

KIC 004916395

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})
004916395-01	OBS	No	6.348173	134.087817	19.8	19.084	8.0	8.7	1.80	7454	0.92	1427.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004916395-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

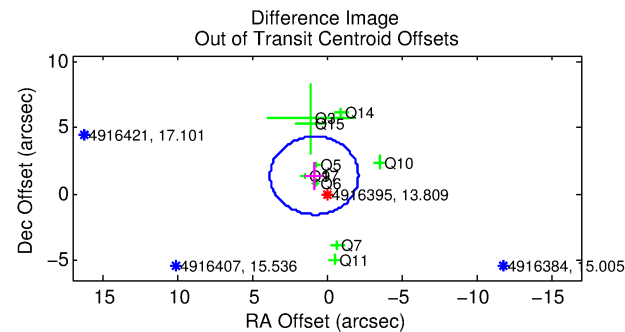
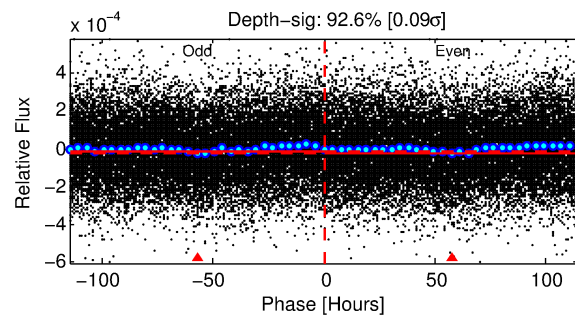
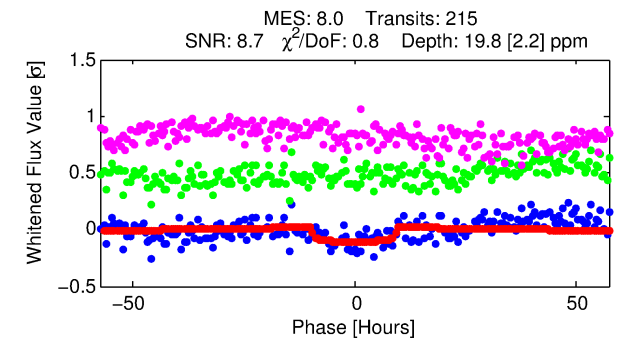
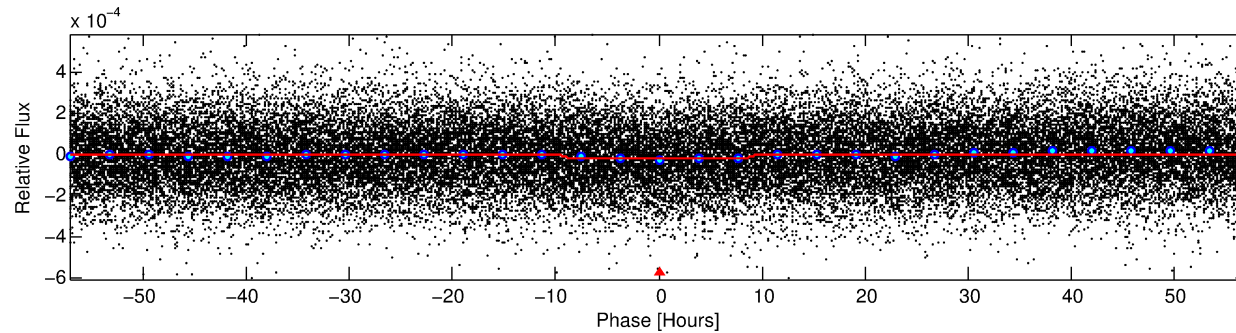
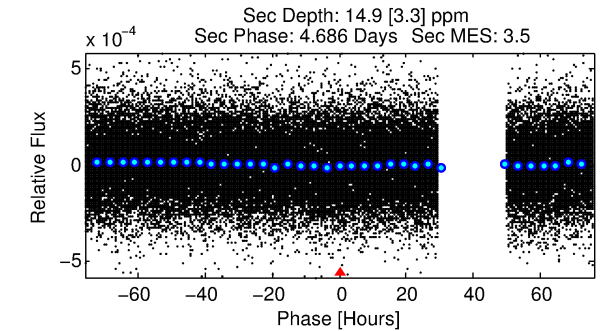
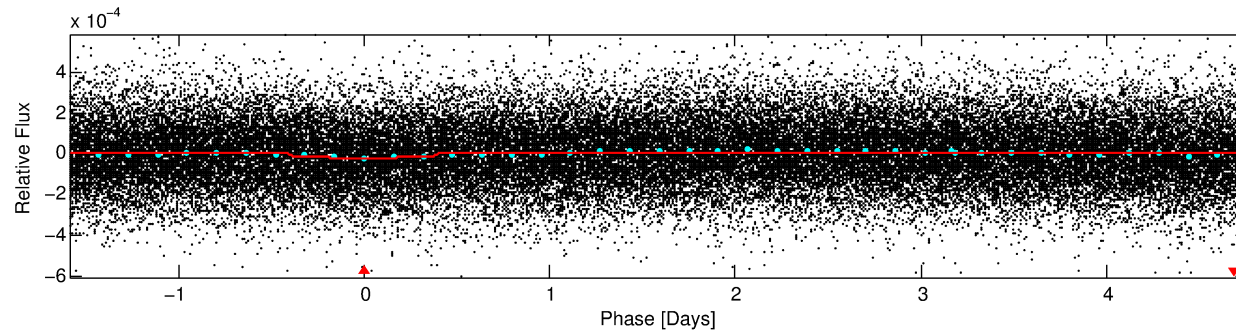
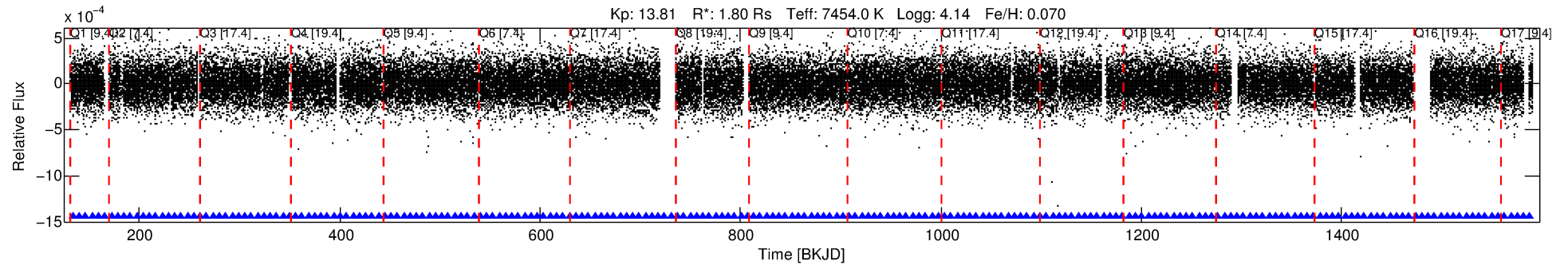
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004916395-01

No Significant Match Found

DV One-Page Summary

KIC: 4916395 Candidate: 1 of 1 Period: 6.348 d



DV Fit Results:

Period = 6.34817 [0.00018] d
Epoch = 134.0878 [0.0213] BKJD
Rp/R* = 0.0047 [0.0008]
a/R* = 1.51 [0.86]
b = 0.89 [0.24]
Seff = 1427.11 [566.22]
Teq = 1567 [155] K
Rp = 0.92 [0.32] Re
a = 0.0791 [0.0197] AU
Ag = 60.89 [32.35] [1.85σ]
Teffp = 6769 [737] K [6.91σ]

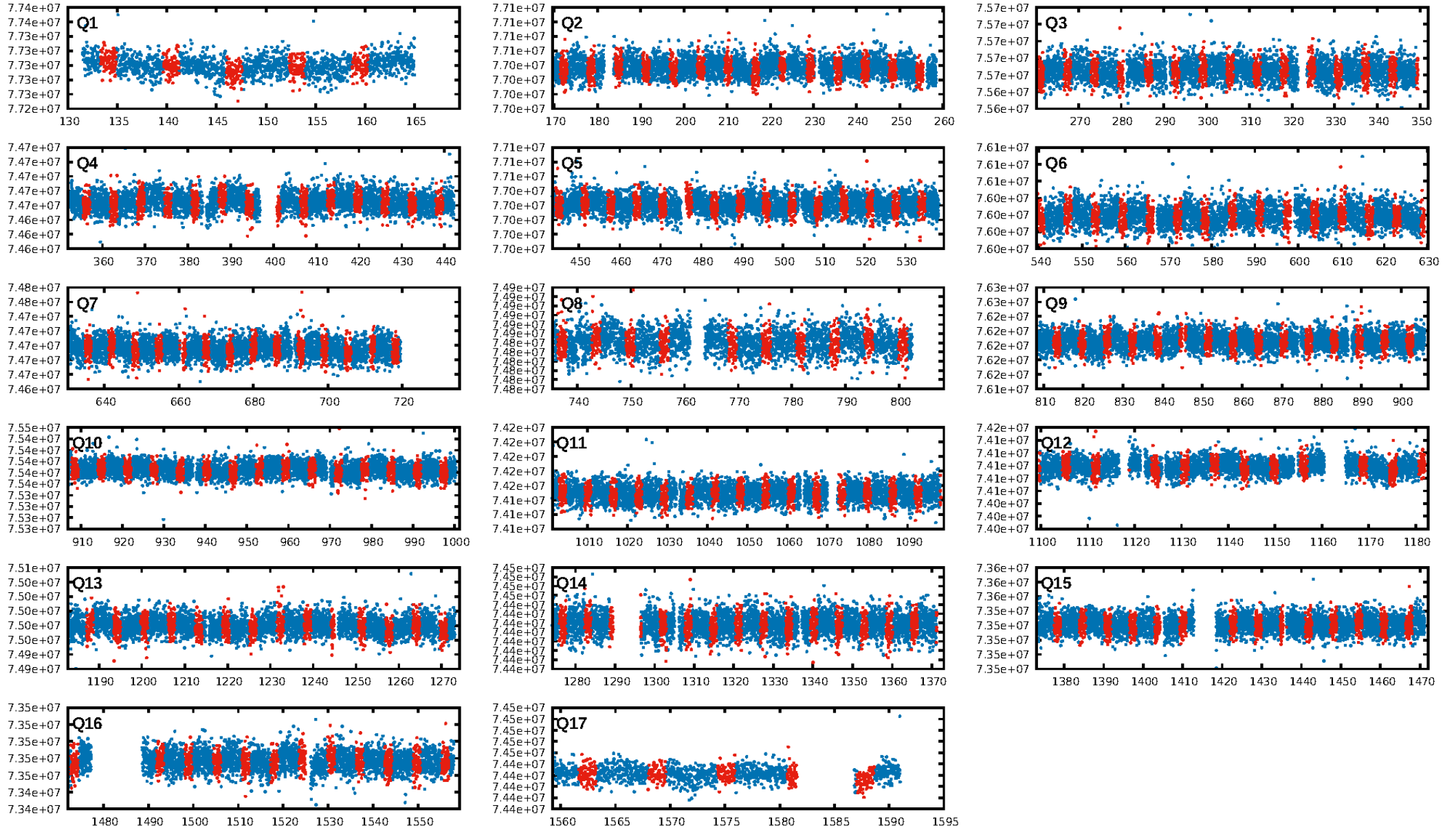
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.04e-17
RollingBand-fgt: 1.00 [205/205]
GhostDiagnostic-chr: -0.8365
Centroid-sig: 48.9%
Centroid-so: 1.833 arcsec [0.69σ]
OotOffset-rm: 1.628 arcsec [1.65σ]
KicOffset-rm: 1.576 arcsec [1.63σ]
OotOffset-st: 3/4/0/3 [10]
KicOffset-st: 3/4/0/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

