

KIC 005376614

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})
005376614-01	OBS	No	2.816586	133.234969	14.7	15.786	7.2	7.3	3.09	7848	1.27	12575.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005376614-01	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.

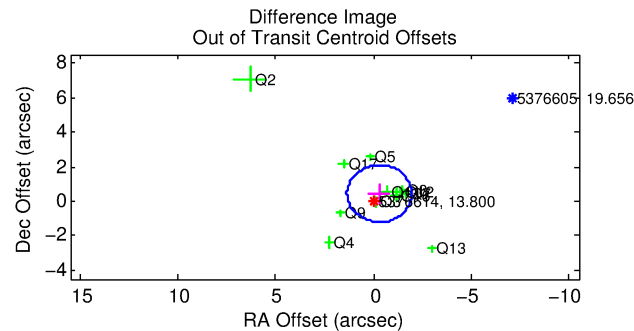
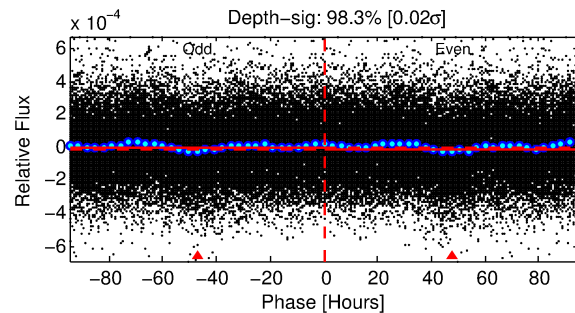
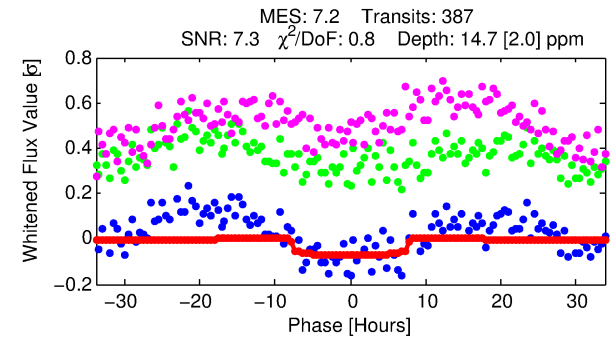
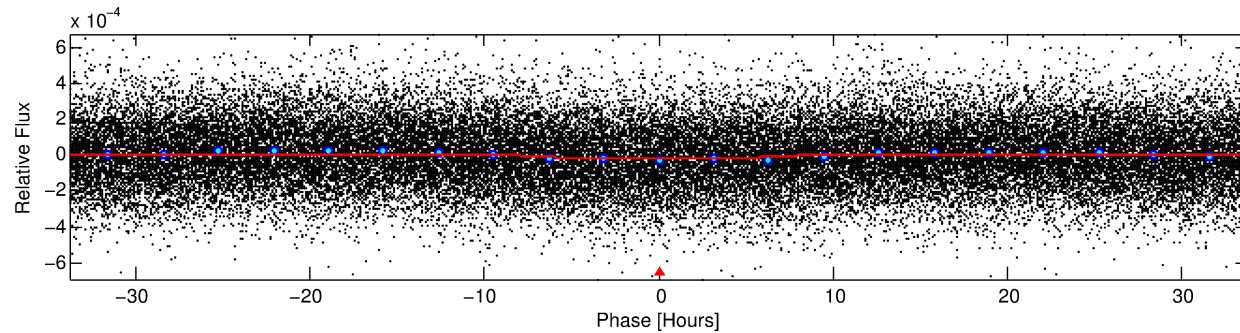
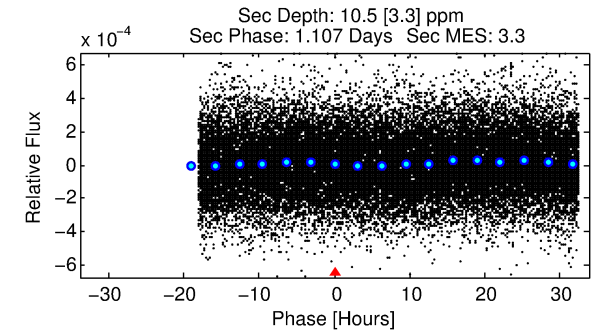
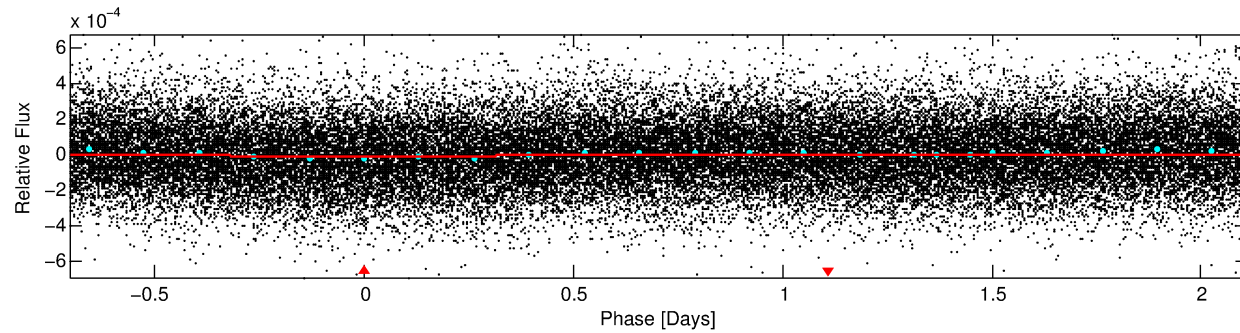
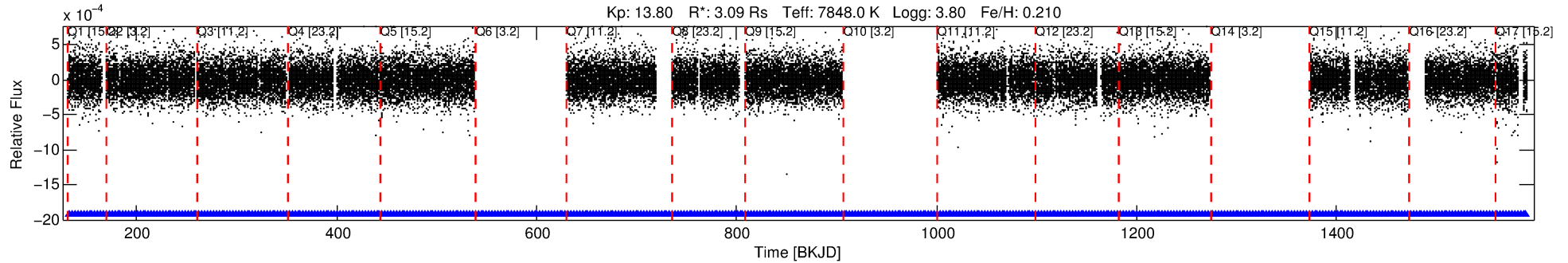
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005376614-01

