

KIC 003120397

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})
003120397-01	OBS	4965.01	10.265503	136.494245	303.7	5.959	9.8	11.4	0.81	5398	2.57	61.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120397-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 003120397-01

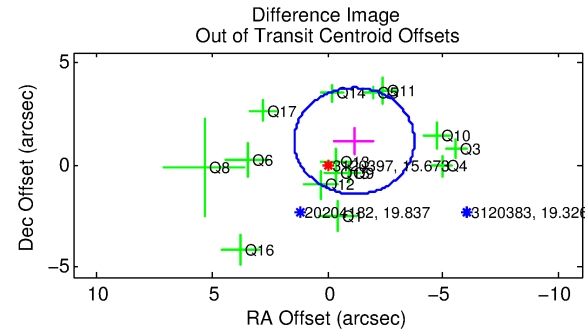
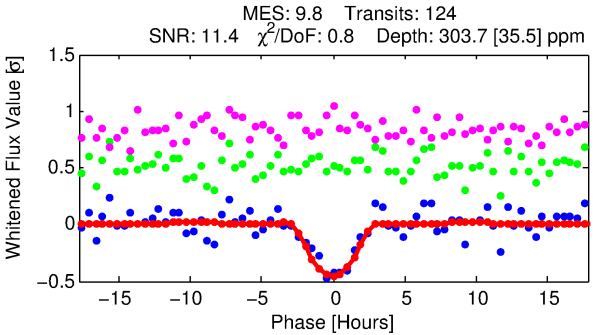
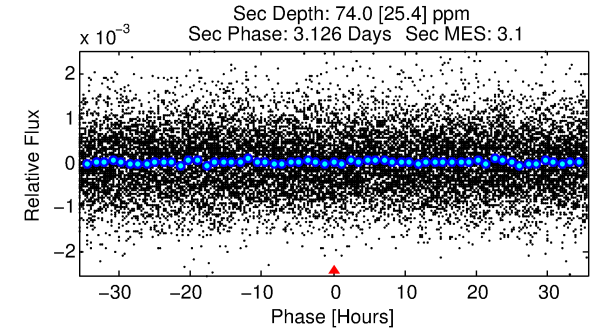
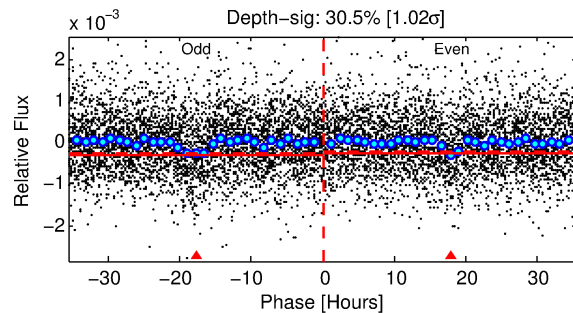
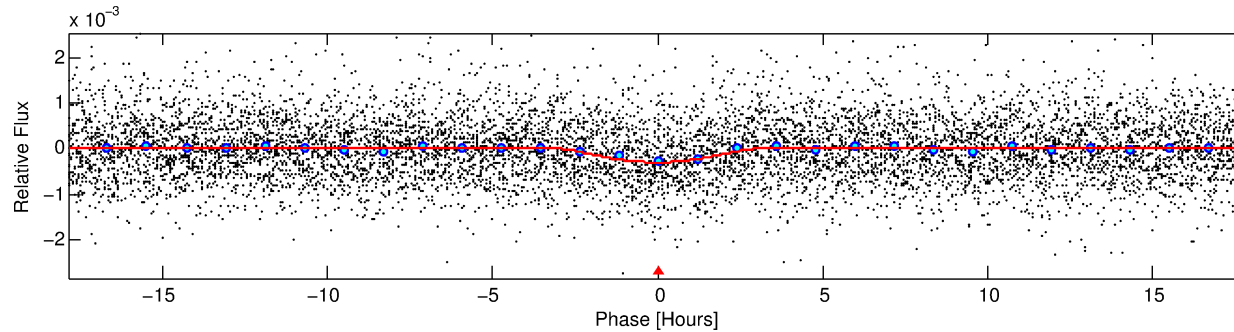
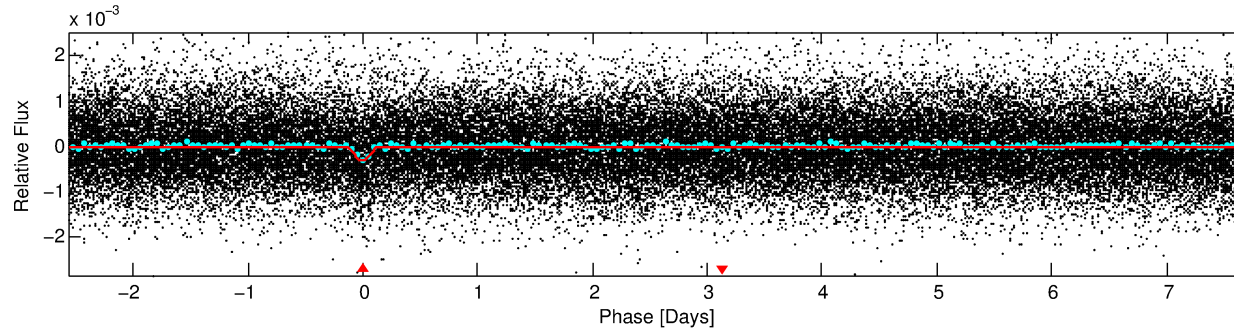
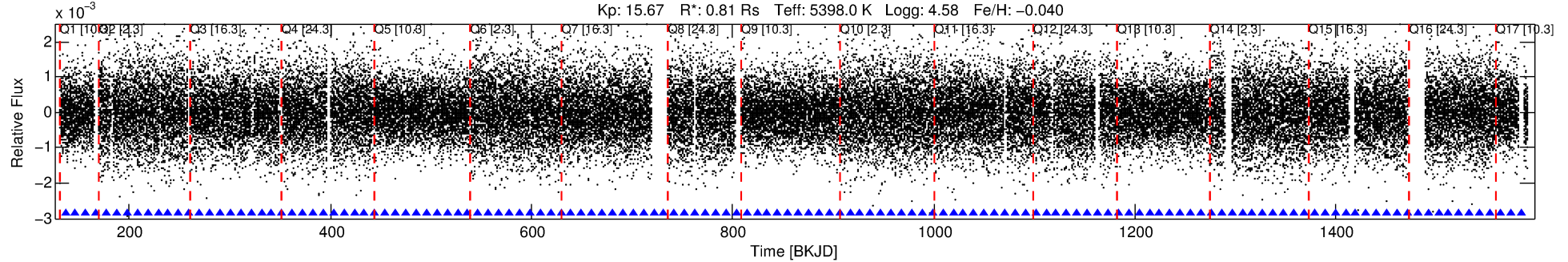
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003120397-01	3120397	6307.01	3120320	1:1	50.3	-2	-13	10.88	15.67	496.15	Direct-PRF	0	0.41	0.17

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3120397 Candidate: 1 of 1 Period: 10.266 d
KOI: K04965 Corr: No Ephemeris Match

Kp: 15.67 R*: 0.81 Rs Teff: 5398.0 K Logg: 4.58 Fe/H: -0.040



DV Fit Results:

Period = 10.26550 [0.00015] d
Epoch = 136.4942 [0.0121] BKJD
Rp/R* = 0.0293 [0.0625]
a/R* = 3.66 [2.23]
b = 0.99 [0.10]
Seff = 61.92 [16.70]
Teff = 715 [48] K
Rp = 2.57 [5.51] Re
a = 0.0892 [0.0145] AU
Ag = 49.05 [210.40] [0.23σ]
Teffp = 2927 [3135] K [0.71σ]

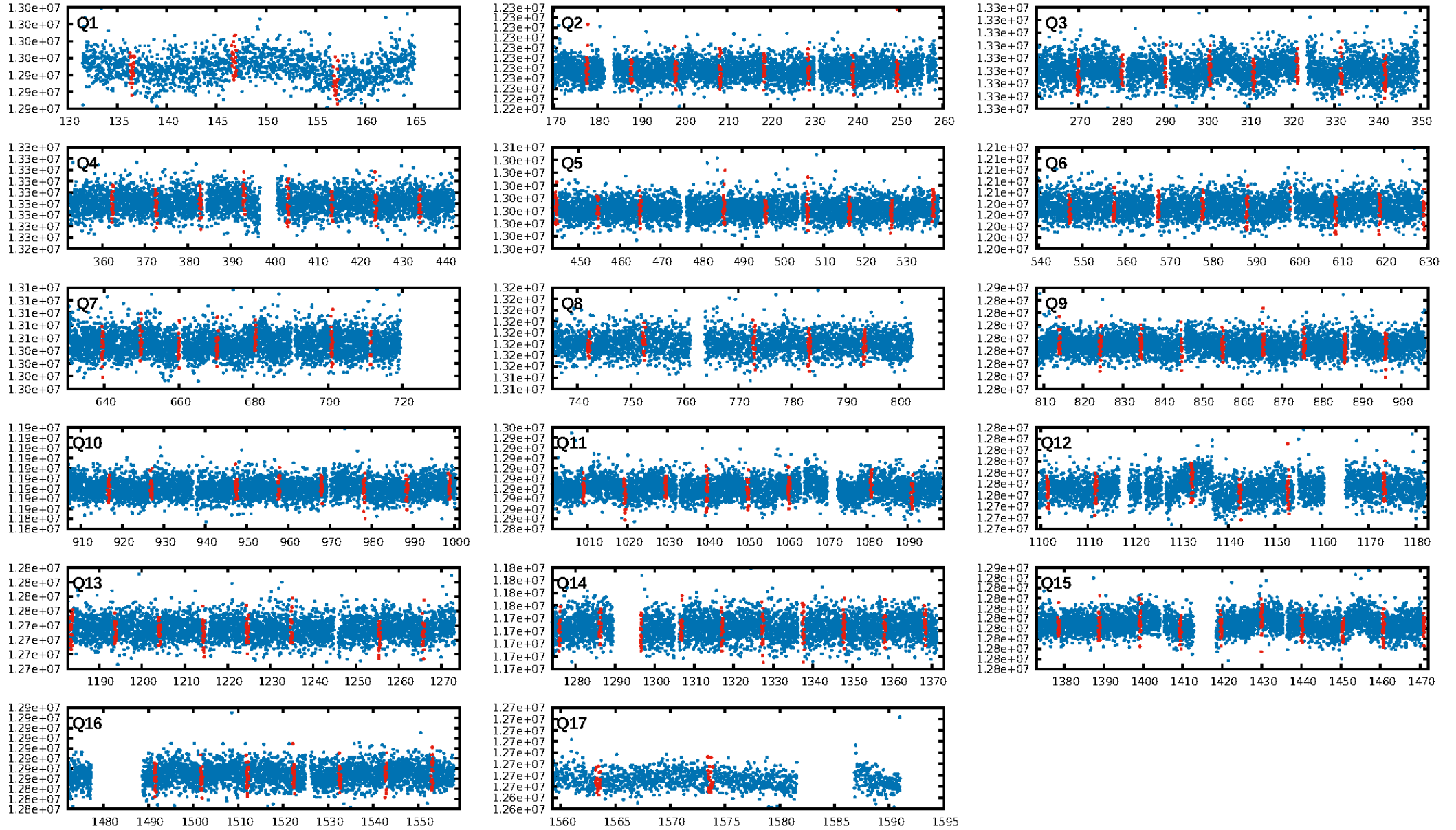
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.94e-22
RollingBand-fgt: 1.00 [119/119]
GhostDiagnostic-chr: -0.04556
Centroid-sig: 0.0%
Centroid-so: 4.782 arcsec [3.53σ]
OotOffset-rm: 1.635 arcsec [1.89σ]
KicOffset-rm: 1.648 arcsec [2.07σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.00 [0/15]
DiffImageOverlap-fno: 1.00 [17/17]

