

KIC 003228740

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 _⊕)
003228740-01	OBS	6309.01	0.730952	132.213645	22.7	2.798	9.1	10.4	1.08	6028	0.61	5463.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003228740-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—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.

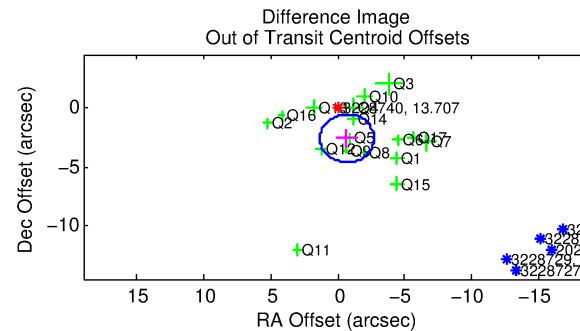
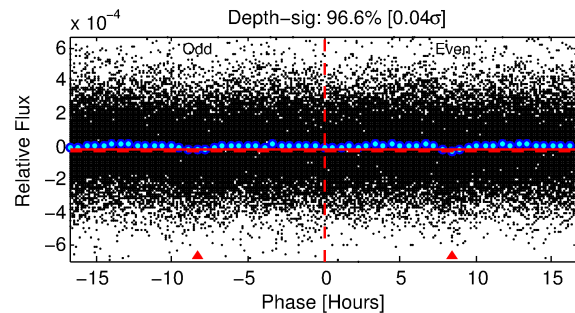
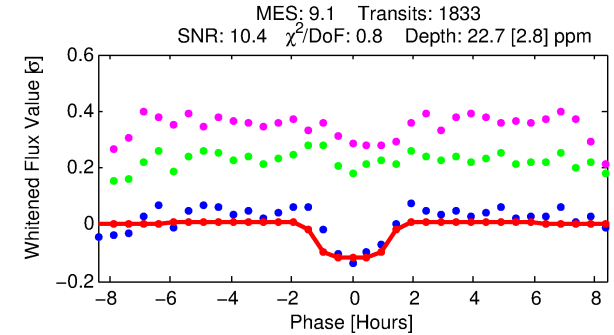
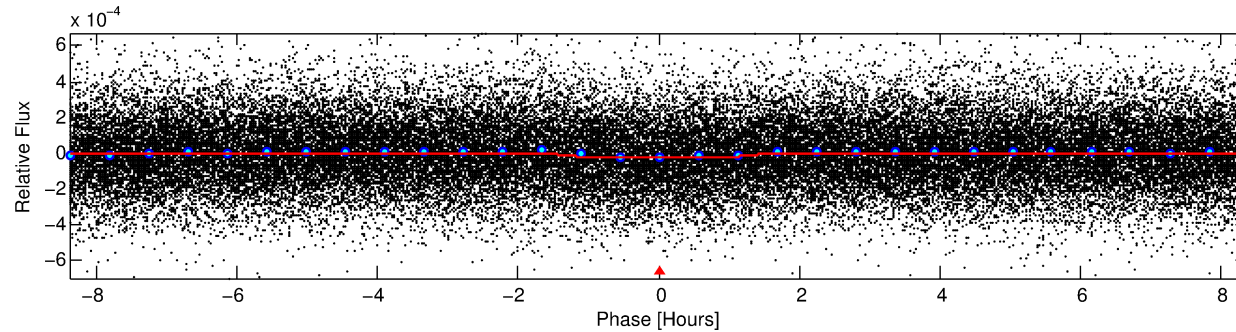
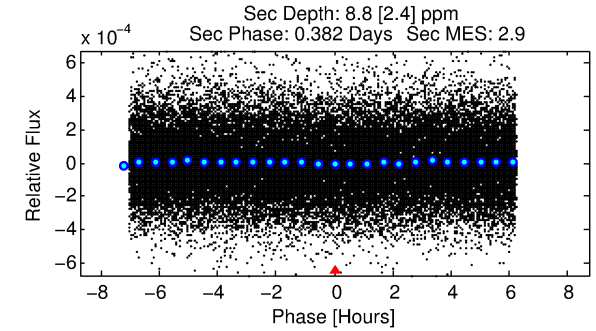
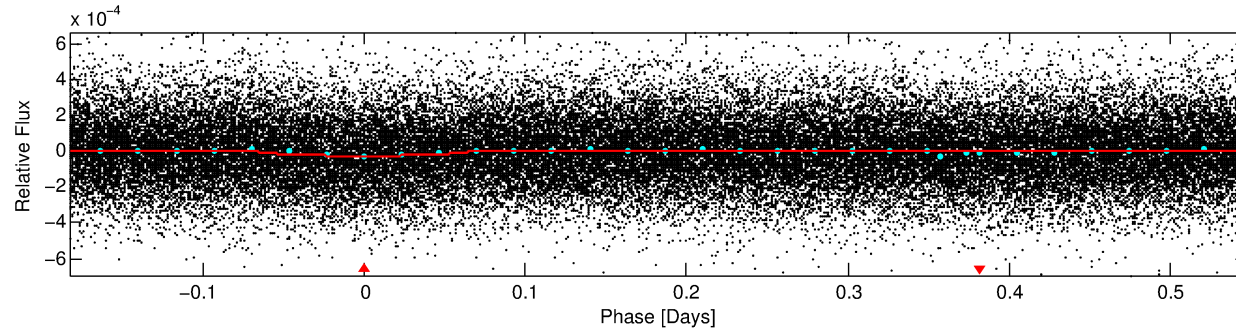
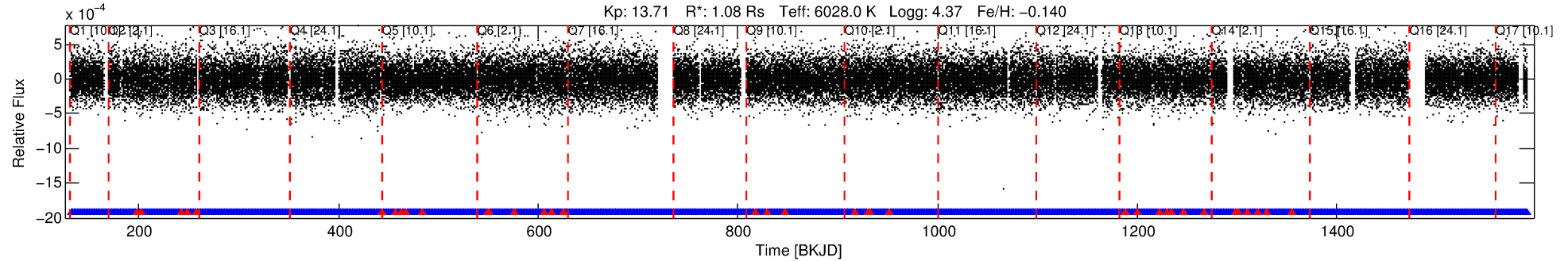
Ephemeris Match Information For 003228740-01

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
003228740-01	3228740	V404-Lyr-pri	3228863	1:1	94.1	-18	-16	11.82	13.71	22668.00	Direct-PRF	0	1.37	1.24

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: 3228740 Candidate: 1 of 1 Period: 0.731 d
KOI: K06309.01 Corr: 0.821



DV Fit Results:

Period = 0.73095 [0.00001] d
Epoch = 132.2136 [0.0033] BKJD
Rp/R* = 0.0051 [0.0022]
a/R* = 1.29 [1.18]
b = 0.90 [0.48]
Seff = 5463.63 [2134.63]
Teq = 2192 [214] K
Rp = 0.61 [0.32] Re
a = 0.0159 [0.0041] AU
Ag = 3.31 [3.24] [0.71σ]
Teffp = 4573 [1043] K [2.24σ]

