

KIC 006224785

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})
006224785-01	OBS	No	0.942229	131.543203	6.7	3.289	9.9	9.1	2.76	8753	0.83	74075.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006224785-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

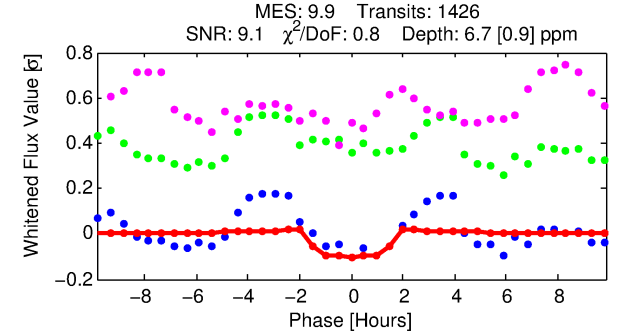
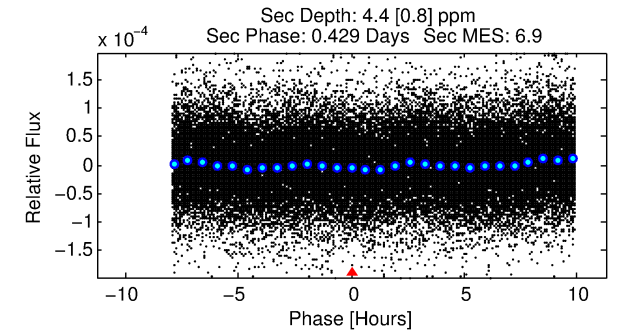
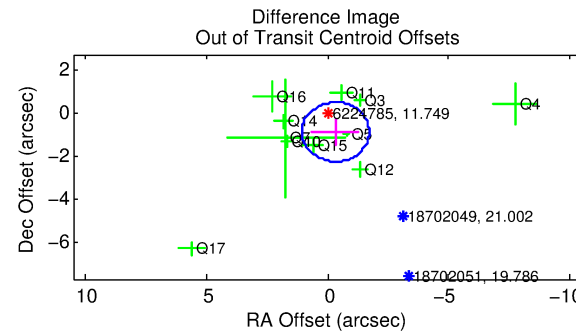
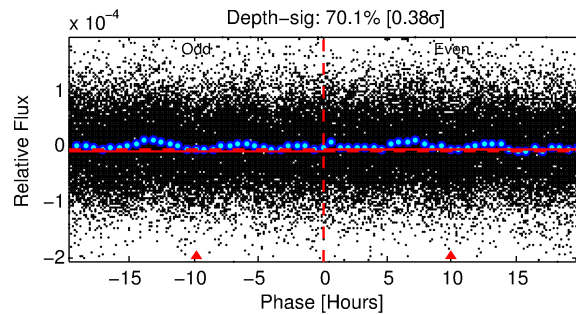
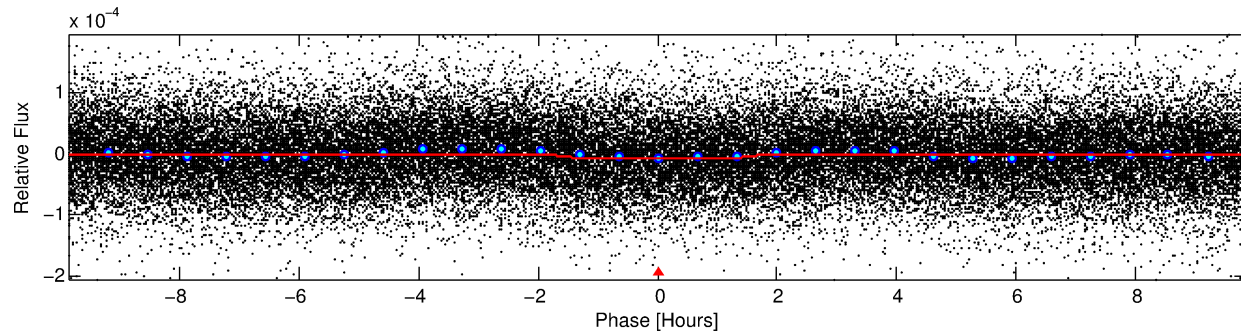
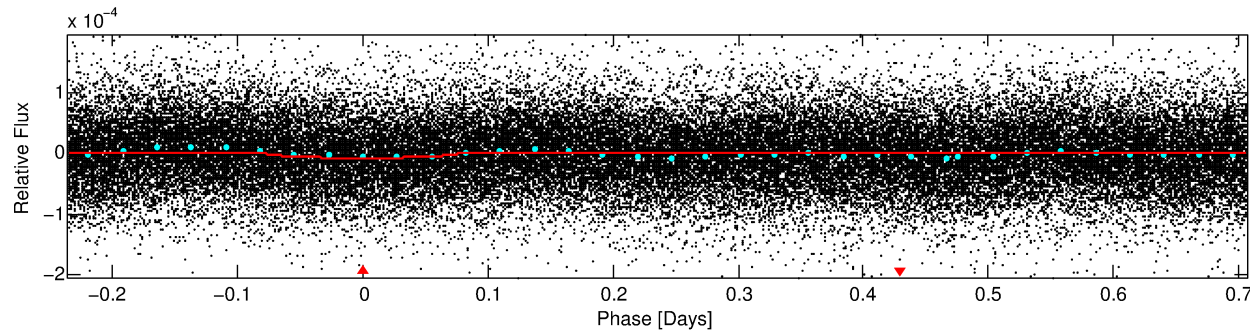
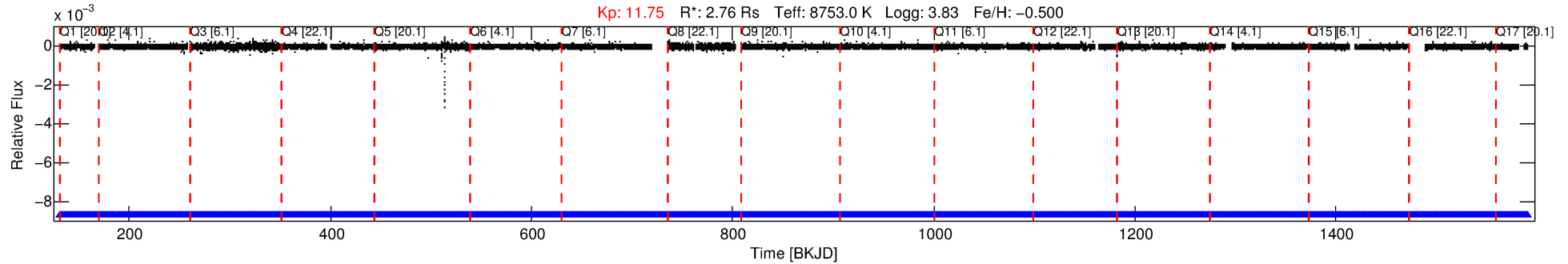
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006224785-01

No Significant Match Found

DV One-Page Summary

KIC: 6224785 Candidate: 1 of 1 Period: 0.942 d



DV Fit Results:

Period = 0.94223 [0.00001] d
Epoch = 131.5432 [0.0037] BKJD
Rp/R* = 0.0027 [0.0005]
a/R* = 1.36 [0.70]
b = 0.89 [0.25]
Seff = 74075.09 [52763.04]
Teq = 4207 [749] K
Rp = 0.83 [0.39] Re
a = 0.0233 [0.0100] AU
Ag = 1.91 [1.51] [0.60 σ]
Teffp = 7641 [807] K [3.12 σ]

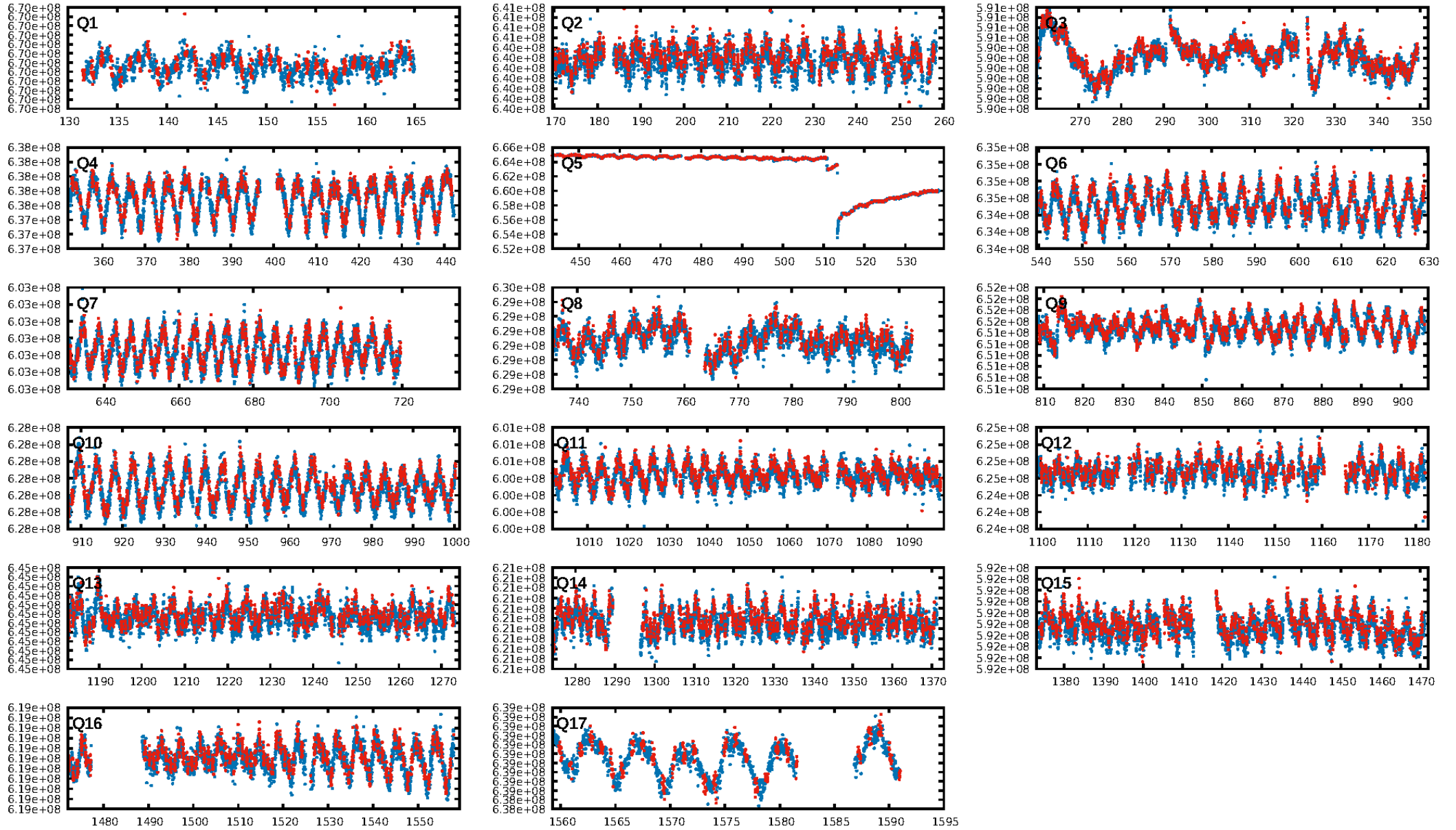
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.84e-22
RollingBand-fgt: 1.00 [1361/1361]
GhostDiagnostic-chr: 1.404
Centroid-sig: 0.2%
Centroid-so: 2.496 arcsec [1.95 σ]
OotOffset-rm: 0.937 arcsec [2.03 σ]
KicOffset-rm: 0.874 arcsec [1.86 σ]
OotOffset-st: 2/4/3/2 [11]
KicOffset-st: 2/4/3/2 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 1.00 [17/17]

