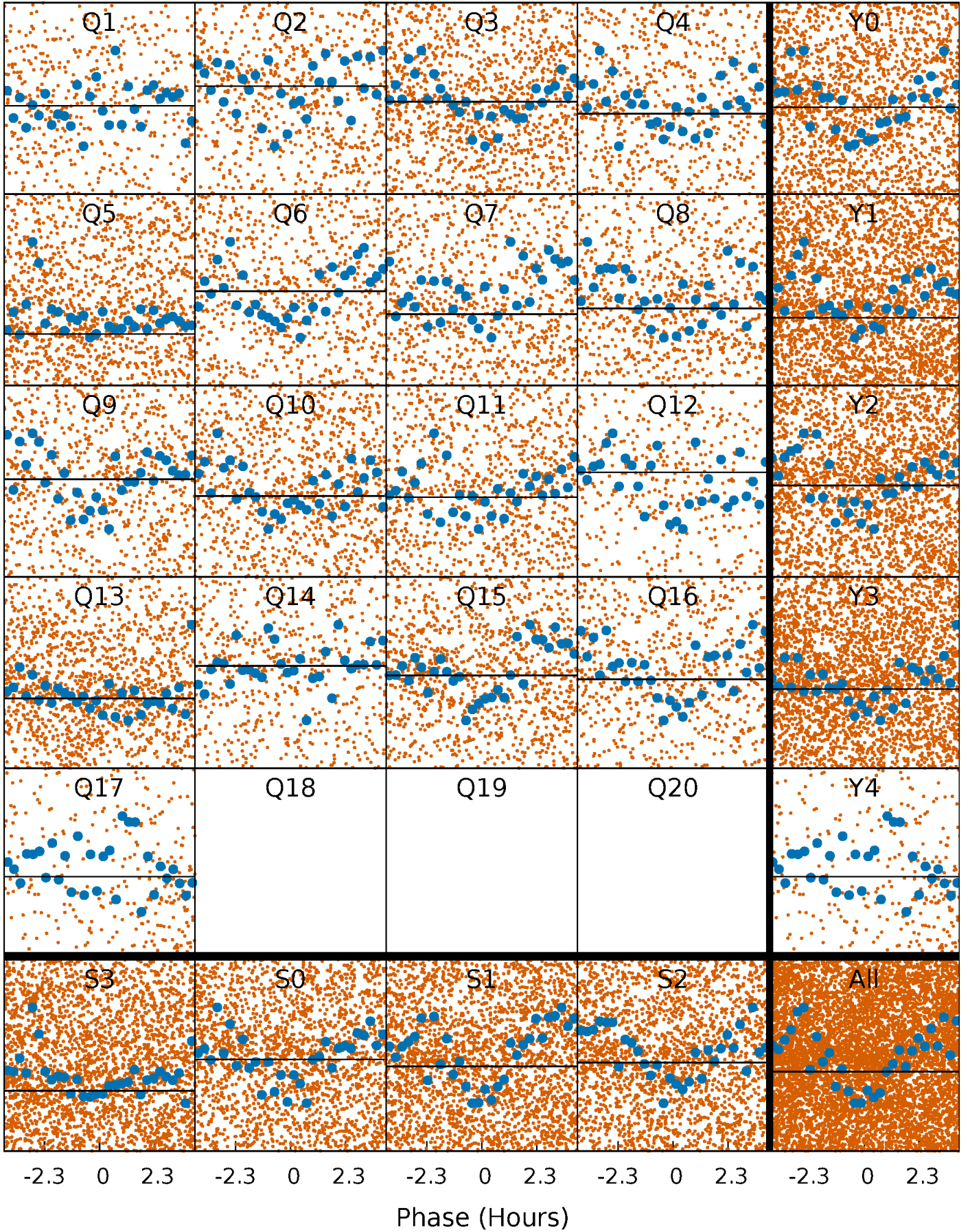
PDC Quarter-Phased Transit Curves

TCE 002446436-01 P= 0.800464 Days $T_0=132.209111$ (BKJD)



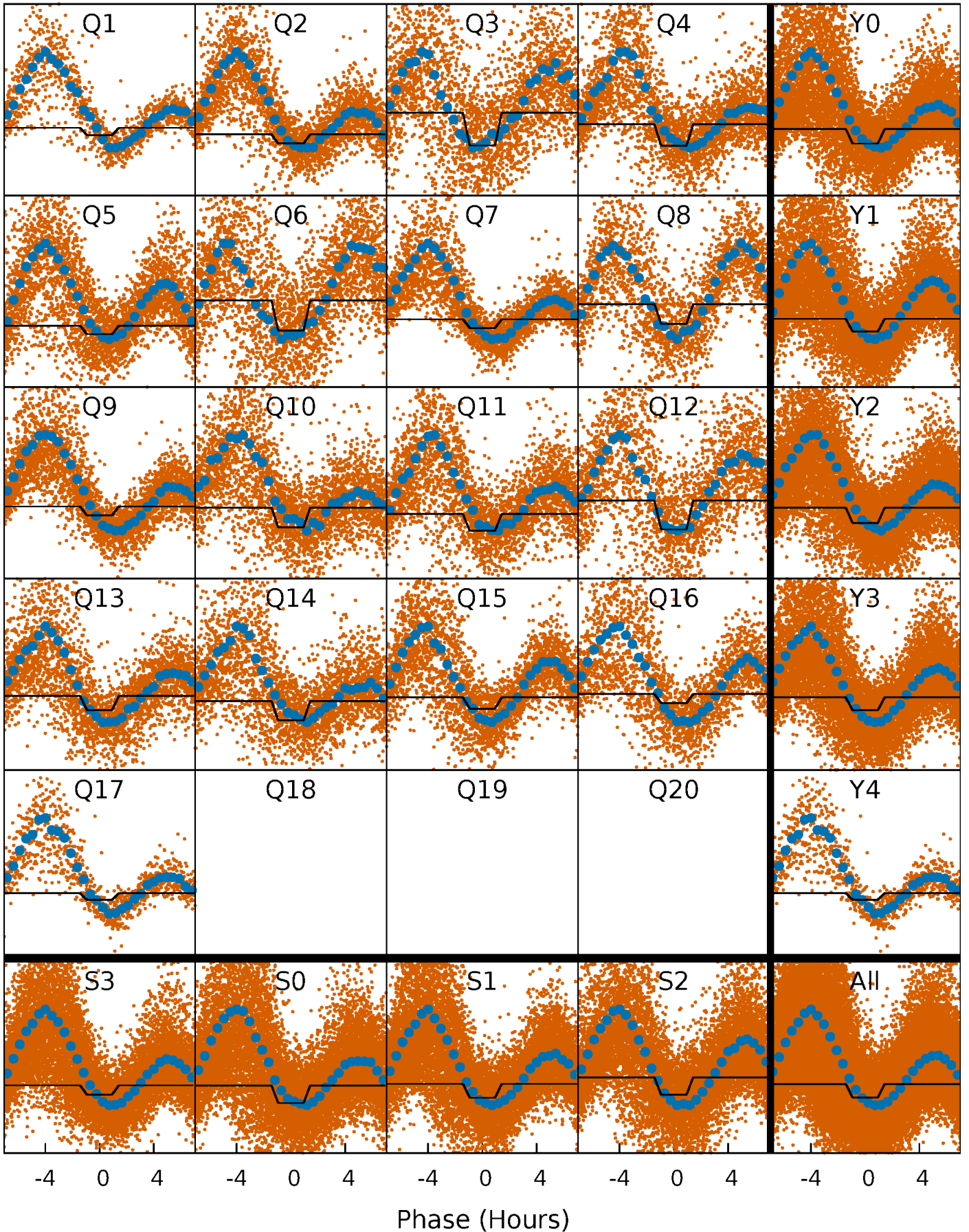
DV Quarter-Phased Transit Curves

TCE 002446436-01 P= 0.800464 Days $T_0=132.209111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