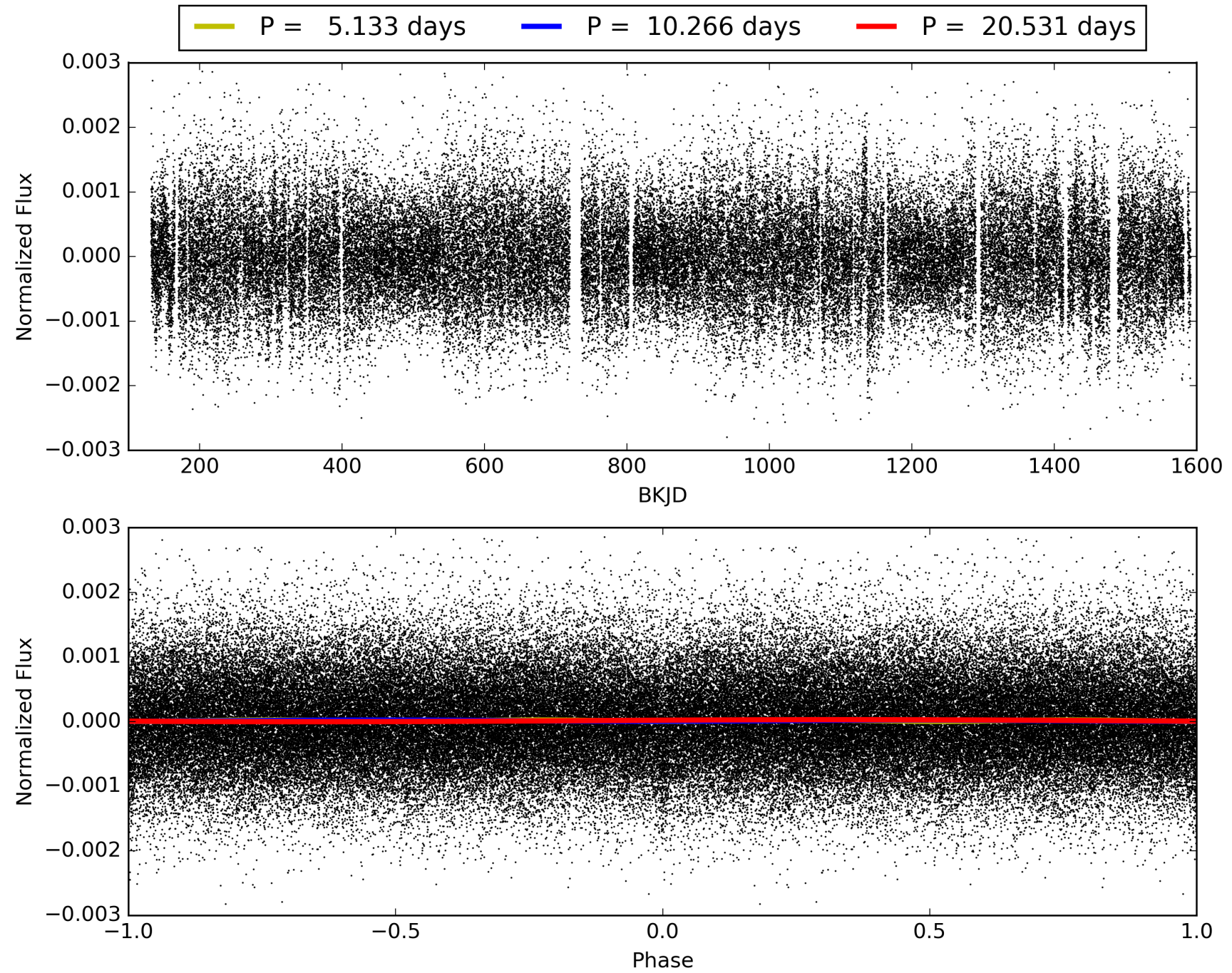
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:18:18 Z

