

KIC 006612284

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 _⊕)
006612284-01	OBS	2908.01	1.245314	132.230819	154.7	1.831	12.8	12.7	0.96	5982	1.43	1998.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006612284-01	OBS	FP	0.00	0	0	0	1	CENT_KIC_POS—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 006612284-01

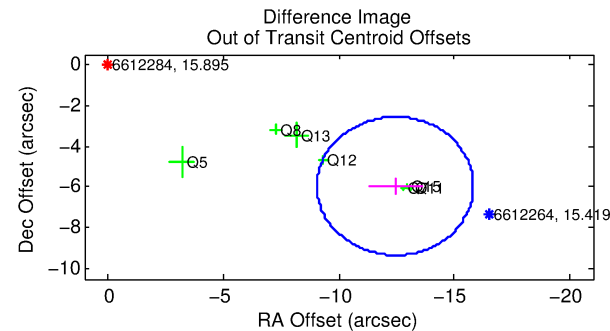
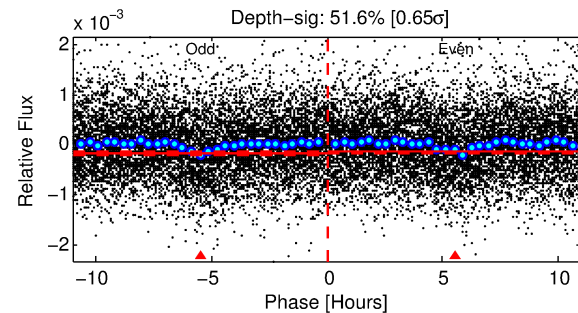
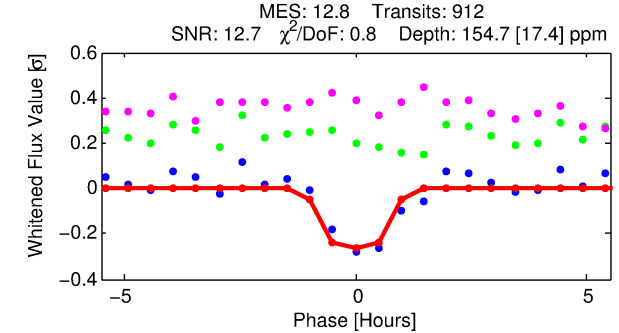
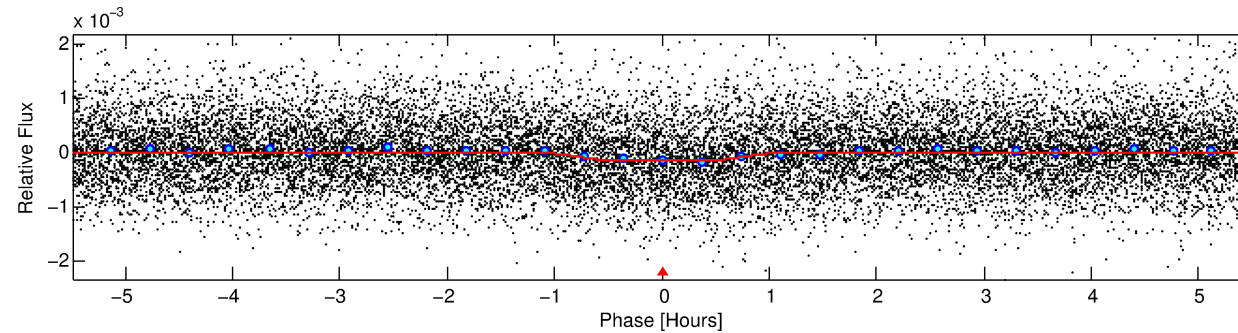
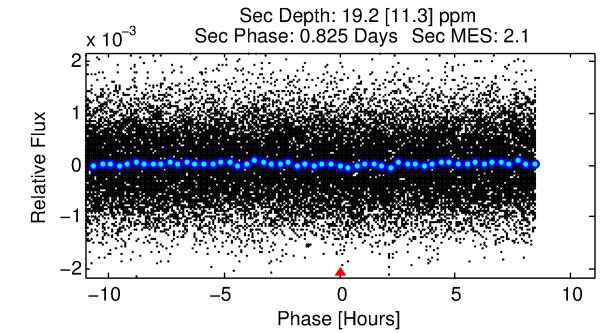
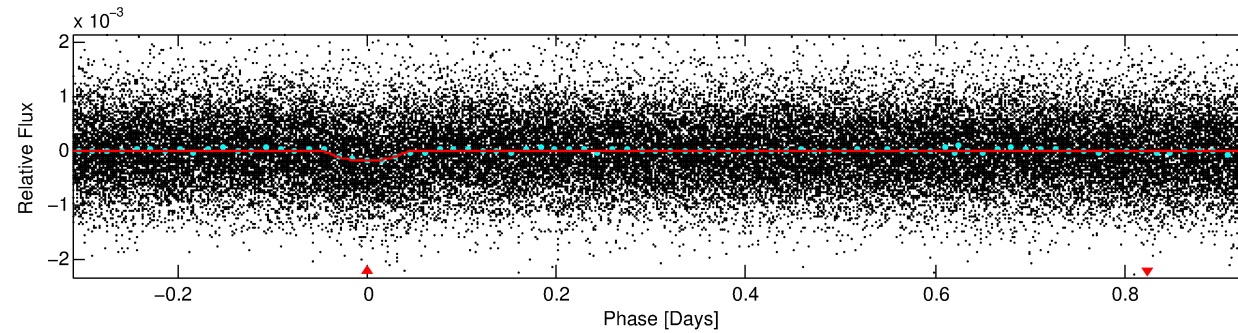
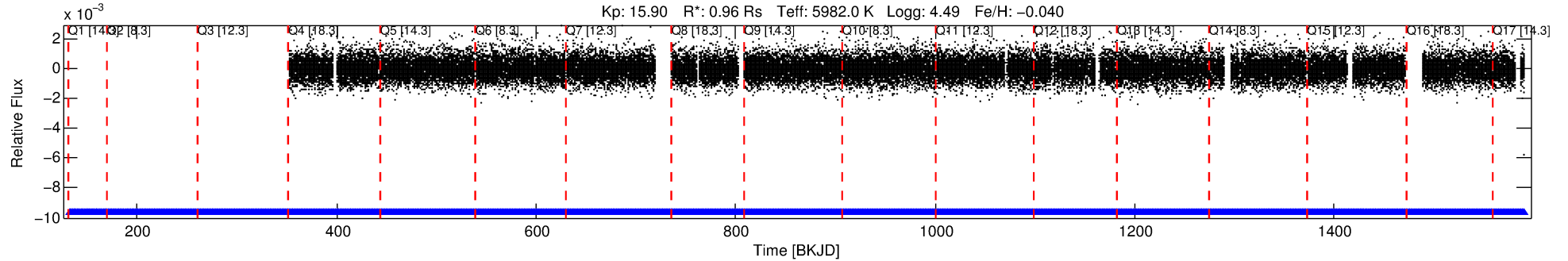
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
006612284-01	6612284	006206751-pri	6206751	1:1	3776.4	0	-2	12.14	15.89	1561.90	Cross-Talk	0	1.32	0.67

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: 6612284 Candidate: 1 of 1 Period: 1.245 d
KOI: K02908.01 Corr: 0.844

Kp: 15.90 R*: 0.96 Rs Teff: 5982.0 K Logg: 4.49 Fe/H: -0.040



DV Fit Results:

Period = 1.24531 [0.00001] d
Epoch = 132.2308 [0.0022] BKJD
Rp/R* = 0.0136 [0.0072]
a/R* = 2.52 [5.71]
b = 0.91 [0.53]
Seff = 1998.74 [782.18]
Teq = 1705 [167] K
Rp = 1.43 [0.87] Re
a = 0.0230 [0.0058] AU
Ag = 2.76 [3.48] [0.50σ]
Teffp = 3396 [1034] K [1.62σ]

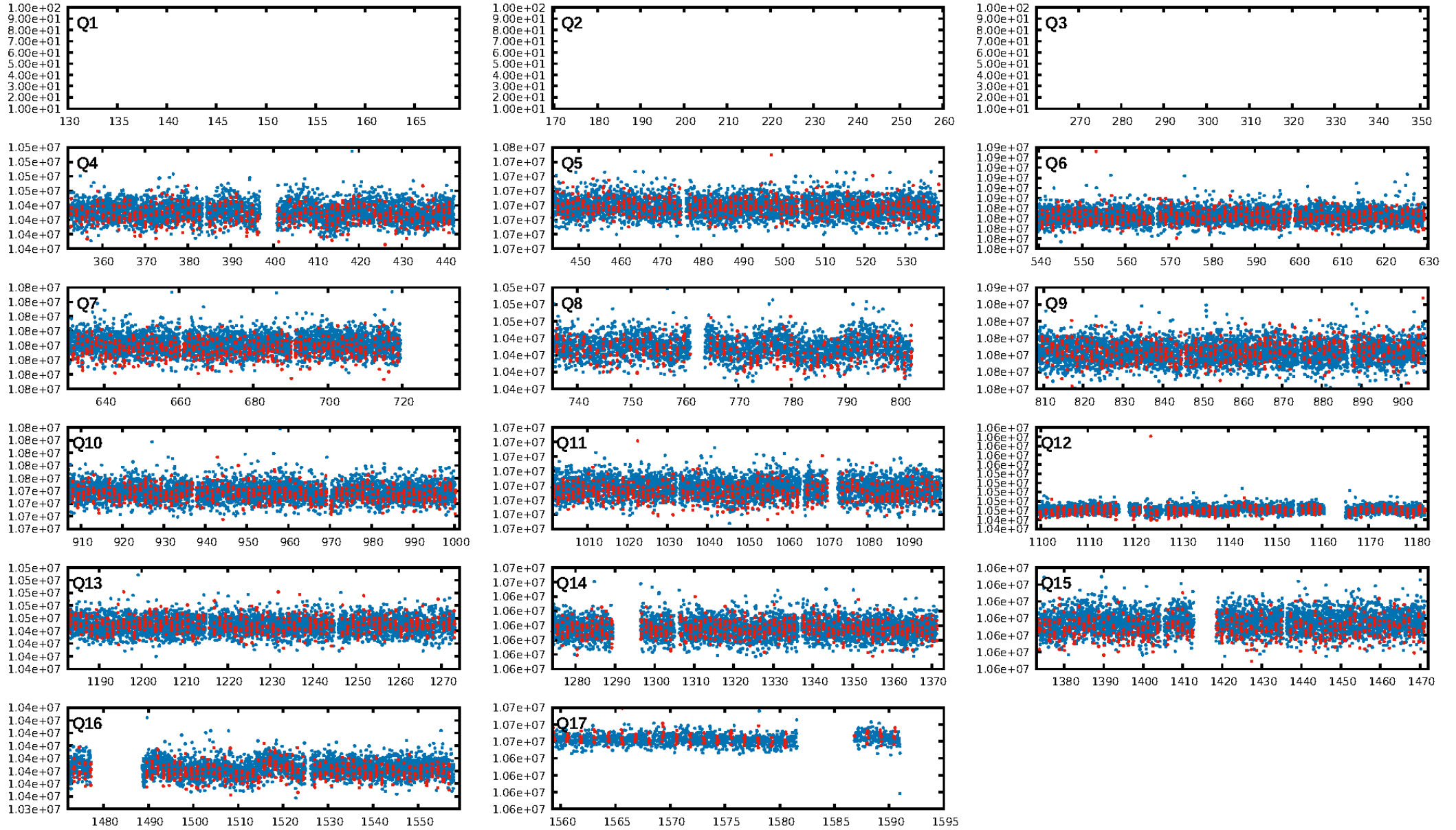
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.44e-37
RollingBand-fgt: 1.00 [891/891]
GhostDiagnostic-chr: 0.9155
Centroid-sig: 0.0%
Centroid-so: 3.163 arcsec [3.79σ]
OotOffset-rm: 13.786 arcsec [12.22σ]
KicOffset-rm: 5.221 arcsec [4.70σ]
OotOffset-st: 0/3/2/2 [7]
KicOffset-st: 0/3/2/2 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 1.00 [14/14]

