

KIC 004274748

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})
004274748-01	OBS	No	4.554742	134.823268	14.3	13.962	8.5	3.0	1.72	6948	0.74	1865.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004274748-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

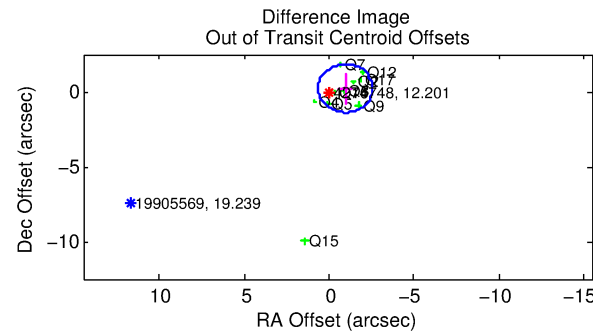
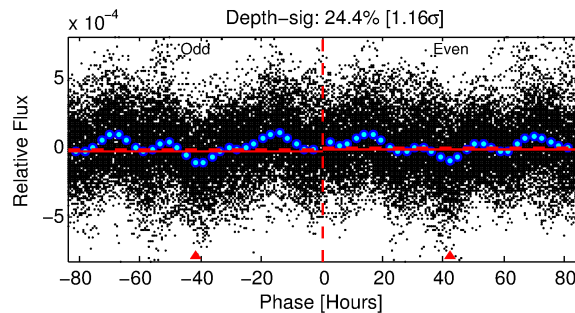
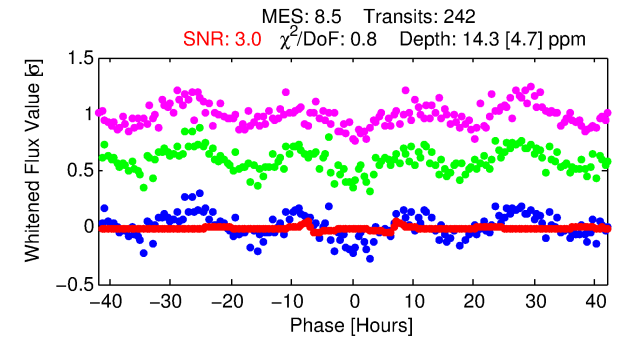
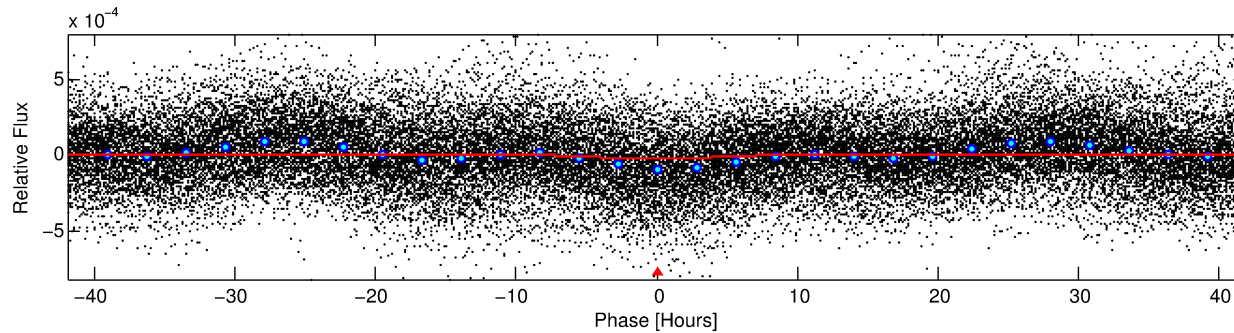
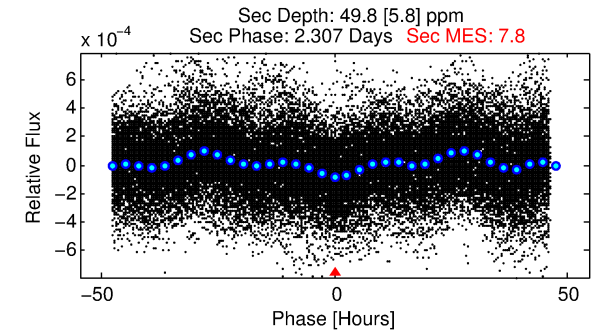
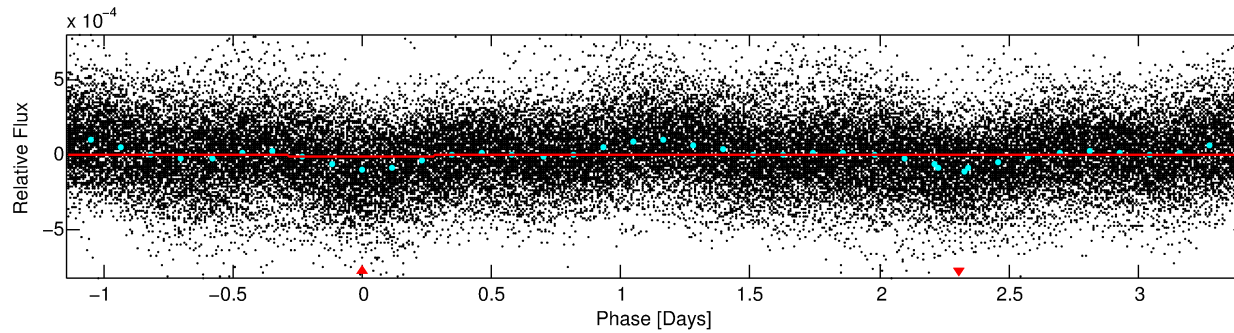
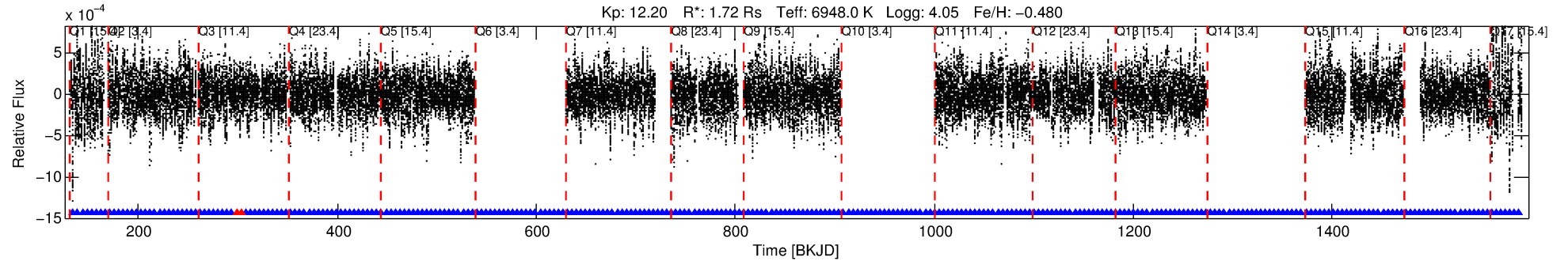
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004274748-01

No Significant Match Found

DV One-Page Summary

KIC: 4274748 Candidate: 1 of 1 Period: 4.555 d



DV Fit Results:

Period = 4.55474 [0.00009] d
Epoch = 134.8233 [0.0122] BKJD
Rp/R* = 0.0039 [0.0010]
a/R* = 1.56 [1.05]
b = 0.87 [0.33]
Seff = 1865.21 [756.44]
Teq = 1676 [170] K
Rp = 0.74 [0.27] Re
a = 0.0574 [0.0140] AU
Ag = 166.44 [109.59] [1.51σ]
Teffp = 9306 [1290] K [5.87σ]

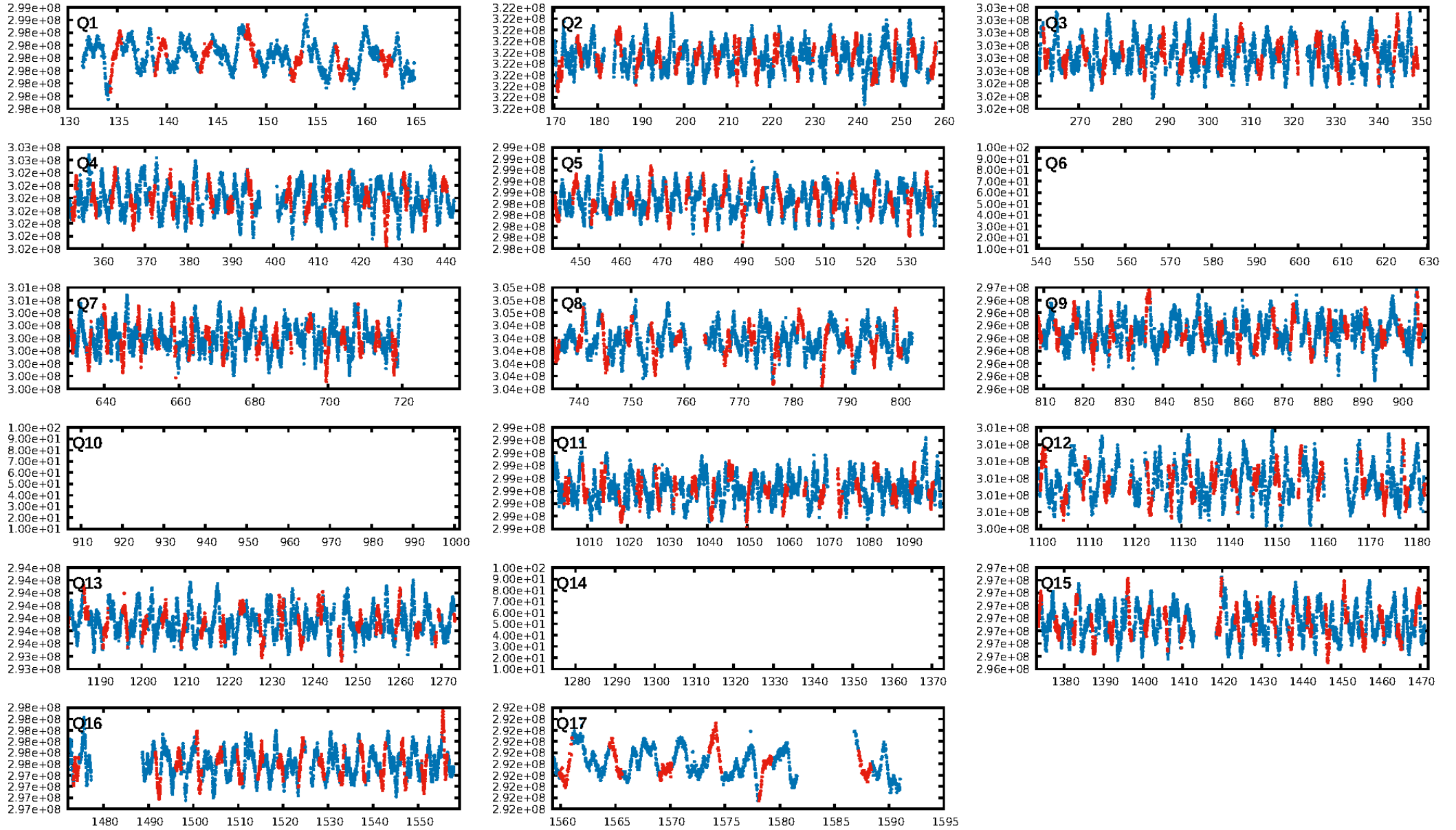
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.90e-13
RollingBand-fgt: 0.99 [227/229]
GhostDiagnostic-chr: 0.4944
Centroid-sig: 40.1%
Centroid-so: 1.046 arcsec [0.67σ]
OotOffset-rm: 0.975 arcsec [1.82σ]
KicOffset-rm: 0.946 arcsec [1.49σ]
OotOffset-st: 1/2/4/3 [10]
KicOffset-st: 1/2/4/3 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [14/14]