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

TCE 003120397-01, PDC Light Curves

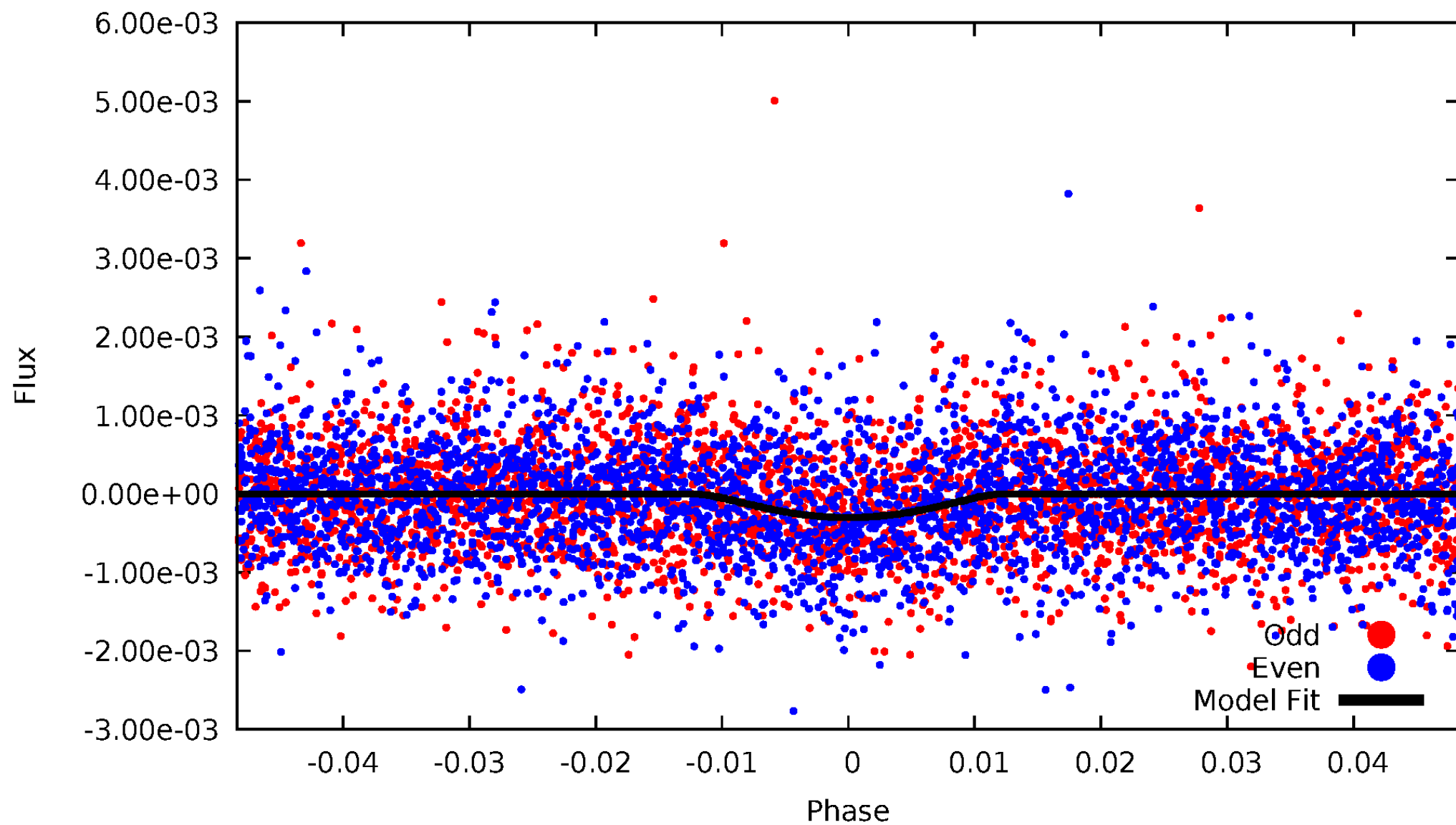


TCE 003120397-01



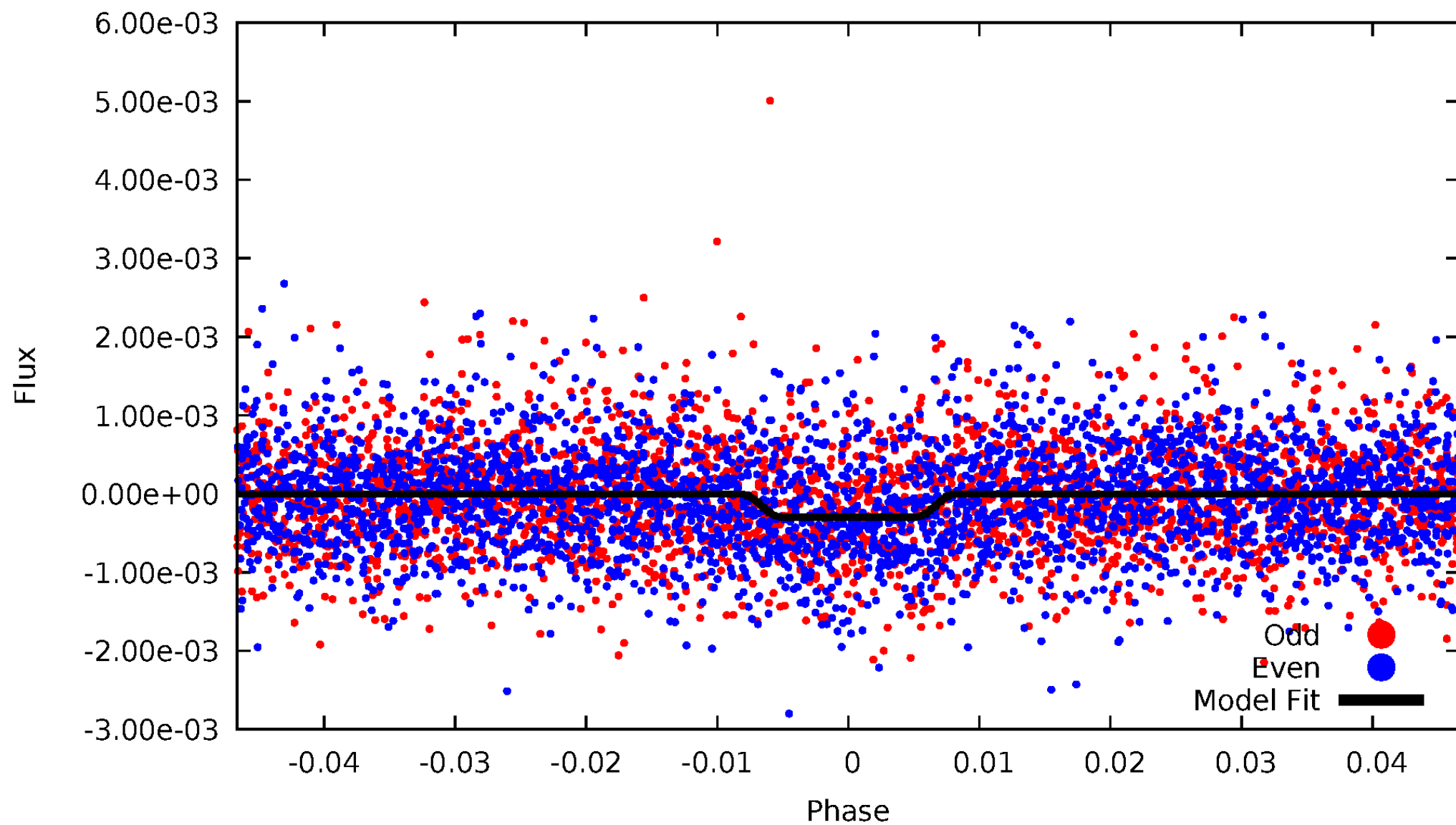
DV Odd/Even

TCE 003120397-01



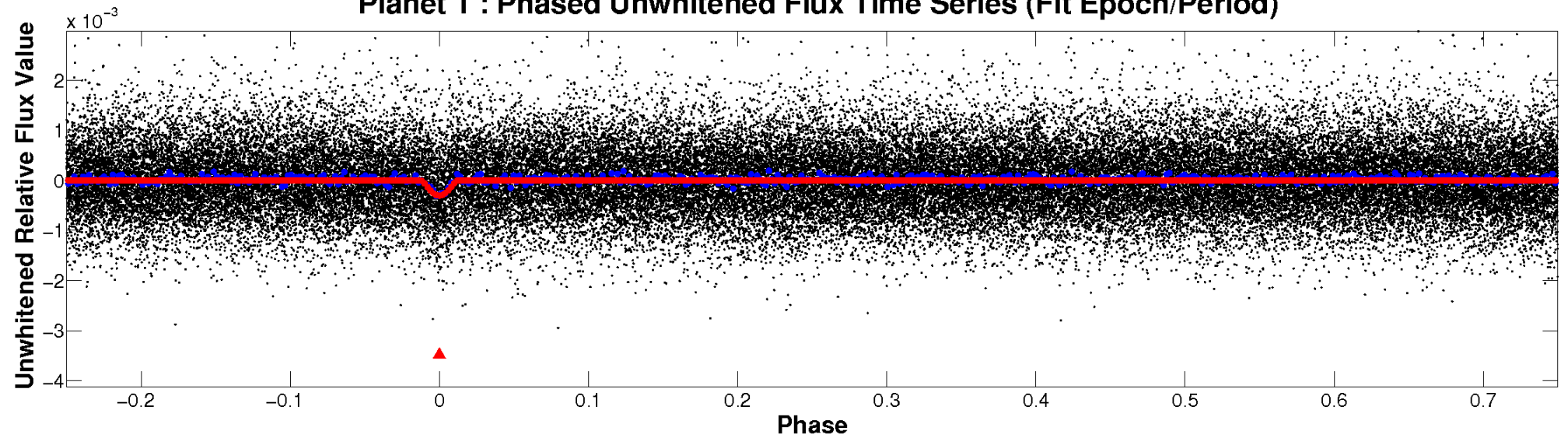
ALT Odd/Even

TCE 003120397-01

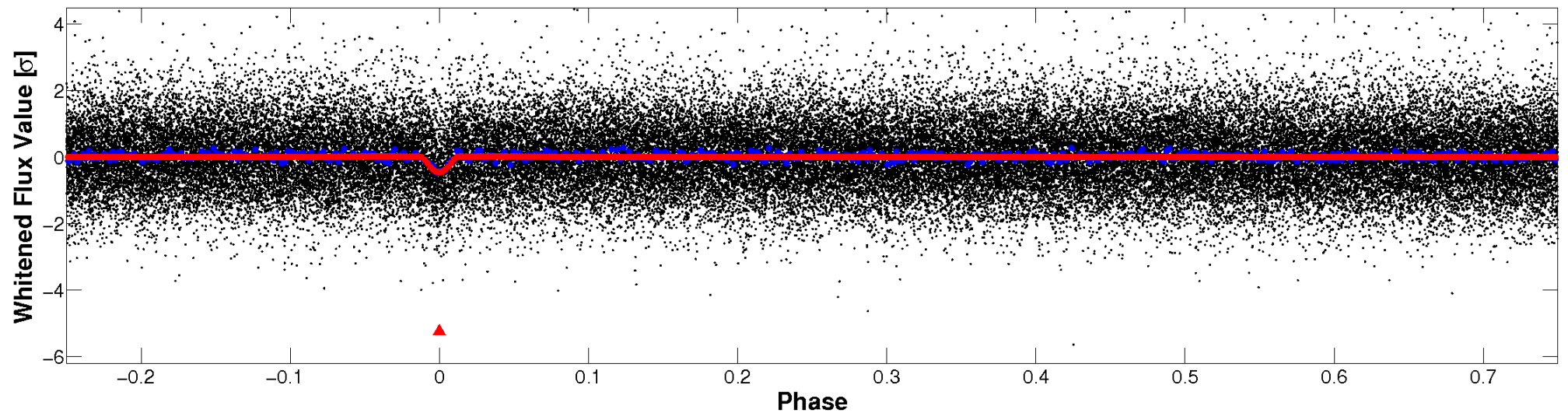


Non-Whitened Vs. Whitened Light Curve

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

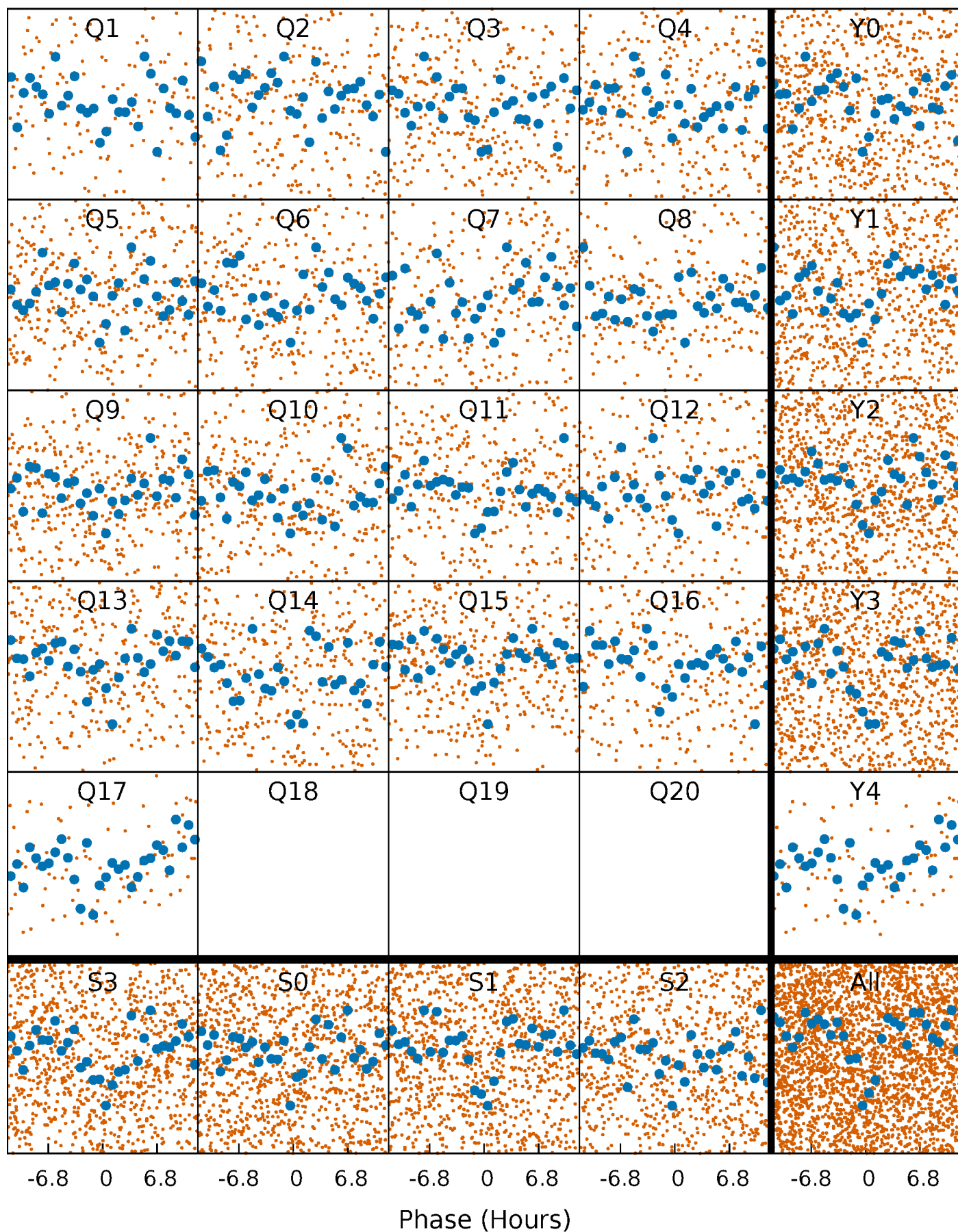


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



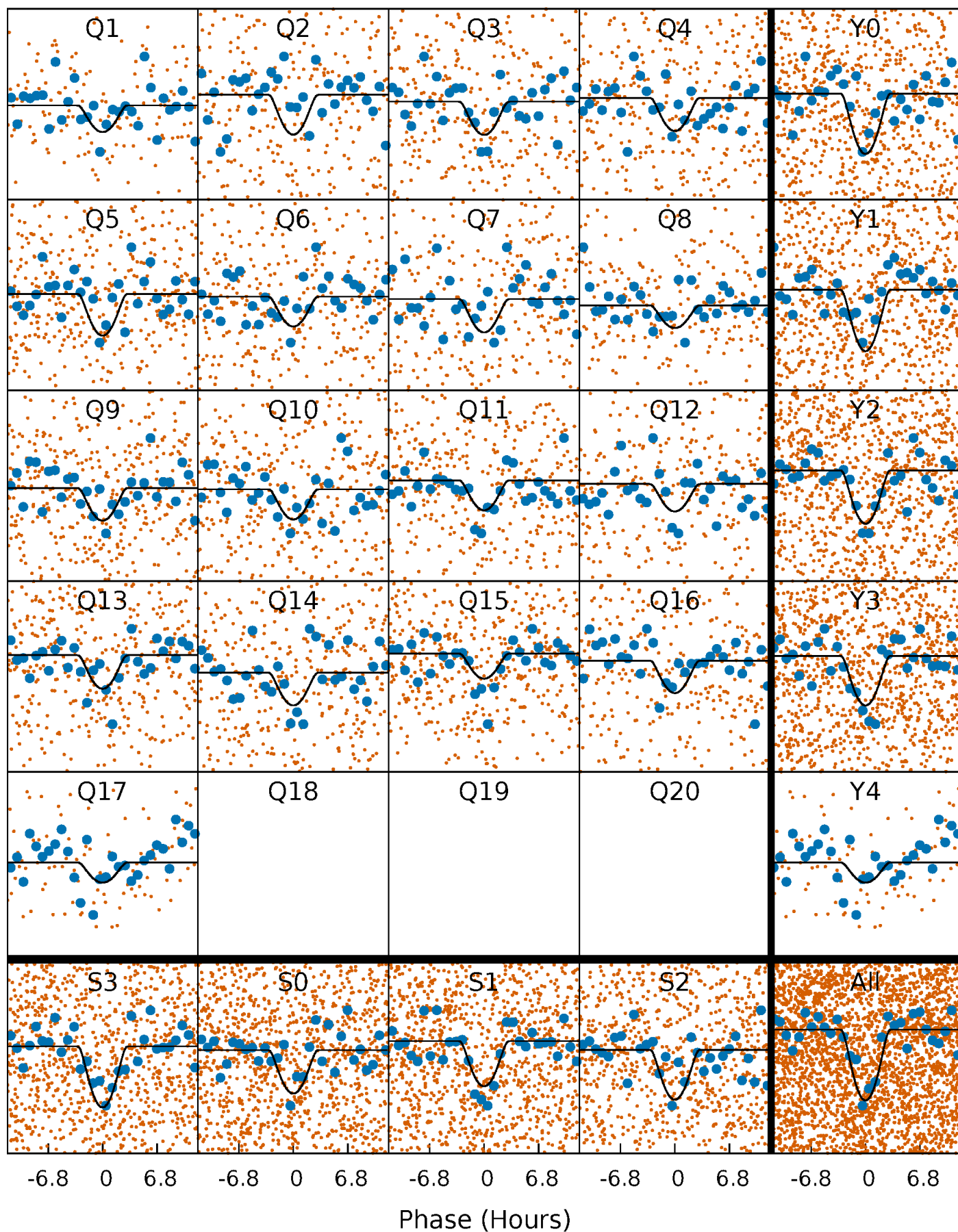
PDC Quarter-Phased Transit Curves

TCE 003120397-01 P= 10.265503 Days $T_0=136.494245$ (BKJD)



