

KIC 002446134

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})
002446134-01	OBS	7632.01	39.130670	165.739000	202.7	2.403	7.1	7.1	1.08	6295	1.80	30.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002446134-01	OBS	FP	0.27	1	0	0	0	MOD_NONUNIQ_ALT

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

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

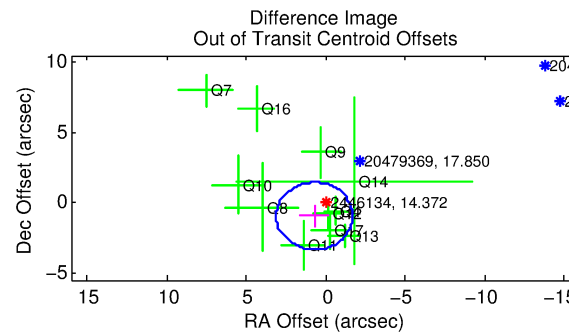
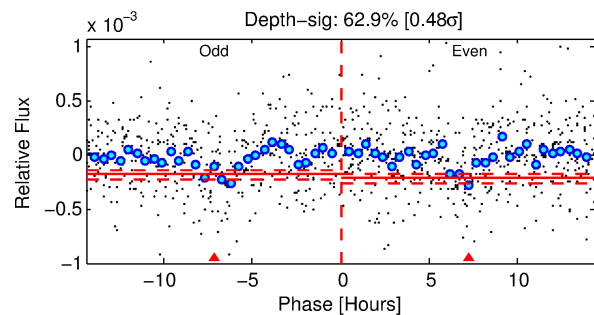
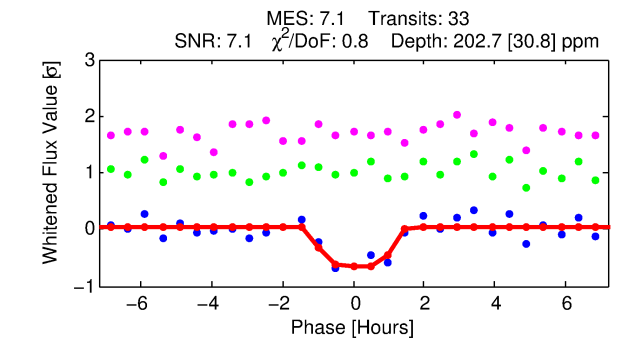
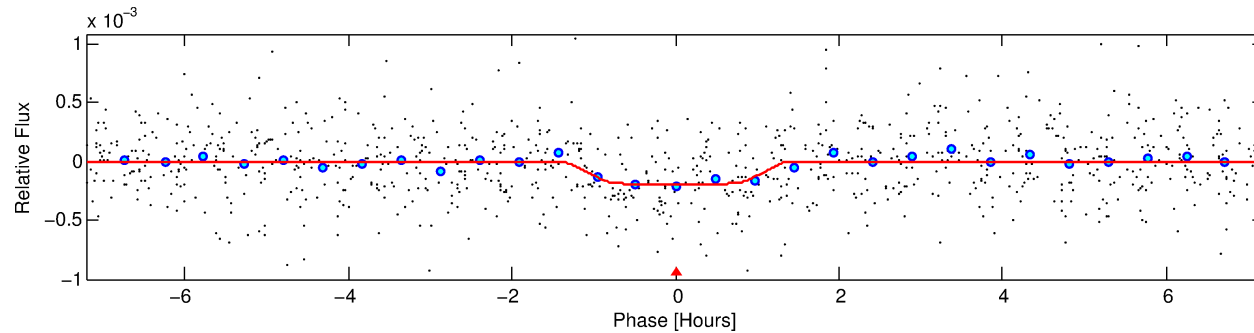
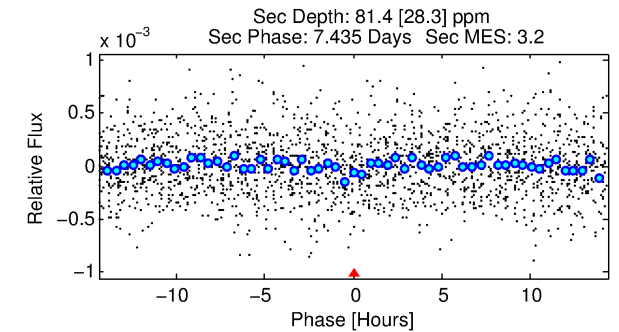
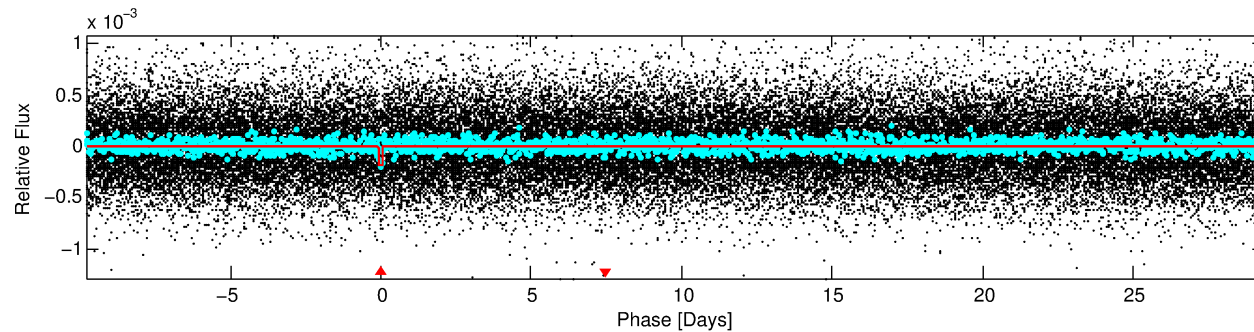
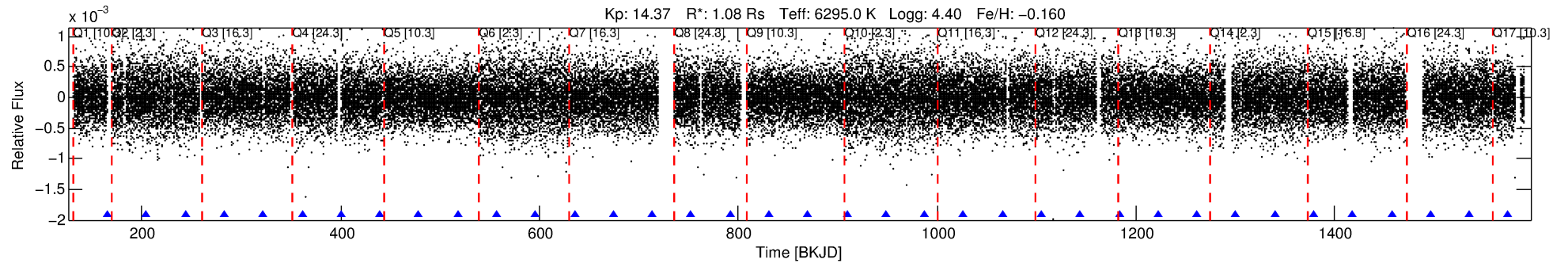
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002446134-01

No Significant Match Found

DV One-Page Summary

KIC: 2446134 Candidate: 1 of 1 Period: 39.131 d



DV Fit Results:

Period = 39.13067 [0.00042] d
Epoch = 165.7390 [0.0090] BKJD
Rp/R* = 0.0153 [0.0113]
a/R* = 59.14 [236.58]
b = 0.90 [0.89]
Seff = 30.79 [13.13]
Teq = 601 [64] K
Rp = 1.80 [1.46] Re
a = 0.2308 [0.0646] AU
Ag = 736.46 [1155.52] [0.64 σ]
Teffp = 4838 [1843] K [2.30 σ]

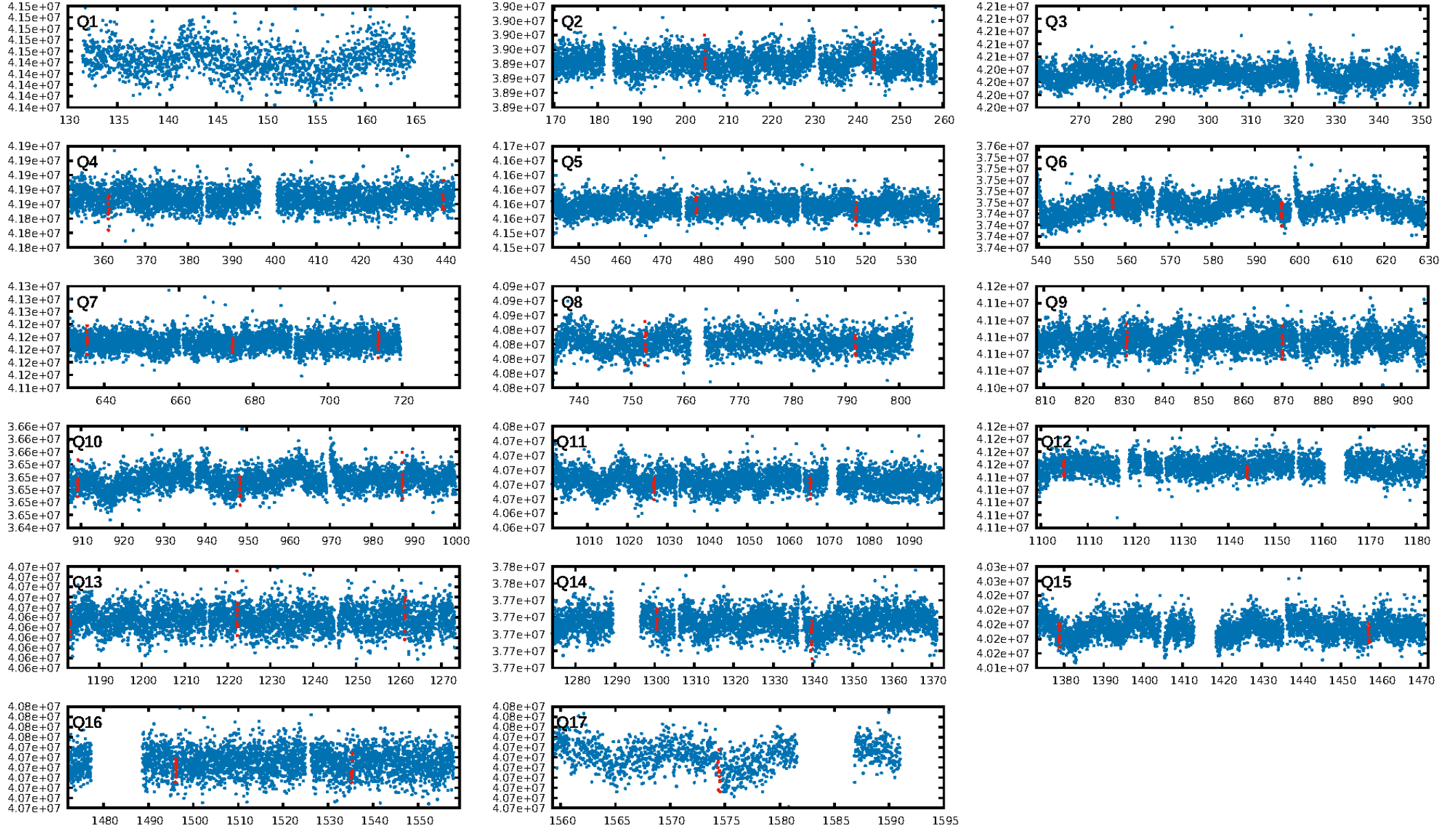
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.32e-12
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 3.254
Centroid-sig: 0.9%
Centroid-so: 2.597 arcsec [1.45 σ]
OotOffset-rm: 1.172 arcsec [1.47 σ]
KicOffset-rm: 1.190 arcsec [1.52 σ]
OotOffset-st: 2/2/4/3 [11]
KicOffset-st: 2/2/4/3 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 1.00 [16/16]

