

KIC 007746958

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})
007746958-01	OBS	2324.01	1.204696	131.902841	212.8	1.022	15.8	20.4	1.00	5780	1.58	2035.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007746958-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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 007746958-01

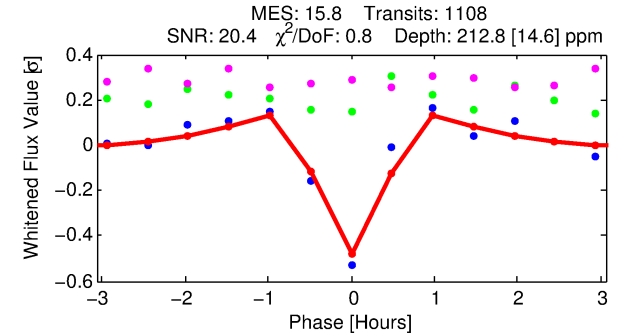
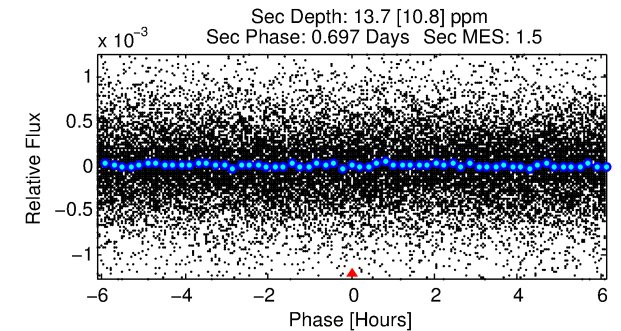
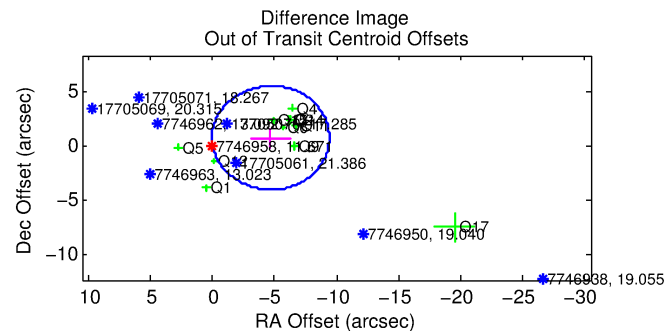
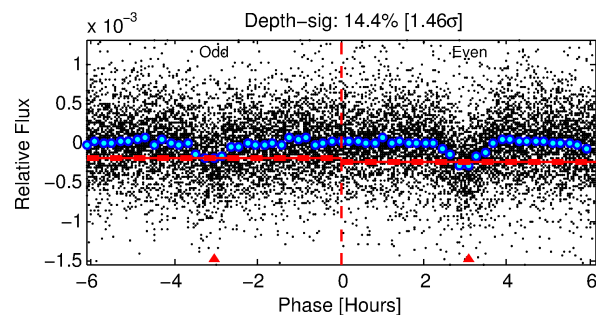
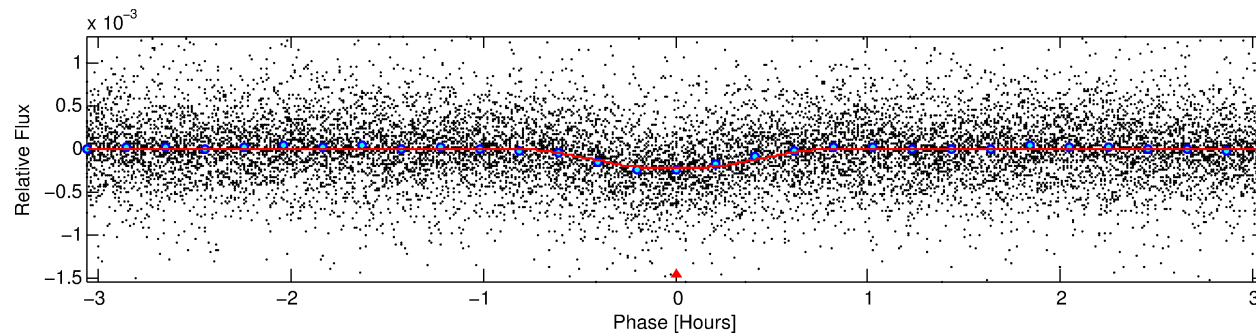
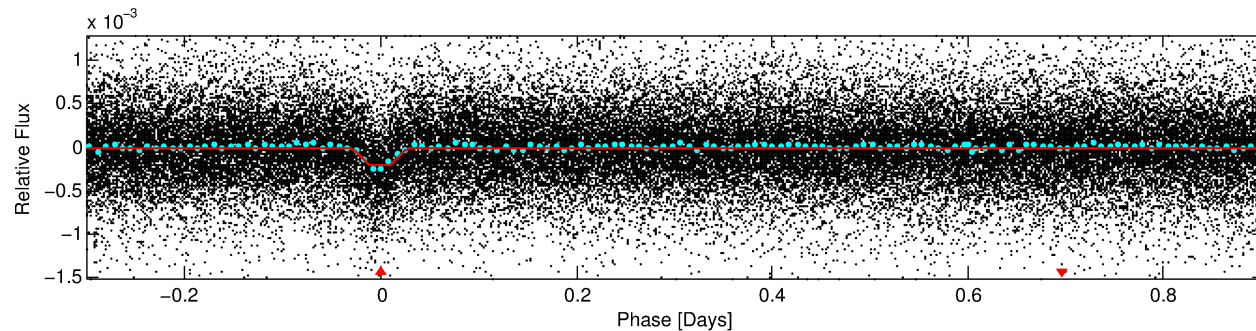
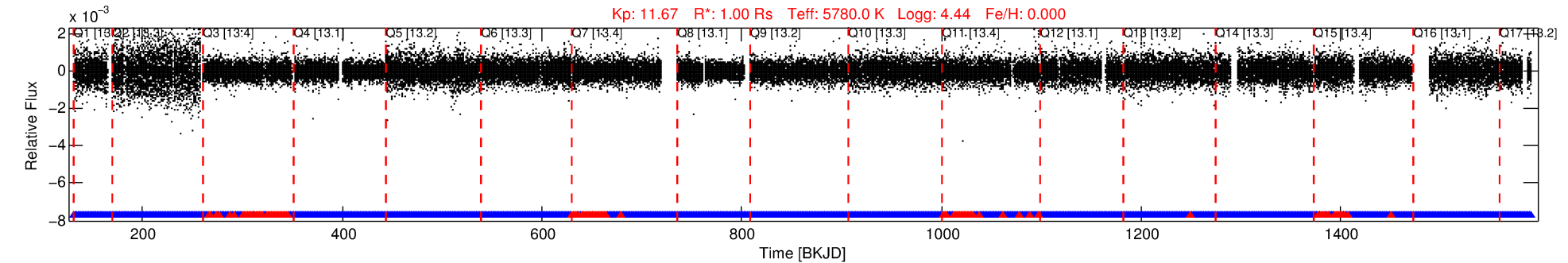
No Significant Match Found

DV One-Page Summary

KIC: 7746958 Candidate: 1 of 1 Period: 1.205 d

KOI: K02324.01 Corr: 0.799

Kp: 11.67 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



DV Fit Results:

Period = 1.20470 [0.00000] d
Epoch = 131.9028 [0.0007] BKJD
Rp/R* = 0.0145 [0.0036]
a/R* = 6.55 [6.83]
b = 0.71 [0.75]
Seff = 2035.96 [0.01]
Teff = 1713 [0] K
Rp = 1.58 [0.39] Re
a = 0.0222 [0.0000] AU
Ag = 1.49 [1.38] [0.35σ]
Teffp = 2924 [680] K [1.78σ]

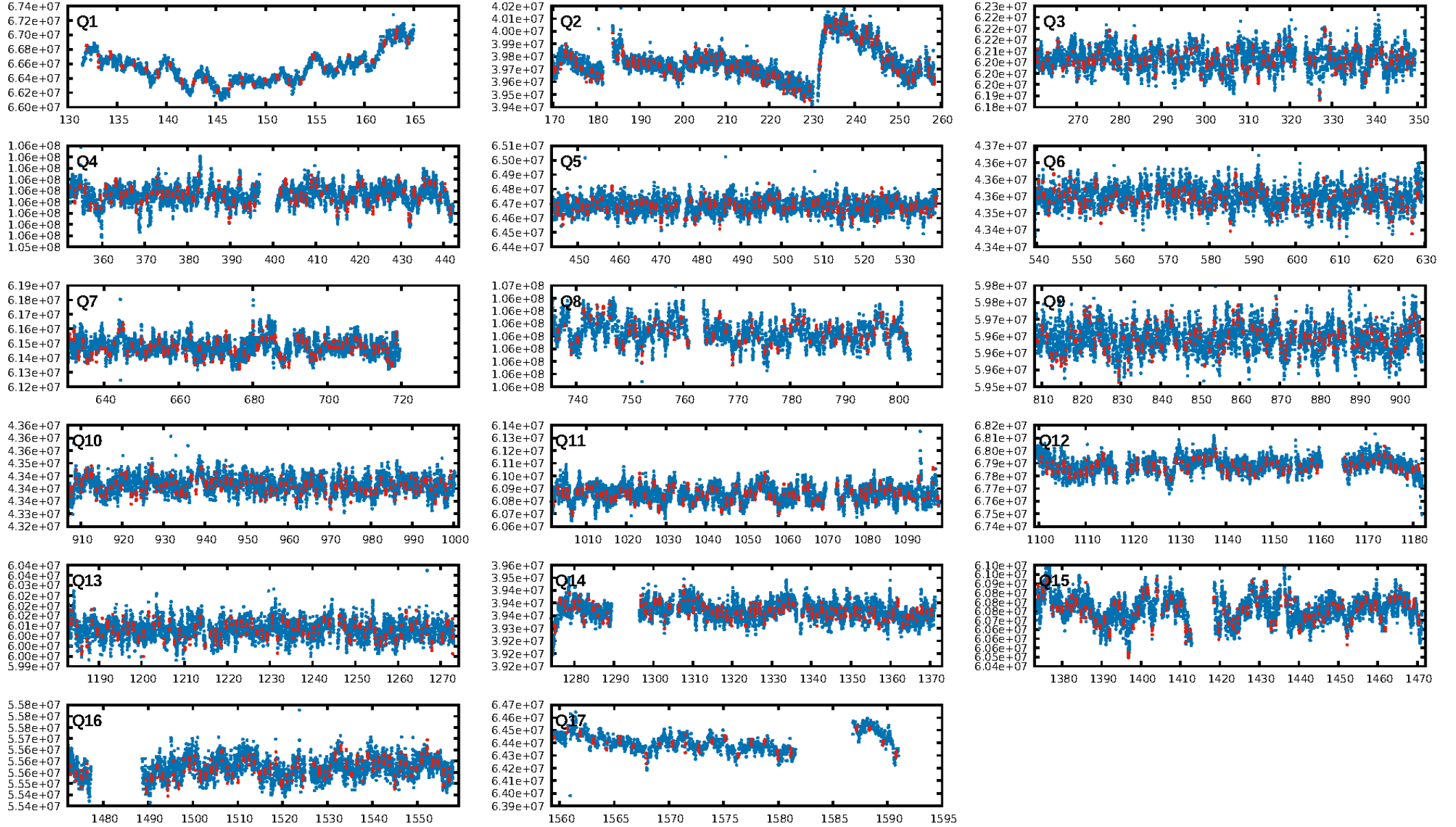
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.00e-84
RollingBand-fgt: 0.89 [946/1057]
GhostDiagnostic-chr: 4.576
Centroid-sig: 0.0%
Centroid-so: 2.824 arcsec [17.86σ]
OotOffset-rm: 4.749 arcsec [3.01σ]
KicOffset-rm: 2.261 arcsec [1.90σ]
OotOffset-st: 3/2/2/4 [11]
KicOffset-st: 3/2/2/4 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

