

KIC 003747641

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})
003747641-01	OBS	No	4.817369	134.019091	124.9	32.762	7.9	9.2	0.80	5613	0.89	196.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003747641-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

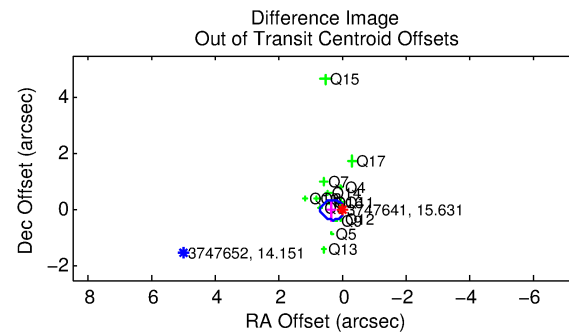
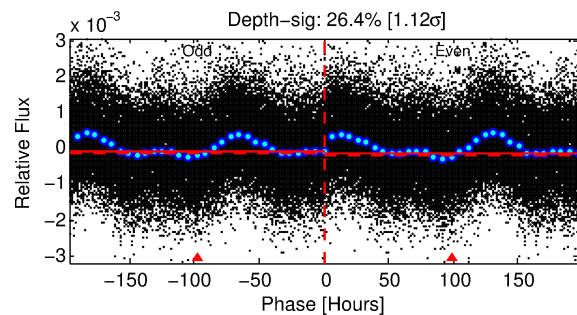
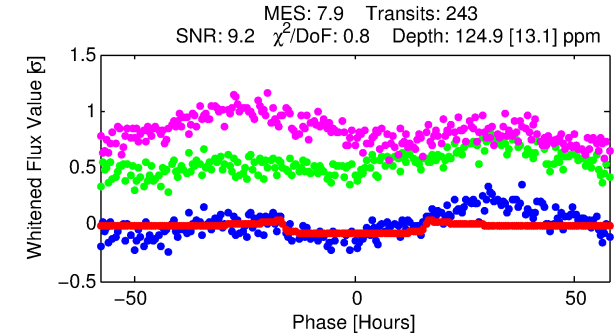
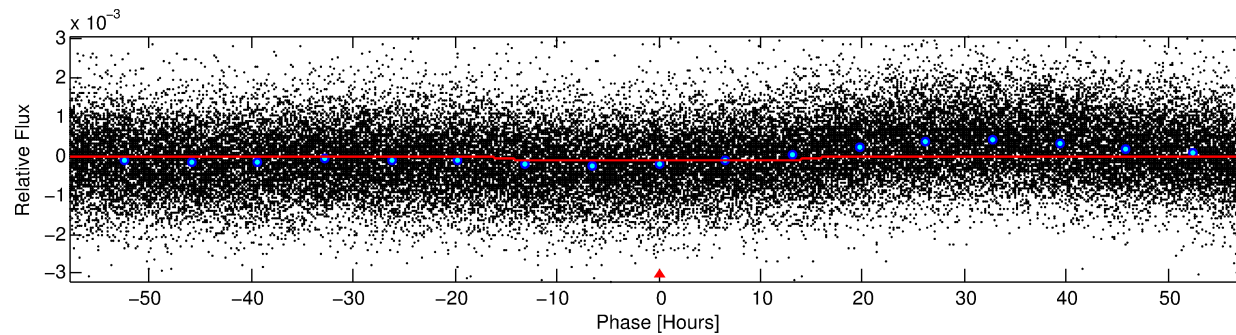
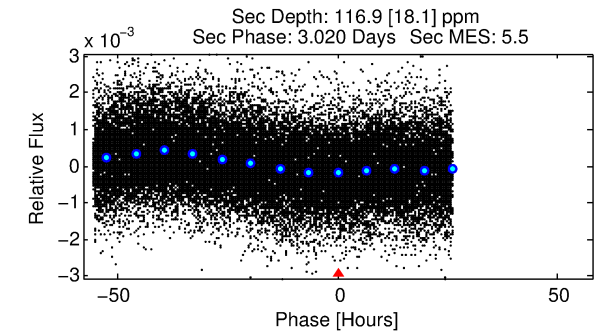
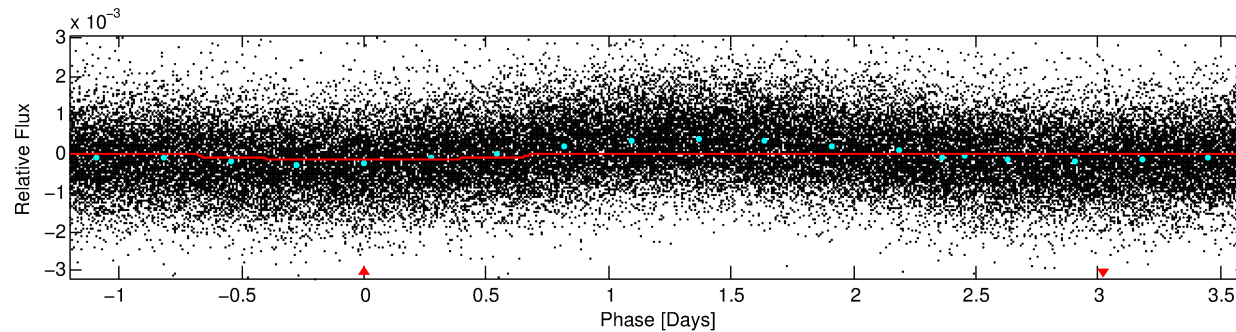
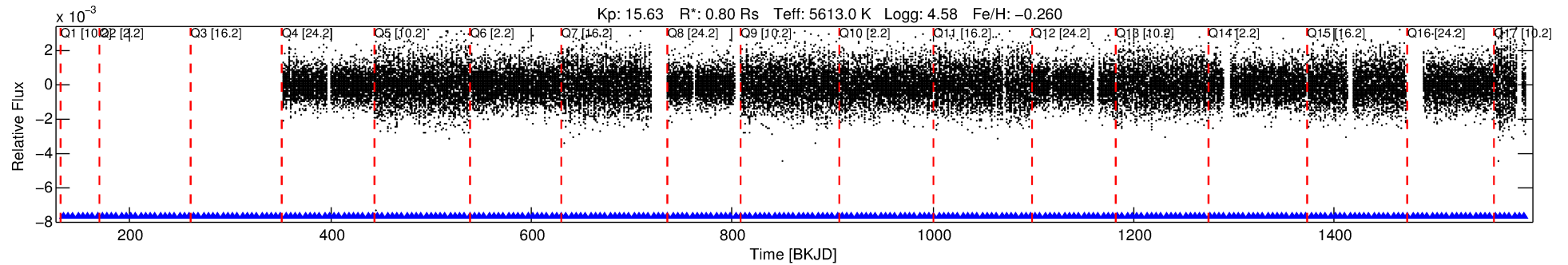
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003747641-01

No Significant Match Found

DV One-Page Summary

KIC: 3747641 Candidate: 1 of 1 Period: 4.817 d



DV Fit Results:

Period = 4.81737 [0.00014] d
Epoch = 134.0191 [0.0226] BKJD
Rp/R* = 0.0103 [0.0054]
a/R* = 1.26 [1.08]
b = 0.38 [5.26]
Seff = 196.56 [58.59]
Teq = 955 [71] K
Rp = 0.89 [0.50] Re
a = 0.0535 [0.0096] AU
Ag = 230.51 [251.10] [0.91σ]
Teff = 5752 [1534] K [3.12σ]

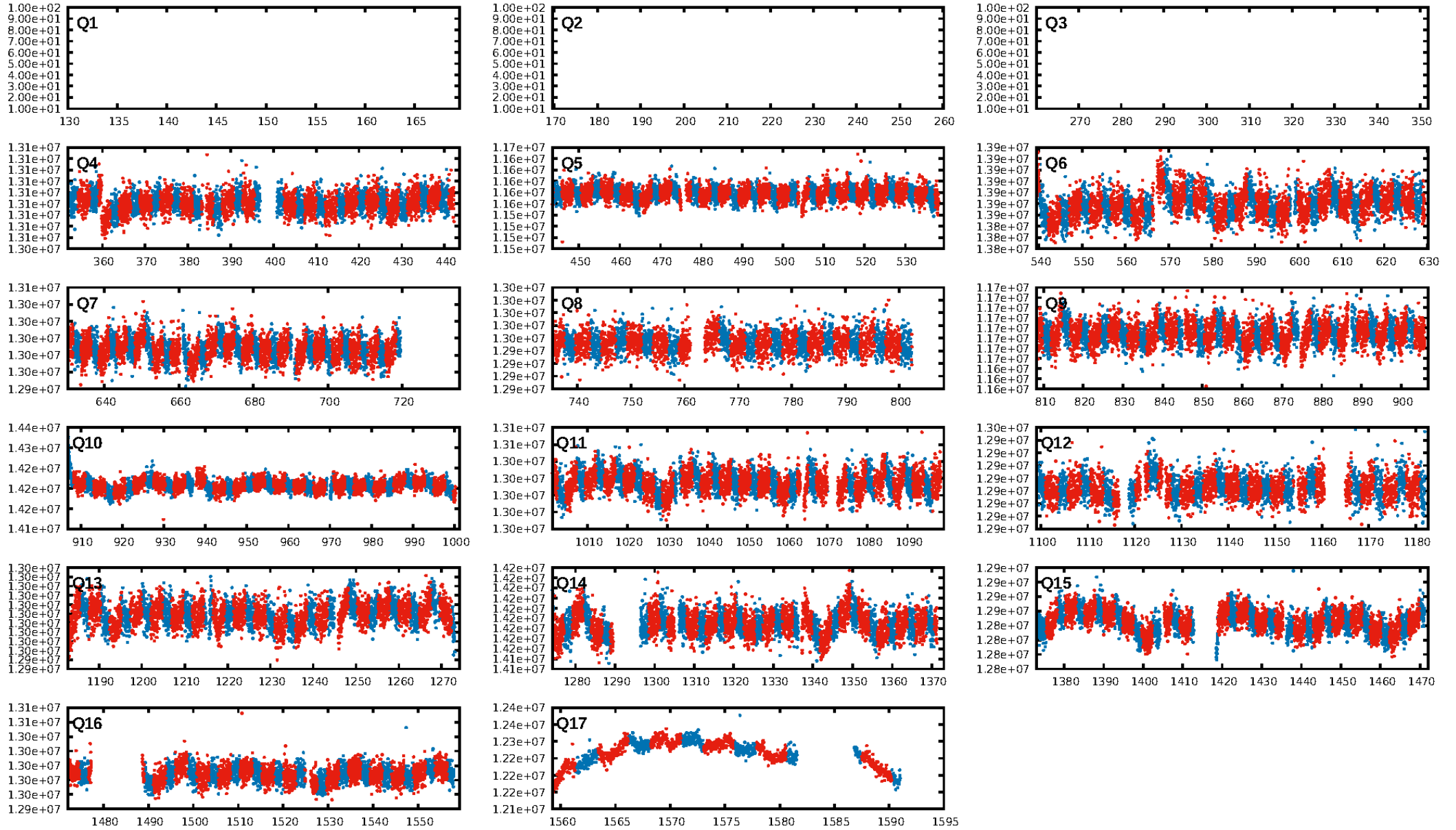
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [237/237]
GhostDiagnostic-chr: 0.3029
Centroid-sig: 0.0%
Centroid-so: 5.549 arcsec [15.08σ]
OotOffset-rm: 0.334 arcsec [2.80σ]
KicOffset-rm: 4.953 arcsec [36.82σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