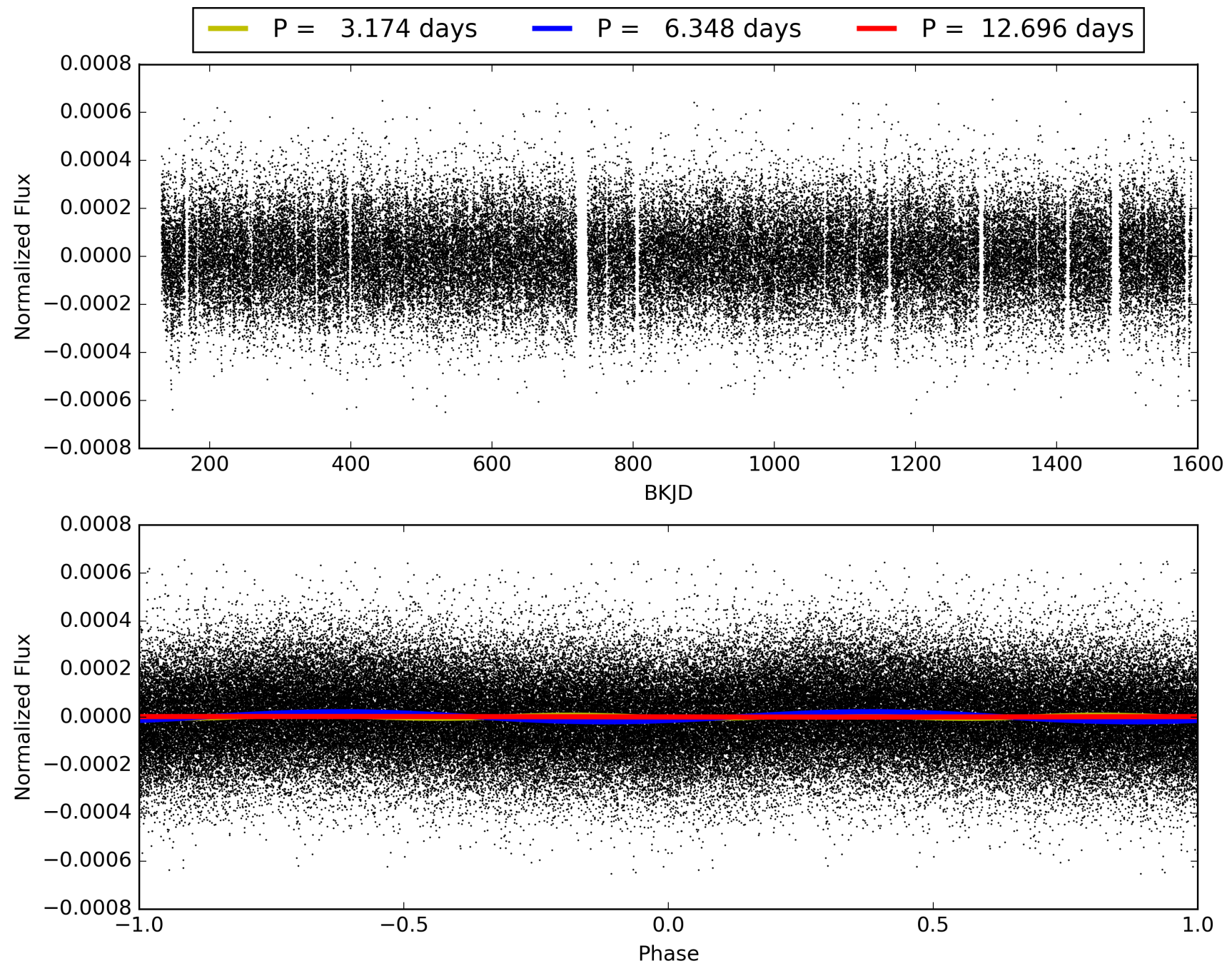
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:08:32 Z