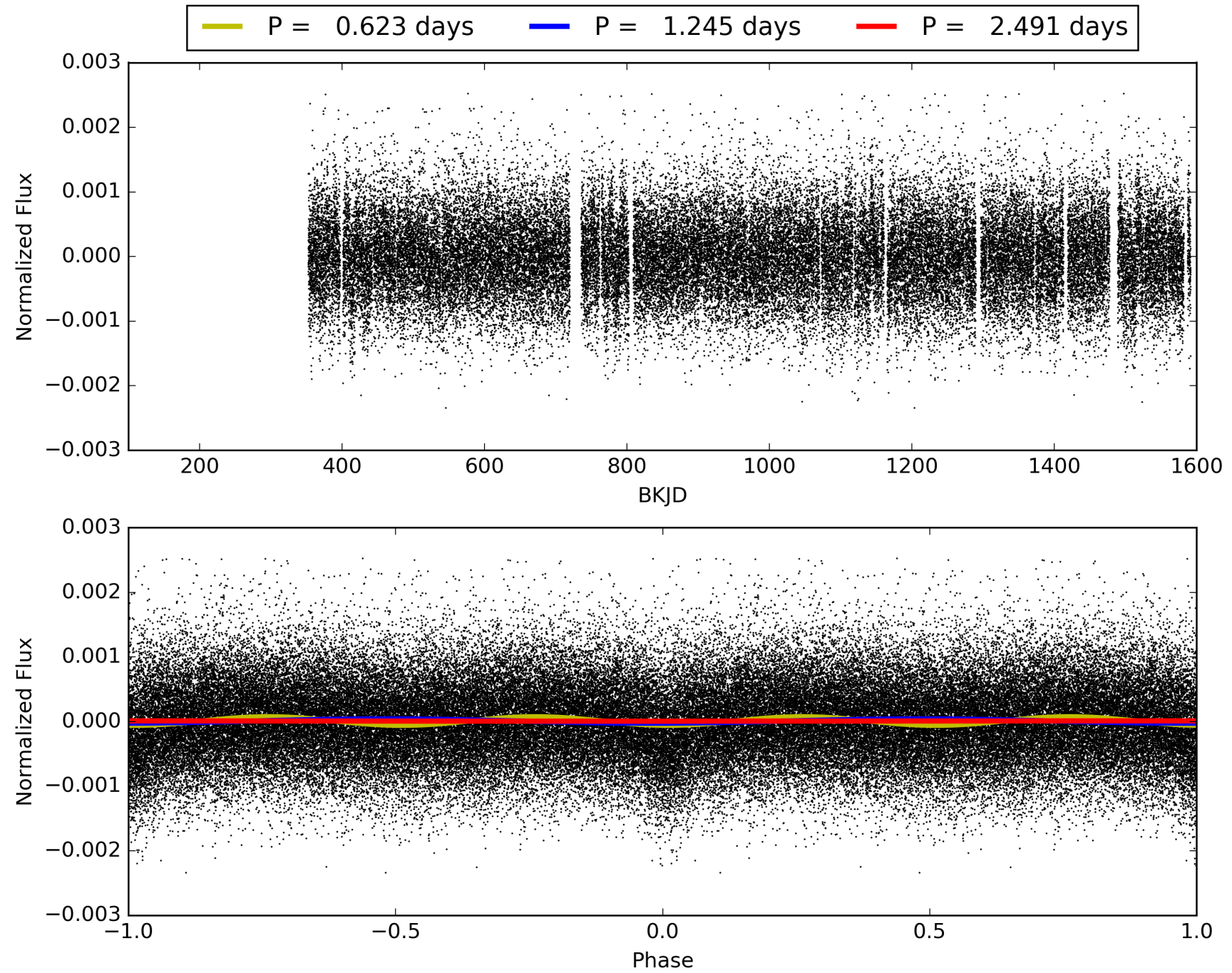
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:14:57 Z