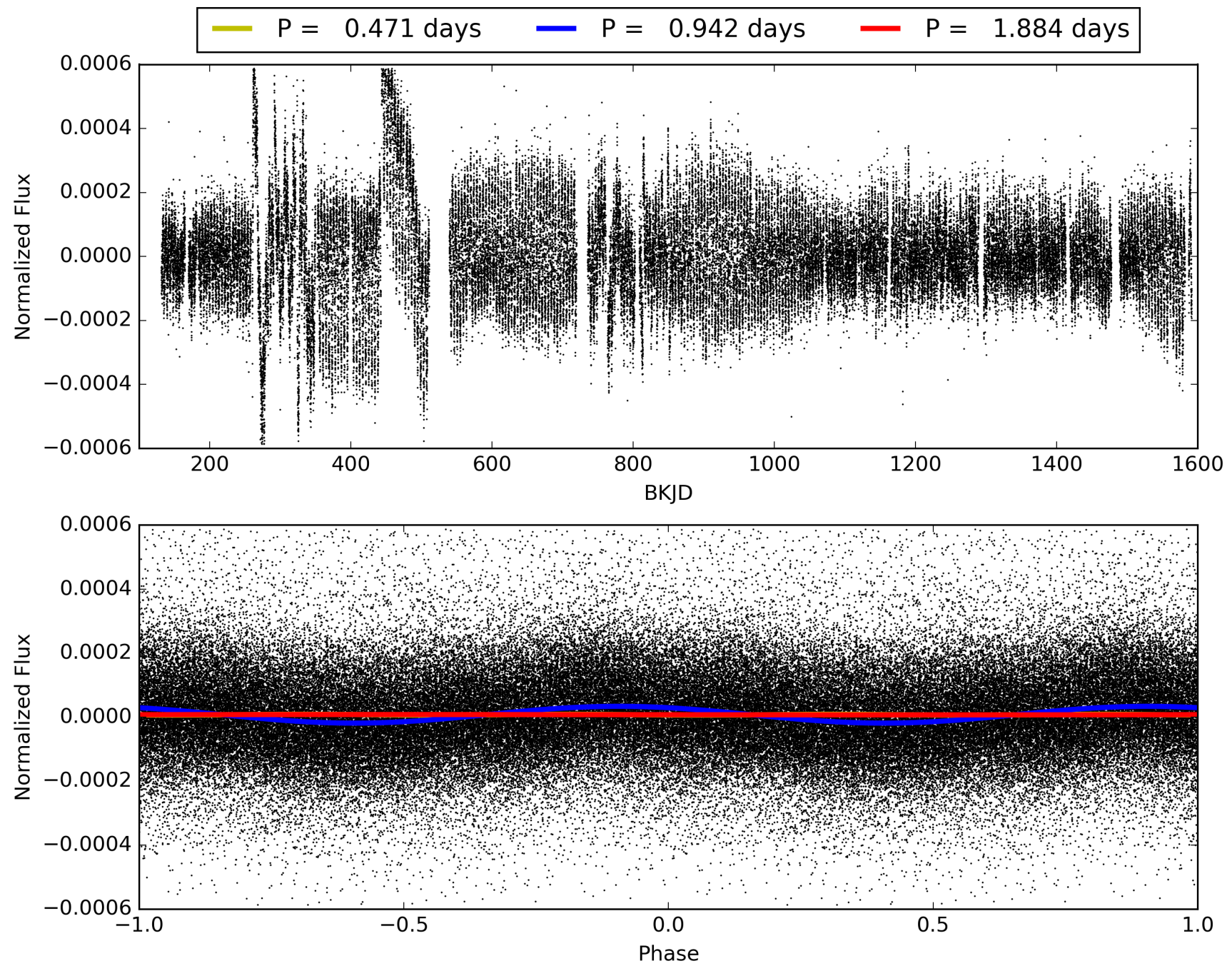
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:32:03 Z