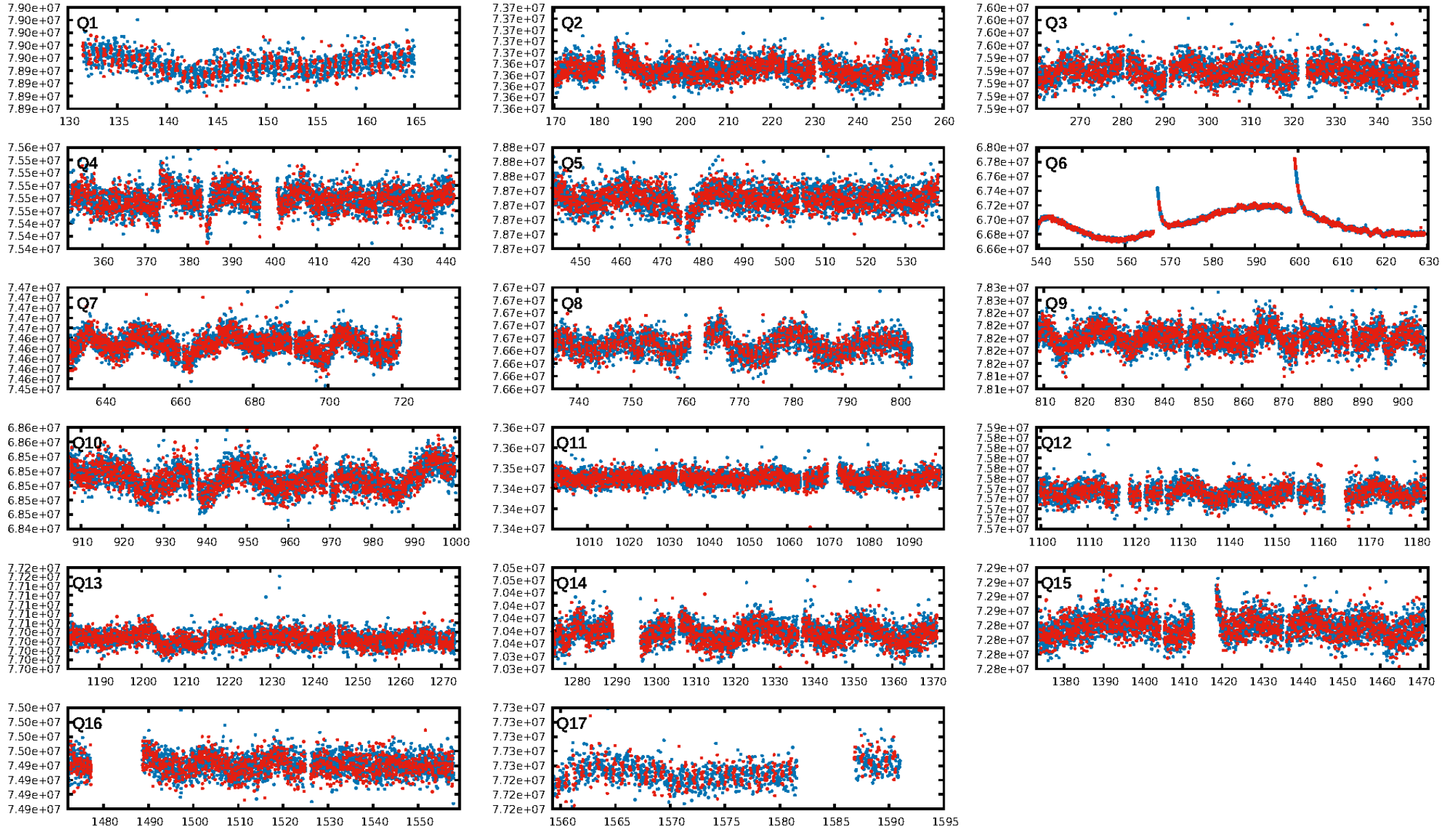
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.10e-20
RollingBand-fgt: 0.98 [1712/1751]
GhostDiagnostic-chr: -0.1912
Centroid-sig: 0.0%
Centroid-so: 5.431 arcsec [3.52σ]
OotOffset-rm: 2.698 arcsec [3.98σ]
KicOffset-rm: 2.750 arcsec [3.83σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

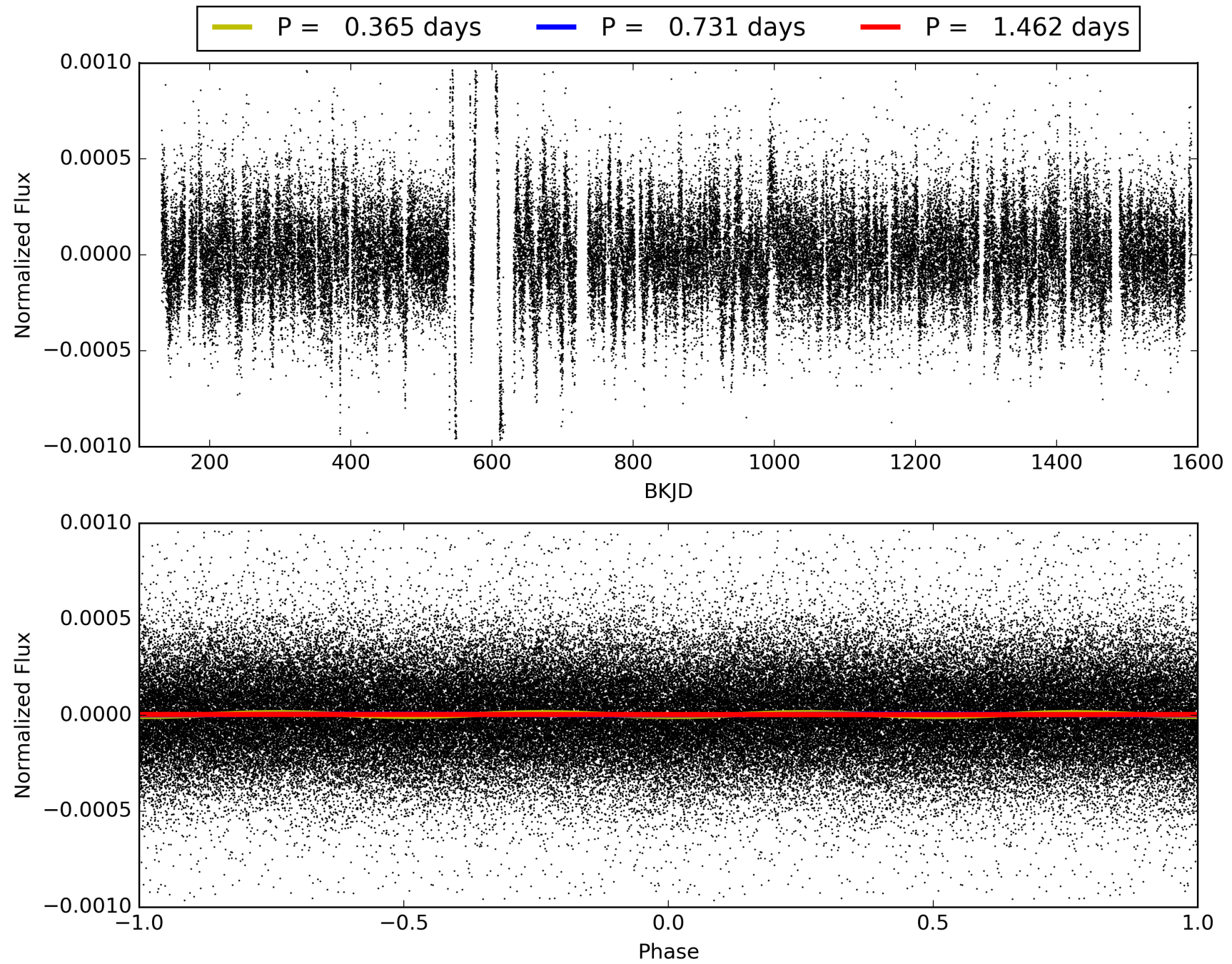
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:26:43 Z