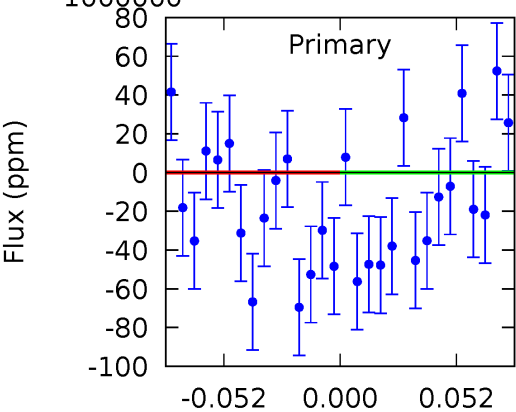
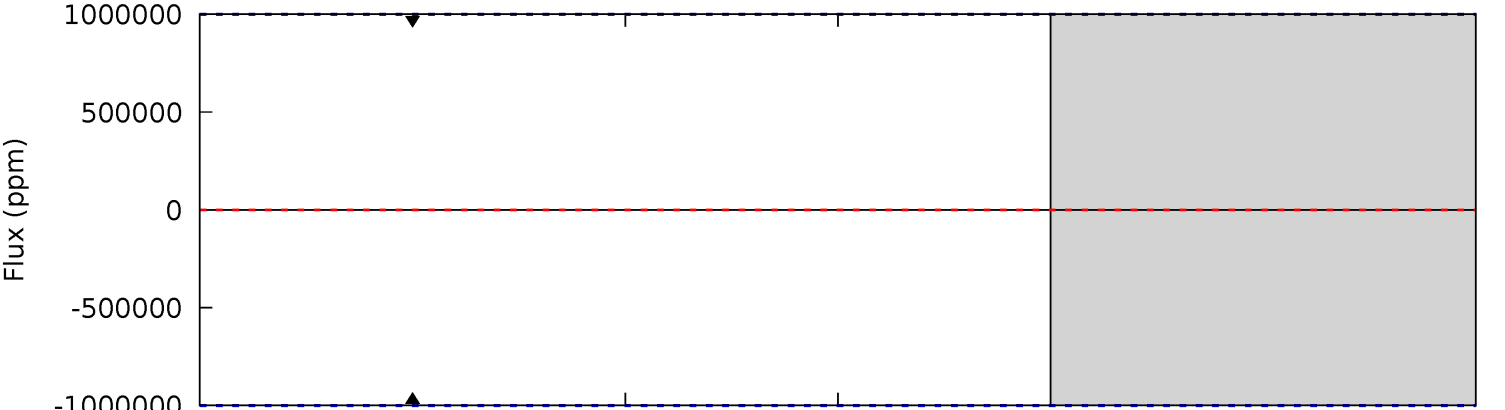
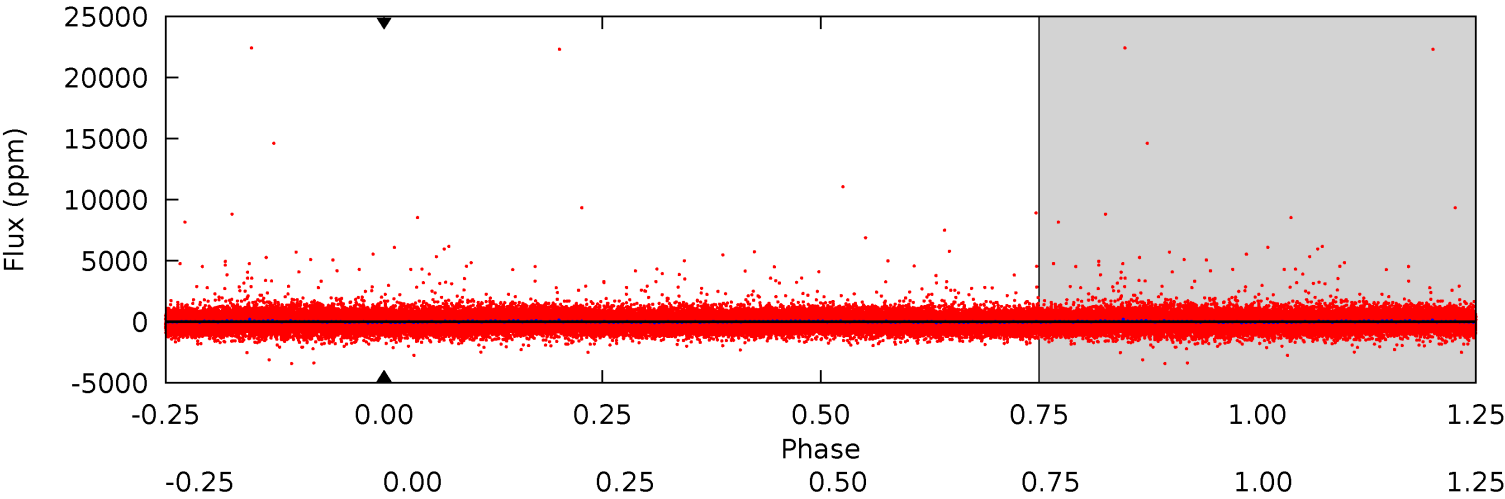
TCE 002446436-01 P= 0.800464 Days $T_0=132.332355$ (BKJD)