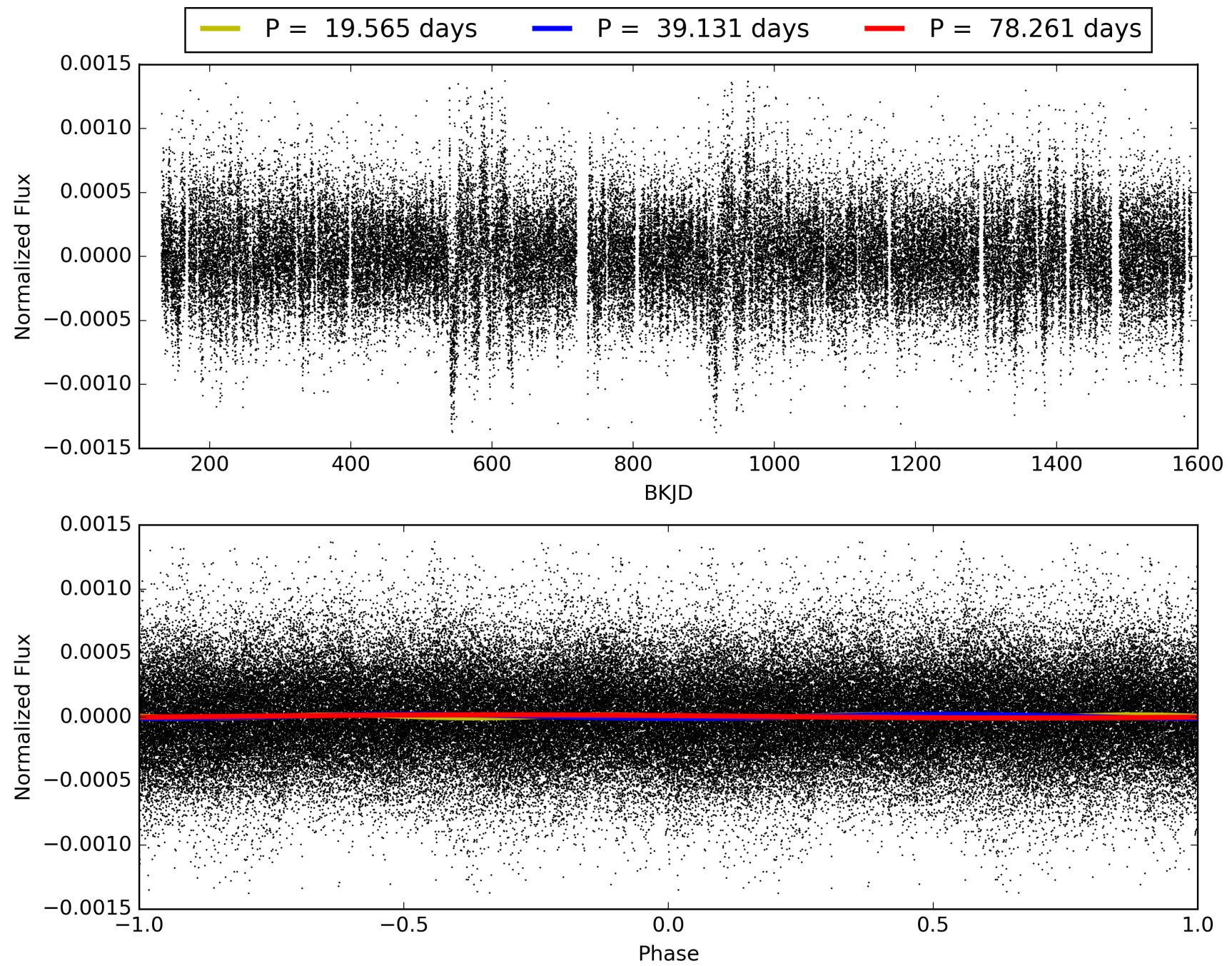
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:24:33 Z