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

TCE 003228740-01, PDC Light Curves

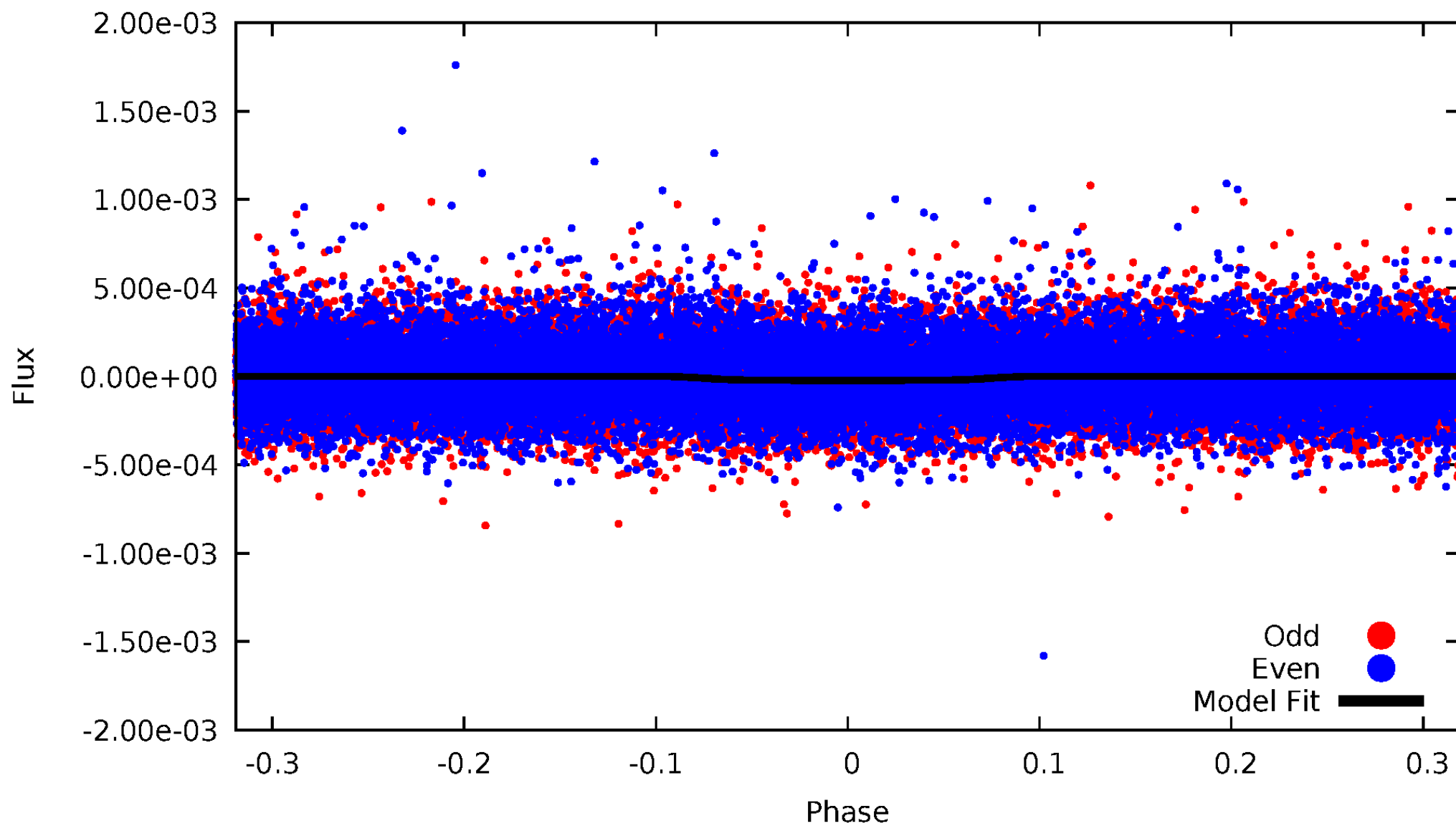


TCE 003228740-01



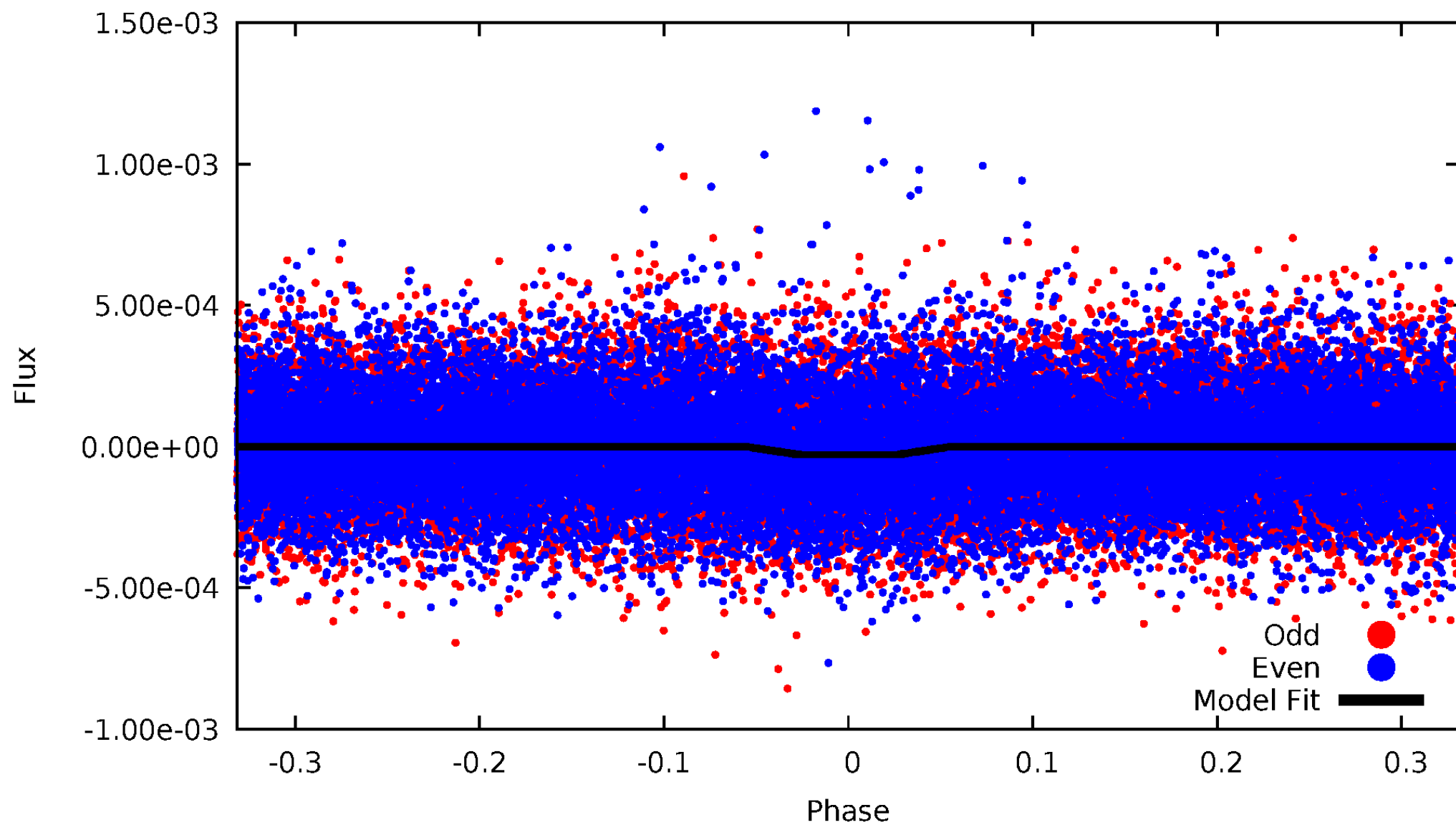
DV Odd/Even

TCE 003228740-01



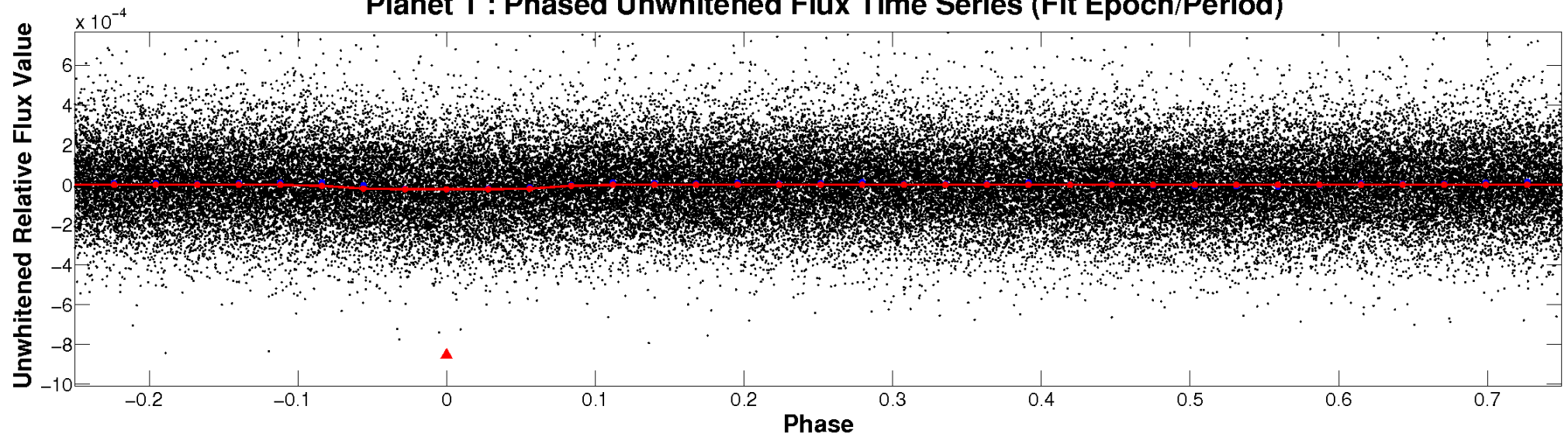
ALT Odd/Even

TCE 003228740-01

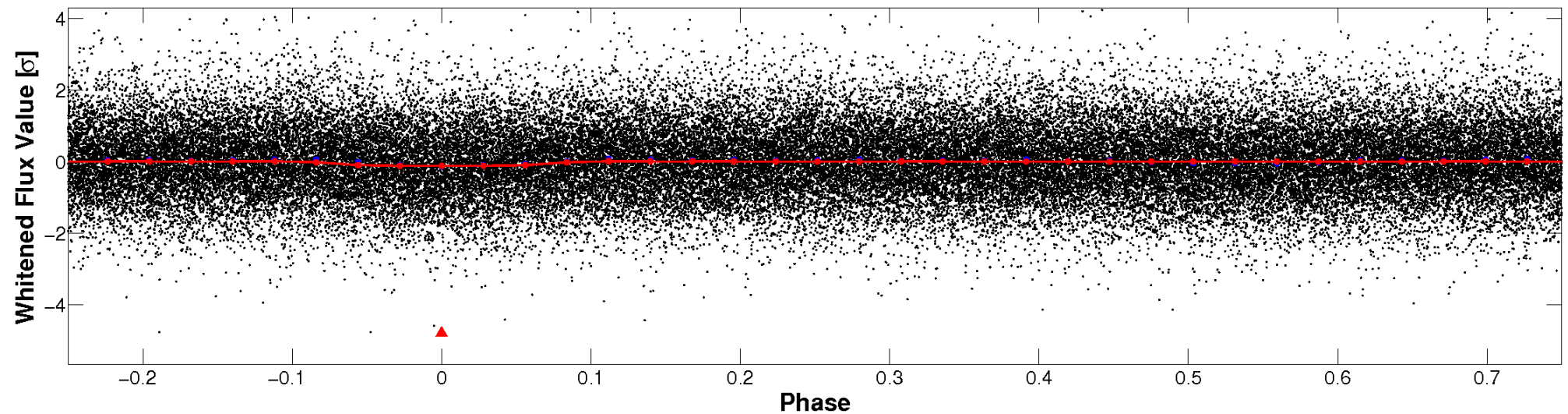