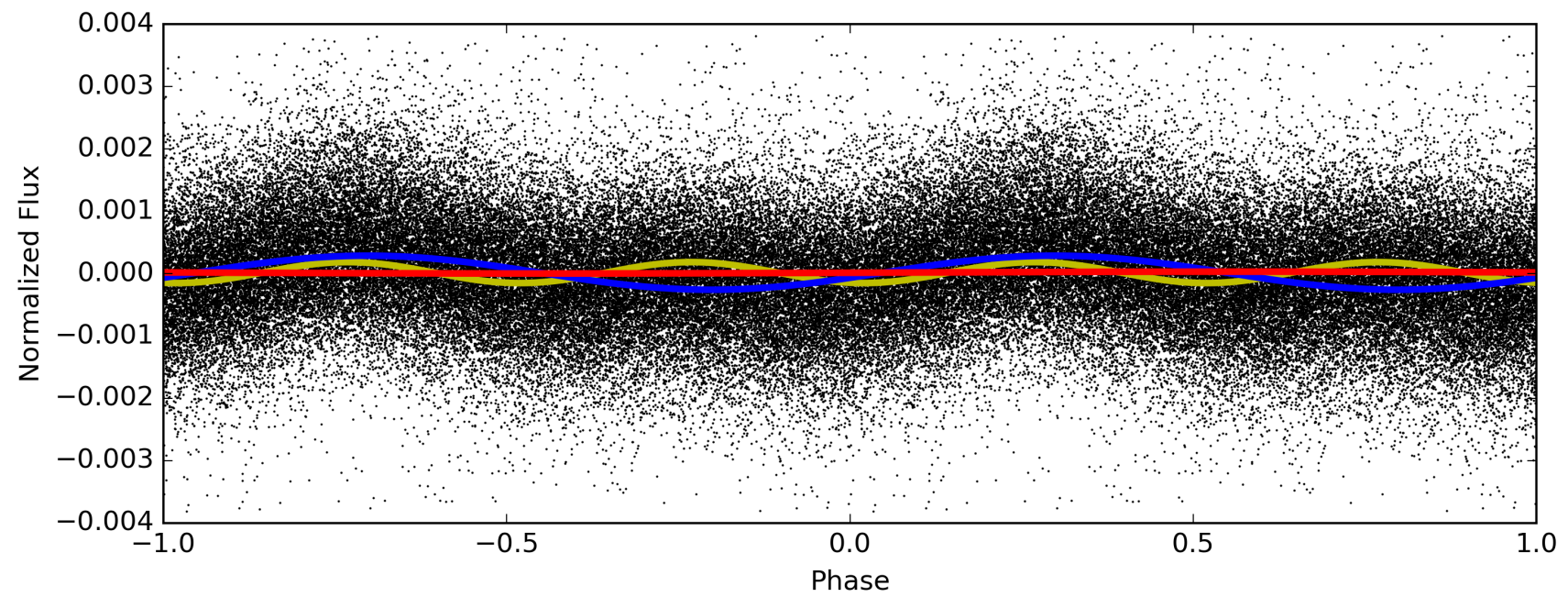
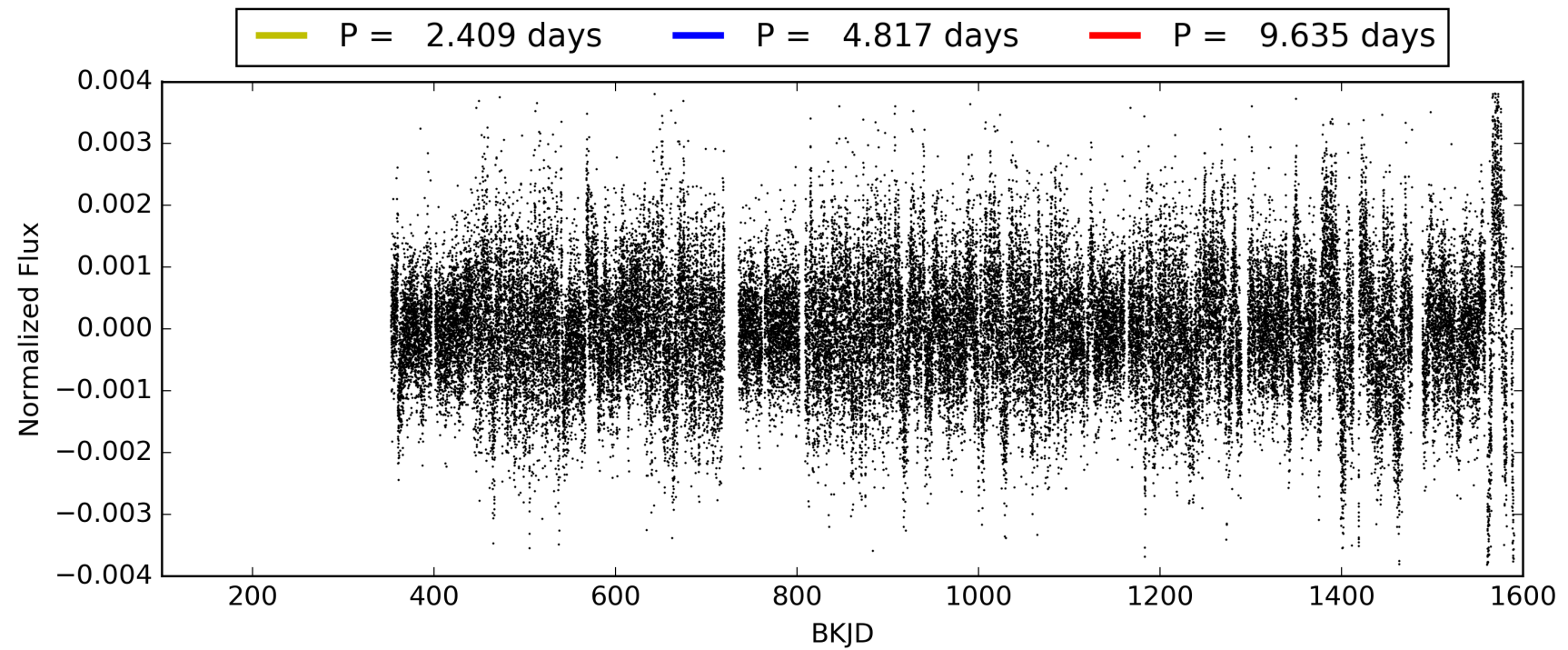
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:13:00 Z