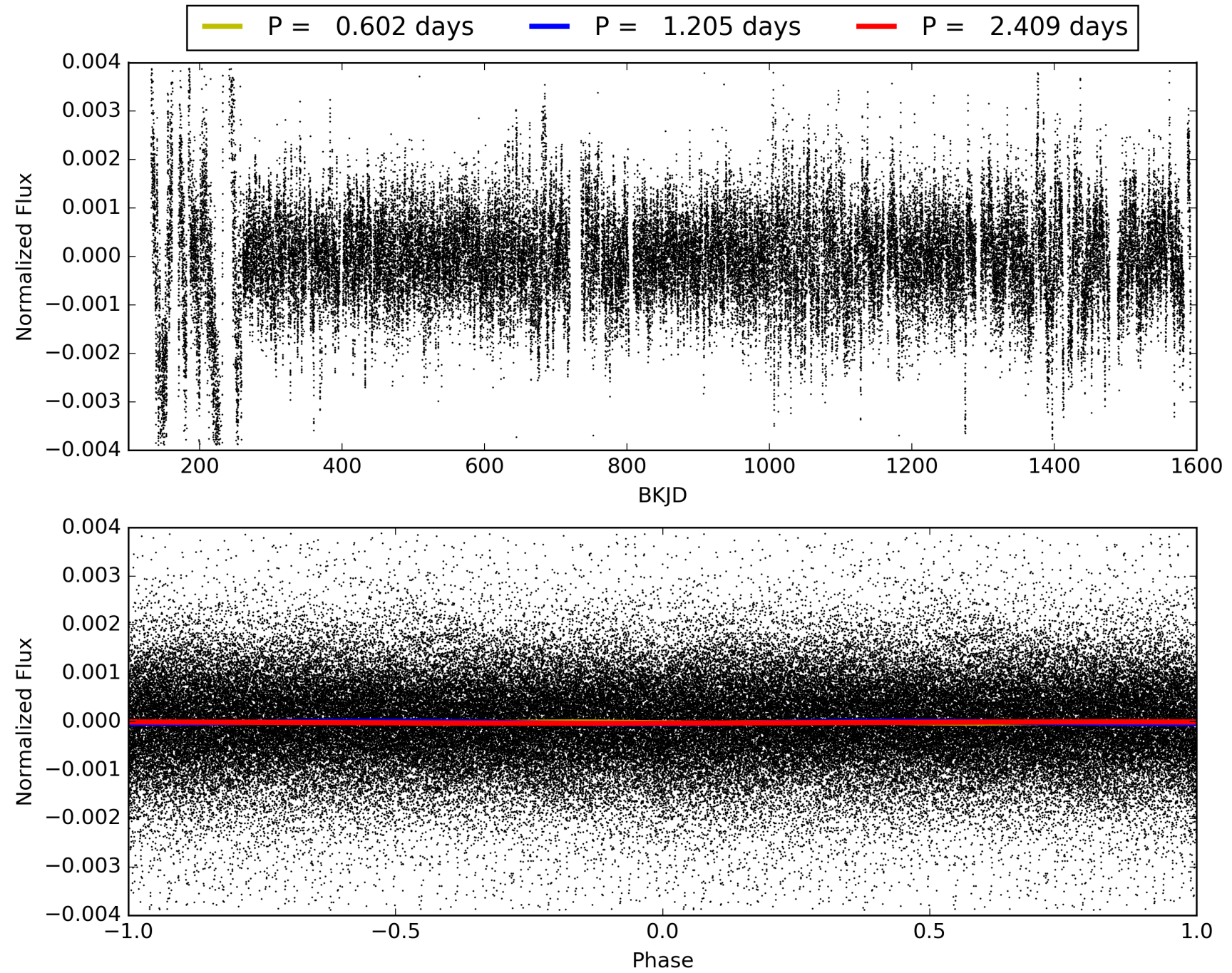
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:47:28 Z

