

KIC 003241557

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
003241557-01	OBS	2863.01	1.703340	132.465349	43.7	2.162	11.8	11.0	0.90	6026	0.69	1282.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241557-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_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.

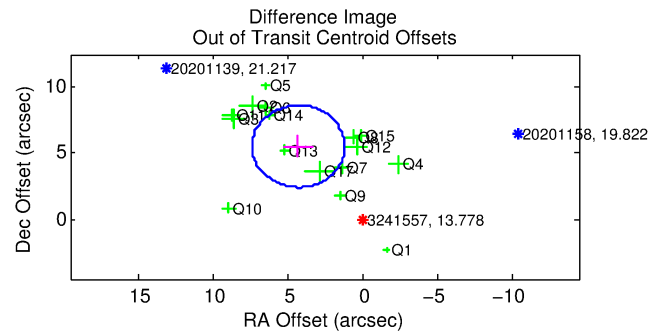
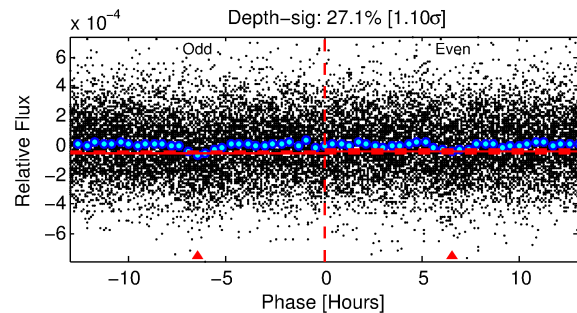
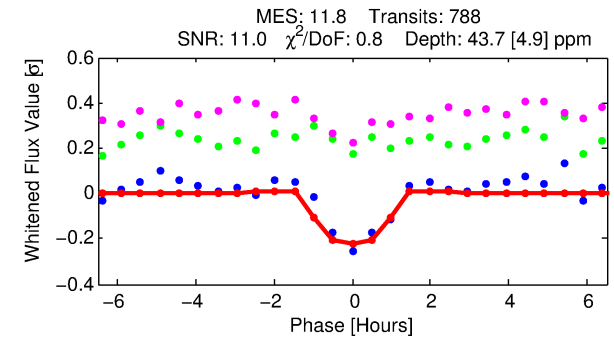
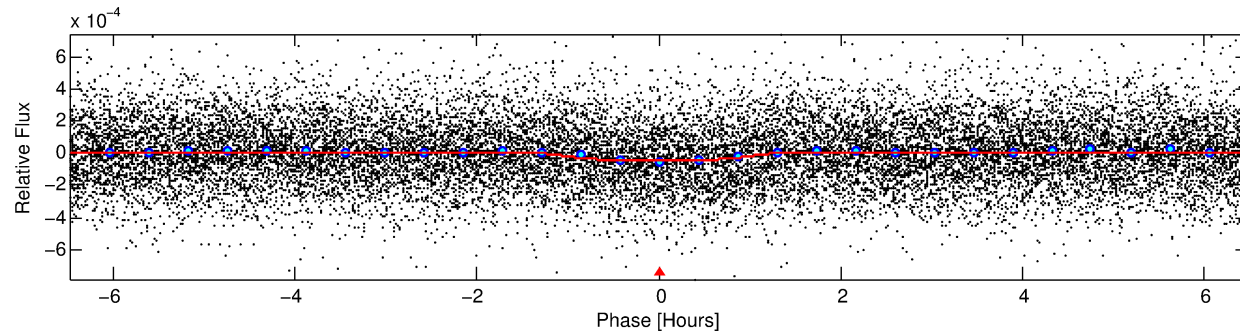
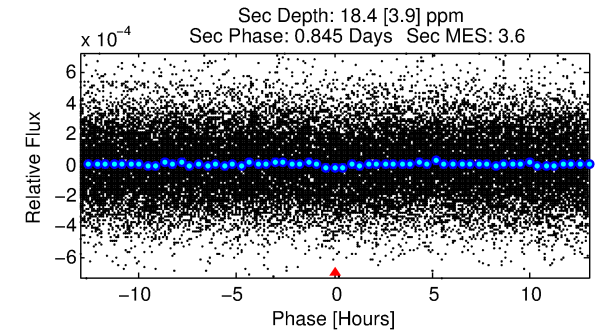
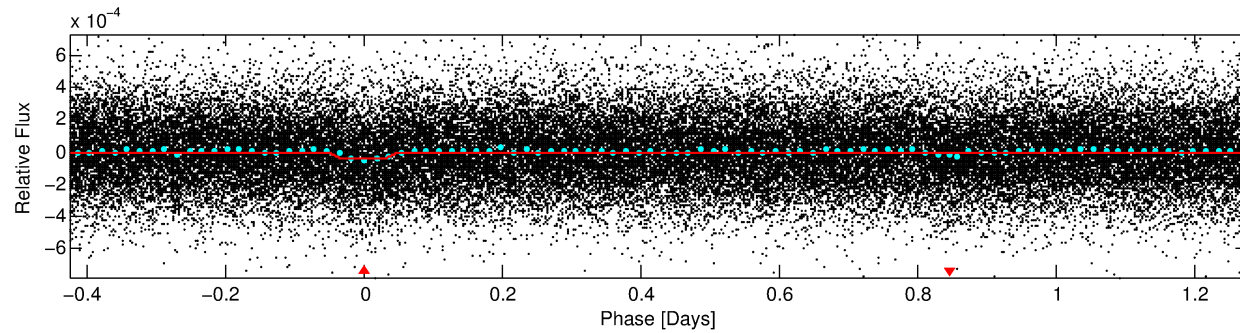
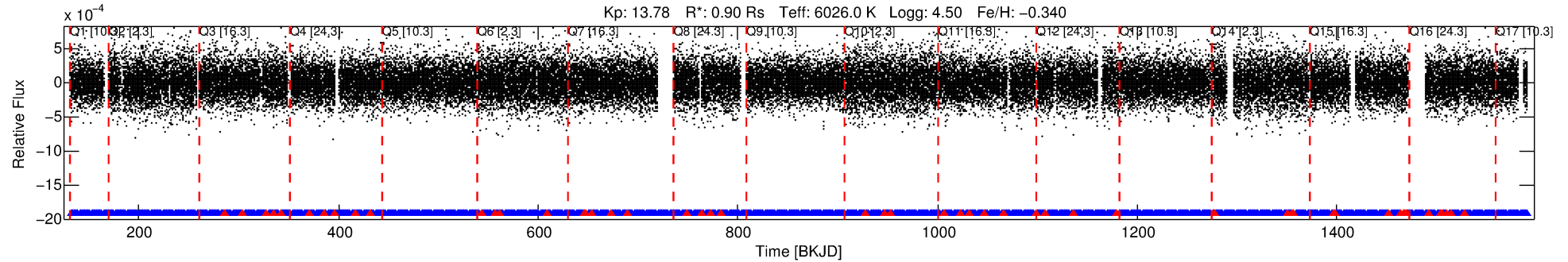
Ephemeris Match Information For 003241557-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
003241557-01	3241557	6312.01	3241619	1:1	48.3	5	11	12.52	13.77	11593.00	Direct-PRF	0	0.35	0.16

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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 σ_P < 5.0 and σ_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: 3241557 Candidate: 1 of 1 Period: 1.703 d
KOI: K02863.01 Corr: 0.915



DV Fit Results:

Period = 1.70334 [0.00001] d
Epoch = 132.4653 [0.0030] BKJD
Rp/R* = 0.0070 [0.0036]
a/R* = 3.18 [7.77]
b = 0.87 [0.76]
Seff = 1282.49 [484.88]
Teff = 1526 [144] K
Rp = 0.69 [0.41] Re
a = 0.0274 [0.0068] AU
Ag = 16.09 [17.89] [0.84σ]
Teffp = 4725 [1251] K [2.54σ]

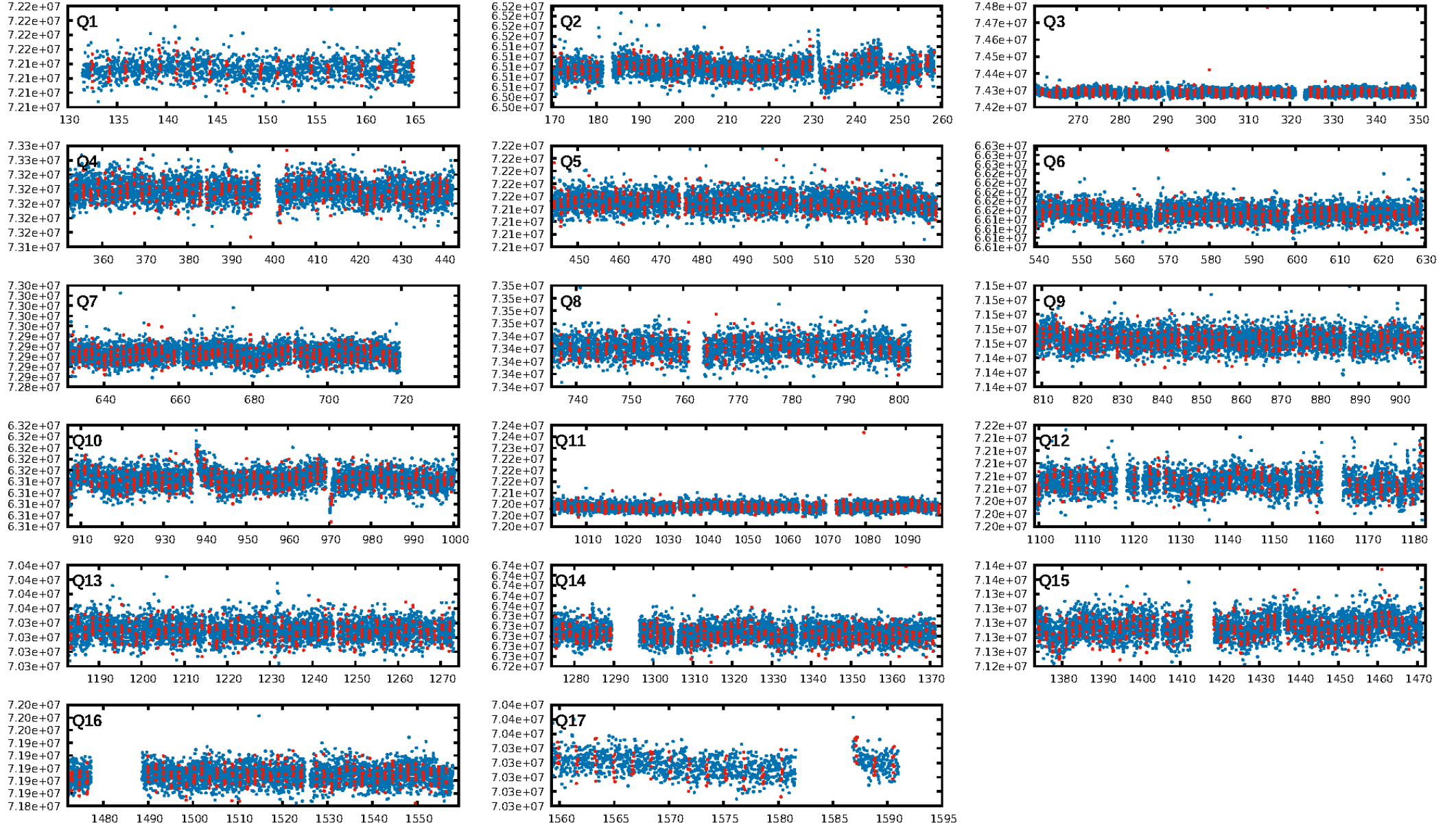
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.73e-32
RollingBand-fgt: 0.93 [700/752]
GhostDiagnostic-chr: 0.1619
Centroid-sig: 0.0%
Centroid-so: 6.791 arcsec [5.13σ]
OotOffset-rm: 6.990 arcsec [6.76σ]
KicOffset-rm: 6.827 arcsec [6.35σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