DV Model-Shift Uniqueness Test

002446436-01, P = 0.800464 Days, E = 131.408647 Days

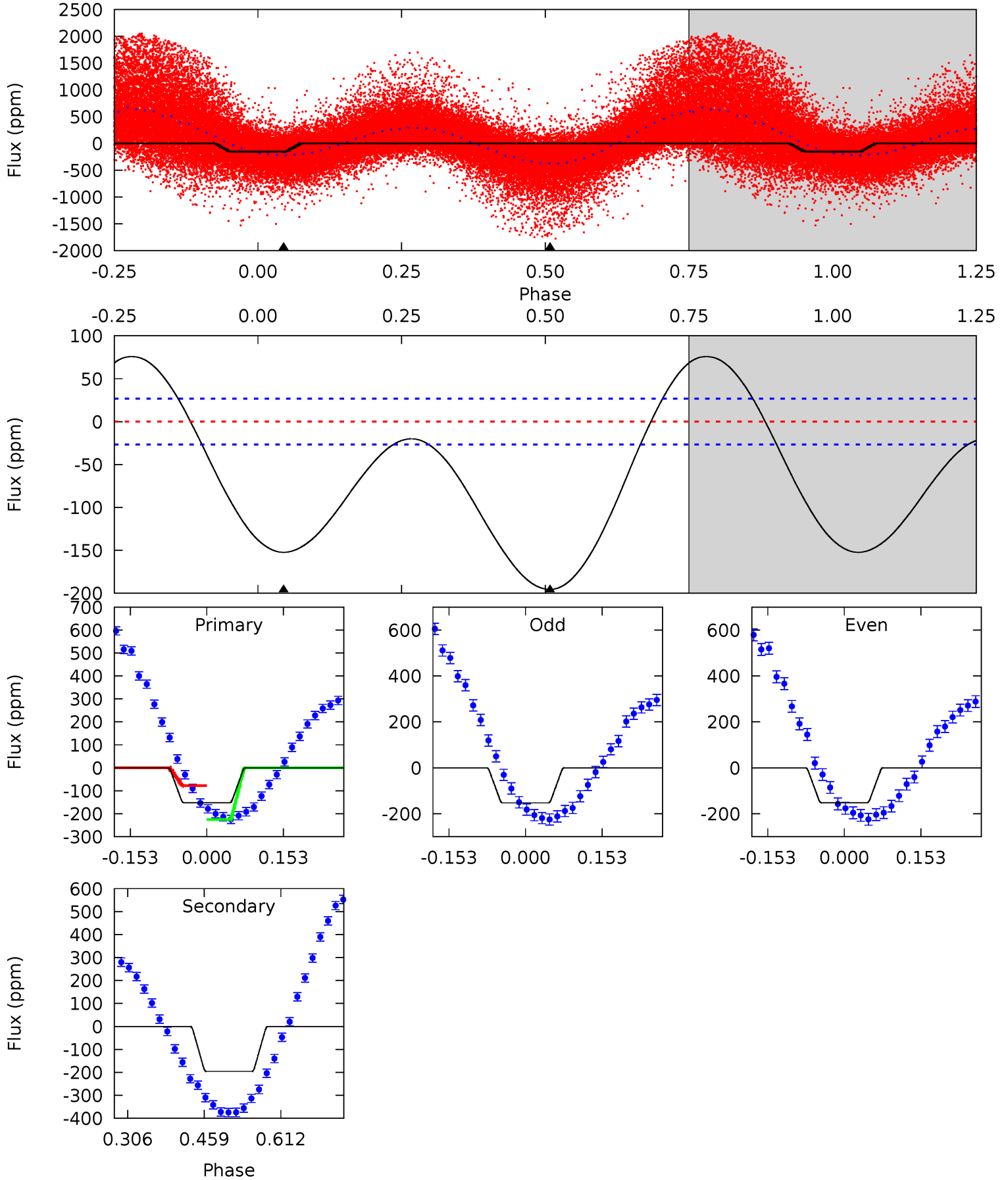
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002446436-01, P = 0.800464 Days, E = 130.731427 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	32.8	0	0	4.47	1.43	7.51	25.5	25.5	32.8	32.8	0.09	1.16	0.28	11.2



Stellar Parameters For KIC 002446436

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6063^{+163}_{-163}	$4.227^{+0.264}_{-0.176}$	$-0.500^{+0.300}_{-0.300}$	$1.199^{+0.325}_{-0.325}$	$0.883^{+0.119}_{-0.076}$	$0.722^{+1.000}_{-0.375}$
	+3%/-3%	+6%/-4%	+60%/-60%	+27%/-27%	+13%/-9%	+139%/-52%
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 002446436-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$9.61^{+10.57}_{-6.97}$	3197^{+232}_{-264}	-4047^{+29965}_{-17145}	$-0.996^{+293.424}_{-232.892}$
Alt.	-196 ± 6	$9.16^{+9.78}_{-6.39}$	3199^{+244}_{-278}	2422^{+2582}_{-5513}	$0.338^{+3.357}_{-0.257}$

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

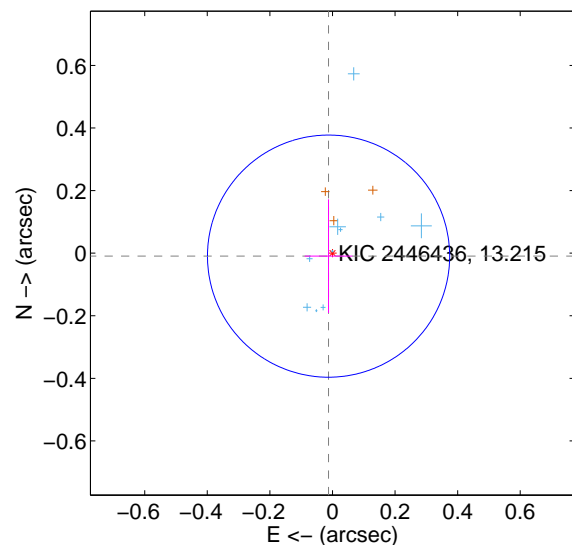
Supplemental centroid analysis for 002446436-01. Kepler magnitude: 13.21. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

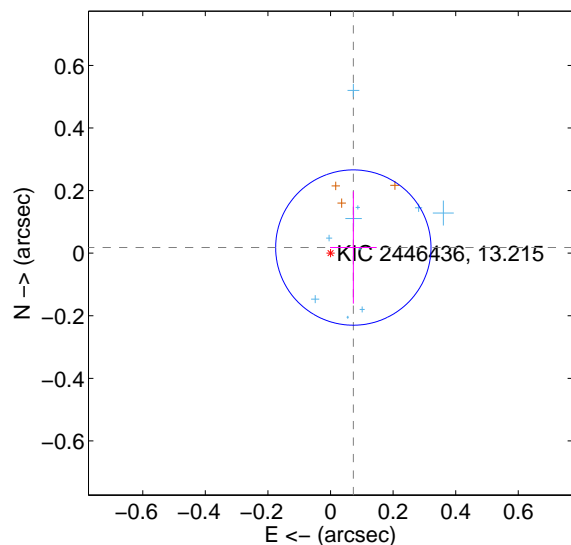
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.129	0.12	0.012 ± 0.076	-0.010 ± 0.182
PRF-fit source offset from KIC position	0.075 ± 0.083	0.91	-0.073 ± 0.075	0.018 ± 0.179
photometric centroid source offset	0.11 ± 0.18	0.64	0.08 ± 0.17	-0.08 ± 0.18

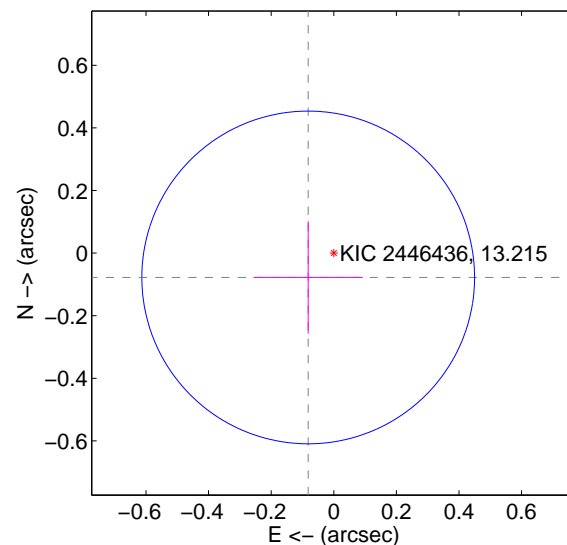
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