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

TCE 006224785-01, PDC Light Curves

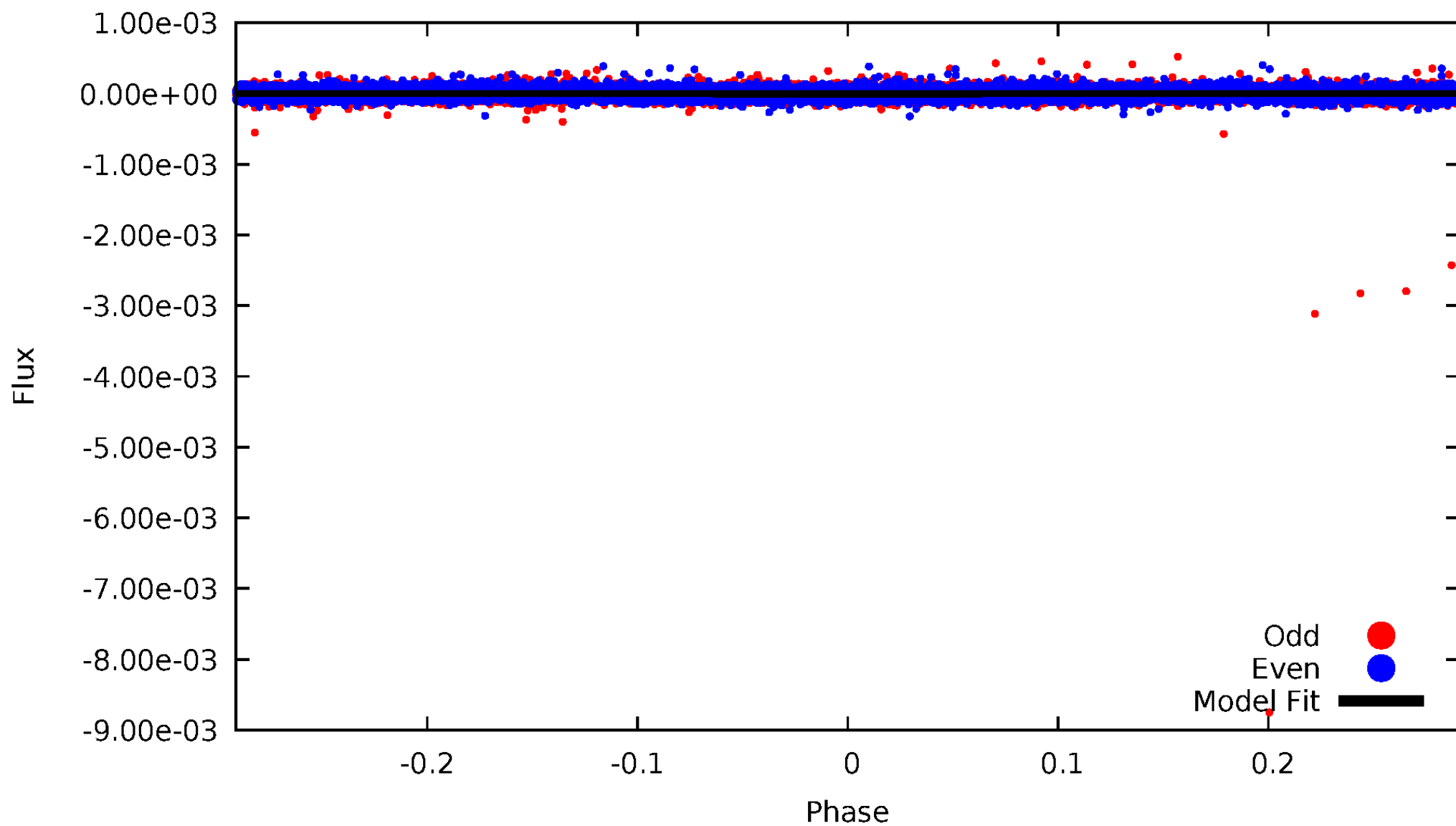


TCE 006224785-01



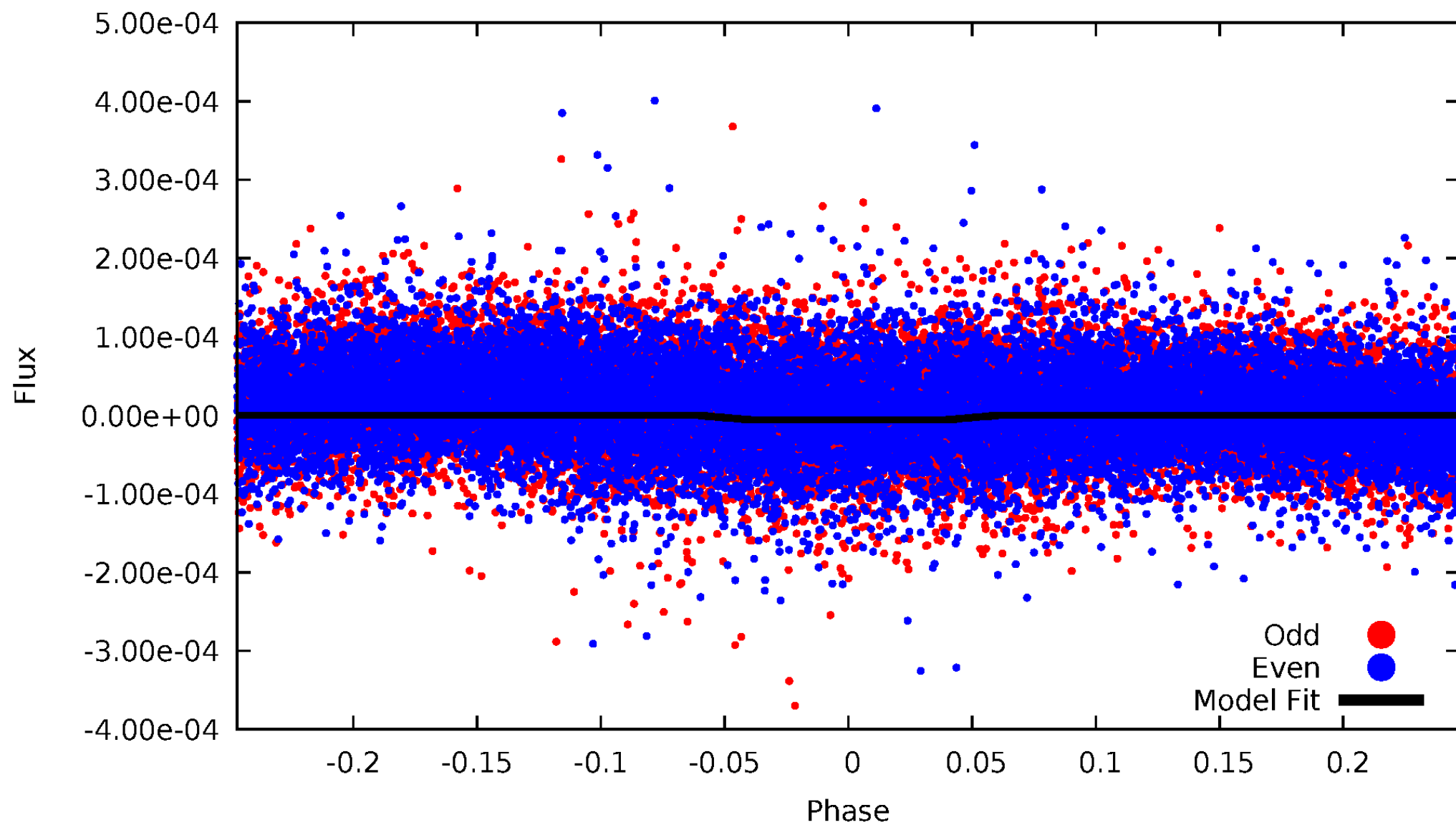
DV Odd/Even

TCE 006224785-01



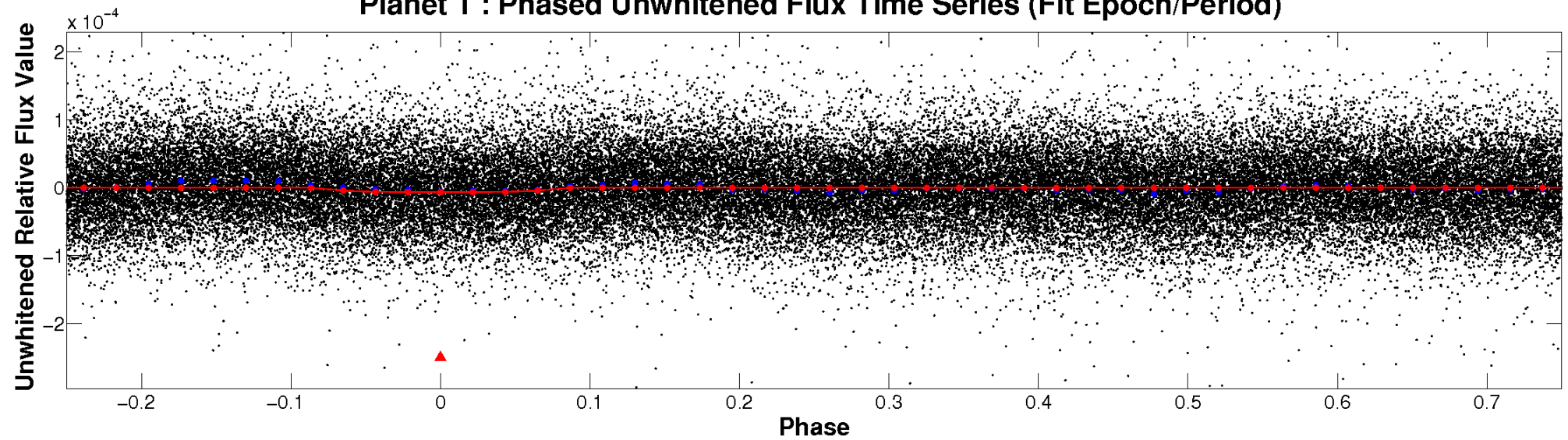
ALT Odd/Even

TCE 006224785-01

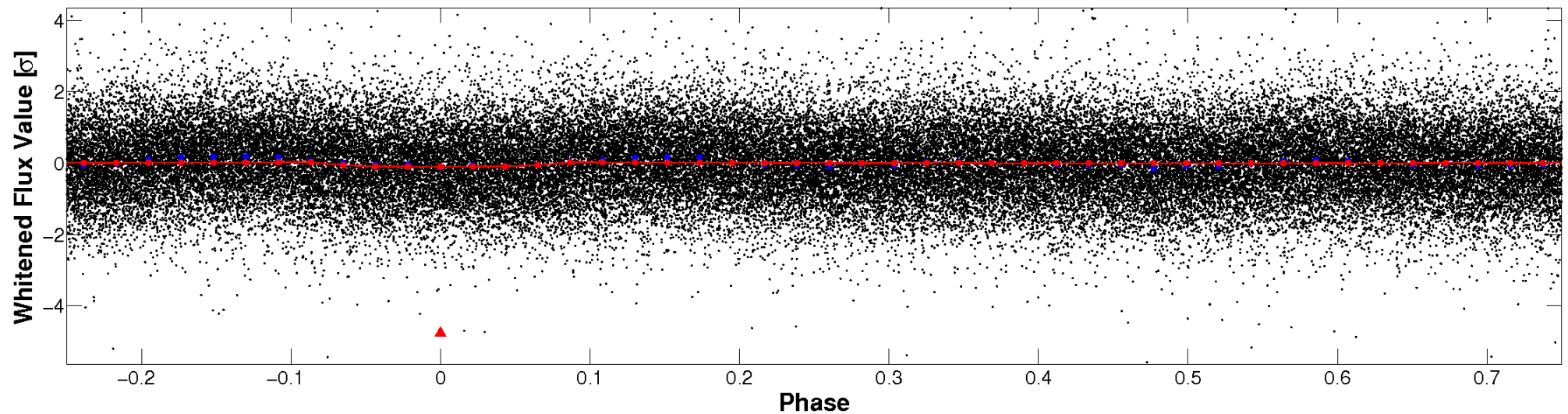


Non-Whitened Vs. Whitened Light Curve

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

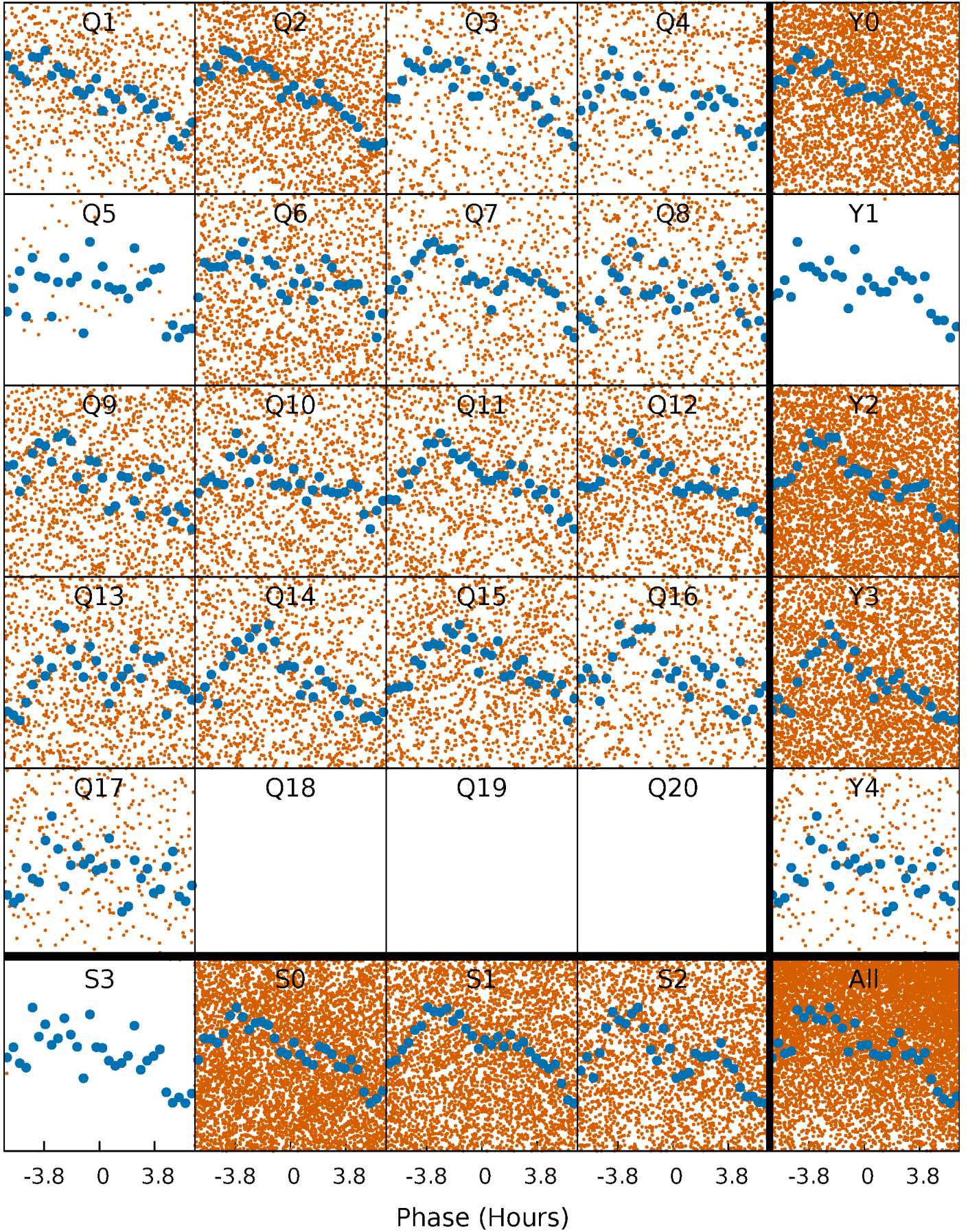