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

TCE 006612284-01, PDC Light Curves

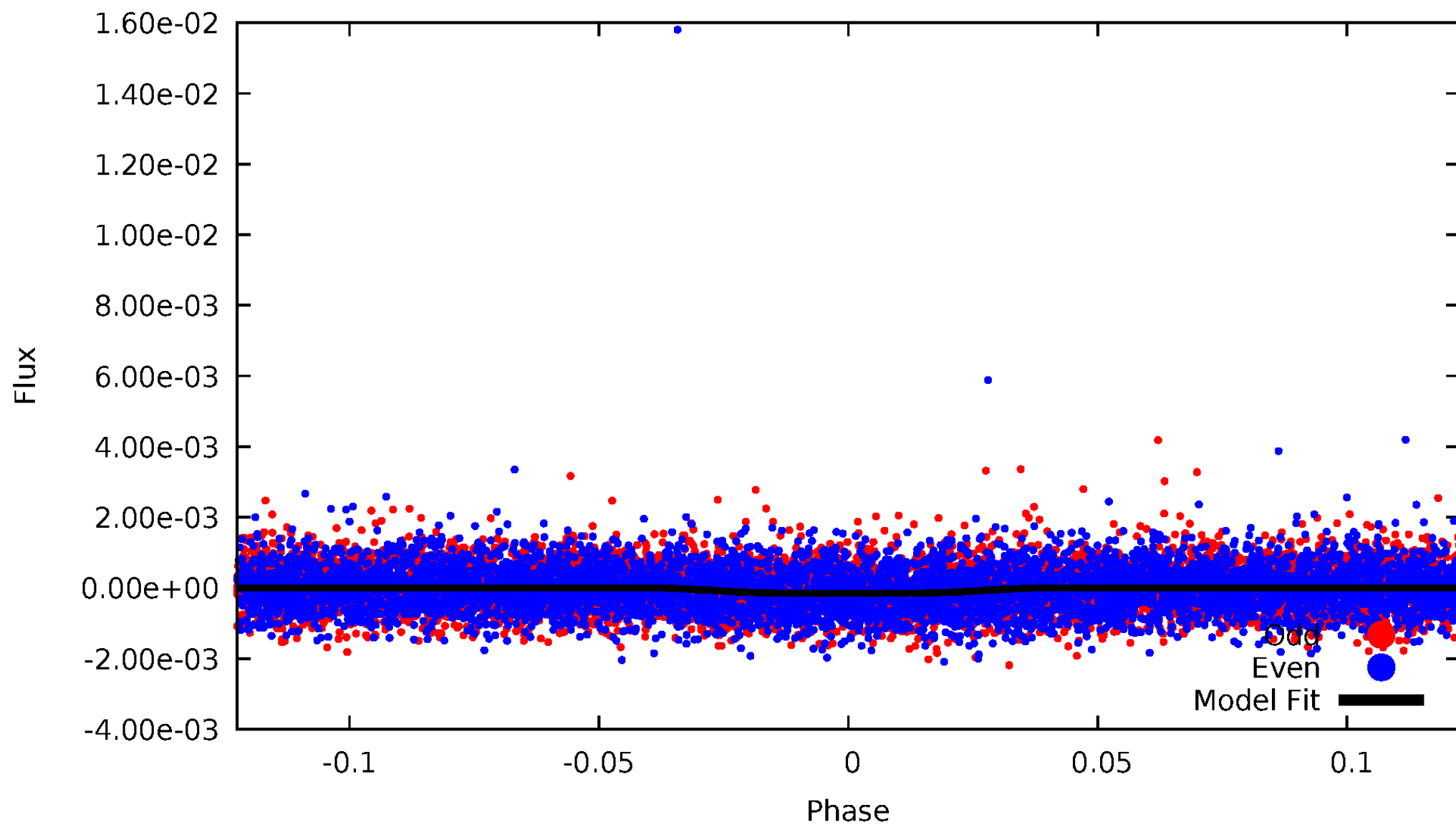


TCE 006612284-01



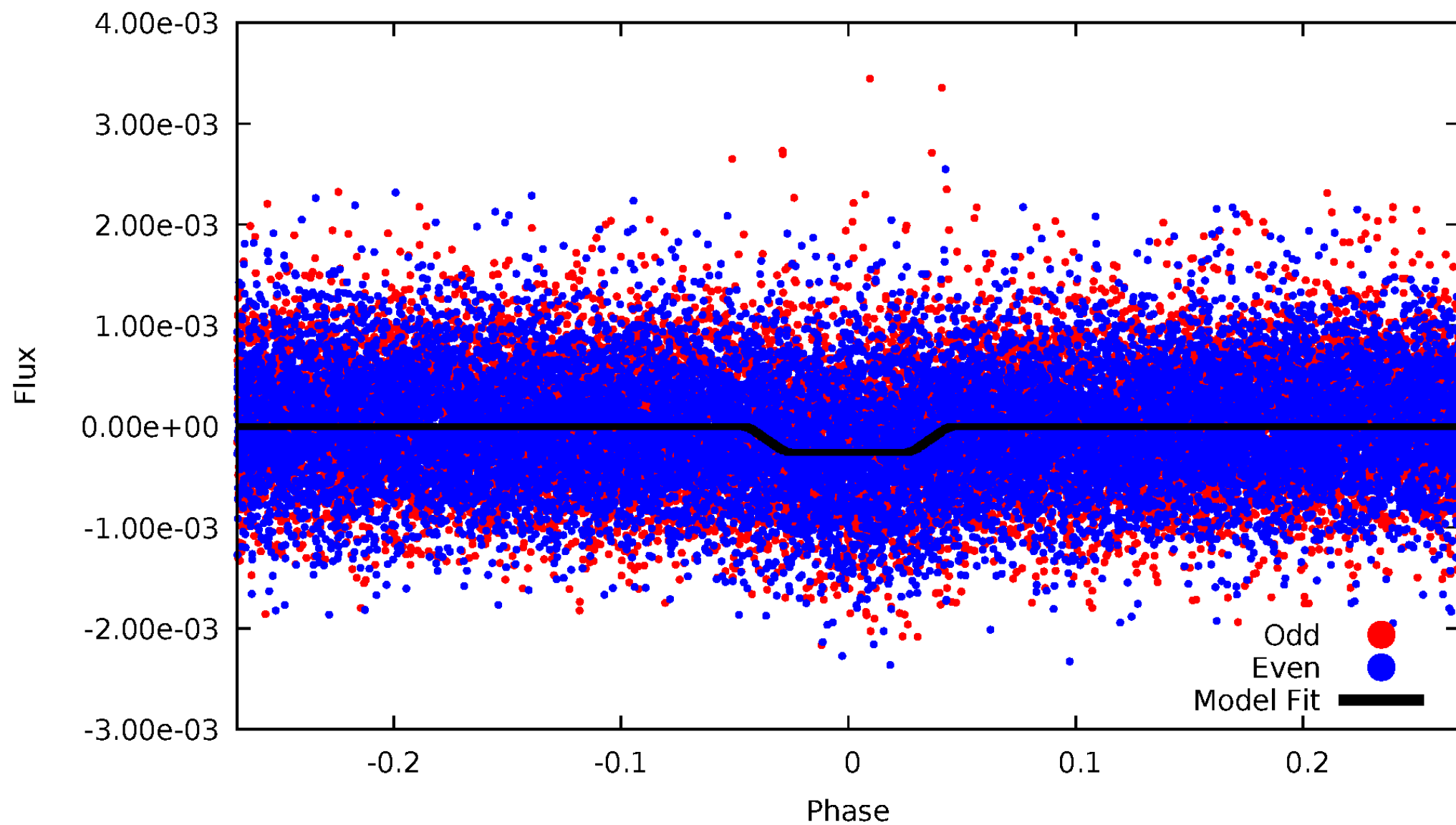
DV Odd/Even

TCE 006612284-01



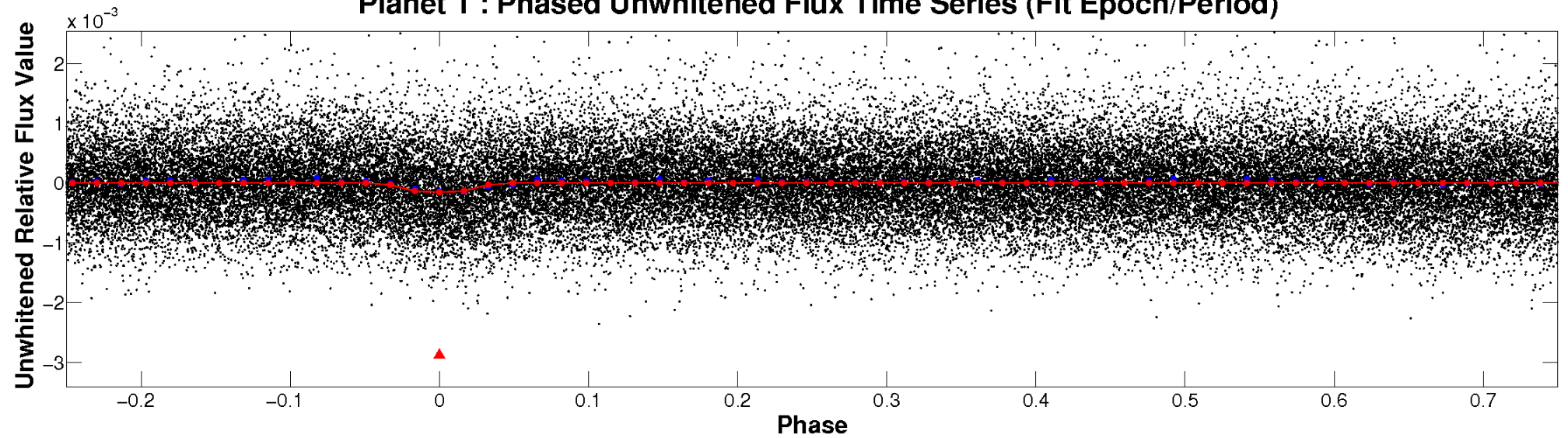
ALT Odd/Even

TCE 006612284-01

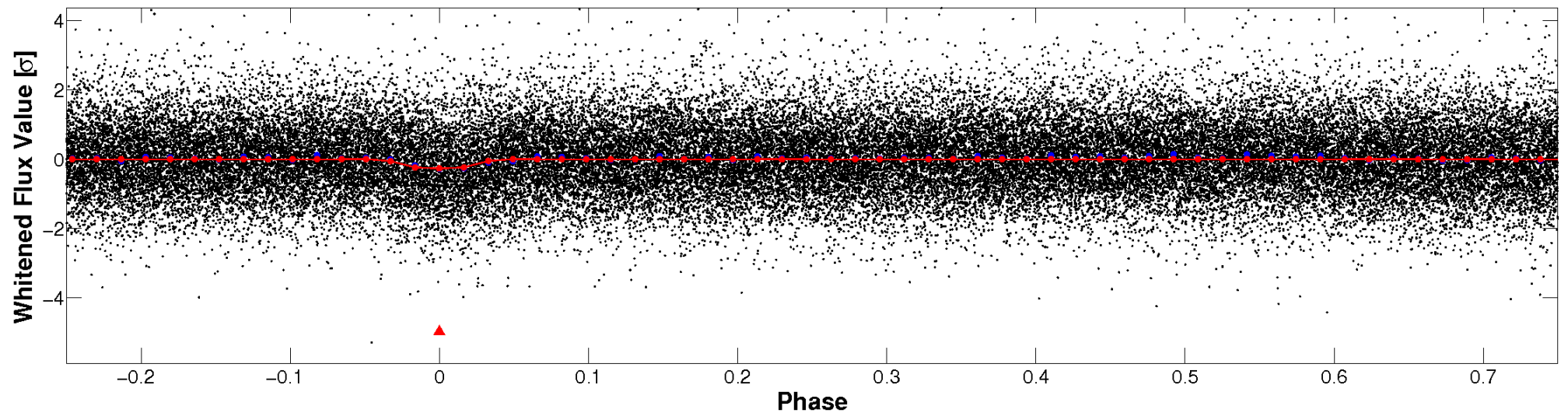


Non-Whitened Vs. Whitened Light Curve

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

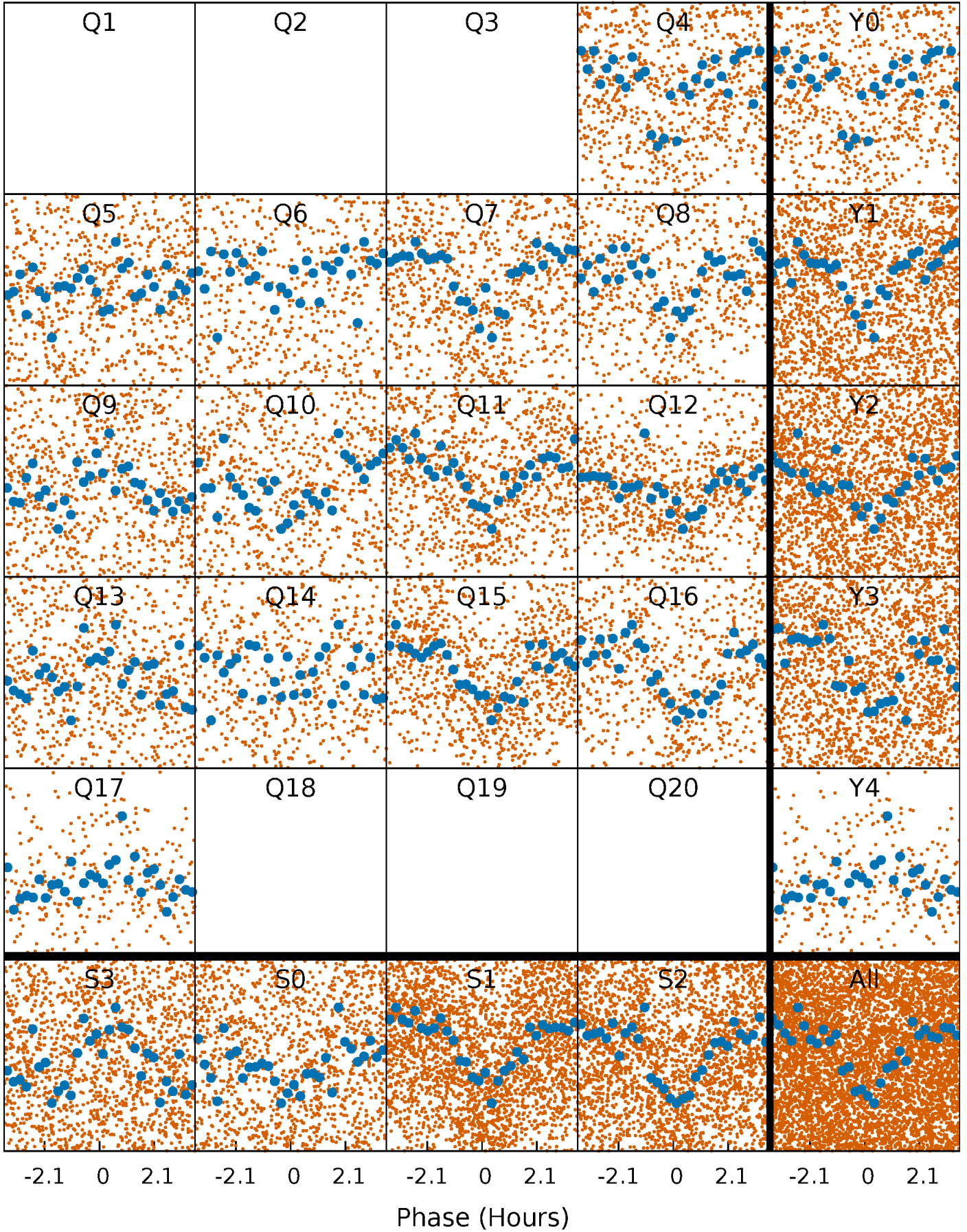