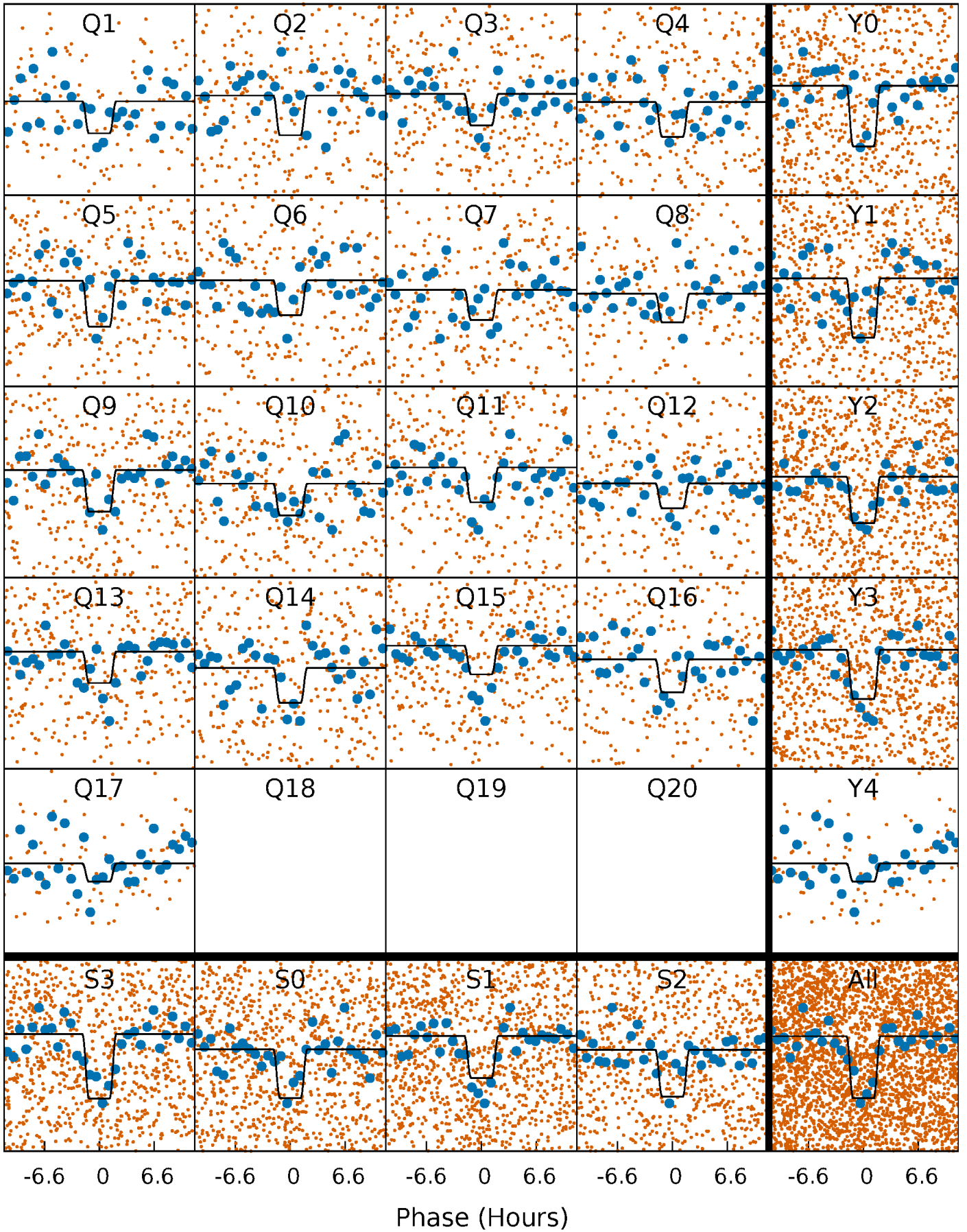
DV Quarter-Phased Transit Curves

TCE 003120397-01 P= 10.265503 Days $T_0=136.494245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

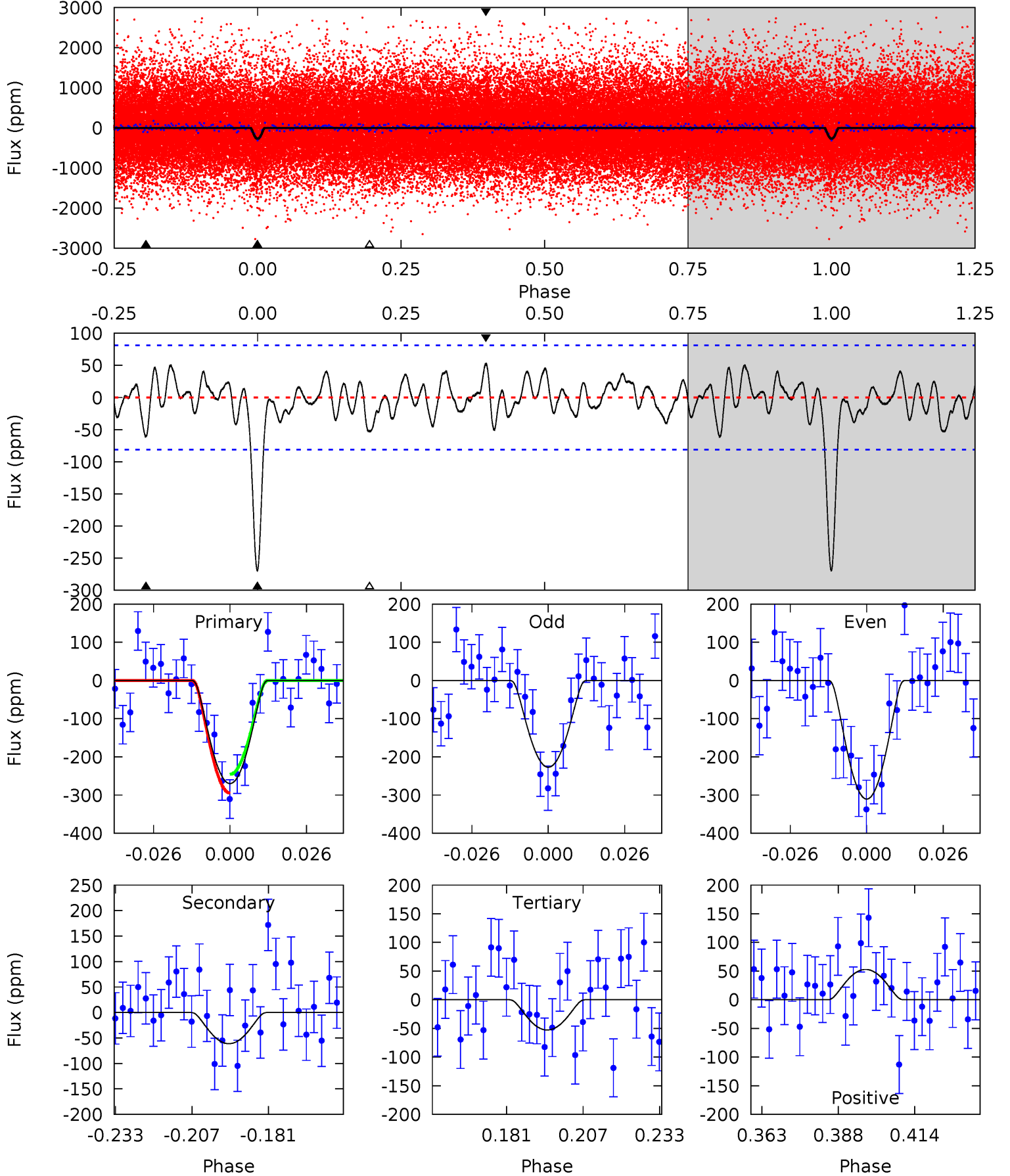
TCE 003120397-01 P= 10.265508 Days $T_0=136.495419$ (BKJD)



DV Model-Shift Uniqueness Test

003120397-01, P = 10.265503 Days, E = 126.228742 Days

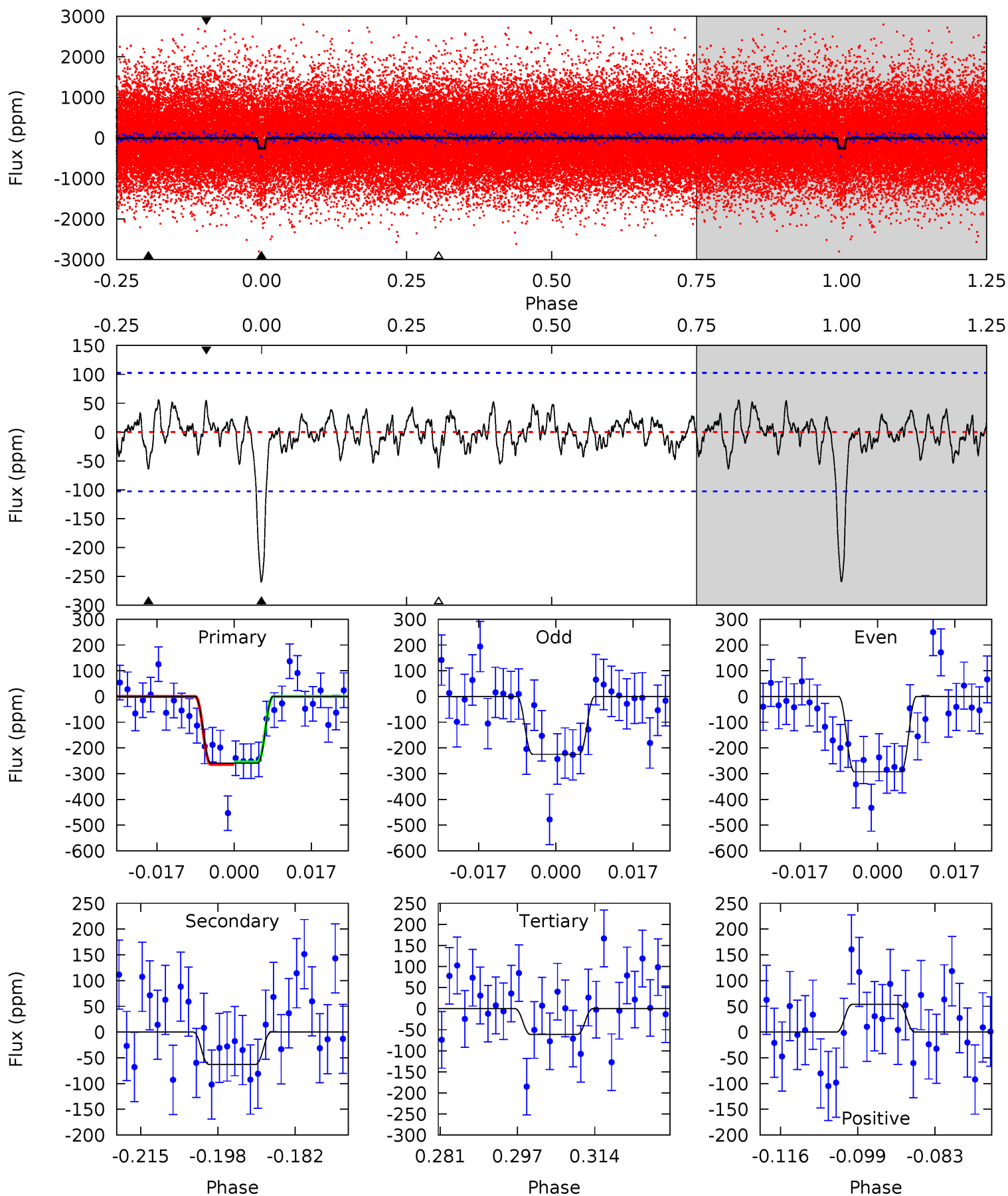
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	3.65	3.15	3.16	4.84	2.23	1.30	13.0	12.9	0.50	0.49	2.49	1.02	0.16	1.47