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

TCE 007746958-01, PDC Light Curves

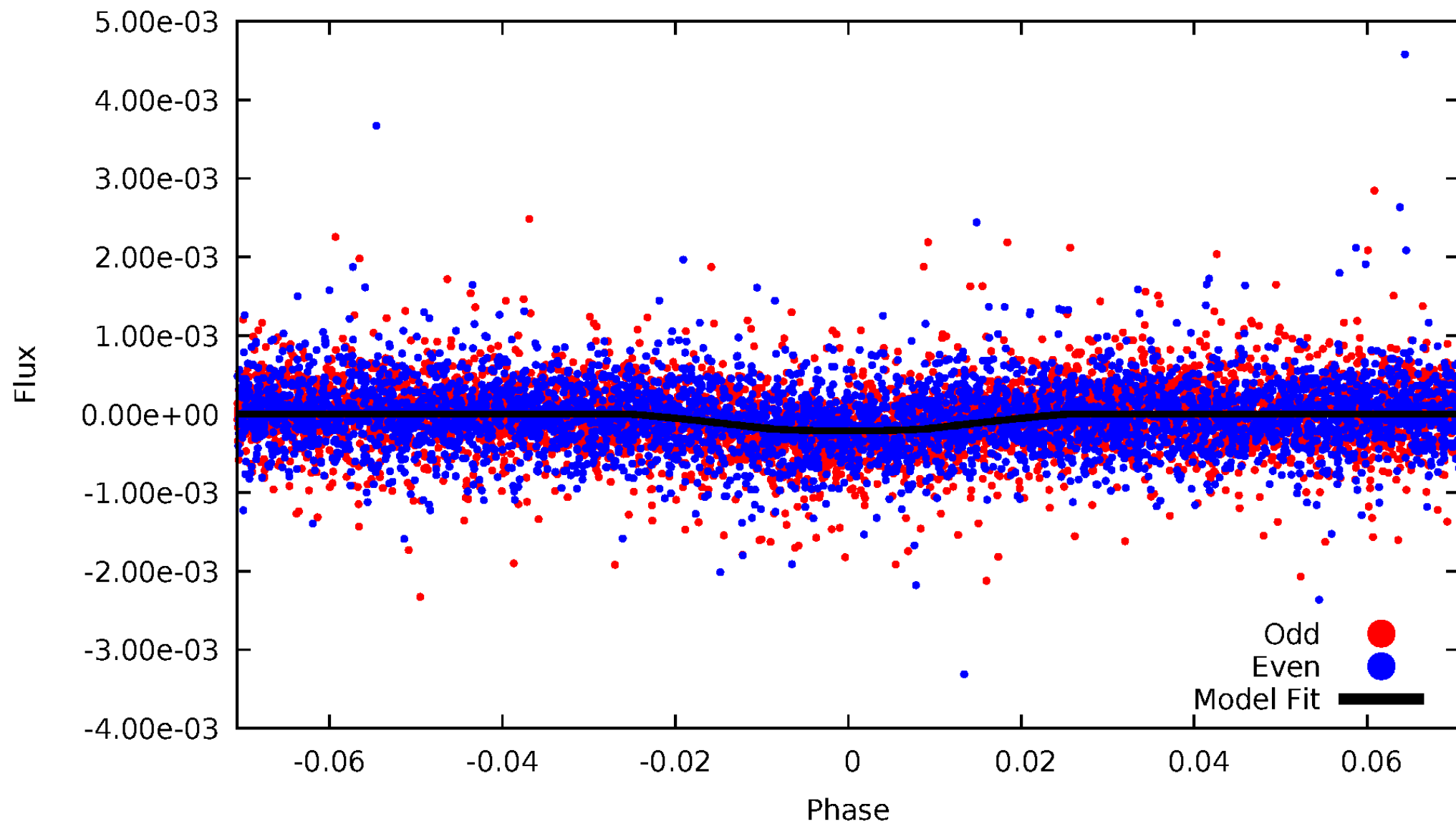


TCE 007746958-01



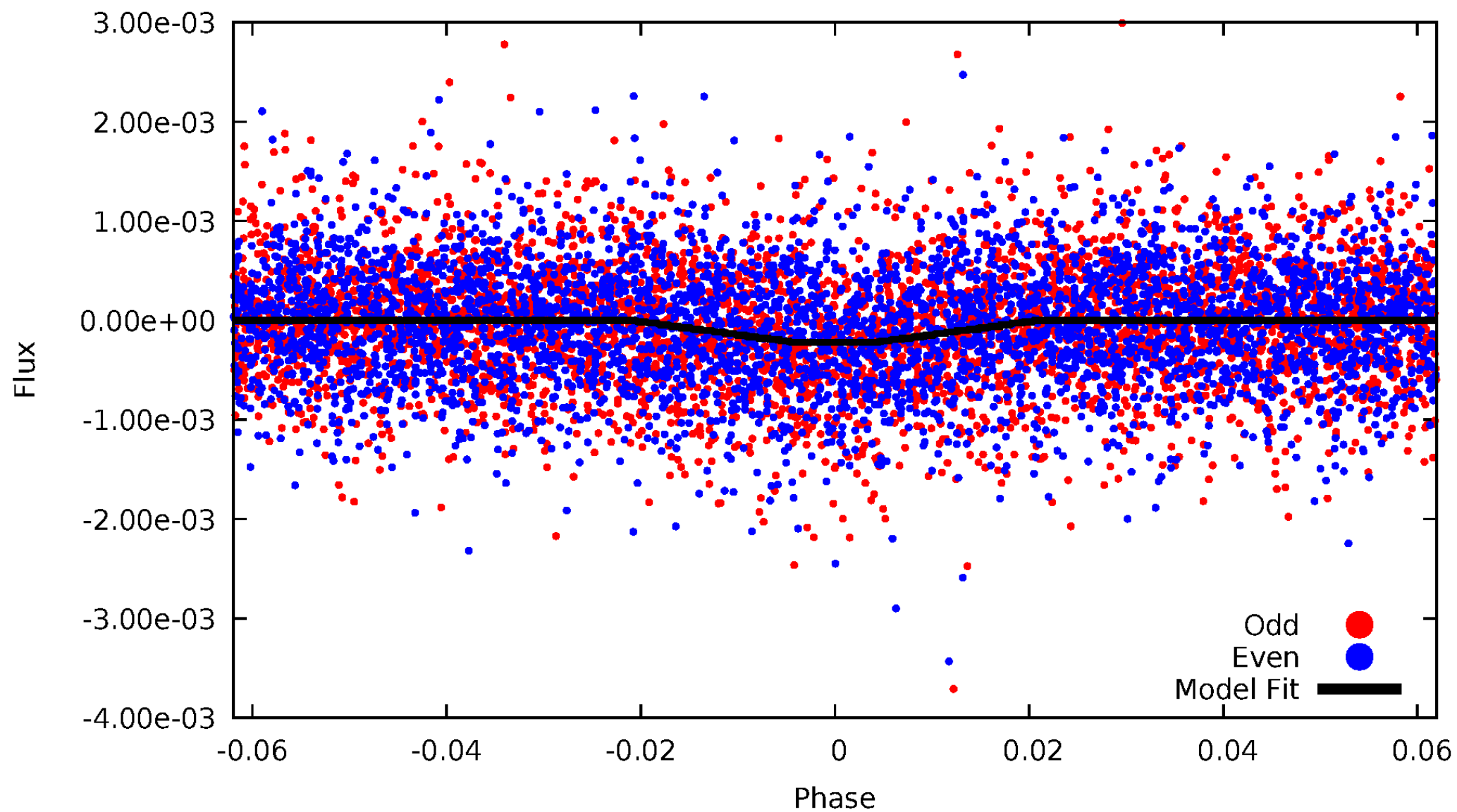
DV Odd/Even

TCE 007746958-01



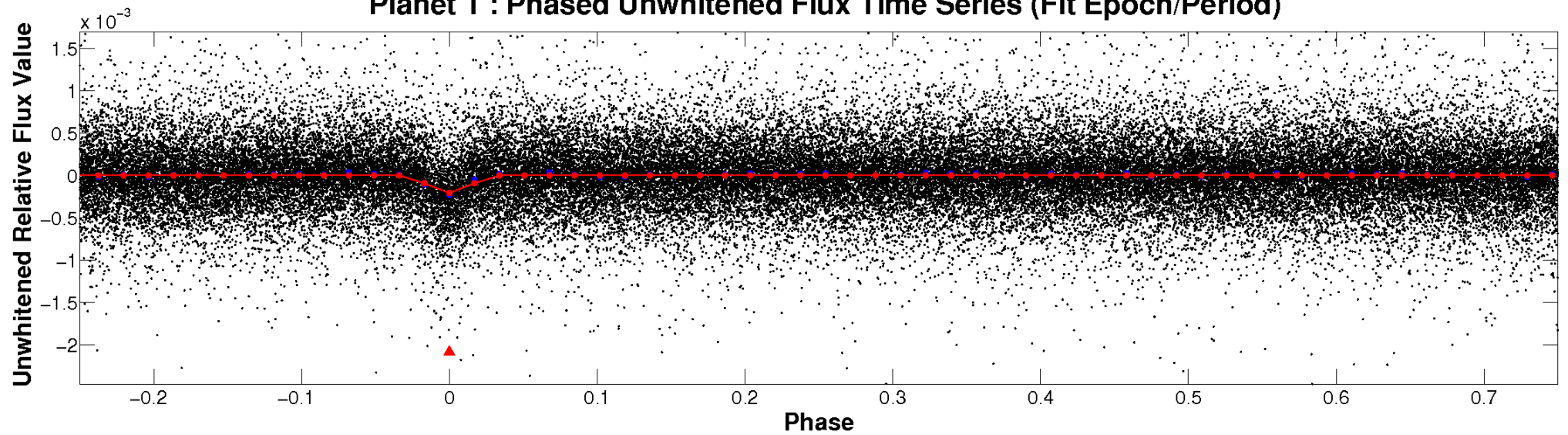
ALT Odd/Even

TCE 007746958-01

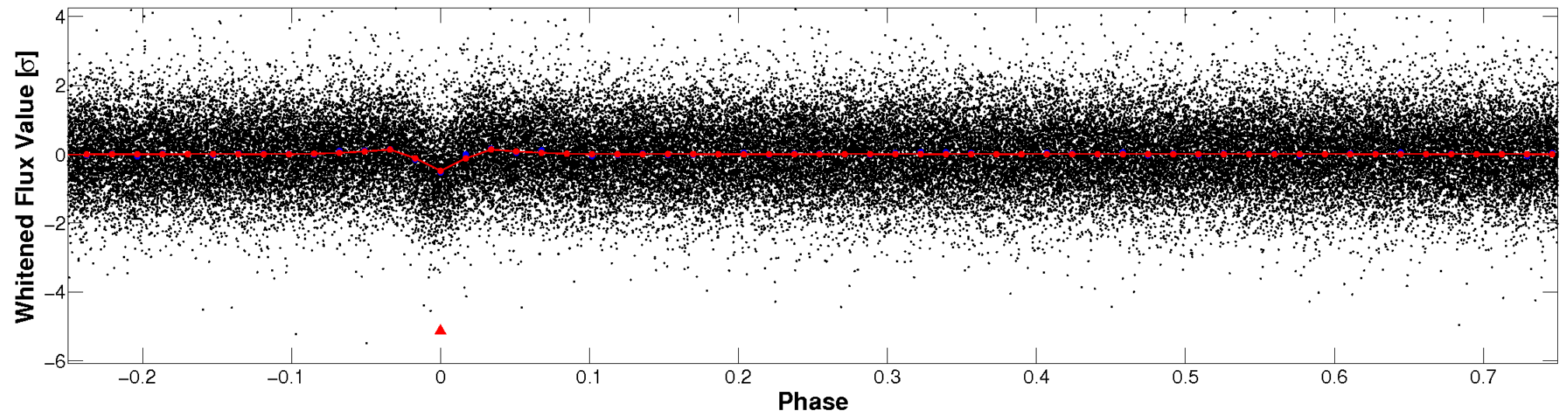


Non-Whitened Vs. Whitened Light Curve

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