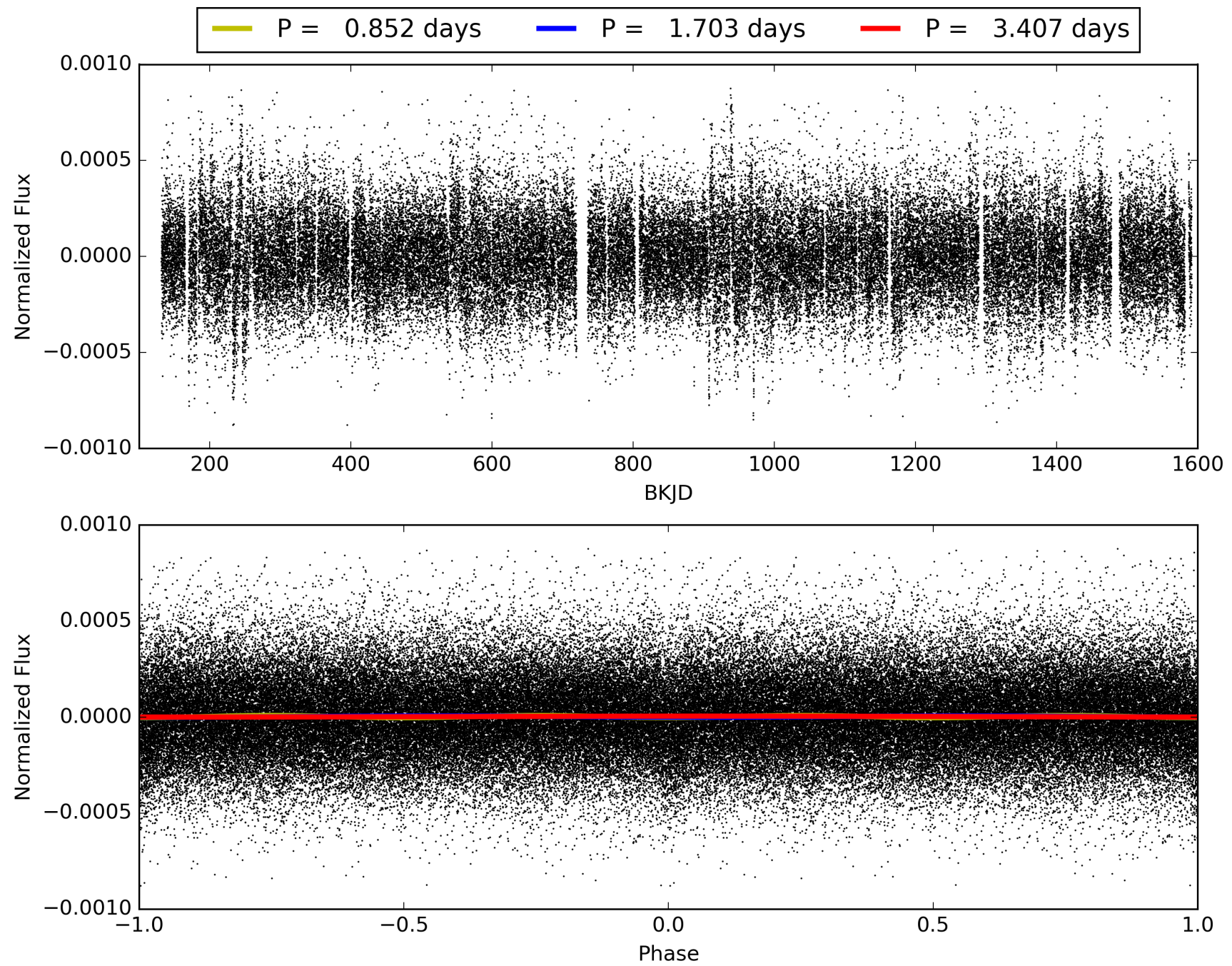
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:54:55 Z