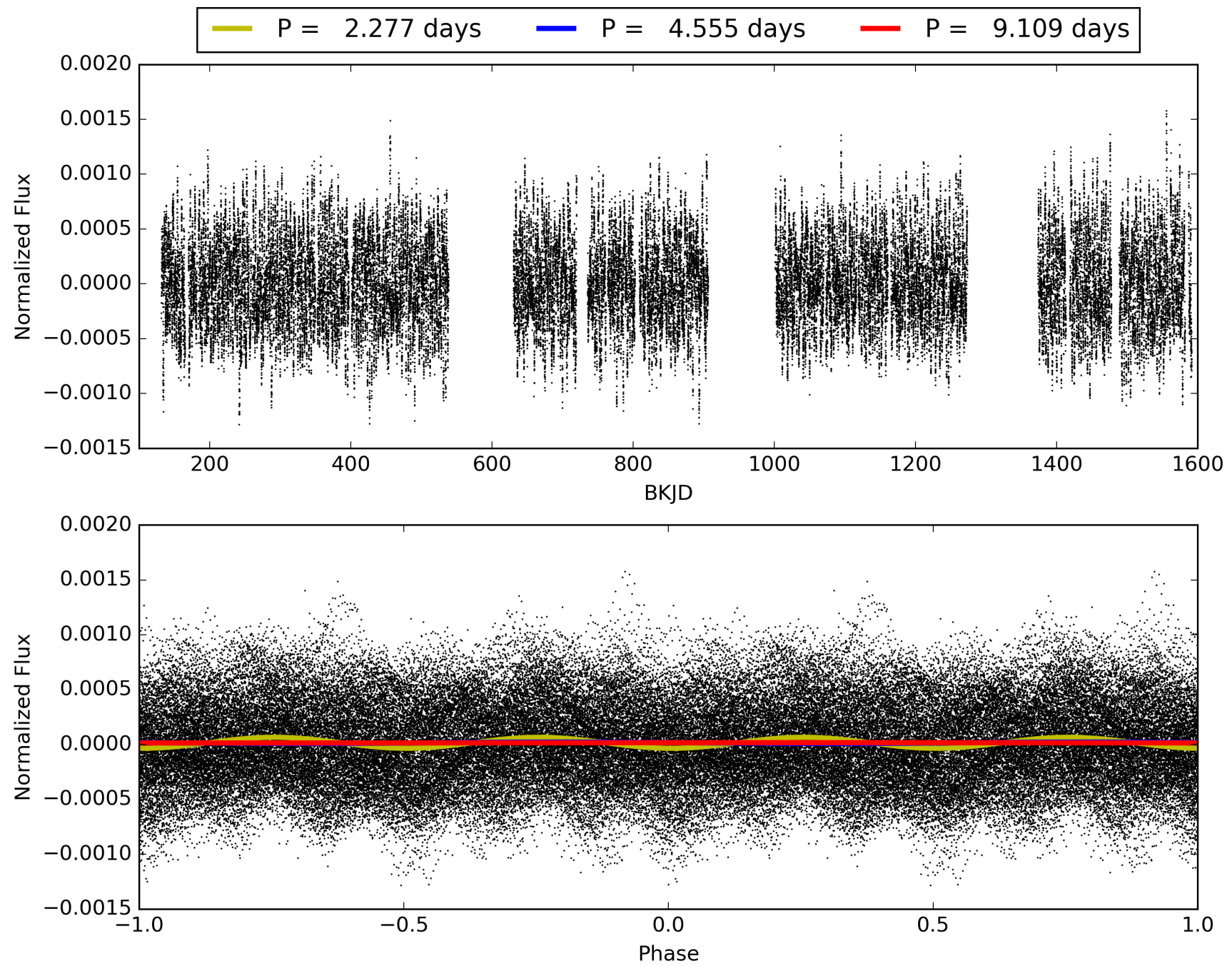
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:42:32 Z