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

TCE 002446134-01, PDC Light Curves

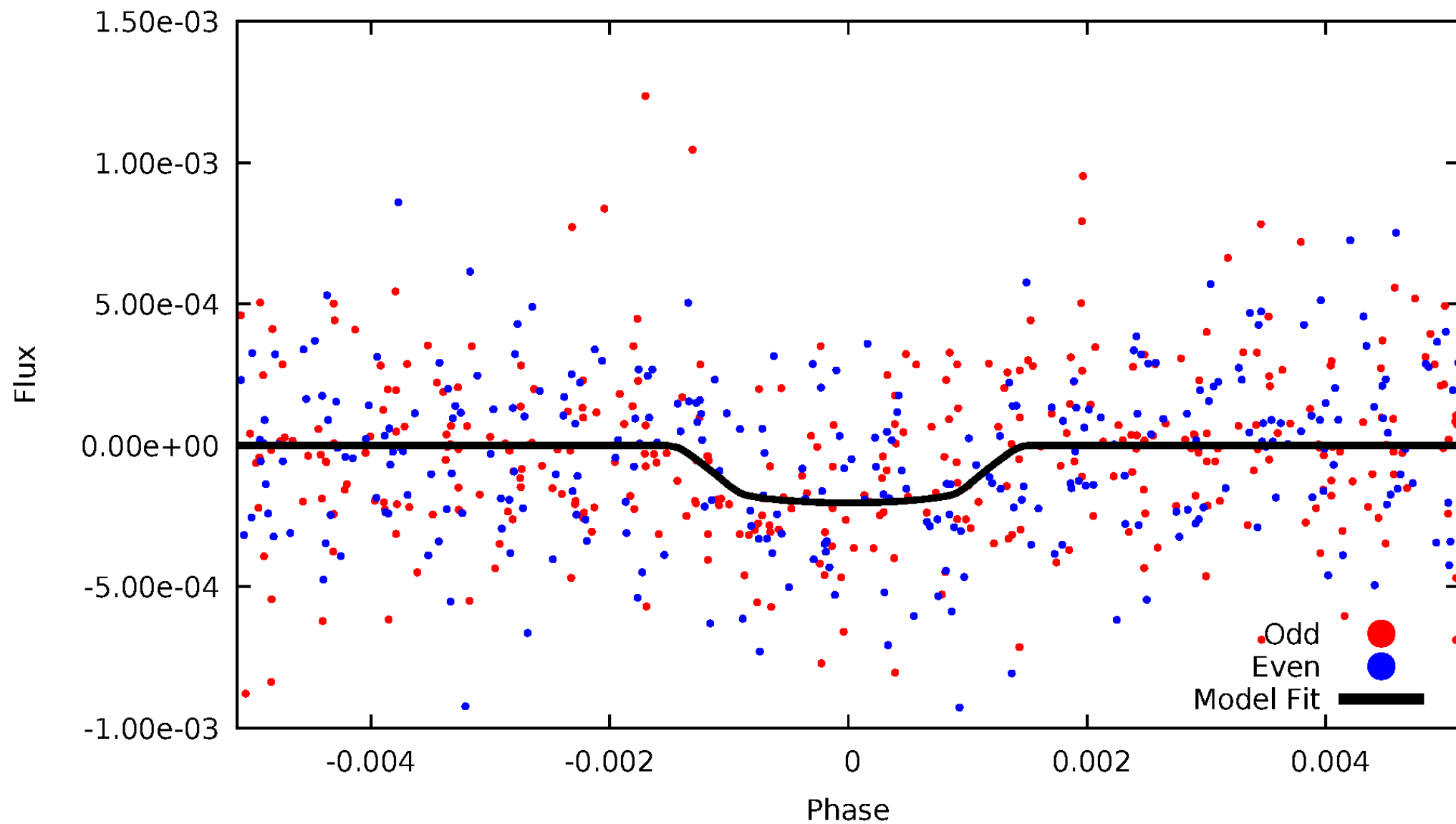


TCE 002446134-01



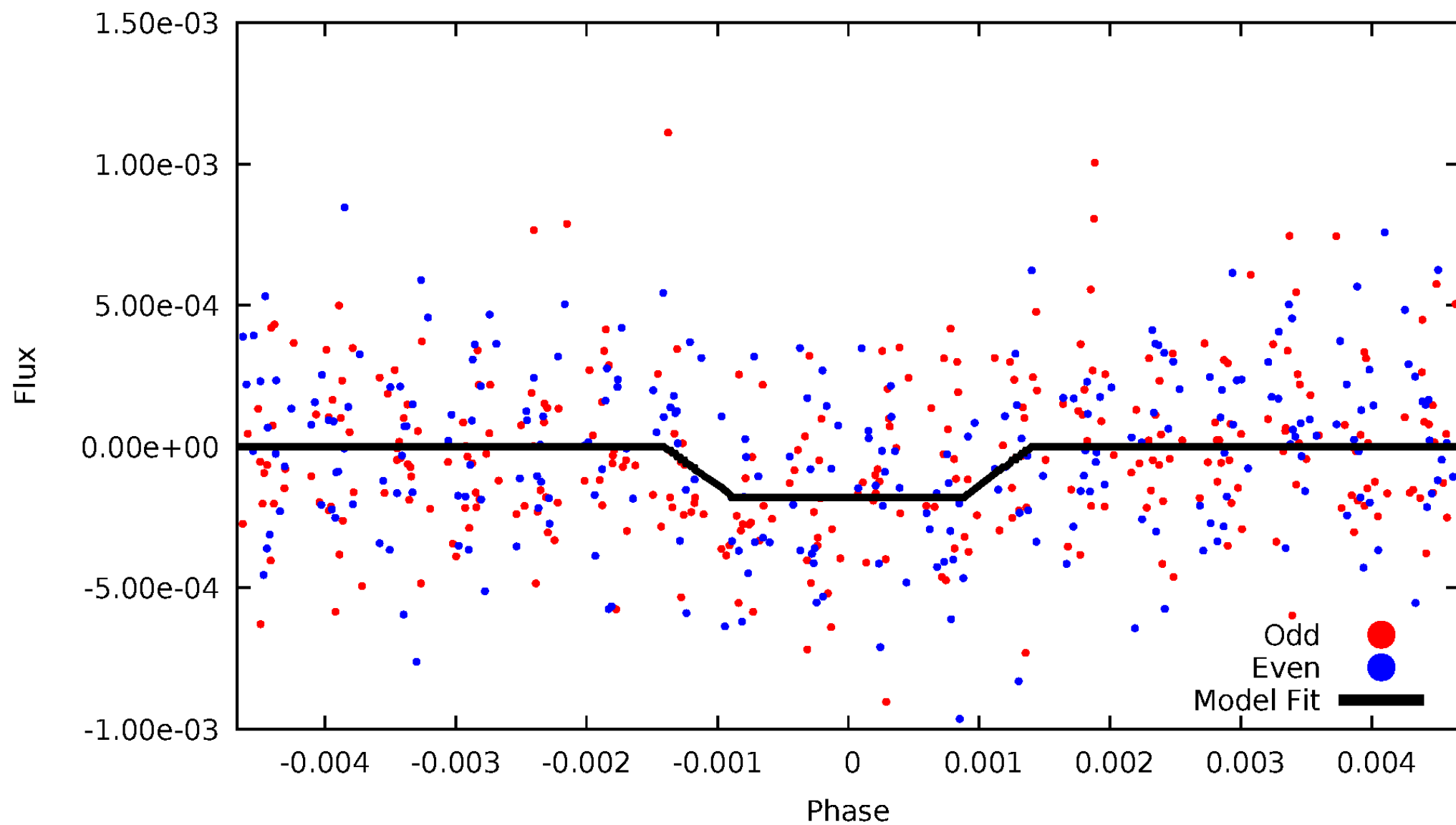
DV Odd/Even

TCE 002446134-01

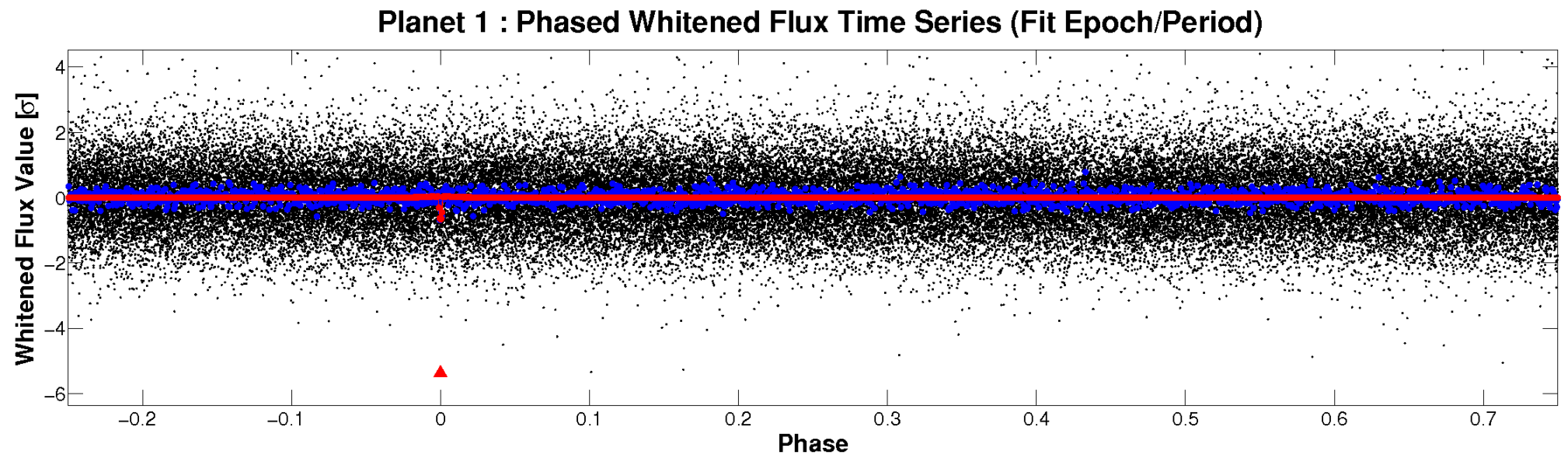
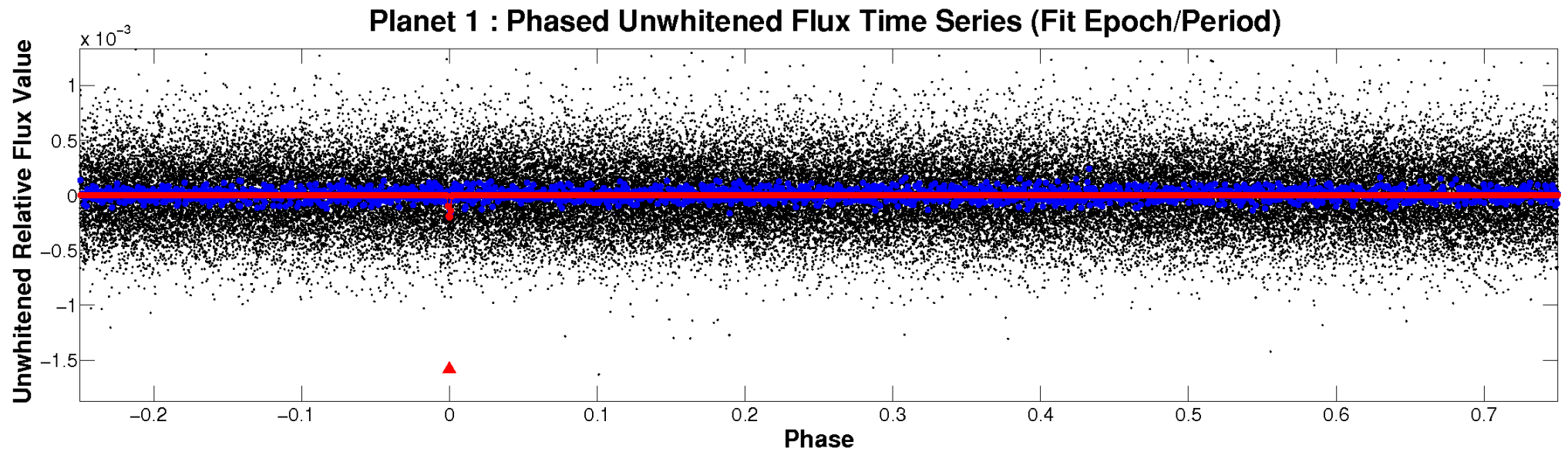