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

TCE 003241557-01, PDC Light Curves

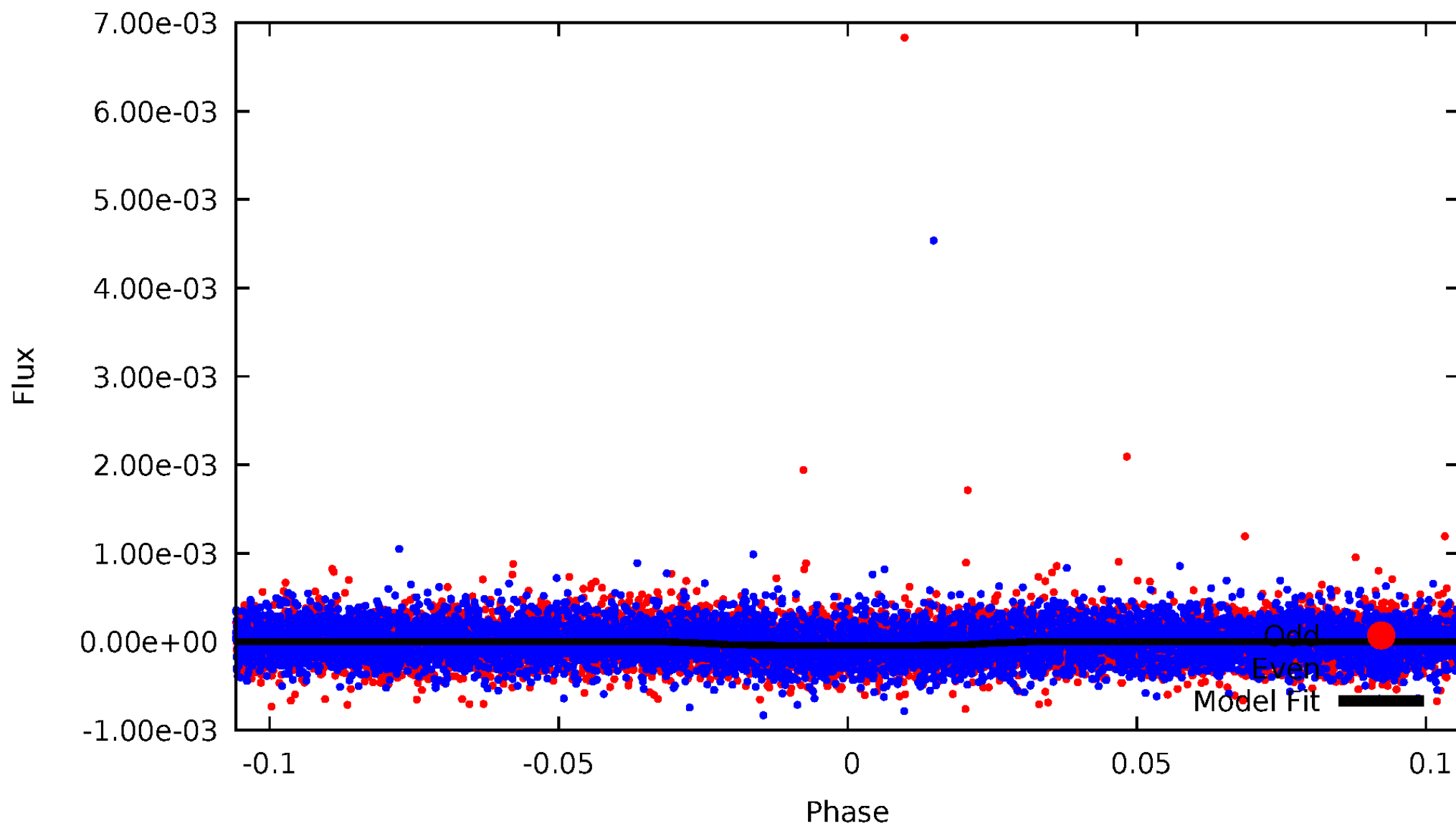


TCE 003241557-01



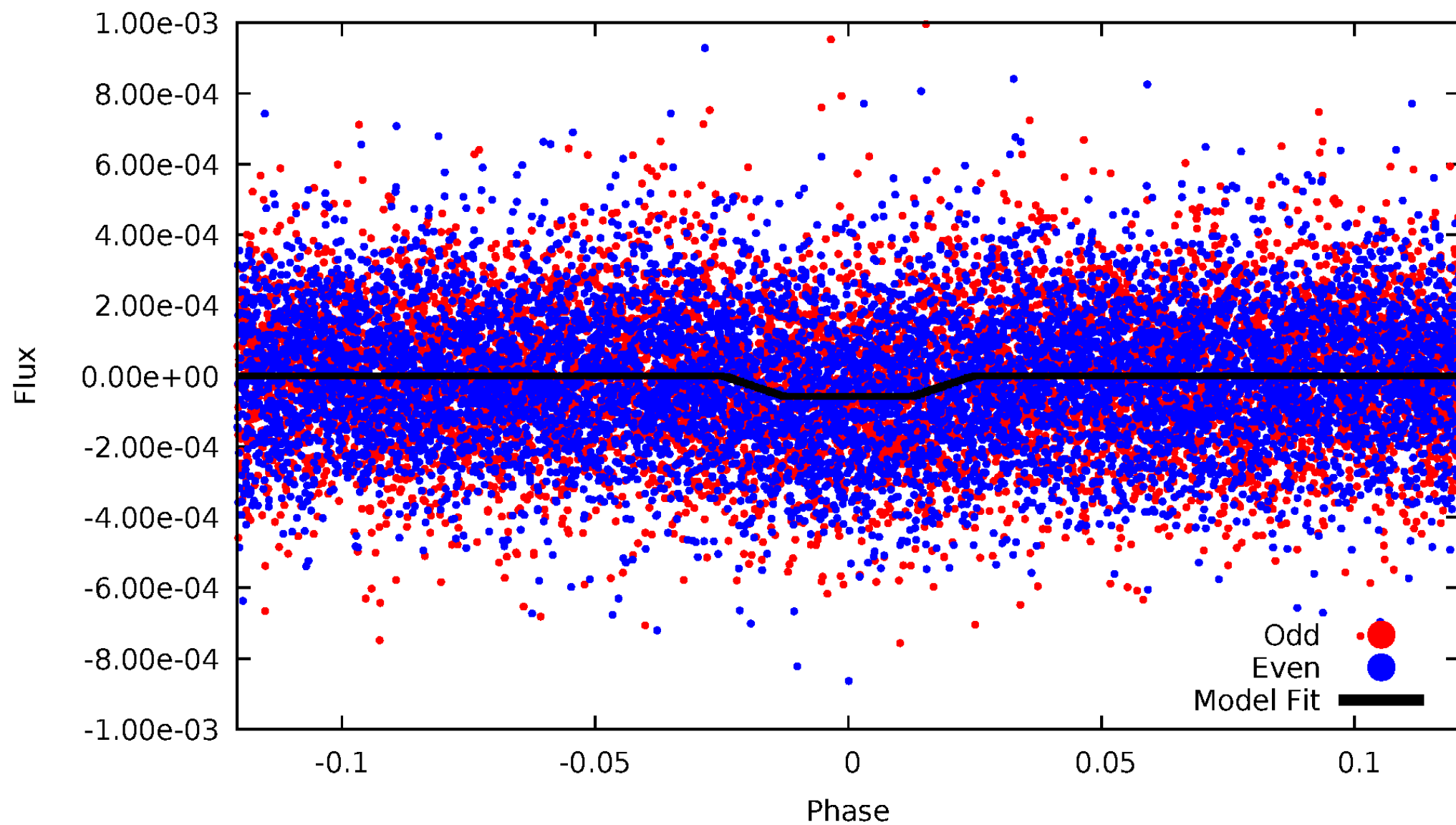
DV Odd/Even

TCE 003241557-01



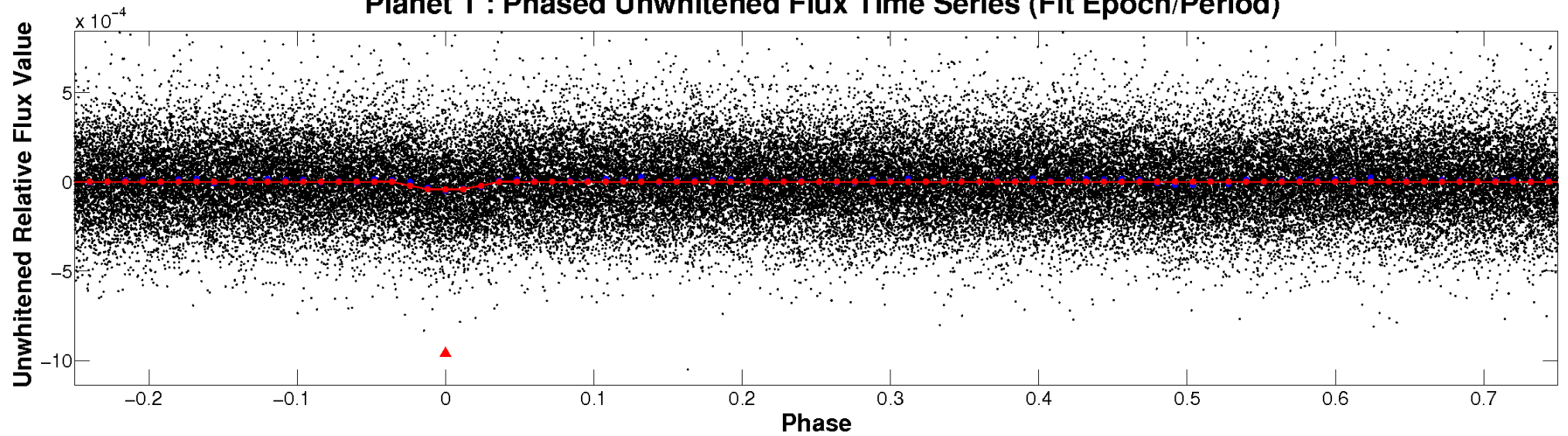
ALT Odd/Even

TCE 003241557-01

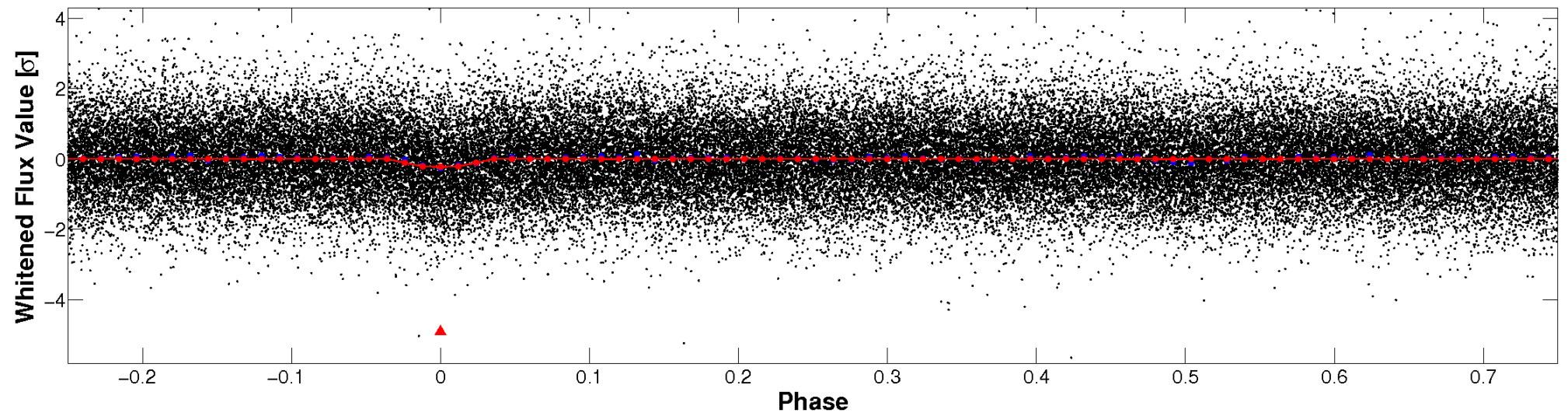


Non-Whitened Vs. Whitened Light Curve

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

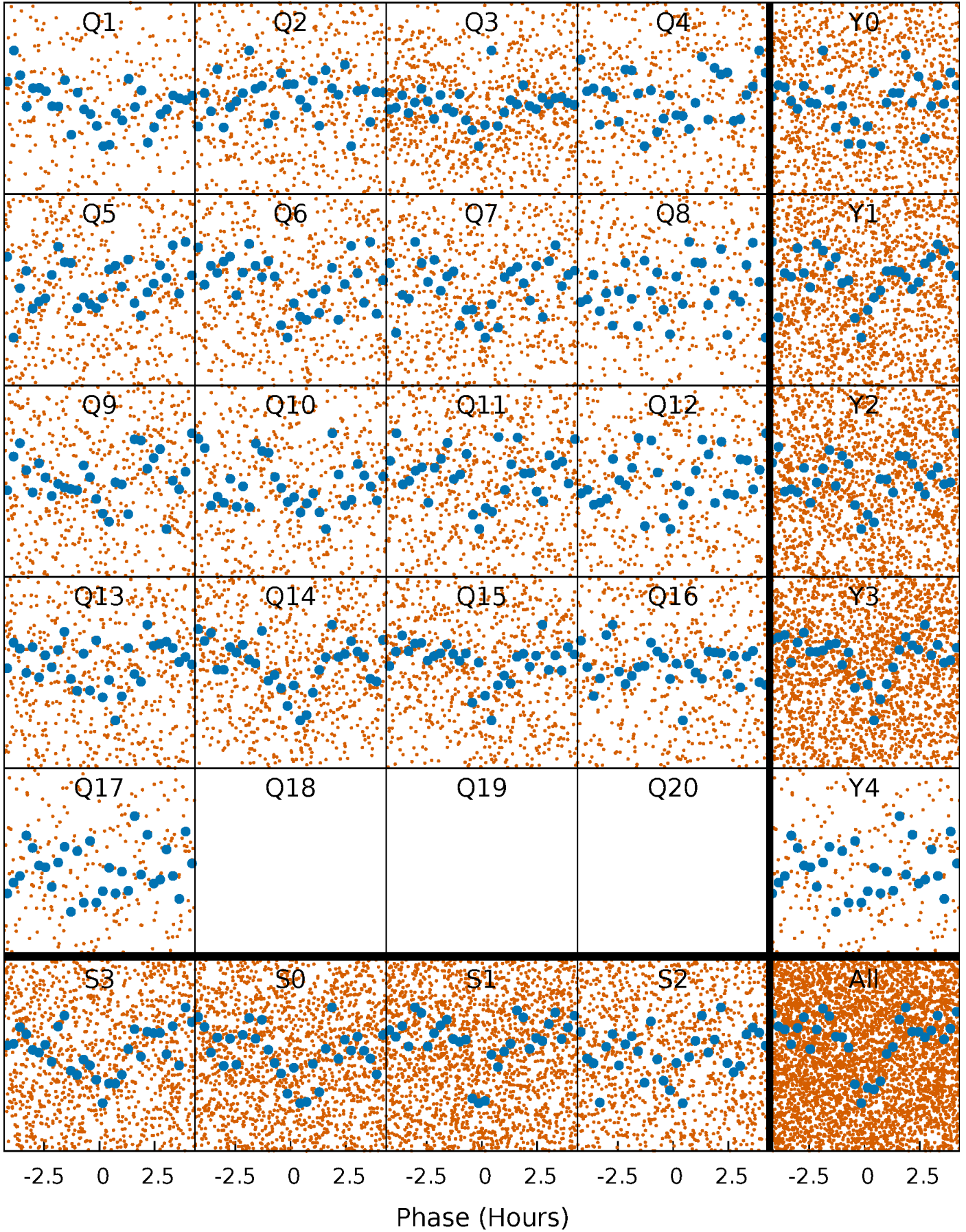


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



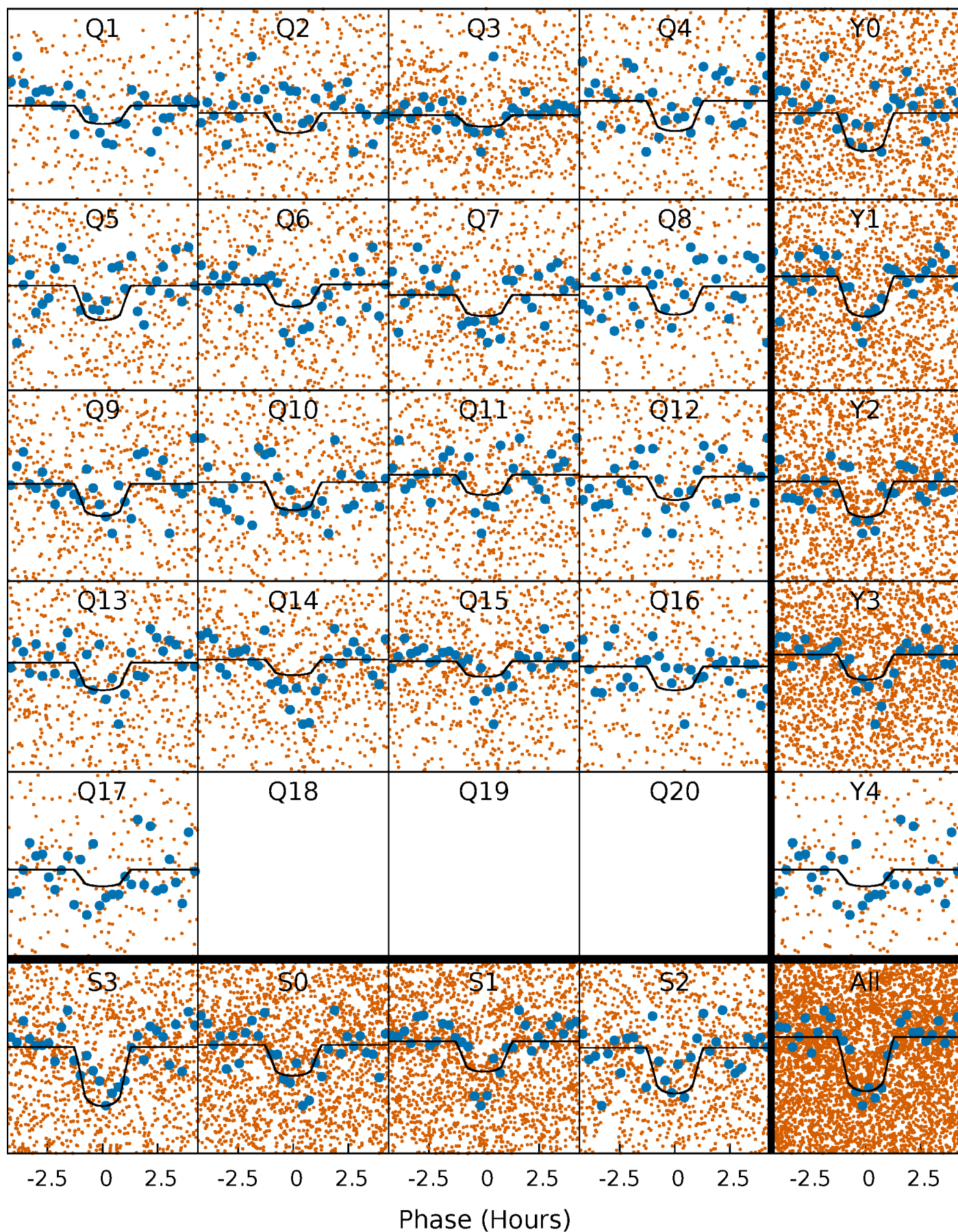
PDC Quarter-Phased Transit Curves

TCE 003241557-01 P= 1.703340 Days $T_0=132.465349$ (BKJD)