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



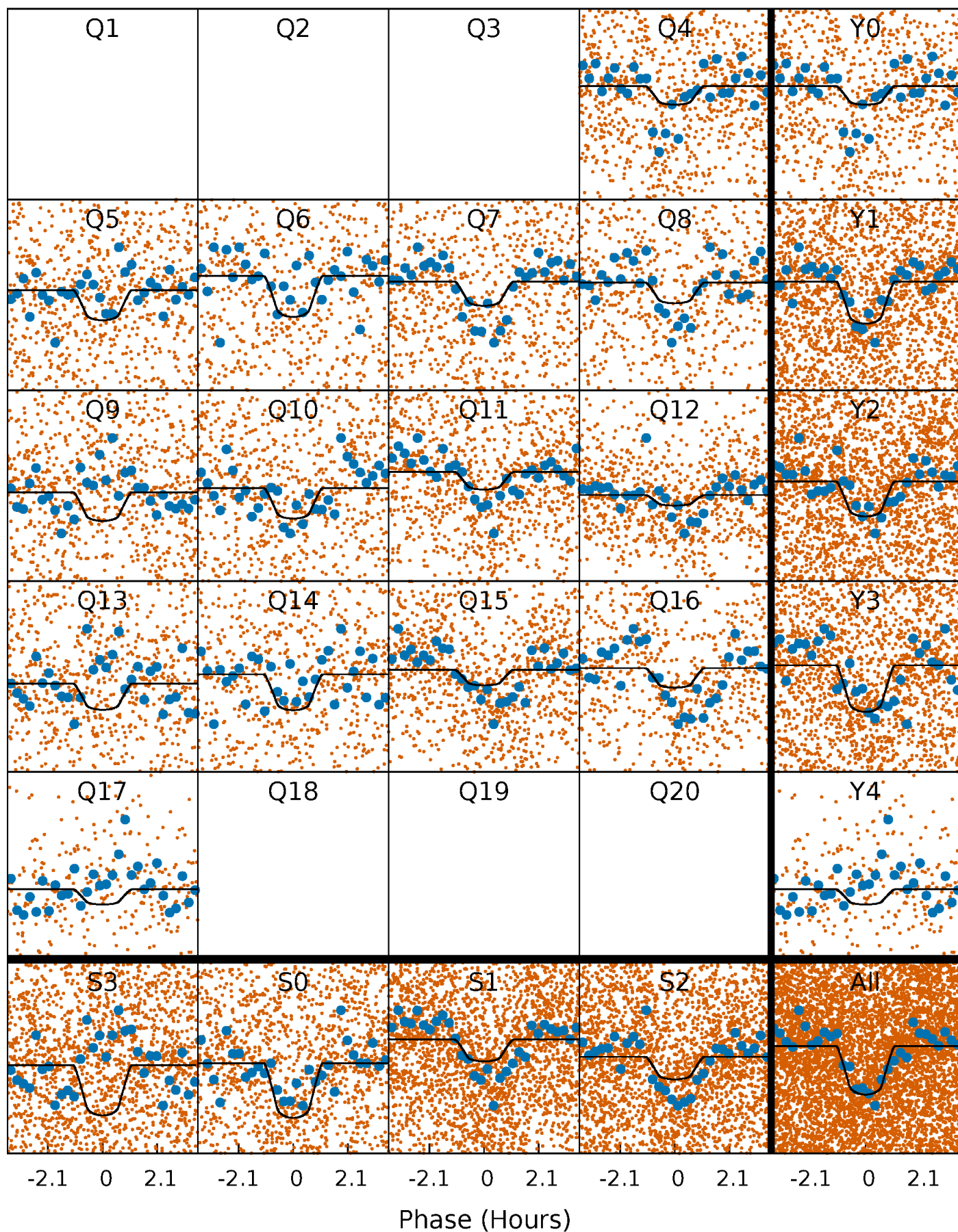
PDC Quarter-Phased Transit Curves

TCE 006612284-01 P= 1.245314 Days $T_0=132.230818$ (BKJD)



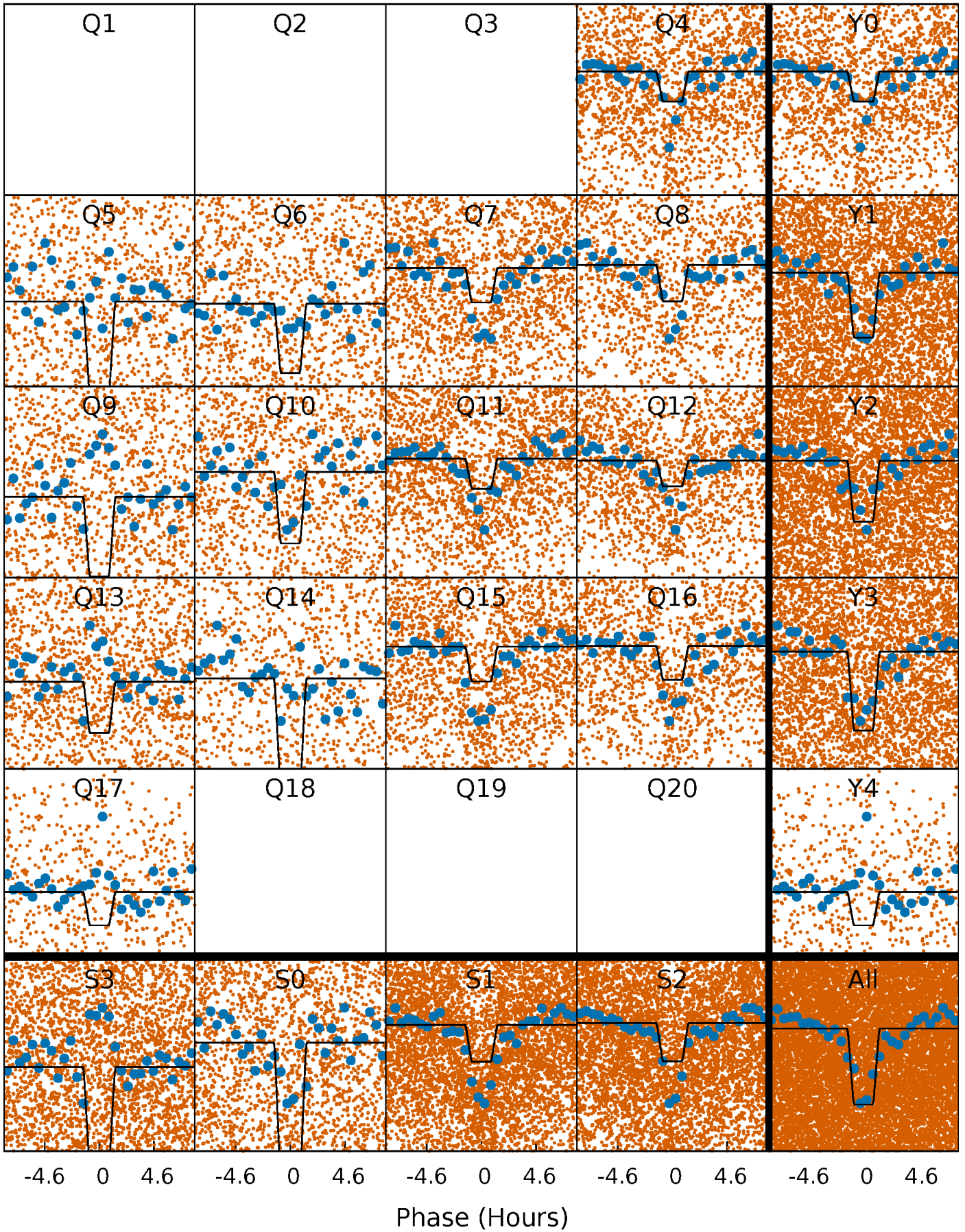
DV Quarter-Phased Transit Curves

TCE 006612284-01 P= 1.245314 Days $T_0=132.230818$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

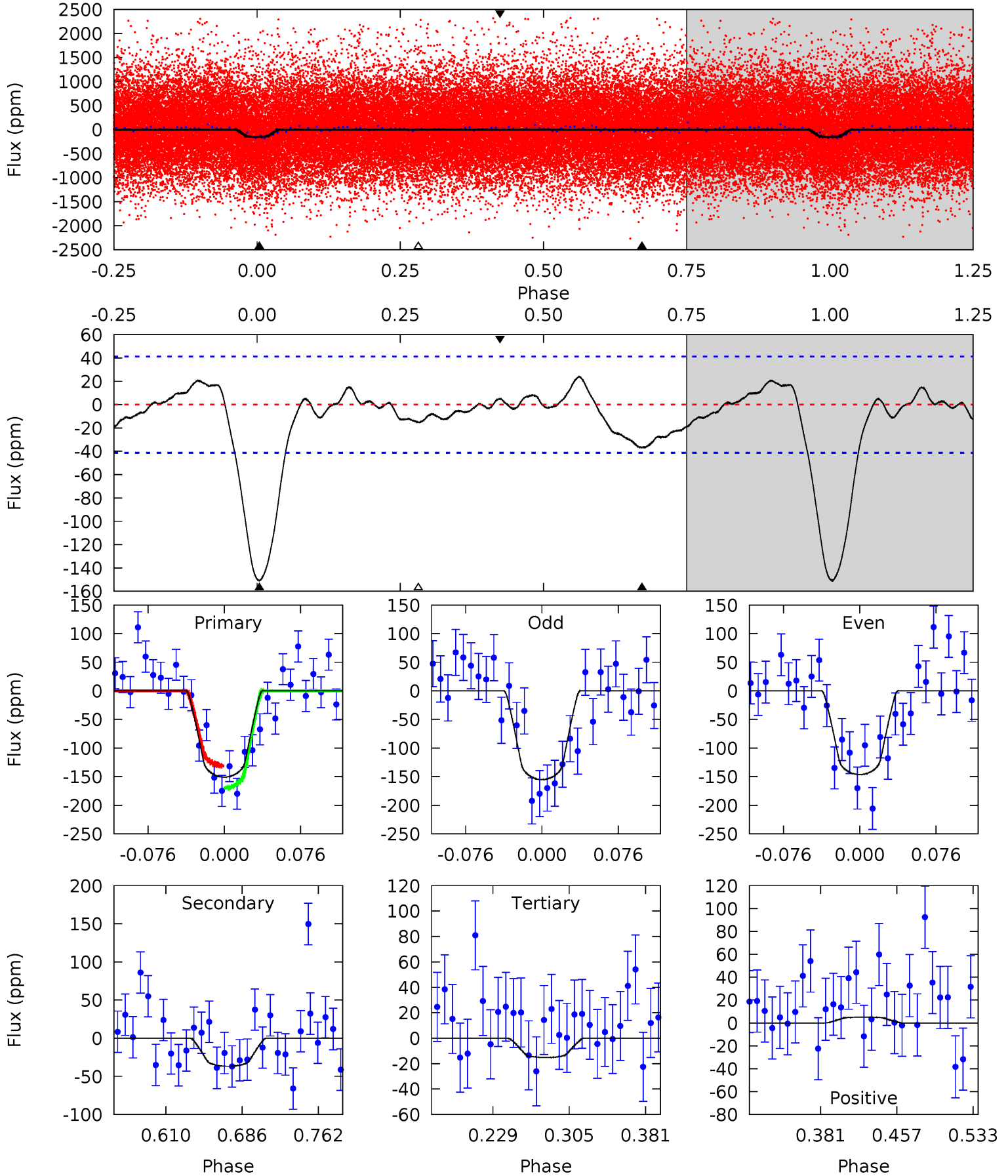
TCE 006612284-01 P= 1.245350 Days $T_0=132.212017$ (BKJD)