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



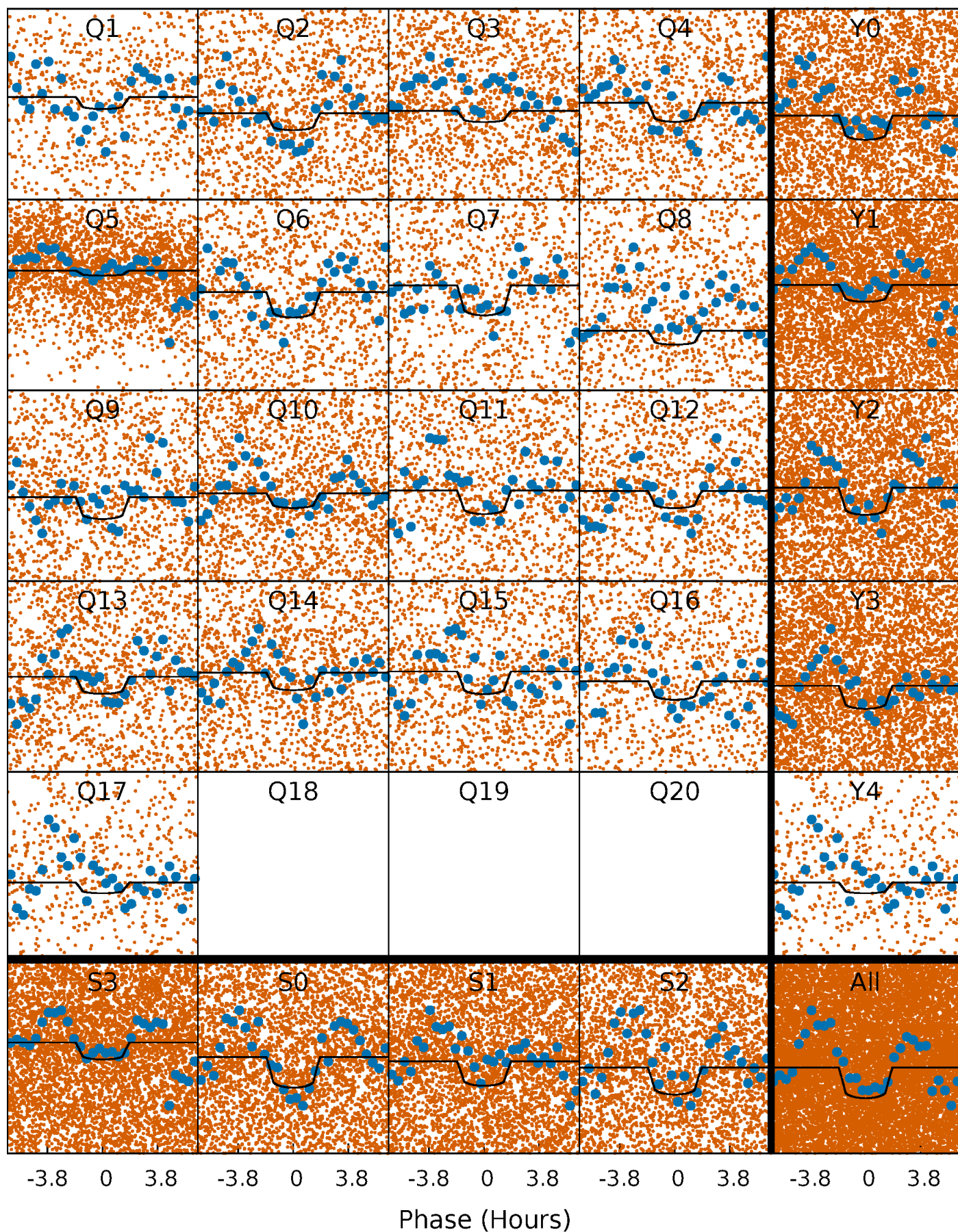
PDC Quarter-Phased Transit Curves

TCE 006224785-01 P= 0.942229 Days $T_0=131.543203$ (BKJD)



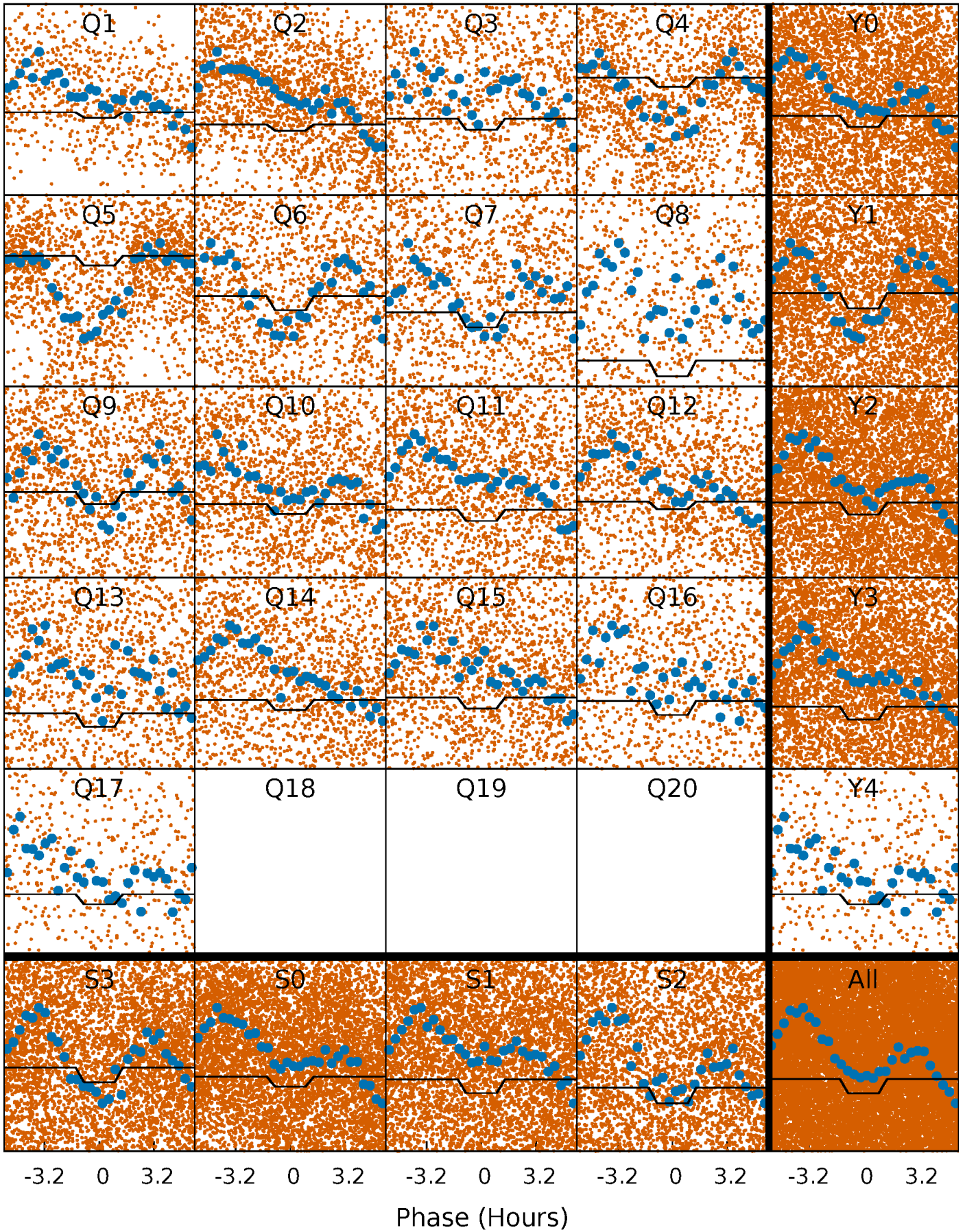
DV Quarter-Phased Transit Curves

TCE 006224785-01 P= 0.942229 Days $T_0=131.543203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

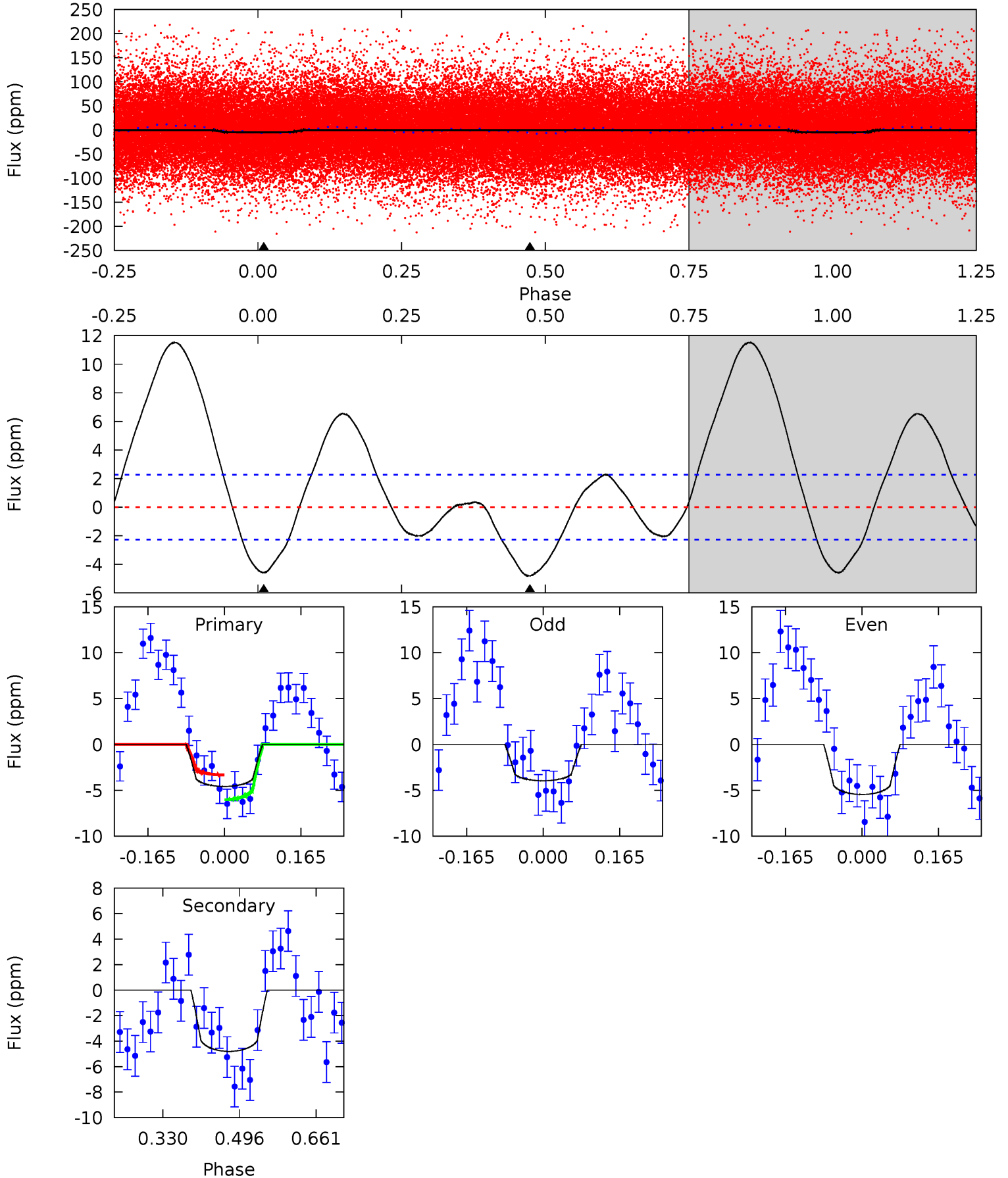
TCE 006224785-01 P= 0.942267 Days $T_0=131.535015$ (BKJD)