No Significant Match Found

DV One-Page Summary

KIC: 5376614 Candidate: 1 of 1 Period: 2.817 d



DV Fit Results:

Period = 2.81659 [0.00008] d
Epoch = 133.2350 [0.0177] BKJD
Rp/R* = 0.0038 [0.0023]
a/R* = 1.28 [1.83]
b = 0.70 [2.68]
Seff = 12575.10 [4758.12]
Teff = 2700 [255] K
Rp = 1.27 [0.87] Re
a = 0.0508 [0.0129] AU
Ag = 9.33 [12.44] [0.67σ]
Teffp = 7296 [2337] K [1.96σ]

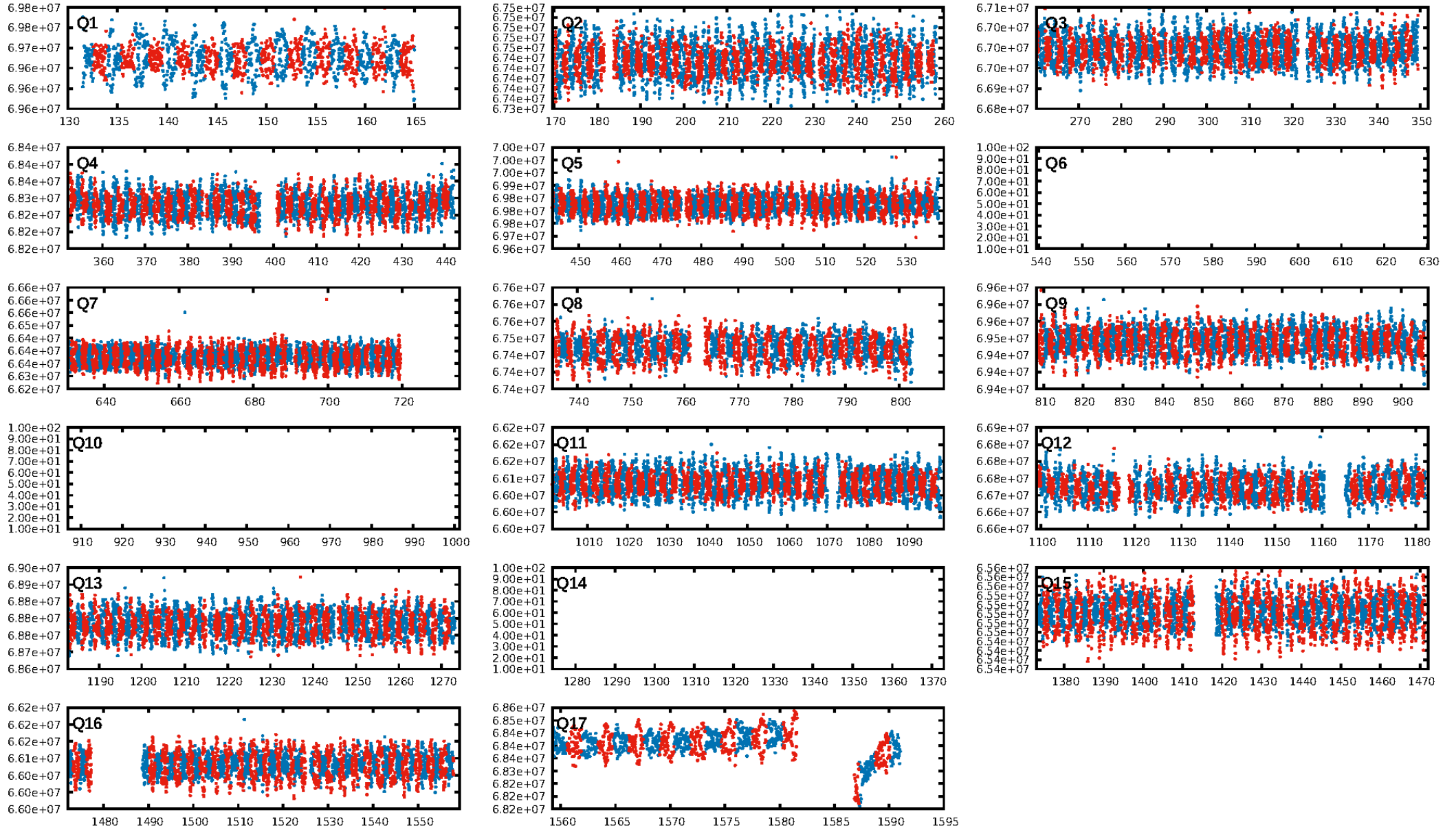
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.21e-08
RollingBand-fgt: 1.00 [365/365]
GhostDiagnostic-chr: 1.699
Centroid-sig: 0.4%
Centroid-so: 4.699 arcsec [2.36σ]
OotOffset-rm: 0.527 arcsec [0.96σ]
KicOffset-st: 1/3/4/4 [12]
KicOffset-st: 1/3/4/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [14/14]