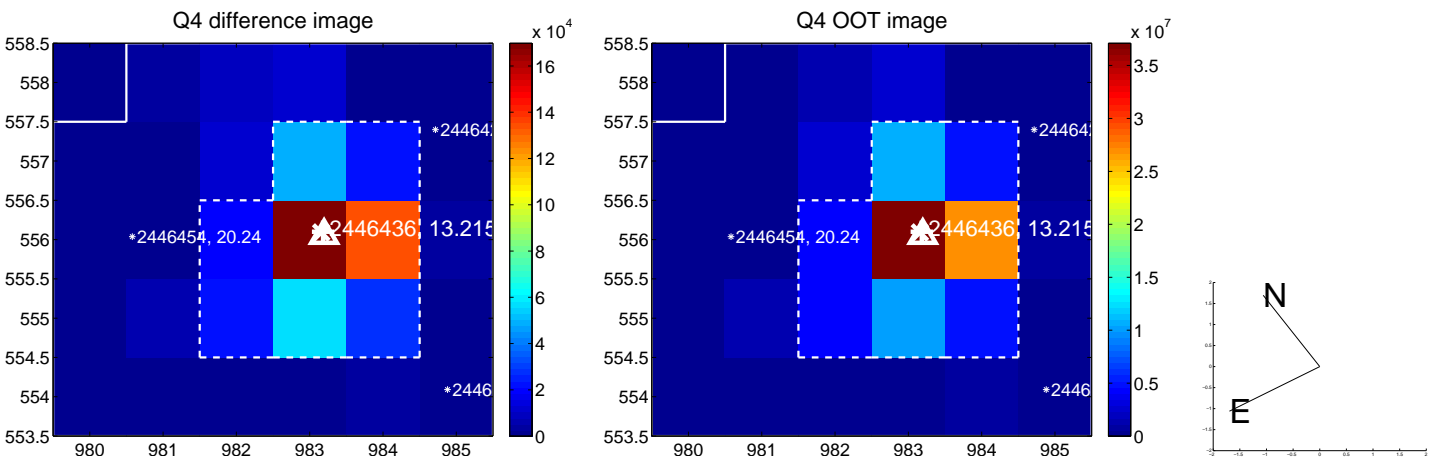
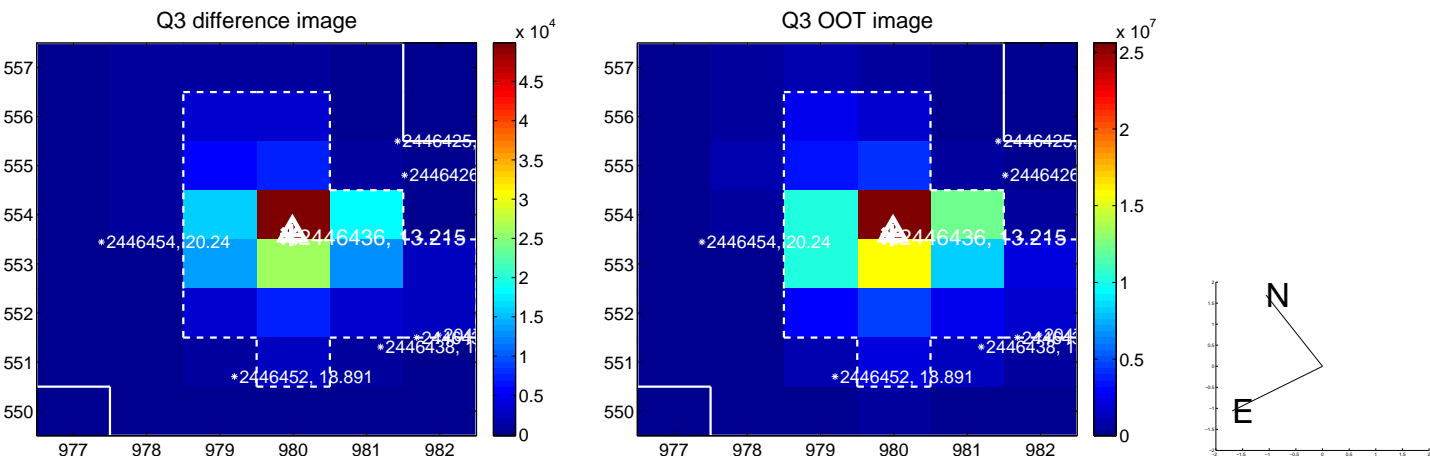
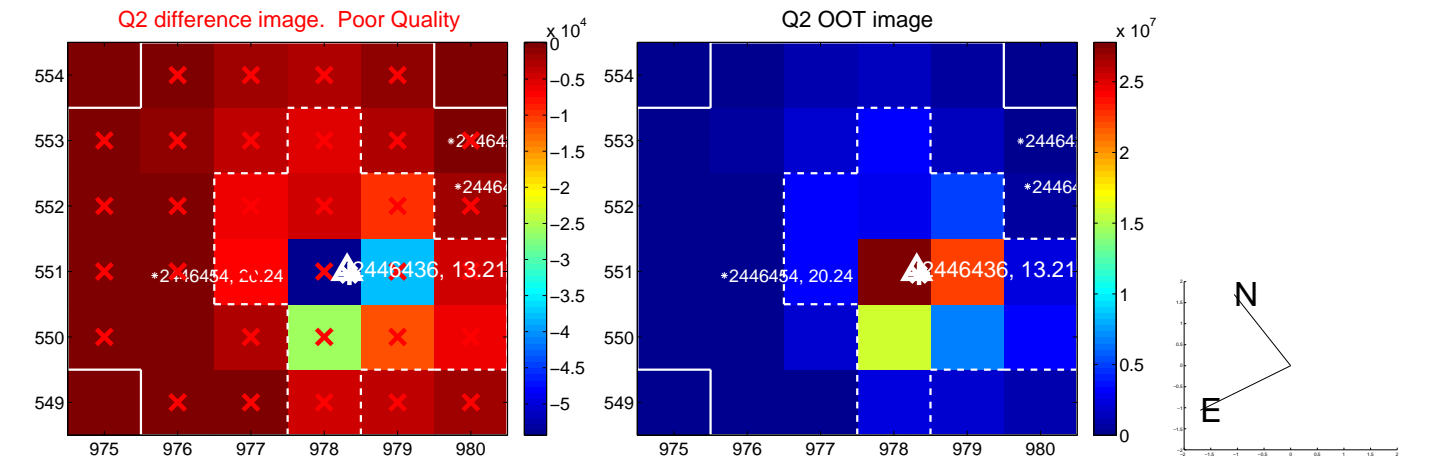
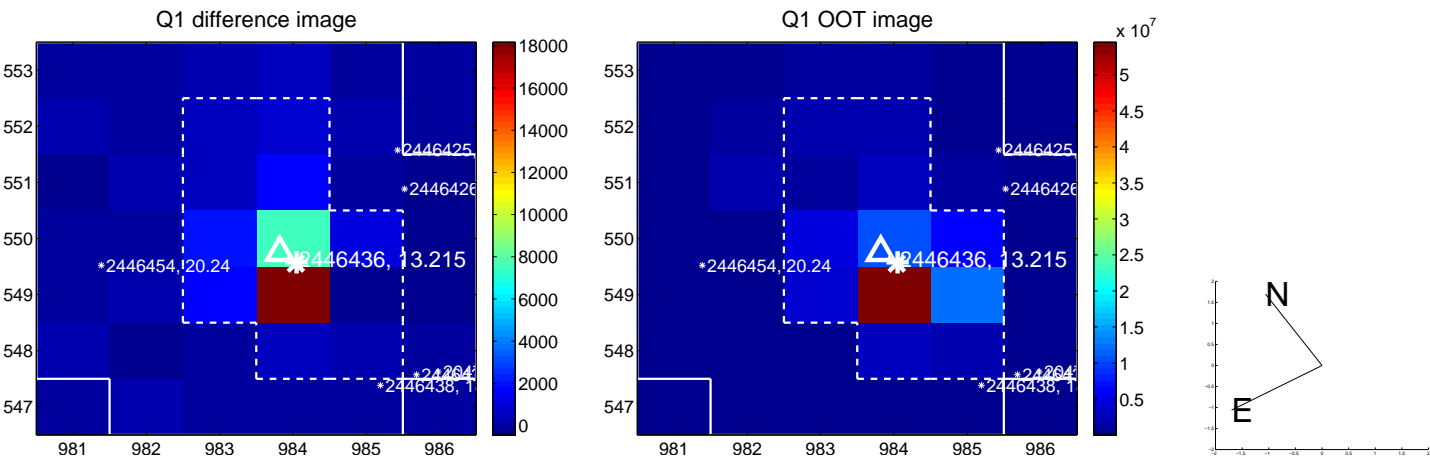