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

TCE 004274748-01, PDC Light Curves

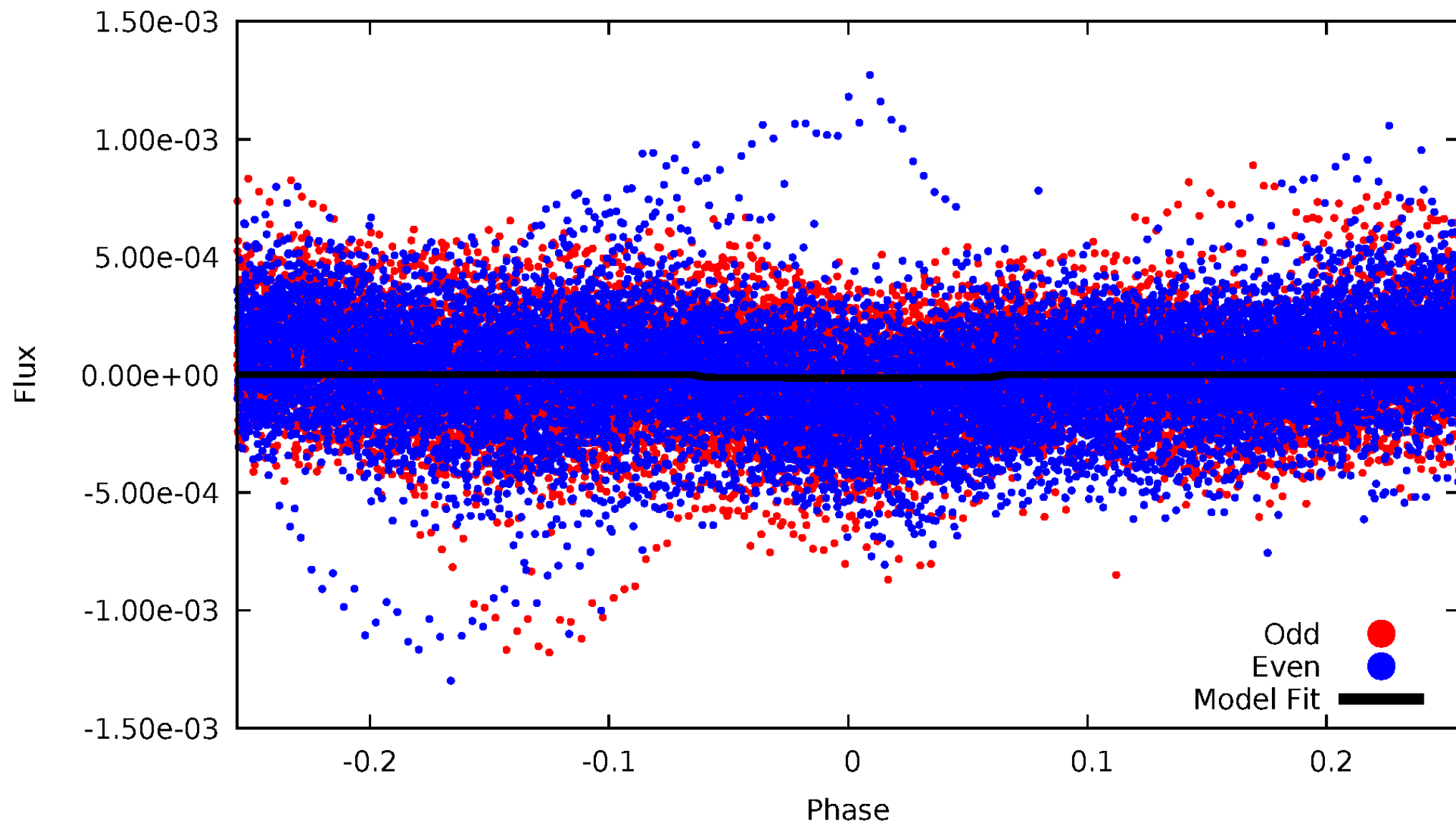


TCE 004274748-01



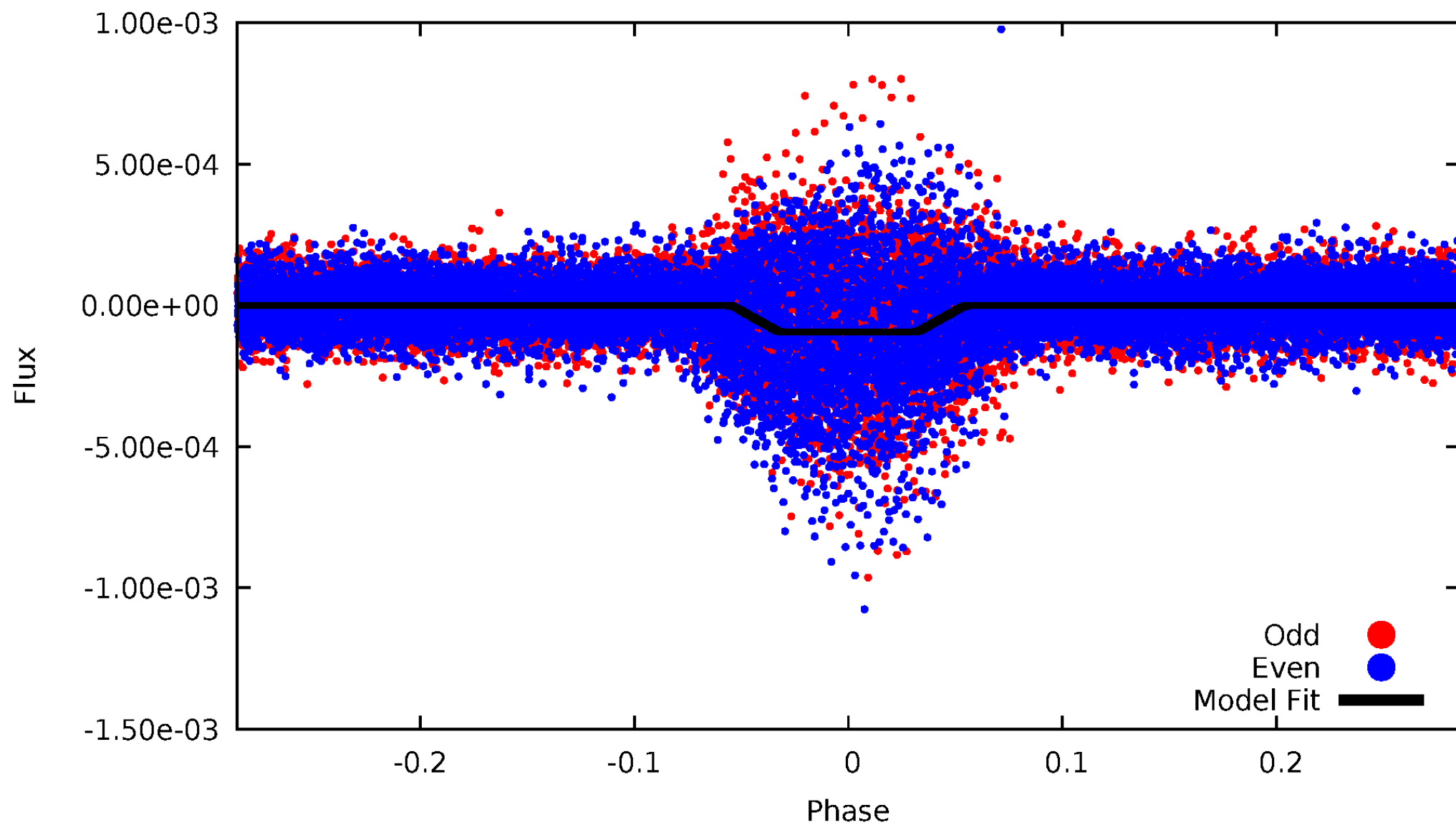
DV Odd/Even

TCE 004274748-01



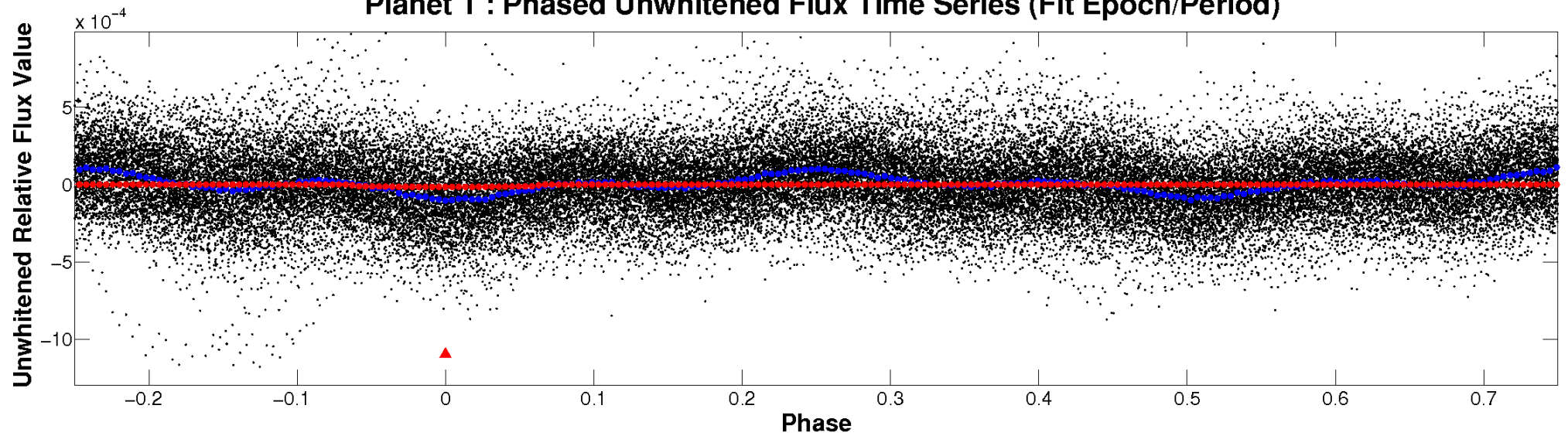
ALT Odd/Even

TCE 004274748-01

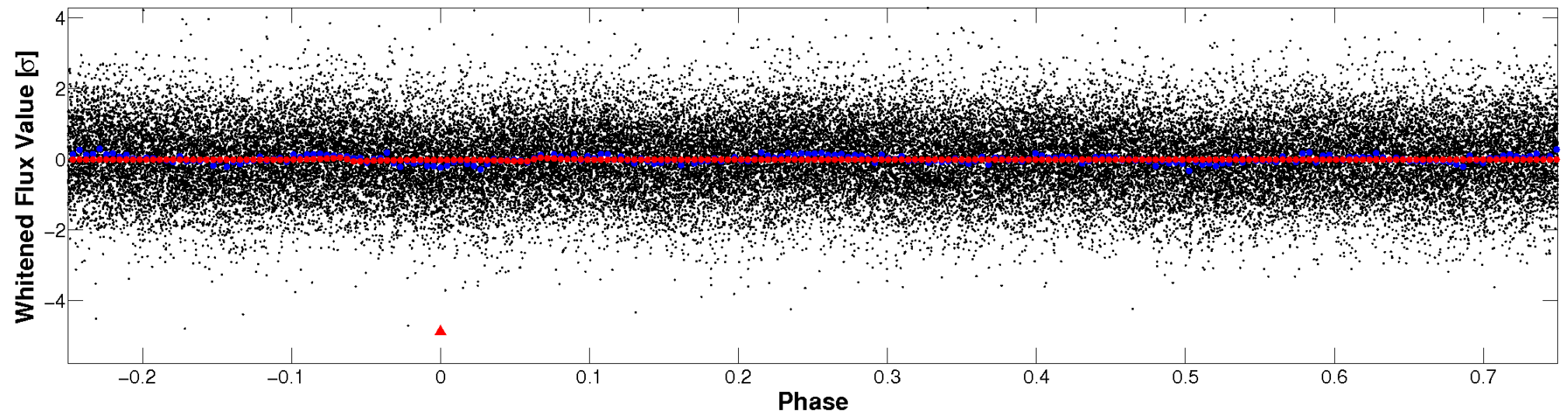


Non-Whitened Vs. Whitened Light Curve

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

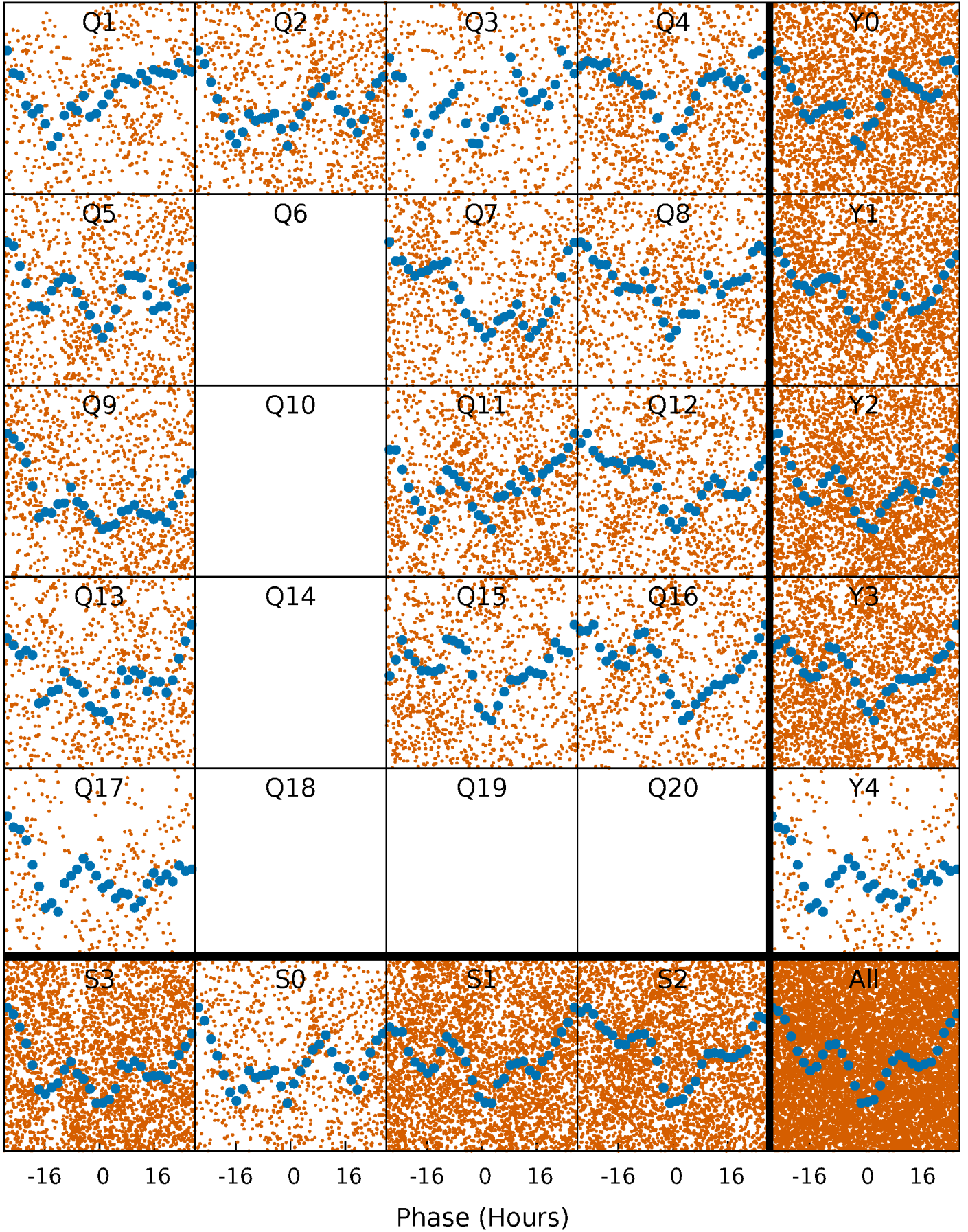