Alt Model-Shift Uniqueness Test

003120397-01, P = 10.265508 Days, E = 126.229911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.02	2.94	2.60	4.93	2.40	1.02	9.52	9.87	0.07	0.42	1.63	0.88	0.18	0.23



Stellar Parameters For KIC 003120397

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5398^{+177}_{-160}	$4.580^{+0.032}_{-0.128}$	$-0.040^{+0.300}_{-0.300}$	$0.805^{+0.157}_{-0.063}$	$0.902^{+0.072}_{-0.108}$	$2.441^{+0.414}_{-0.918}$
	+3%/-3%	+1%/-3%	+750%/-750%	+20%/-8%	+8%/-12%	+17%/-38%
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 003120397-01 / KOI 4965.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 17	$4.99^{+4.52}_{-3.58}$	1016^{+47}_{-40}	2758^{+1223}_{-446}	10^{+113}_{-8}
Alt.	-63 ± 21	$4.53^{+4.70}_{-3.02}$	1018^{+49}_{-44}	2846^{+1264}_{-503}	13^{+116}_{-10}

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 $A_{\text{obs}} \gg 1.0$

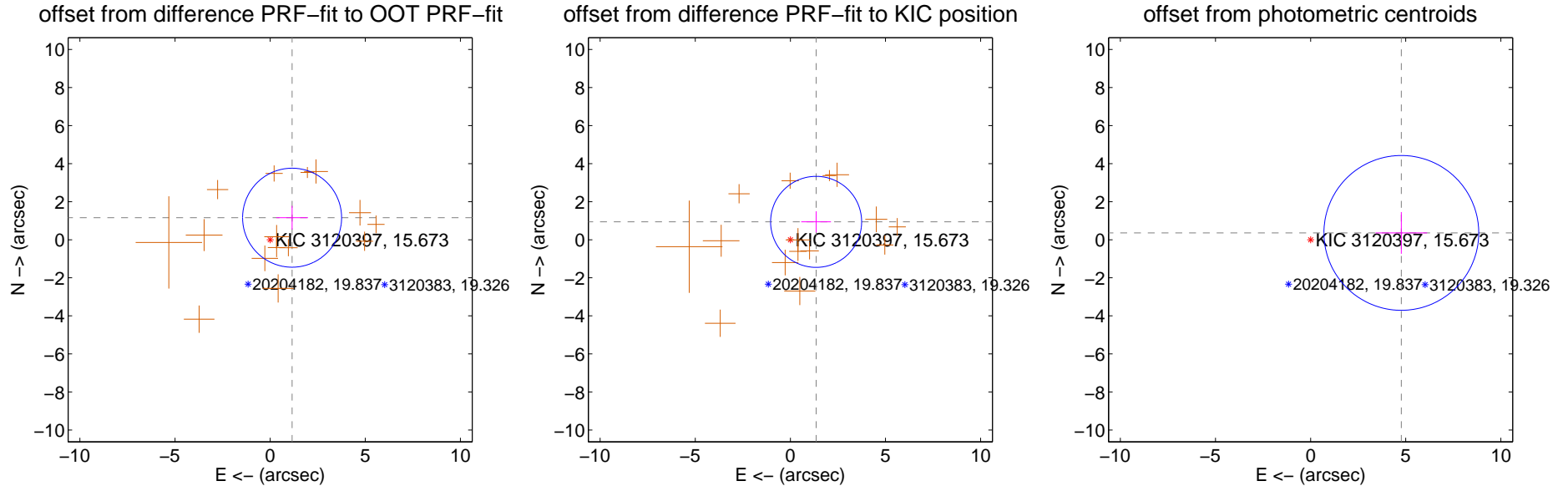
DV Centroid Data

Supplemental centroid analysis for 003120397-01. Kepler magnitude: 15.67. Transit SNR 11.40

There are 0 quarters with good PRF difference image offsets

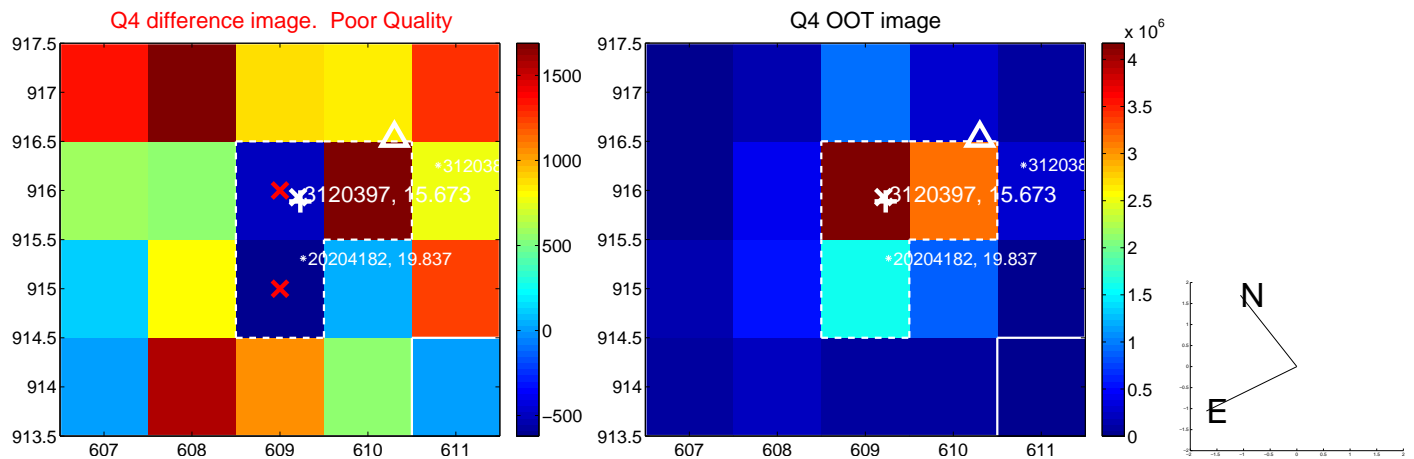
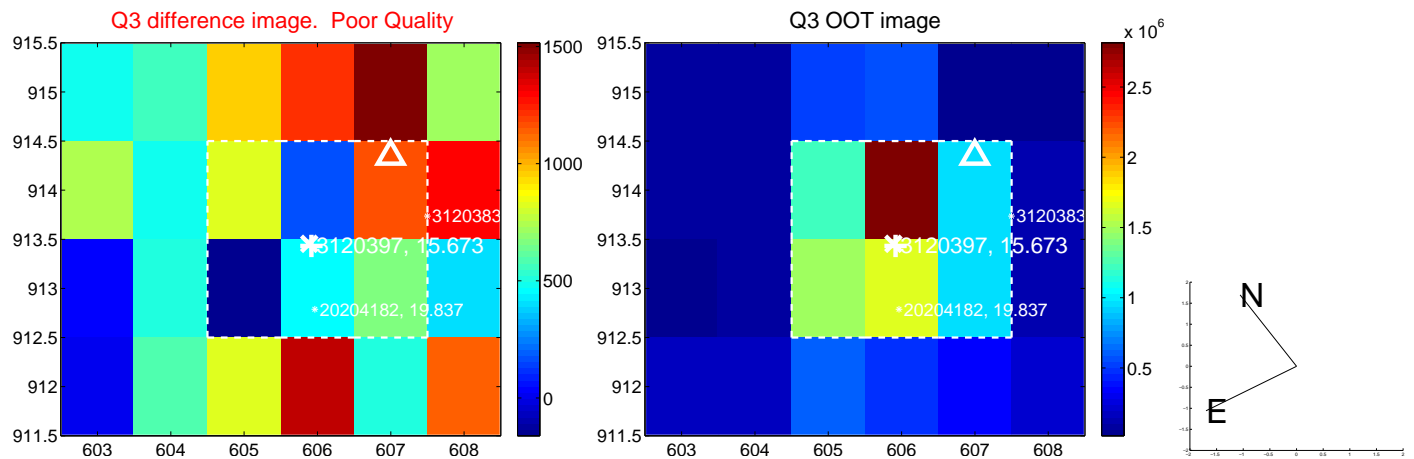
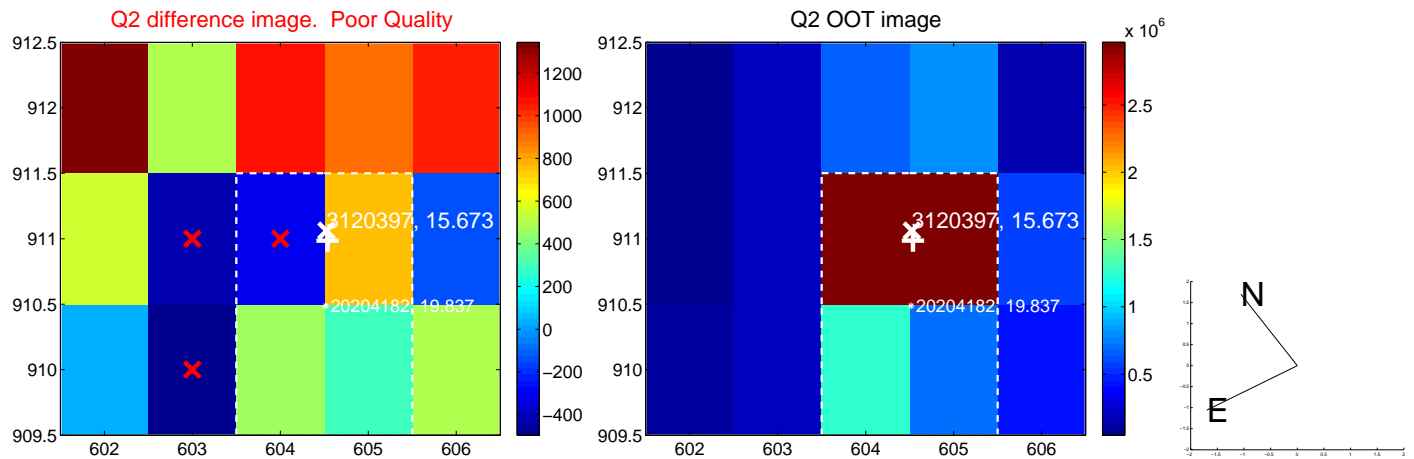
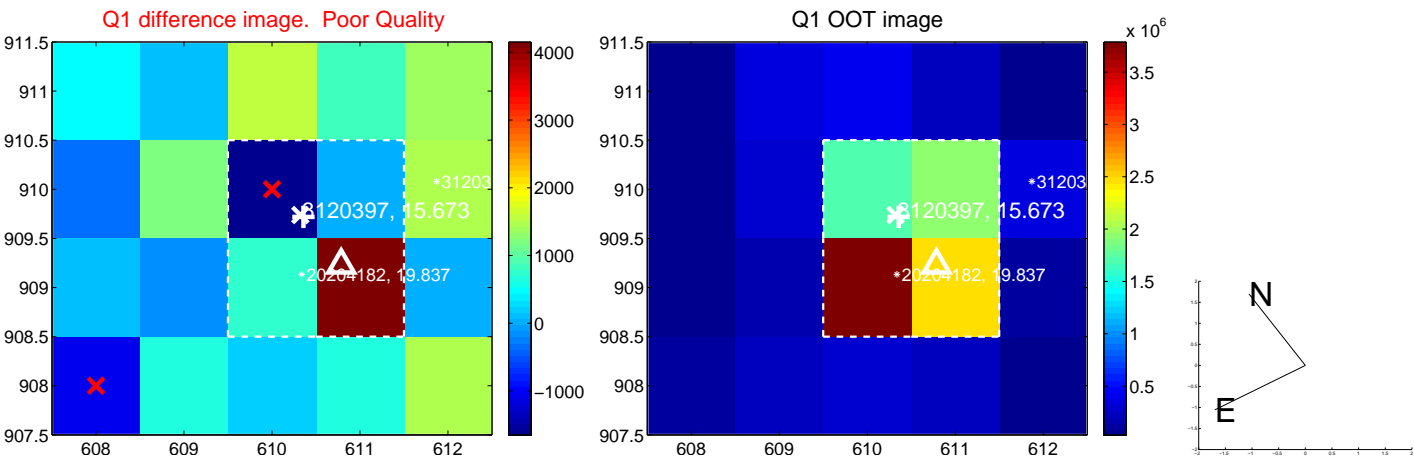
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.635 ± 0.867	1.89	-1.154 ± 0.835	1.159 ± 0.623
PRF-fit source offset from KIC position	1.648 ± 0.797	2.07	-1.353 ± 0.782	0.940 ± 0.557
photometric centroid source offset	4.78 ± 1.36	3.53	-4.77 ± 1.36	0.36 ± 1.09