DV Model-Shift Uniqueness Test

006224785-01, P = 0.942229 Days, E = 130.600974 Days

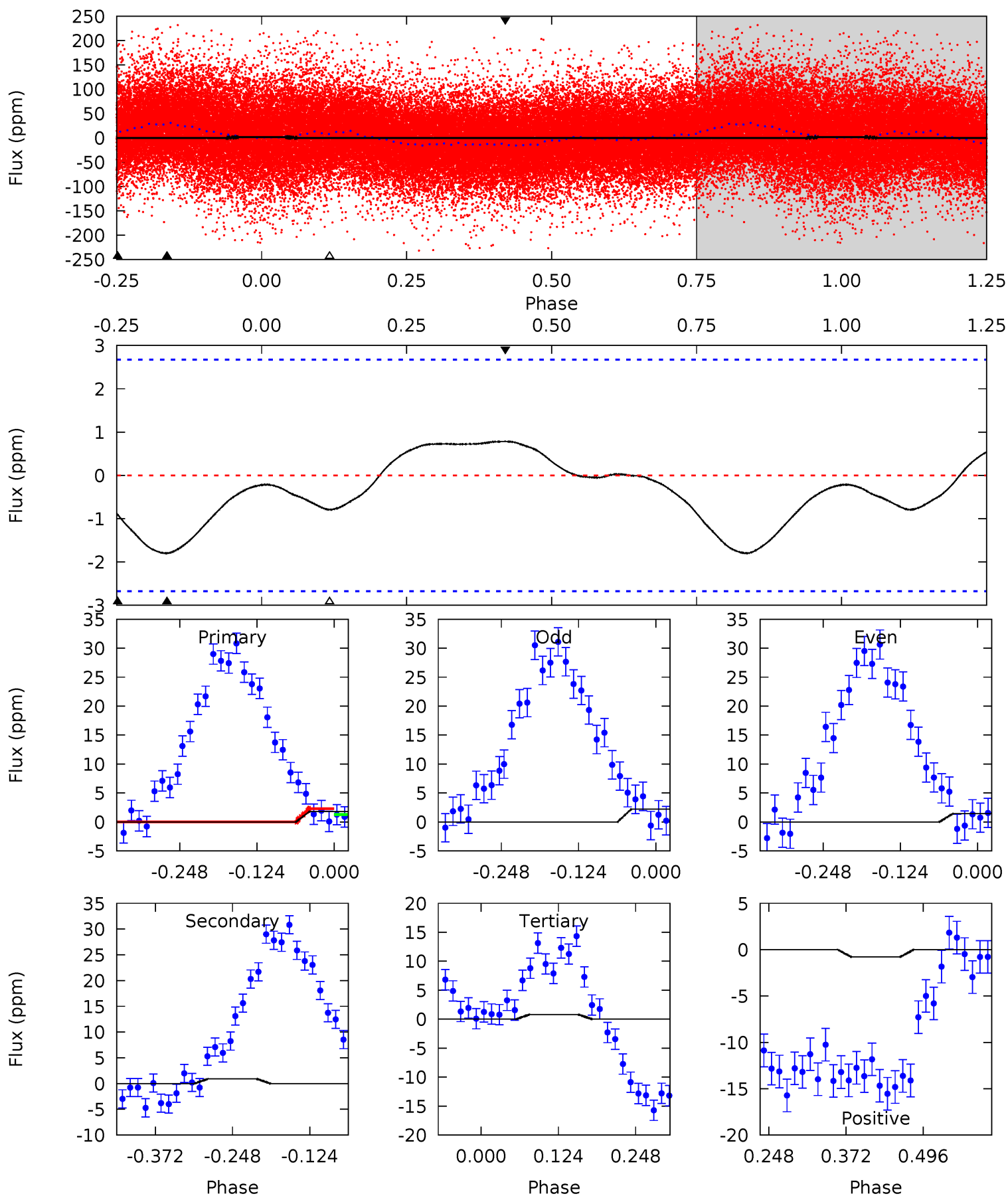
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	9.46	0	0	4.46	1.39	7.54	9.01	9.01	9.46	9.46	1.48	0.71	0.71	2.68



Alt Model-Shift Uniqueness Test

006224785-01, P = 0.942267 Days, E = 130.592748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.04	1.53	1.34	1.32	4.52	1.54	0.84	1.70	1.72	0.19	0.21	0.64	0.58	0.30	0.88



Stellar Parameters For KIC 006224785

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8753^{+242}_{-363}	$3.833^{+0.408}_{-0.072}$	$-0.500^{+0.150}_{-0.350}$	$2.764^{+0.307}_{-1.227}$	$1.897^{+0.247}_{-0.423}$	$0.127^{+0.482}_{-0.029}$
	+3%/-4%	+11%/-2%	+30%/-70%	+11%/-44%	+13%/-22%	+381%/-23%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006224785-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 1	$0.78^{+0.18}_{-0.20}$	5706^{+329}_{-582}	7320^{+1018}_{-781}	$2.467^{+1.730}_{-0.862}$
Alt.	-1 ± 1	$0.68^{+0.18}_{-0.19}$	5677^{+359}_{-609}	4374^{+1261}_{-8415}	$0.542^{+0.713}_{-0.385}$

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 $A_{obs} \gg 1.0$

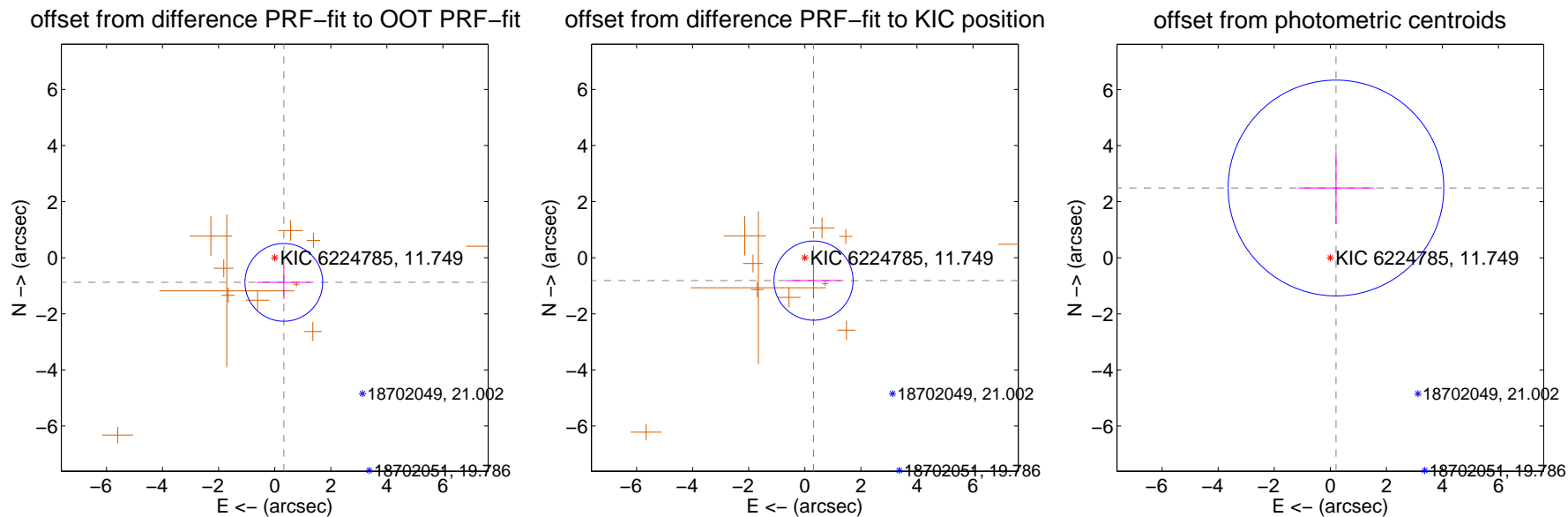
DV Centroid Data

Supplemental centroid analysis for 006224785-01. **Kepler magnitude: 11.75.** Transit SNR 9.06