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



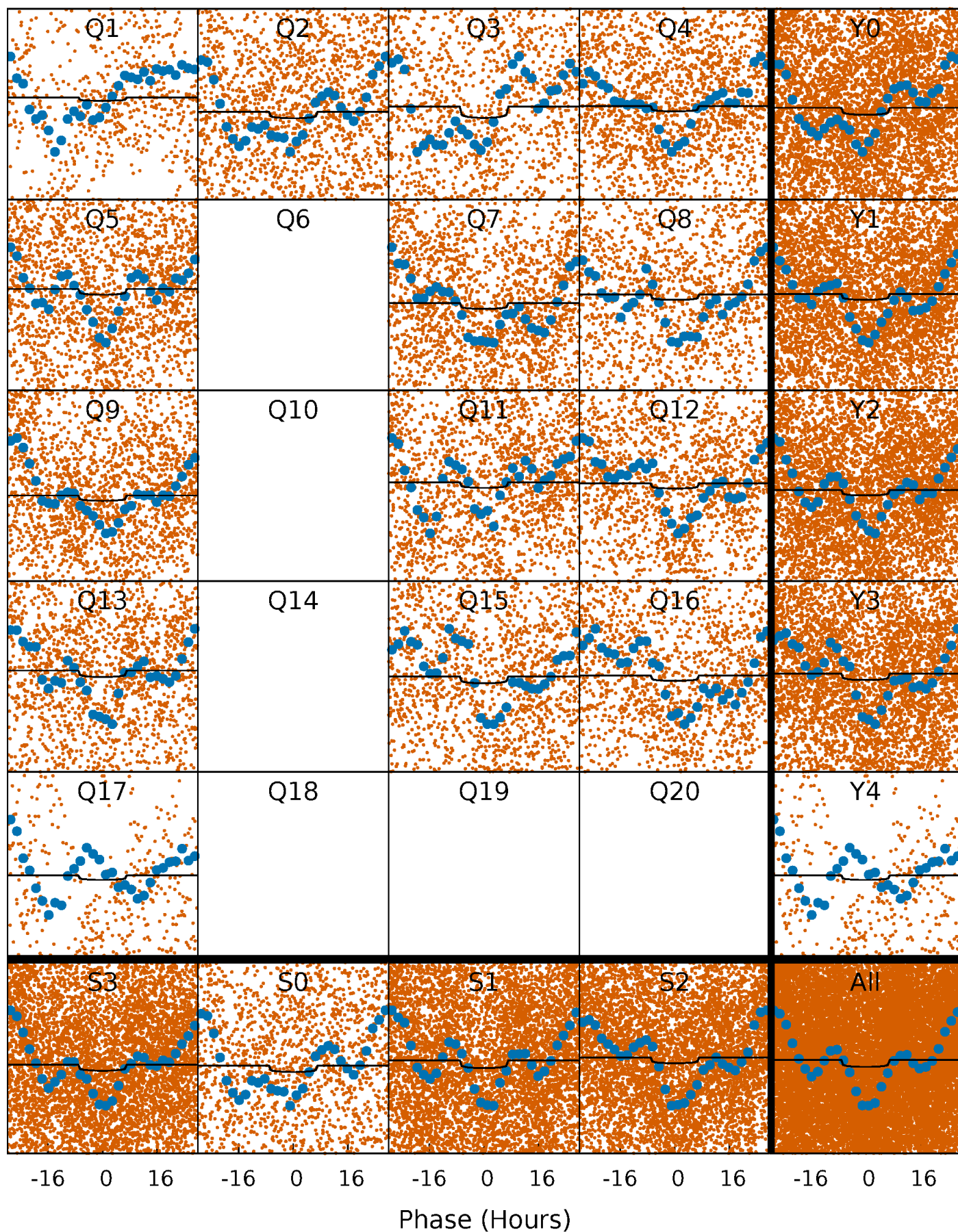
PDC Quarter-Phased Transit Curves

TCE 004274748-01 P= 4.554742 Days $T_0=134.823268$ (BKJD)



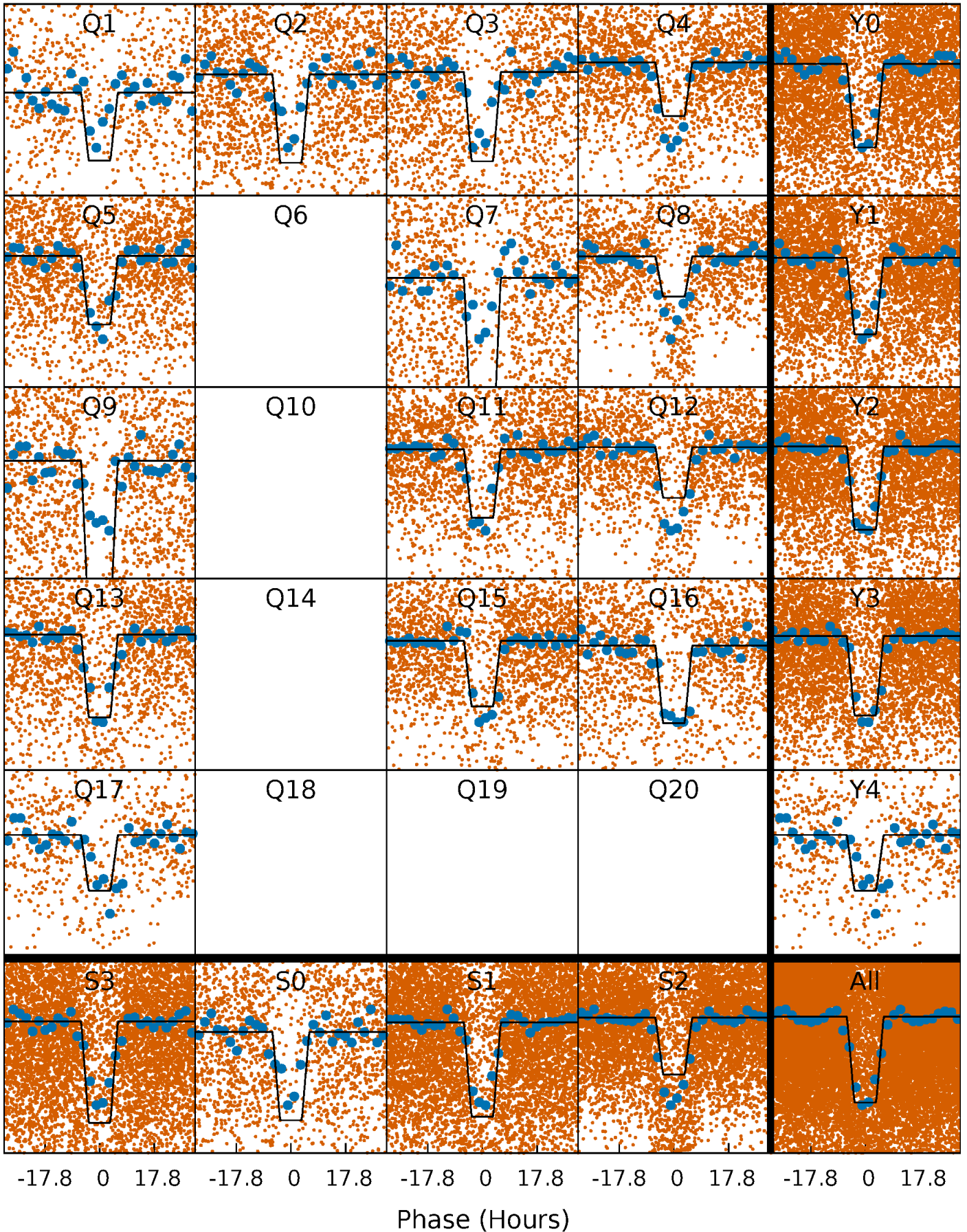
DV Quarter-Phased Transit Curves

TCE 004274748-01 P= 4.554742 Days $T_0=134.823268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

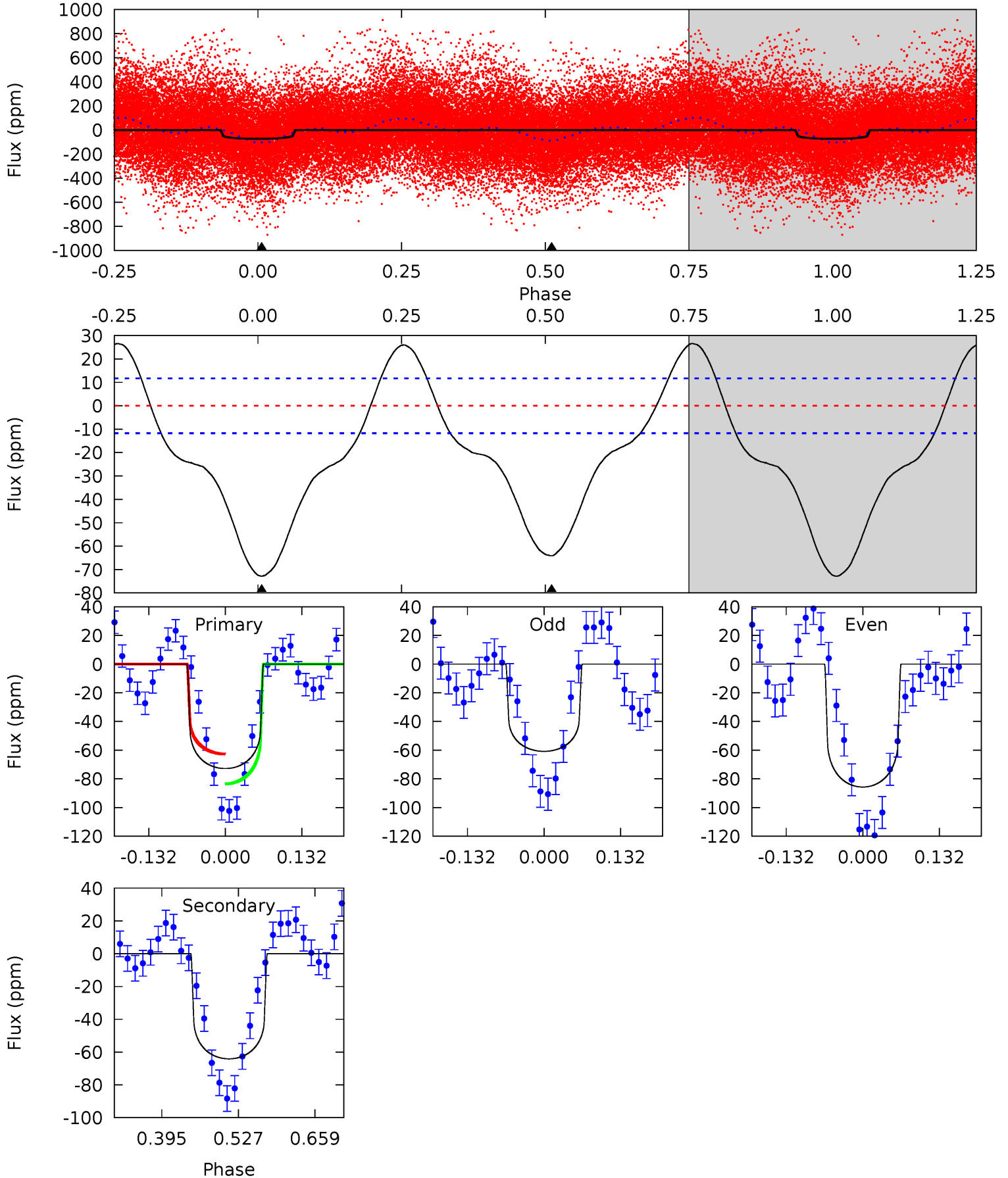
TCE 004274748-01 P= 4.554760 Days $T_0=134.856455$ (BKJD)