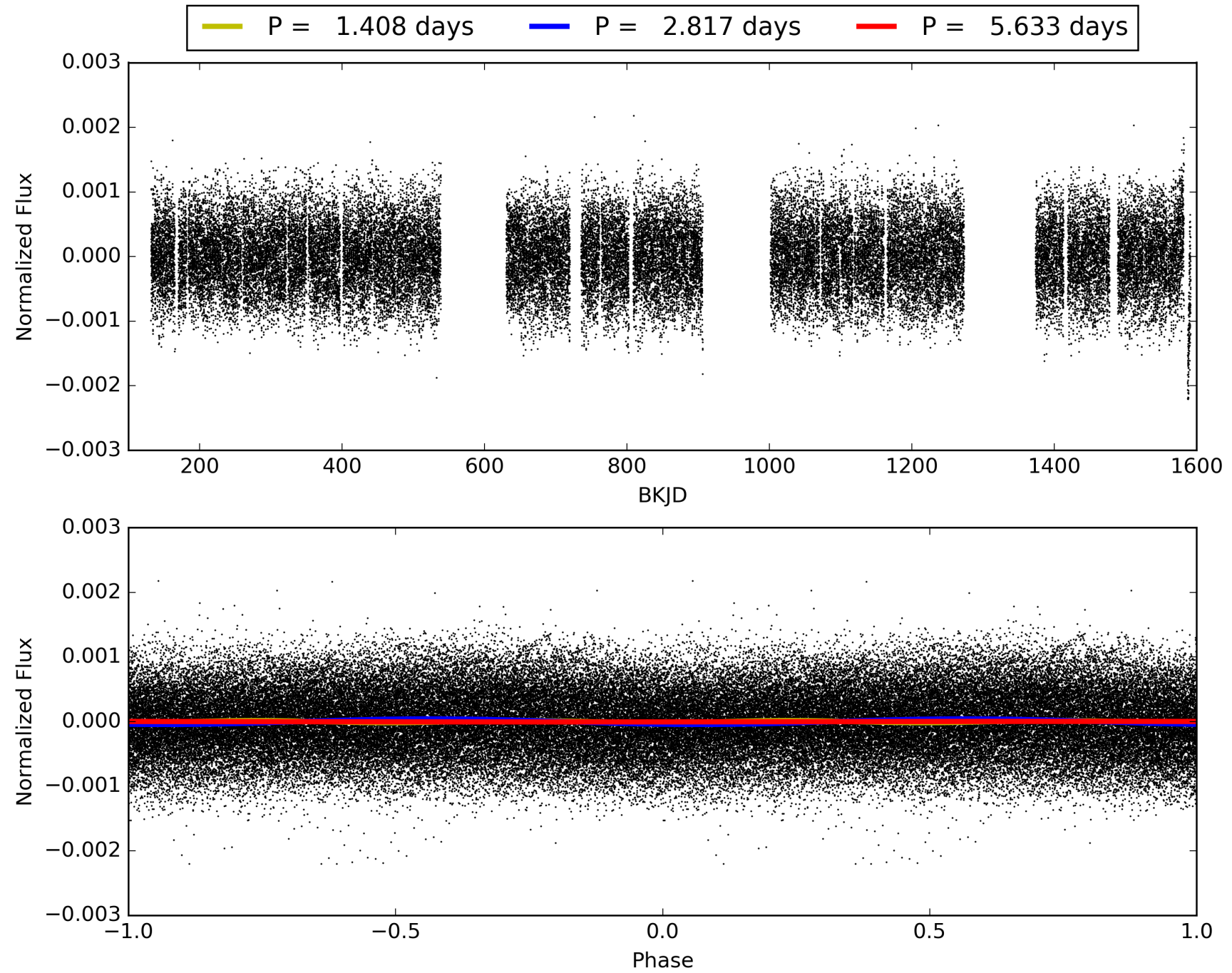
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:58:30 Z