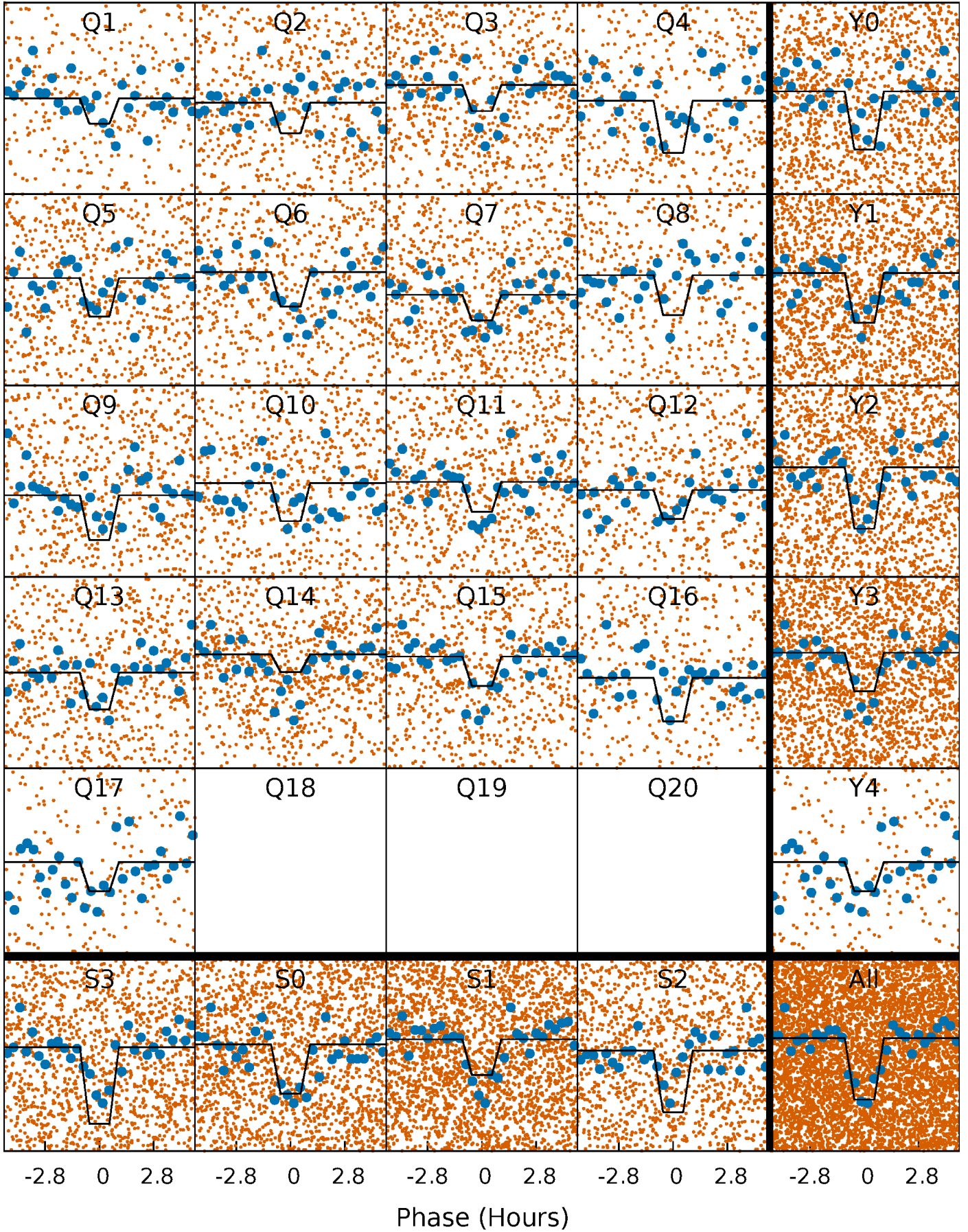
DV Quarter-Phased Transit Curves

TCE 003241557-01 P= 1.703340 Days $T_0=132.465349$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

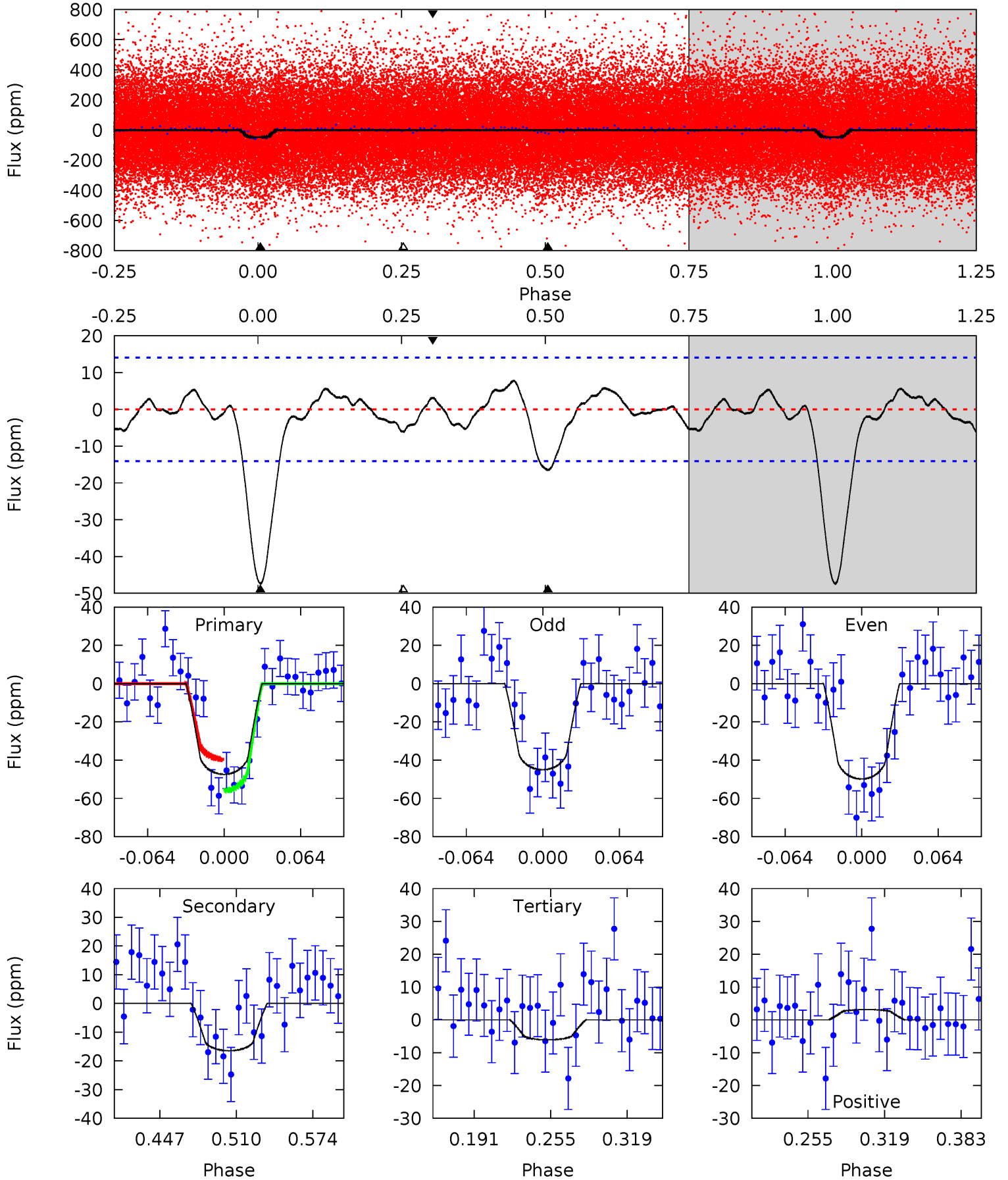
TCE 003241557-01 P= 1.703384 Days $T_0=132.450770$ (BKJD)



DV Model-Shift Uniqueness Test

003241557-01, P = 1.703340 Days, E = 130.762009 Days

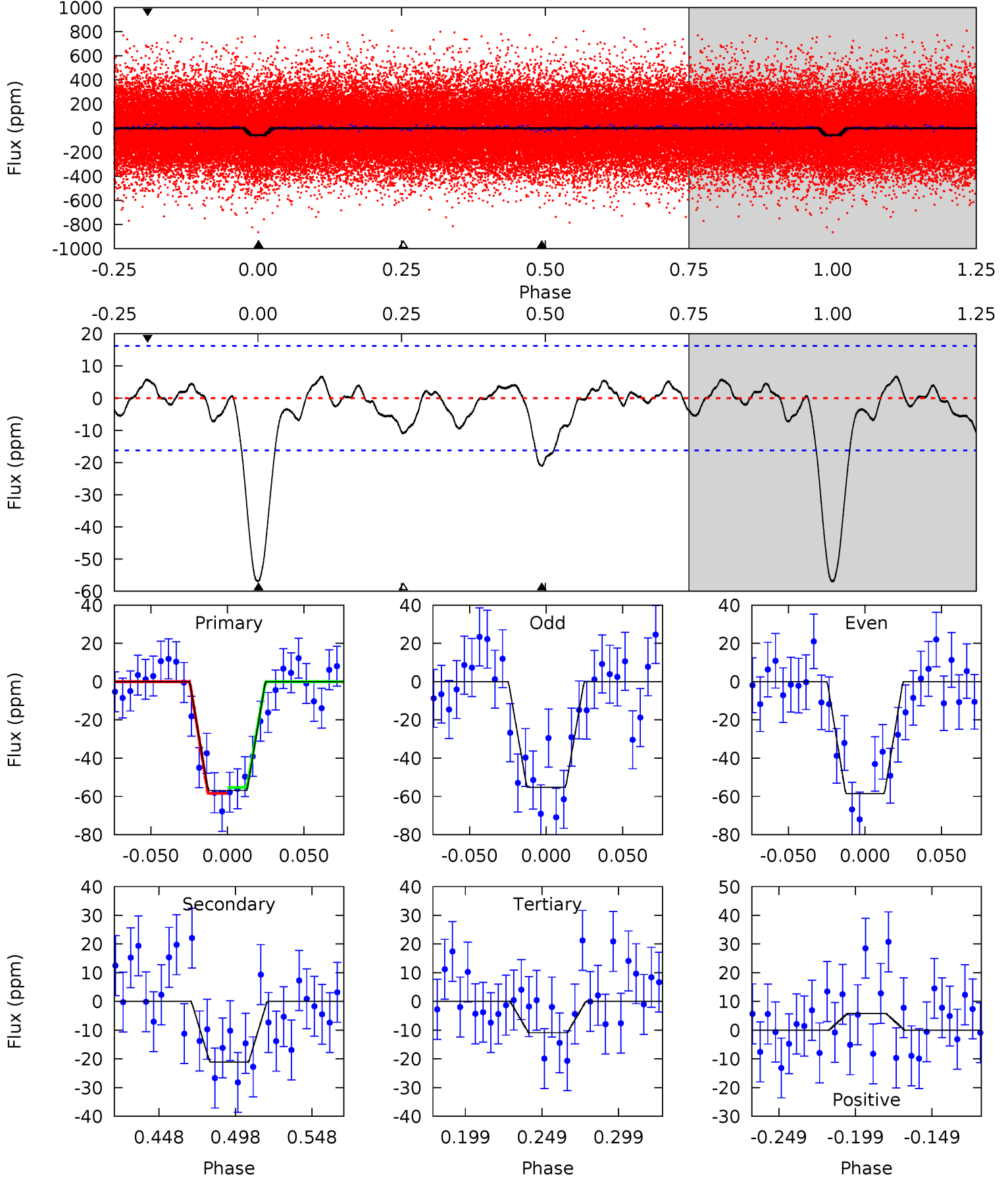
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	5.45	2.01	1.04	4.66	1.85	1.05	13.7	14.6	3.44	4.41	0.80	0.92	0.14	2.72