DV Model-Shift Uniqueness Test

004274748-01, P = 4.554742 Days, E = 130.268526 Days

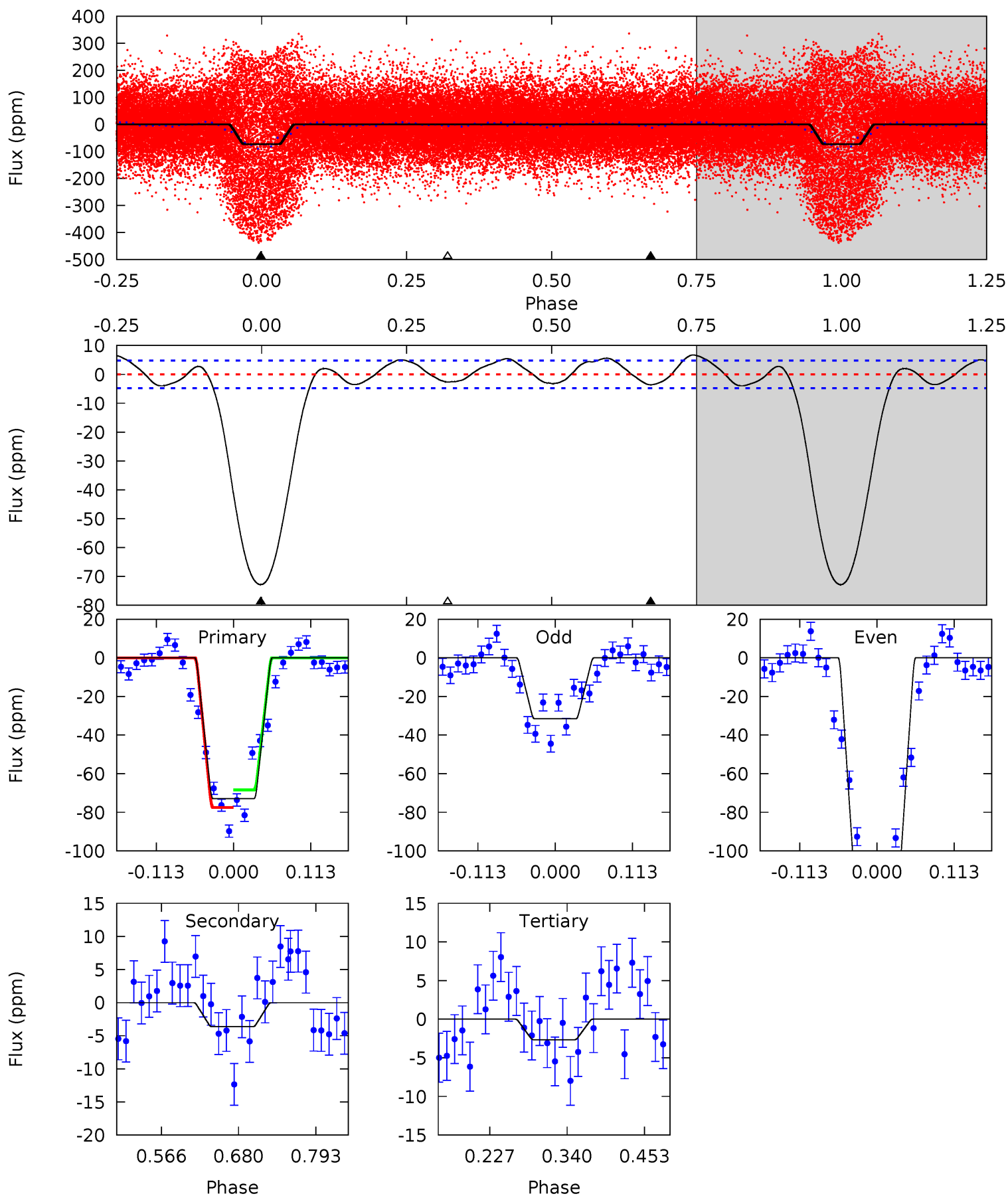
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.9	24.6	0	0	4.51	1.51	6.42	27.9	27.9	24.6	24.6	4.78	0.96	0.27	3.99



Alt Model-Shift Uniqueness Test

004274748-01, P = 4.554760 Days, E = 130.301695 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.2	3.45	2.52	0	4.54	1.58	2.67	66.7	69.2	0.93	3.45	40.2	0.97	0.08	4.25



Stellar Parameters For KIC 004274748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6948^{+192}_{-240}	$4.054^{+0.221}_{-0.119}$	$-0.480^{+0.250}_{-0.300}$	$1.716^{+0.367}_{-0.448}$	$1.216^{+0.189}_{-0.154}$	$0.339^{+0.431}_{-0.119}$
	+3%/-3%	+5%/-3%	+52%/-62%	+21%/-26%	+16%/-13%	+127%/-35%
Source	PHO1	FLK73	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 004274748-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-64 ± 3	$0.72^{+0.23}_{-0.20}$	2324^{+137}_{-175}	10984^{+3177}_{-1780}	226^{+216}_{-94}
Alt.	-4 ± 1	$1.75^{+0.33}_{-0.30}$	2297^{+160}_{-170}	3442^{+251}_{-256}	$2.160^{+1.196}_{-0.876}$

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 $A_{obs} \gg 1.0$

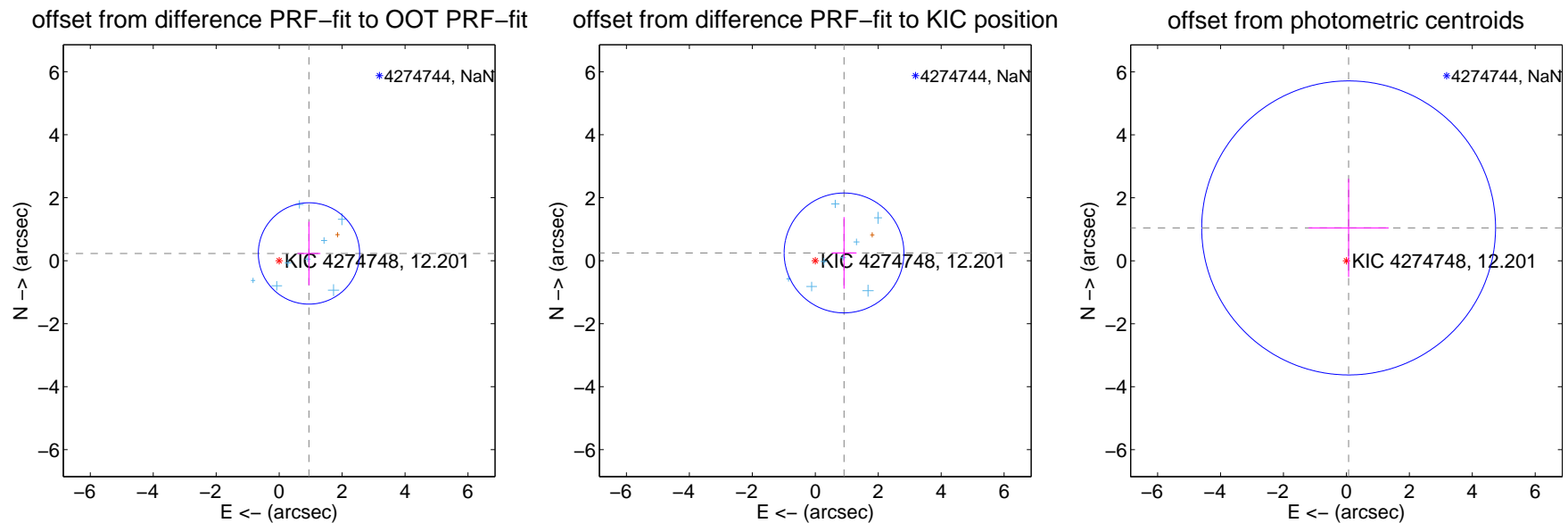
DV Centroid Data

Supplemental centroid analysis for 004274748-01. Kepler magnitude: 12.20. Transit SNR 2.97