There are 0 quarters with good PRF difference image offsets

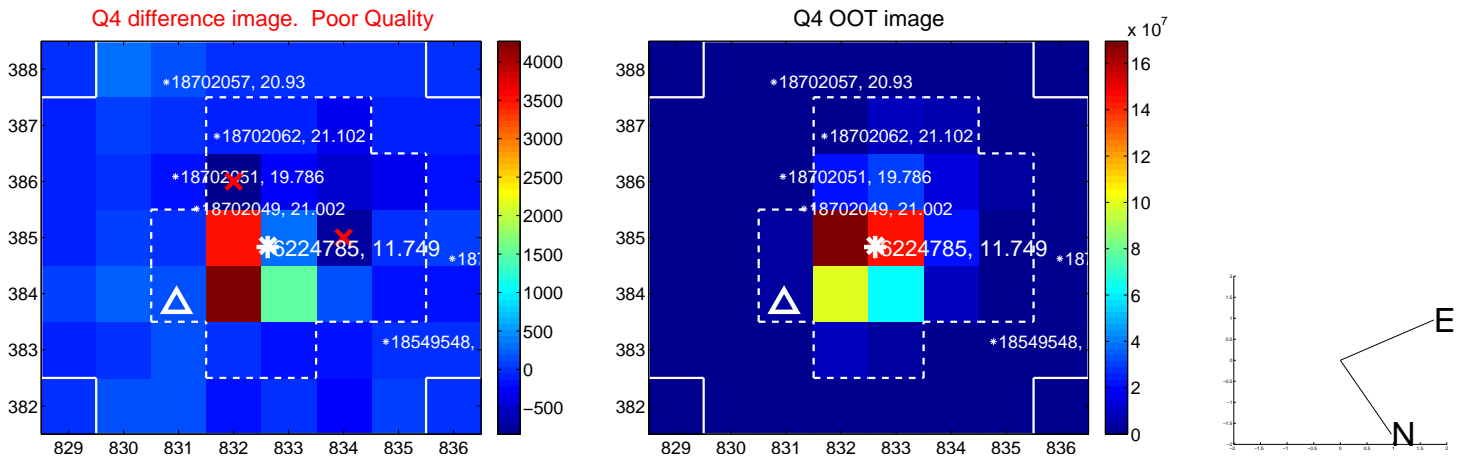
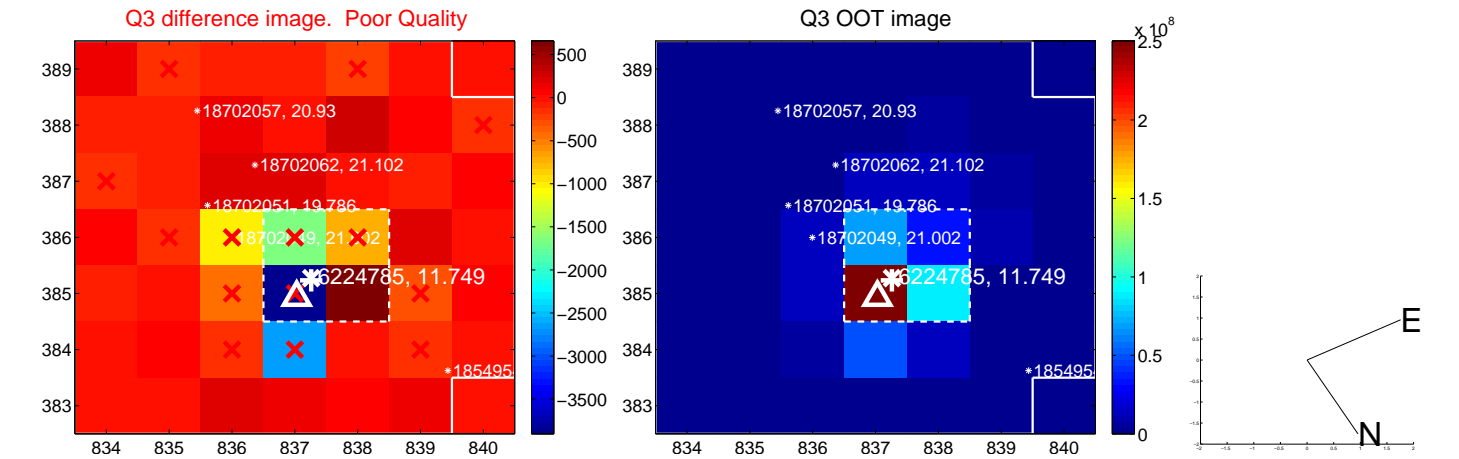
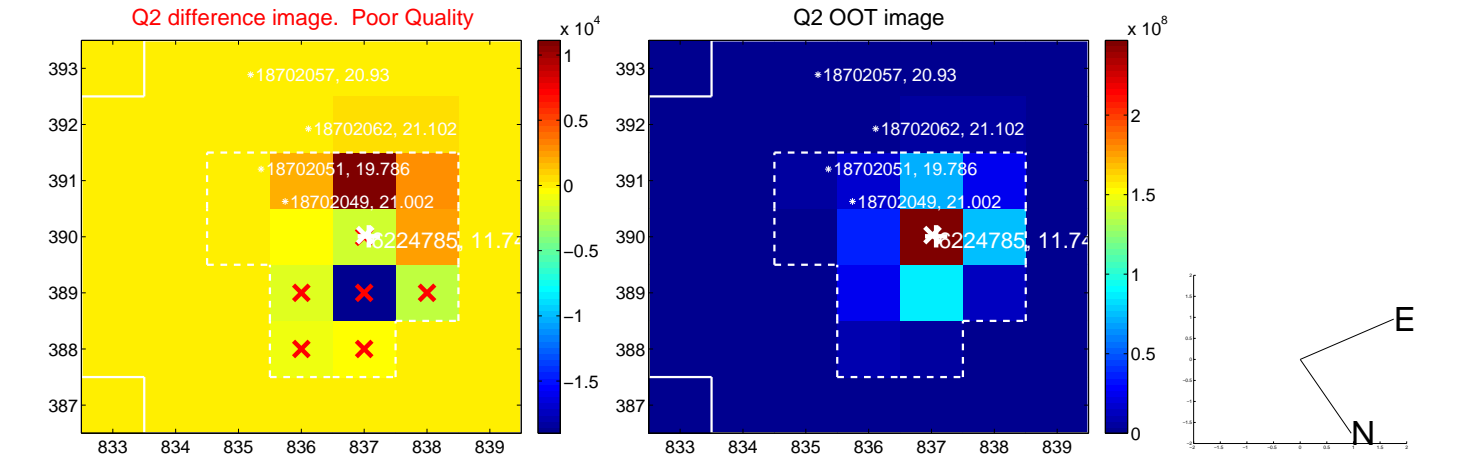
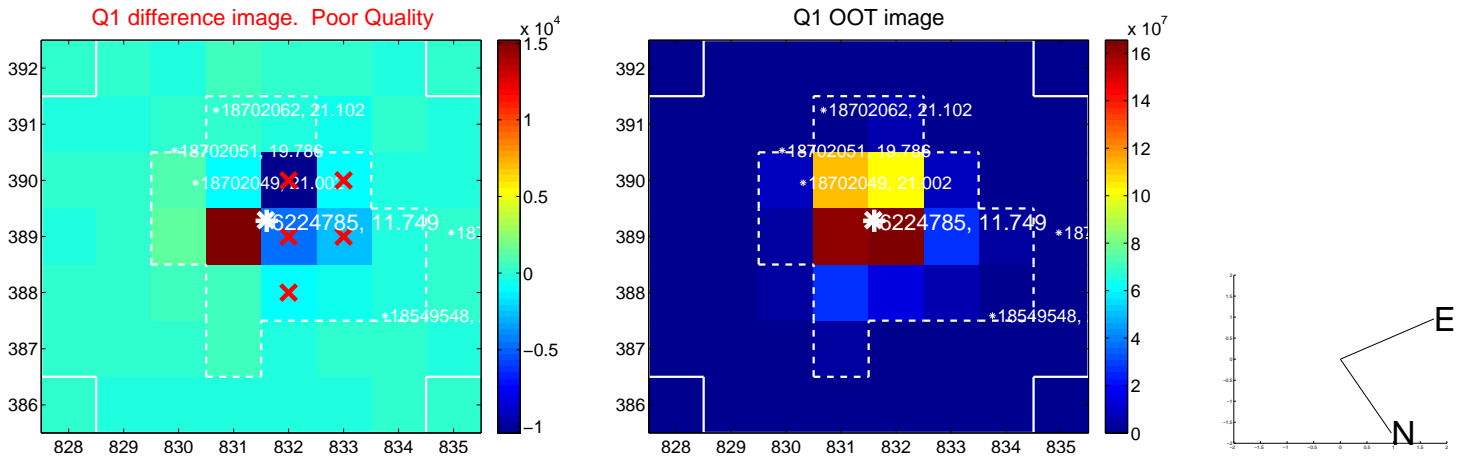
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.937 ± 0.462	2.03	-0.325 ± 0.963	-0.879 ± 0.595
PRF-fit source offset from KIC position	0.874 ± 0.470	1.86	-0.311 ± 0.977	-0.817 ± 0.645
photometric centroid source offset	2.50 ± 1.28	1.95	-0.20 ± 1.34	2.49 ± 1.28