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

TCE 004916395-01, PDC Light Curves

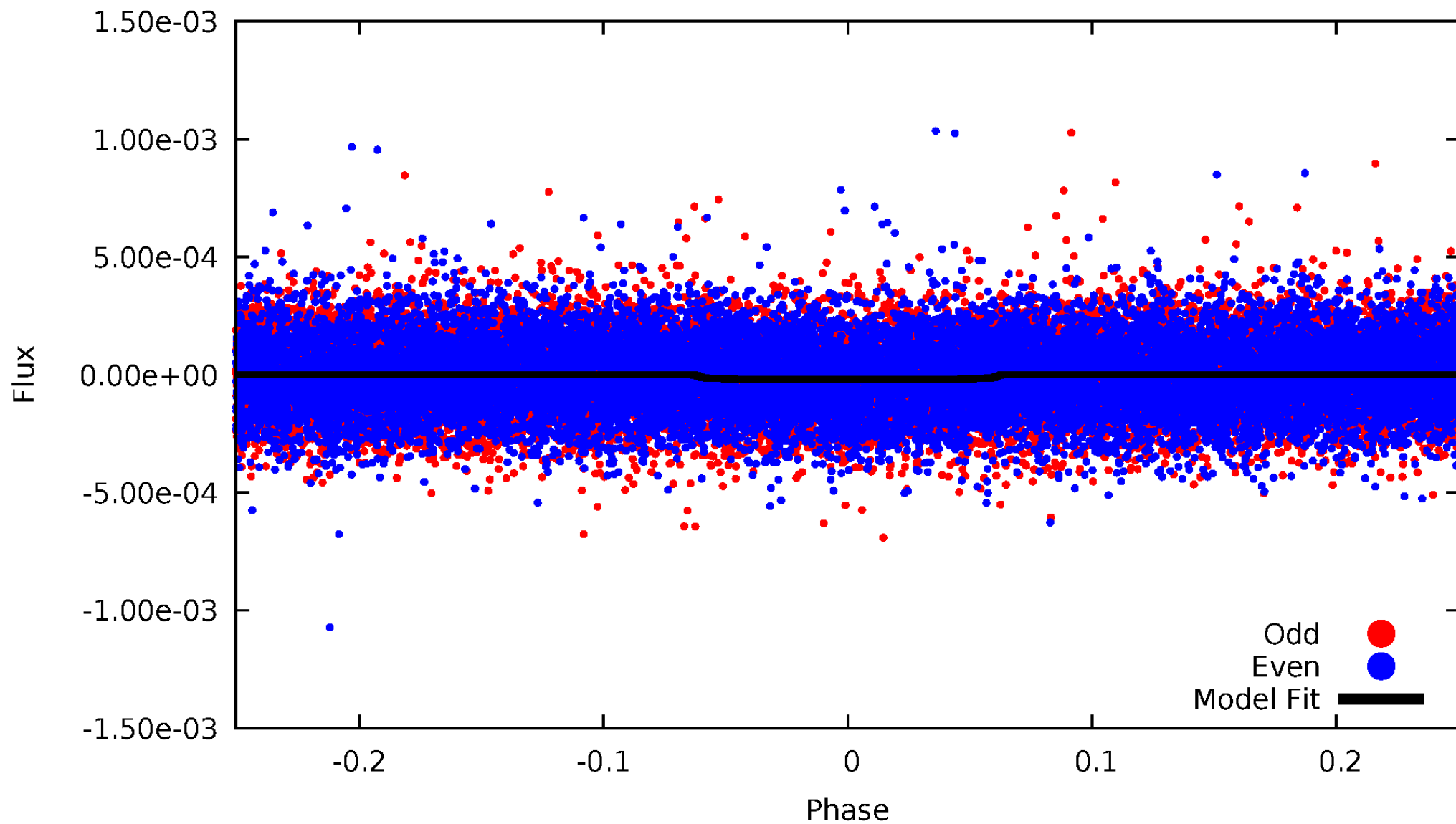


TCE 004916395-01



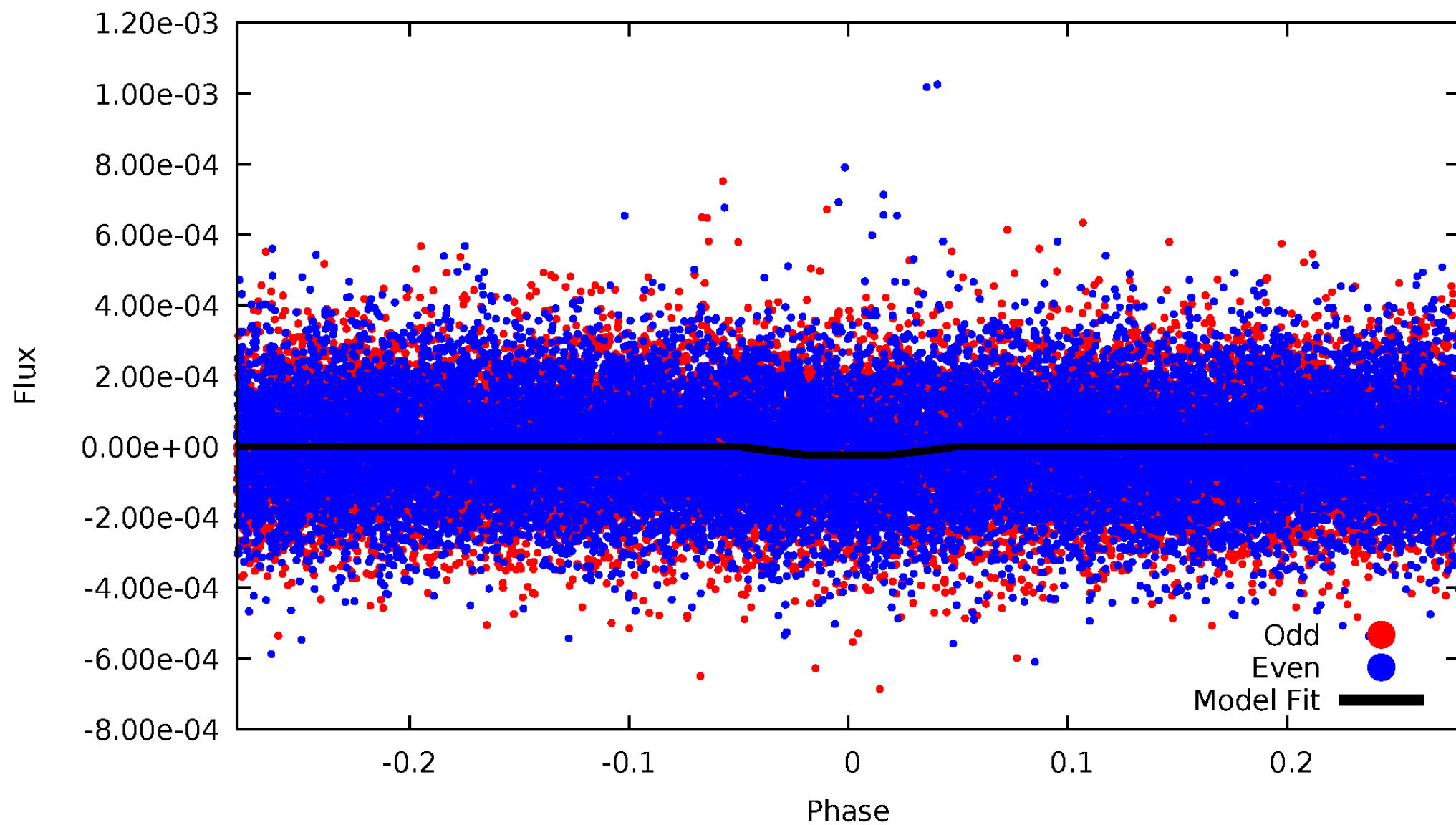
DV Odd/Even

TCE 004916395-01



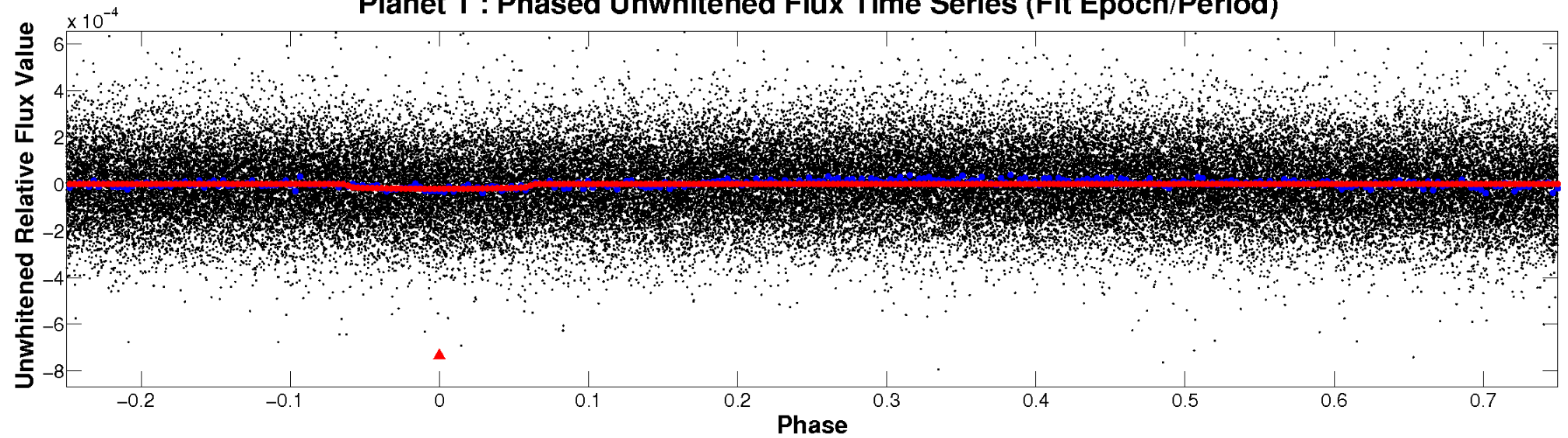
ALT Odd/Even

TCE 004916395-01

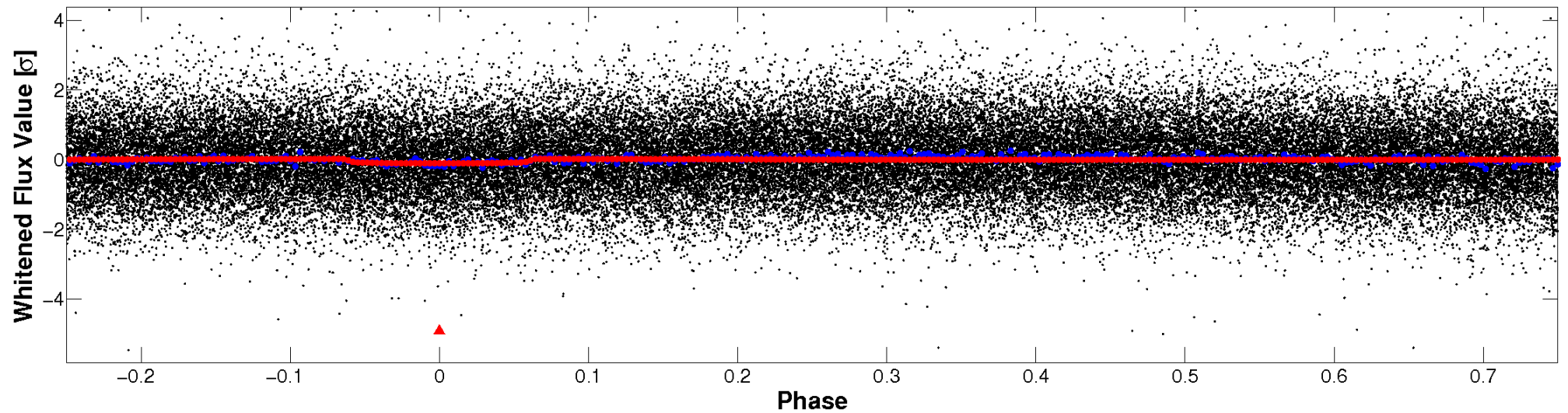


Non-Whitened Vs. Whitened Light Curve

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

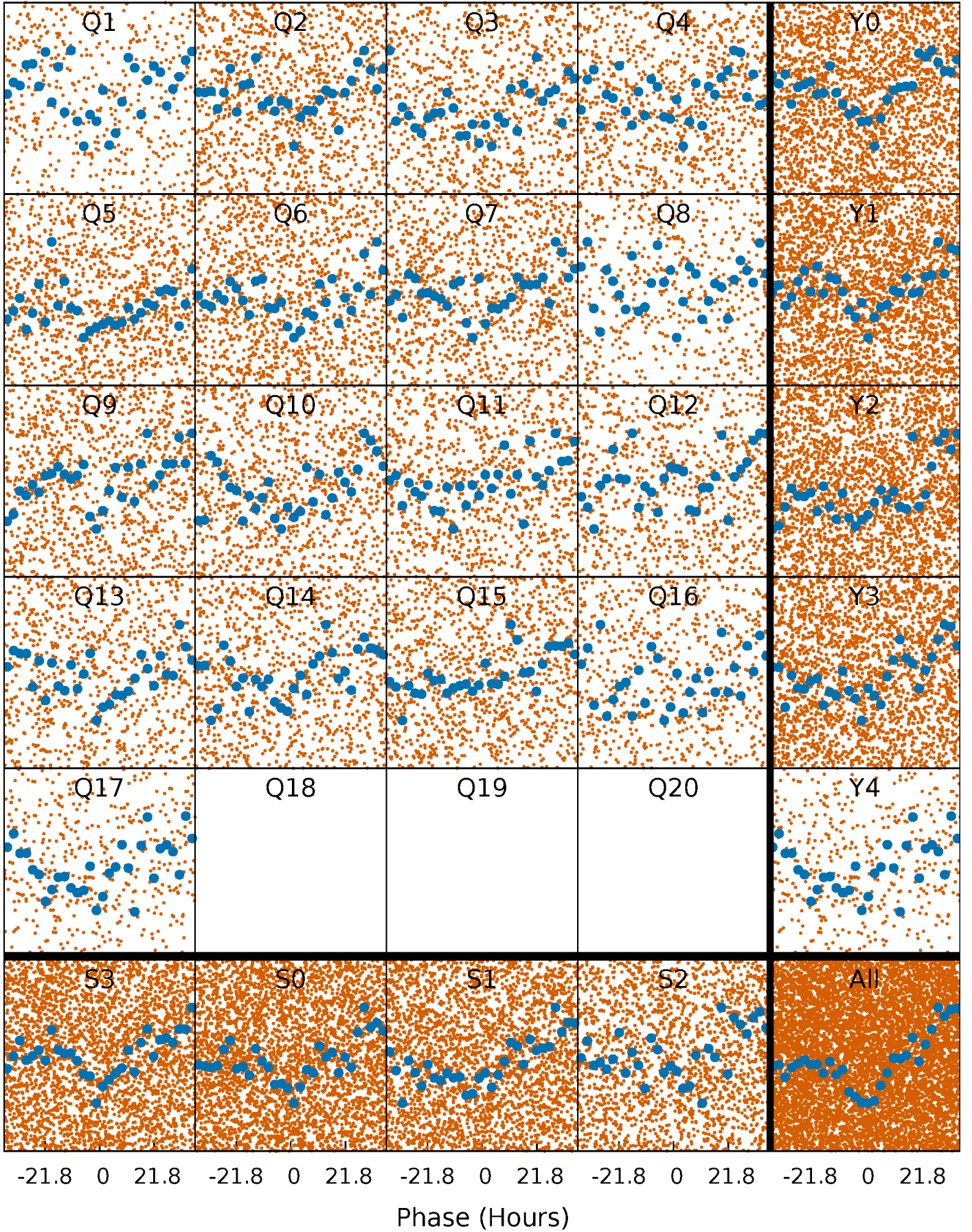