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

TCE 003747641-01, PDC Light Curves

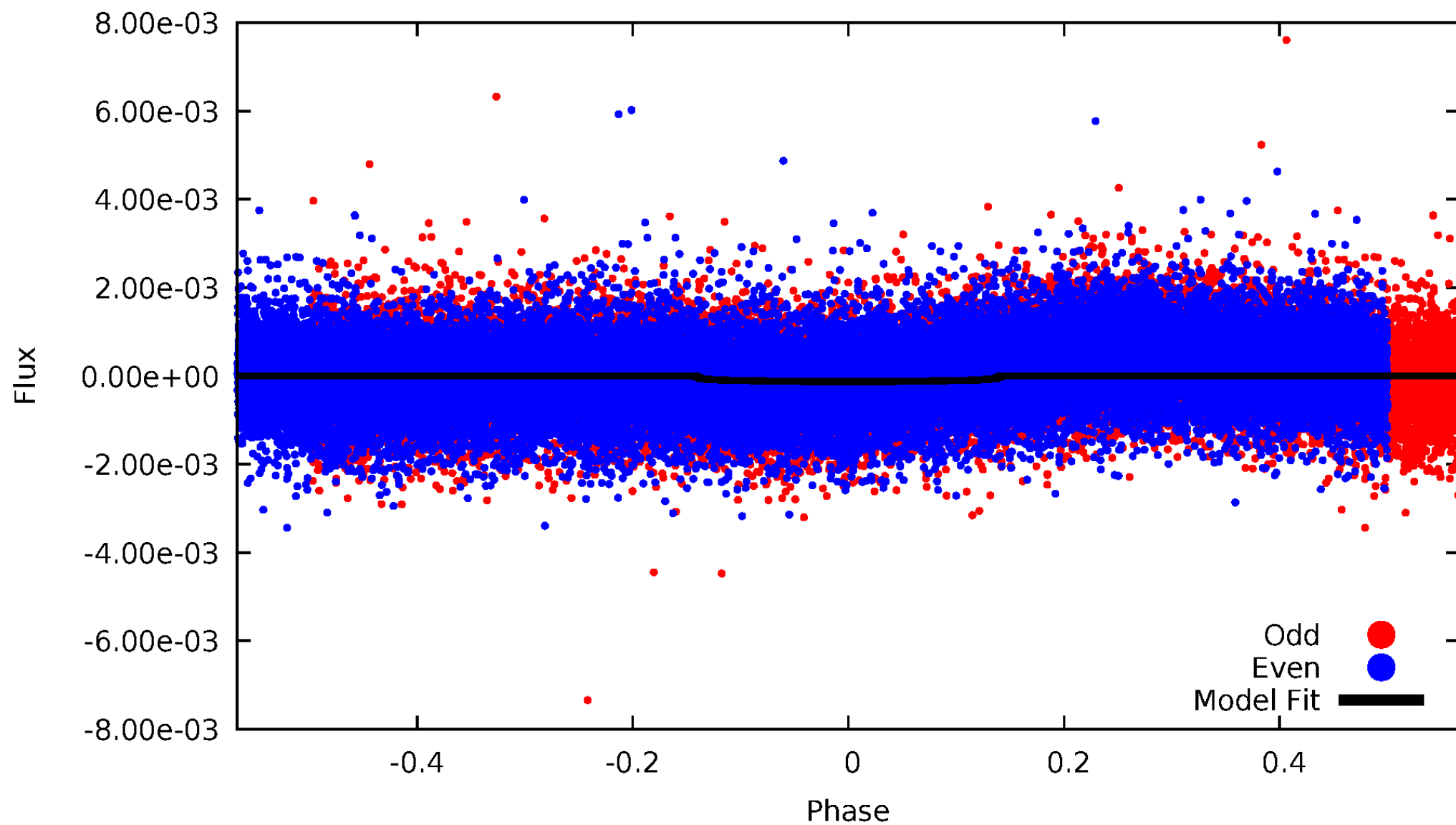


TCE 003747641-01



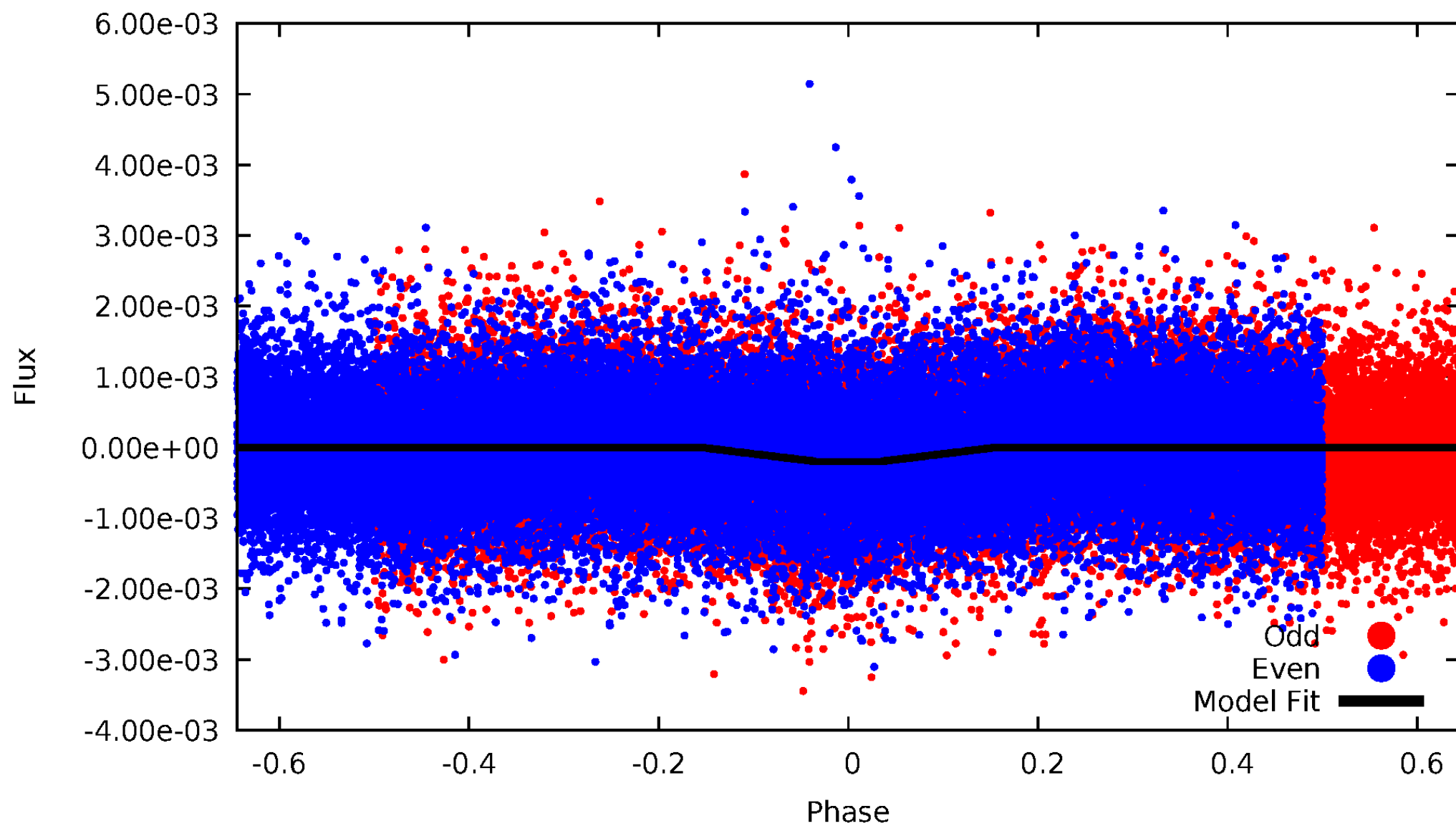
DV Odd/Even

TCE 003747641-01



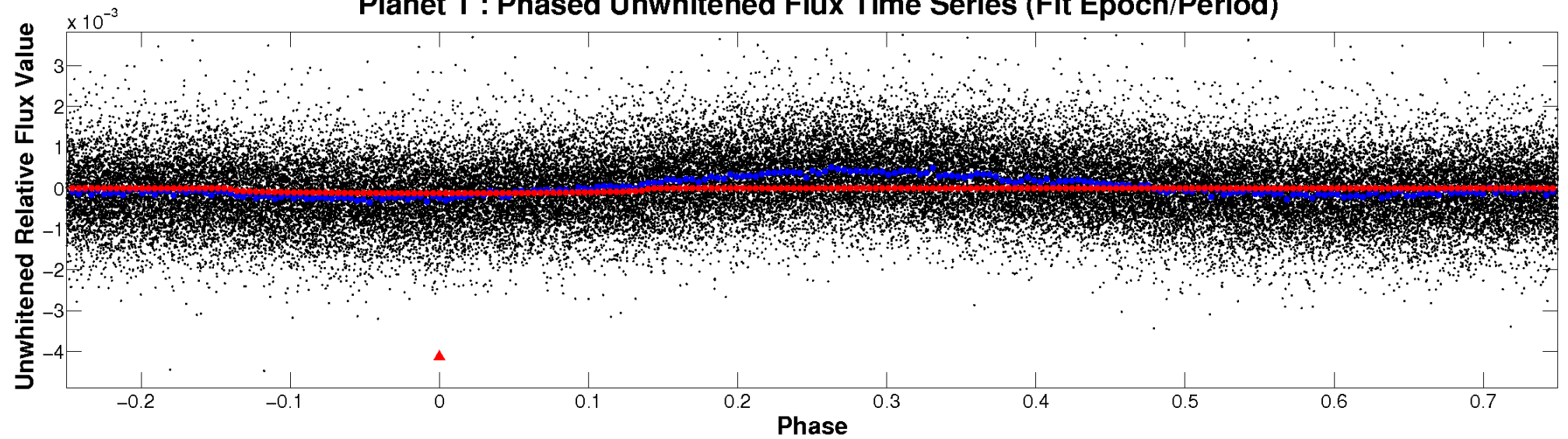
ALT Odd/Even

TCE 003747641-01

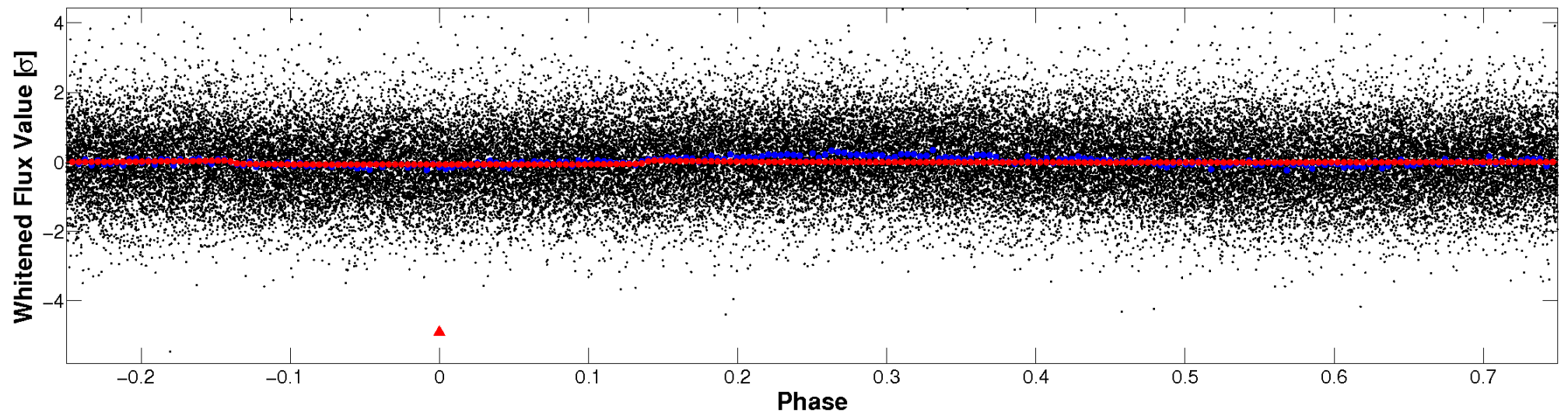


Non-Whitened Vs. Whitened Light Curve

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

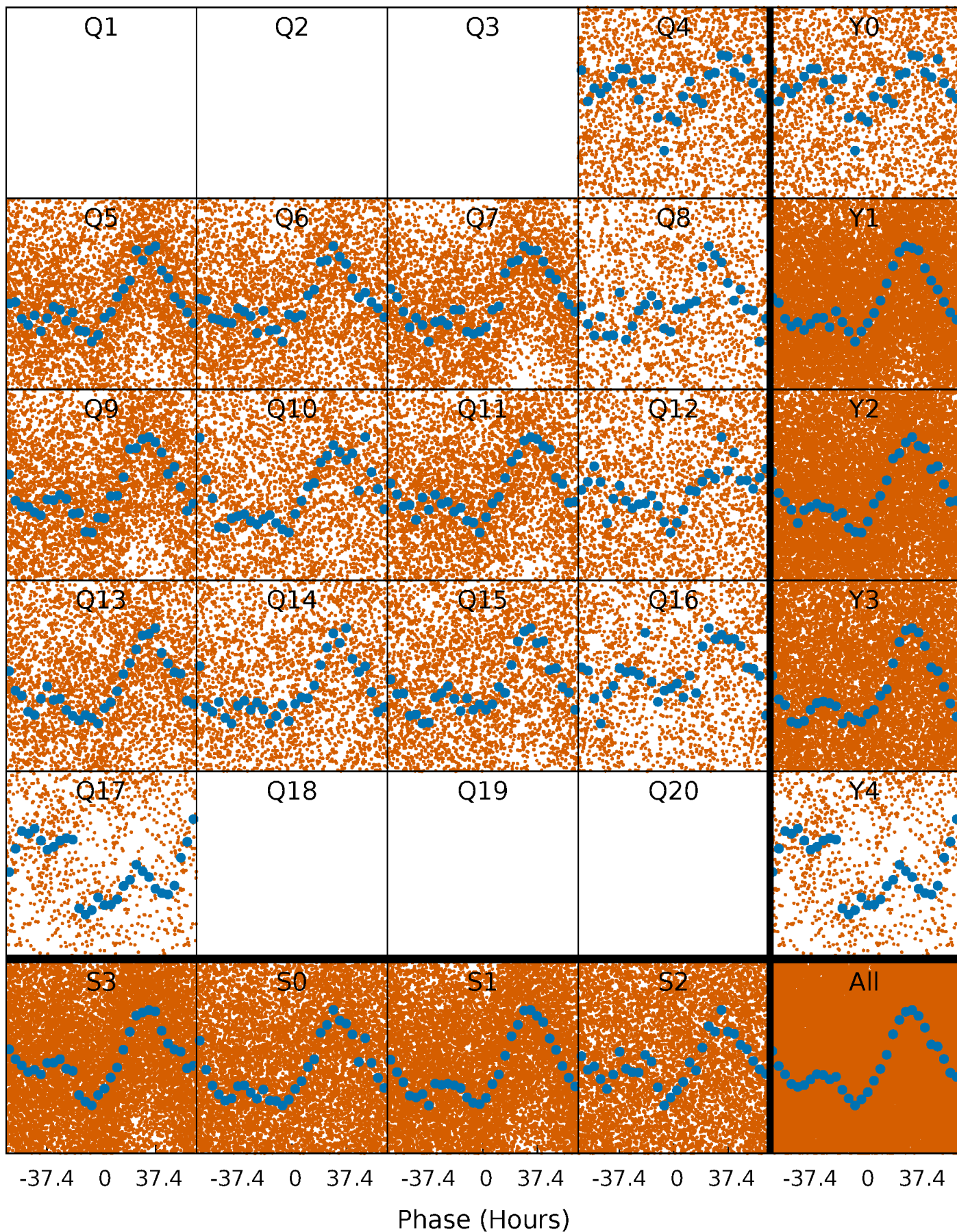