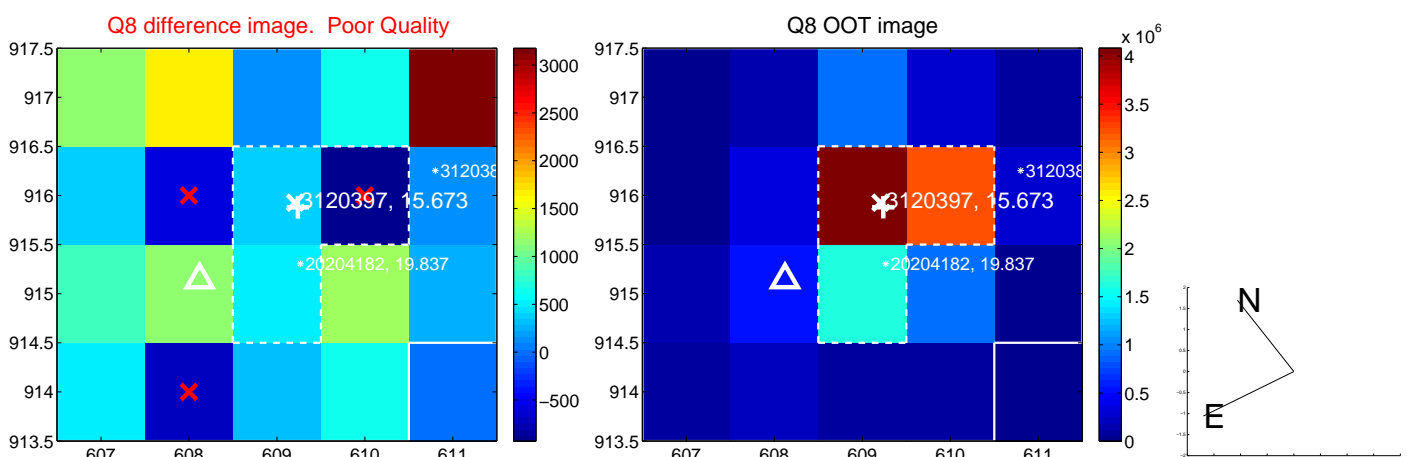
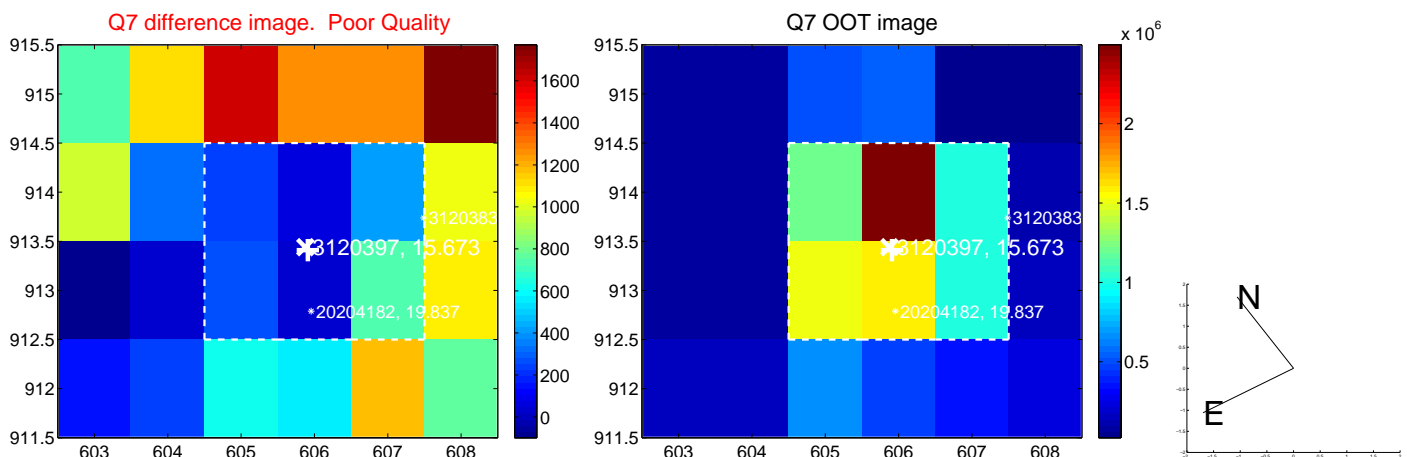
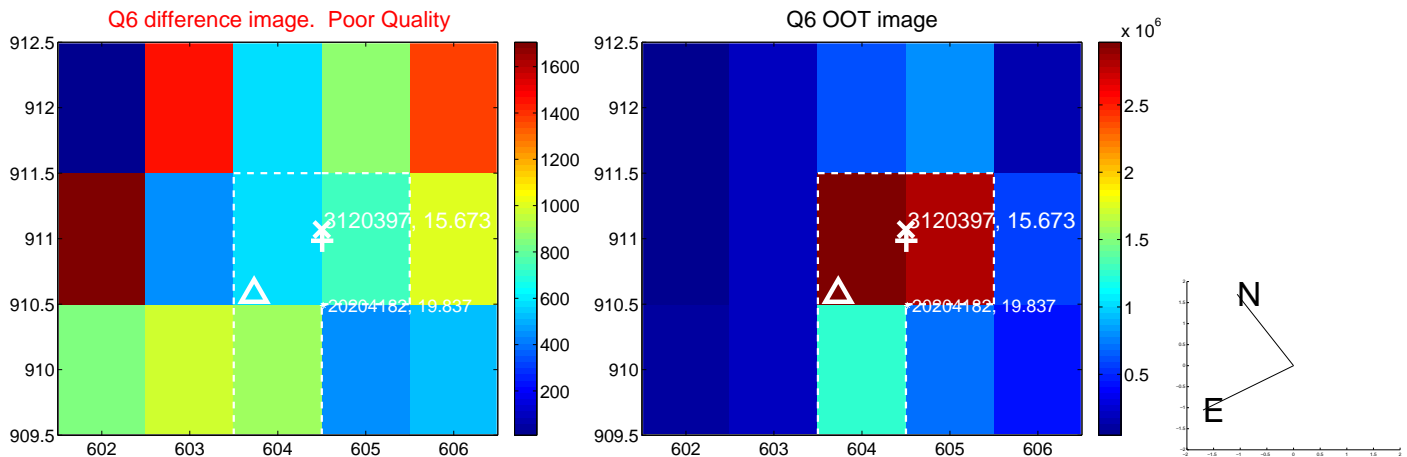
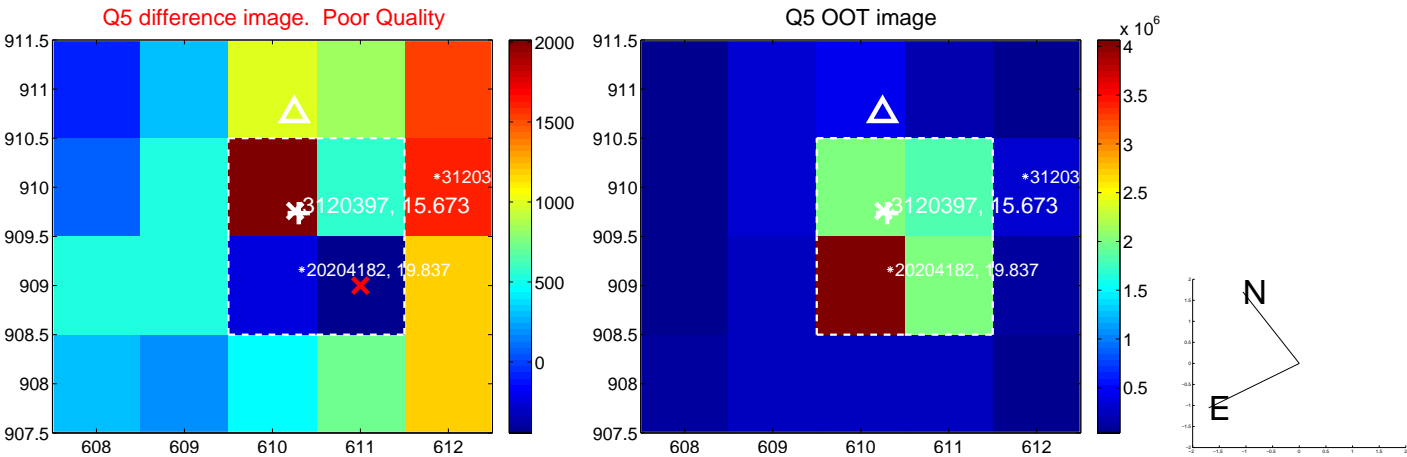