Non-Whitened Vs. Whitened Light Curve

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

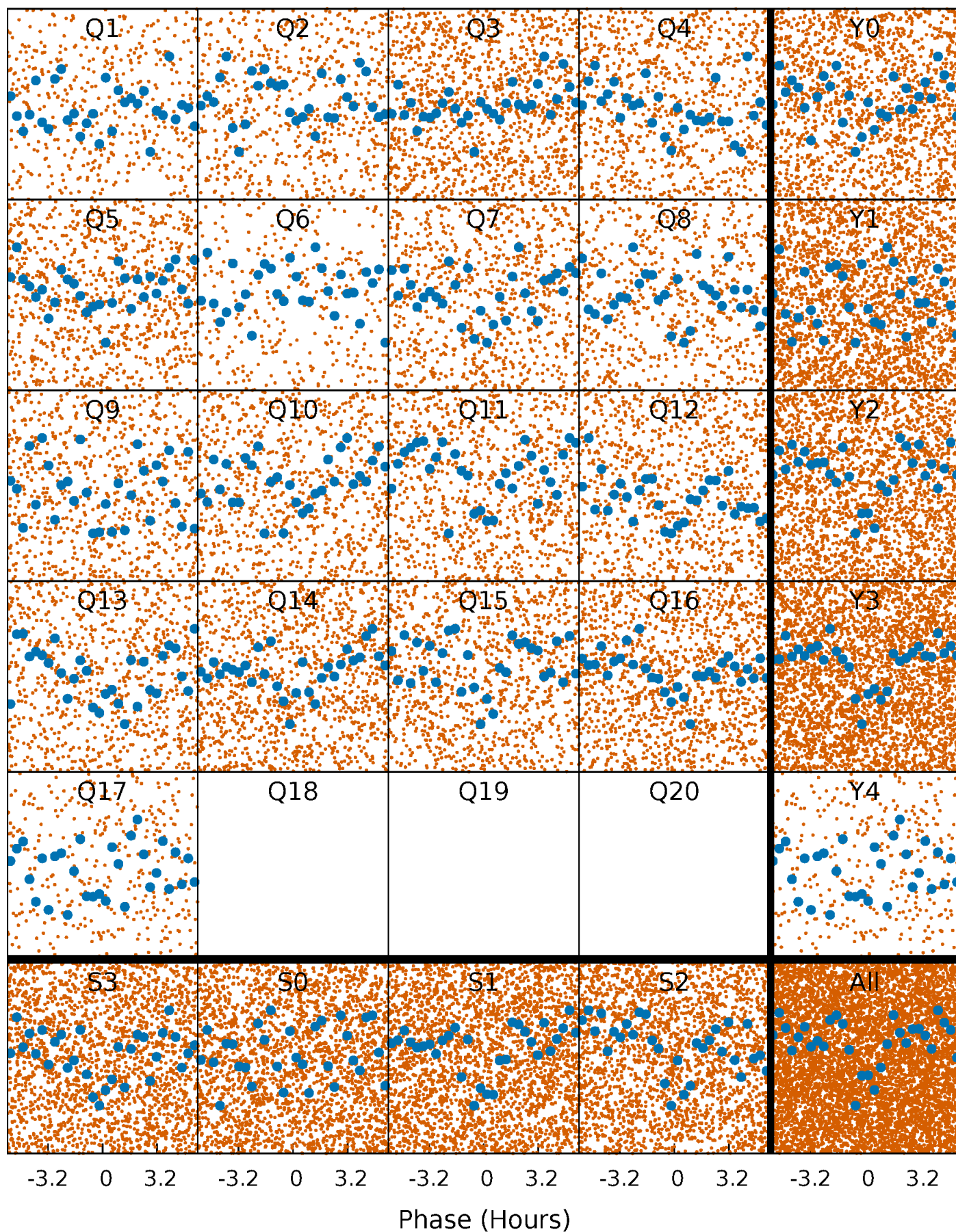


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



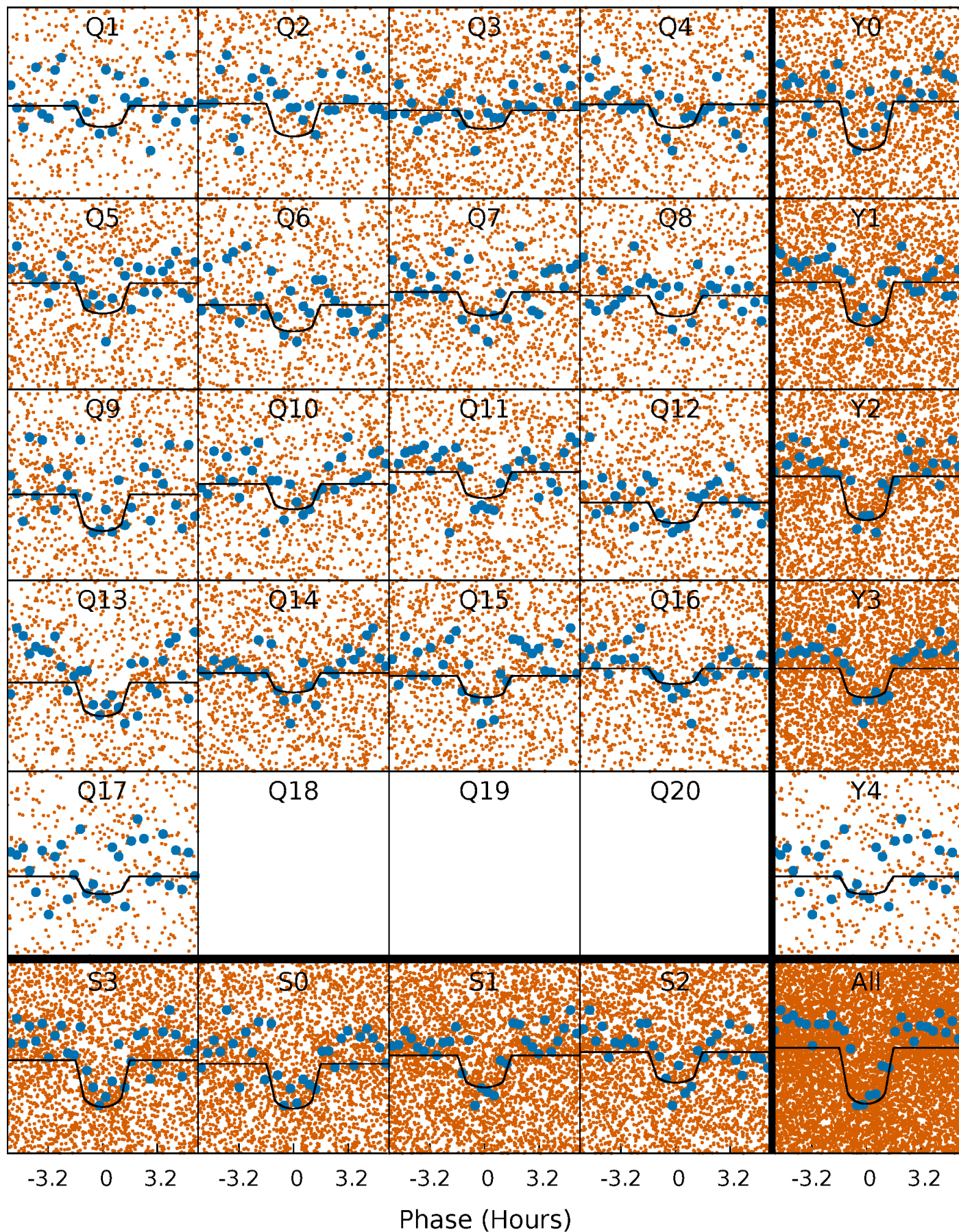
PDC Quarter-Phased Transit Curves

TCE 003228740-01 P= 0.730952 Days $T_0=132.213645$ (BKJD)