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



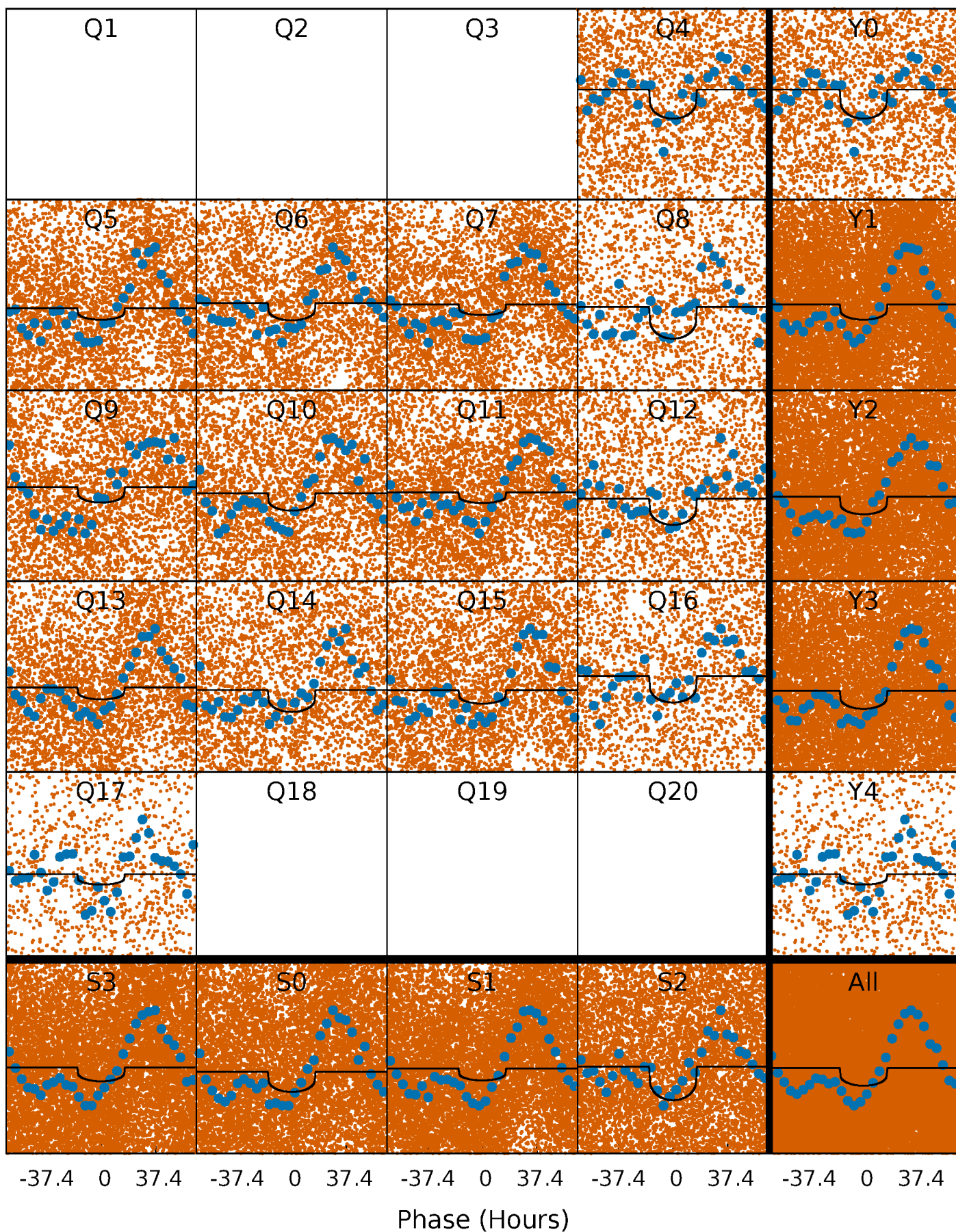
PDC Quarter-Phased Transit Curves

TCE 003747641-01 P= 4.817369 Days $T_0=134.019091$ (BKJD)



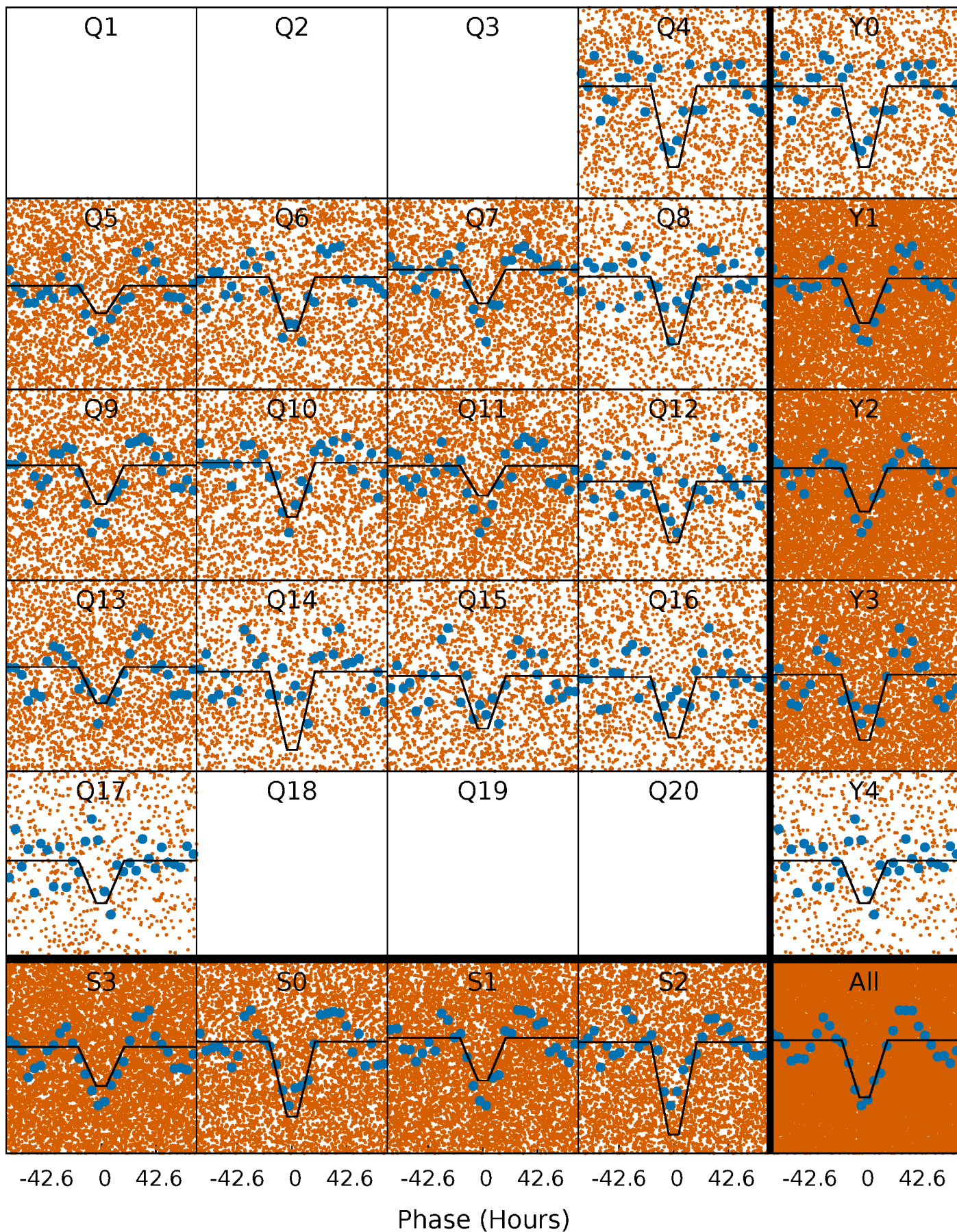
DV Quarter-Phased Transit Curves

TCE 003747641-01 P= 4.817369 Days $T_0=134.019091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

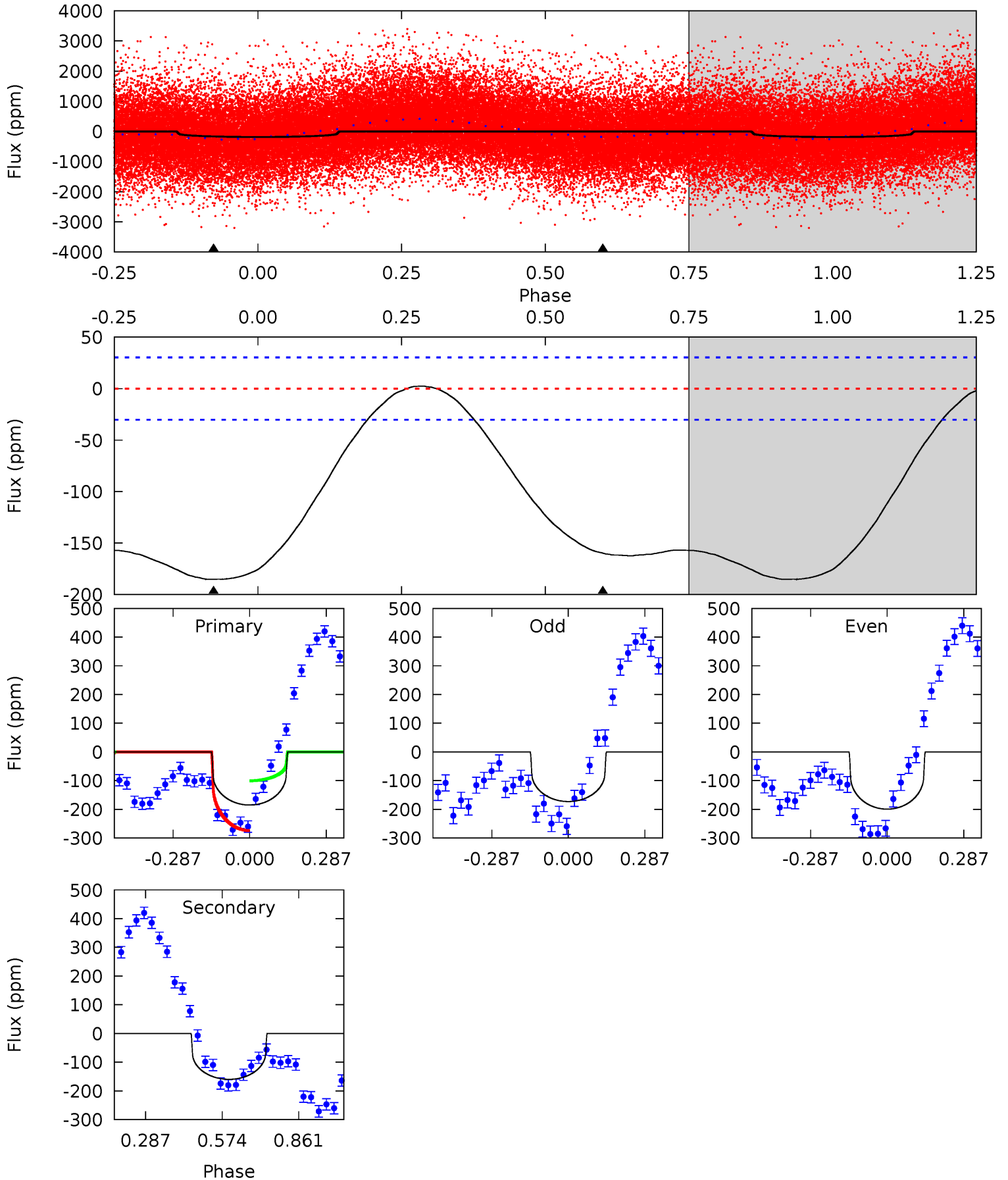
TCE 003747641-01 P= 4.818334 Days $T_0=133.848034$ (BKJD)