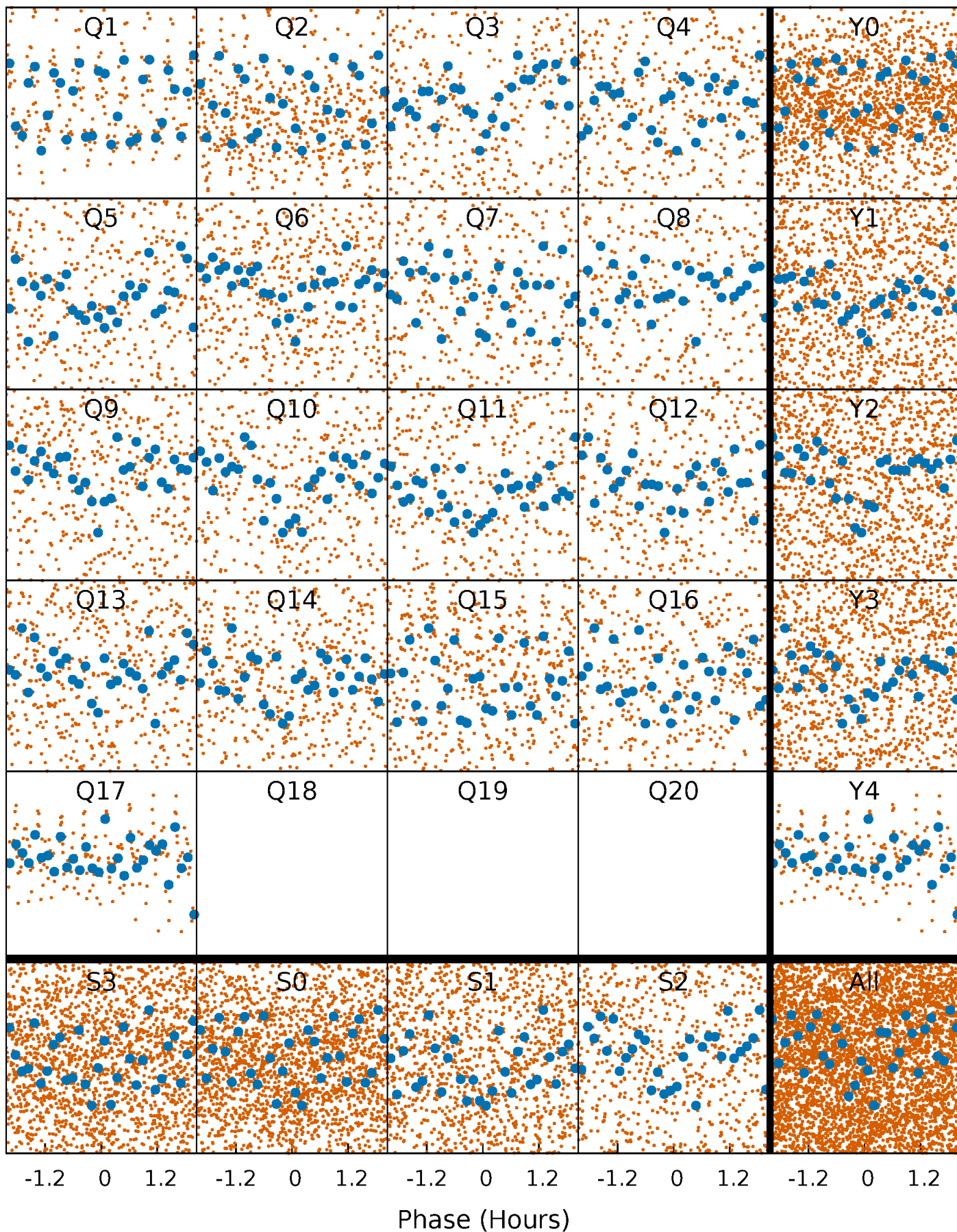


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



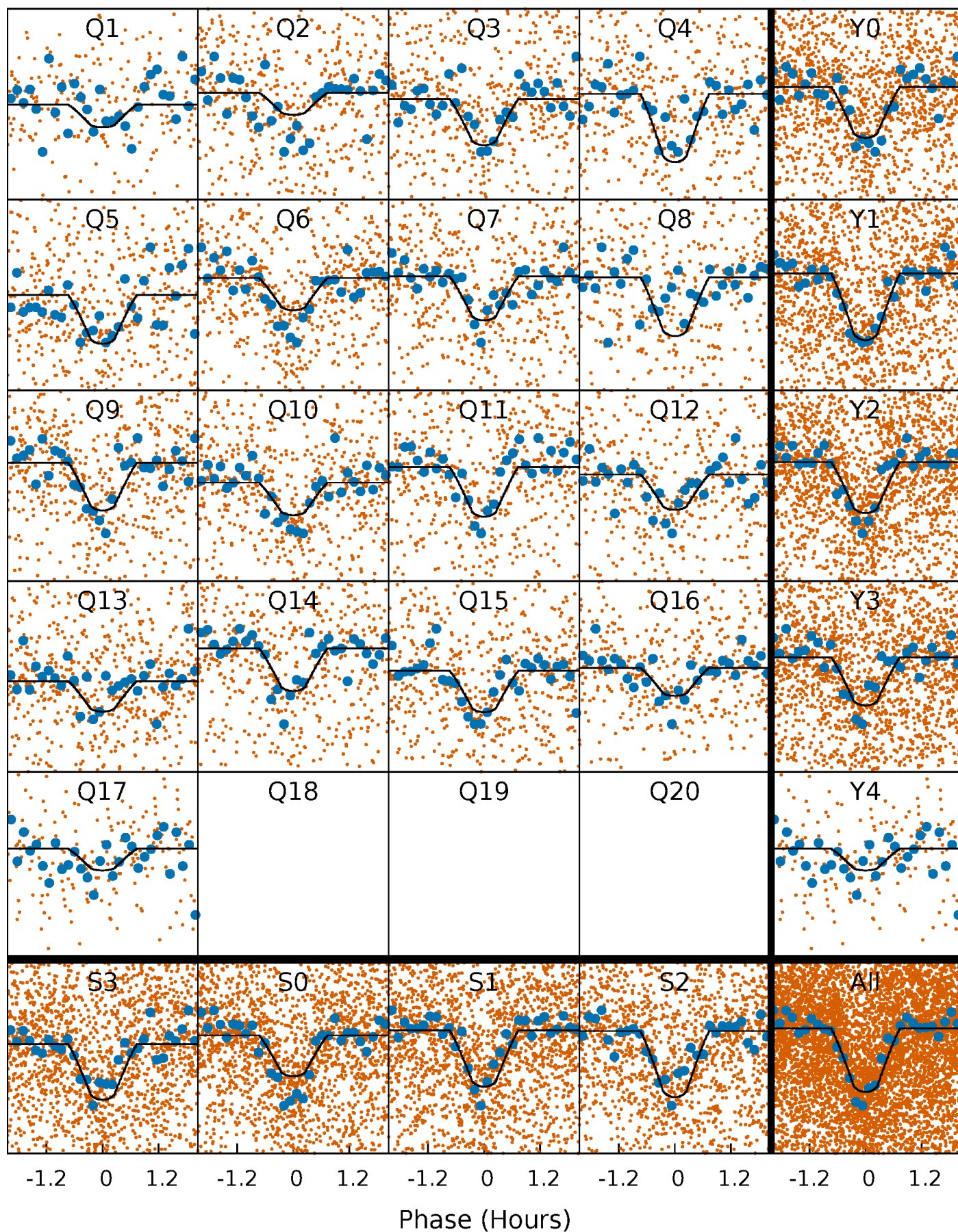
PDC Quarter-Phased Transit Curves

TCE 007746958-01 P= 1.204696 Days $T_0=131.902841$ (BKJD)



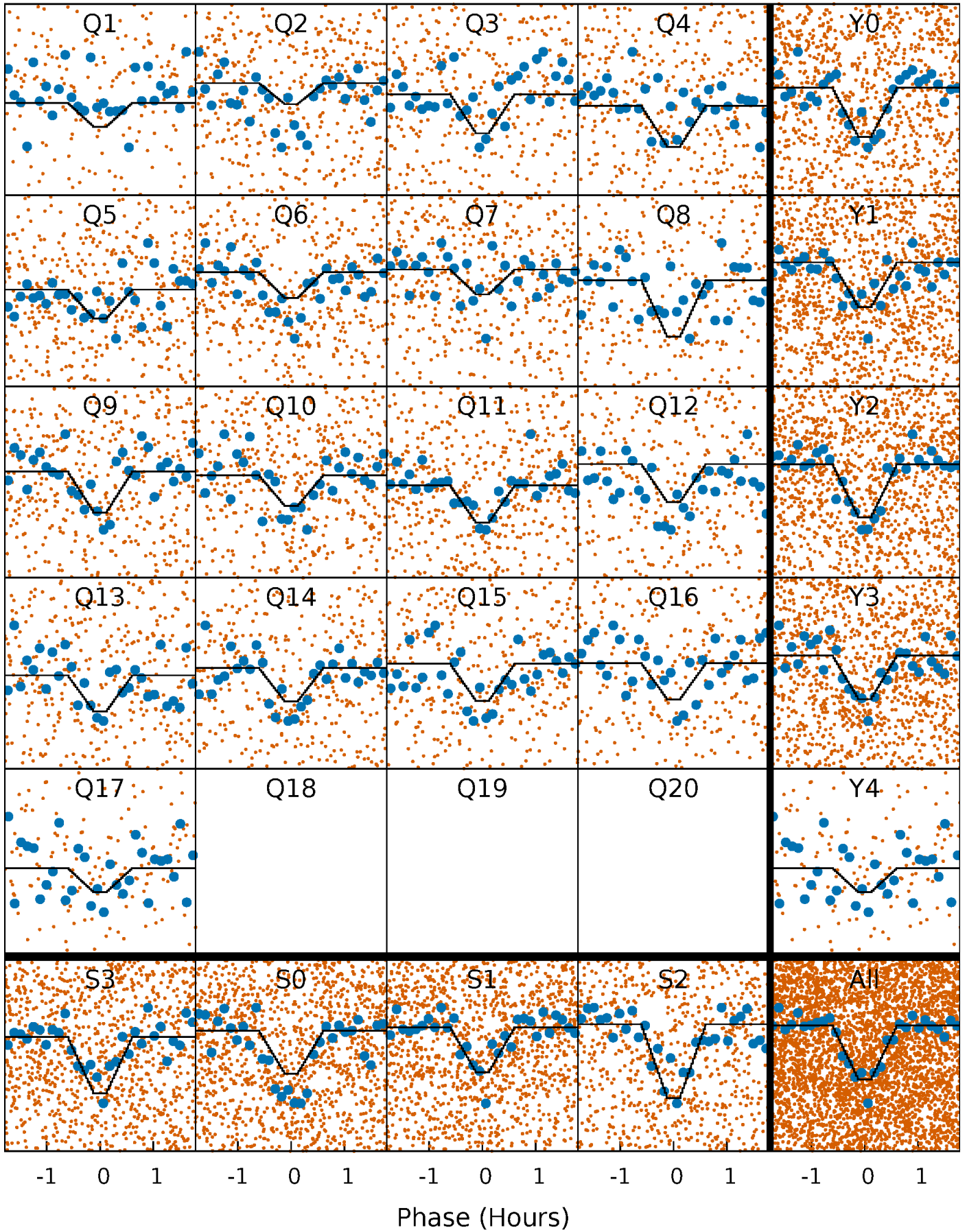
DV Quarter-Phased Transit Curves

TCE 007746958-01 P= 1.204696 Days $T_0=131.902841$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