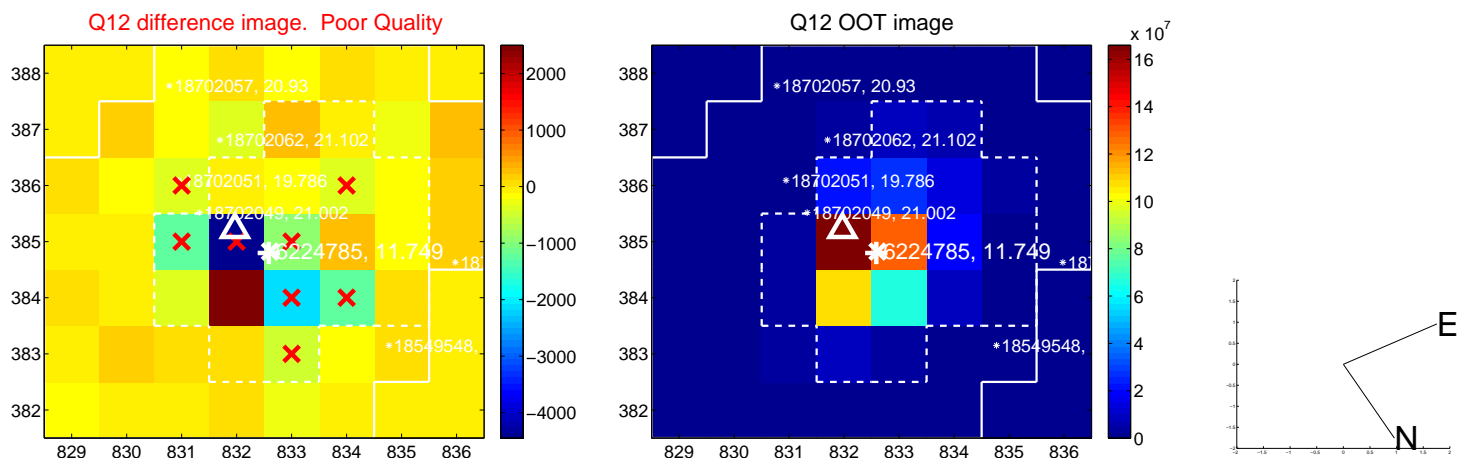
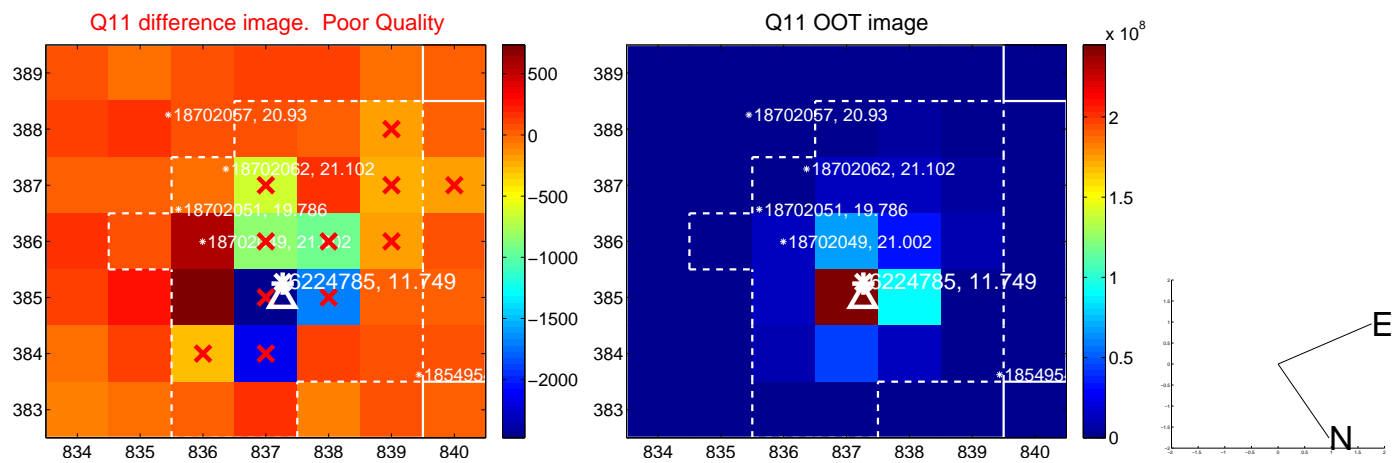
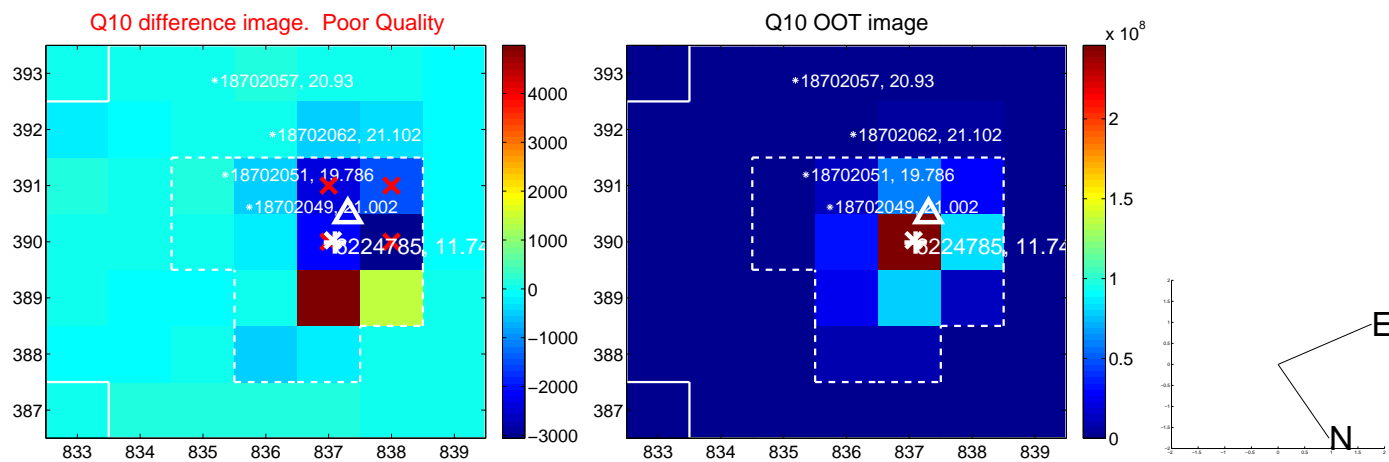
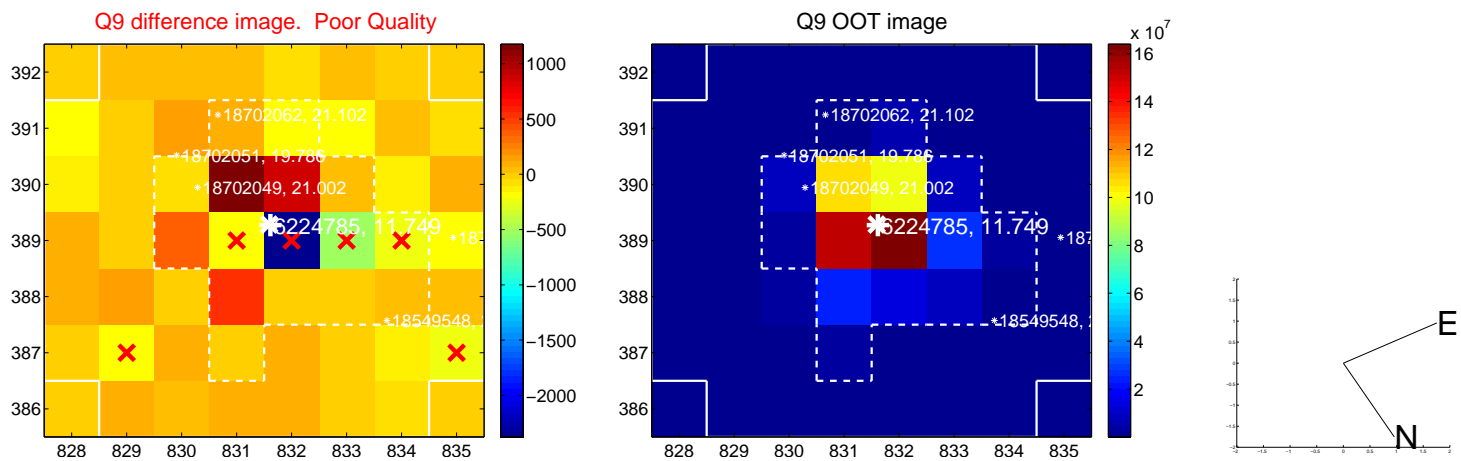