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



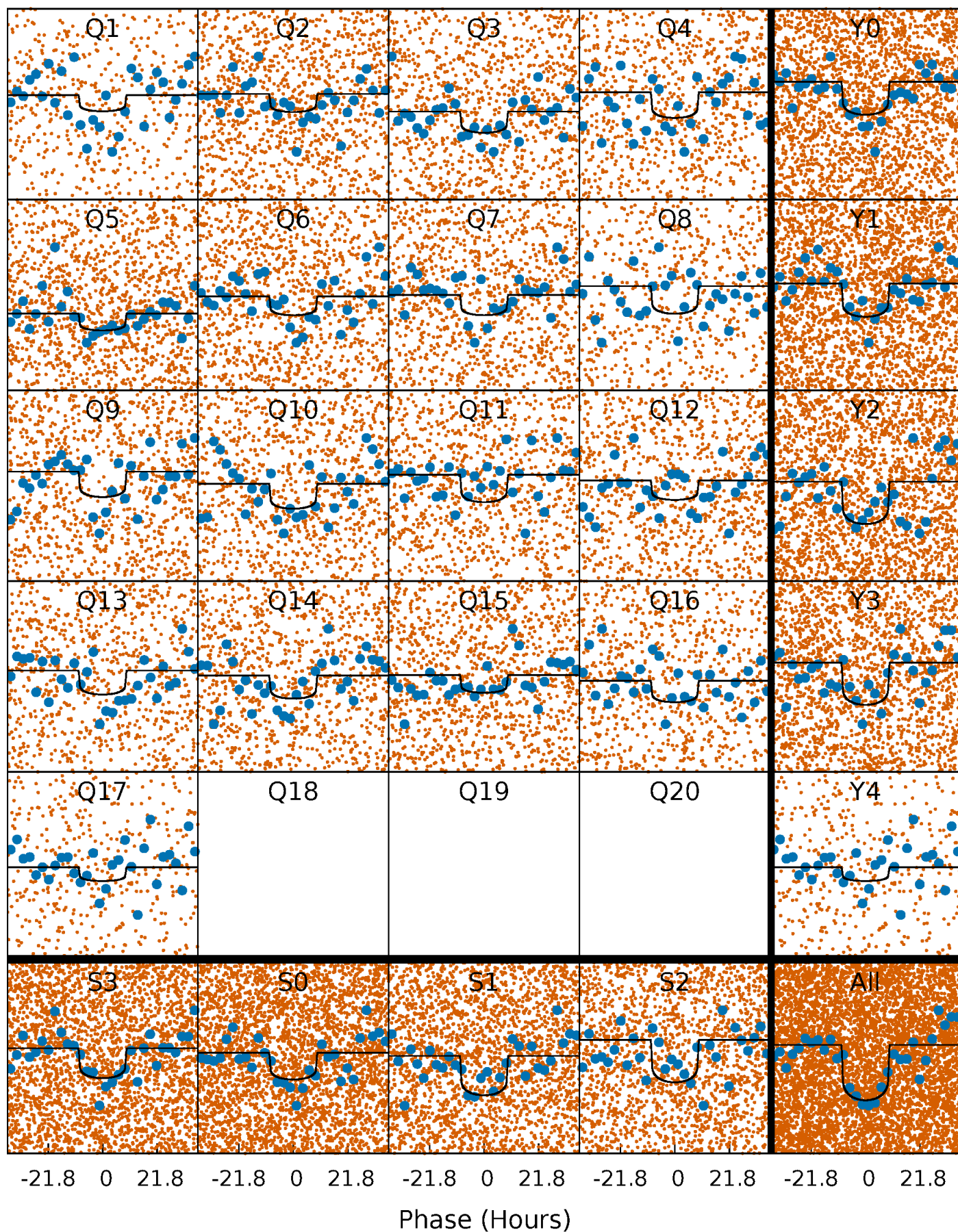
PDC Quarter-Phased Transit Curves

TCE 004916395-01 P= 6.348173 Days $T_0=134.087817$ (BKJD)



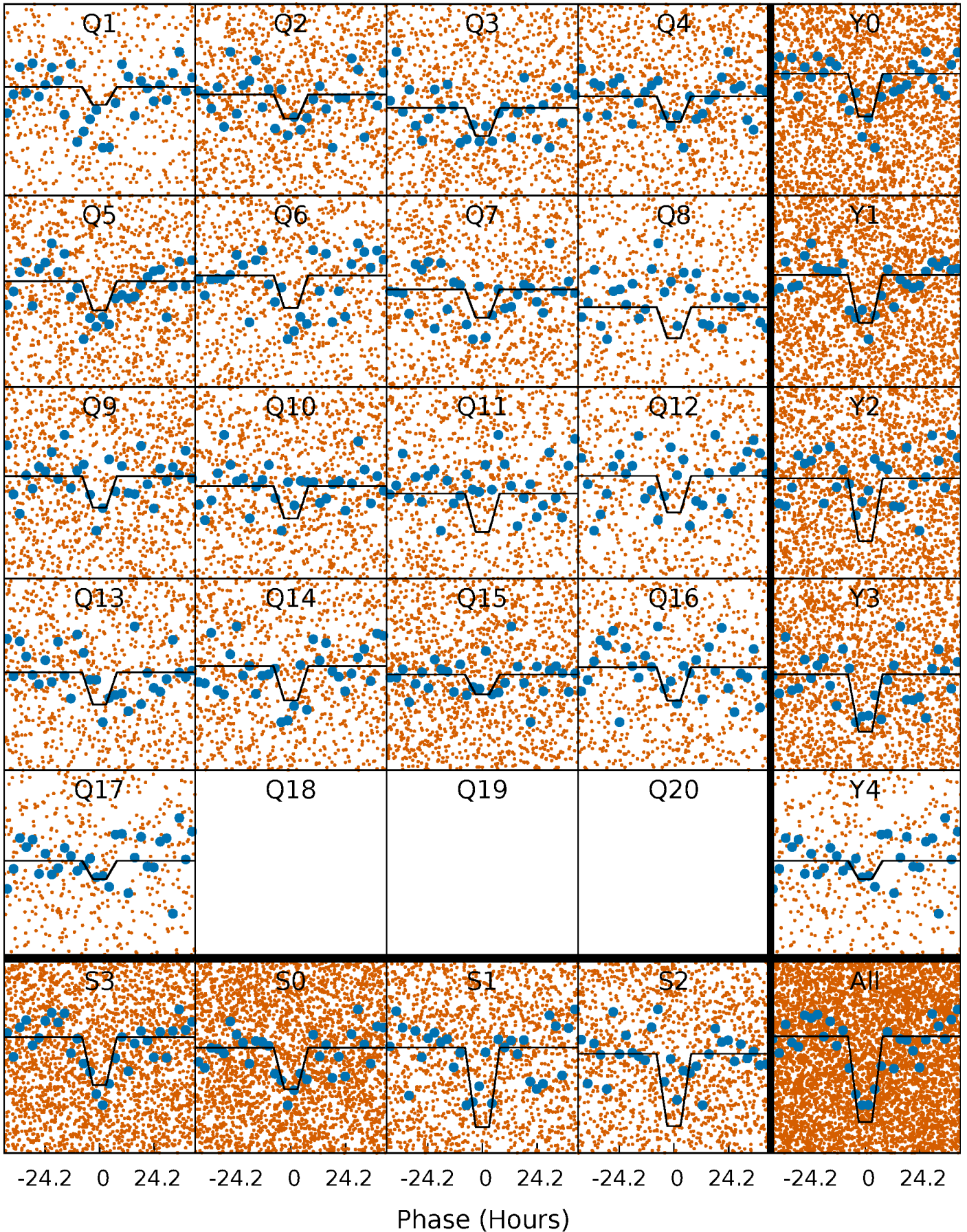
DV Quarter-Phased Transit Curves

TCE 004916395-01 P= 6.348173 Days $T_0=134.087817$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

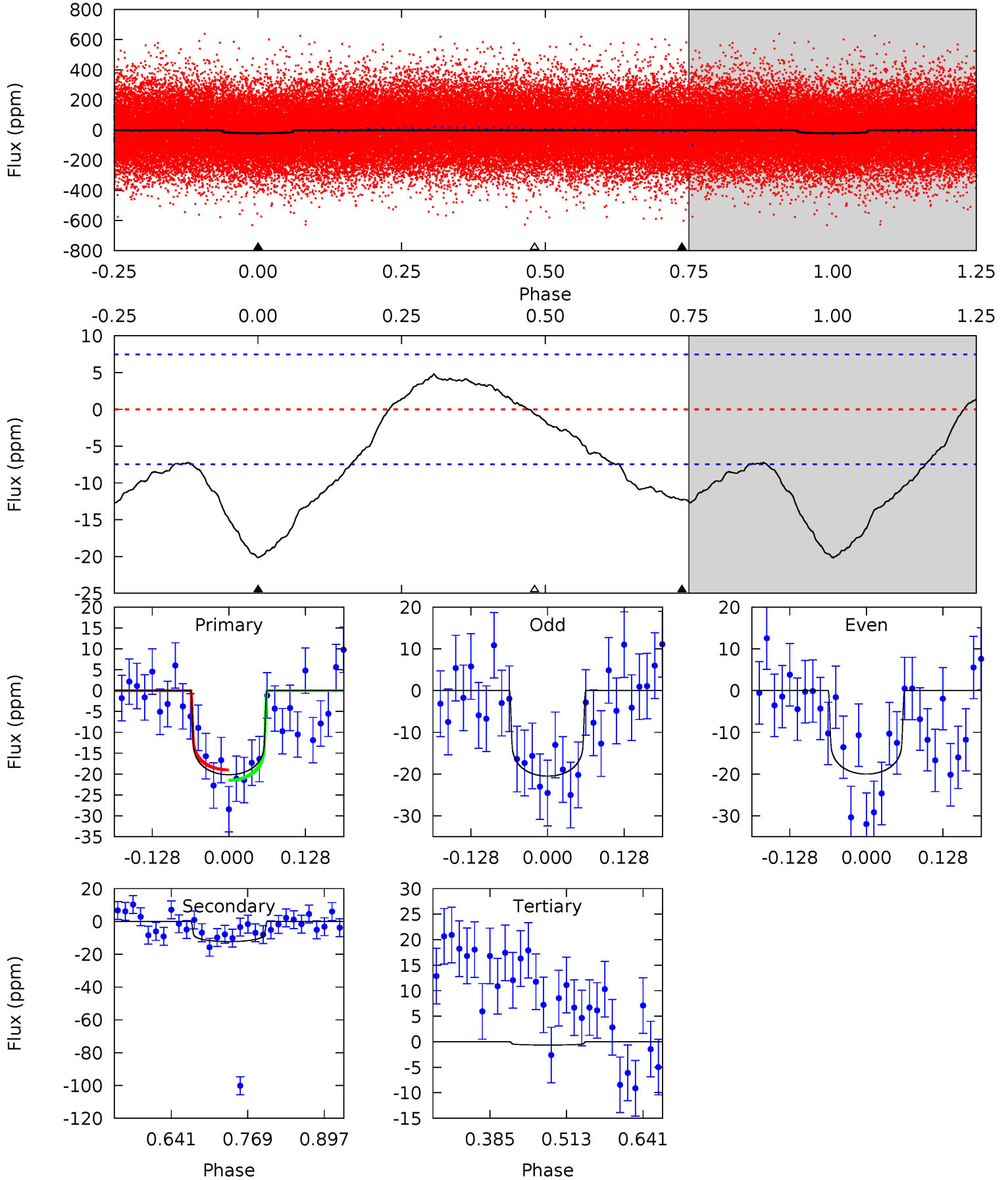
TCE 004916395-01 P= 6.347741 Days $T_0=134.146696$ (BKJD)