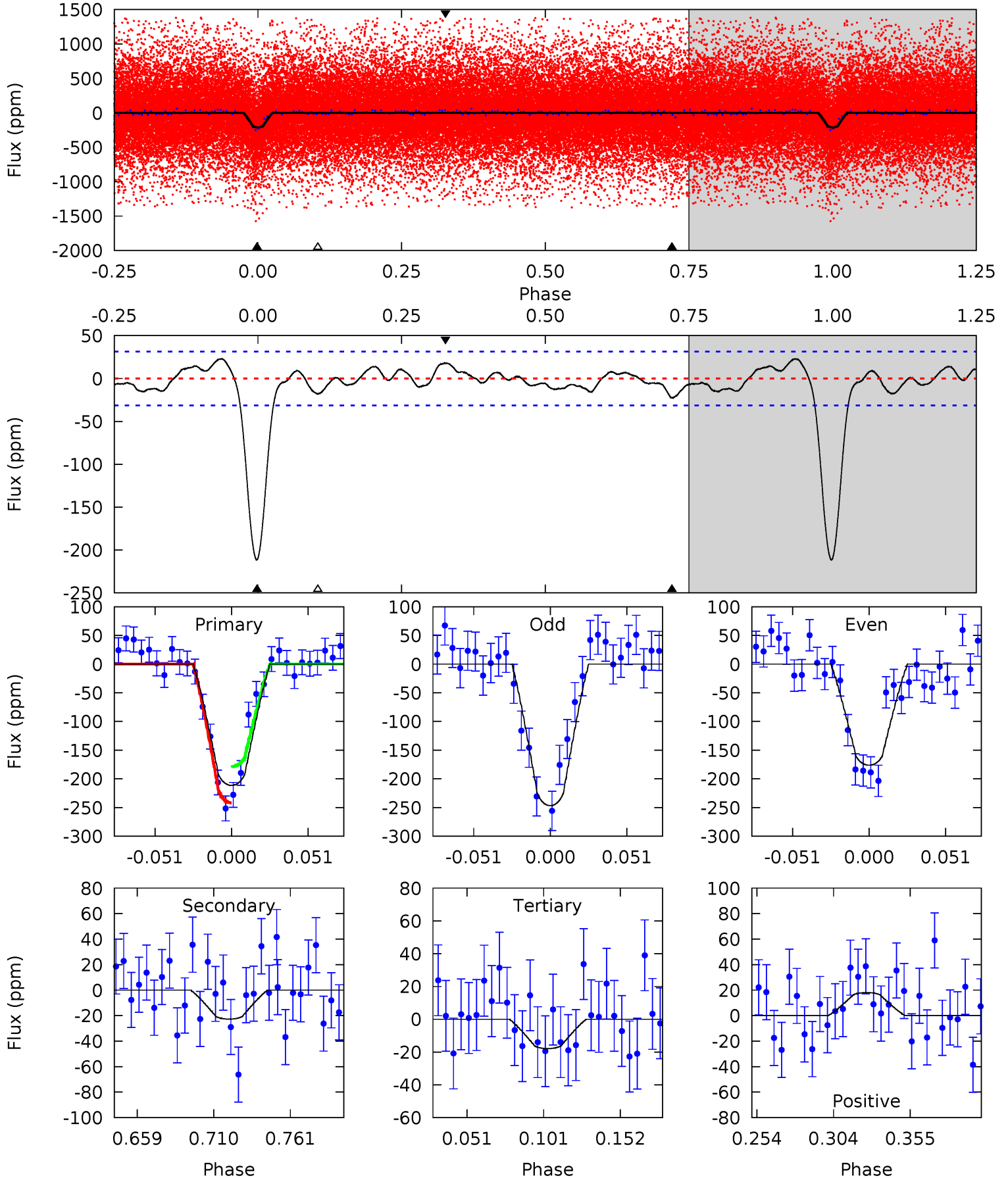
TCE 007746958-01 P= 1.204687 Days $T_0=131.905669$ (BKJD)



DV Model-Shift Uniqueness Test

007746958-01, P = 1.204696 Days, E = 130.698145 Days

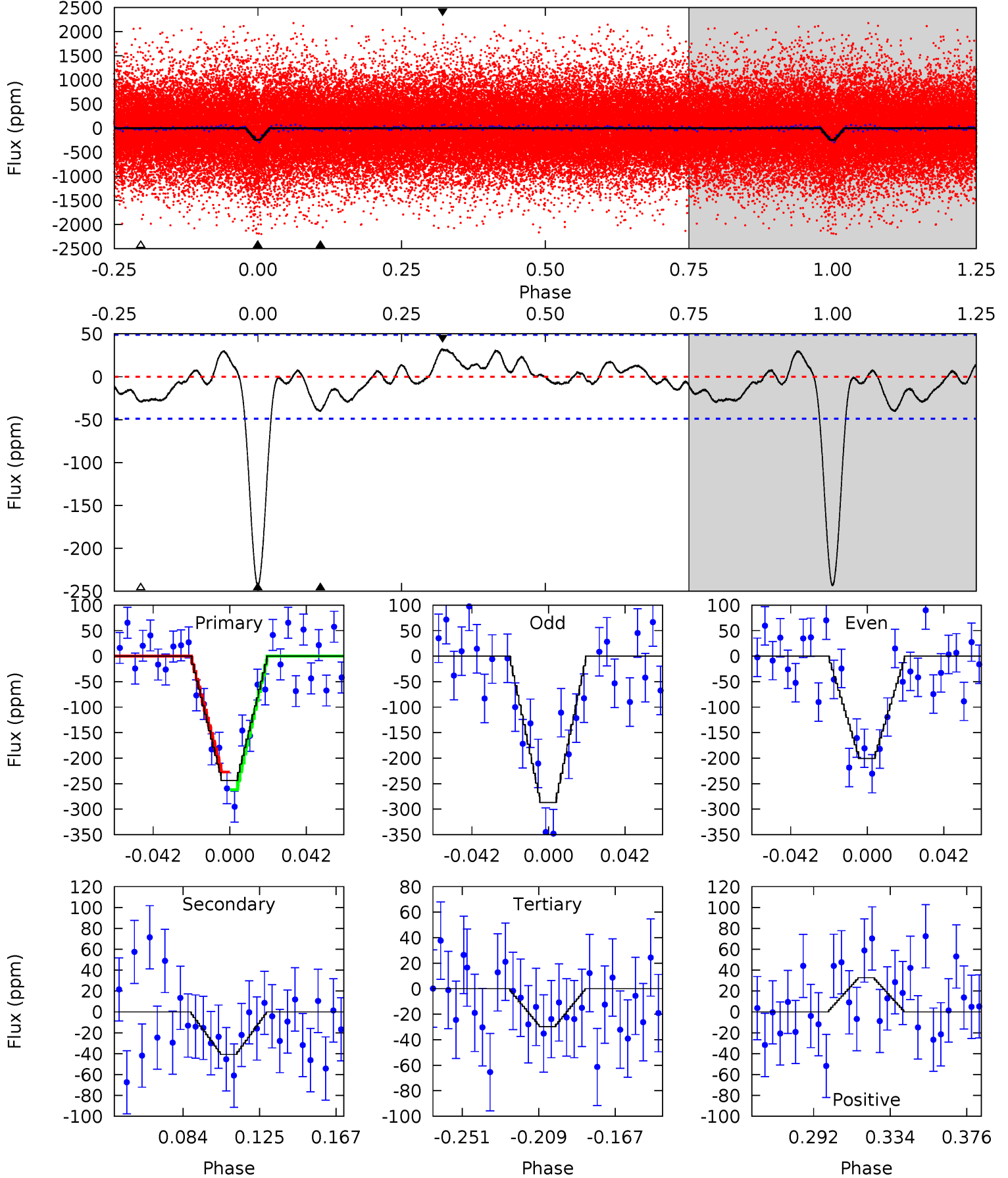
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.7	3.41	2.68	2.71	4.71	1.95	1.43	29.0	29.0	0.73	0.70	5.30	1.02	0.10	4.74



Alt Model-Shift Uniqueness Test

007746958-01, P = 1.204687 Days, E = 130.700982 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.7	3.95	2.88	3.18	4.74	2.04	1.43	20.8	20.5	1.07	0.78	4.20	1.11	0.12	1.67



Stellar Parameters For KIC 007746958

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007746958-01 / KOI 2324.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-23 ± 7	$1.57^{+0.42}_{-0.39}$	2403^{+106}_{-125}	3631^{+456}_{-365}	$2.426^{+2.189}_{-1.085}$
Alt.	-41 ± 10	$1.60^{+0.44}_{-0.39}$	2393^{+118}_{-113}	4033^{+503}_{-410}	$4.187^{+3.437}_{-1.765}$

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

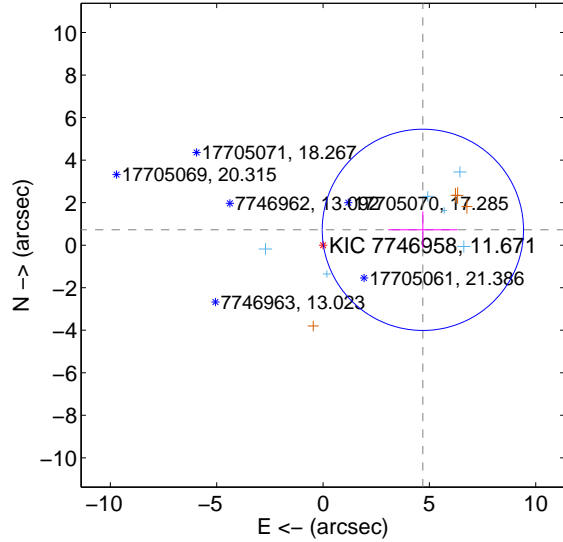
Supplemental centroid analysis for 007746958-01. **Kepler magnitude: 11.67.** Transit SNR 20.41

There are 6 quarters with good PRF difference image offsets

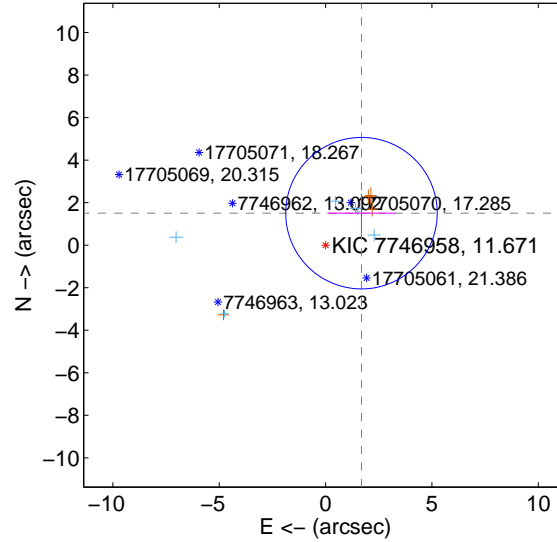
The OOT PRF centroid is offset from the target star catalog position by about 4.39 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.749 ± 1.577	3.01	-4.694 ± 1.625	0.722 ± 0.864
PRF-fit source offset from KIC position	2.261 ± 1.187	1.90	-1.688 ± 1.606	1.505 ± 0.915
photometric centroid source offset	2.82 ± 0.16	17.86	2.82 ± 0.16	0.08 ± 0.18

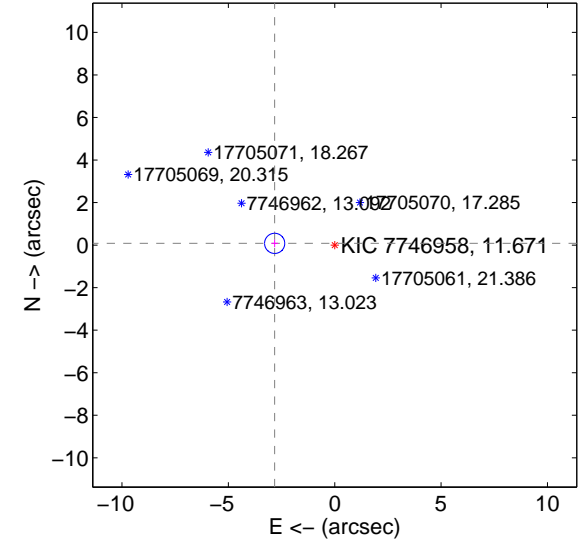
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