Alt Model-Shift Uniqueness Test

003241557-01, P = 1.703384 Days, E = 130.747386 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	6.13	3.16	1.67	4.71	1.96	1.13	13.4	14.8	2.97	4.45	0.49	0.94	0.11	0.44



Stellar Parameters For KIC 003241557

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6026^{+162}_{-180}	$4.503^{+0.065}_{-0.195}$	$-0.340^{+0.300}_{-0.300}$	$0.904^{+0.268}_{-0.089}$	$0.949^{+0.117}_{-0.117}$	$1.811^{+0.489}_{-0.932}$
	+3%/-3%	+1%/-4%	+88%/-88%	+30%/-10%	+12%/-12%	+27%/-51%
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 003241557-01 / KOI 2863.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 3	$0.74^{+0.37}_{-0.34}$	2173^{+144}_{-100}	4656^{+1519}_{-700}	12^{+33}_{-7}
Alt.	-21 ± 3	$0.80^{+0.37}_{-0.39}$	2171^{+151}_{-109}	4746^{+1642}_{-685}	14^{+38}_{-7}

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

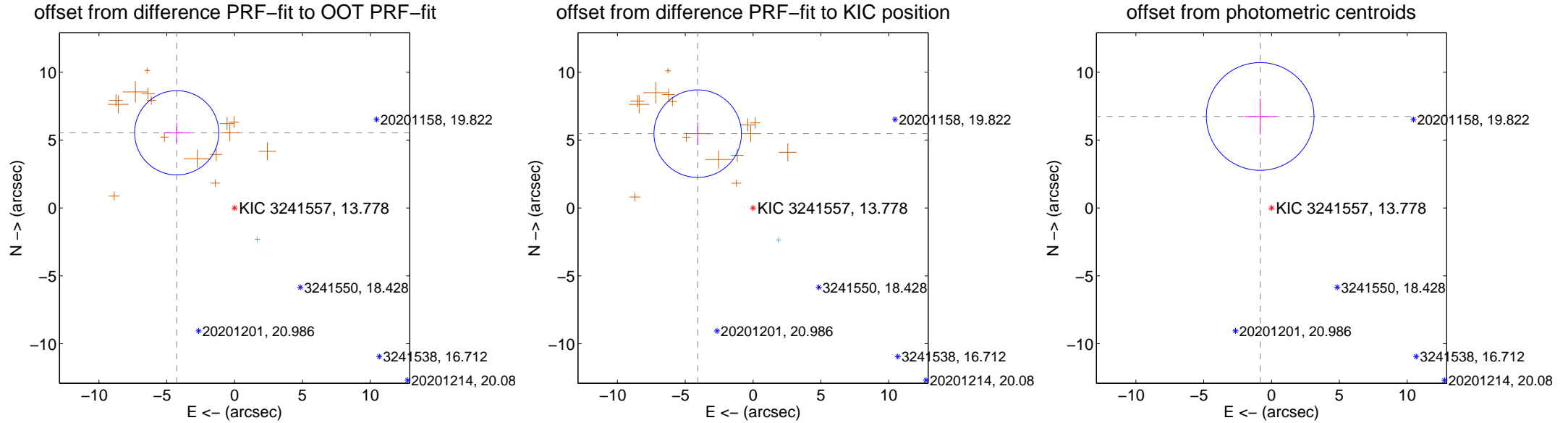
DV Centroid Data

Supplemental centroid analysis for 003241557-01. Kepler magnitude: 13.78. Transit SNR 10.97

There are 1 quarters with good PRF difference image offsets

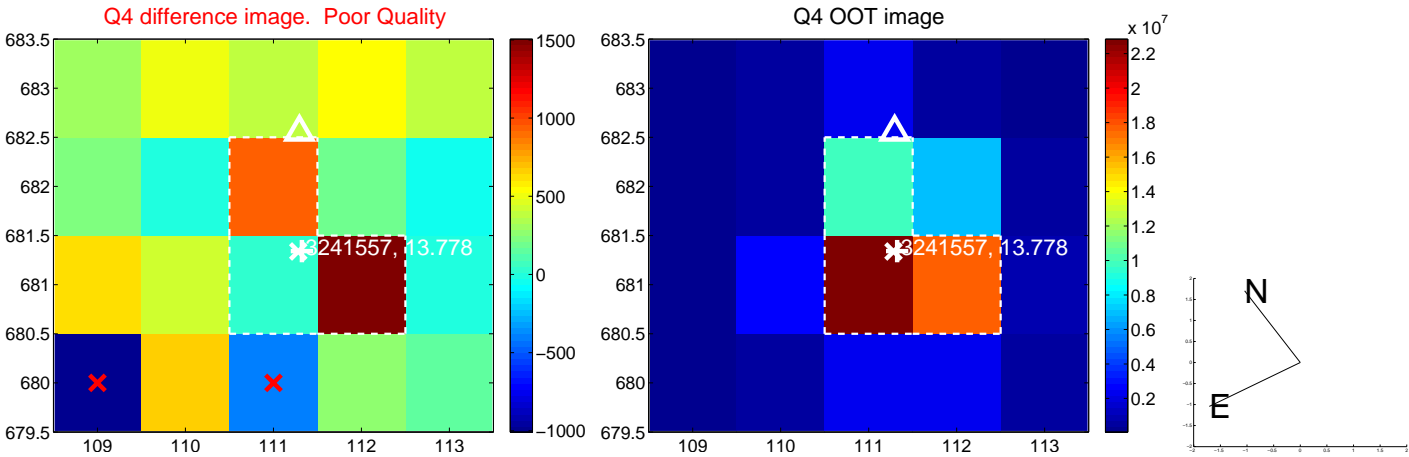
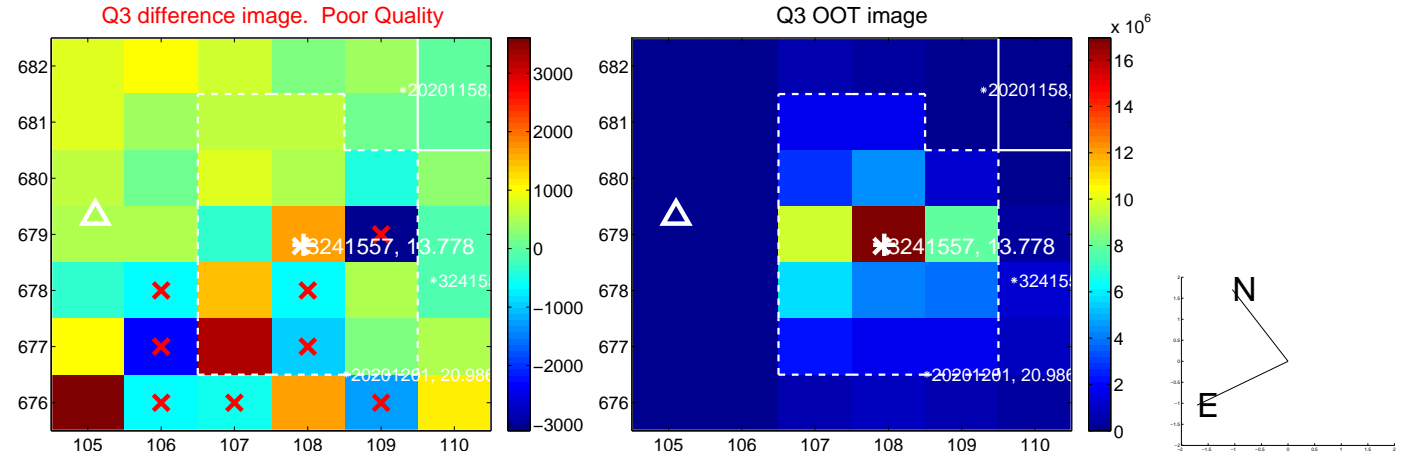
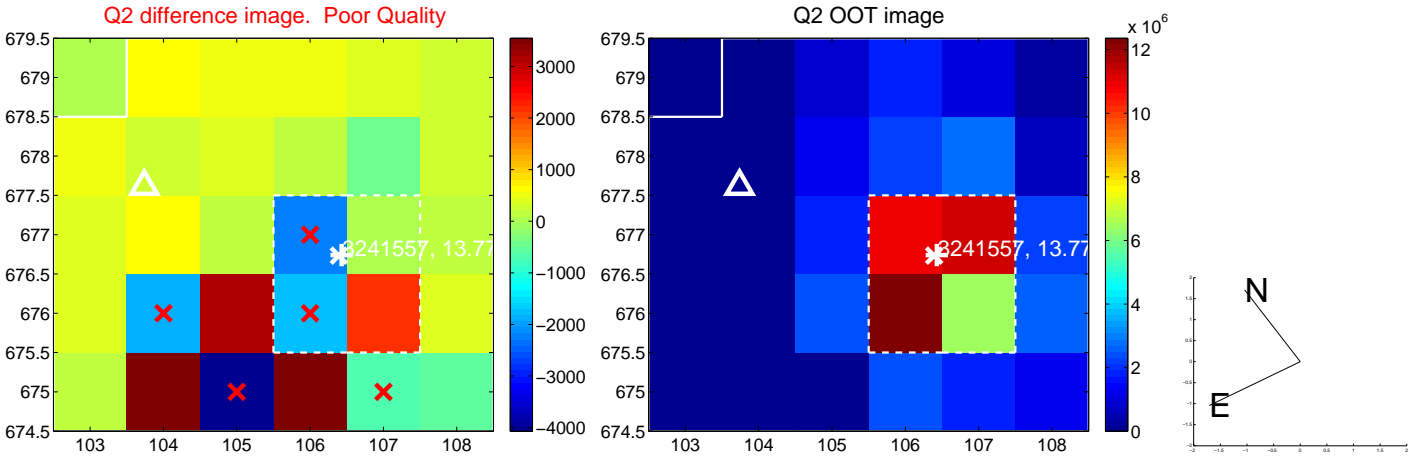
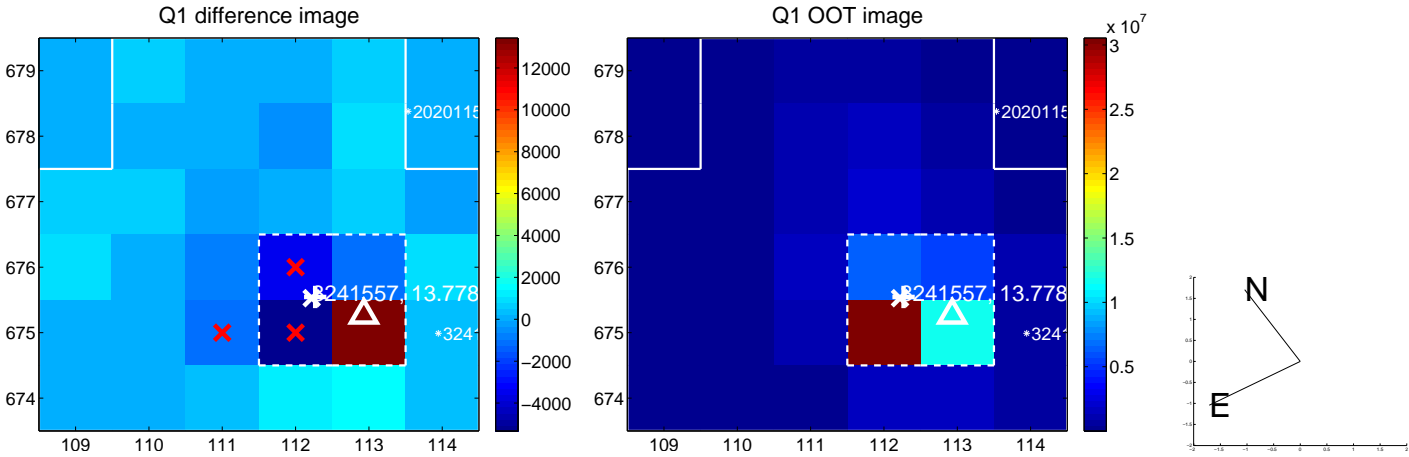
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.990 ± 1.034	6.76	4.266 ± 0.957	5.537 ± 0.745
PRF-fit source offset from KIC position	6.827 ± 1.075	6.35	4.081 ± 0.943	5.474 ± 0.827
photometric centroid source offset	6.79 ± 1.32	5.13	0.84 ± 1.15	6.74 ± 1.33