DV Model-Shift Uniqueness Test

004916395-01, P = 6.348173 Days, E = 127.739644 Days

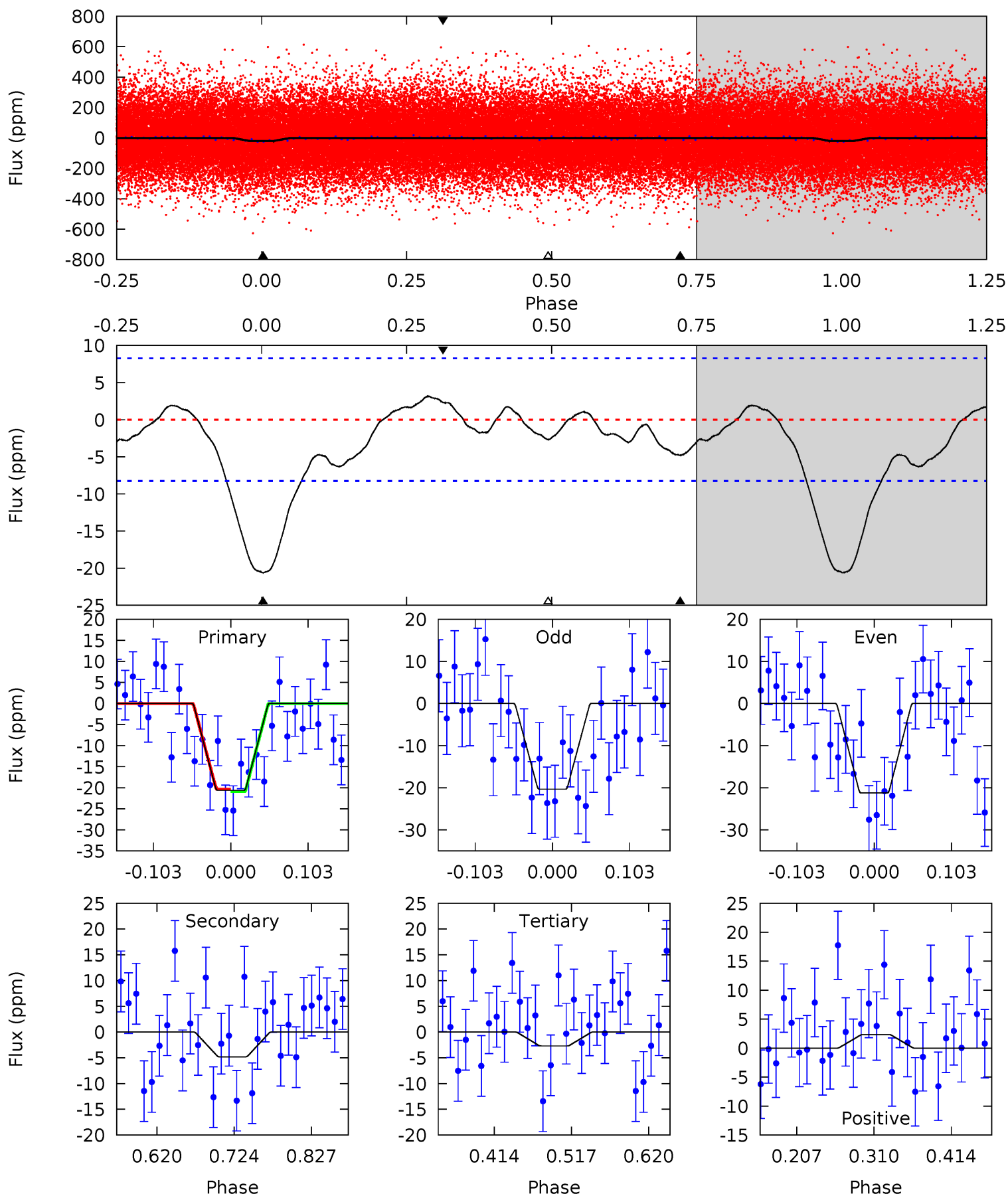
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.43	0.39	0	4.51	1.52	2.54	11.8	12.2	7.04	7.43	0.15	1.15	0.19	0.75



Alt Model-Shift Uniqueness Test

004916395-01, P = 6.347741 Days, E = 127.798955 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	2.65	1.48	1.29	4.56	1.63	1.31	9.89	10.1	1.16	1.36	0.25	0.98	0.13	0.15



Stellar Parameters For KIC 004916395

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7454^{+206}_{-335}	$4.143^{+0.102}_{-0.189}$	$0.070^{+0.200}_{-0.350}$	$1.796^{+0.545}_{-0.336}$	$1.636^{+0.214}_{-0.235}$	$0.398^{+0.229}_{-0.195}$
	+3%/-4%	+2%/-5%	+286%/-500%	+30%/-19%	+13%/-14%	+57%/-49%
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 004916395-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 2	$0.94^{+0.21}_{-0.19}$	2210^{+171}_{-133}	6296^{+717}_{-549}	47^{+26}_{-16}
Alt.	-5 ± 2	$0.98^{+0.23}_{-0.17}$	2216^{+165}_{-129}	4958^{+594}_{-559}	16^{+12}_{-8}

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

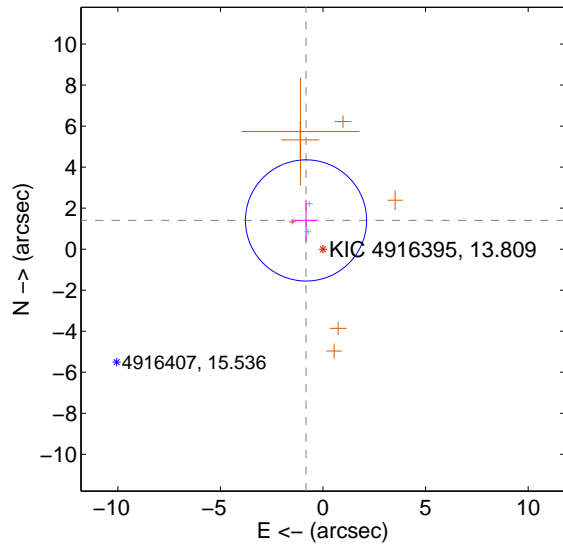
Supplemental centroid analysis for 004916395-01. Kepler magnitude: 13.81. Transit SNR 8.75

There are 3 quarters with good PRF difference image offsets

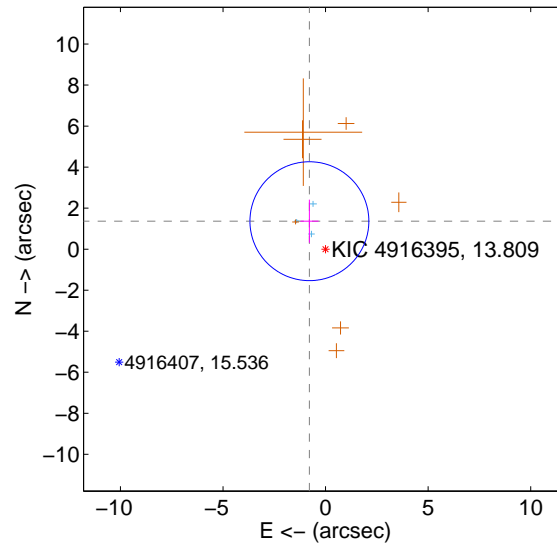
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.628 ± 0.985	1.65	0.829 ± 0.556	1.401 ± 1.016
PRF-fit source offset from KIC position	1.576 ± 0.966	1.63	0.789 ± 0.444	1.364 ± 1.051
photometric centroid source offset	1.83 ± 2.67	0.69	-1.83 ± 2.67	-0.07 ± 2.02

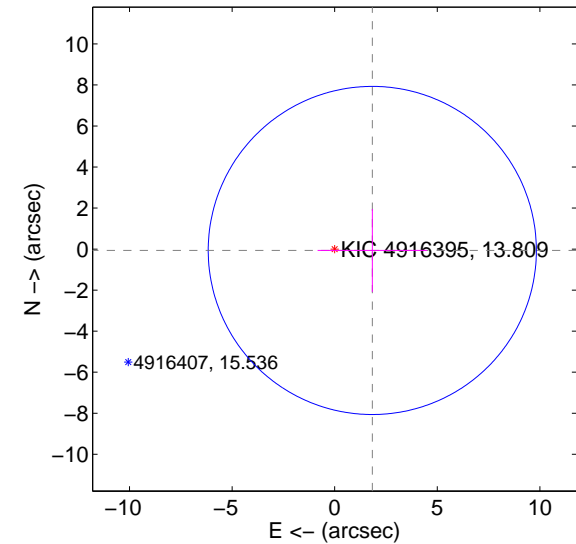
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