DV Model-Shift Uniqueness Test

003747641-01, P = 4.817369 Days, E = 134.019091 Days

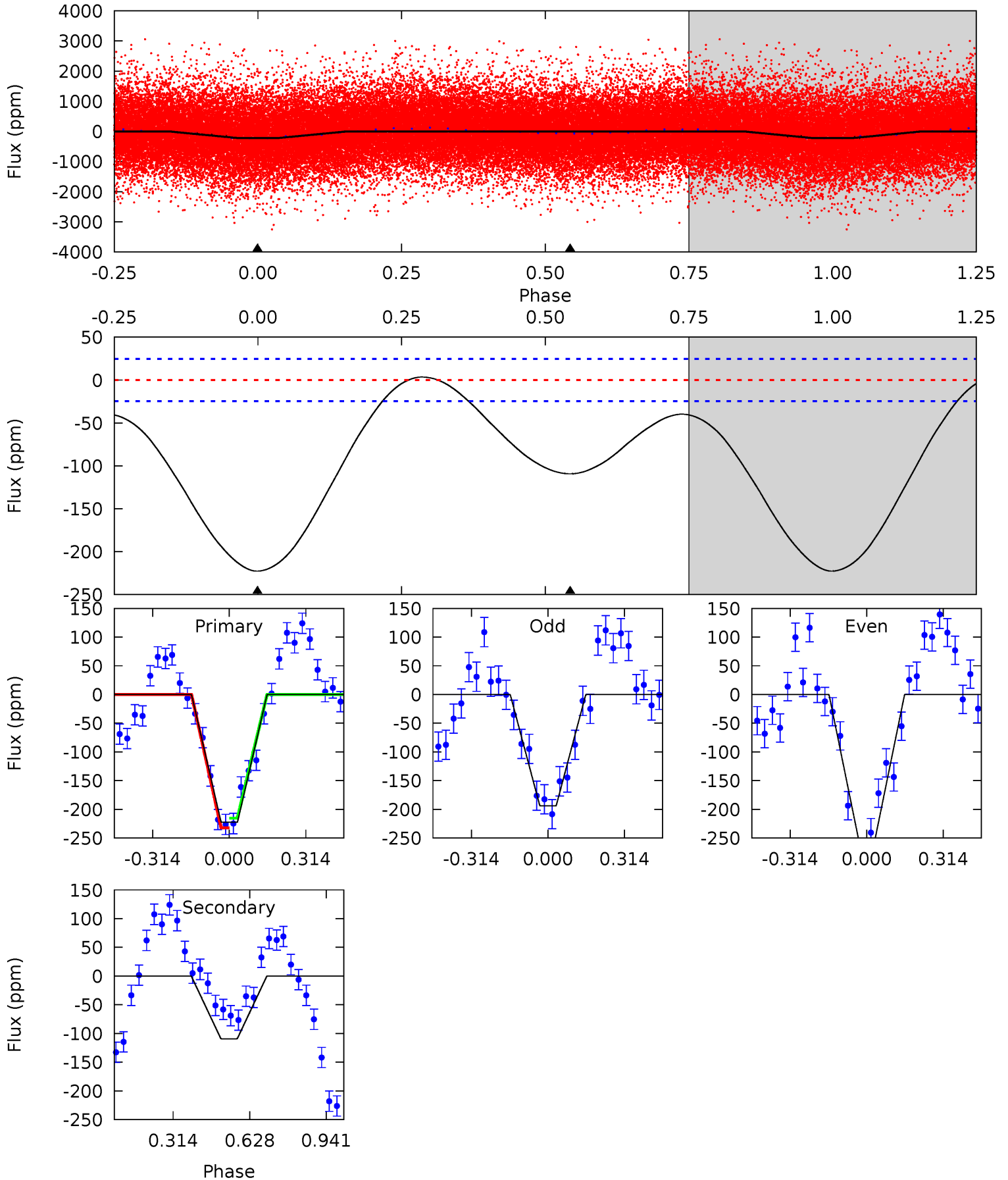
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	22.9	0	0	4.34	1.06	0.86	26.6	26.6	22.9	22.9	1.90	1.16	0.01	13.9



Alt Model-Shift Uniqueness Test

003747641-01, P = 4.818334 Days, E = 133.848034 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	19.1	0	0	4.32	1.01	2.22	39.0	39.0	19.1	19.1	5.16	1.03	0.02	1.46



Stellar Parameters For KIC 003747641

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5613^{+178}_{-198}	$4.581^{+0.036}_{-0.144}$	$-0.260^{+0.300}_{-0.300}$	$0.795^{+0.169}_{-0.073}$	$0.888^{+0.088}_{-0.107}$	$2.492^{+0.474}_{-1.017}$
	+3%/-4%	+1%/-3%	+115%/-115%	+21%/-9%	+10%/-12%	+19%/-41%
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 003747641-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-160 ± 7	$0.94^{+0.46}_{-0.46}$	1361^{+70}_{-61}	6154^{+2737}_{-1057}	283^{+771}_{-152}
Alt.	-109 ± 6	$1.27^{+0.52}_{-0.51}$	1360^{+69}_{-64}	4916^{+1280}_{-619}	105^{+180}_{-53}

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 $A_{obs} \gg 1.0$

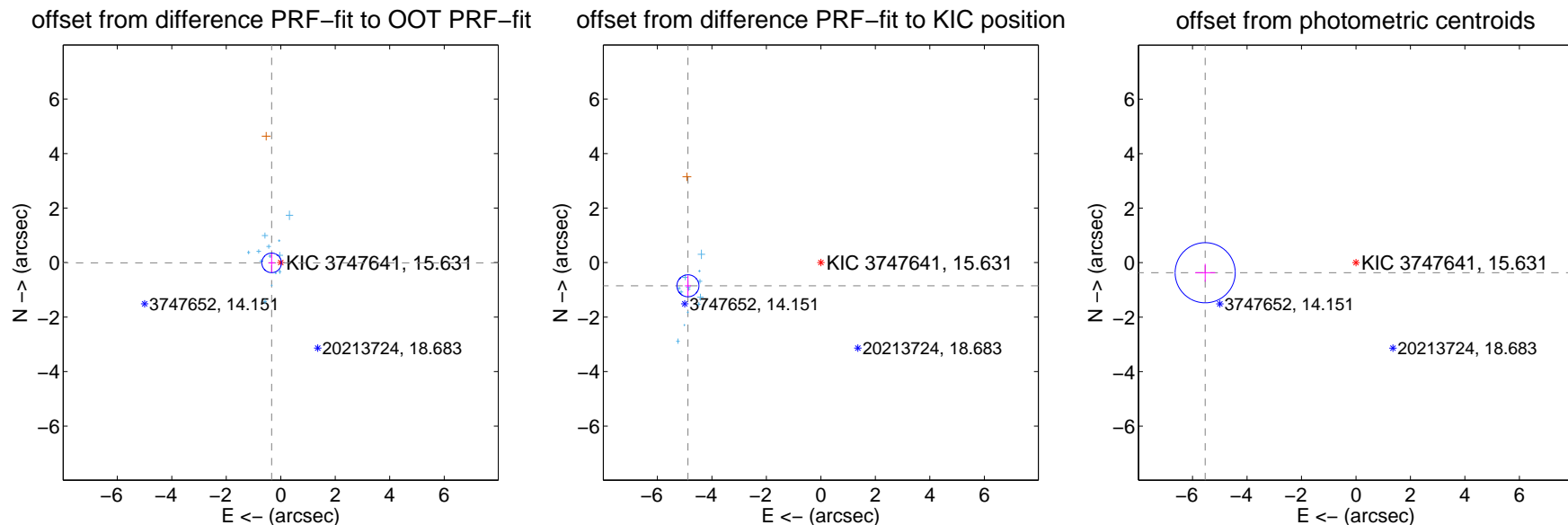
DV Centroid Data

Supplemental centroid analysis for 003747641-01. Kepler magnitude: 15.63. Transit SNR 9.25