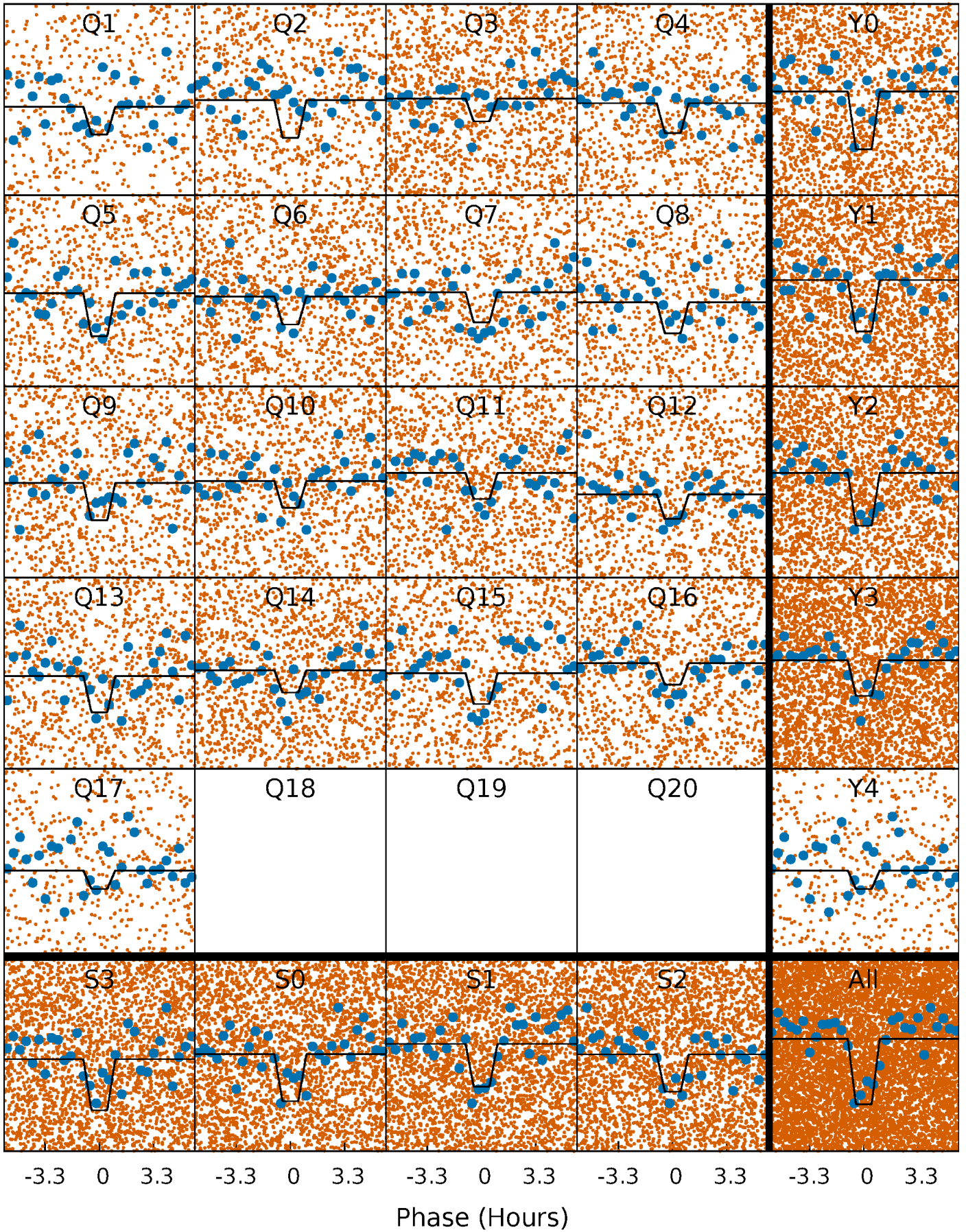
DV Quarter-Phased Transit Curves

TCE 003228740-01 P= 0.730952 Days $T_0=132.213645$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

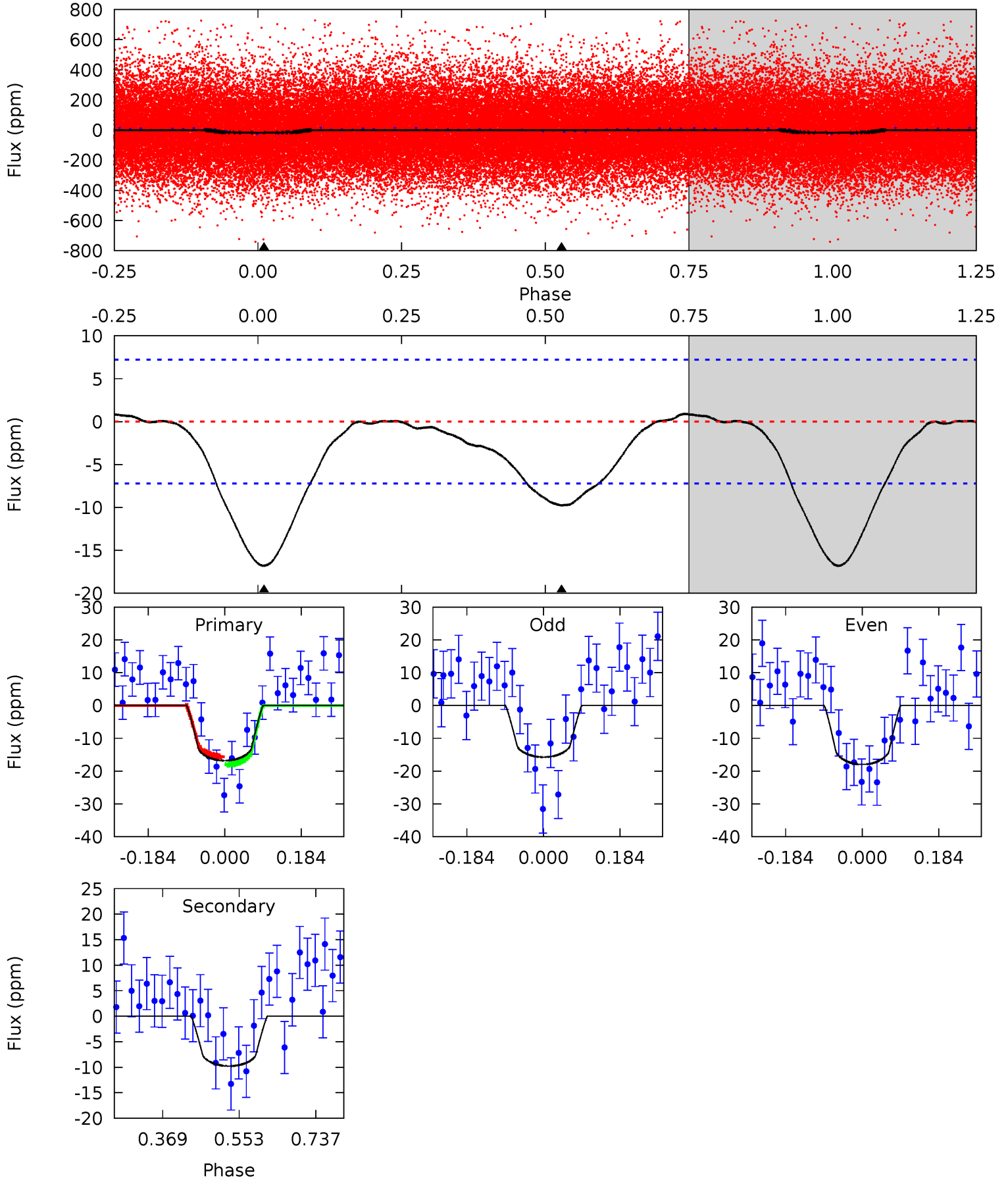
TCE 003228740-01 P= 0.730955 Days $T_0=132.212920$ (BKJD)



DV Model-Shift Uniqueness Test

003228740-01, P = 0.730952 Days, E = 131.482693 Days

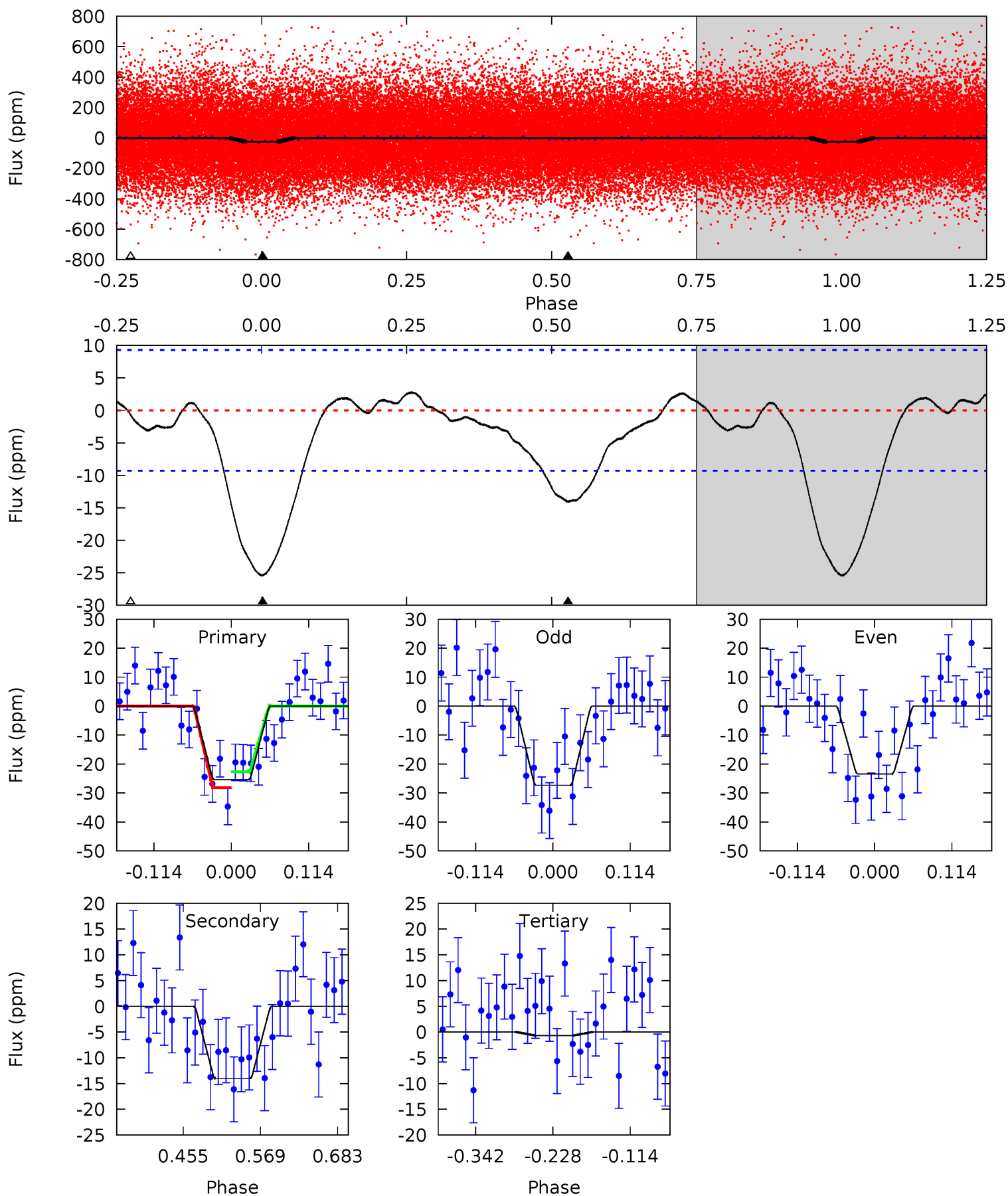
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.00	0	0	4.43	1.33	0.41	10.3	10.3	6.00	6.00	0.69	1.05	0.05	0.76