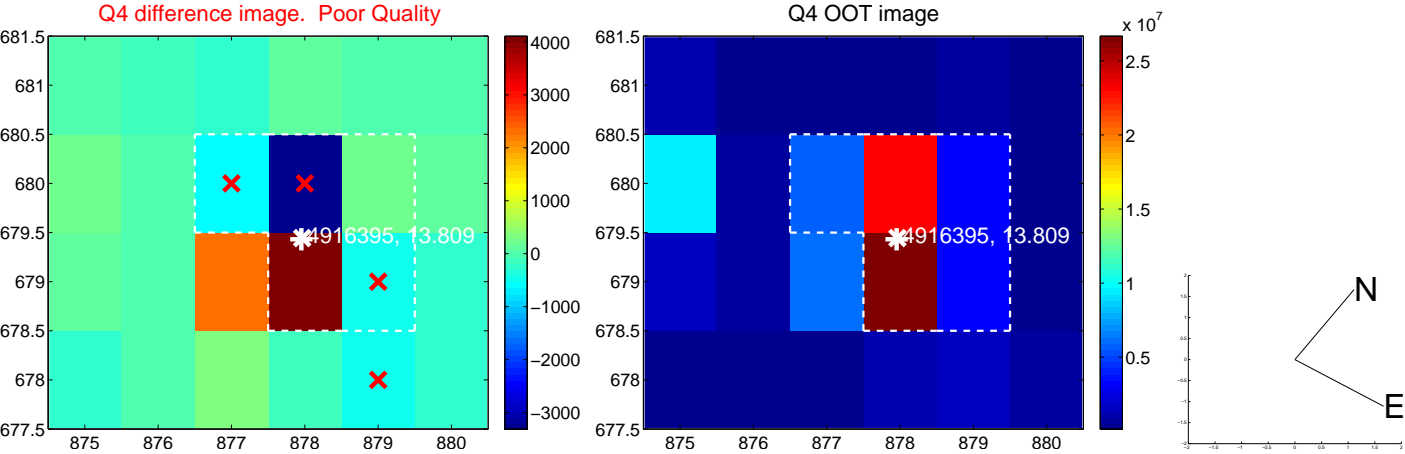
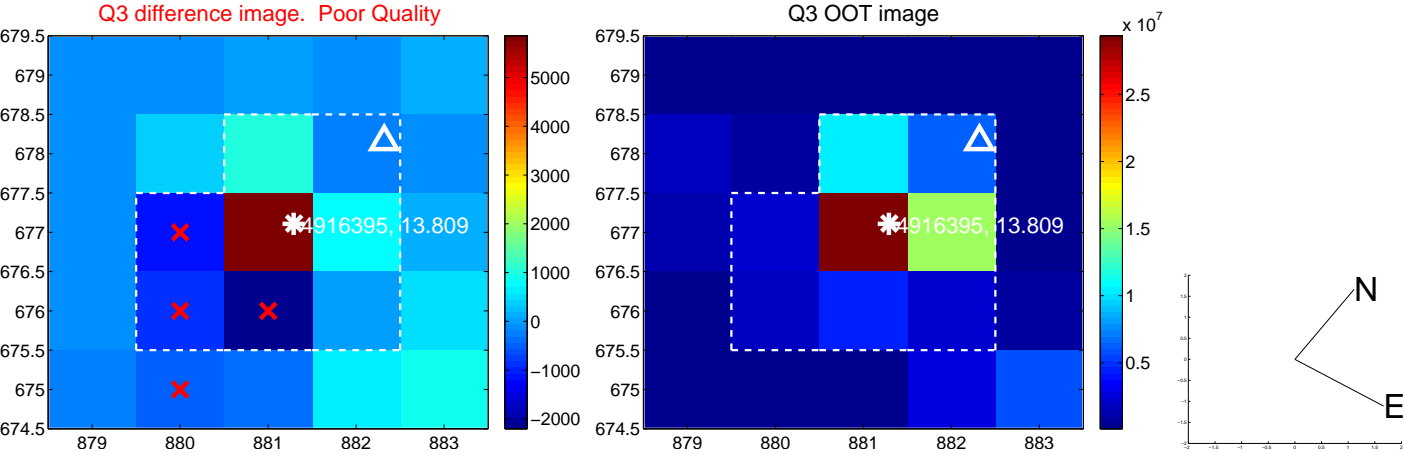
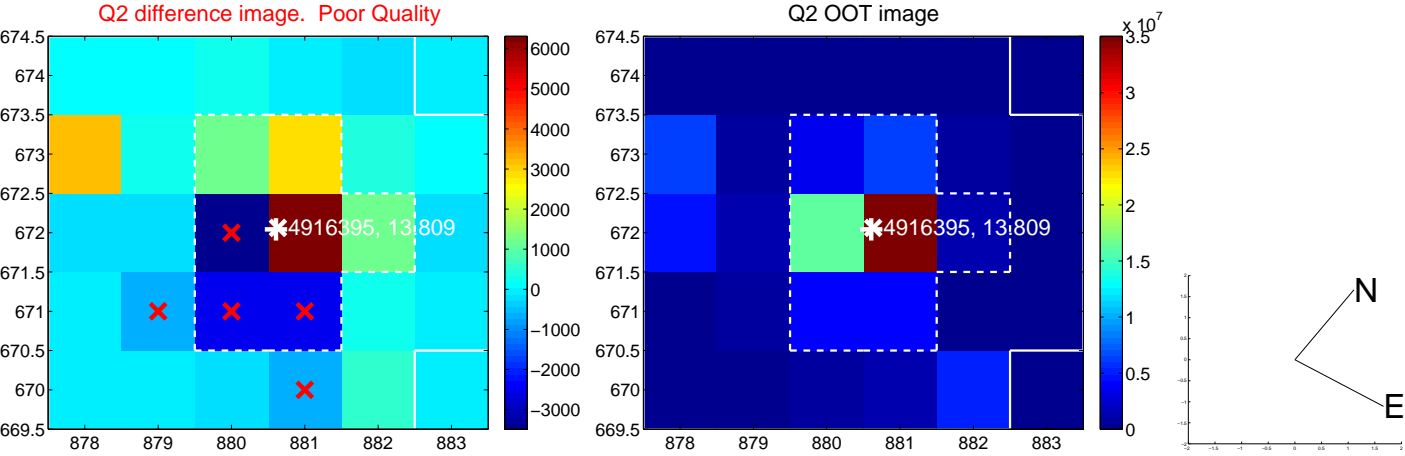
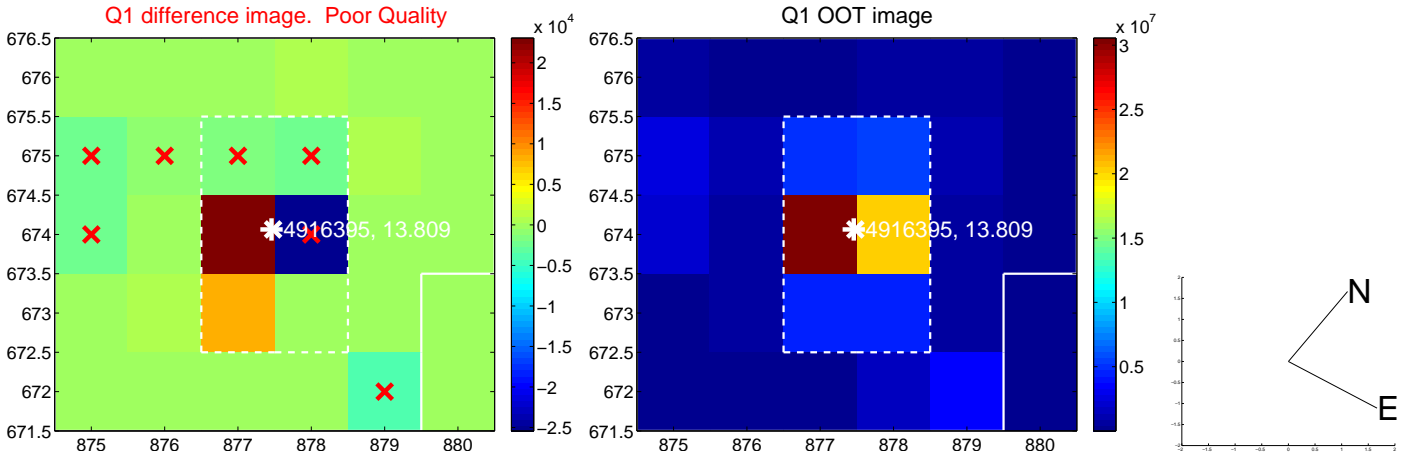