offset from photometric centroids

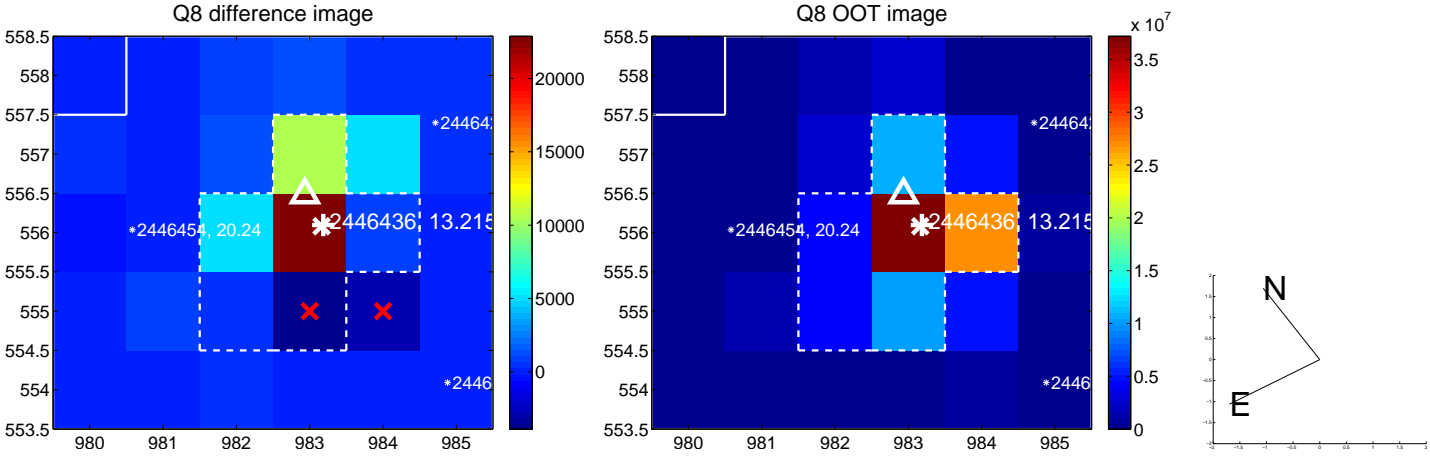
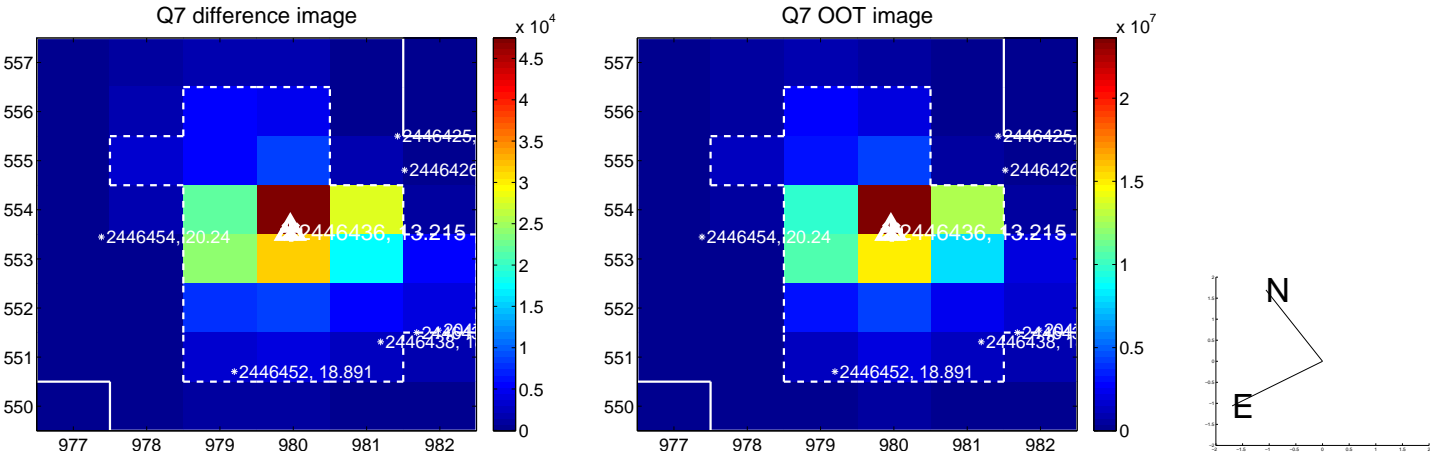
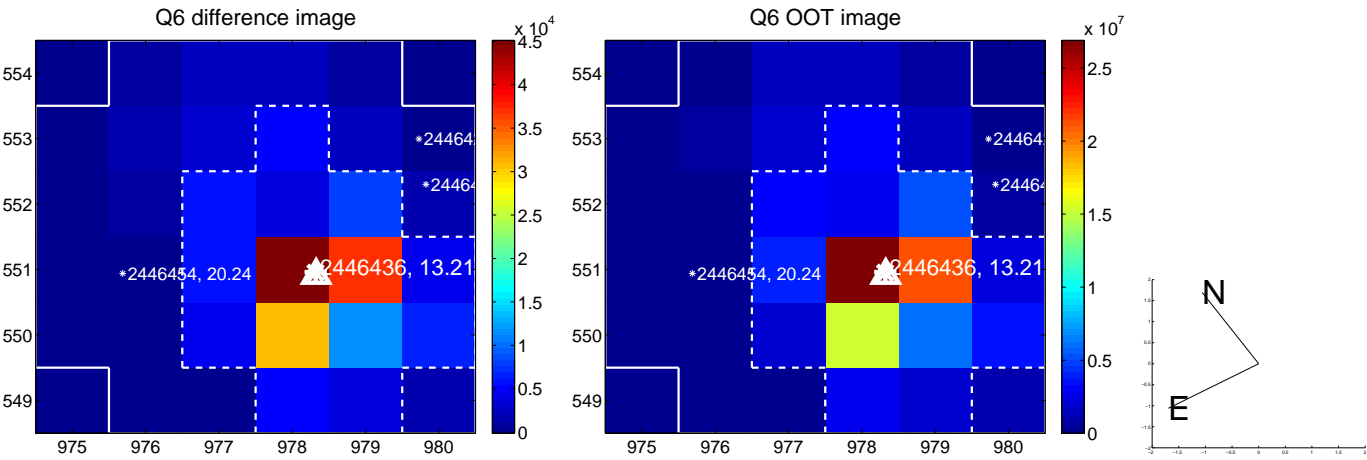
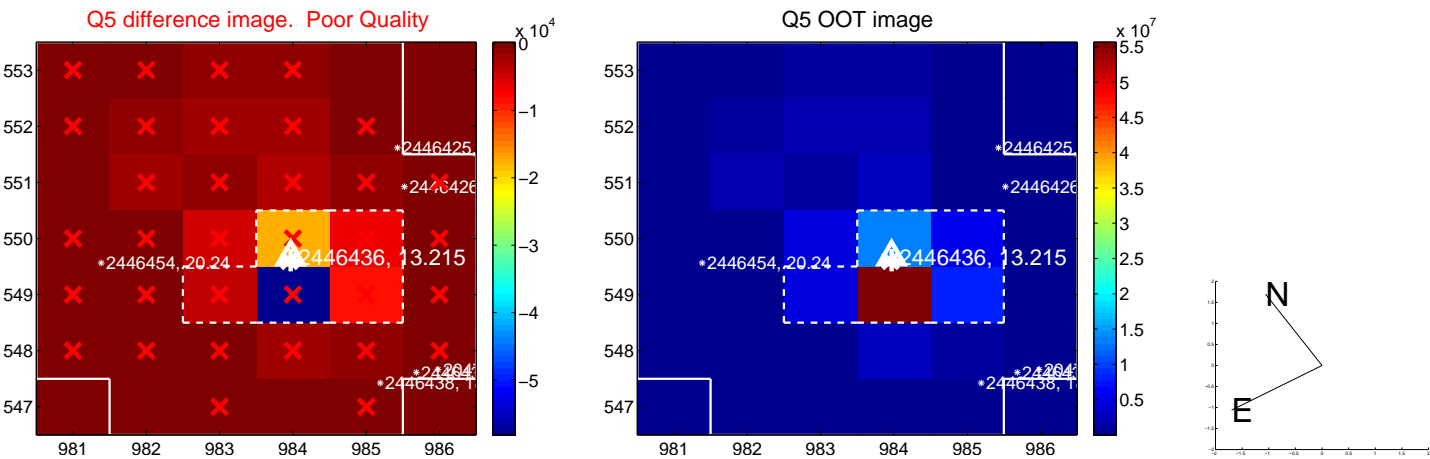