Alt Model-Shift Uniqueness Test

003228740-01, P = 0.730955 Days, E = 131.481965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	6.85	0.33	0	4.54	1.58	0.85	12.1	12.4	6.52	6.85	0.95	1.07	0.10	1.34



Stellar Parameters For KIC 003228740

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+162}_{-180}	$4.371^{+0.108}_{-0.201}$	$-0.140^{+0.300}_{-0.300}$	$1.078^{+0.336}_{-0.168}$	$0.994^{+0.153}_{-0.112}$	$1.117^{+0.569}_{-0.604}$
	+3%/-3%	+2%/-5%	+214%/-214%	+31%/-16%	+15%/-11%	+51%/-54%
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 003228740-01 / KOI 6309.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$0.62^{+0.31}_{-0.25}$	3088^{+231}_{-171}	4705^{+1360}_{-723}	$3.498^{+6.397}_{-1.987}$
Alt.	-14 ± 2	$0.65^{+0.27}_{-0.27}$	3097^{+229}_{-175}	5040^{+1610}_{-721}	$4.602^{+9.577}_{-2.377}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

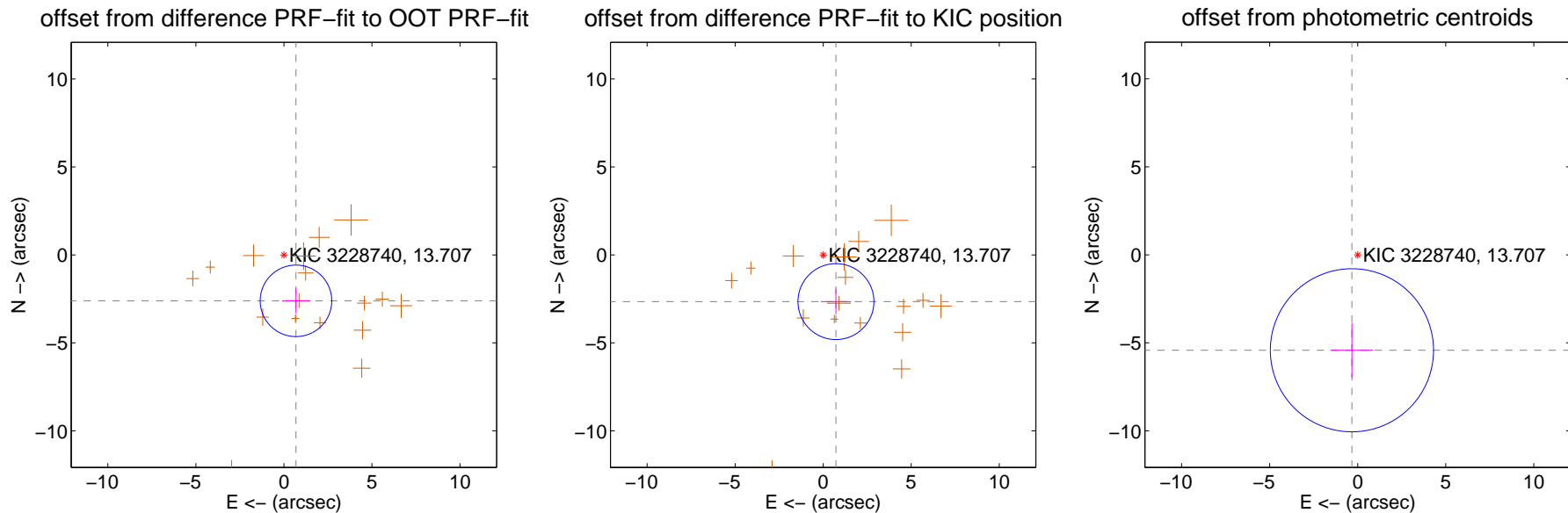
DV Centroid Data

Supplemental centroid analysis for 003228740-01. Kepler magnitude: 13.71. Transit SNR 10.41

There are 0 quarters with good PRF difference image offsets

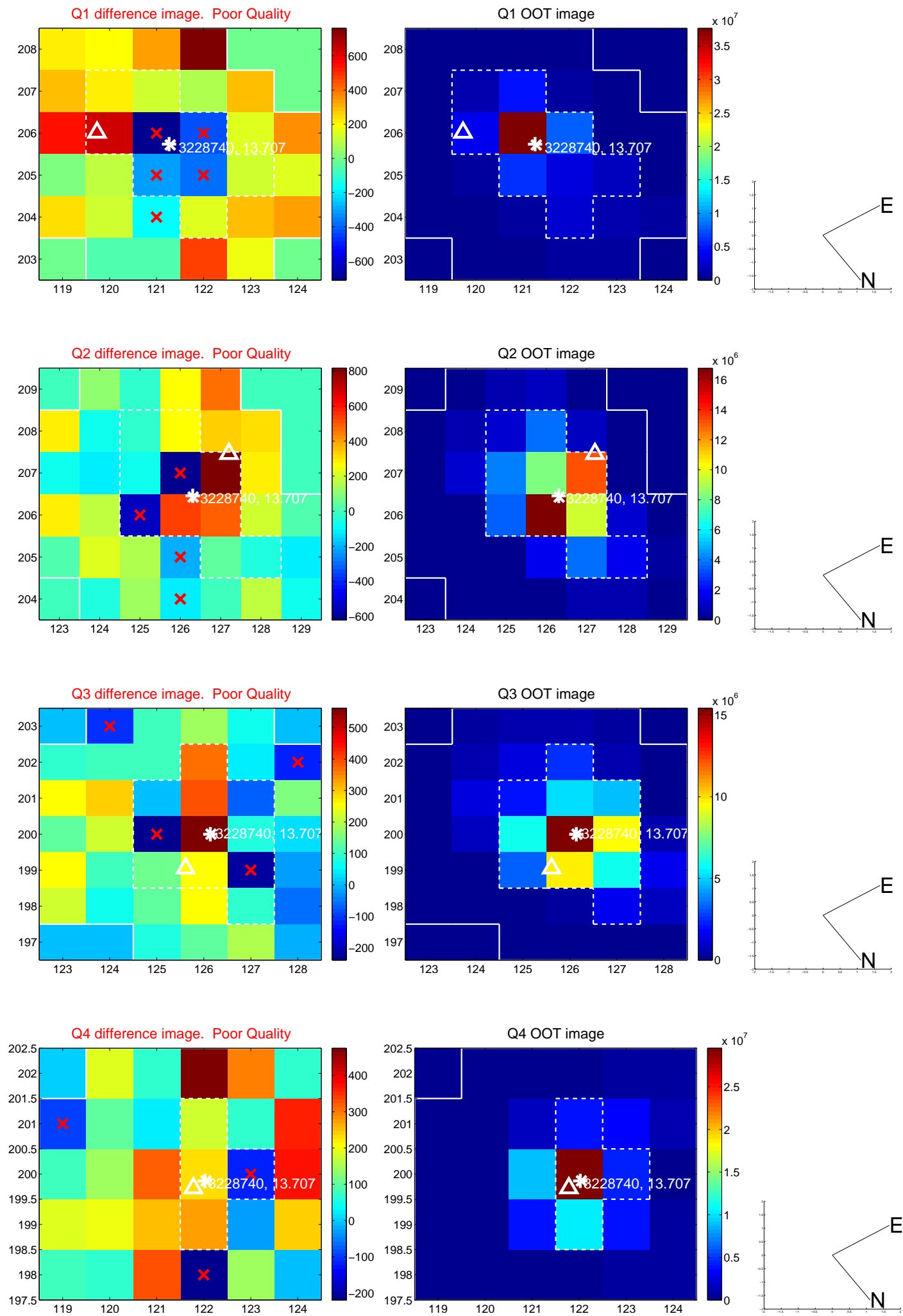
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.698 ± 0.677	3.98	-0.684 ± 0.786	-2.610 ± 0.707
PRF-fit source offset from KIC position	2.750 ± 0.719	3.83	-0.724 ± 0.865	-2.653 ± 0.729
photometric centroid source offset	5.43 ± 1.54	3.52	0.33 ± 1.21	-5.42 ± 1.55