offset from photometric centroids

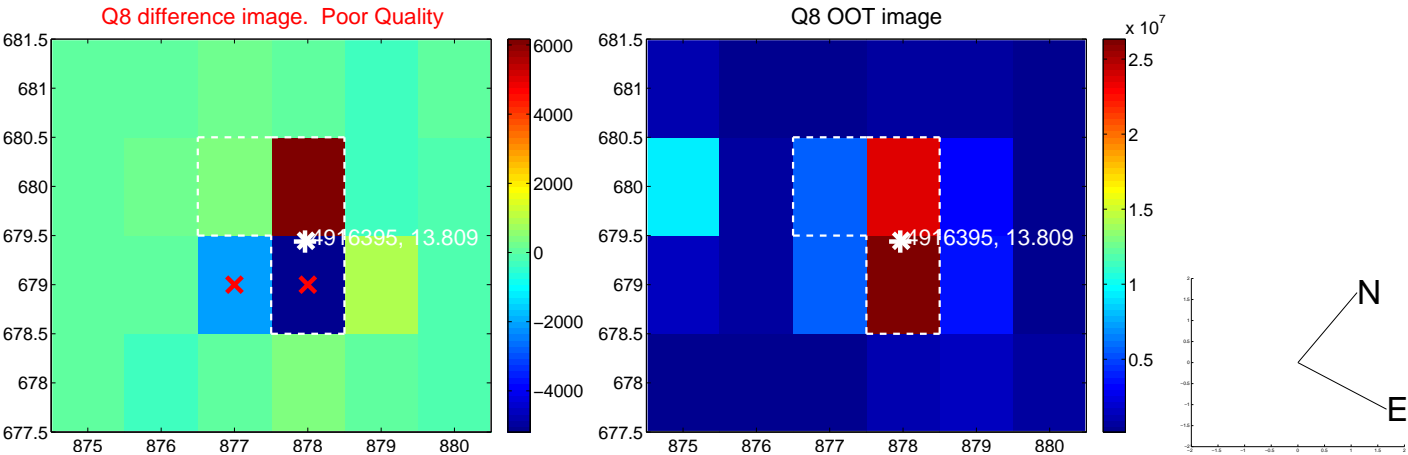
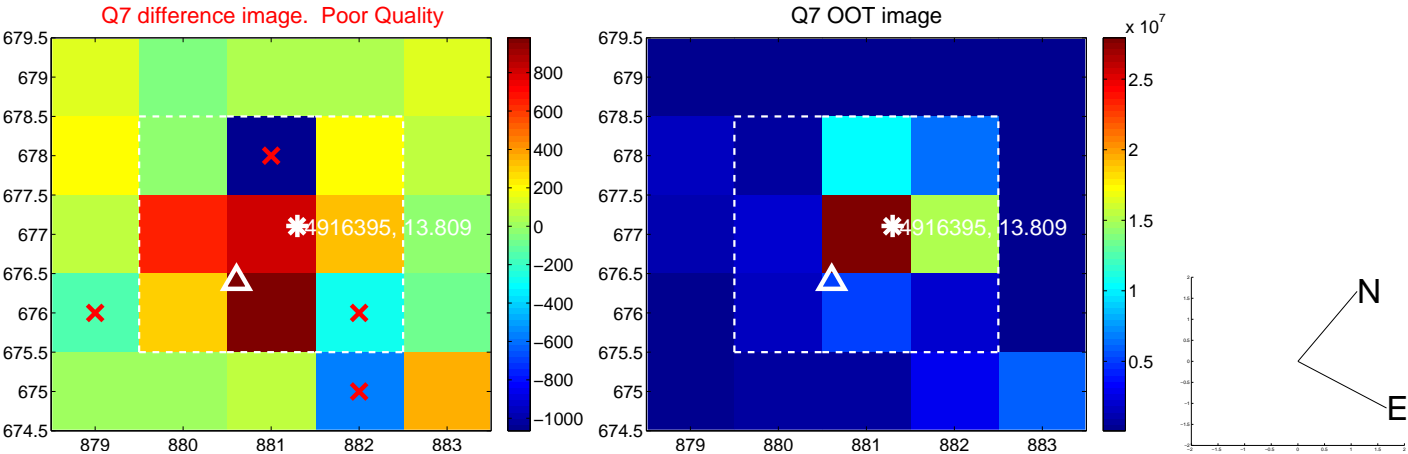
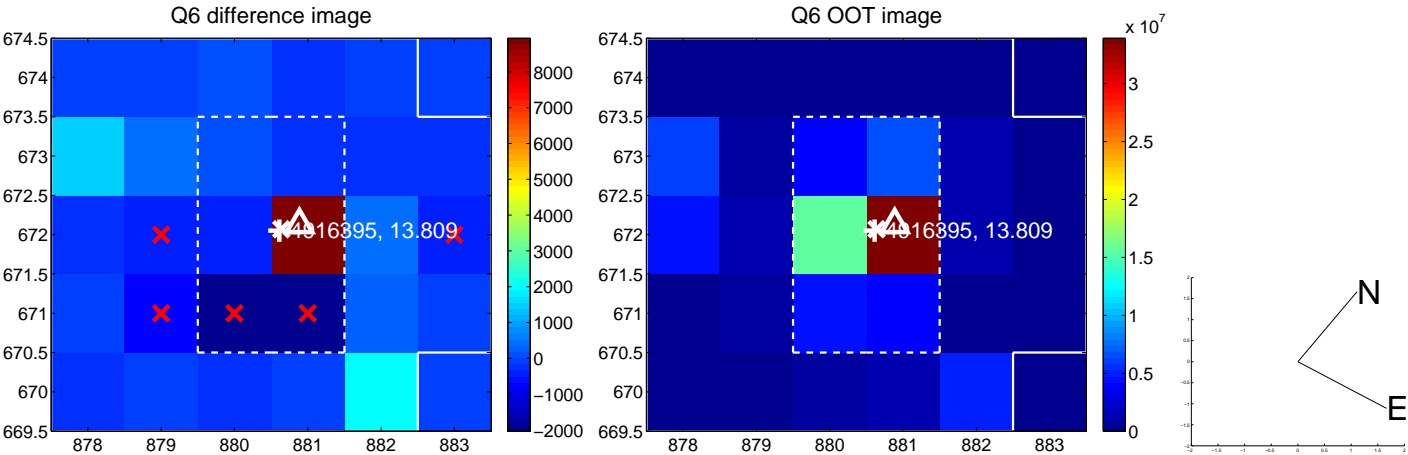
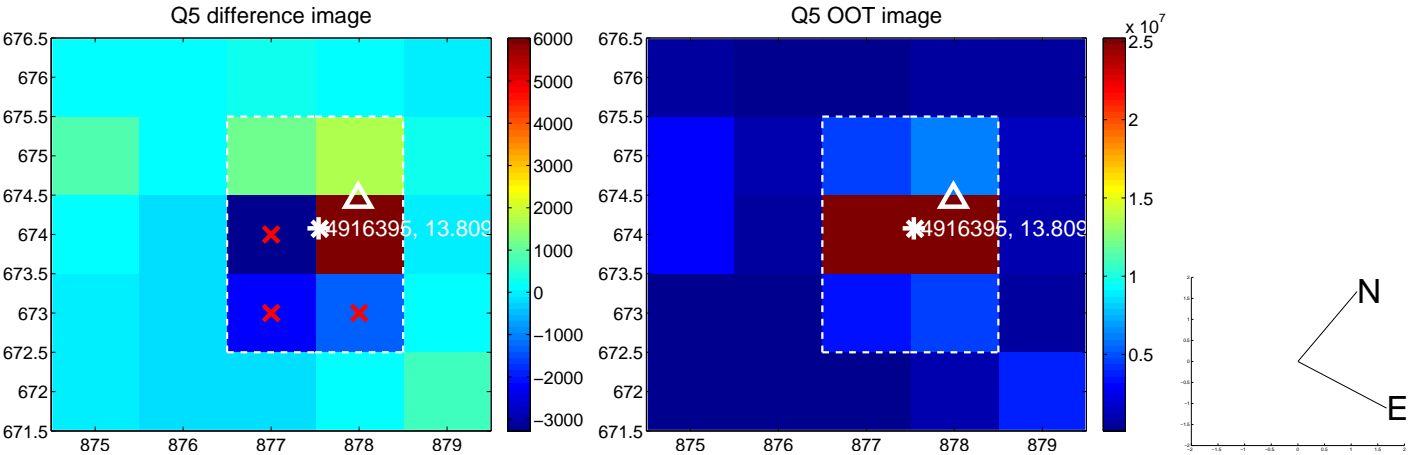