ALT Odd/Even

TCE 002446134-01

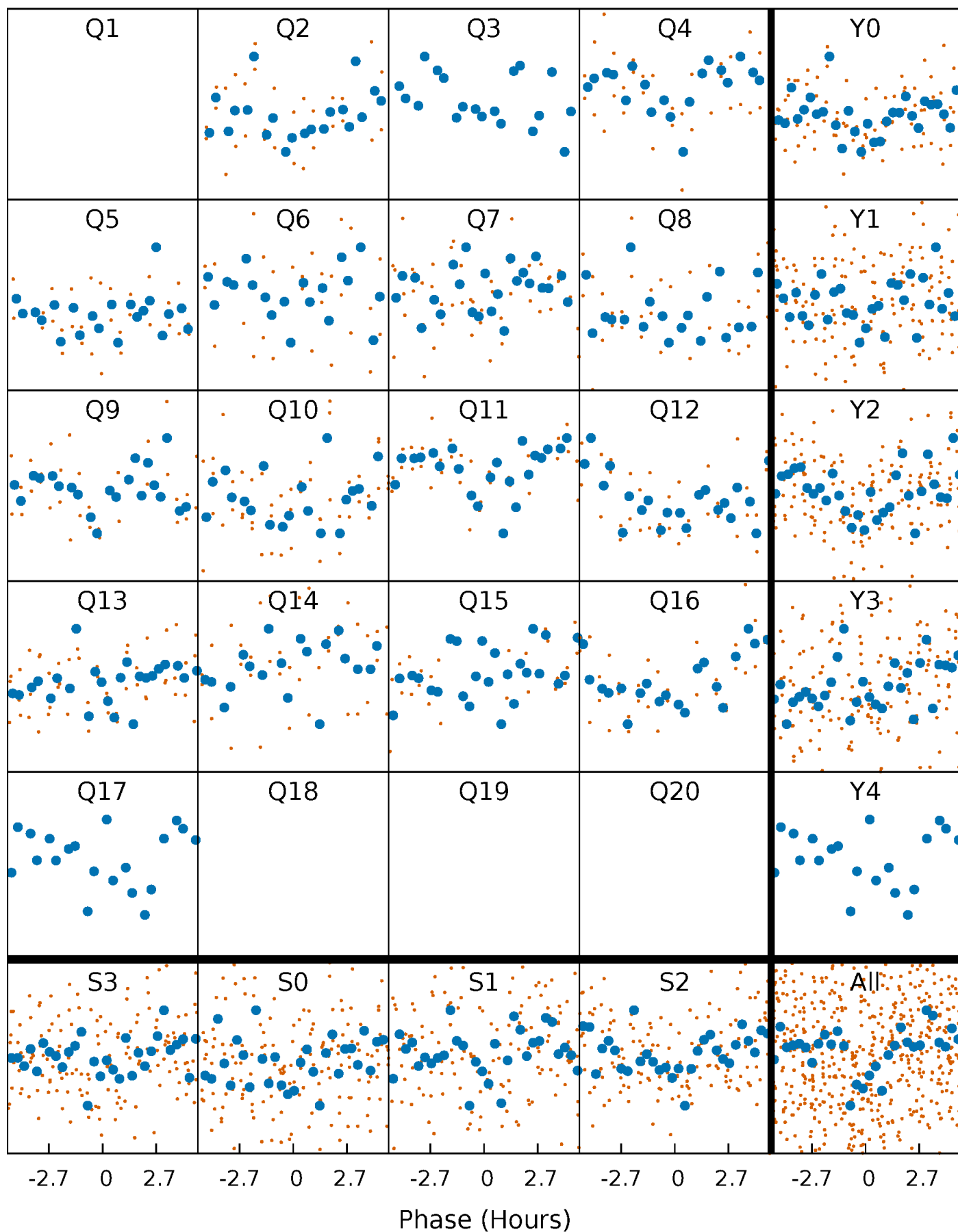


Non-Whitened Vs. Whitened Light Curve



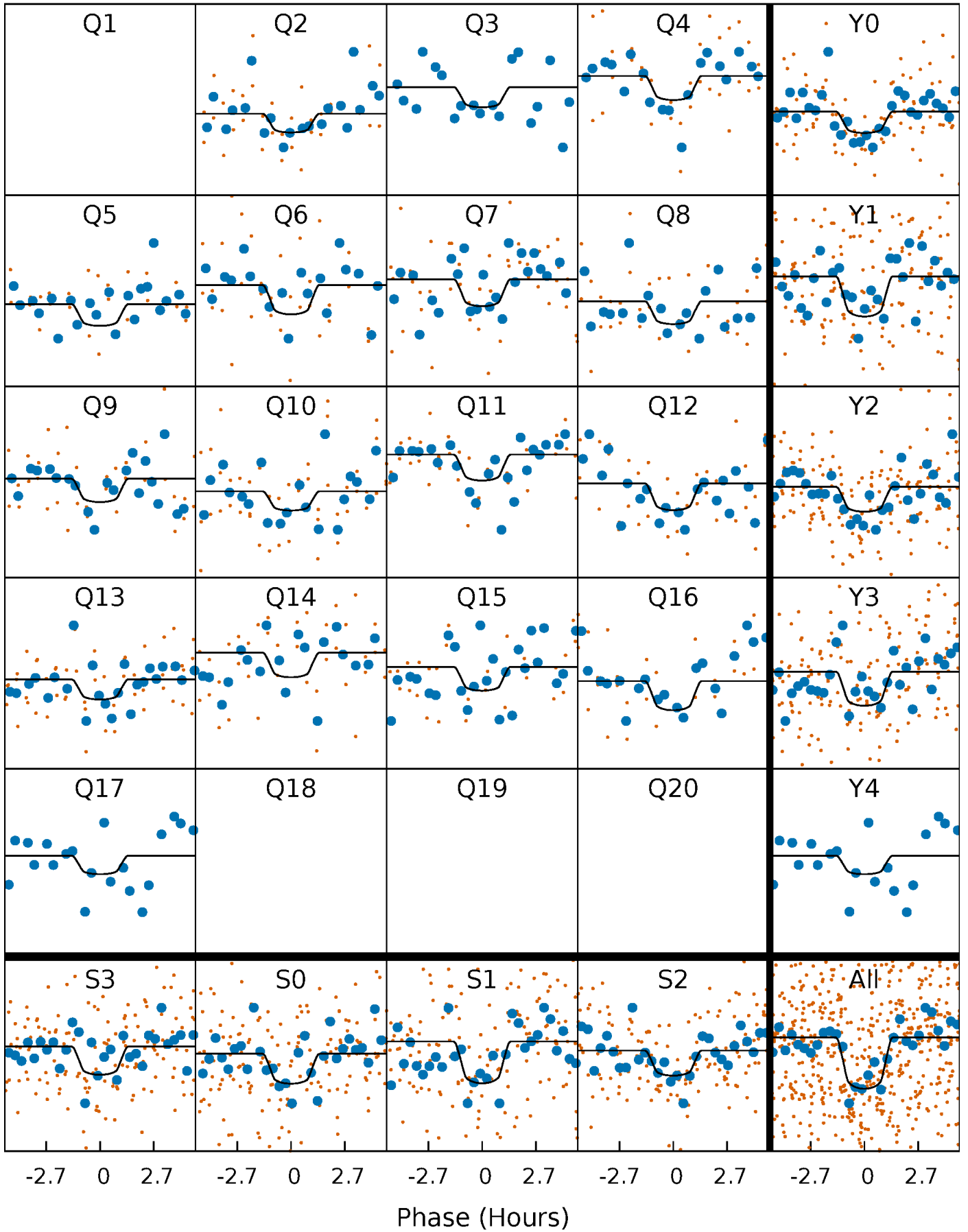
PDC Quarter-Phased Transit Curves

TCE 002446134-01 P= 39.130670 Days $T_0=165.739000$ (BKJD)



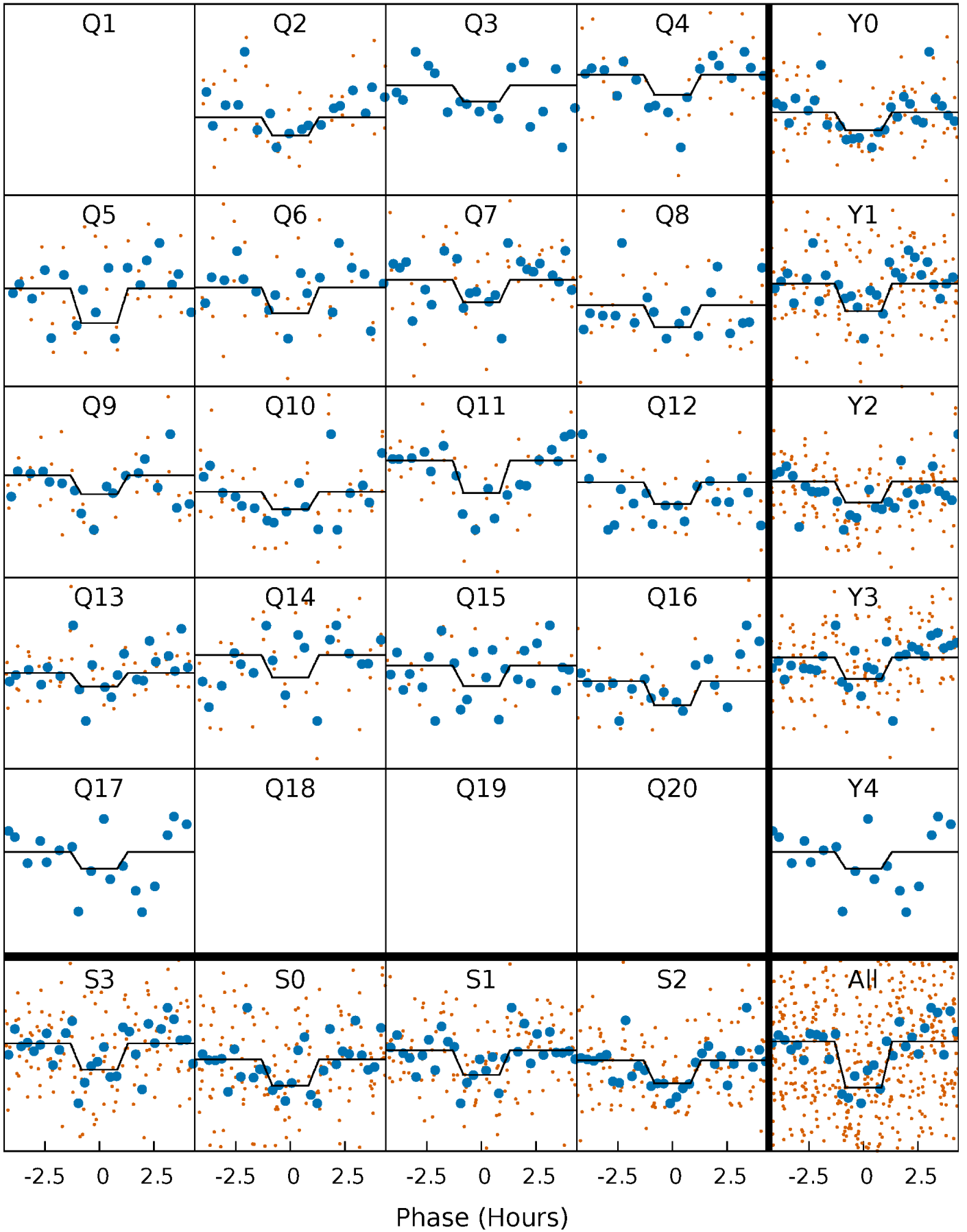
DV Quarter-Phased Transit Curves

TCE 002446134-01 P= 39.130670 Days $T_0=165.739000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

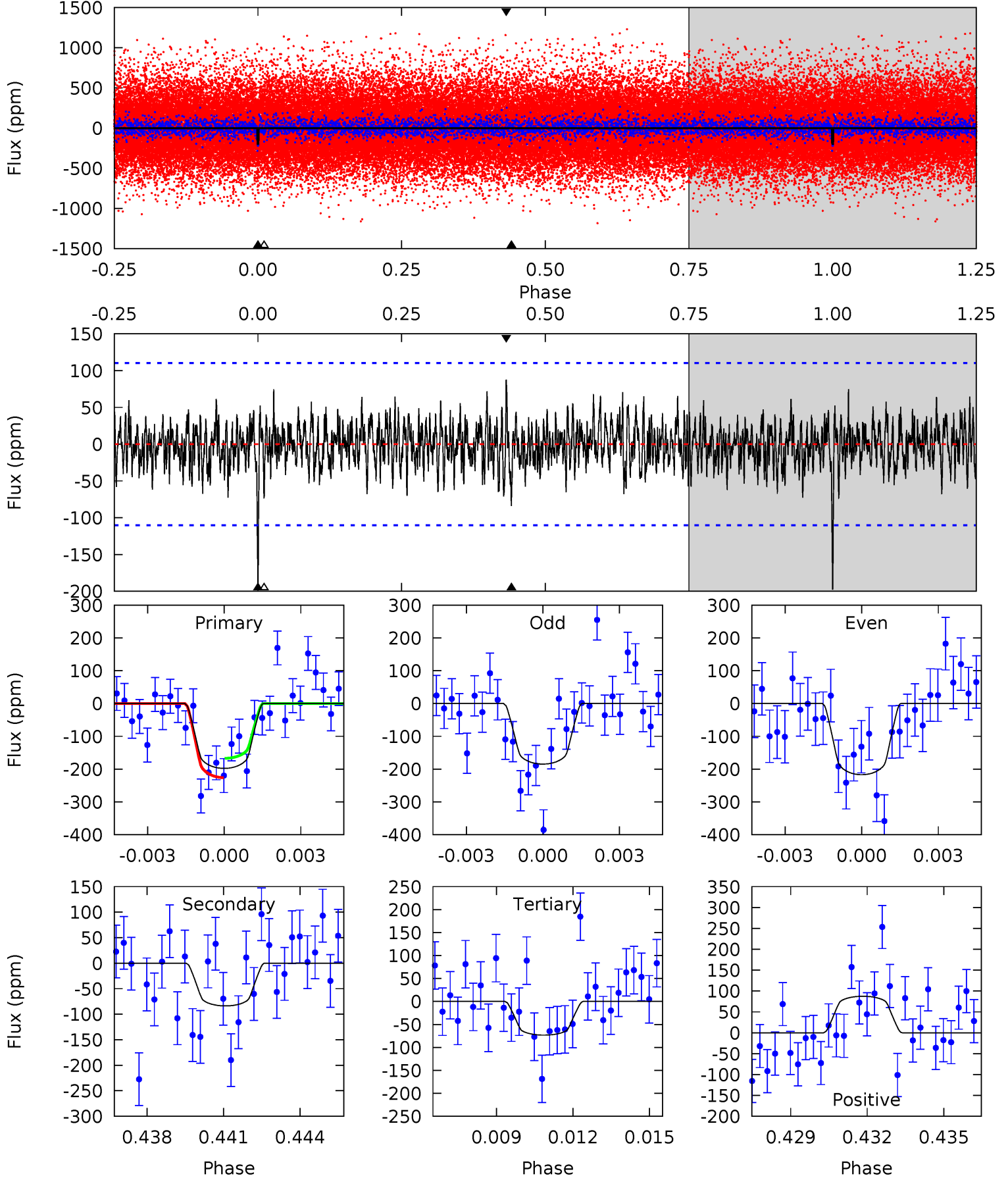
TCE 002446134-01 P= 39.130617 Days $T_0=165.743207$ (BKJD)