There are 8 quarters with good PRF difference image offsets

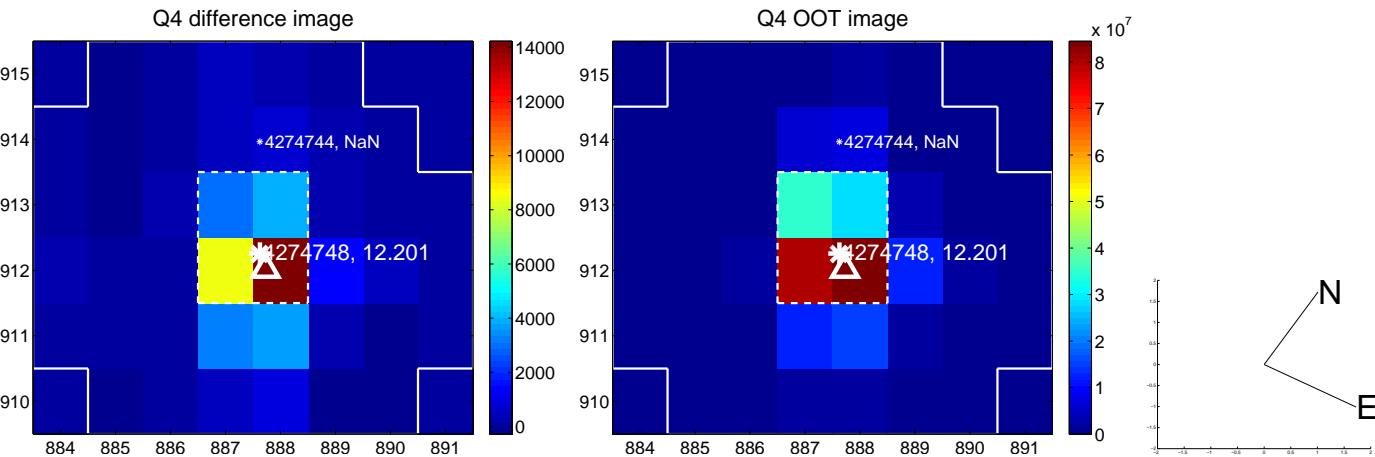
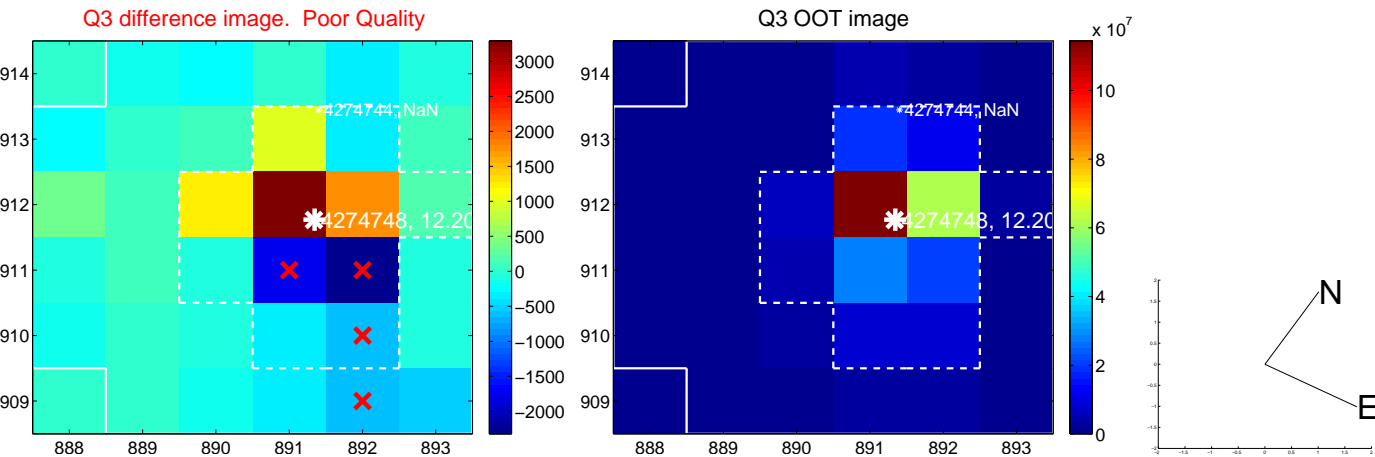
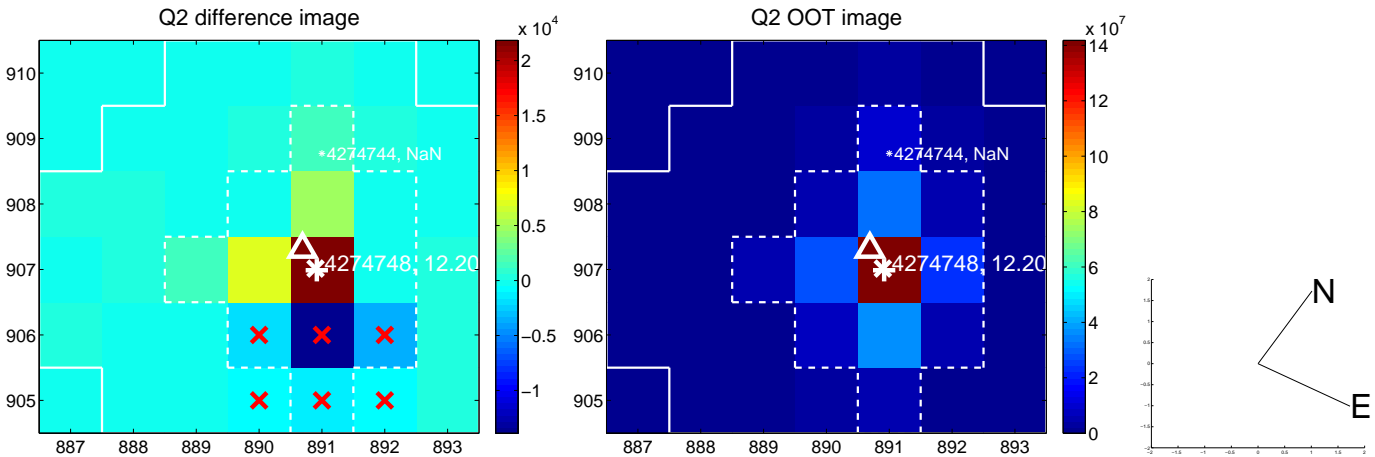
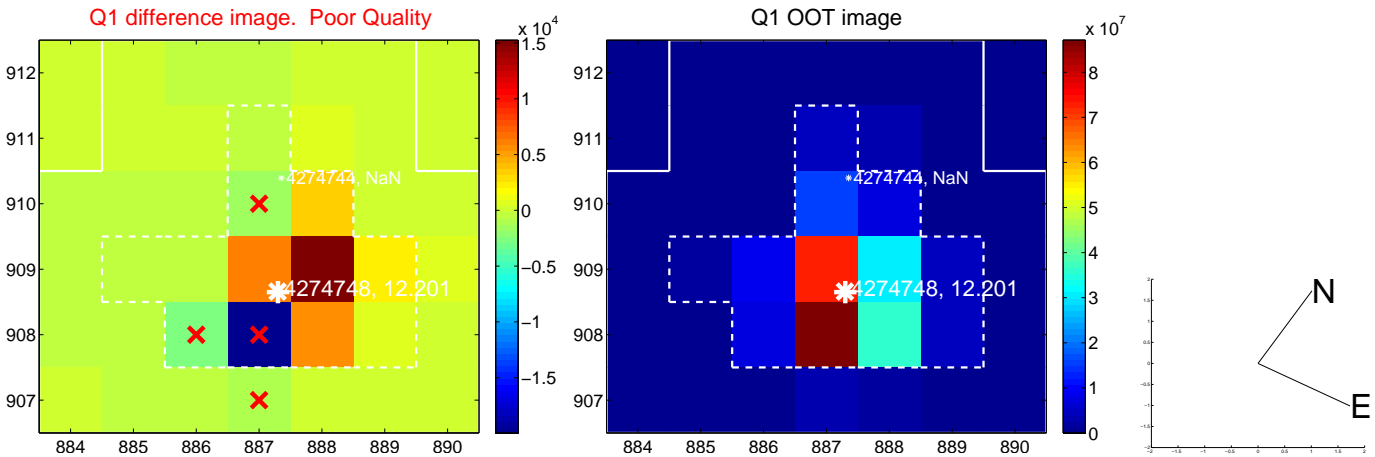
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.975 ± 0.537	1.82	-0.948 ± 0.361	0.230 ± 1.007
PRF-fit source offset from KIC position	0.946 ± 0.634	1.49	-0.914 ± 0.397	0.246 ± 1.137
photometric centroid source offset	1.05 ± 1.56	0.67	-0.07 ± 1.27	1.04 ± 1.56

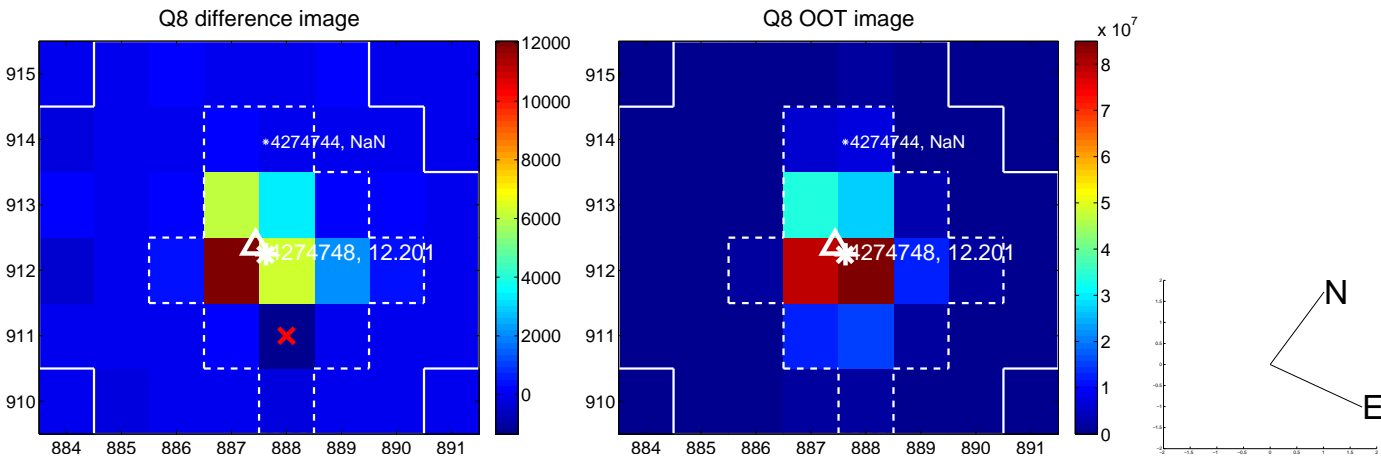
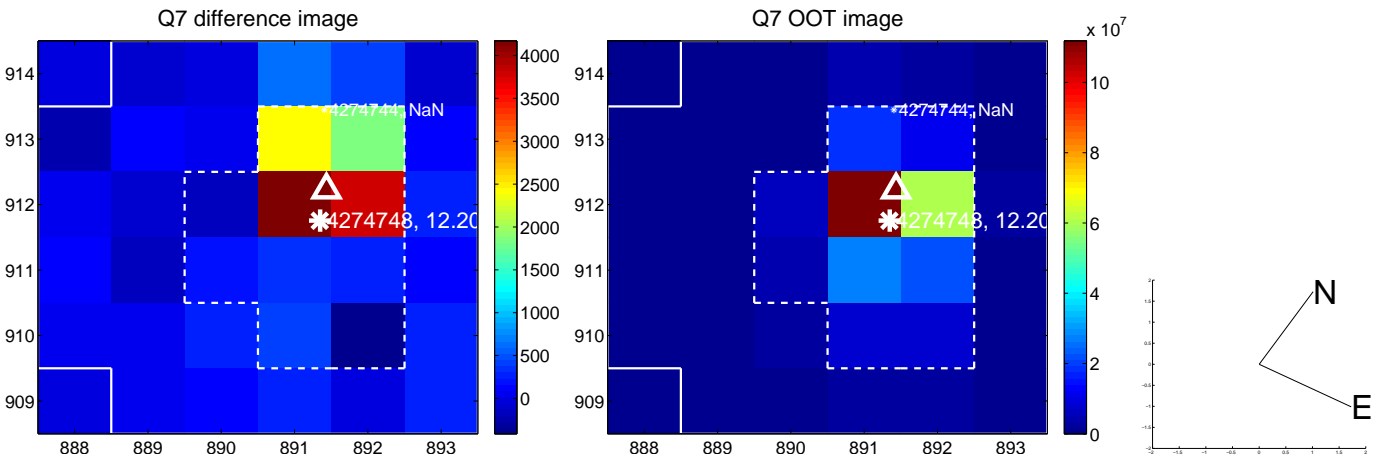
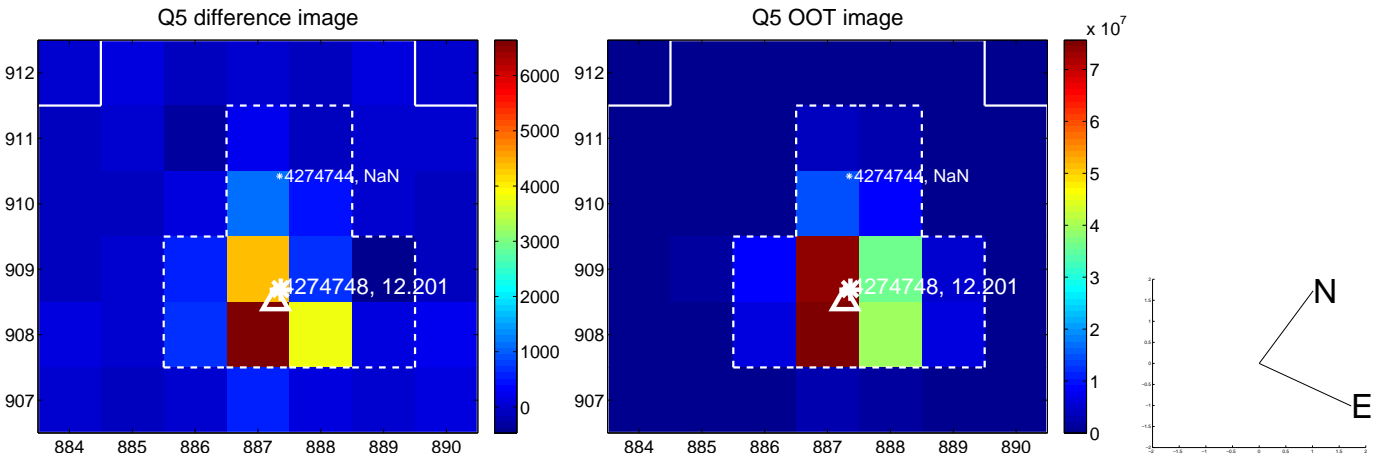