There are 13 quarters with good PRF difference image offsets

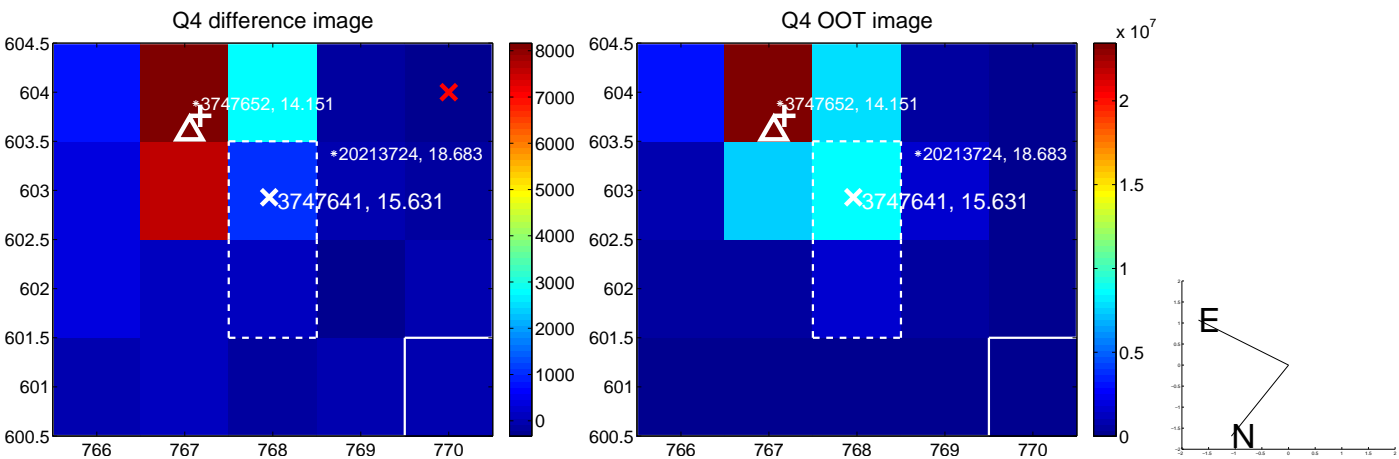
The OOT PRF centroid is offset from the target star catalog position by about 4.92 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.334 ± 0.120	2.80	0.334 ± 0.119	-0.010 ± 0.357
PRF-fit source offset from KIC position	4.953 ± 0.135	36.82	4.879 ± 0.108	-0.851 ± 0.380
photometric centroid source offset	5.55 ± 0.37	15.08	5.54 ± 0.37	-0.37 ± 0.33

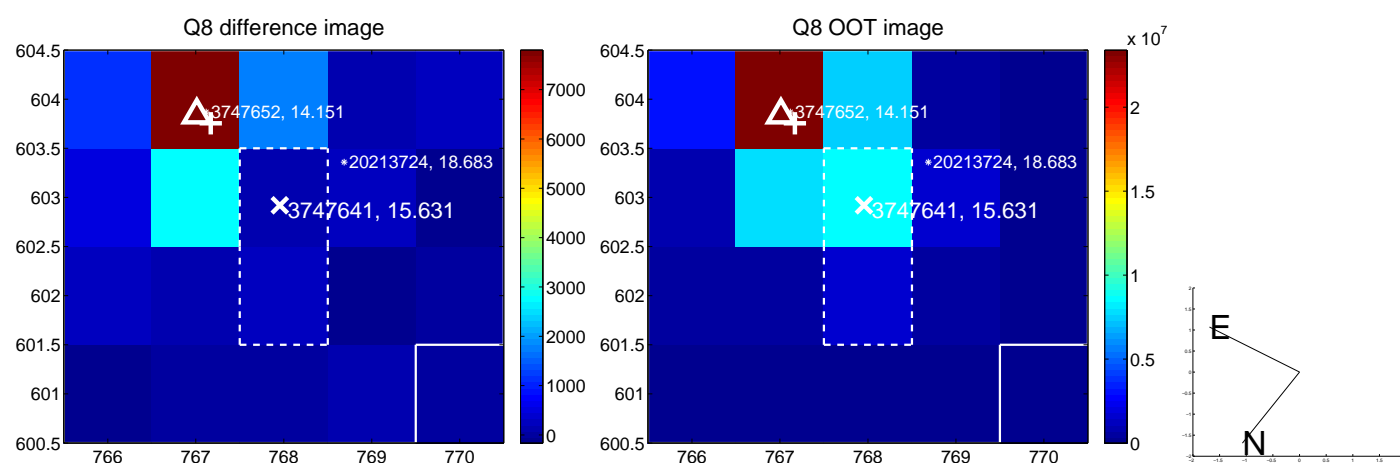
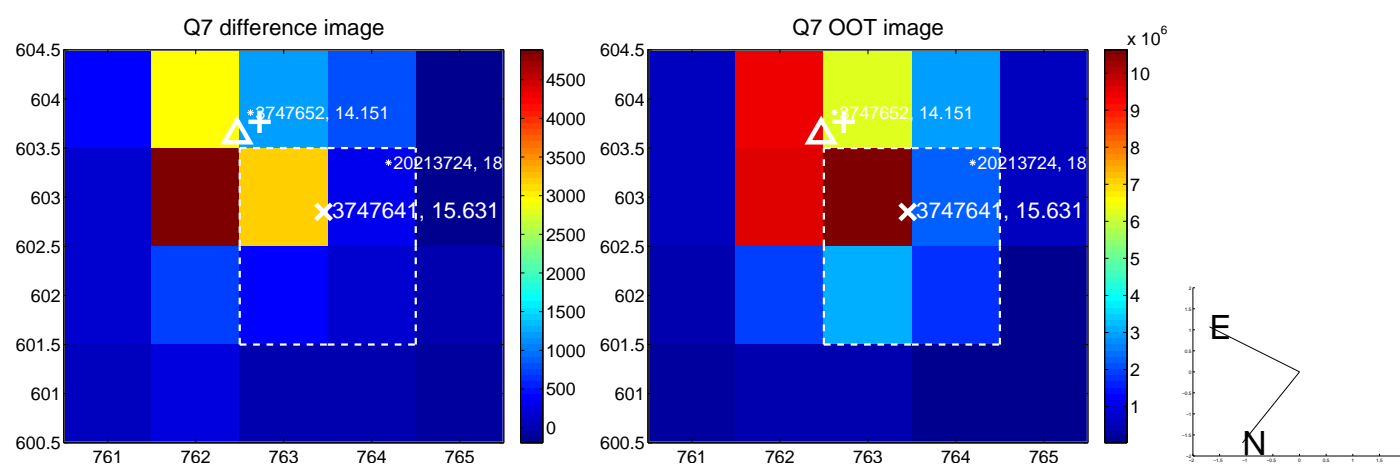
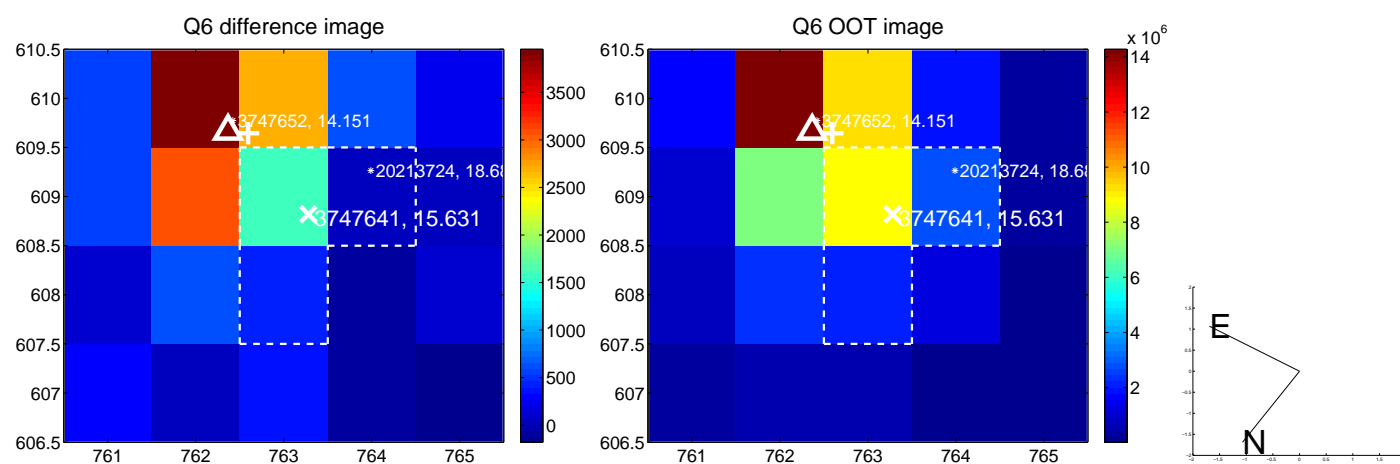
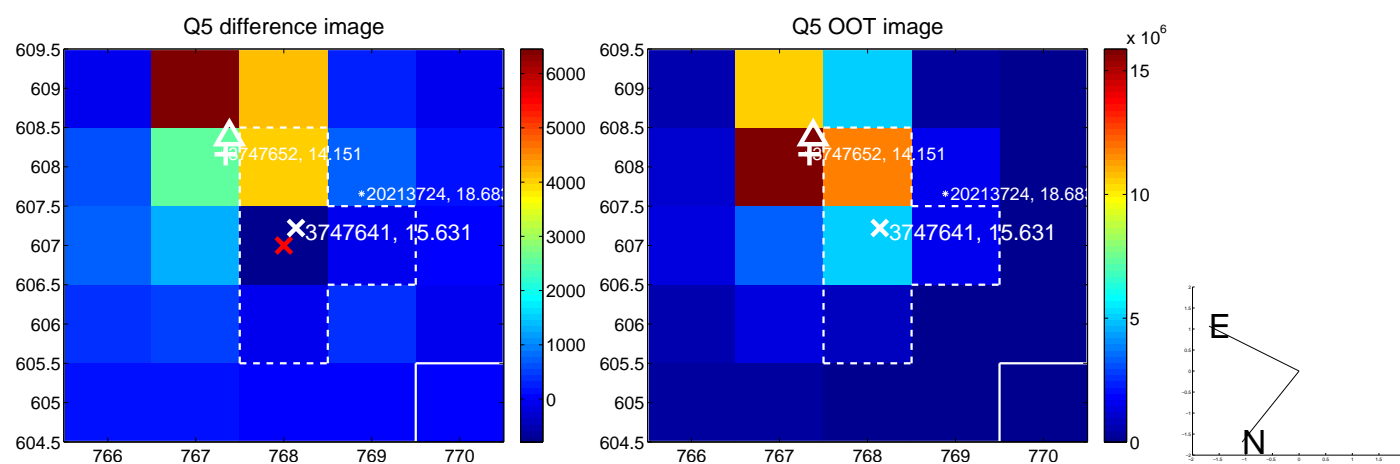