DV Model-Shift Uniqueness Test

006612284-01, P = 1.245314 Days, E = 132.230818 Days

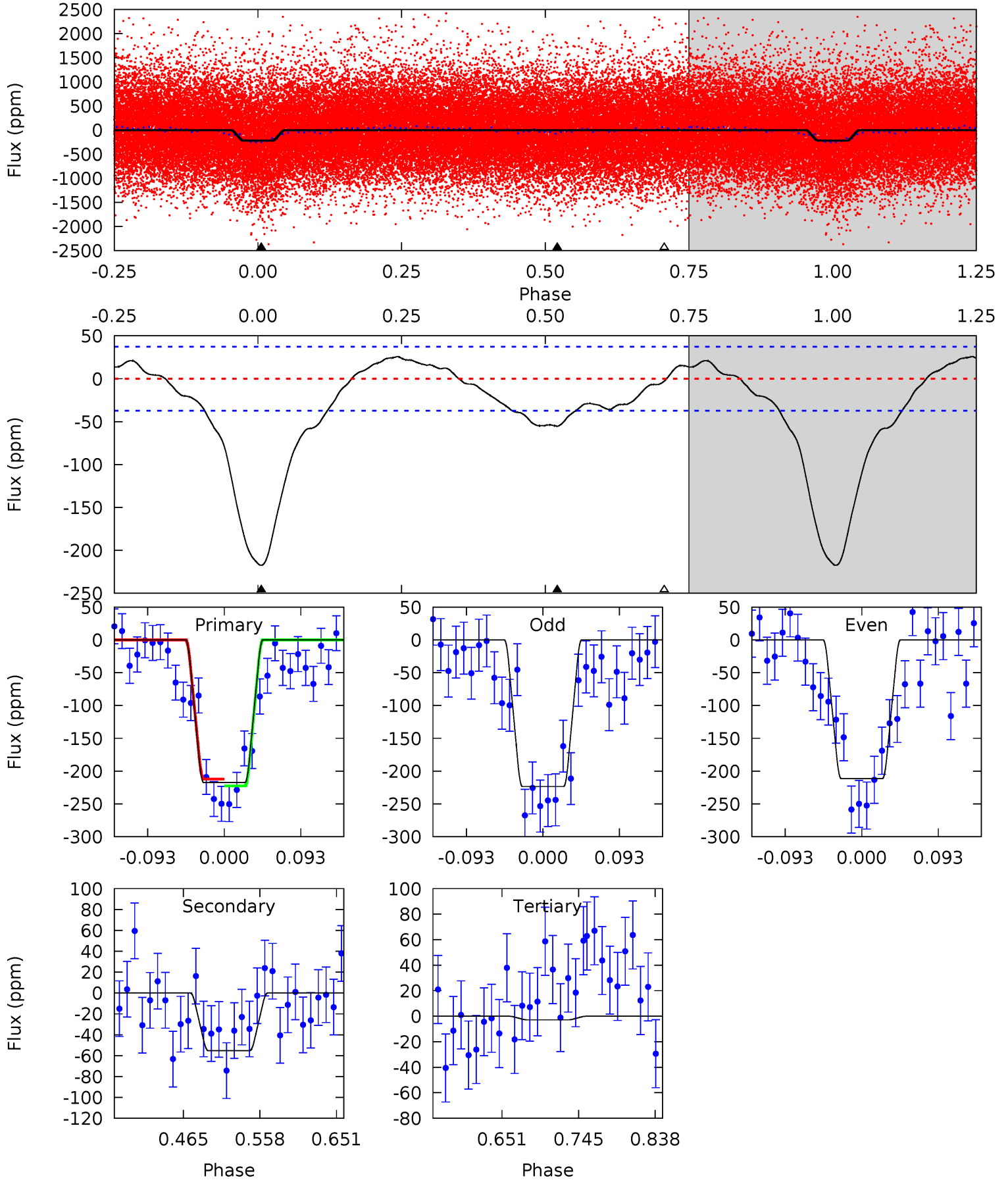
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	4.12	1.71	0.57	4.62	1.77	1.07	15.2	16.3	2.41	3.55	0.49	0.94	0.14	2.19



Alt Model-Shift Uniqueness Test

006612284-01, P = 1.245350 Days, E = 132.212017 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	6.80	0.35	0	4.58	1.68	2.42	26.4	26.7	6.45	6.80	0.75	1.00	0.11	0.63



Stellar Parameters For KIC 006612284

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+189}_{-210}	$4.493^{+0.050}_{-0.200}$	$-0.040^{+0.250}_{-0.300}$	$0.960^{+0.285}_{-0.095}$	$1.047^{+0.126}_{-0.139}$	$1.667^{+0.461}_{-0.870}$
	+3%/-4%	+1%/-4%	+625%/-750%	+30%/-10%	+12%/-13%	+28%/-52%
Source	KIC0	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 006612284-01 / KOI 2908.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 9	$1.48^{+0.87}_{-0.67}$	2432^{+172}_{-126}	4151^{+1204}_{-648}	$4.534^{+11.499}_{-2.702}$
Alt.	-55 ± 8	$1.72^{+0.81}_{-0.74}$	2429^{+176}_{-116}	4295^{+1150}_{-581}	$5.298^{+10.925}_{-2.854}$

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

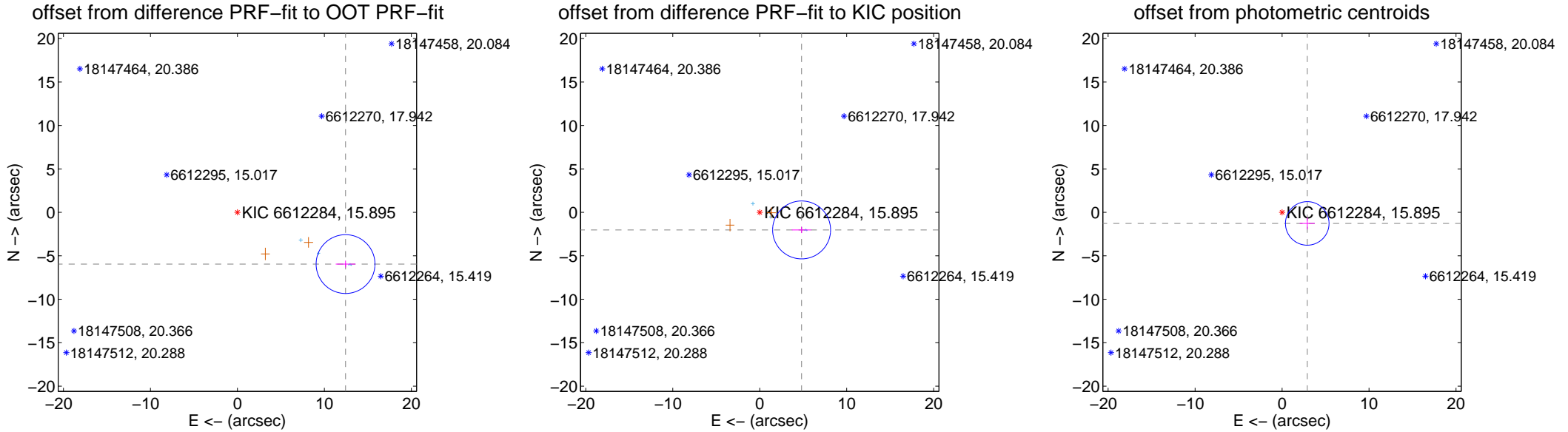
DV Centroid Data

Supplemental centroid analysis for 006612284-01. Kepler magnitude: 15.89. Transit SNR 12.69

There are 5 quarters with good PRF difference image offsets

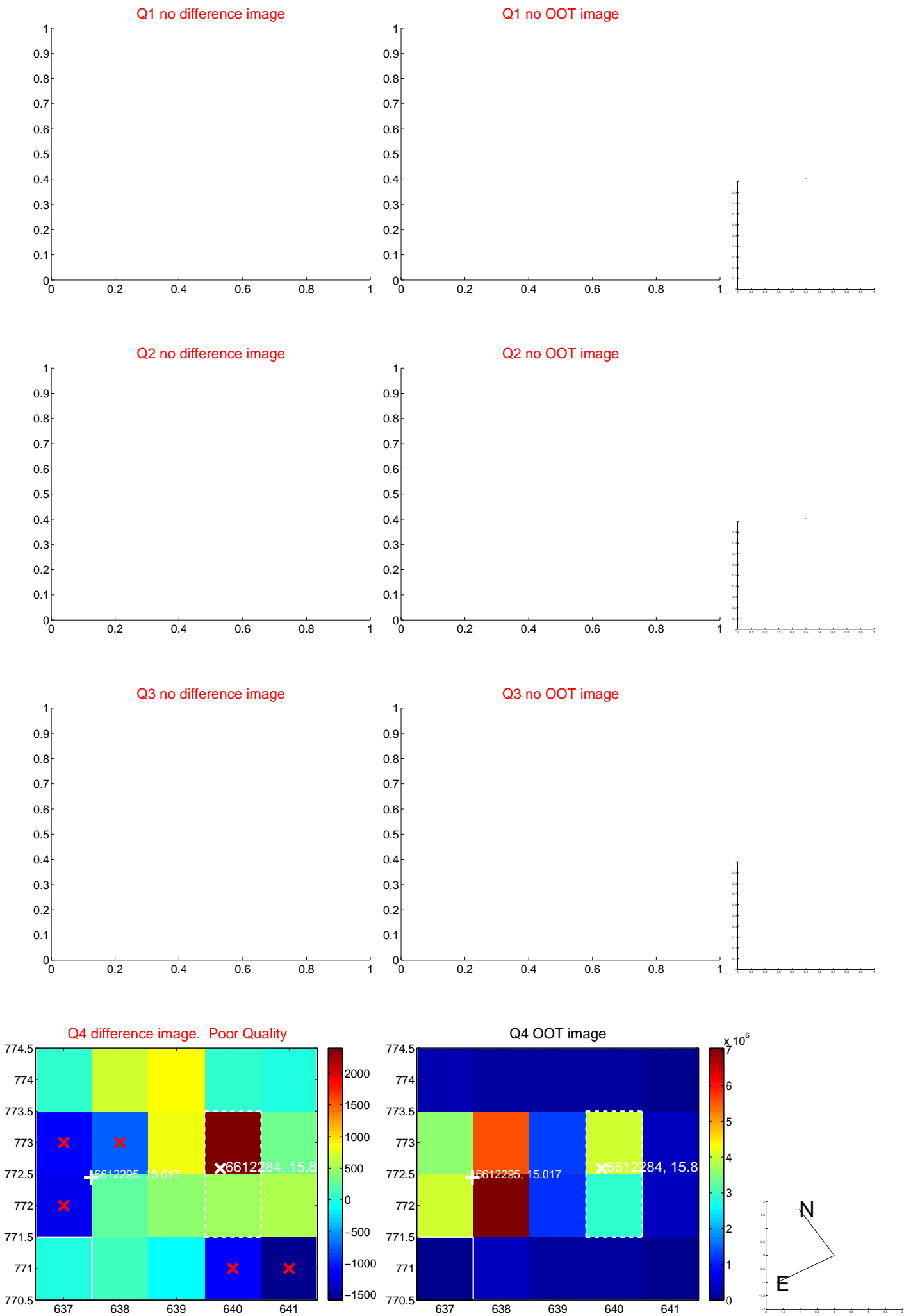
The OOT PRF centroid is offset from the target star catalog position by about 8.61 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	13.786 ± 1.128	12.22	-12.435 ± 1.132	-5.951 ± 0.396
PRF-fit source offset from KIC position	5.221 ± 1.111	4.70	-4.815 ± 1.105	-2.020 ± 0.362
photometric centroid source offset	3.16 ± 0.84	3.79	-2.90 ± 0.86	-1.27 ± 0.68