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

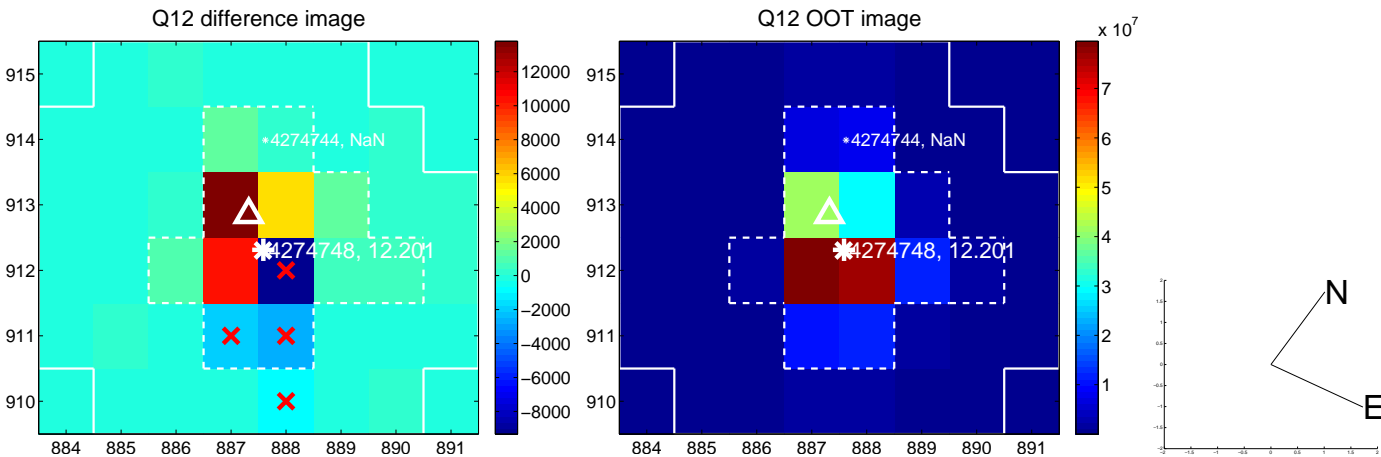
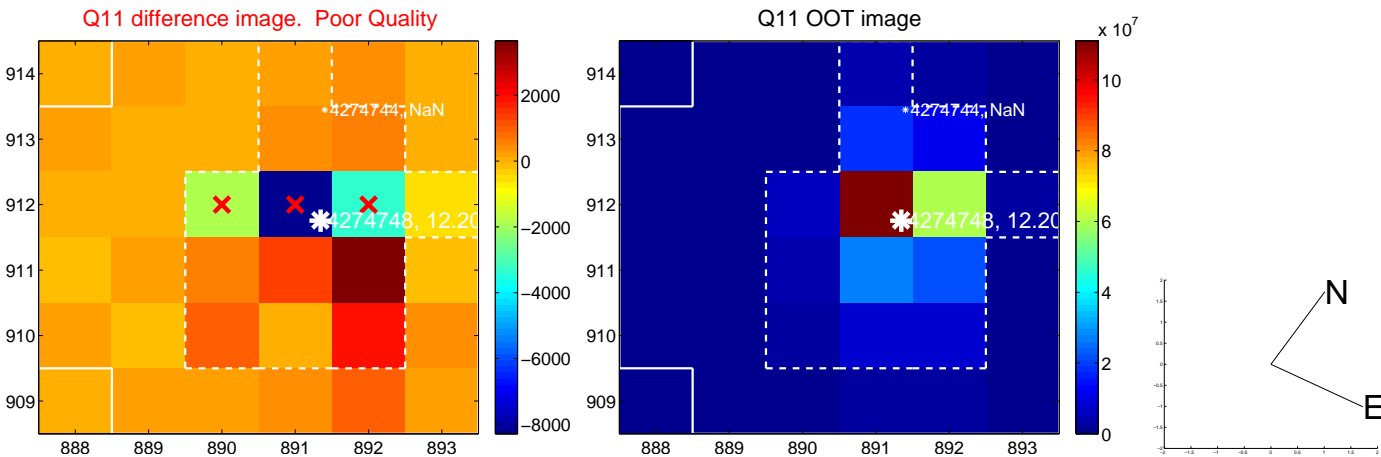
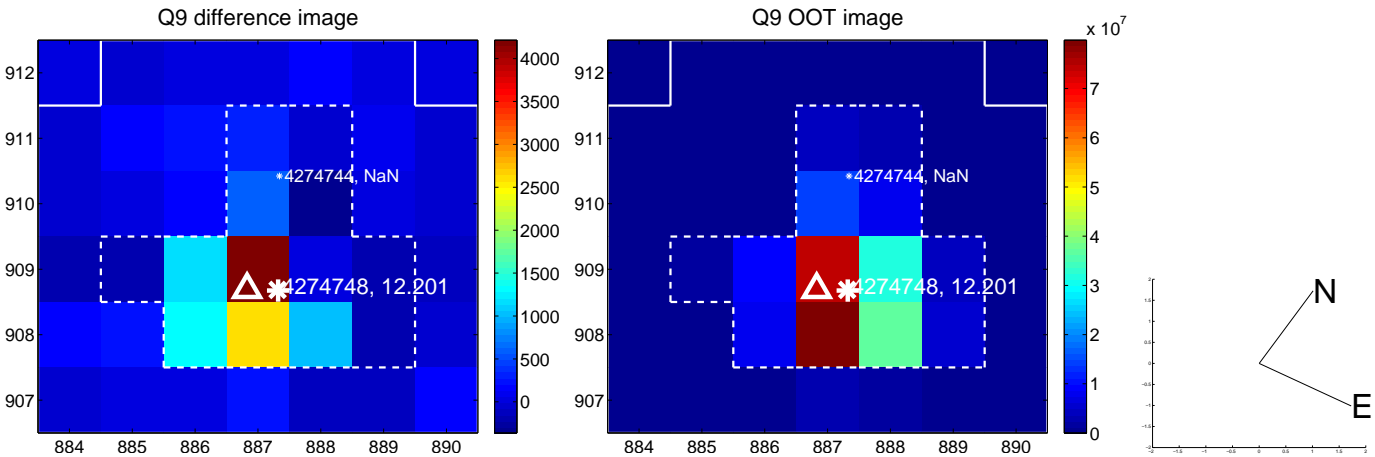
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