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

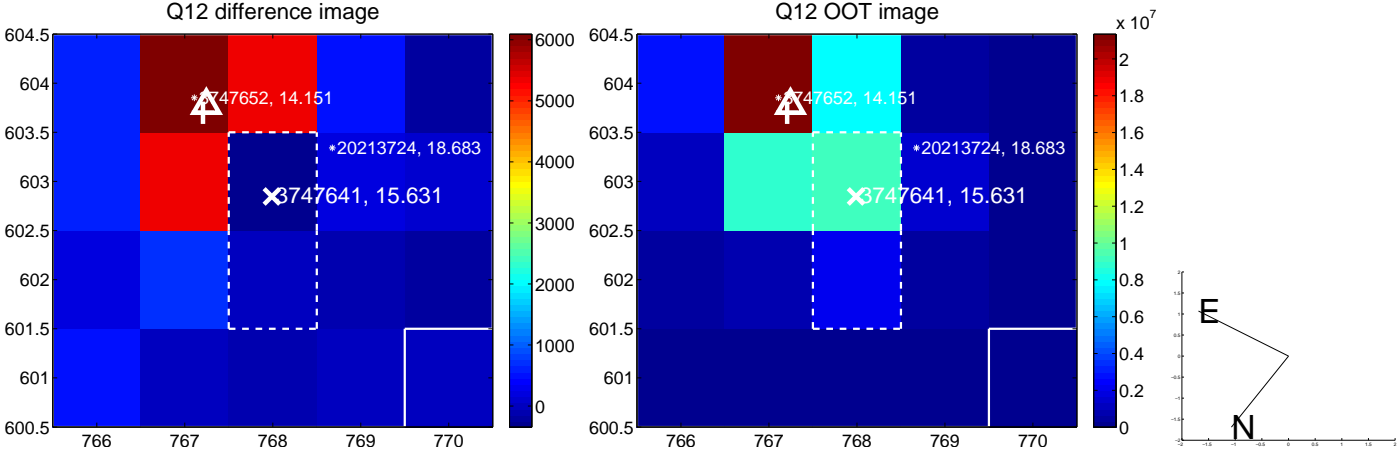
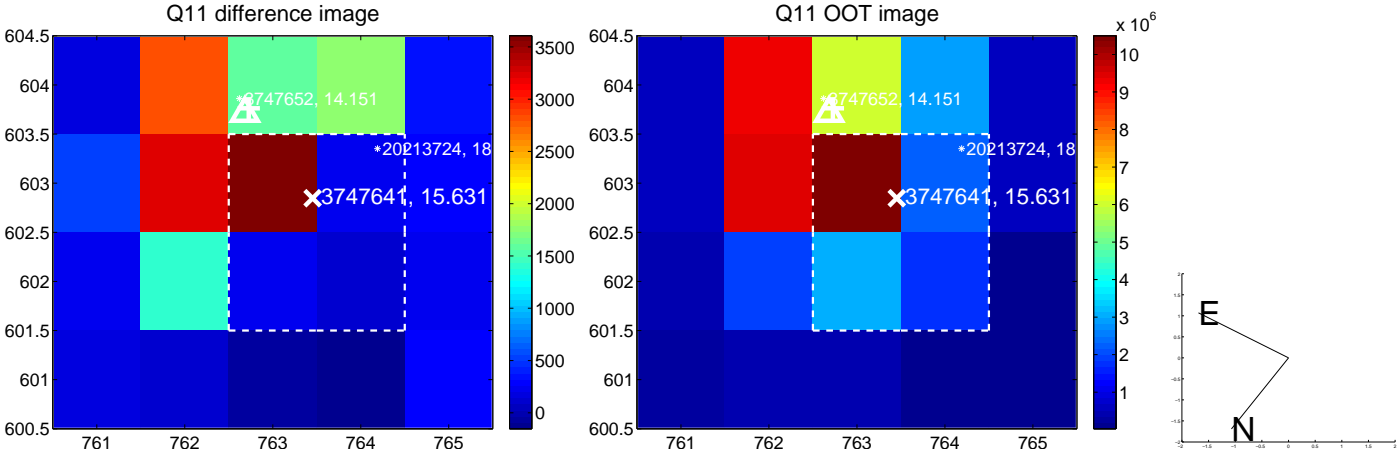
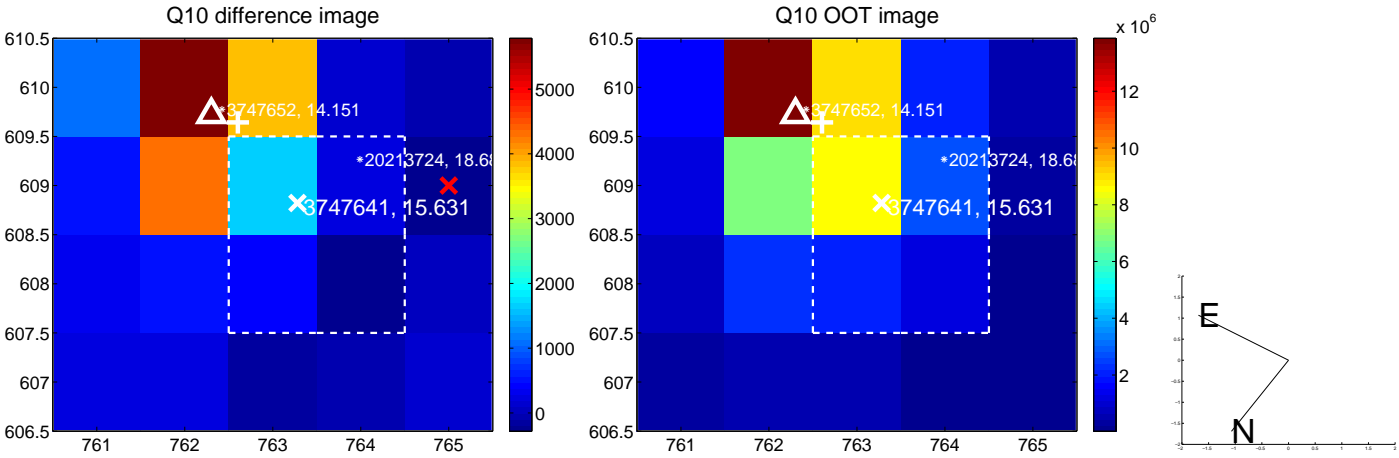
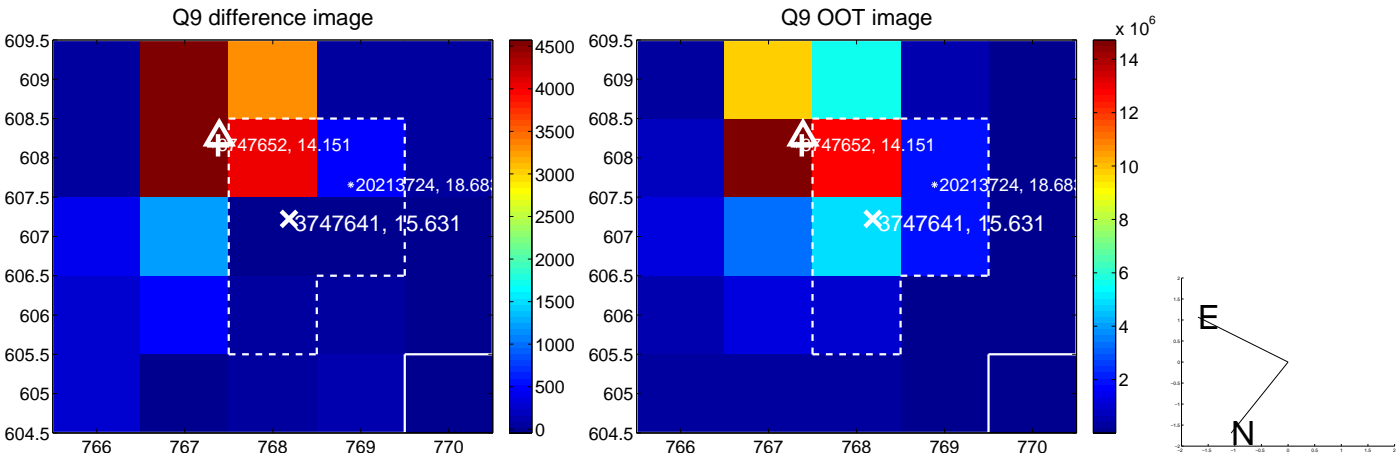
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