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

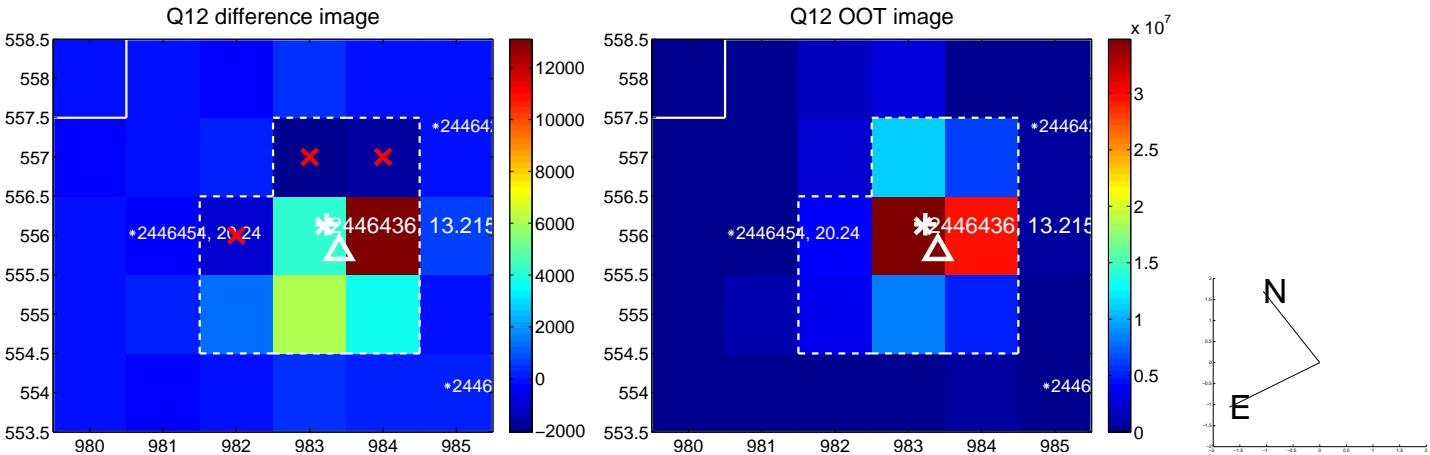
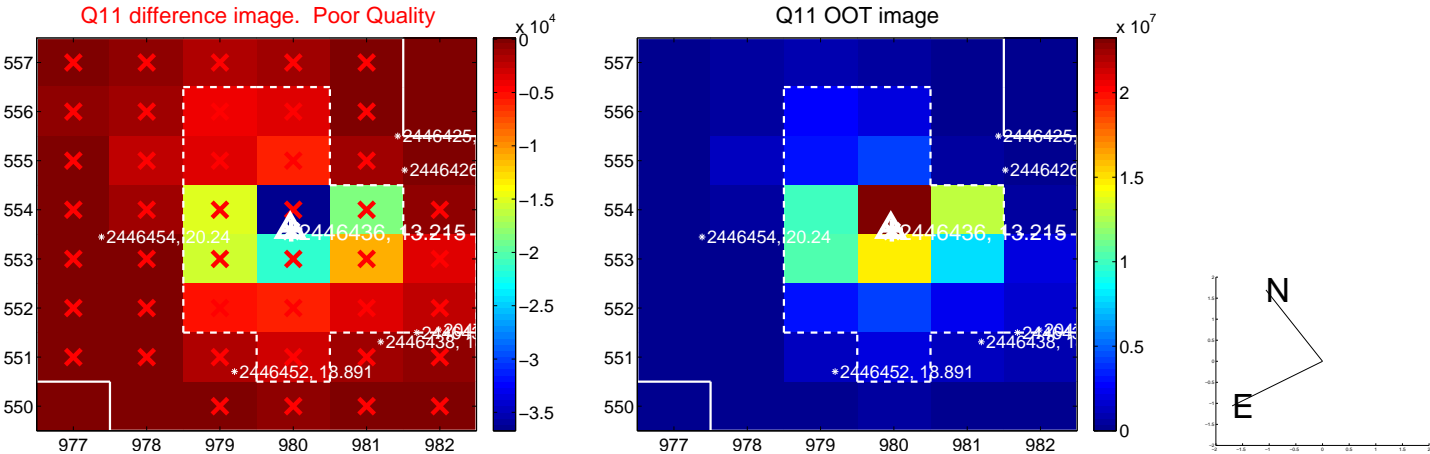