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

TCE 005376614-01, PDC Light Curves

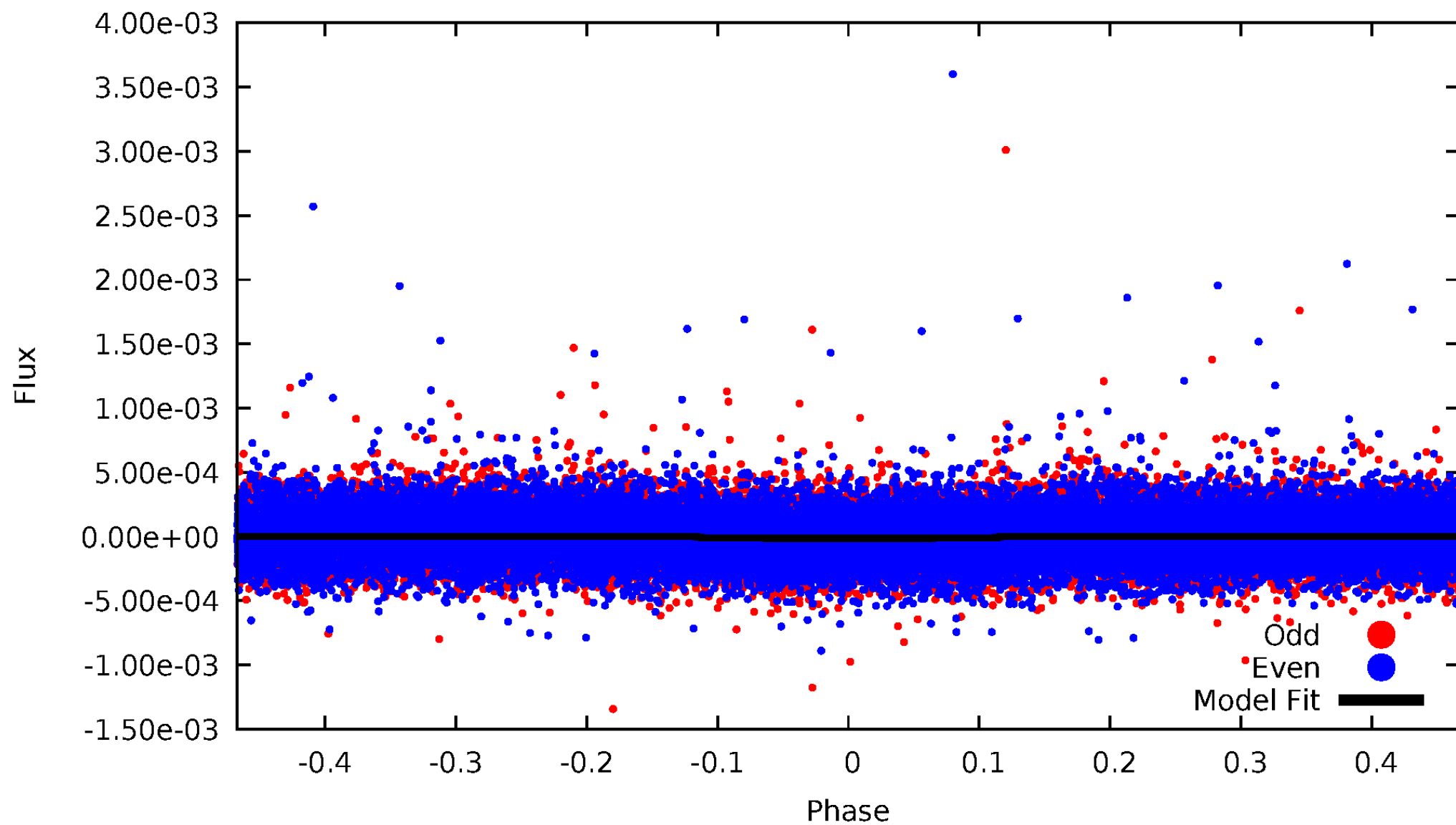


TCE 005376614-01