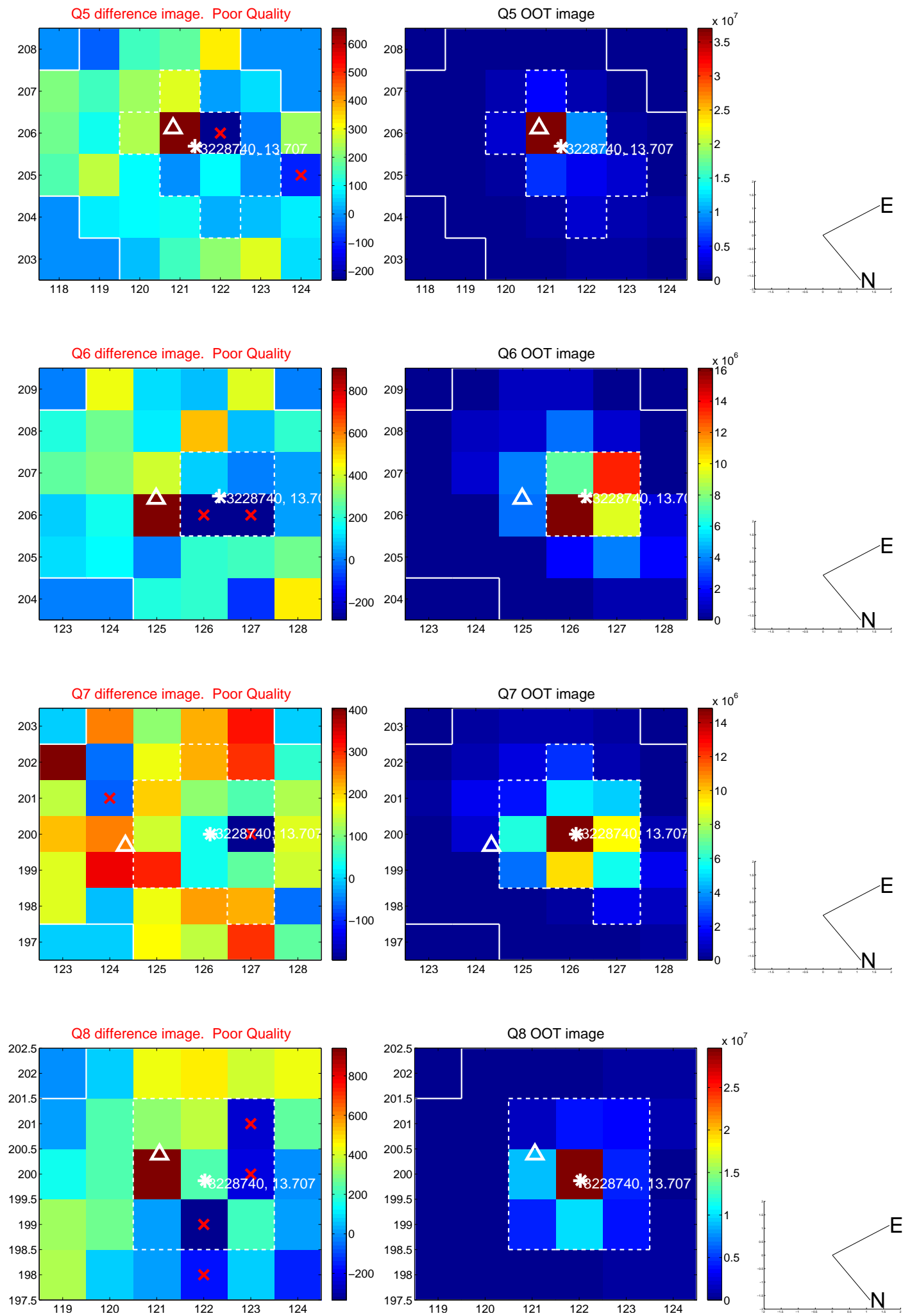


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

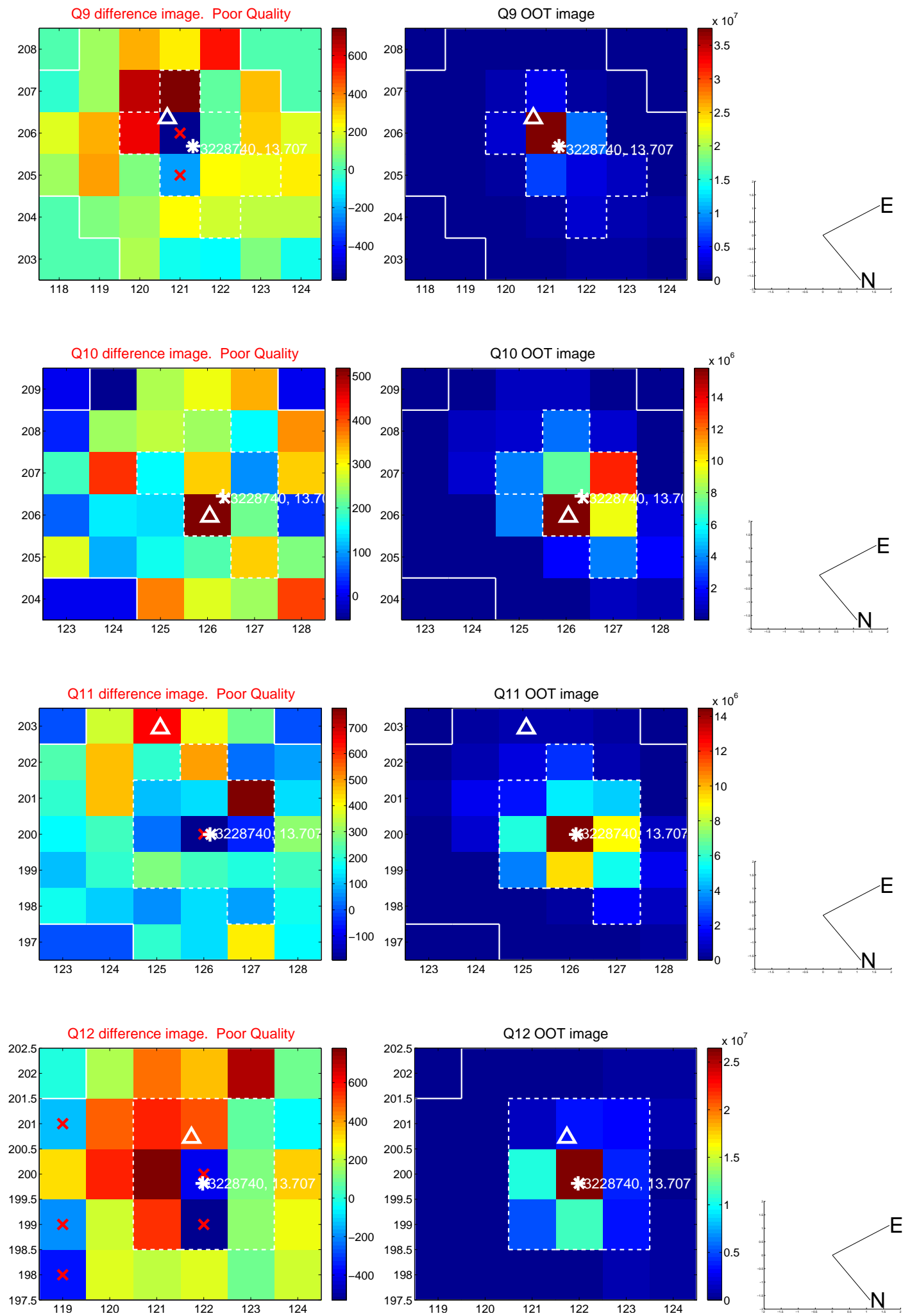
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