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

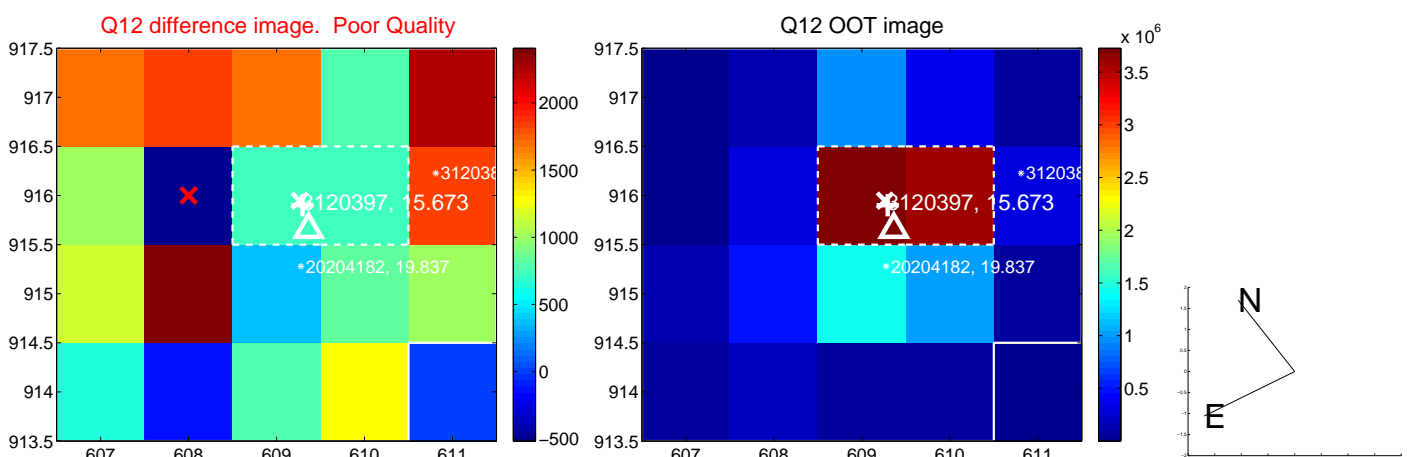
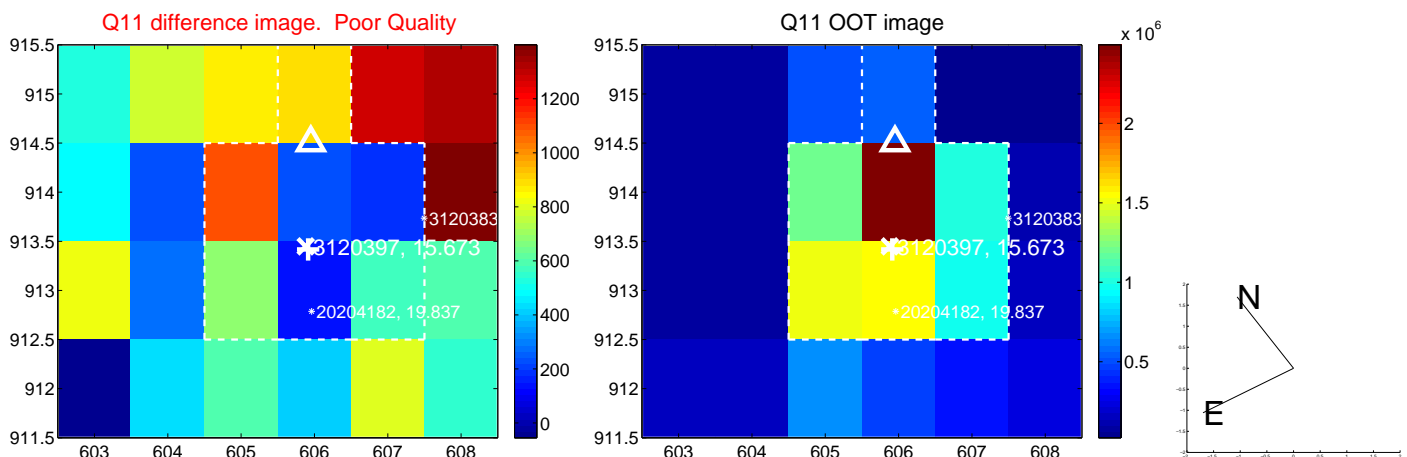
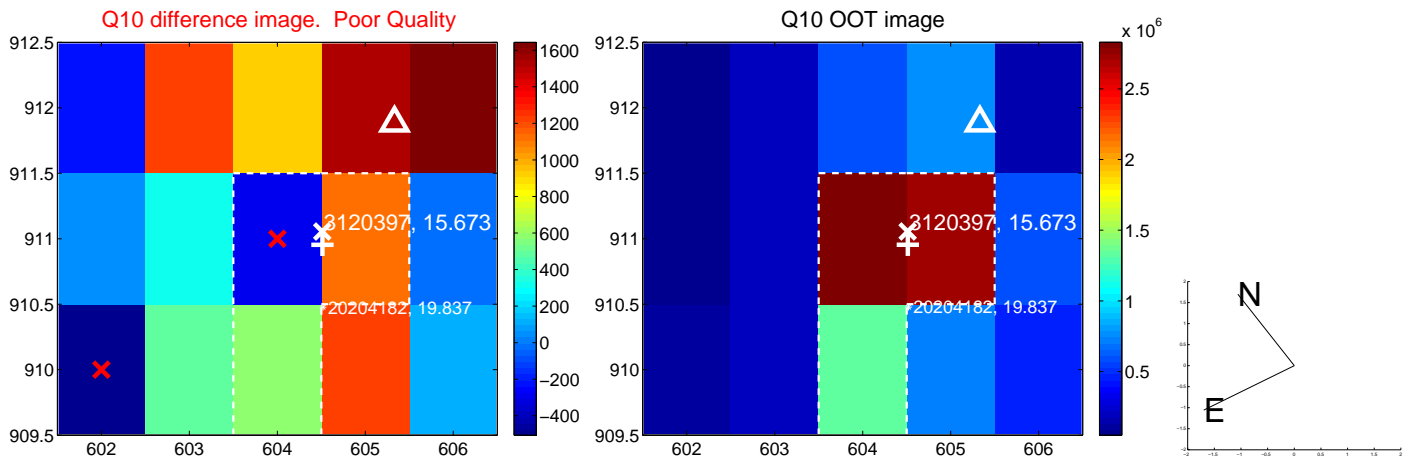
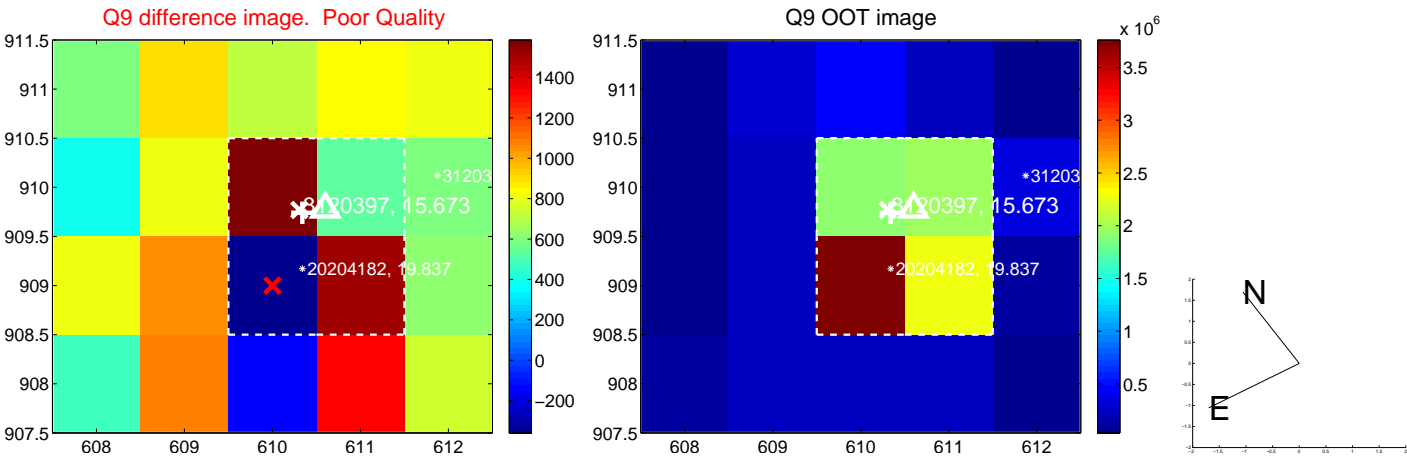
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