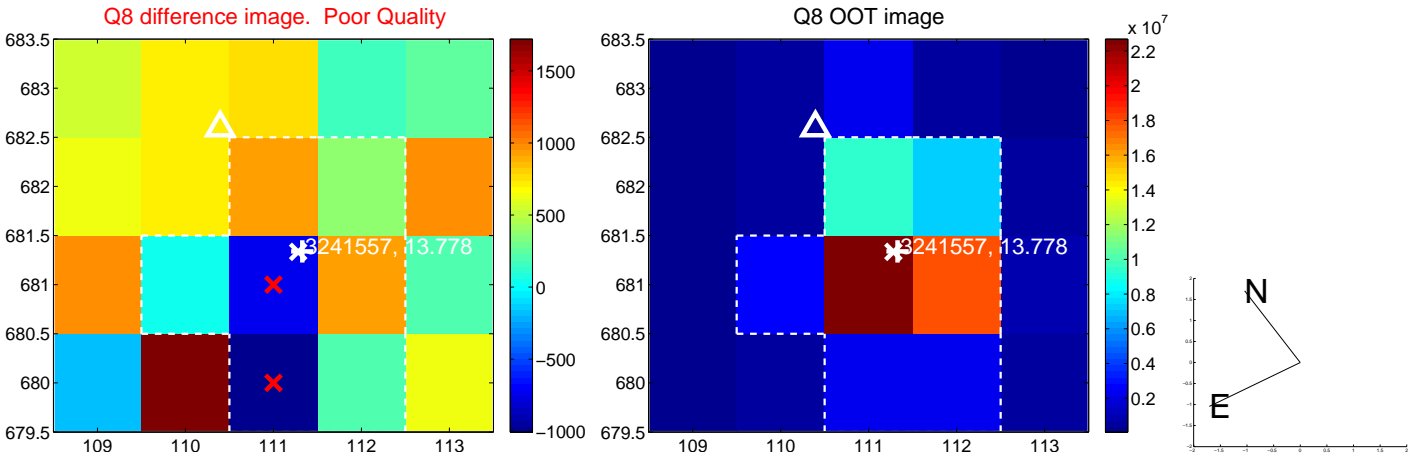
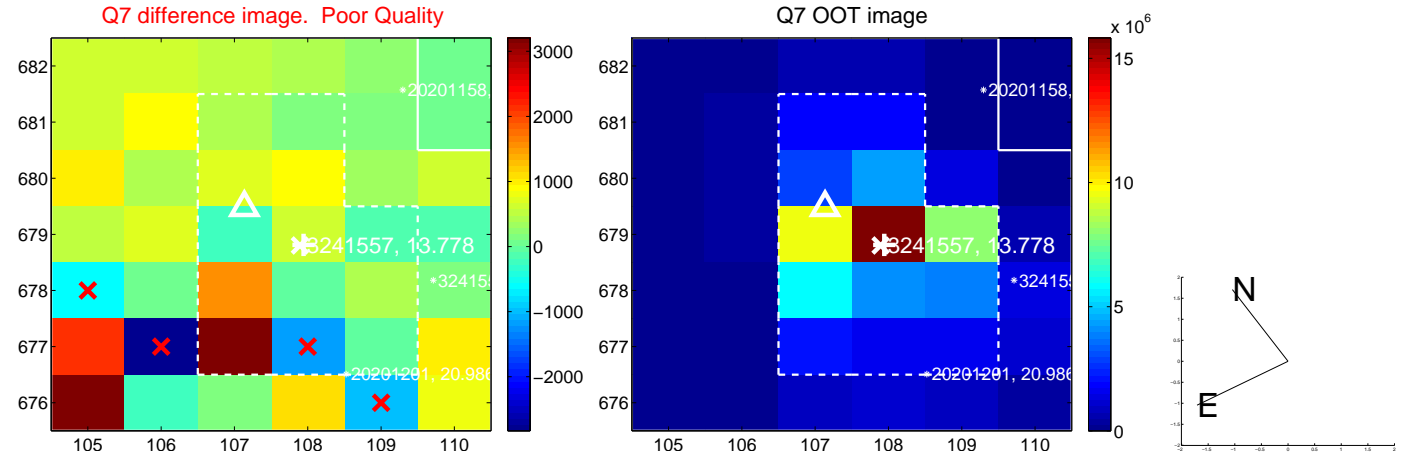
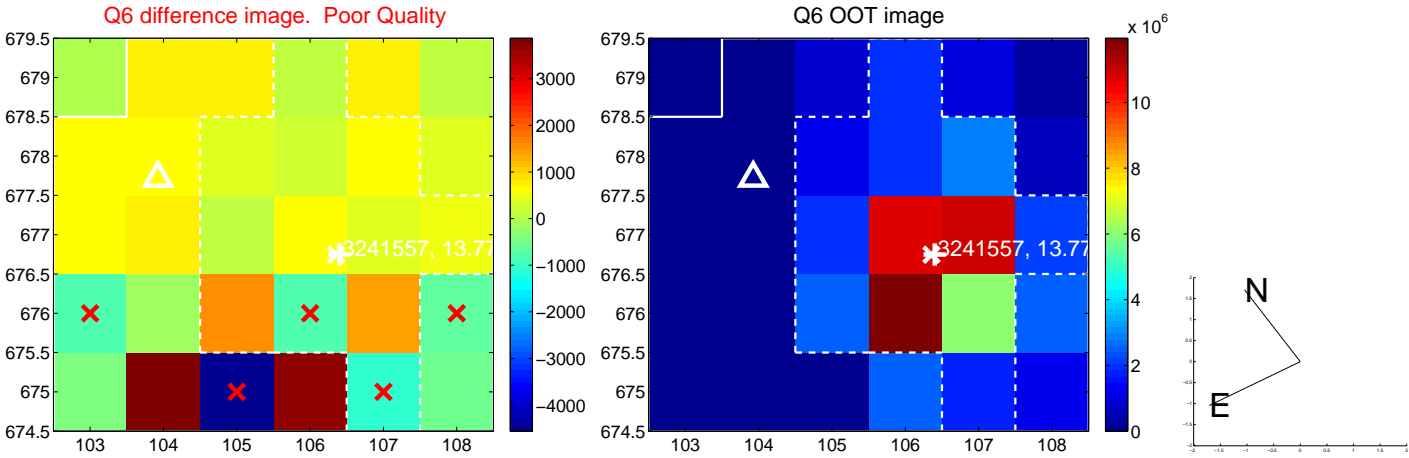
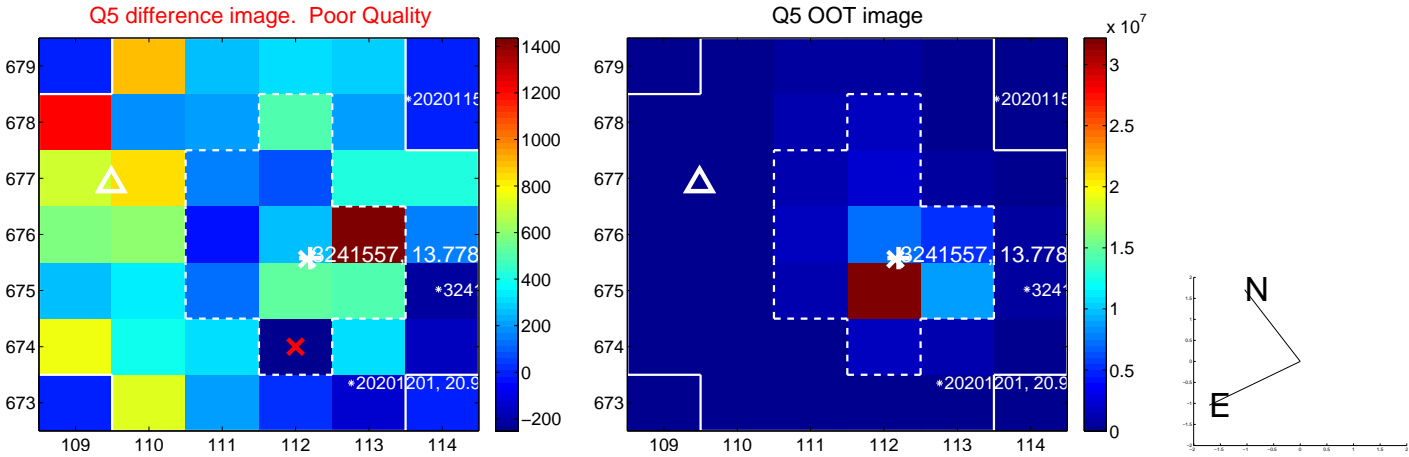