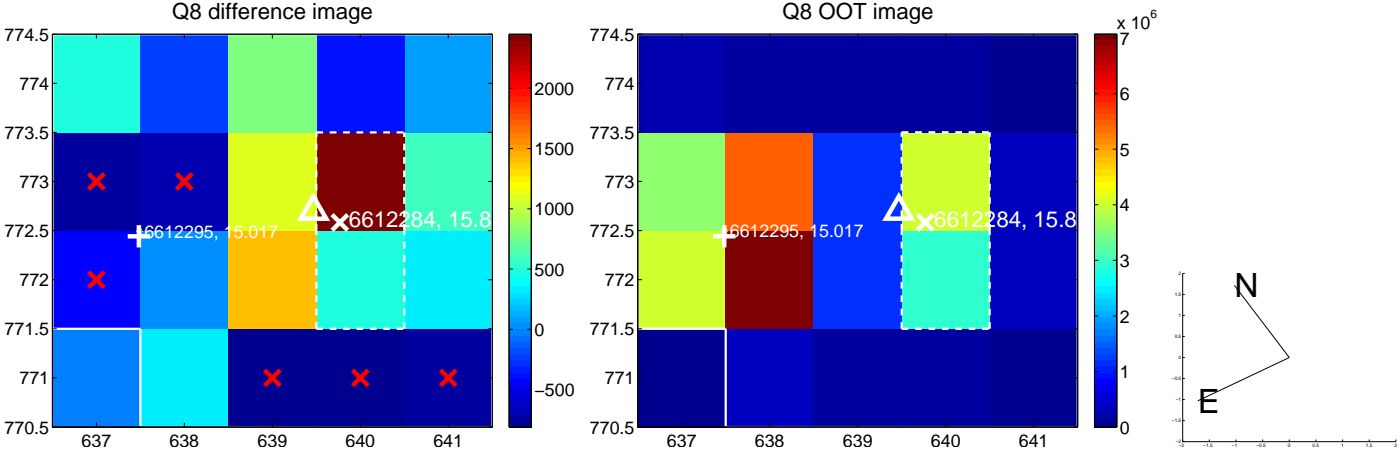
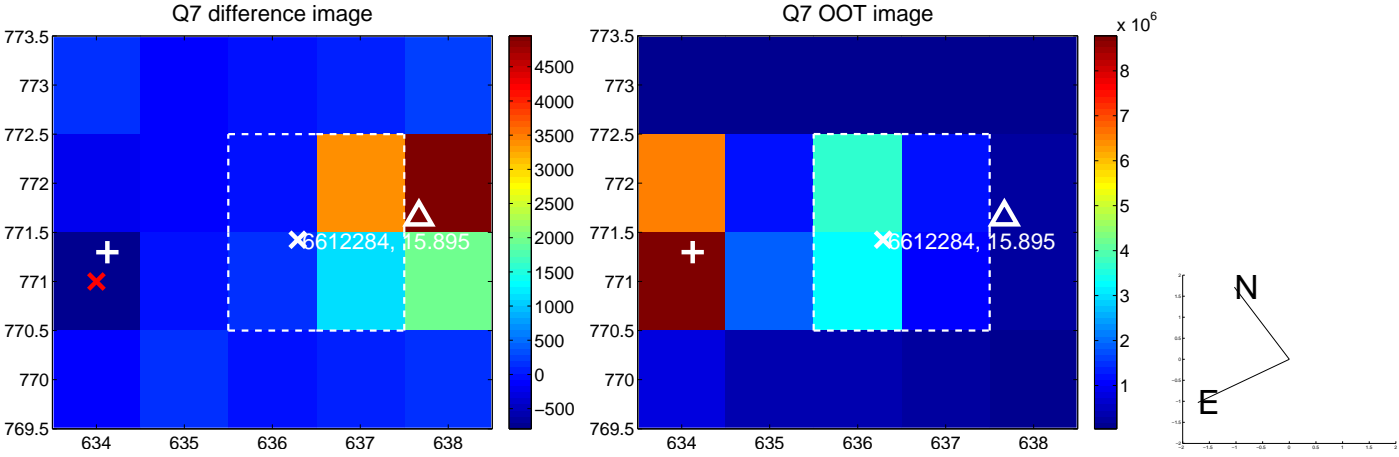
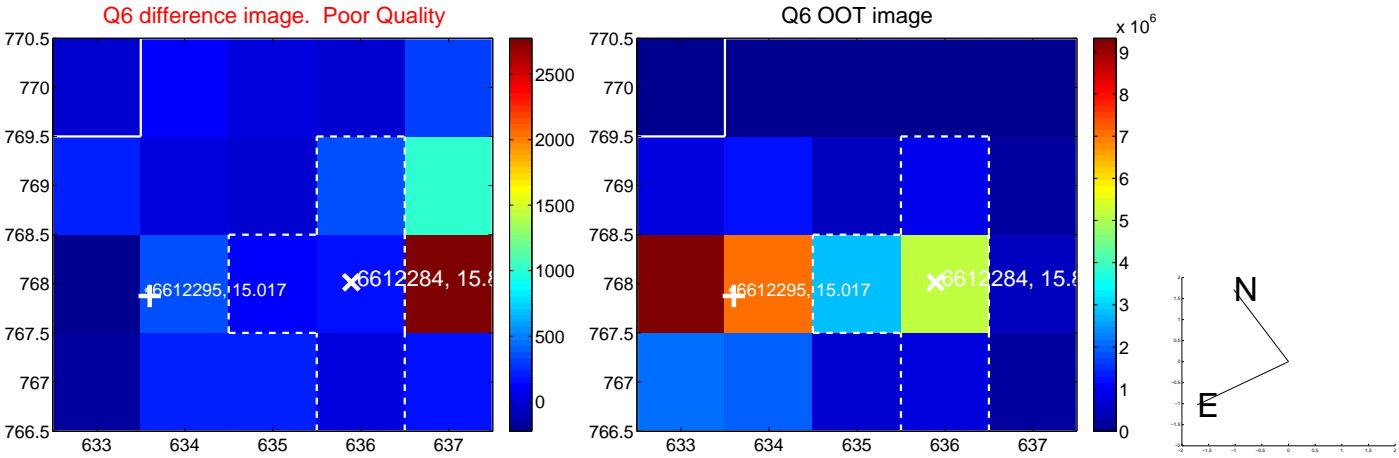
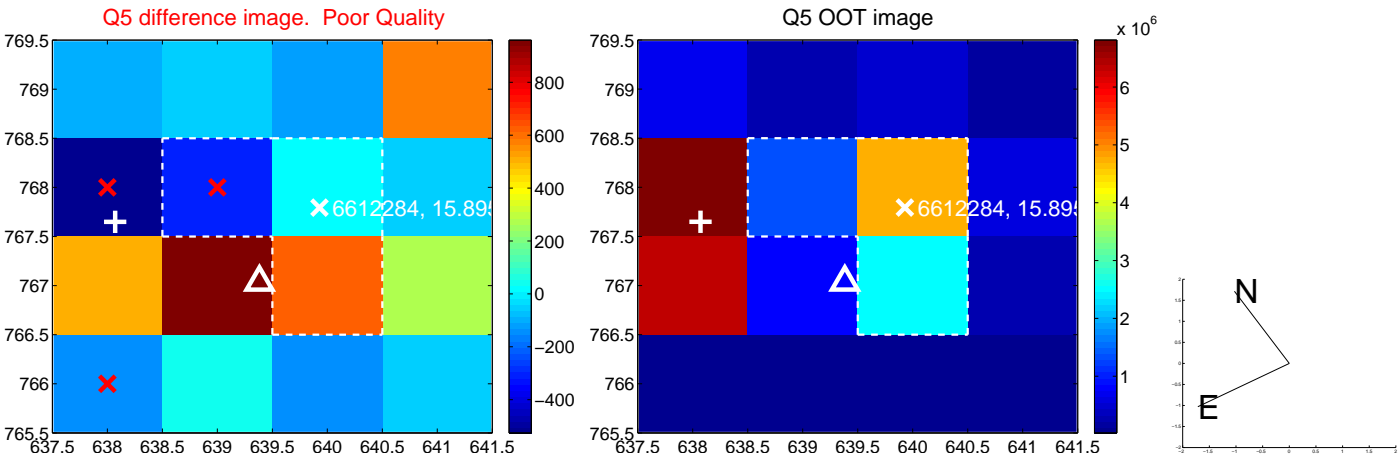