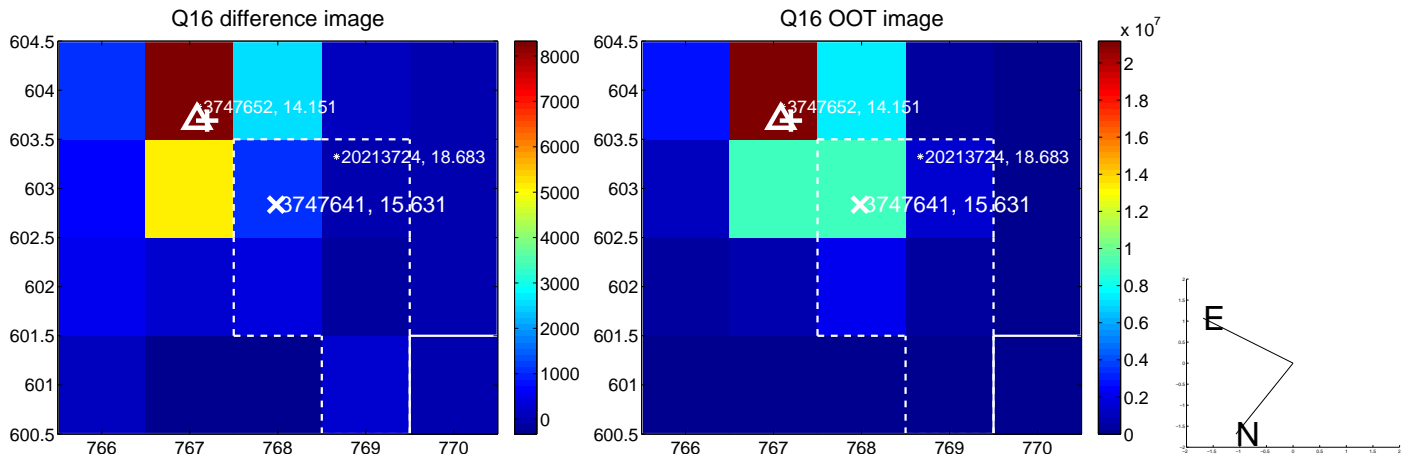
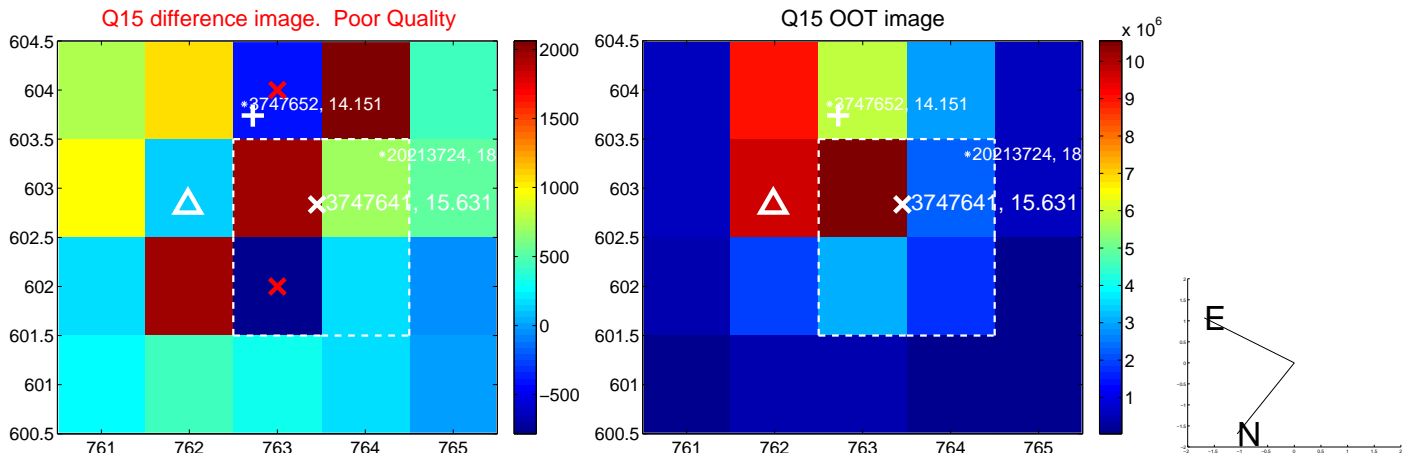
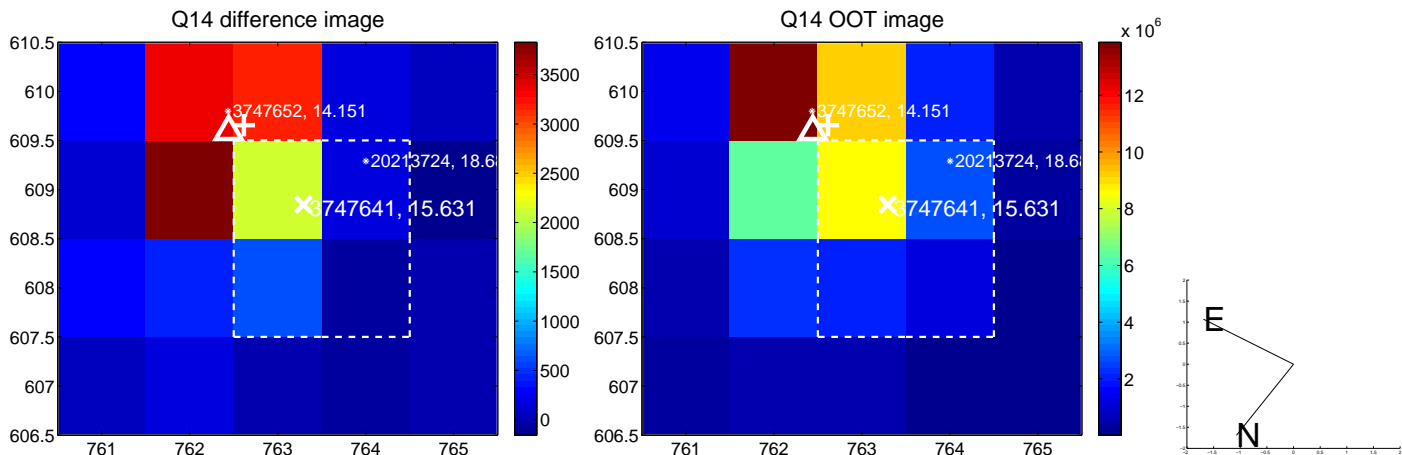
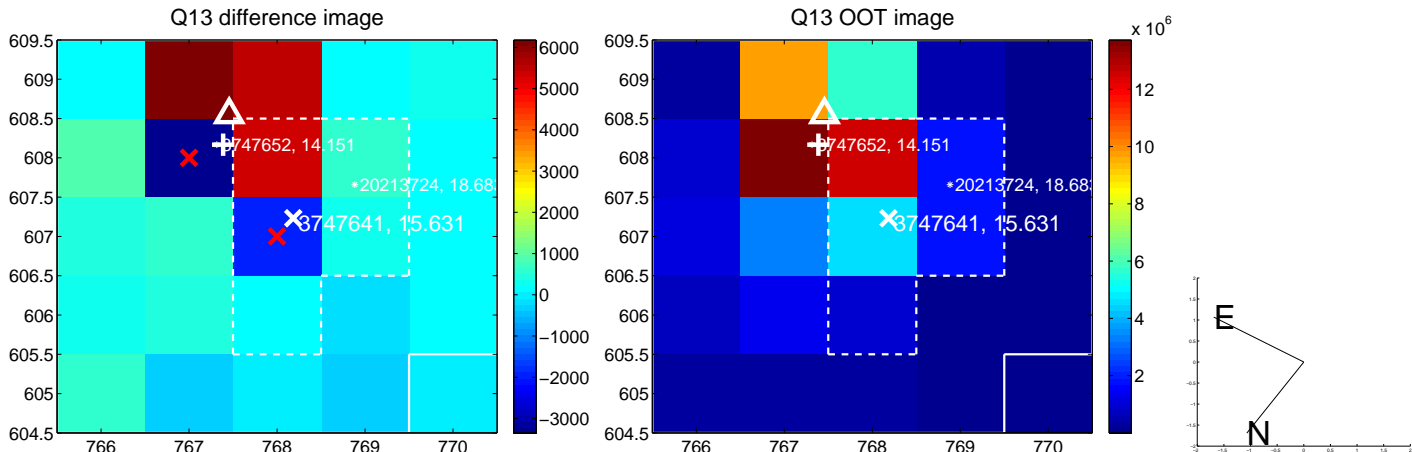
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



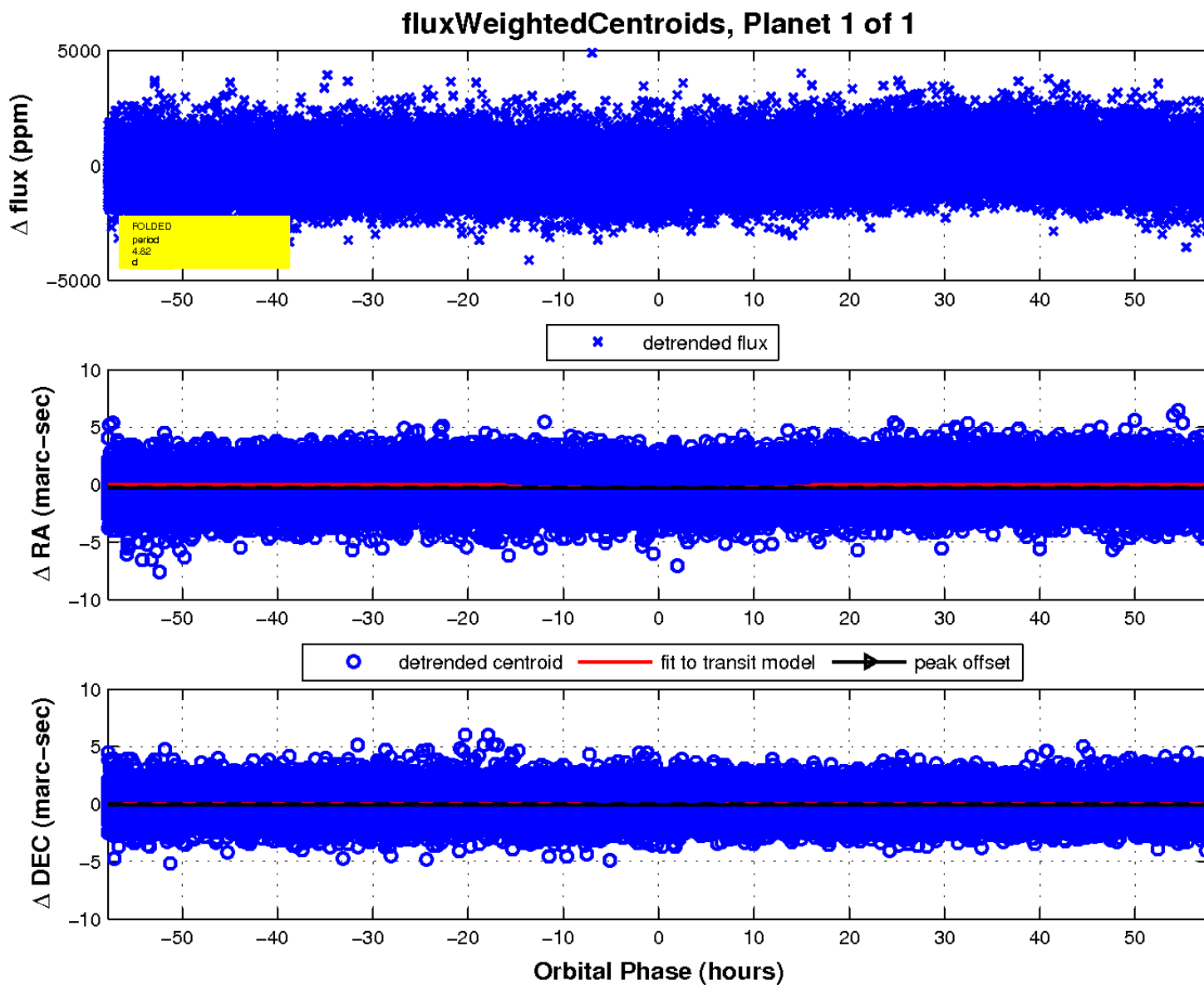
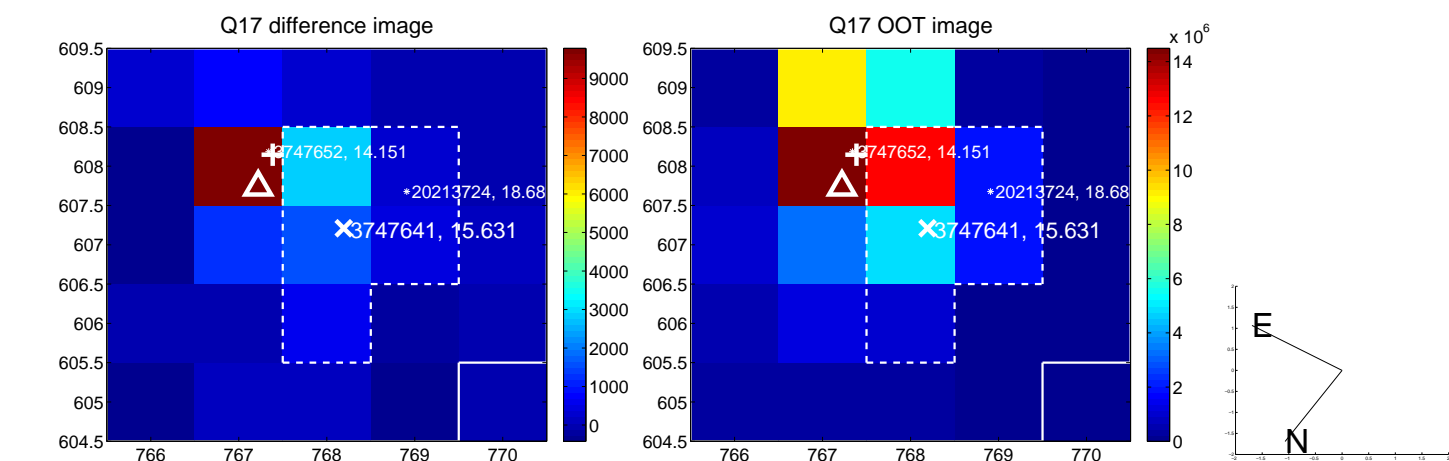
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