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

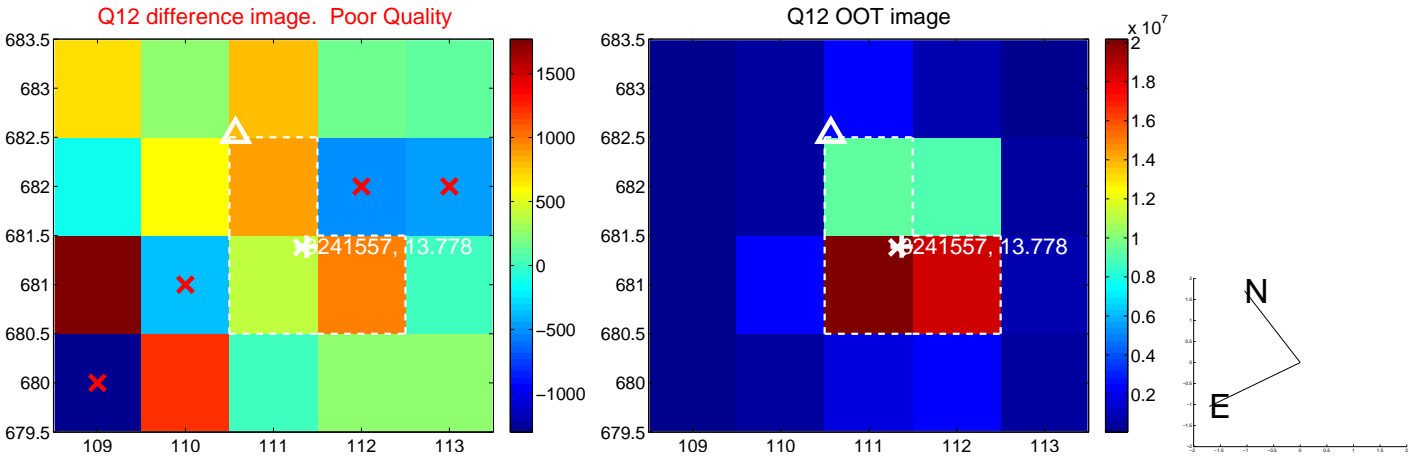
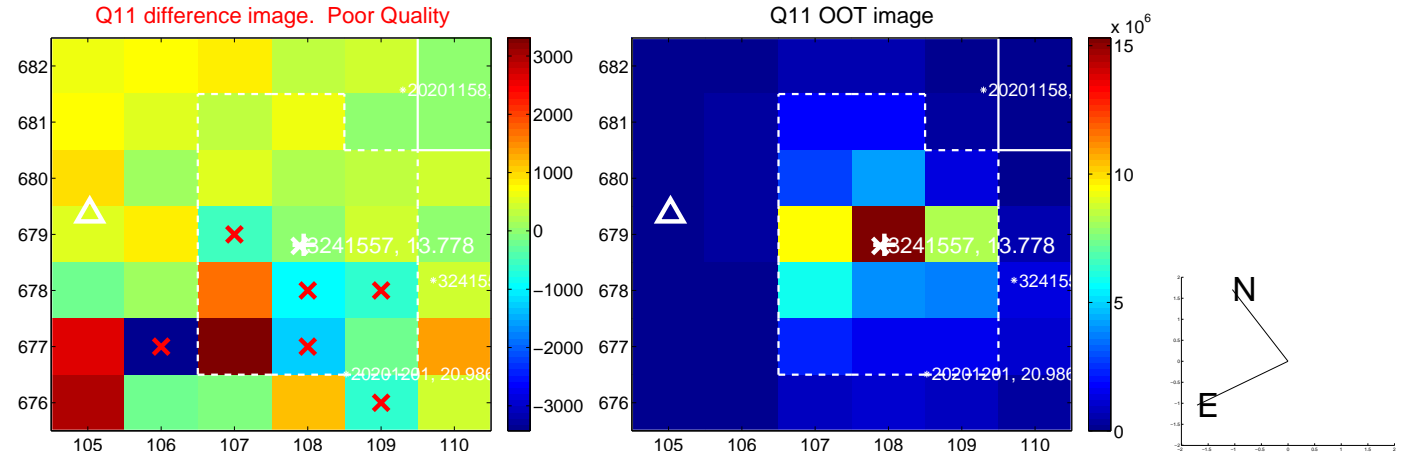
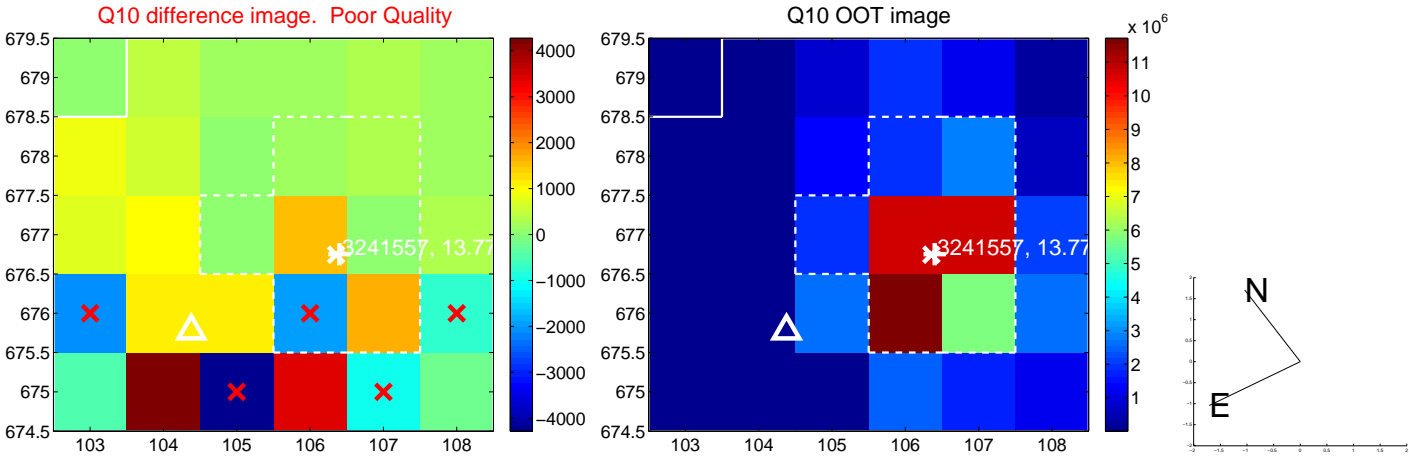
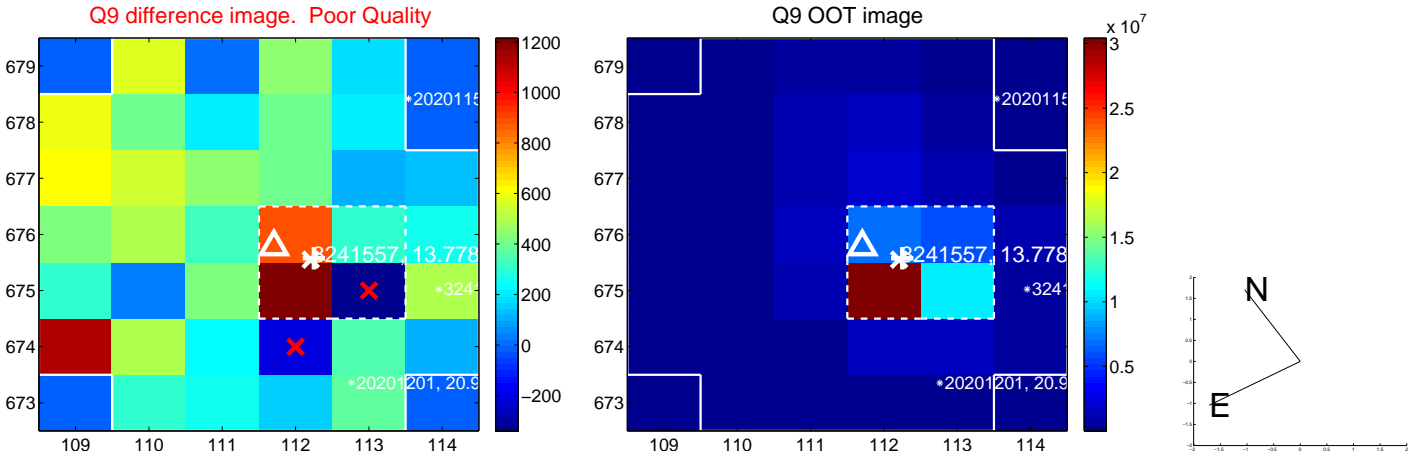
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