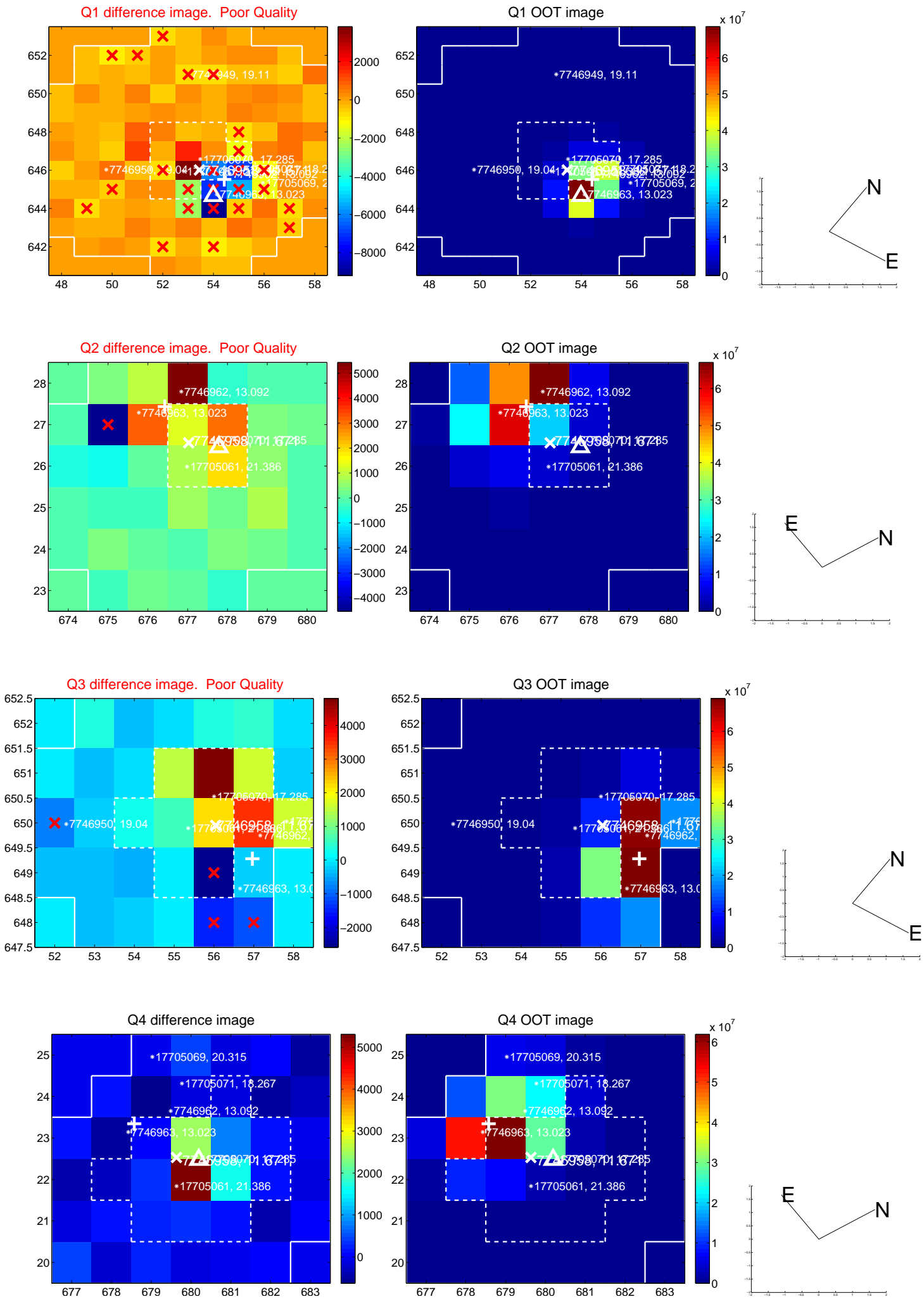


offset from photometric centroids

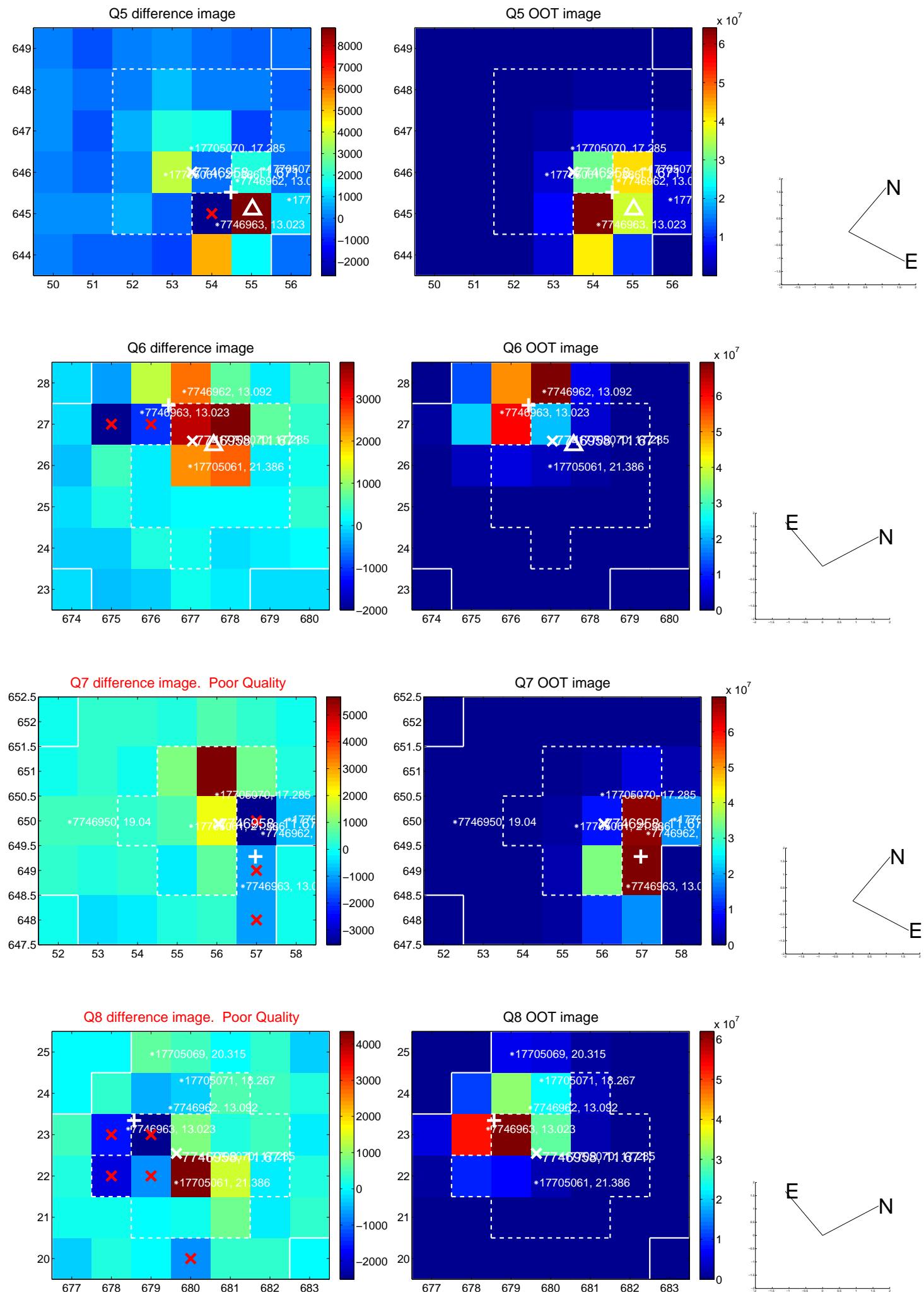


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

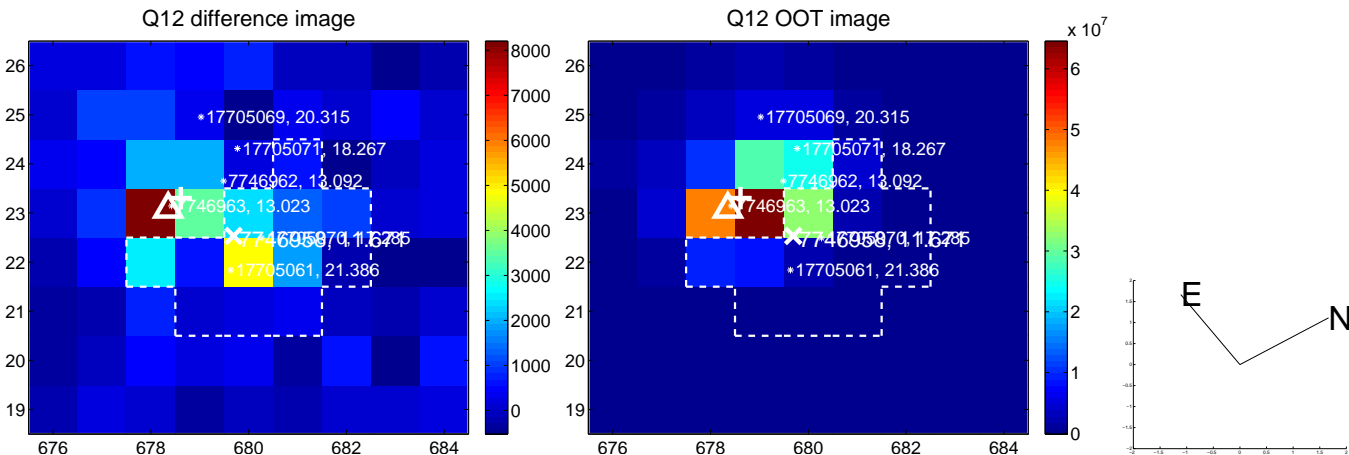