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

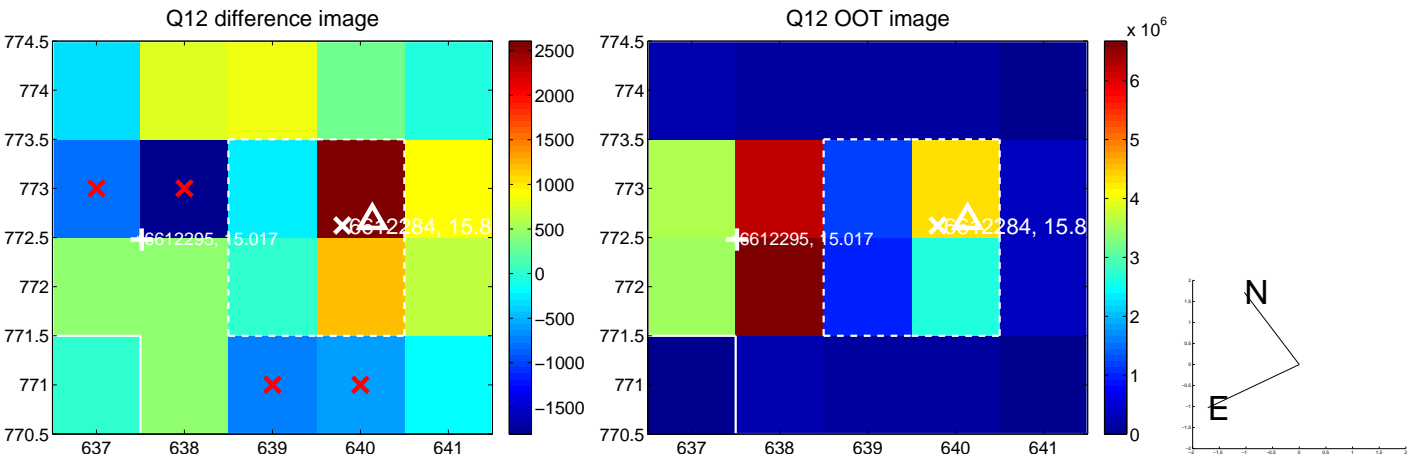
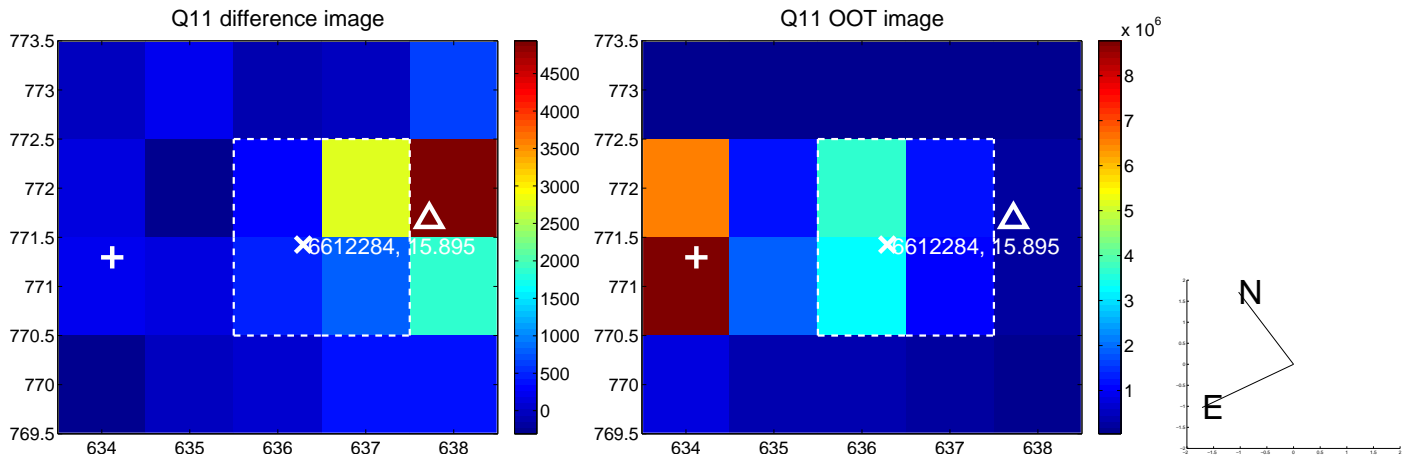
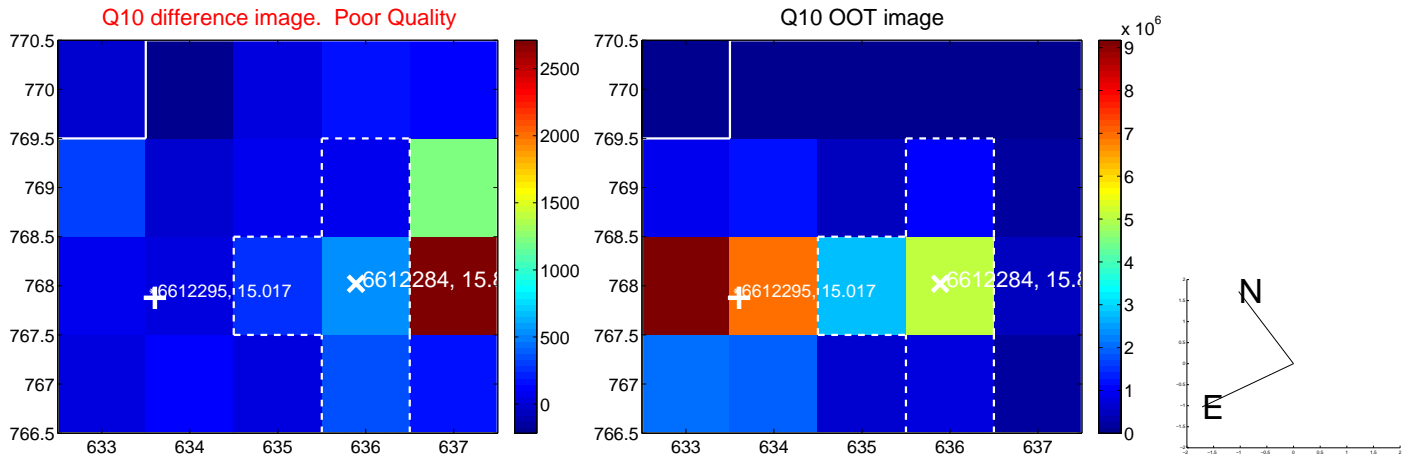
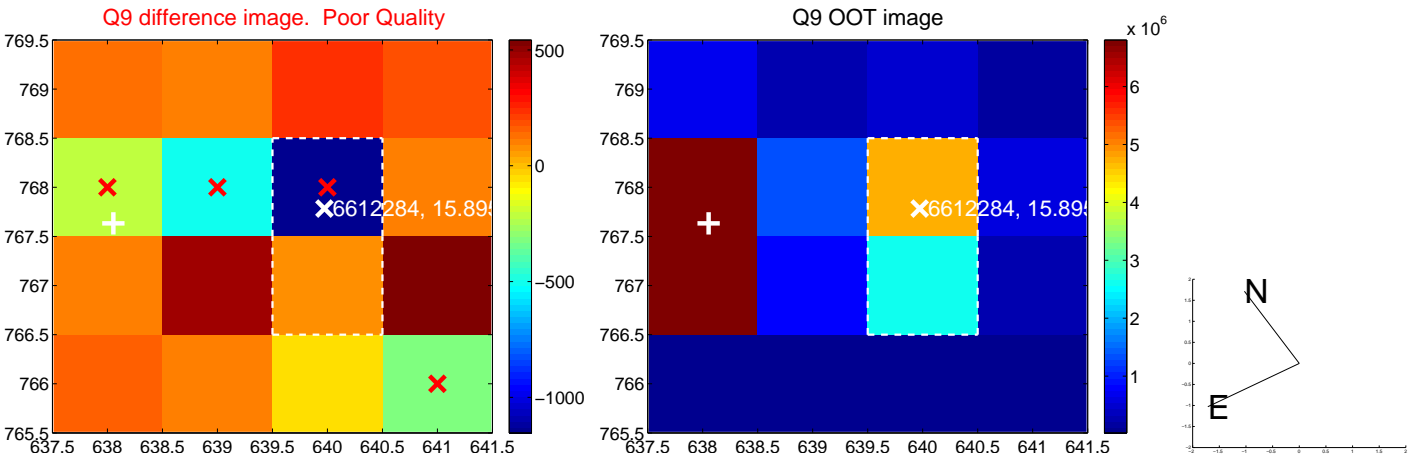
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