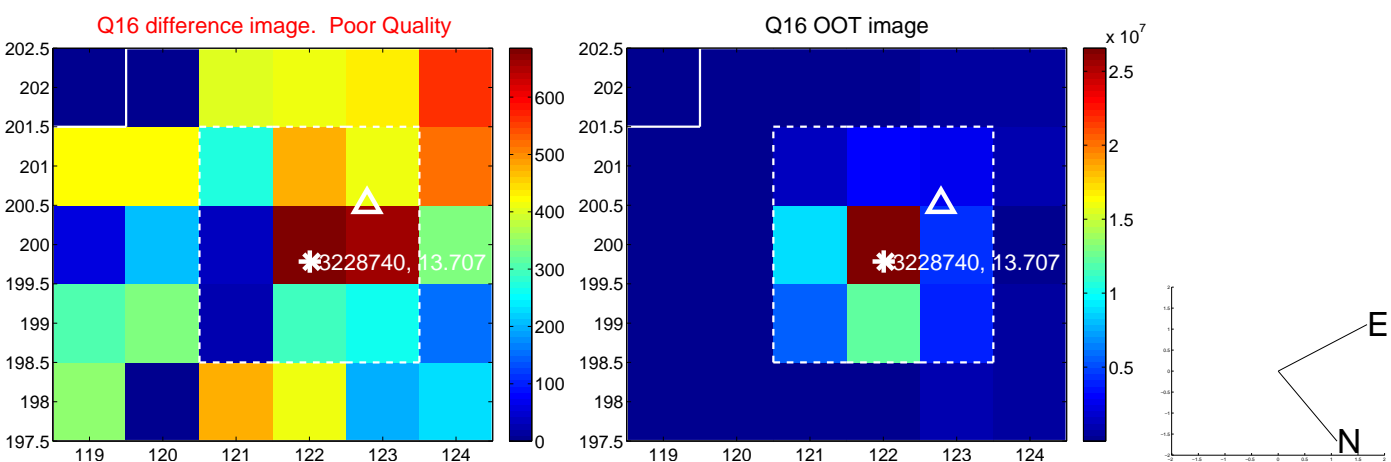
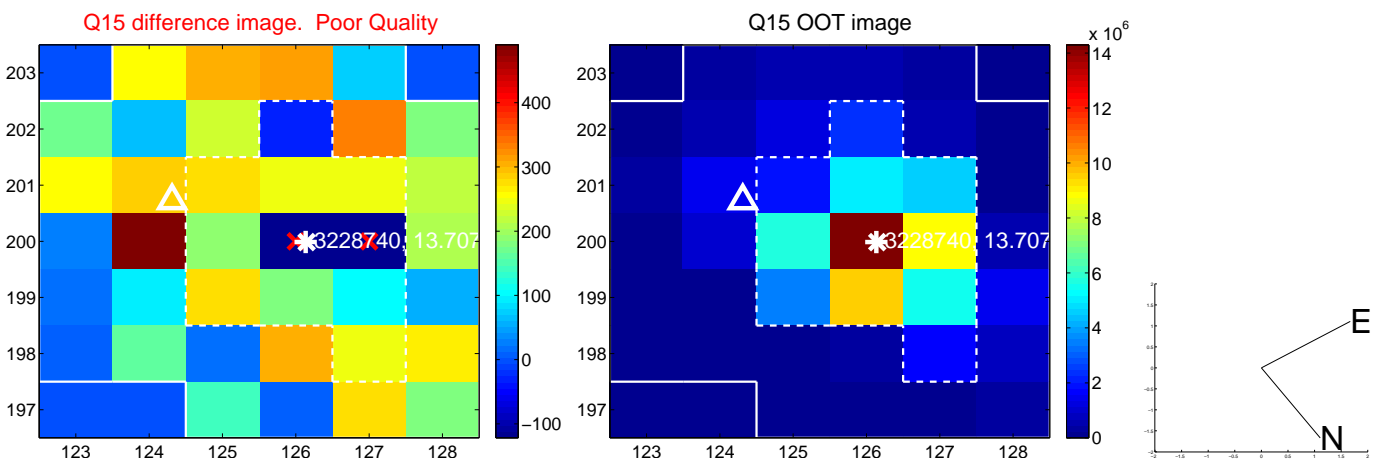
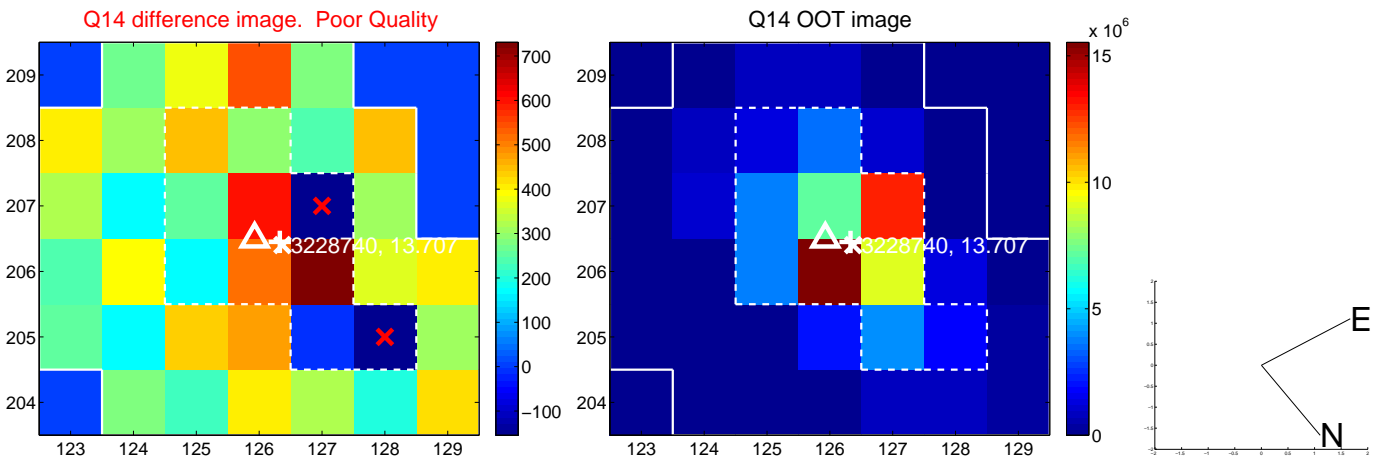
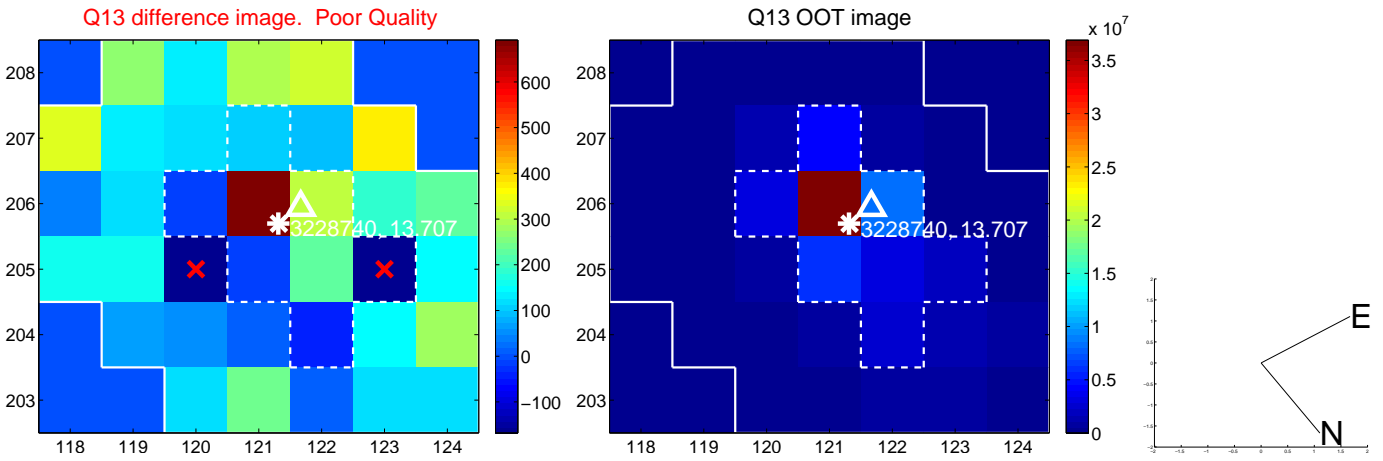
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



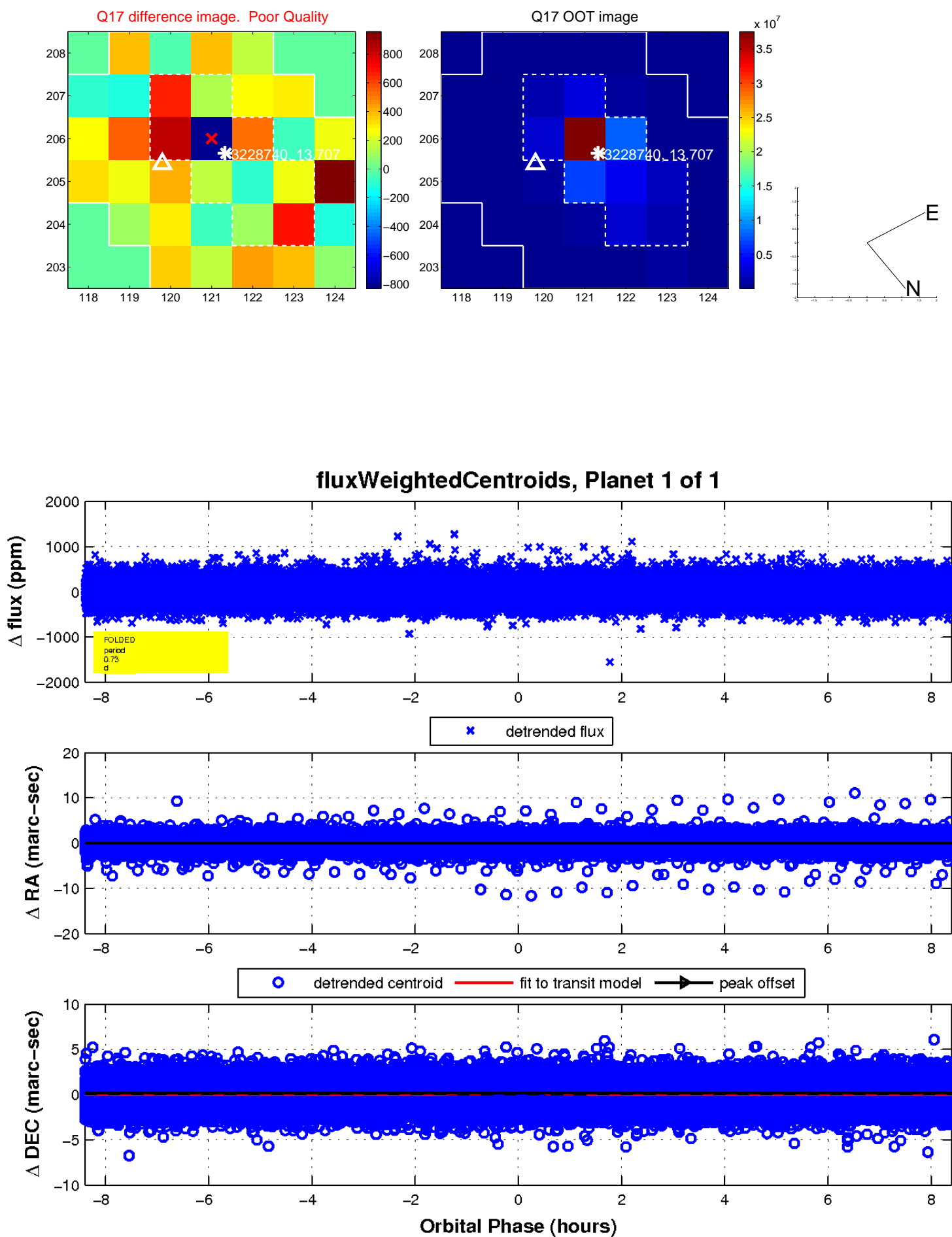
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