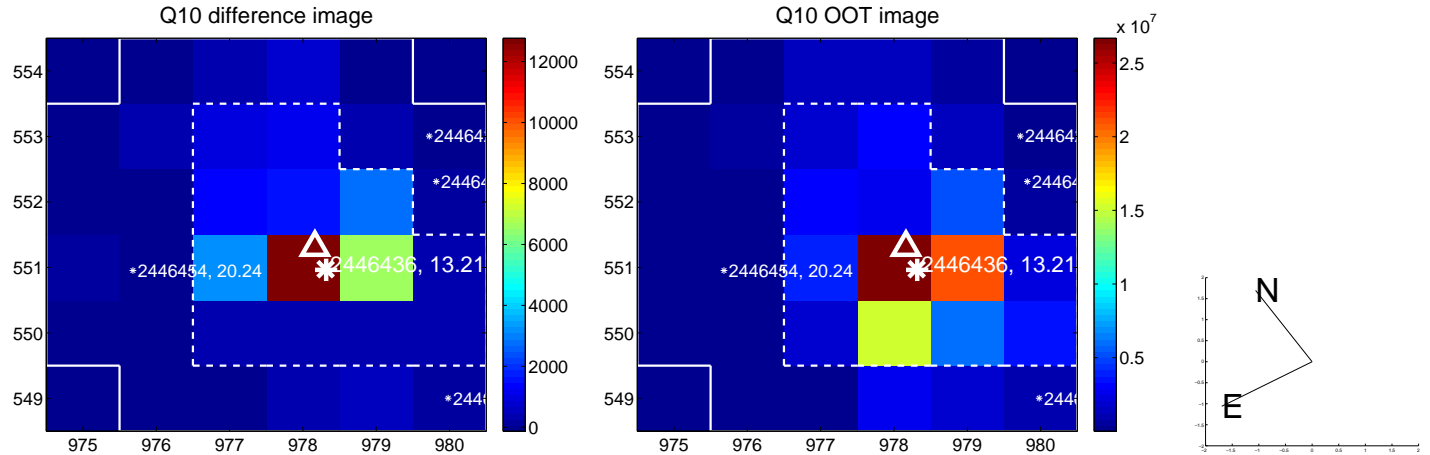
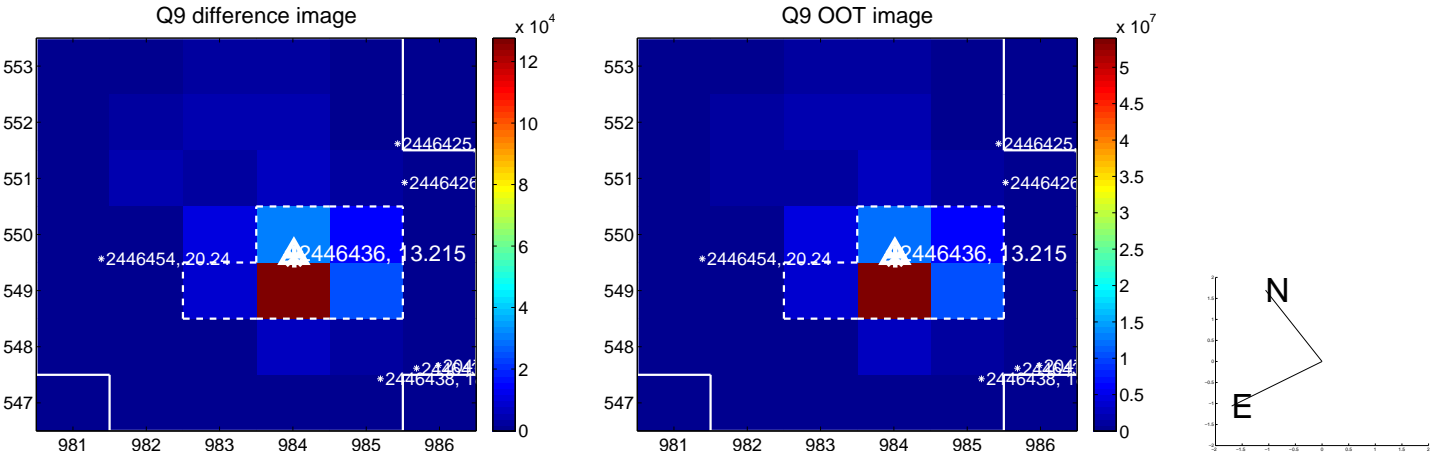
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