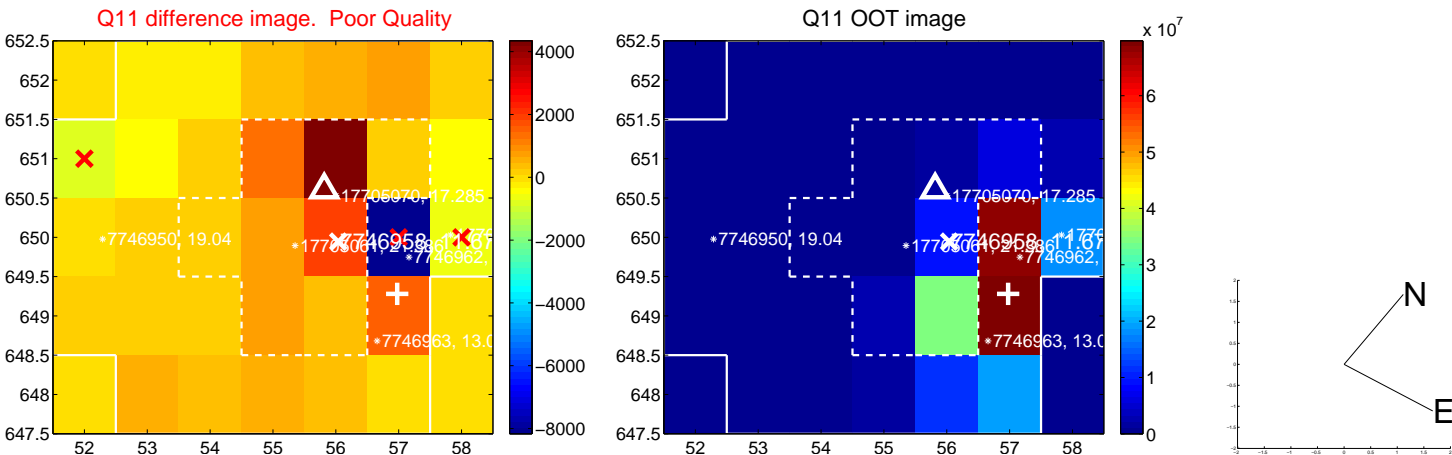
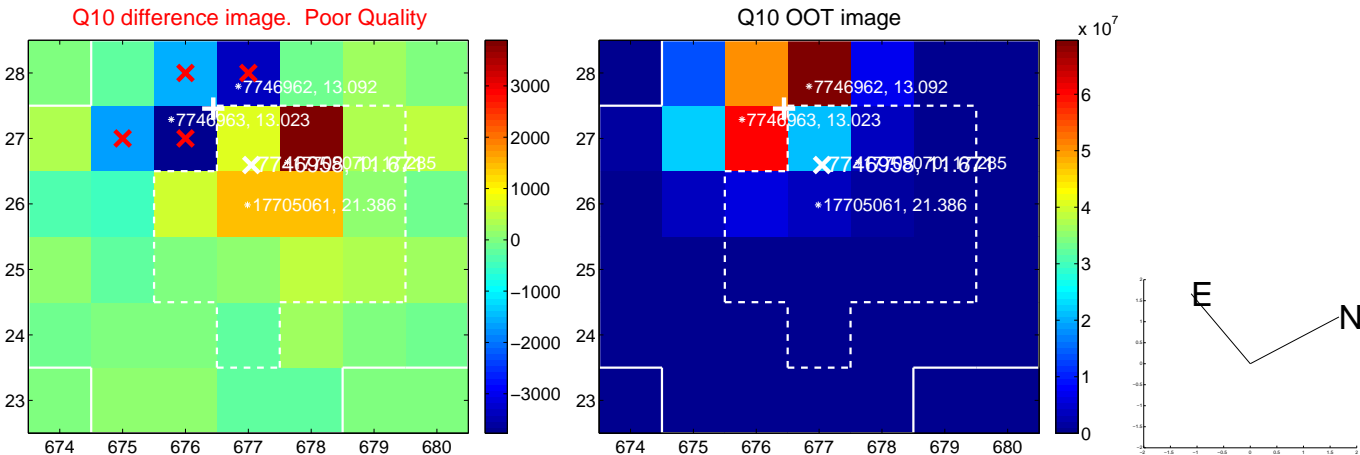
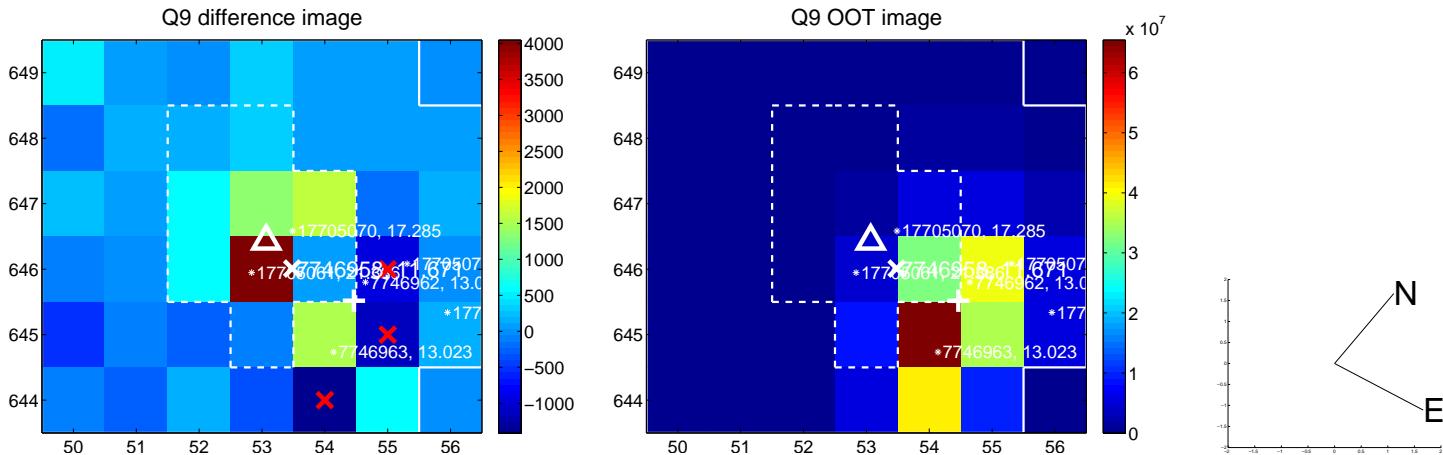
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