DV Model-Shift Uniqueness Test

002446134-01, P = 39.130670 Days, E = 126.608330 Days

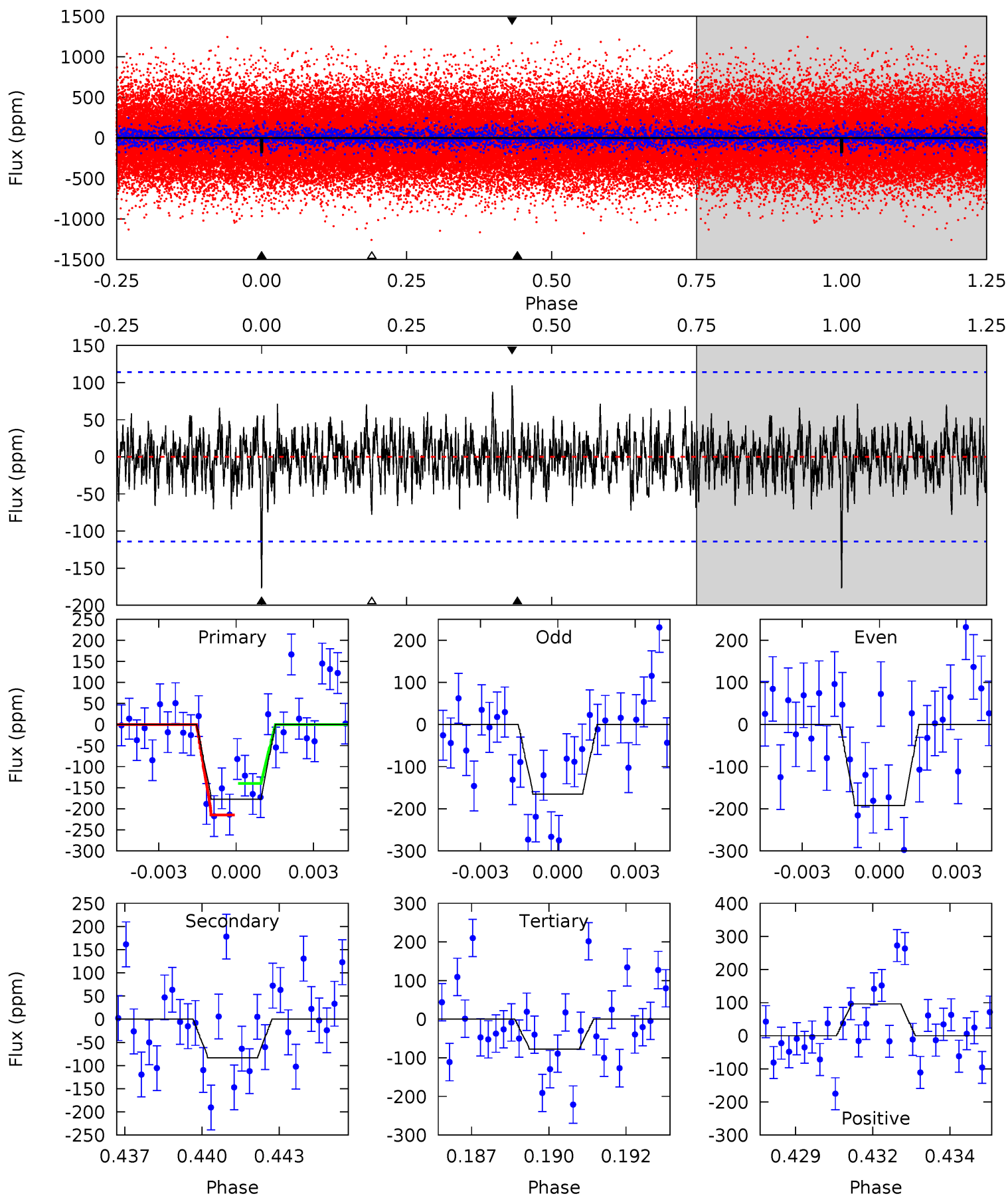
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.42	3.99	3.49	4.17	5.26	2.97	1.18	5.93	5.25	0.50	-0.18	0.77	1.11	0.31	1.41



Alt Model-Shift Uniqueness Test

002446134-01, P = 39.130617 Days, E = 126.612590 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.17	3.84	3.59	4.44	5.27	2.99	1.15	4.58	3.73	0.25	-0.60	0.62	0.98	0.35	1.73



Stellar Parameters For KIC 002446134

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6295^{+169}_{-225}	$4.401^{+0.072}_{-0.217}$	$-0.160^{+0.250}_{-0.300}$	$1.080^{+0.364}_{-0.145}$	$1.065^{+0.173}_{-0.129}$	$1.191^{+0.449}_{-0.628}$
	+3%/-4%	+2%/-5%	+156%/-188%	+34%/-13%	+16%/-12%	+38%/-53%
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 002446134-01 / KOI 7632.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-84 ± 21	$2.11^{+1.25}_{-1.26}$	853^{+65}_{-45}	4712^{+2441}_{-774}	543^{+2520}_{-340}
Alt.	-83 ± 22	$1.83^{+1.39}_{-1.15}$	857^{+65}_{-50}	4987^{+3263}_{-963}	710^{+4587}_{-496}

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

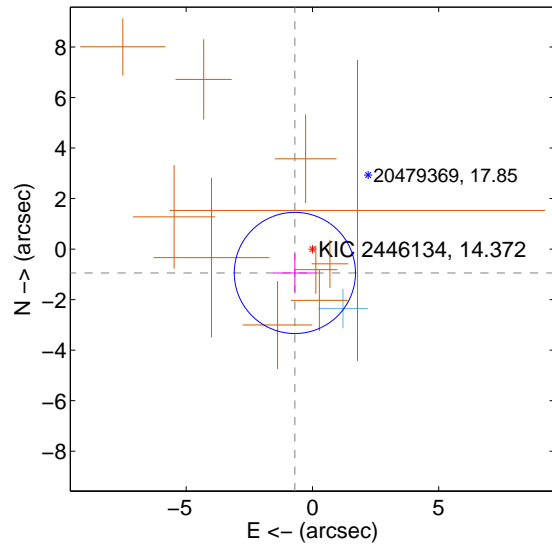
Supplemental centroid analysis for 002446134-01. Kepler magnitude: 14.37. Transit SNR 7.10

There are 1 quarters with good PRF difference image offsets

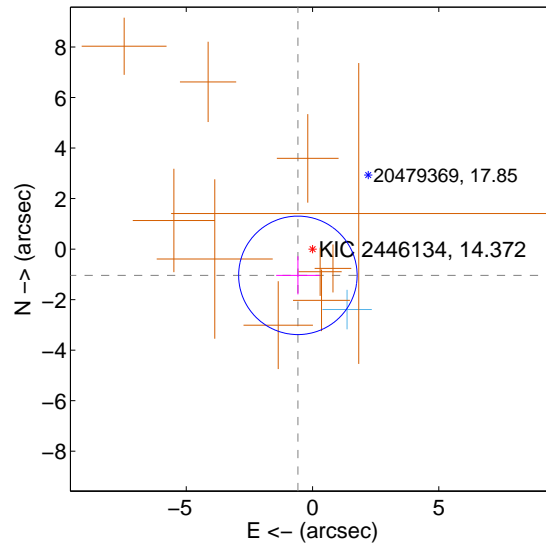
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.172 ± 0.800	1.47	0.695 ± 0.850	-0.944 ± 0.771
PRF-fit source offset from KIC position	1.190 ± 0.782	1.52	0.580 ± 0.860	-1.039 ± 0.756
photometric centroid source offset	2.60 ± 1.80	1.45	-0.29 ± 1.77	2.58 ± 1.80

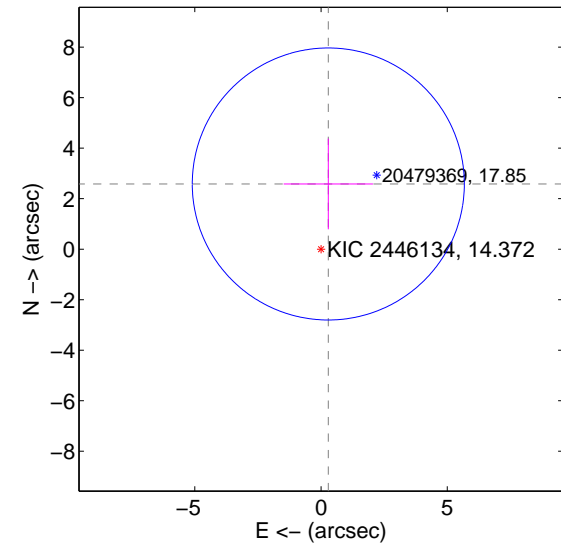
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