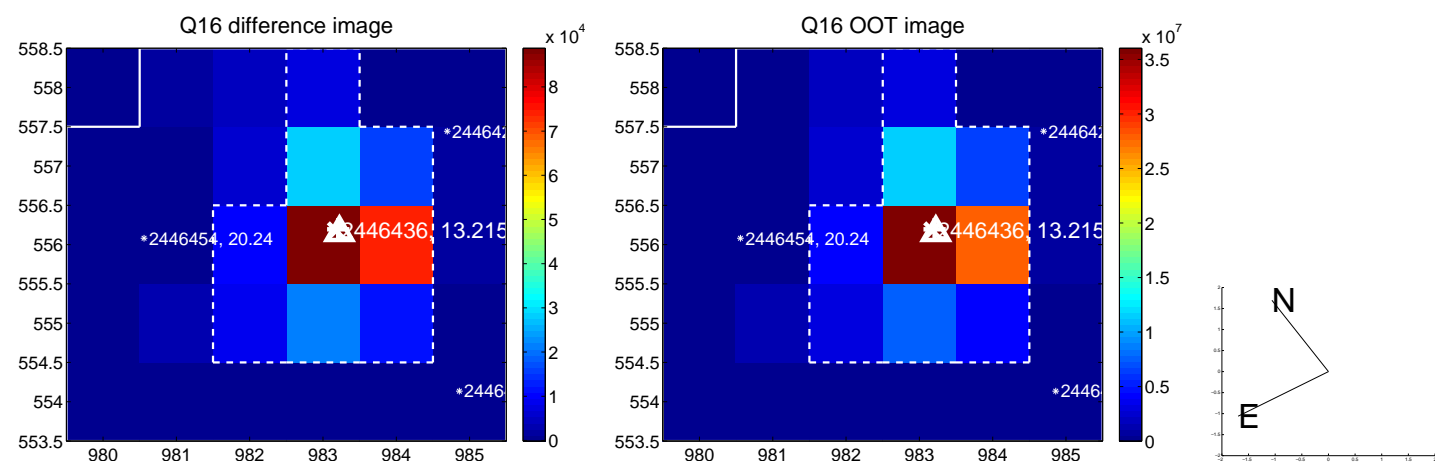
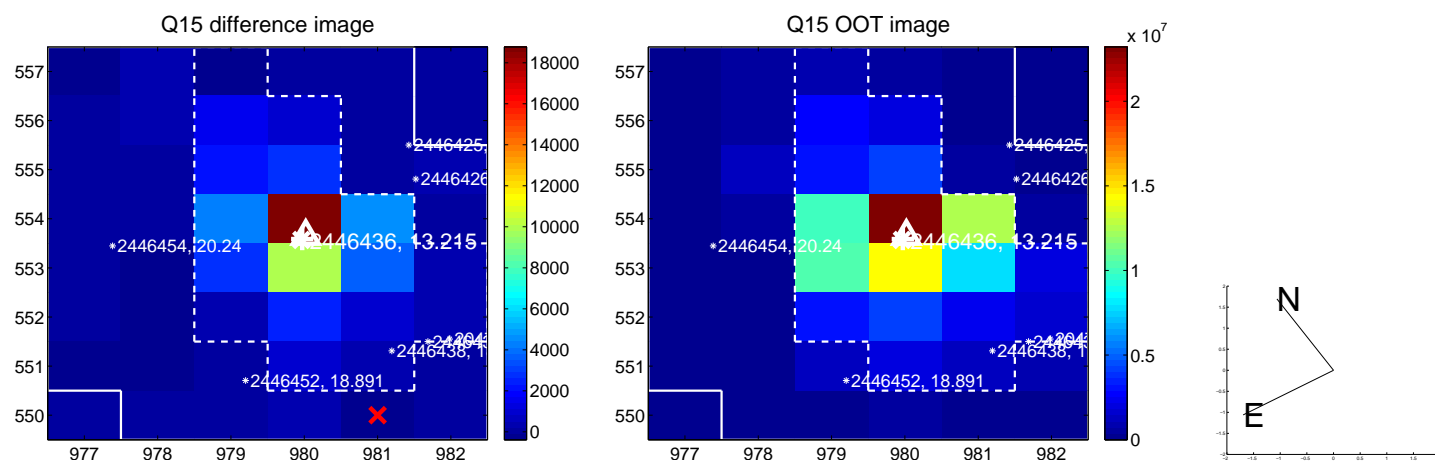
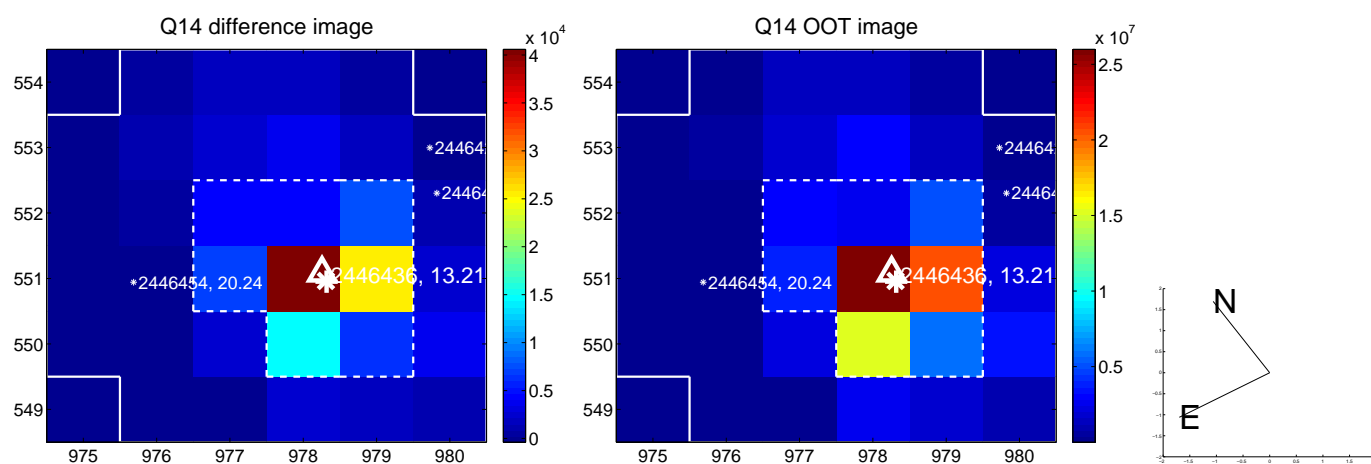
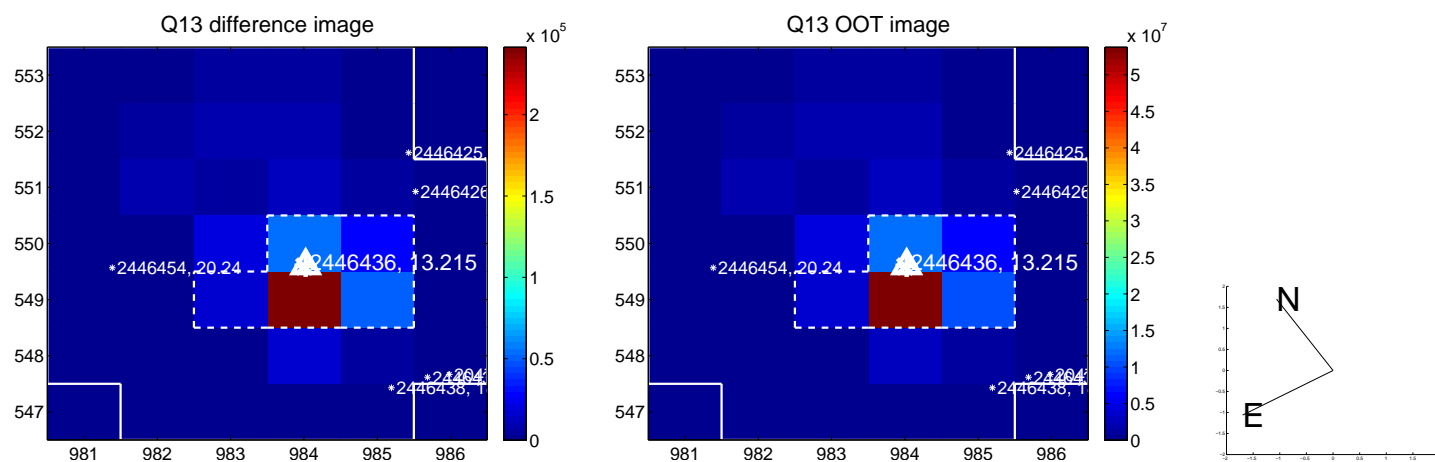
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