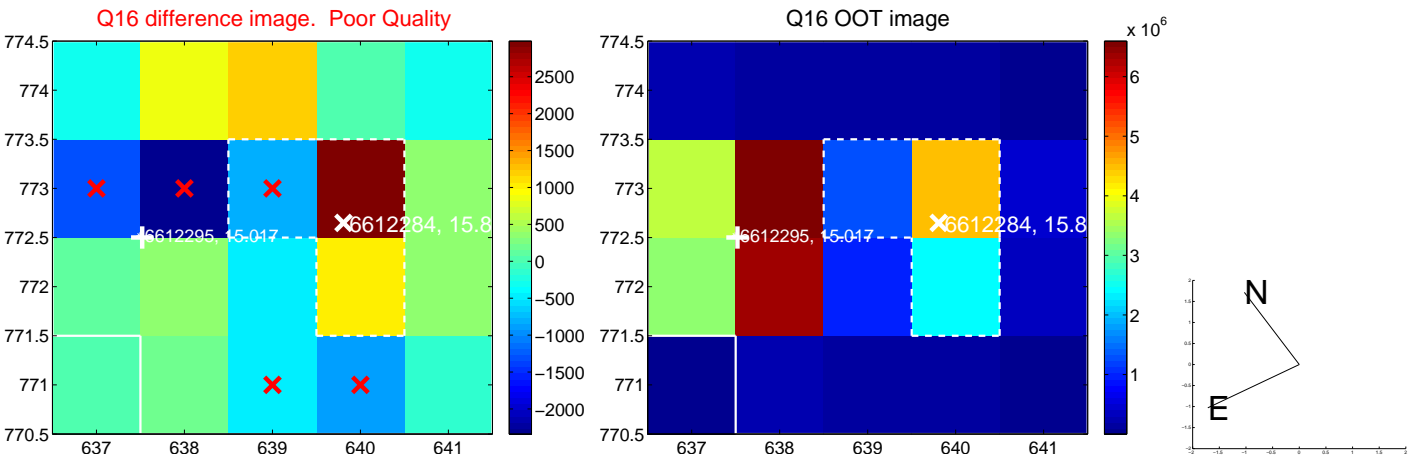
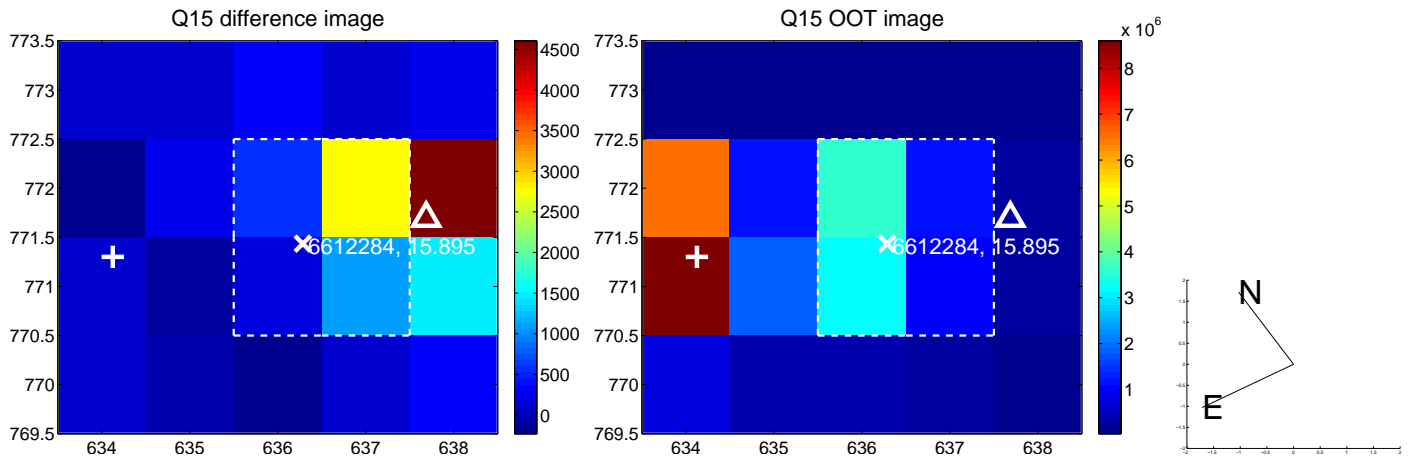
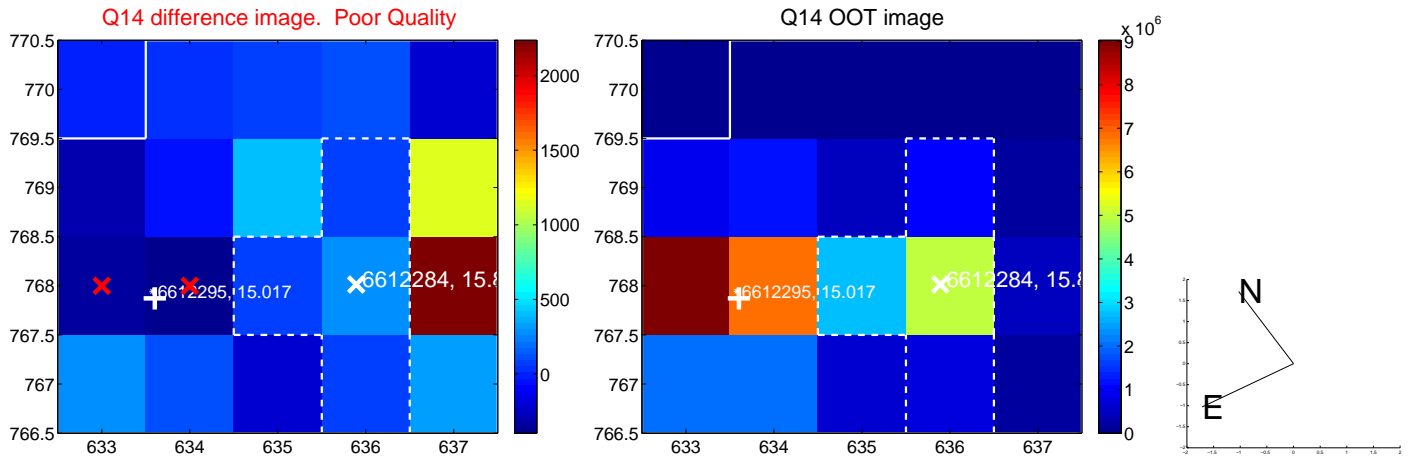
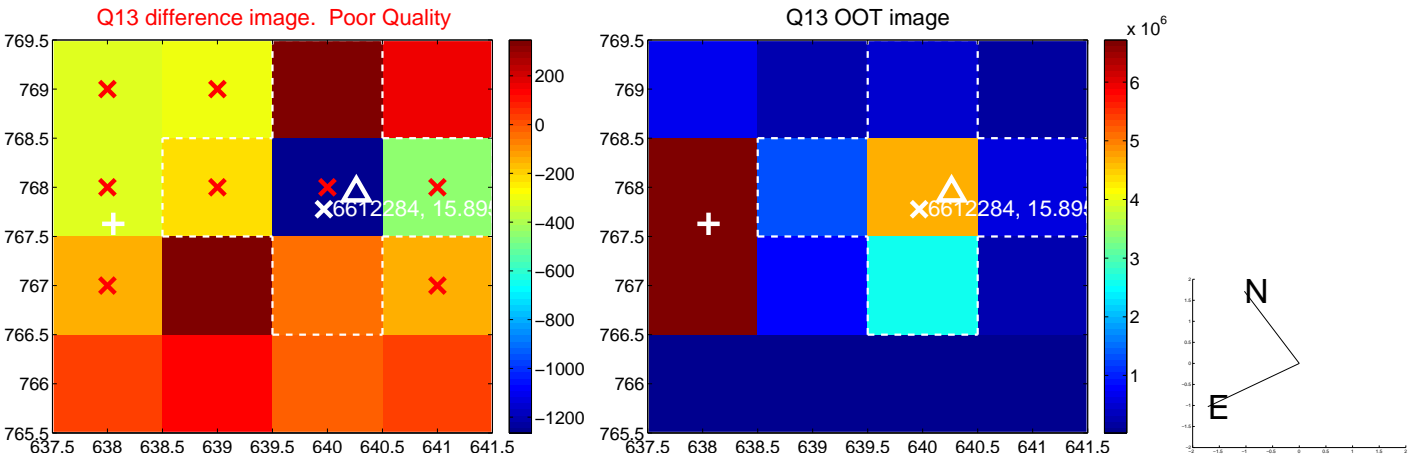
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



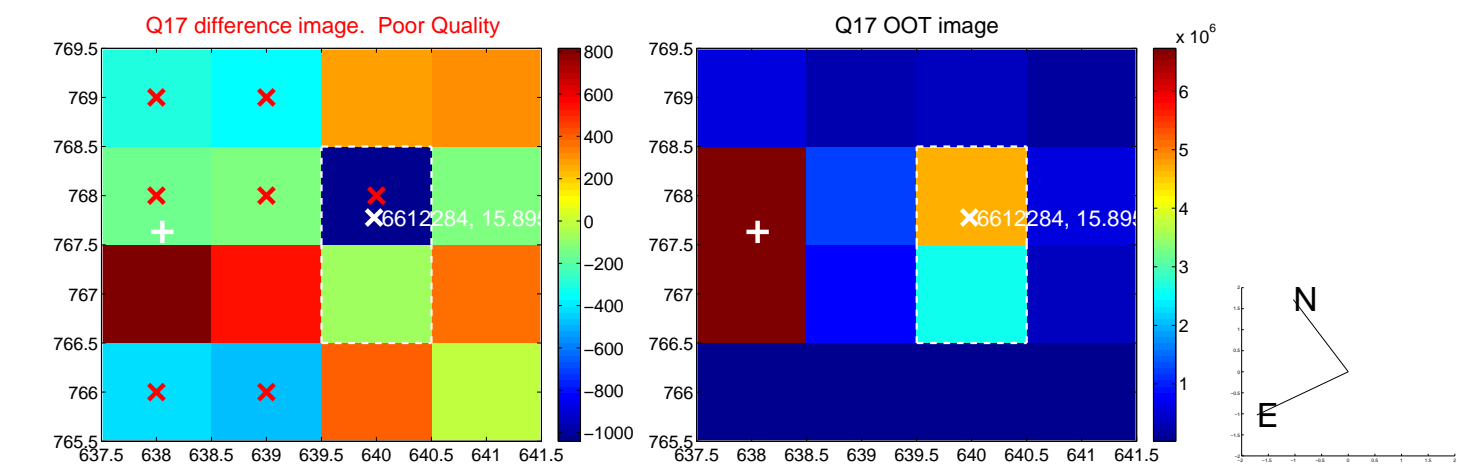
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



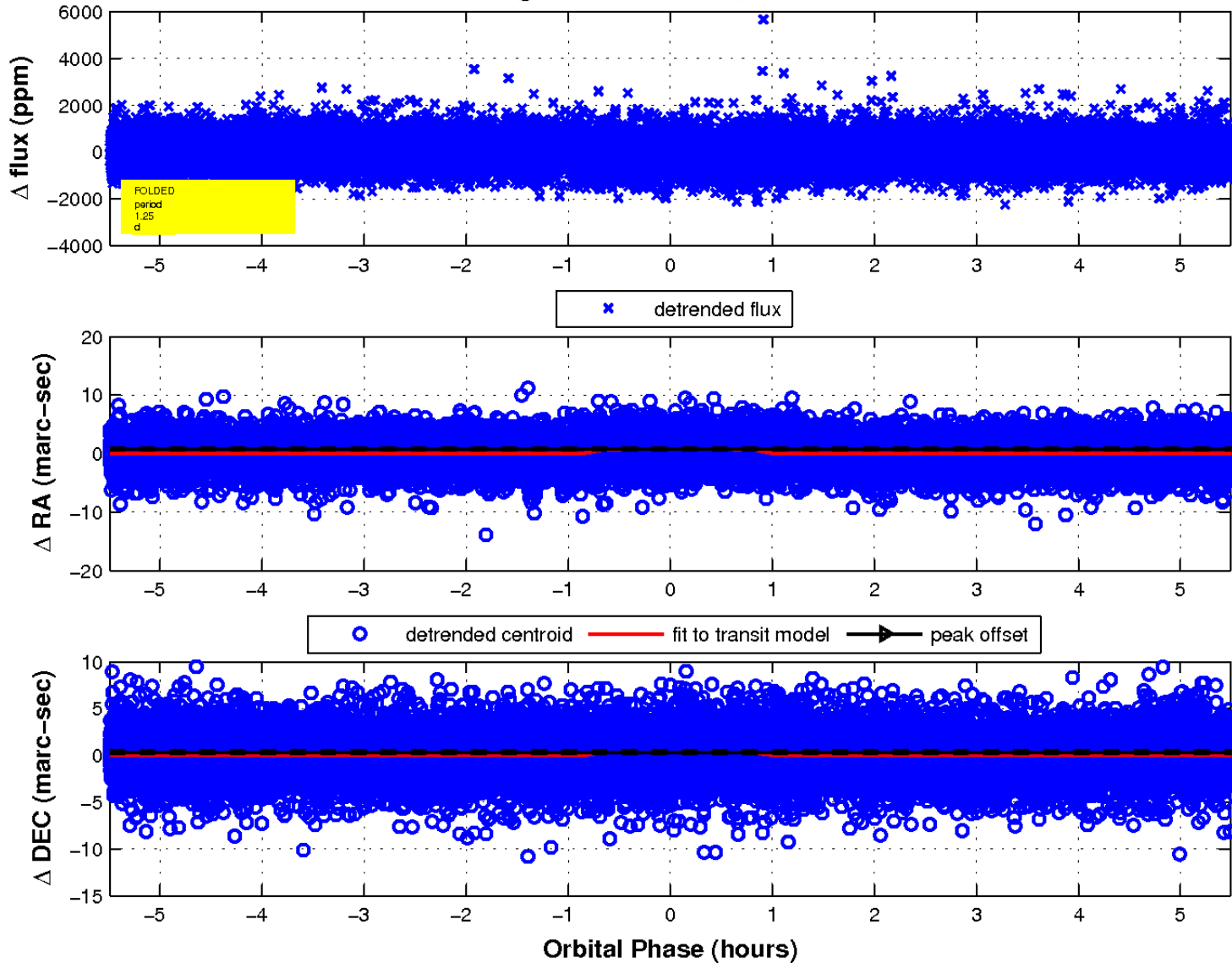
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