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

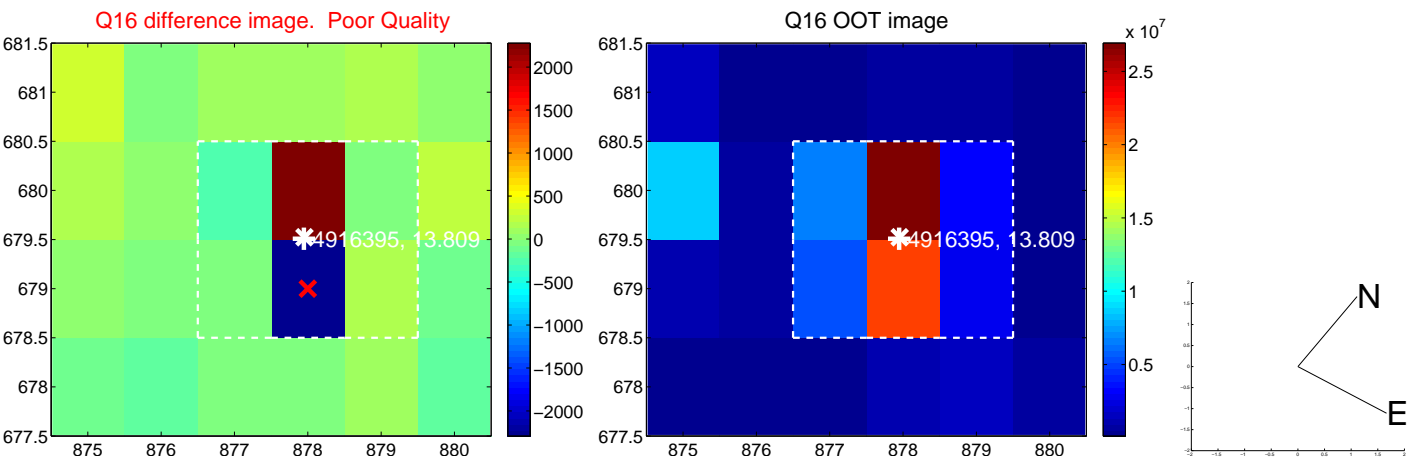
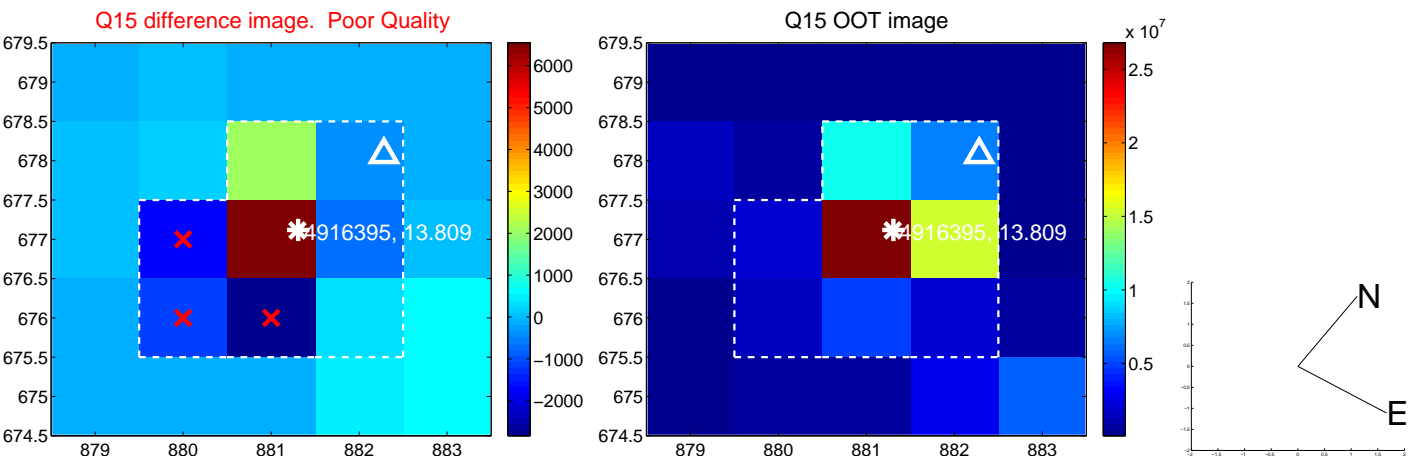
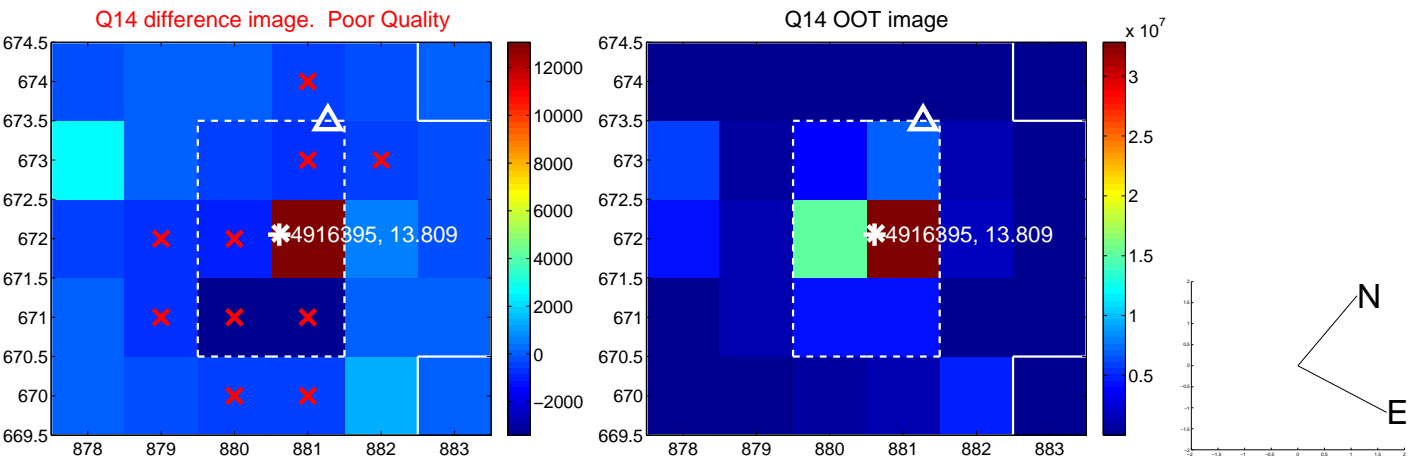
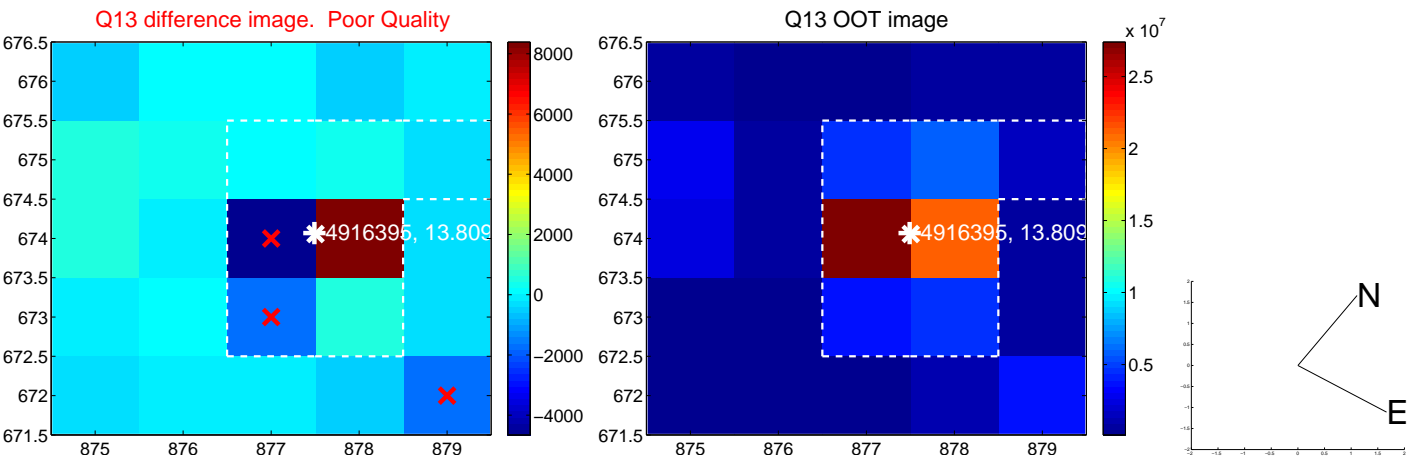
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



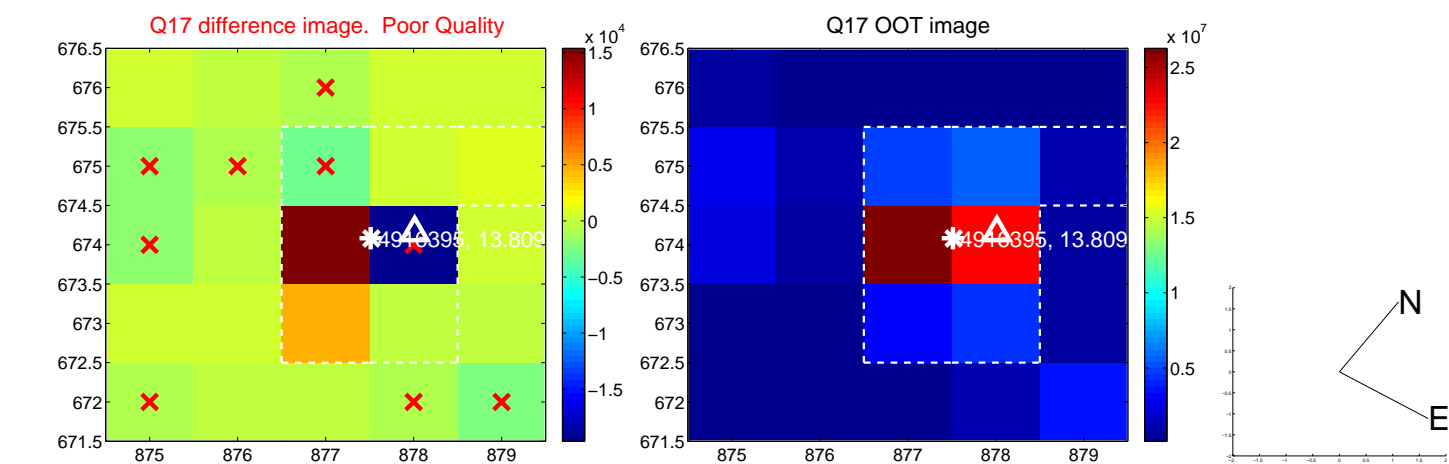
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



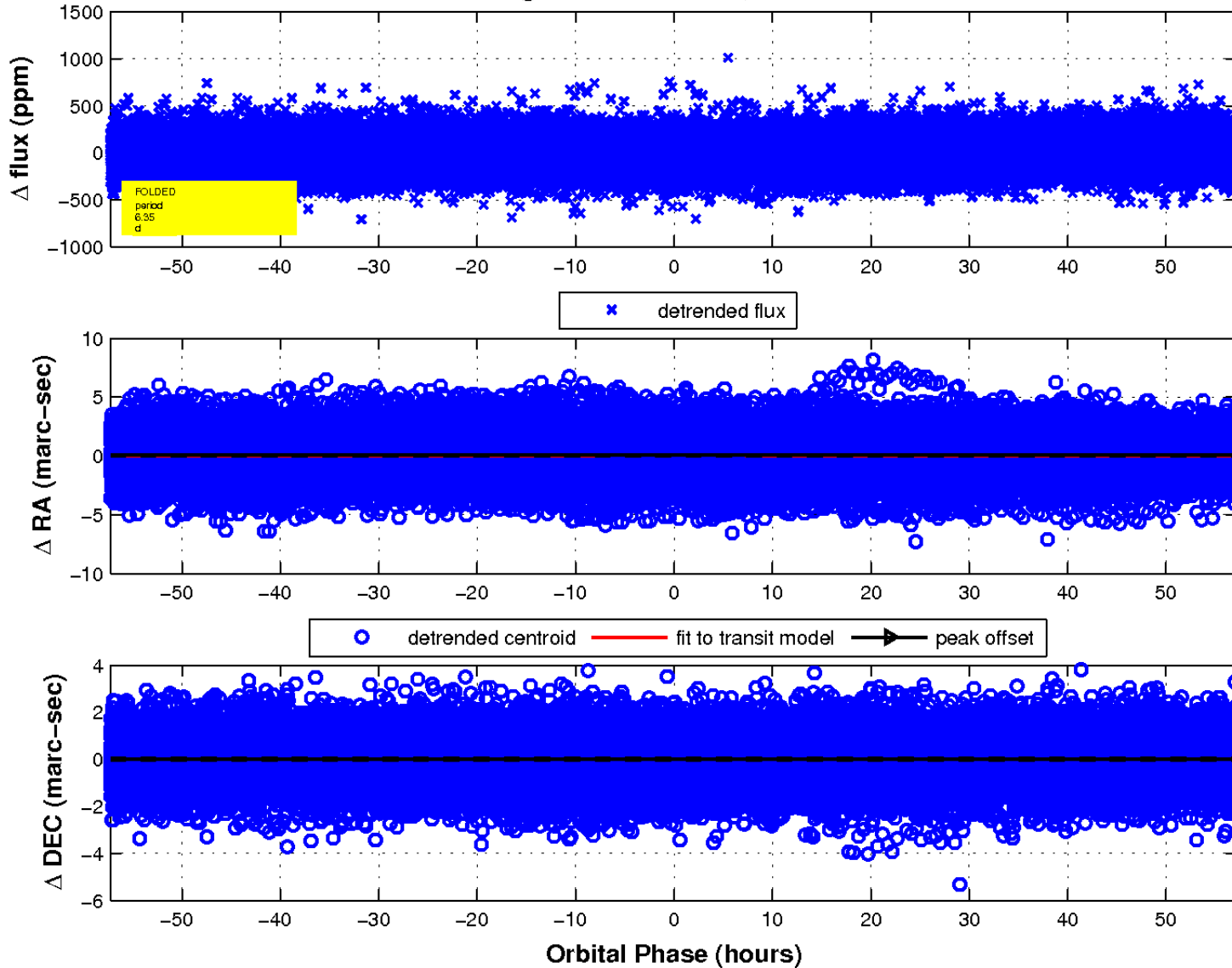
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