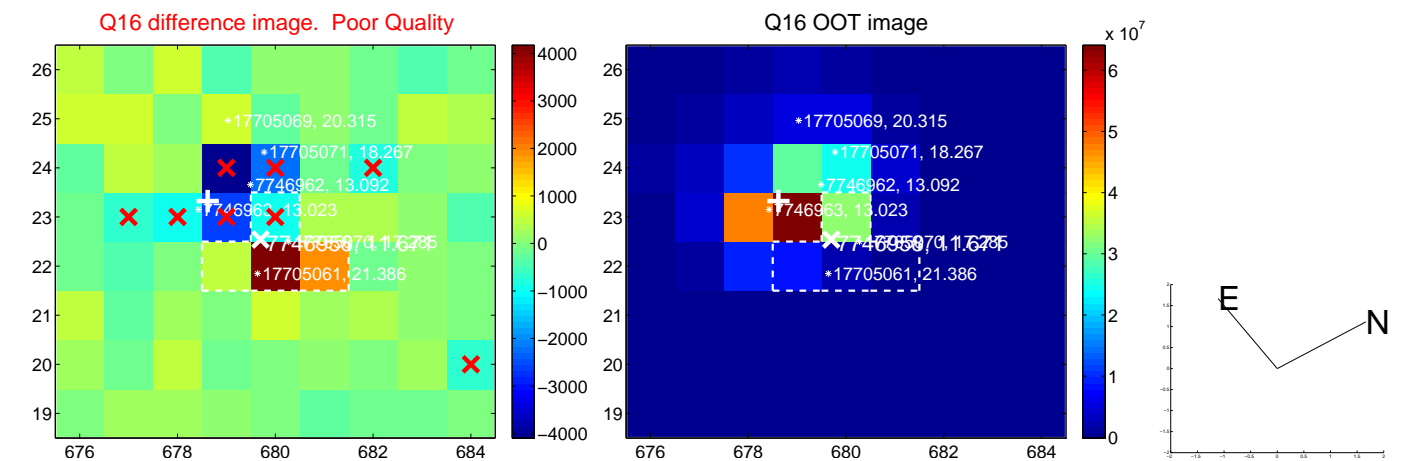
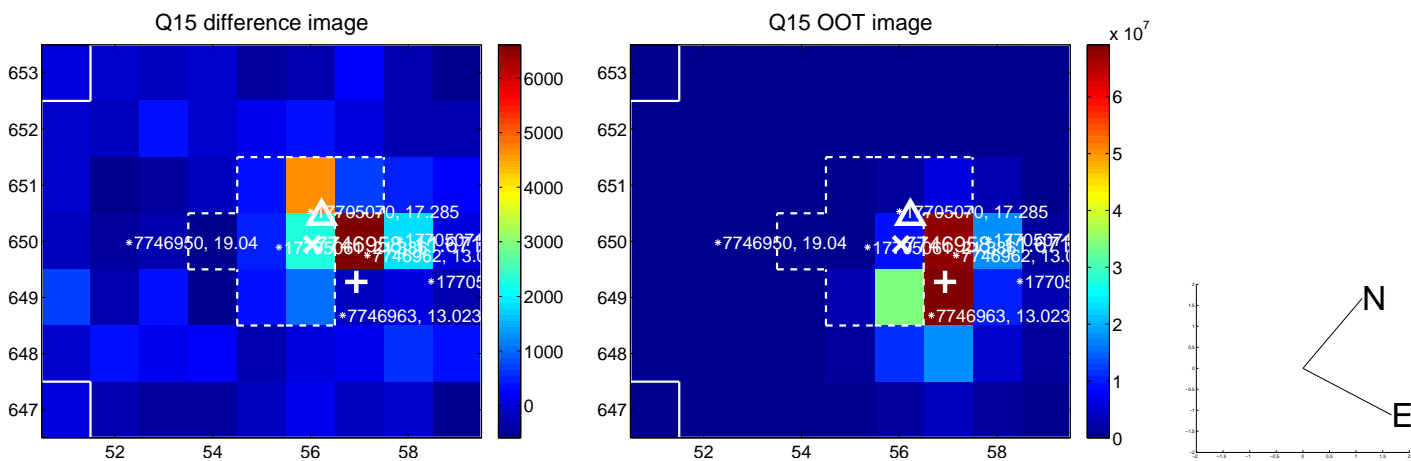
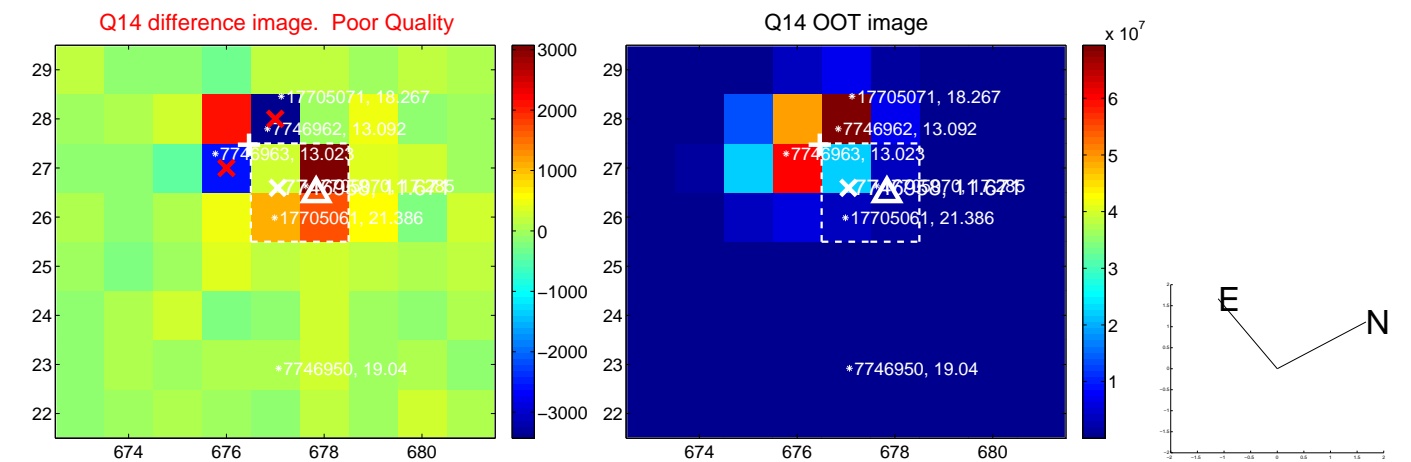
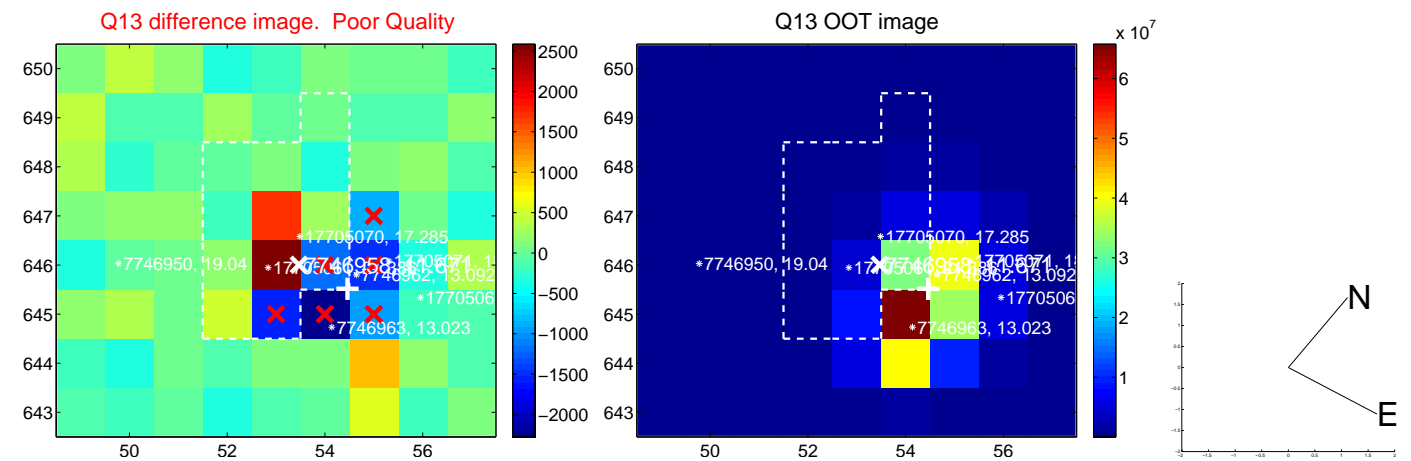
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



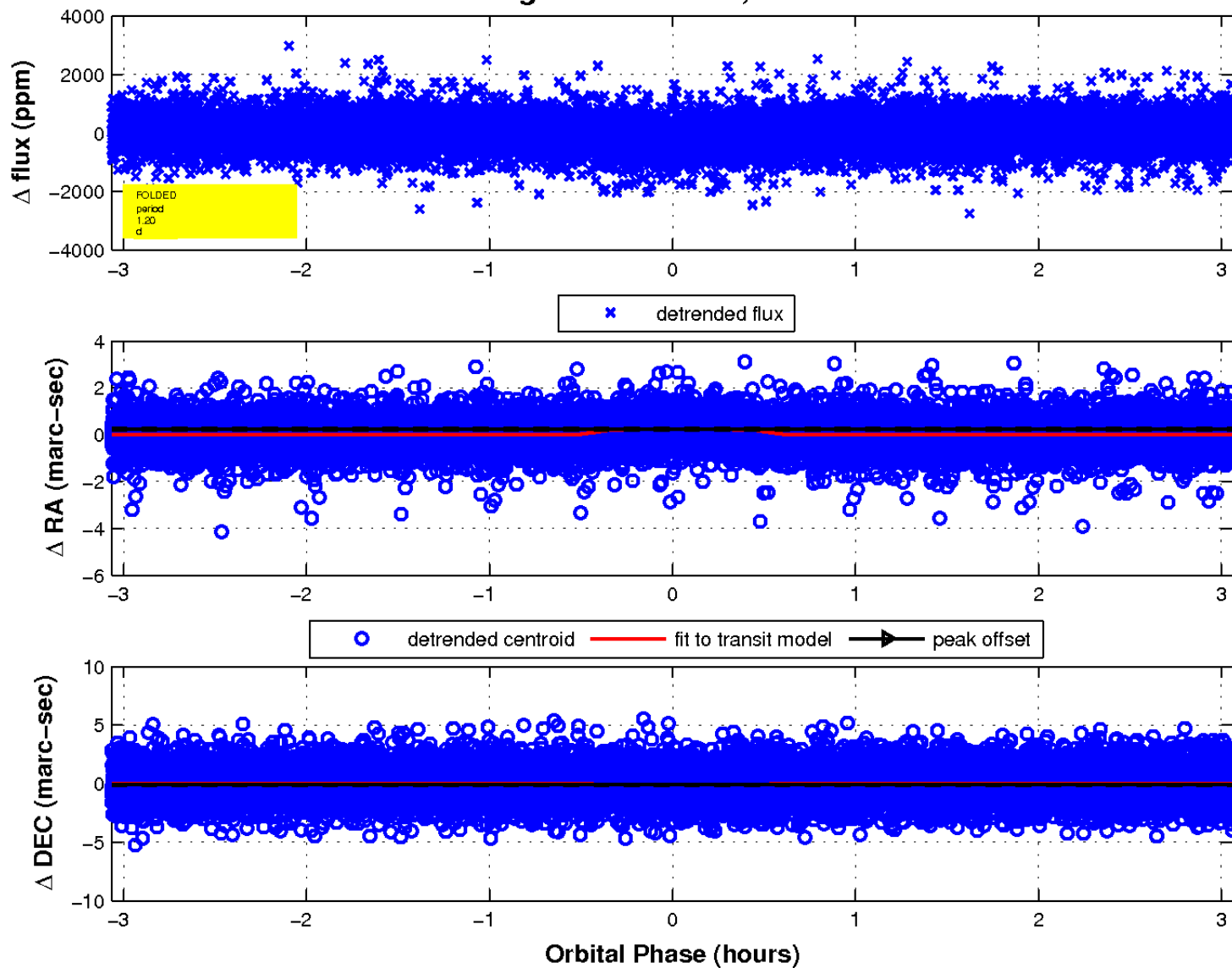
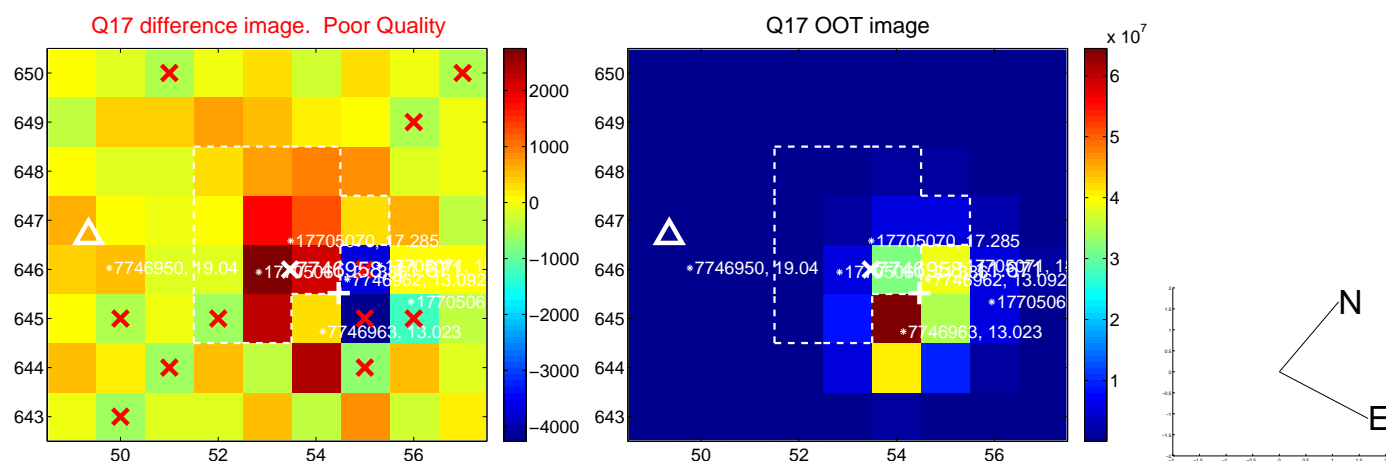
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