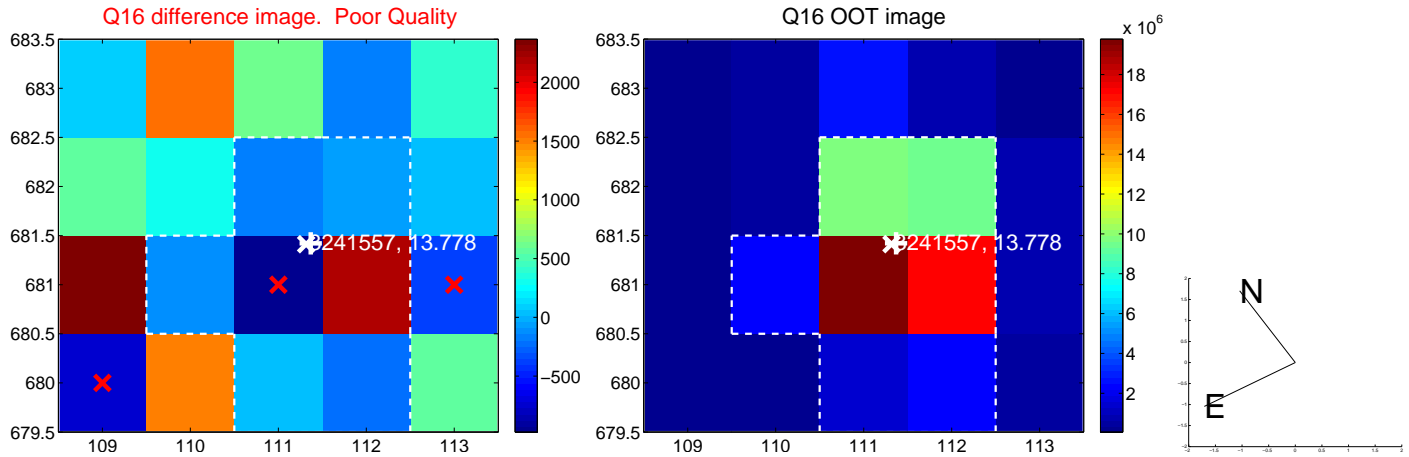
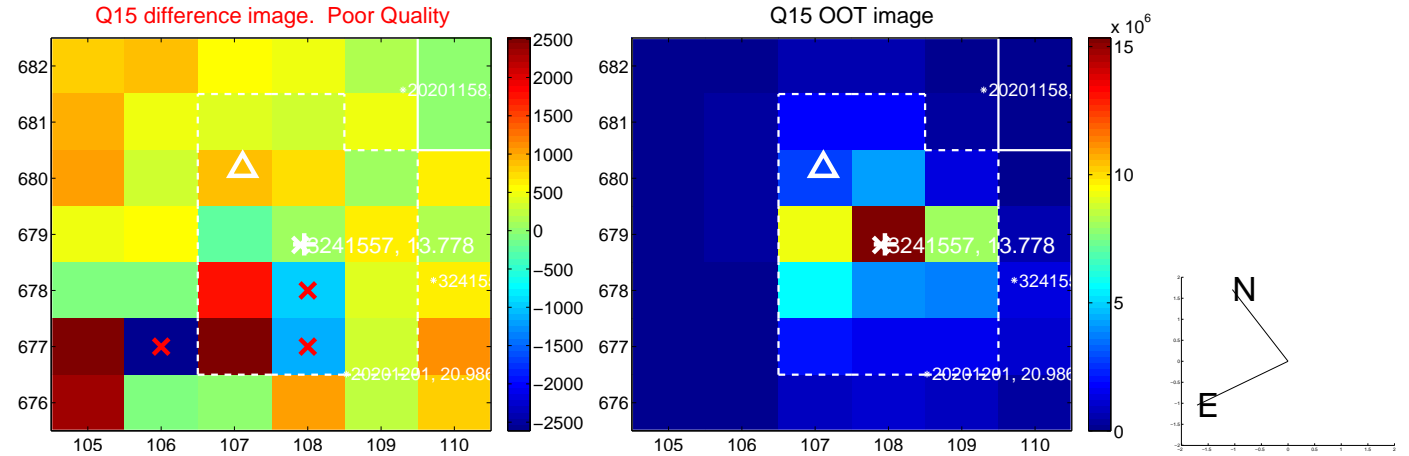
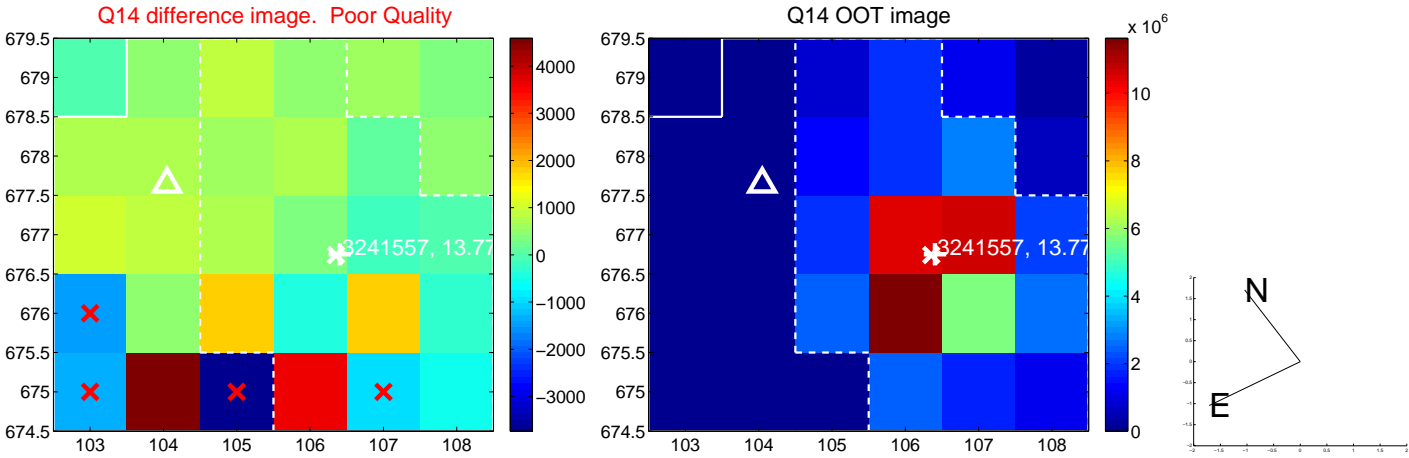
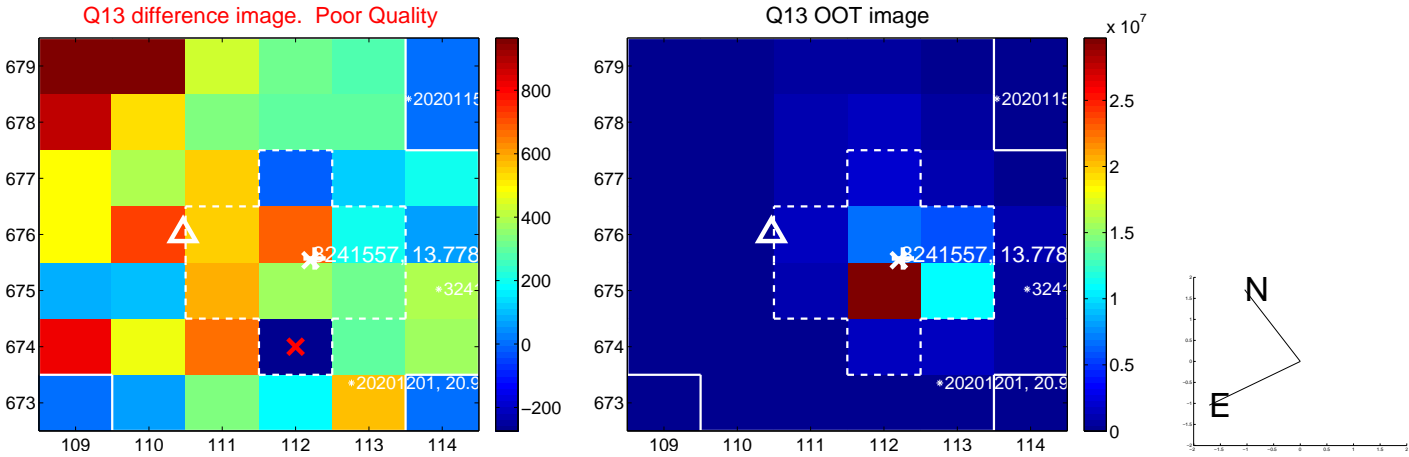
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



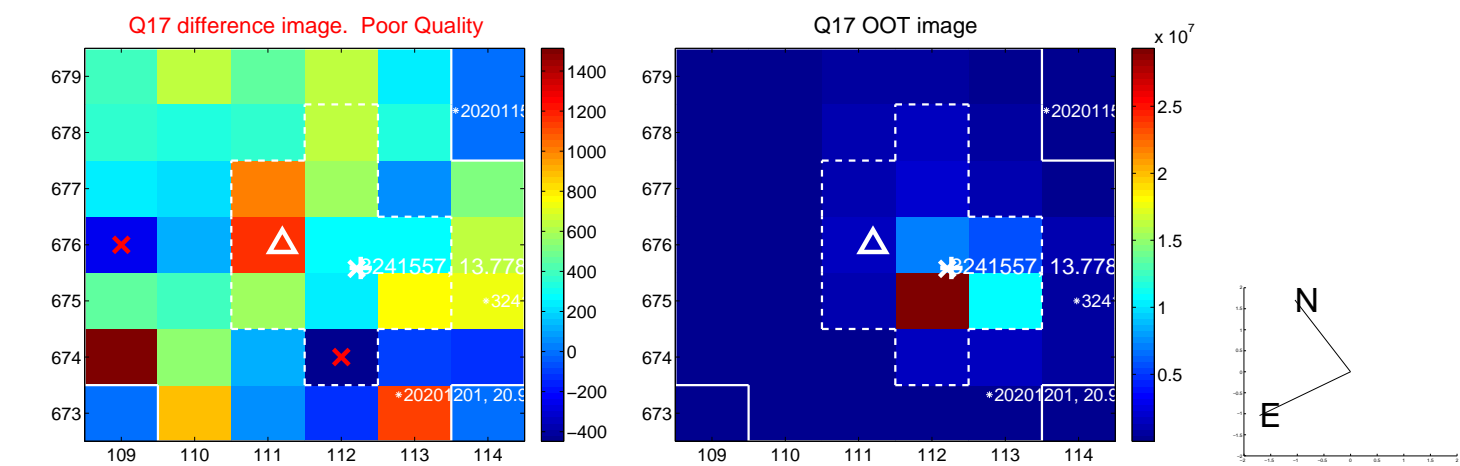
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



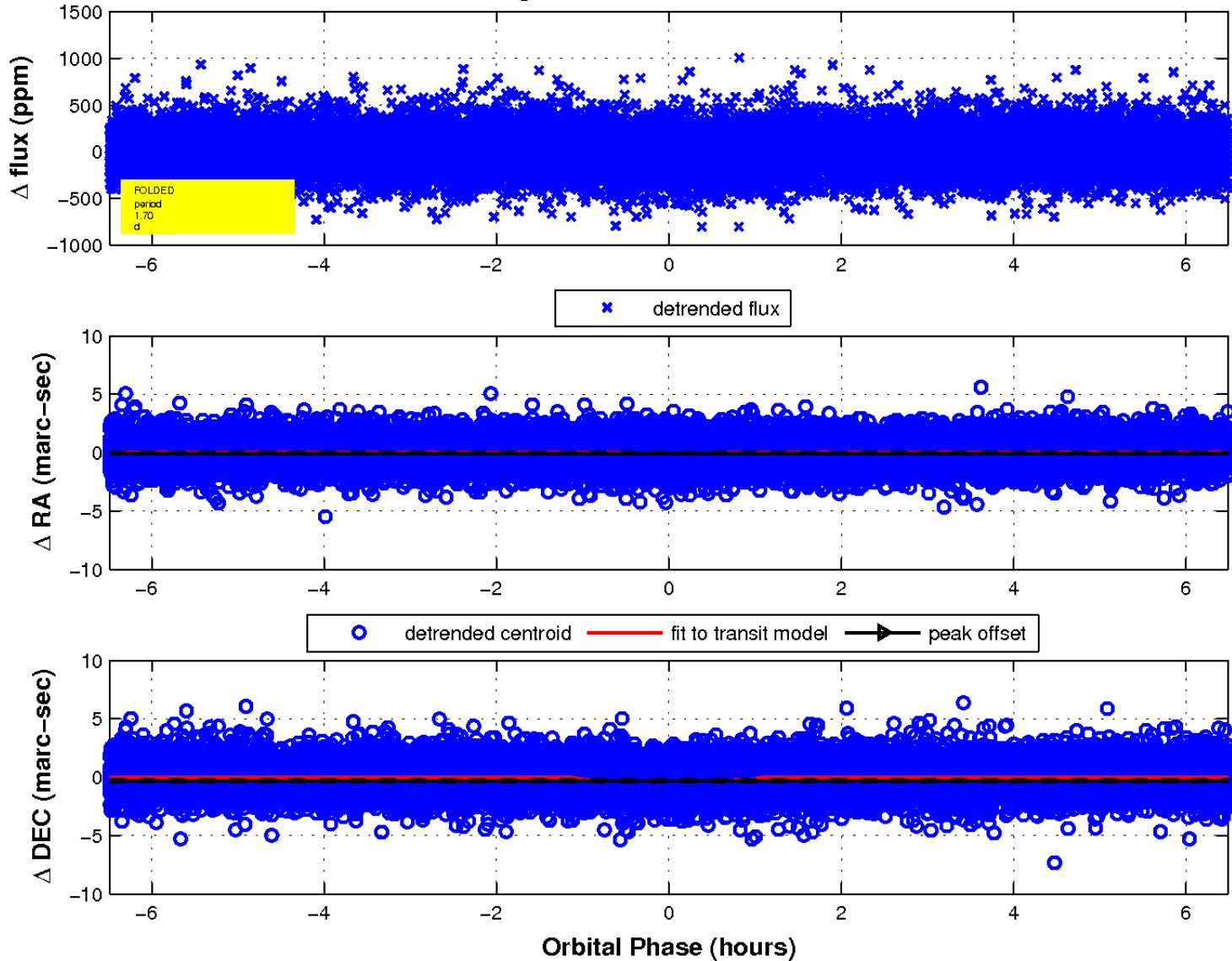
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