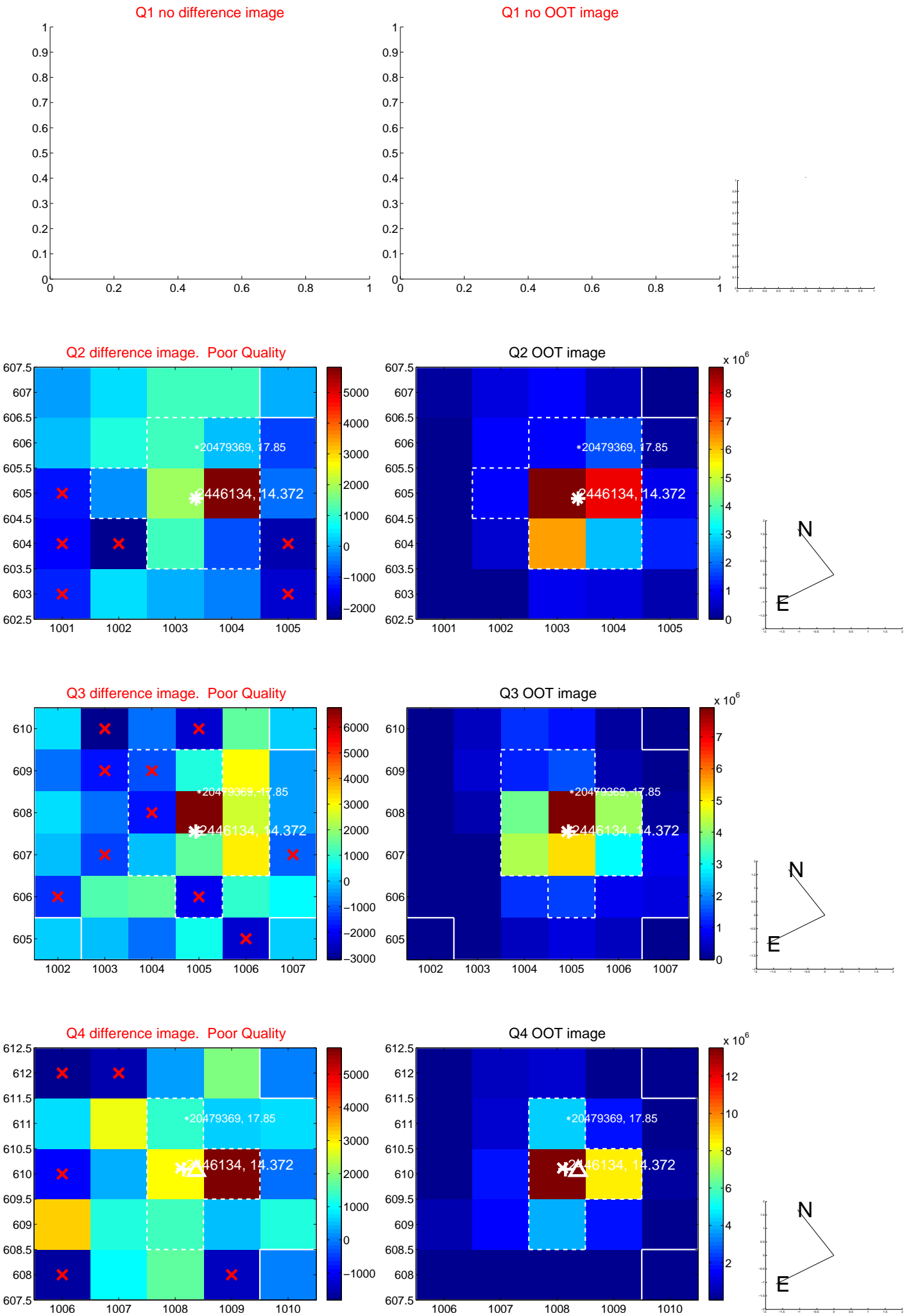


offset from photometric centroids

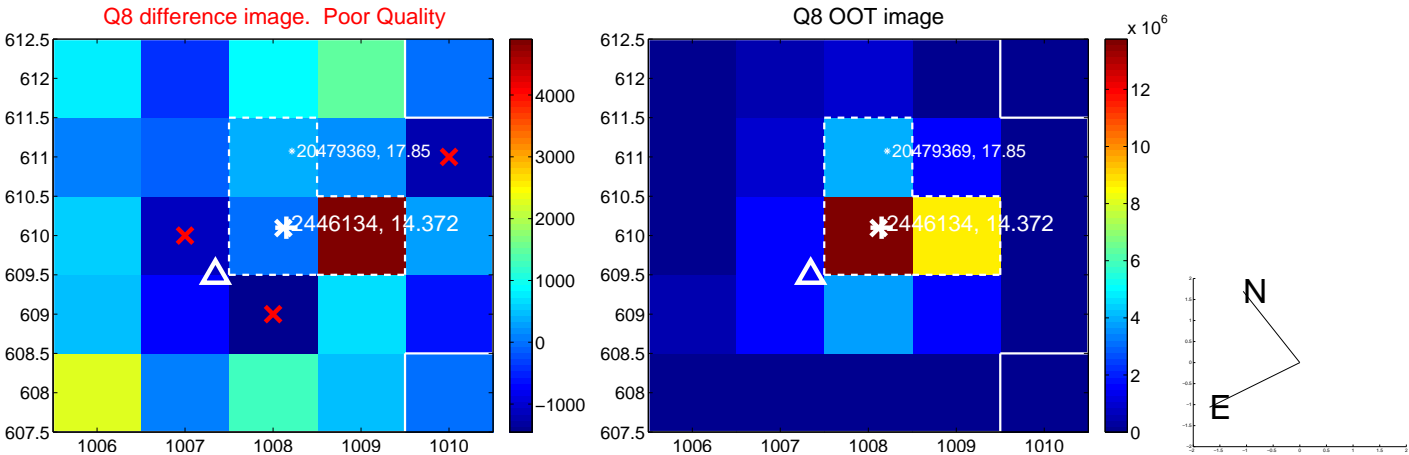
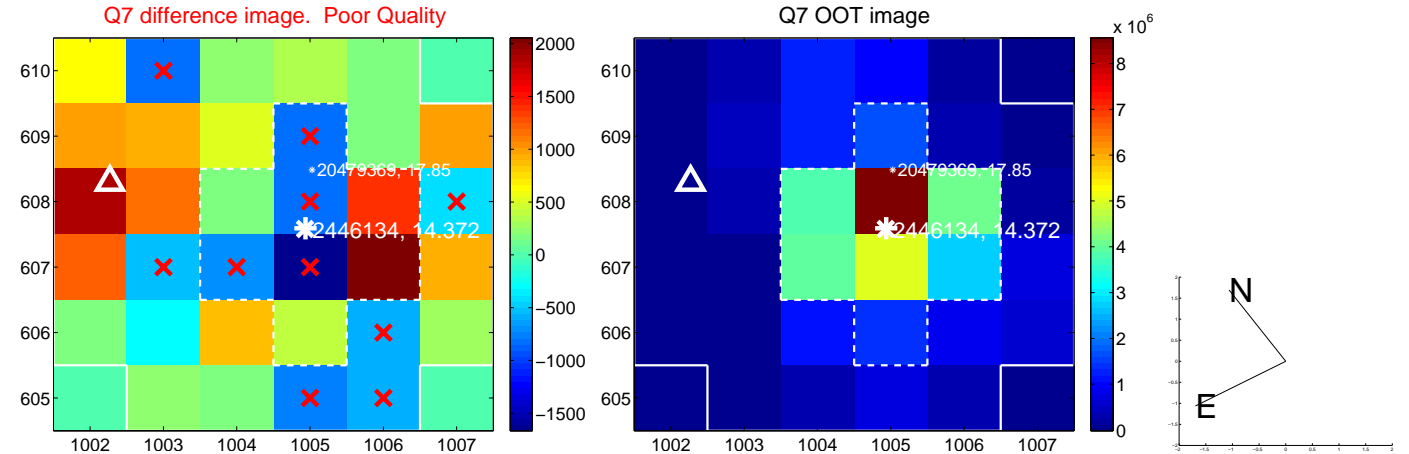
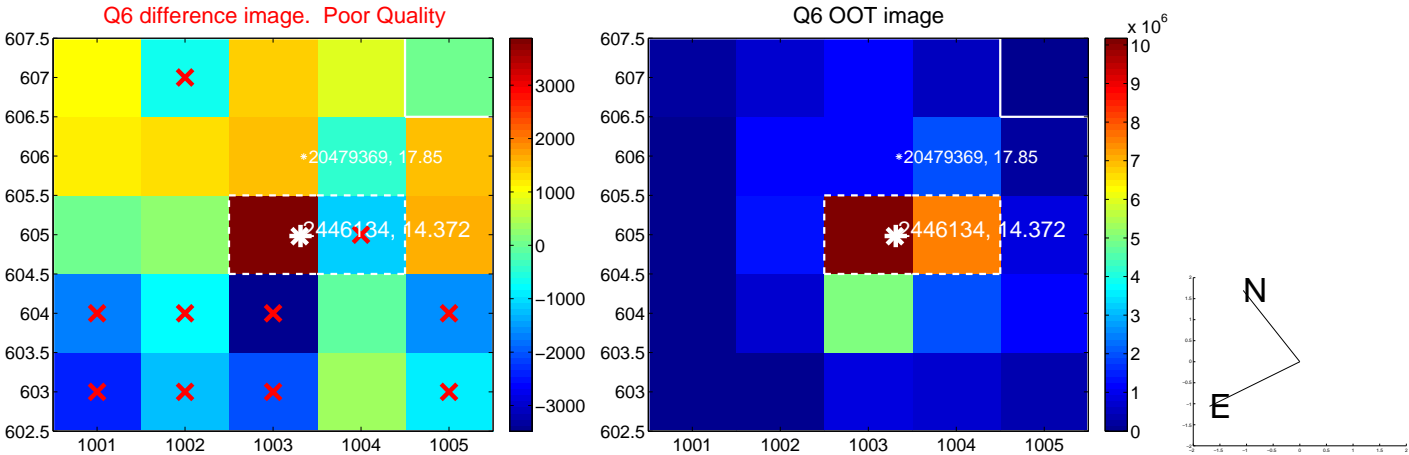
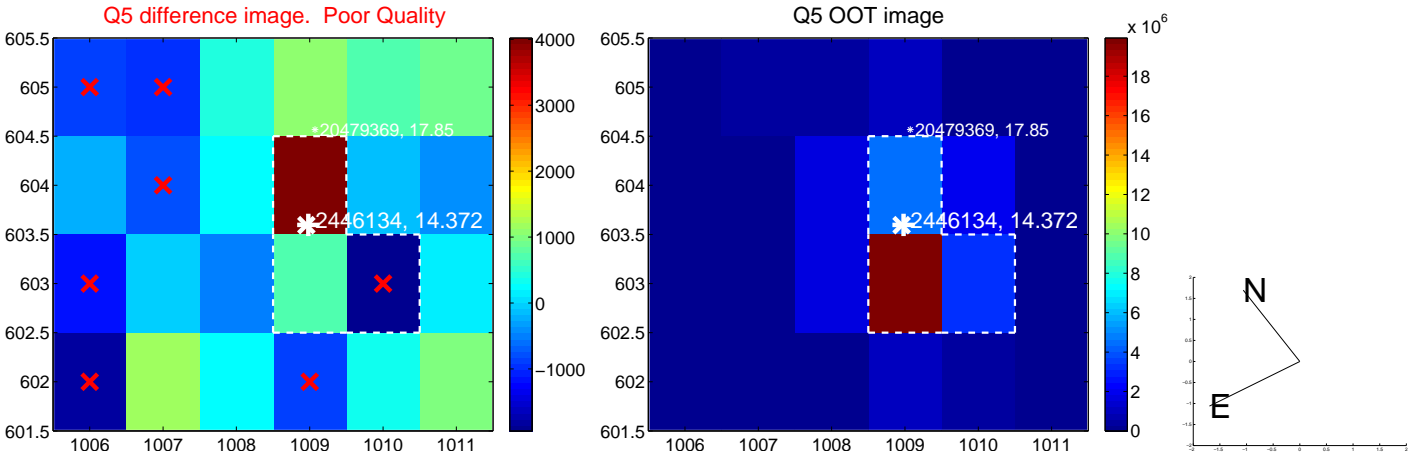