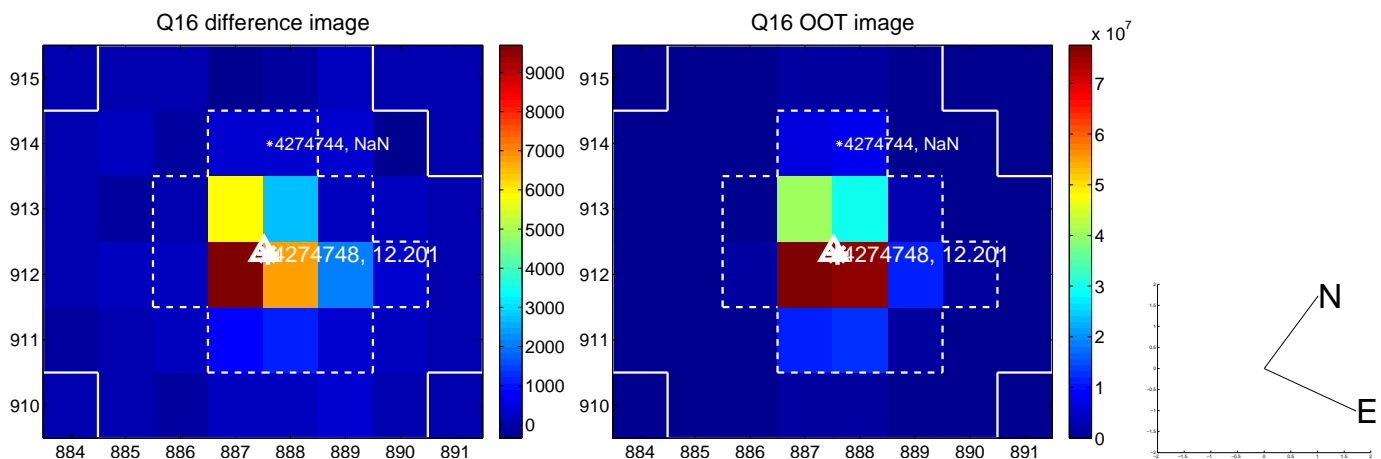
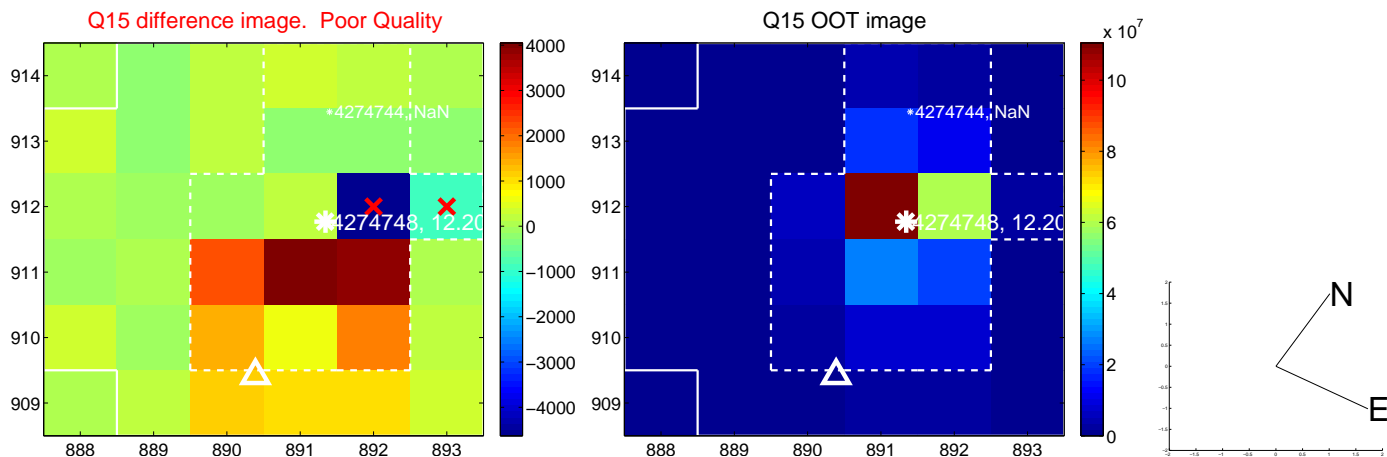
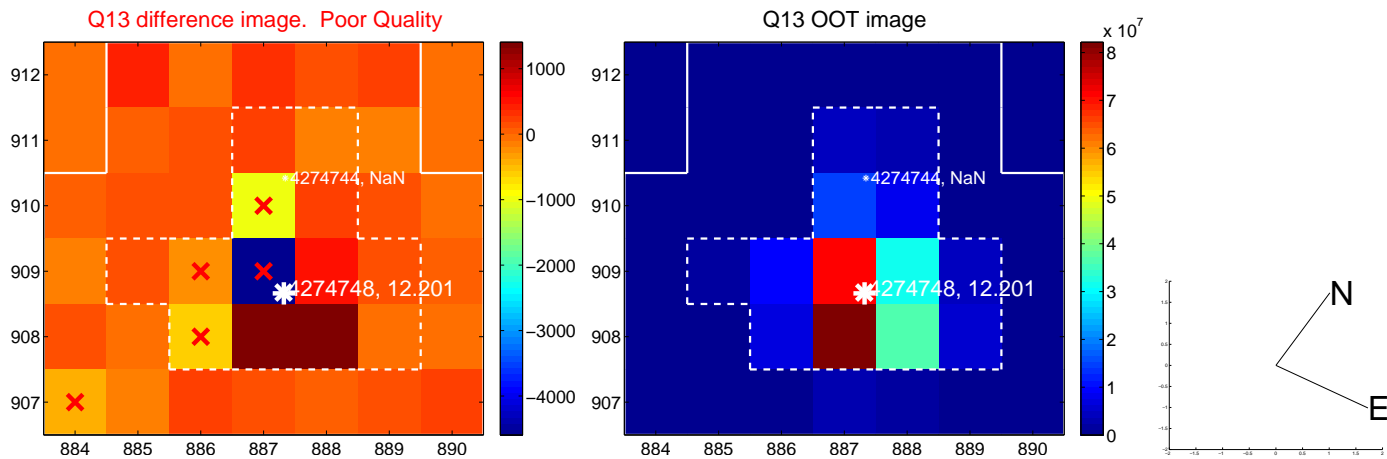
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



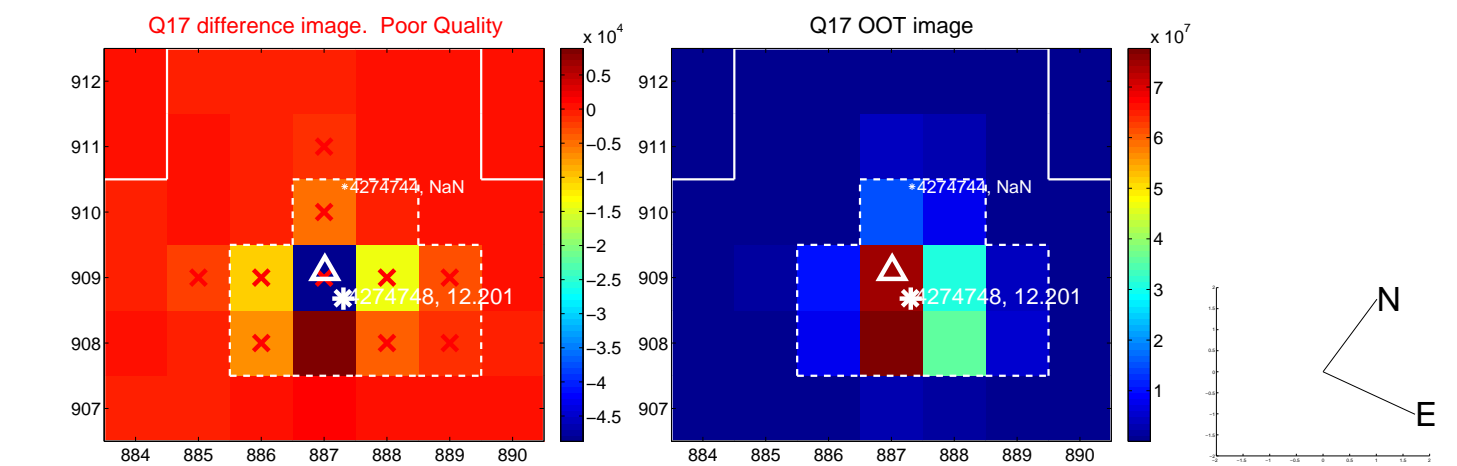
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



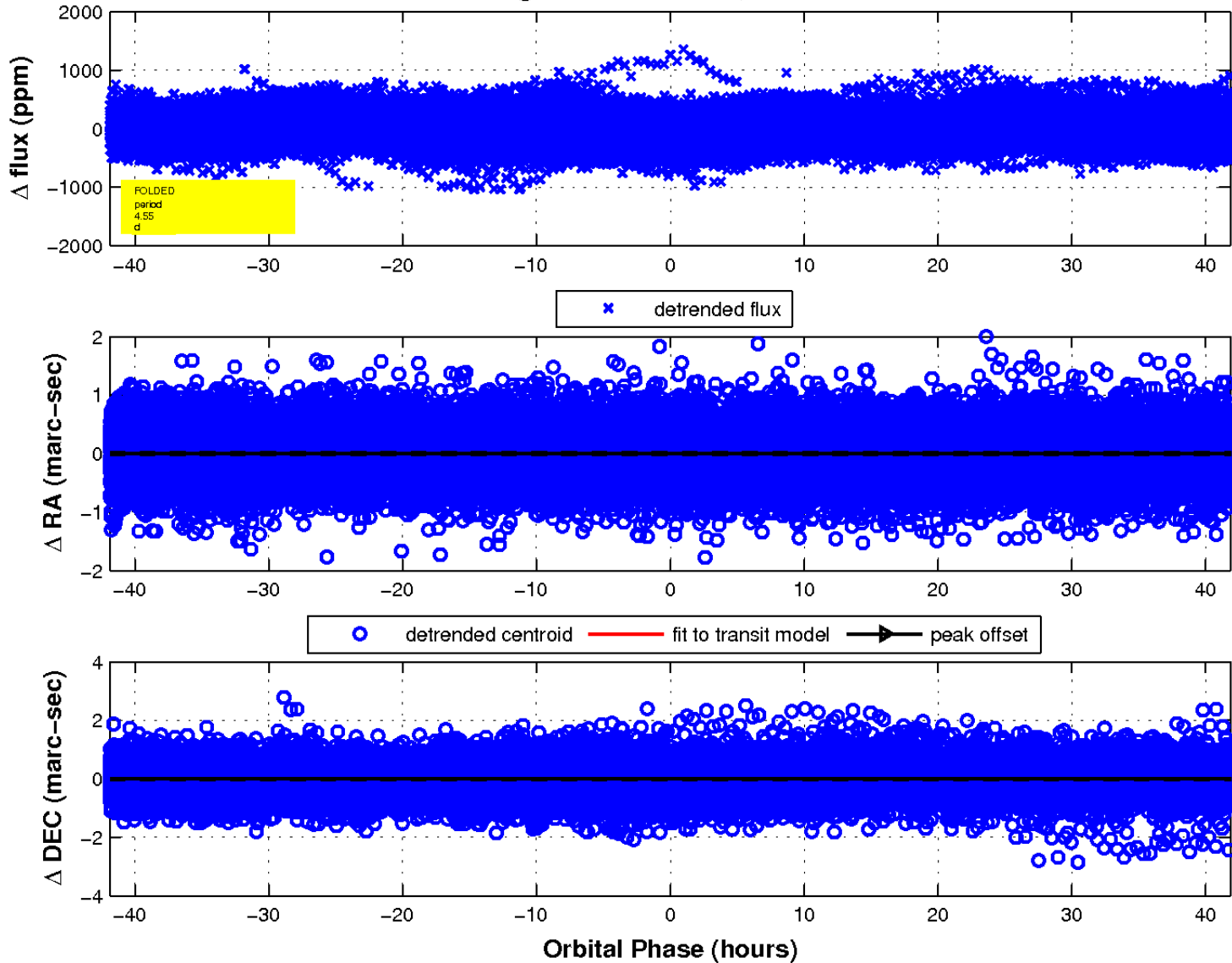
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