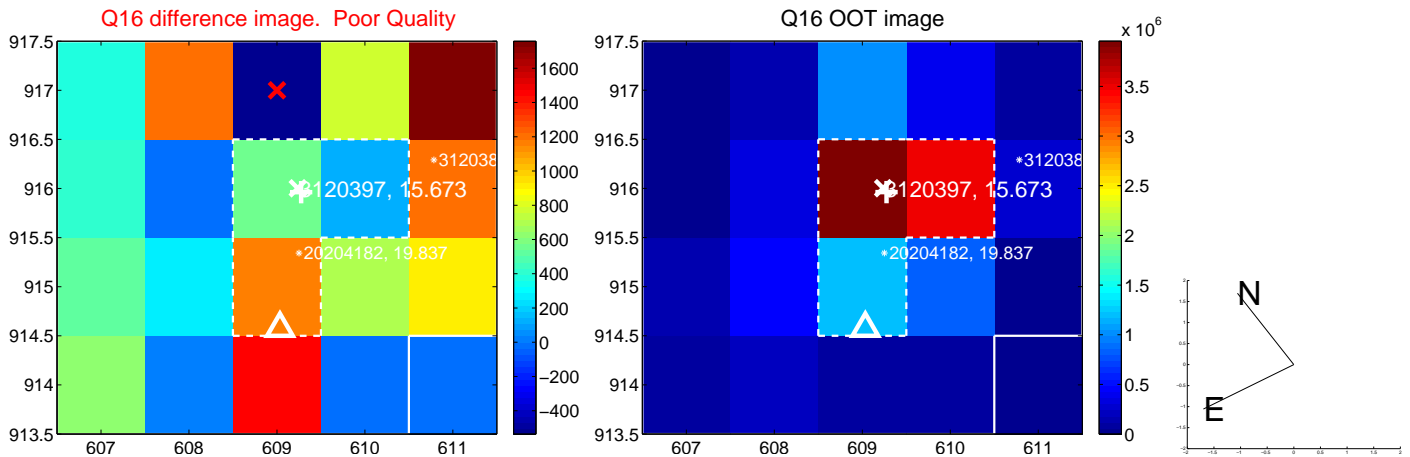
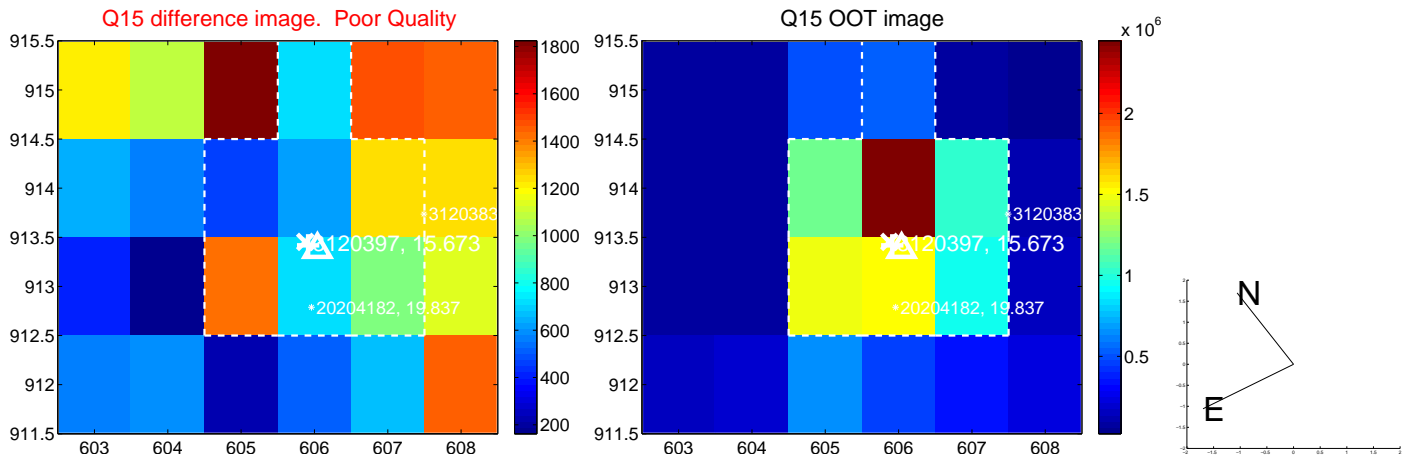
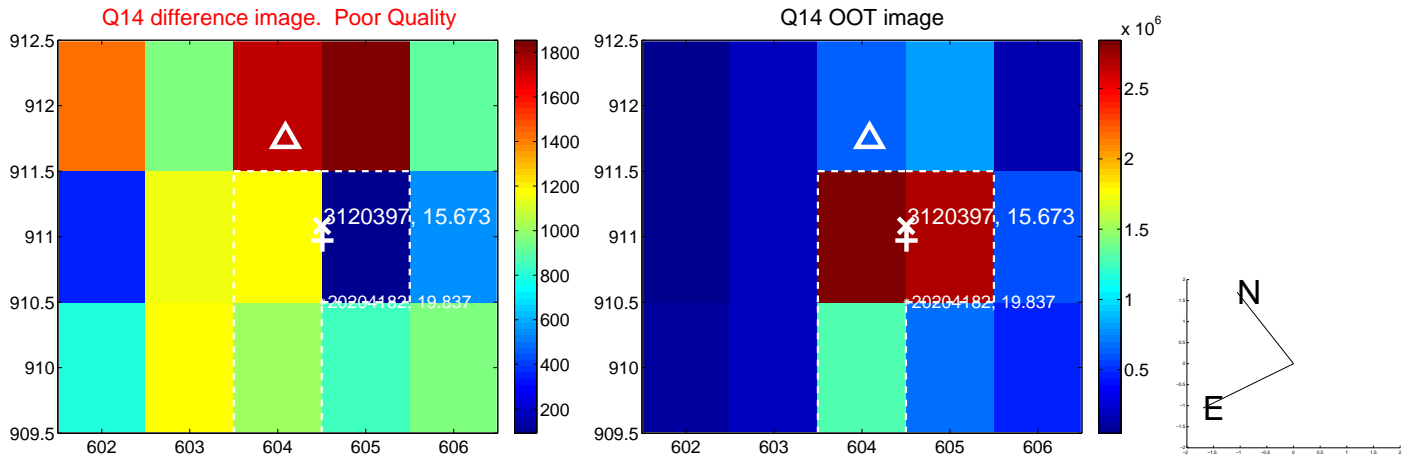
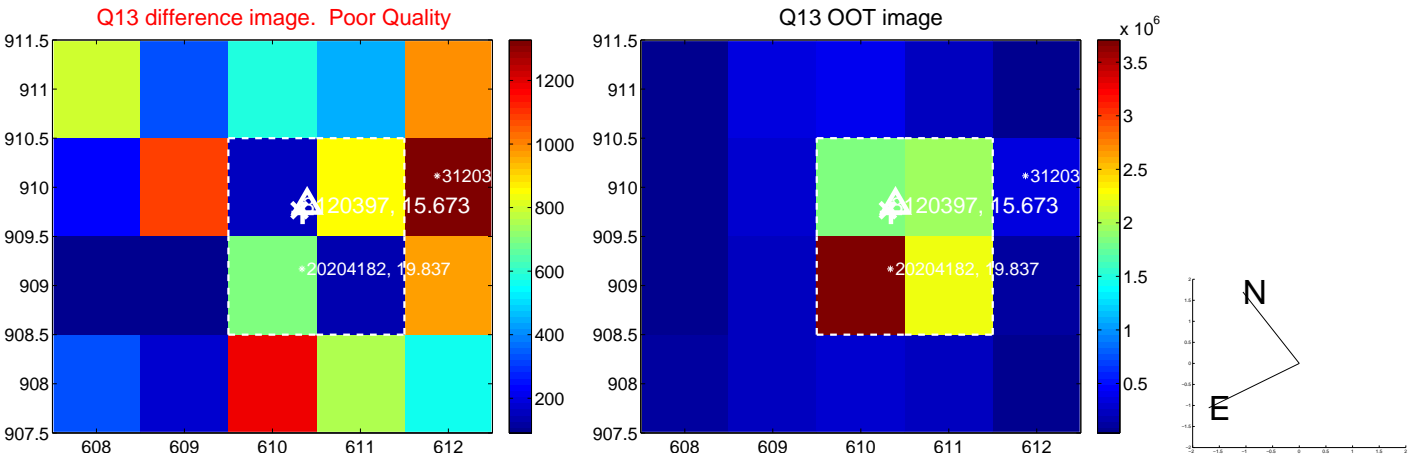
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



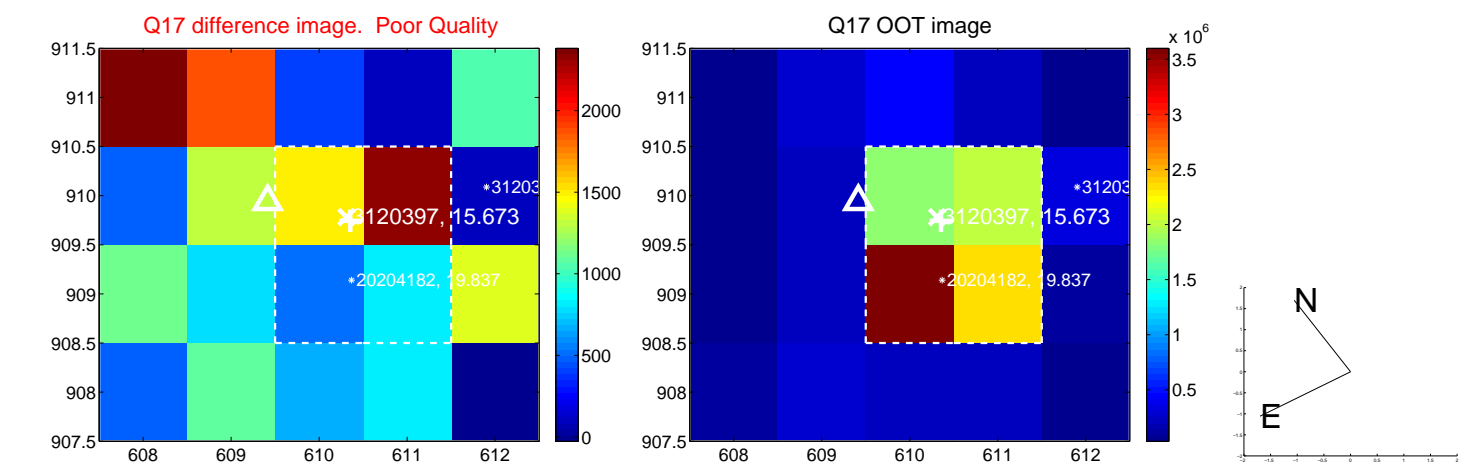
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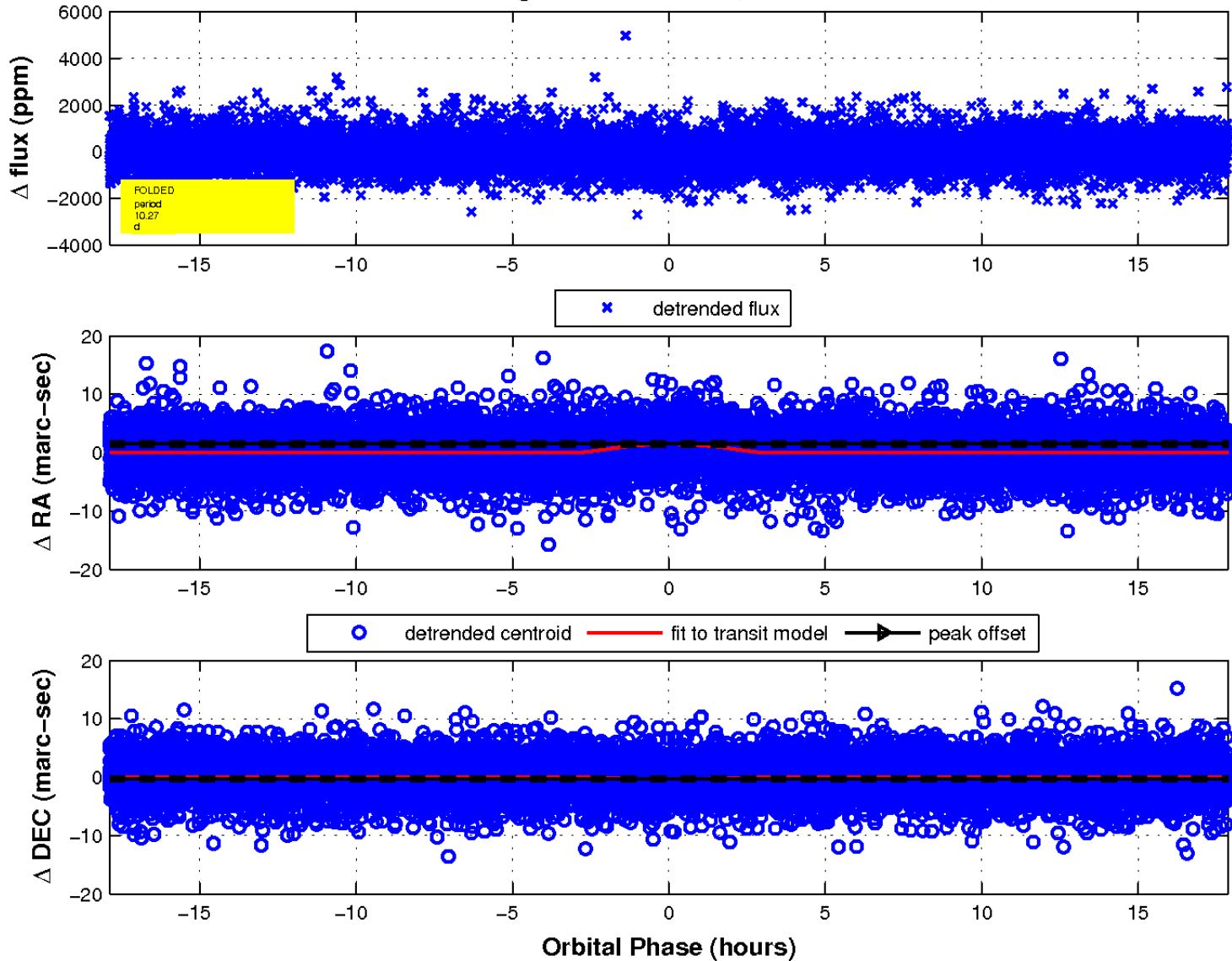
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