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

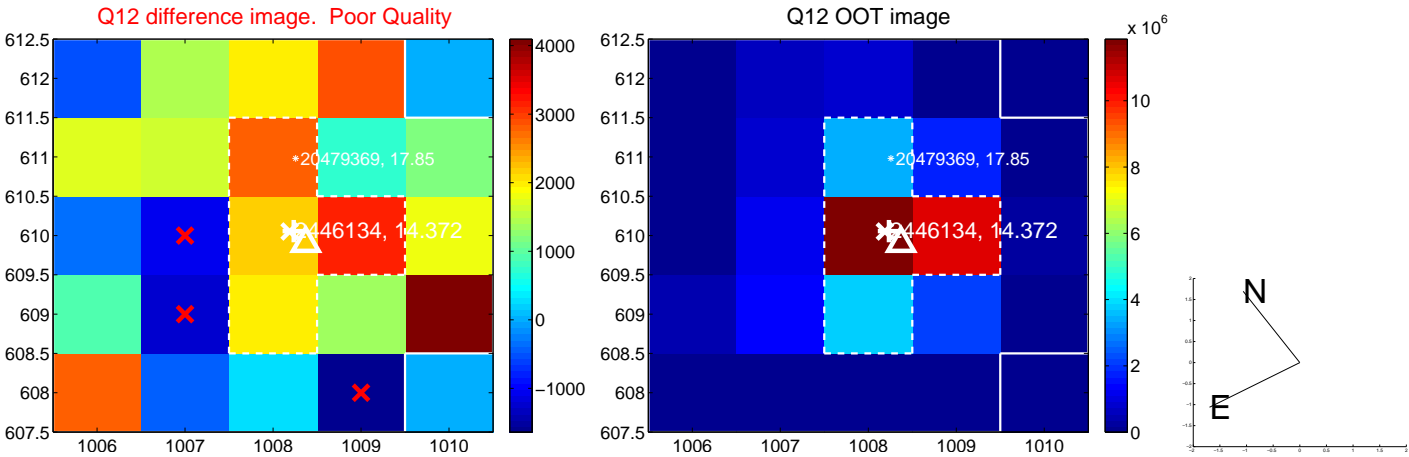
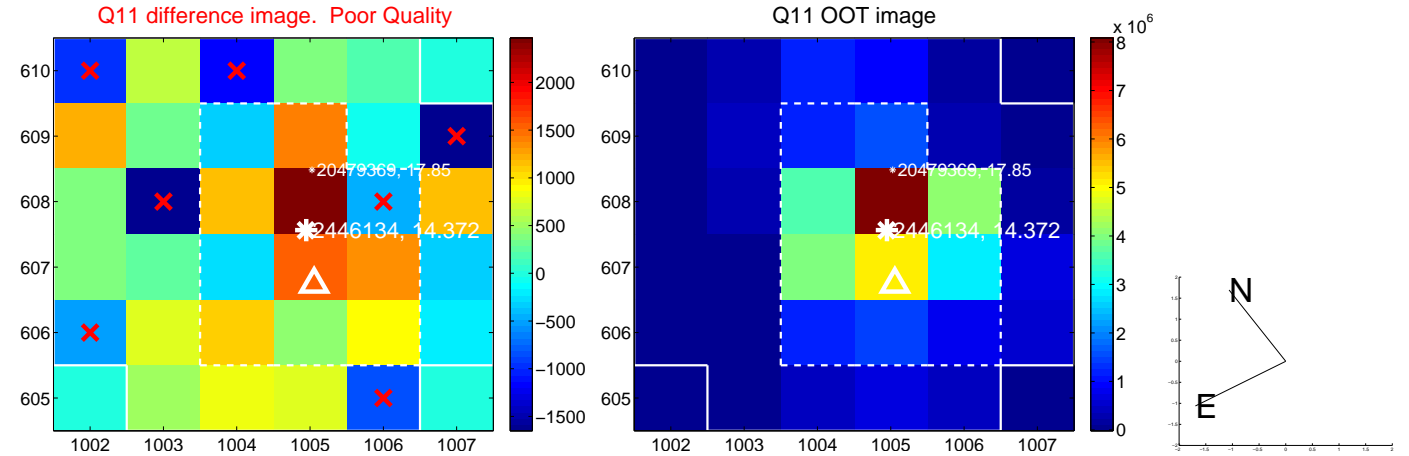
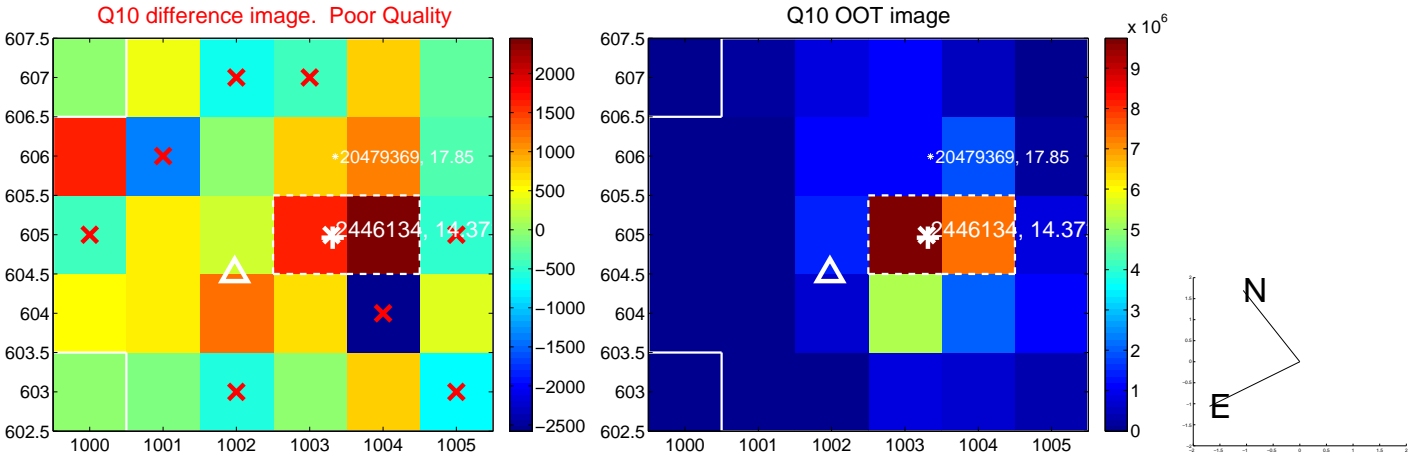
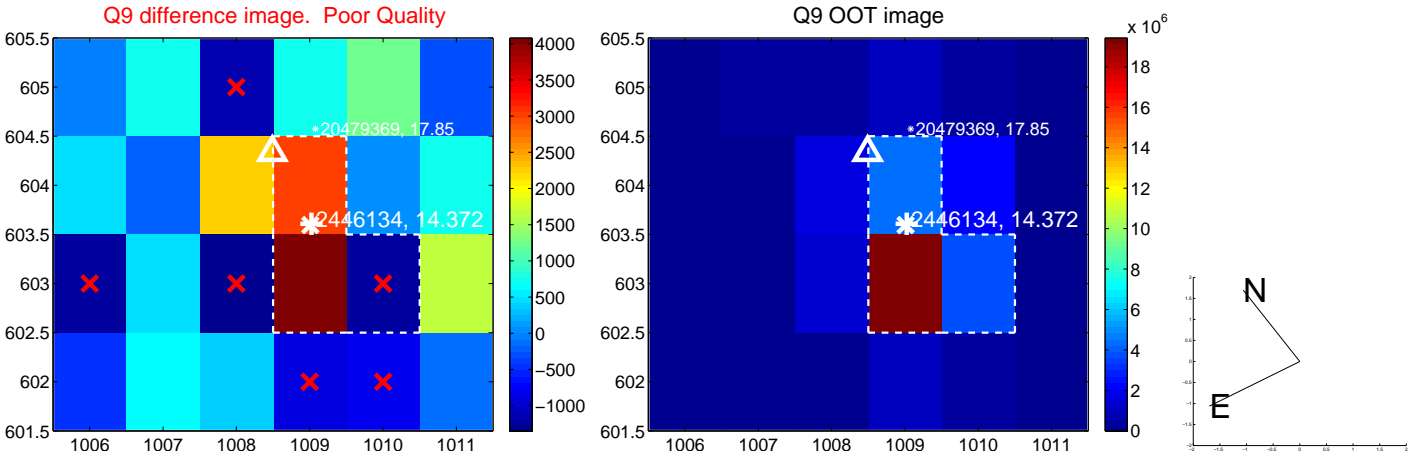
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