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

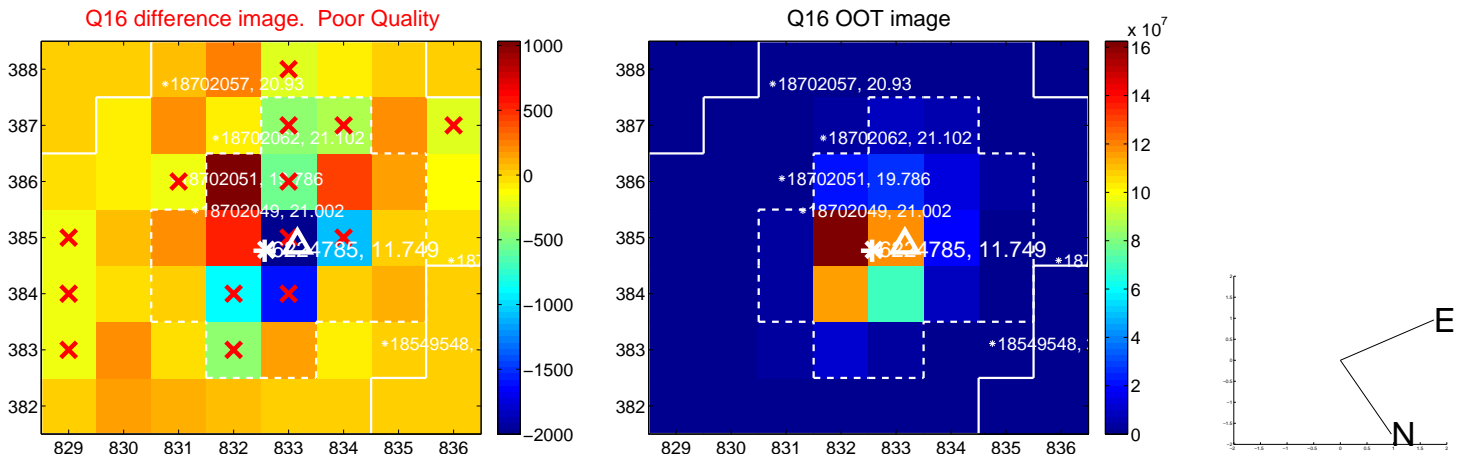
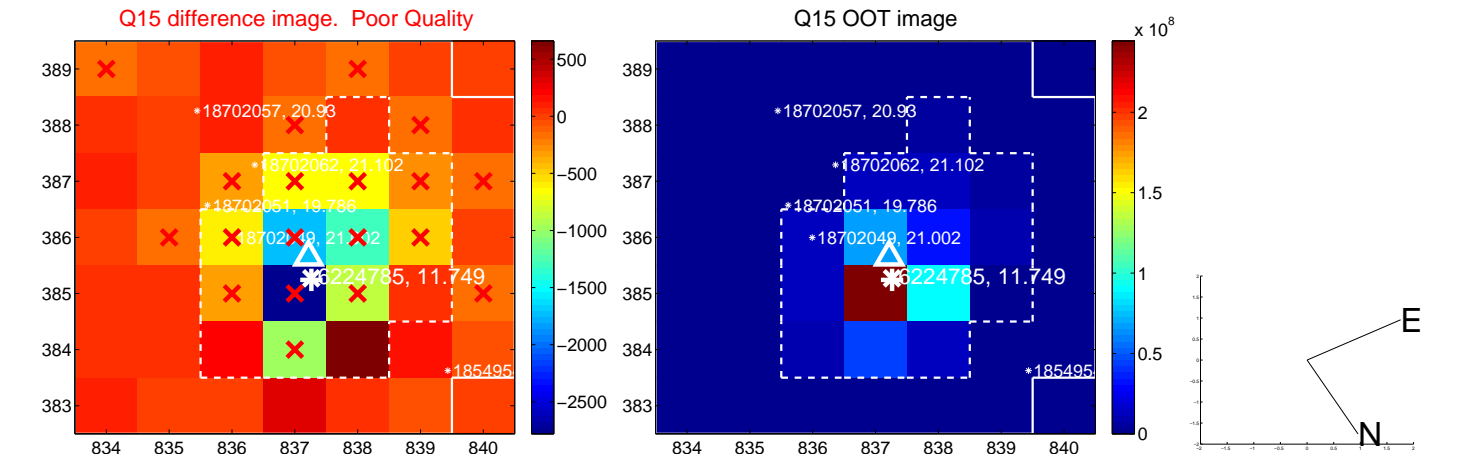
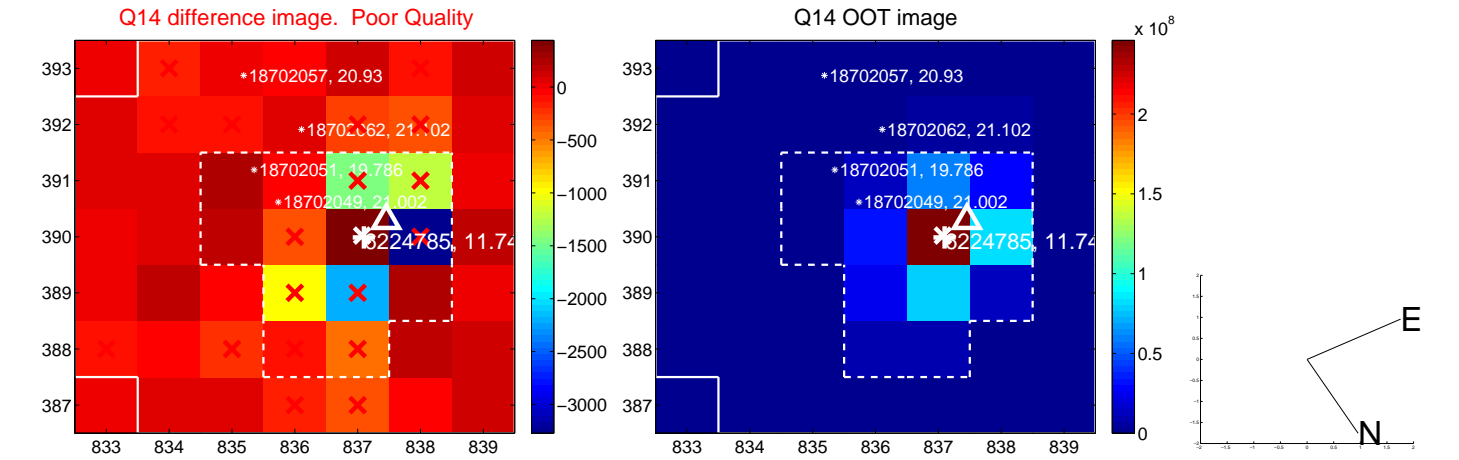
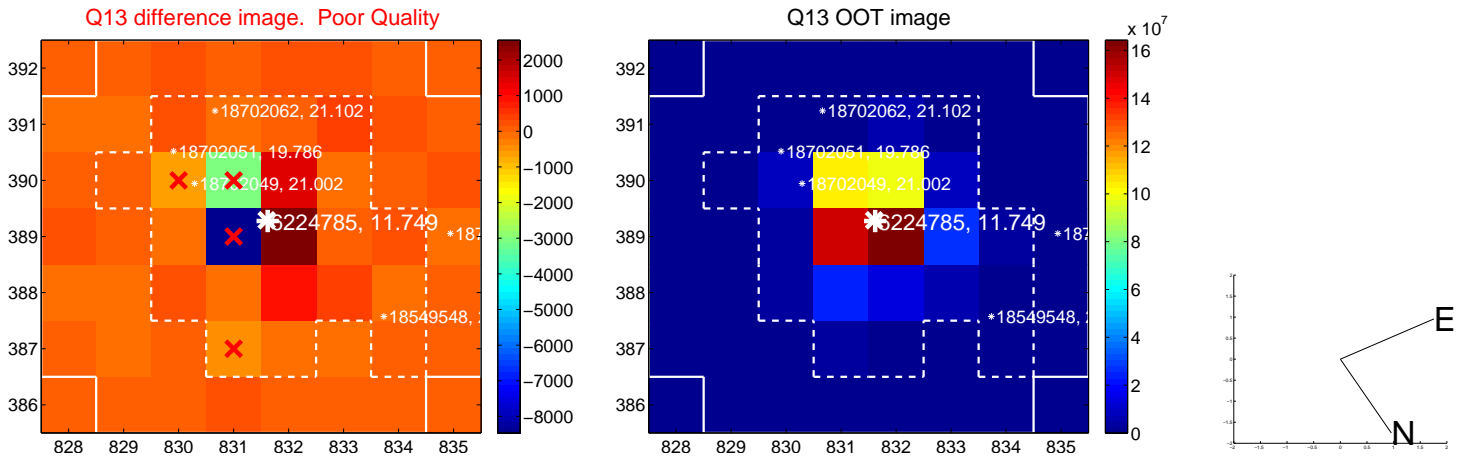
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



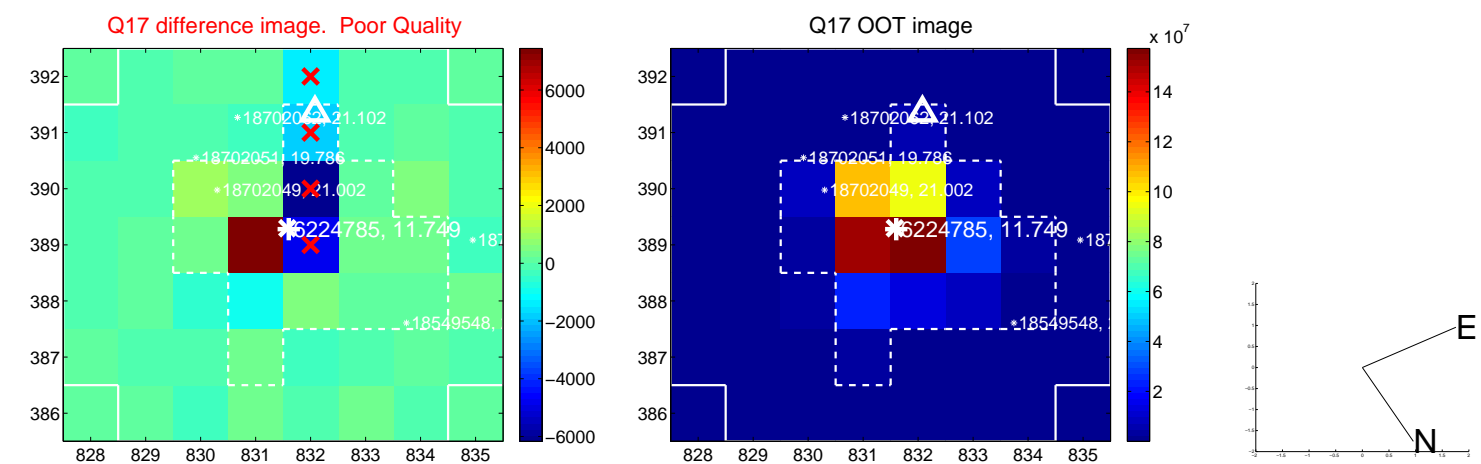
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



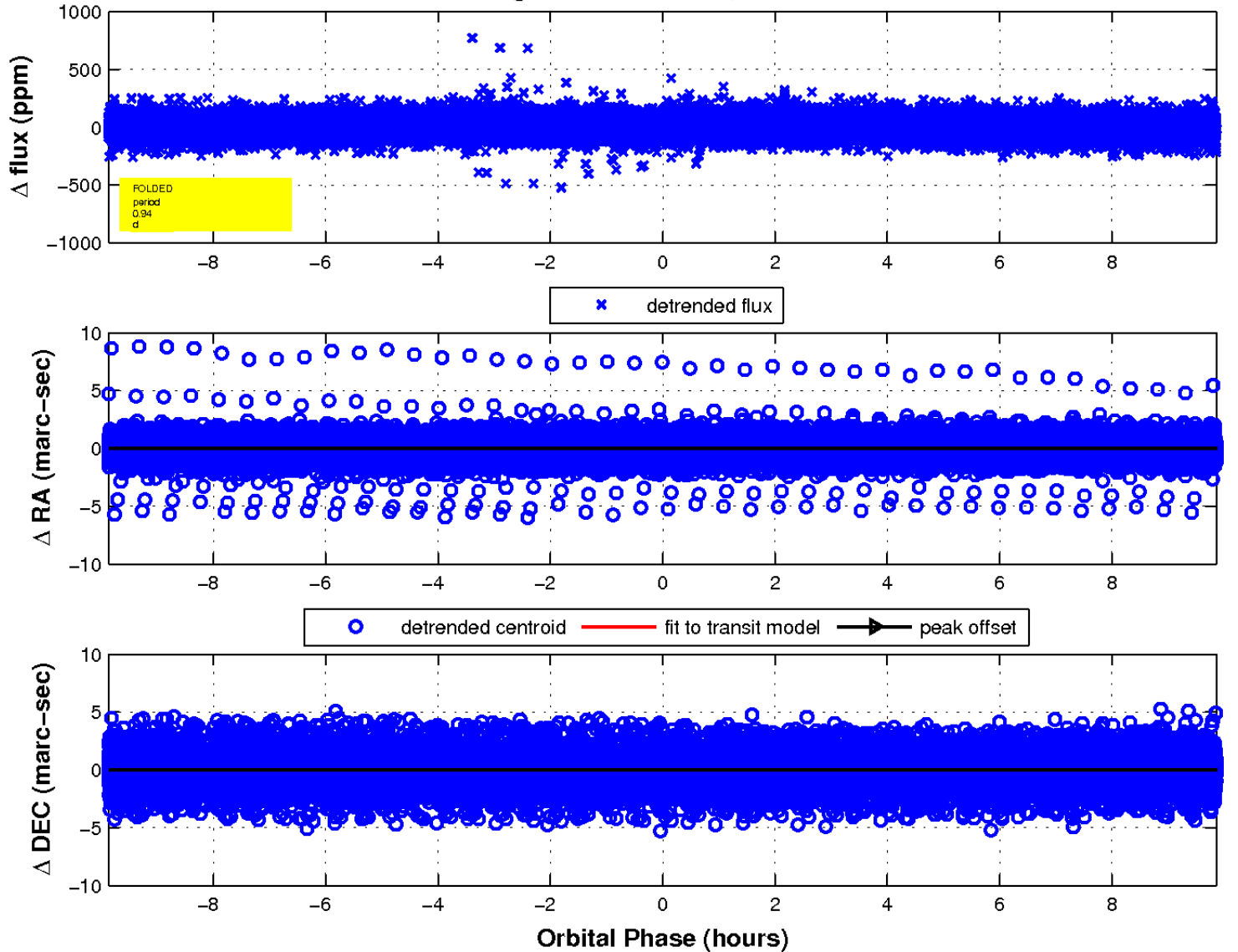
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