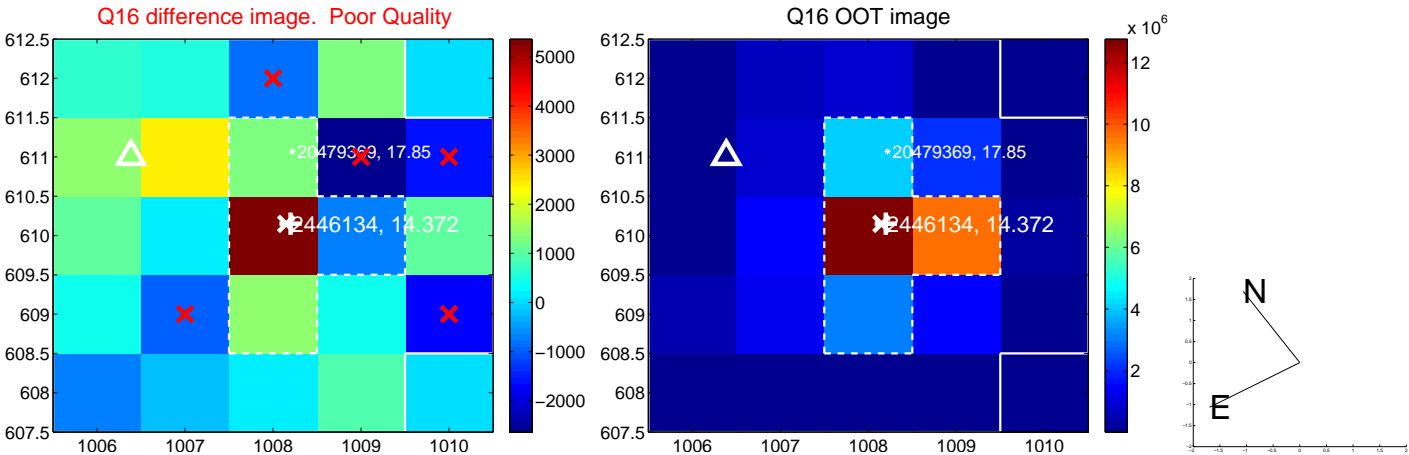
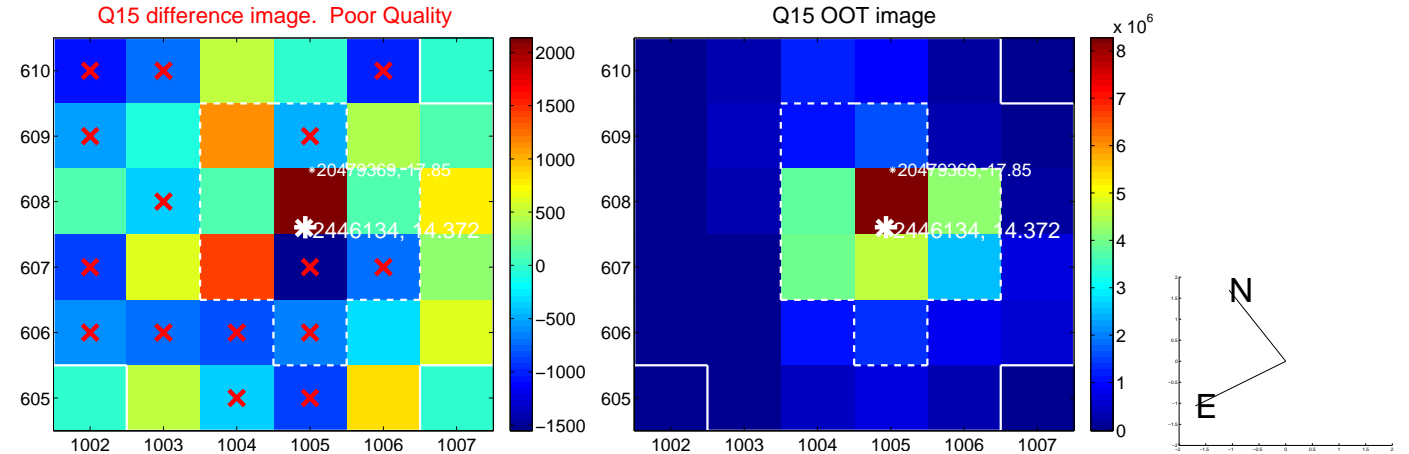
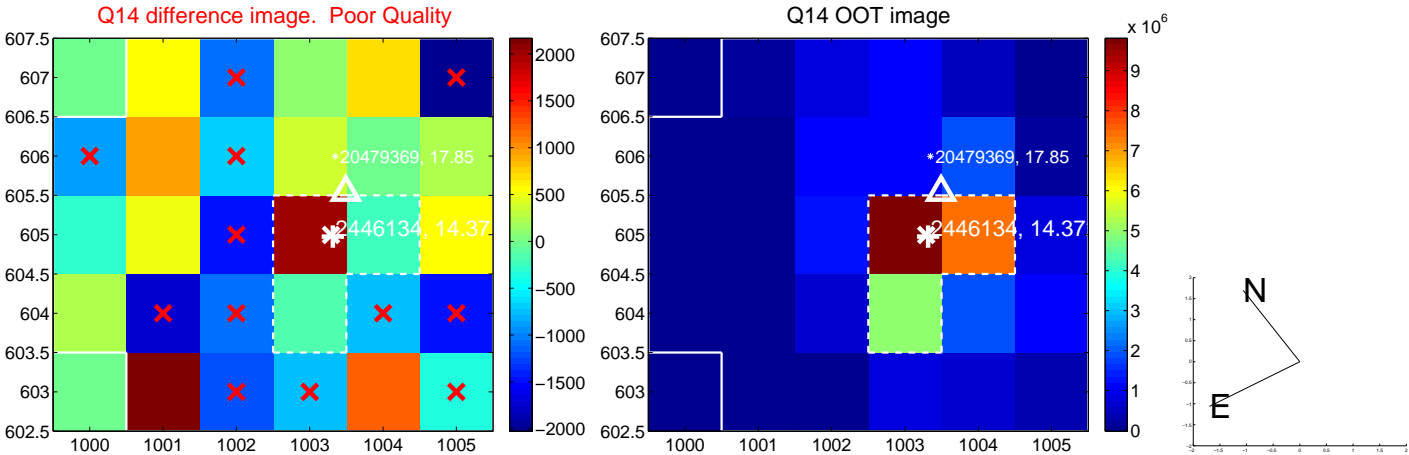
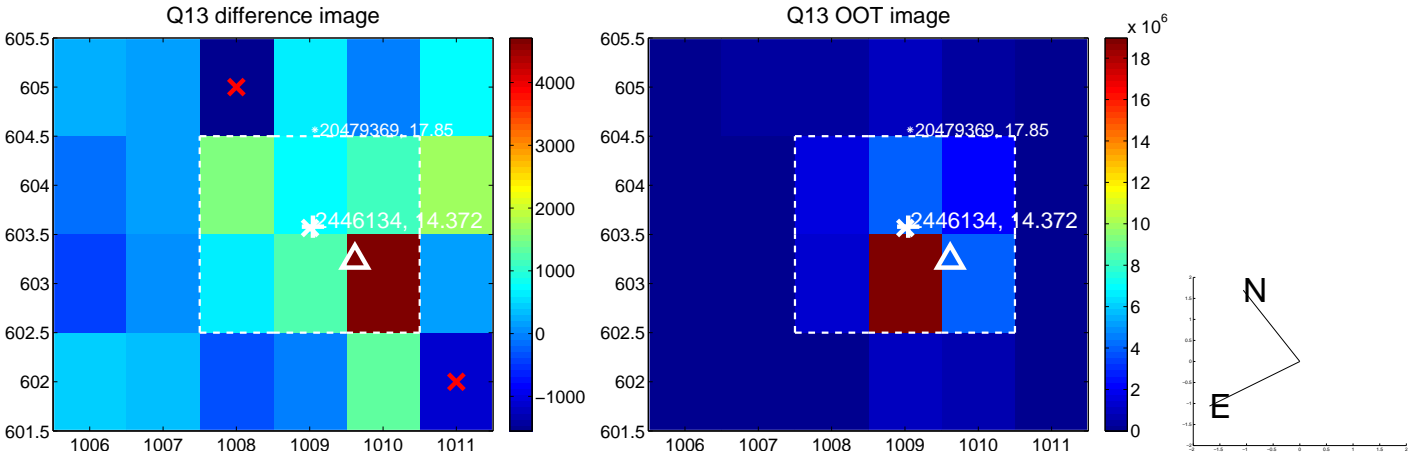
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



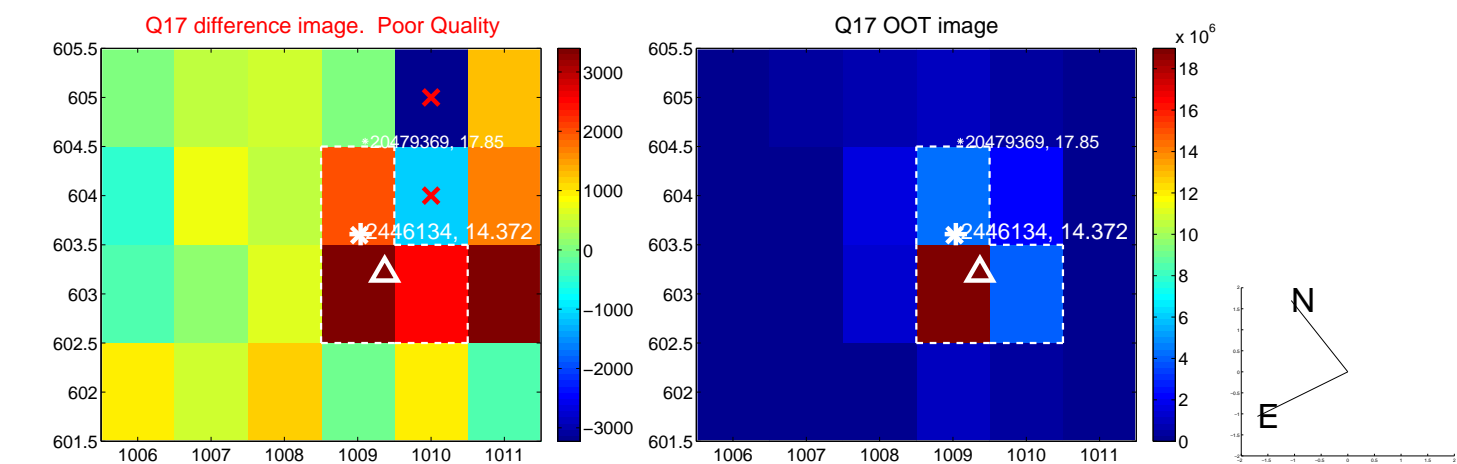
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



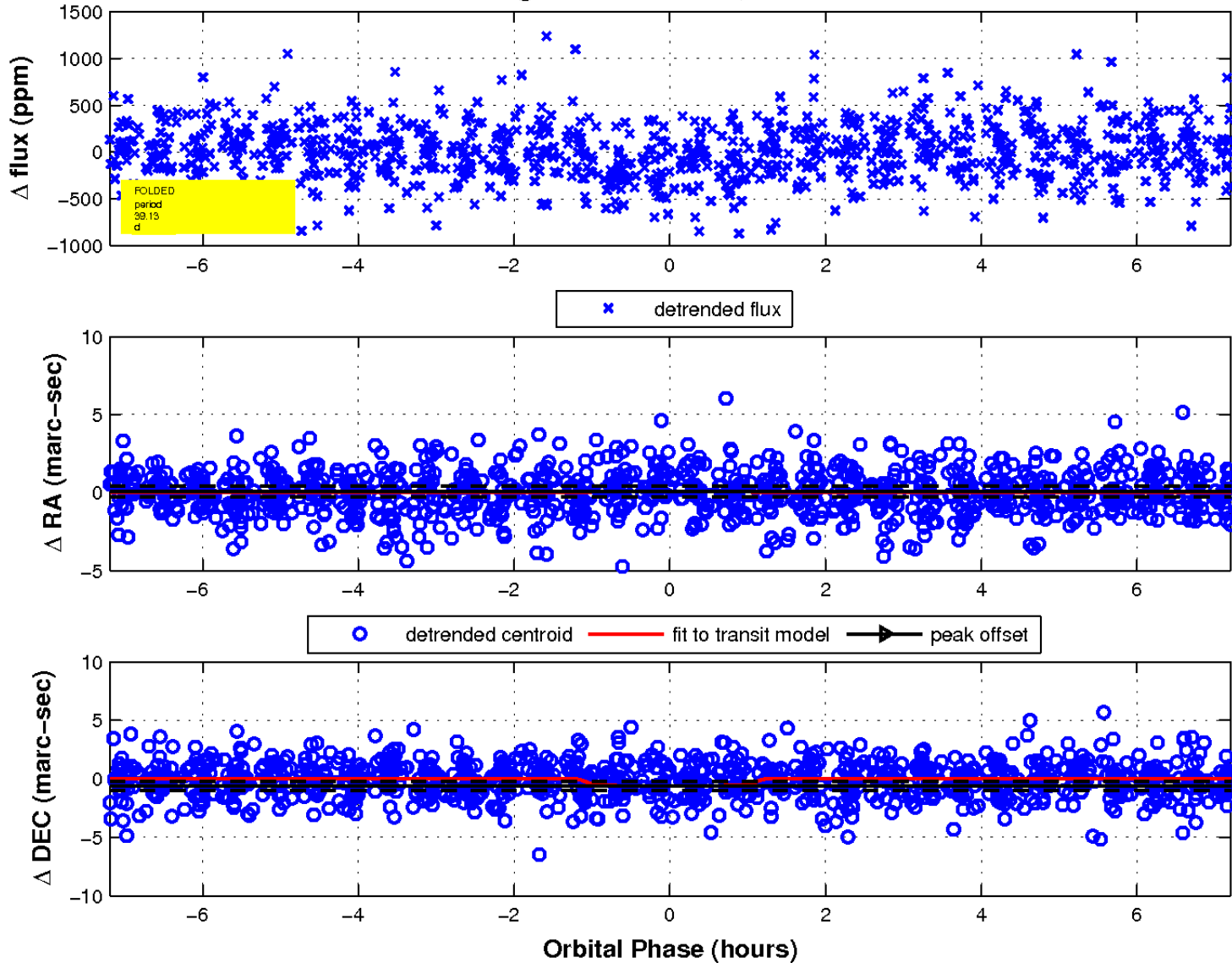
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