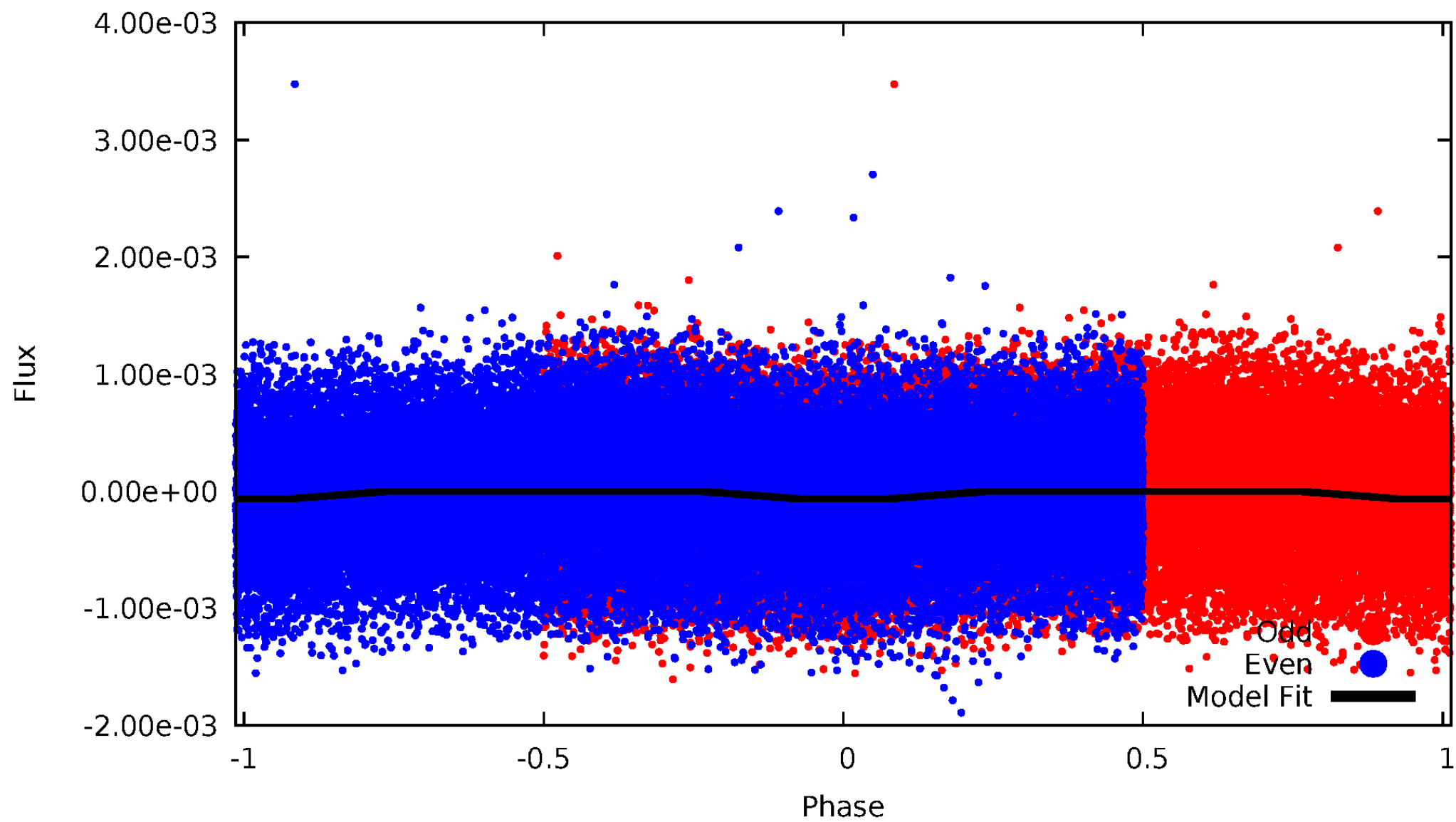
DV Odd/Even

TCE 005376614-01



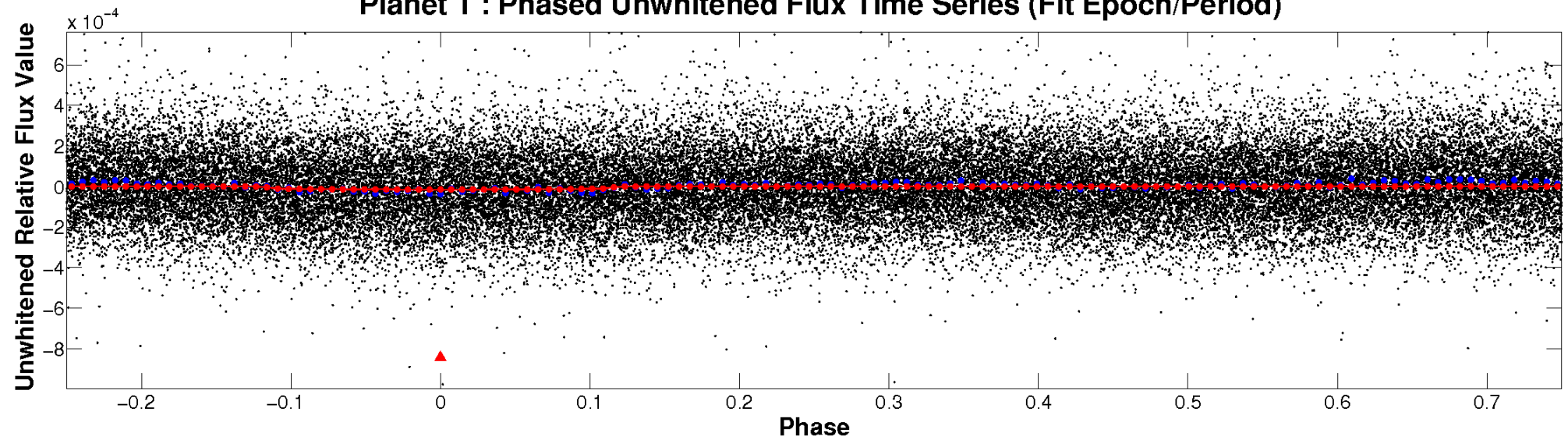
ALT Odd/Even

TCE 005376614-01

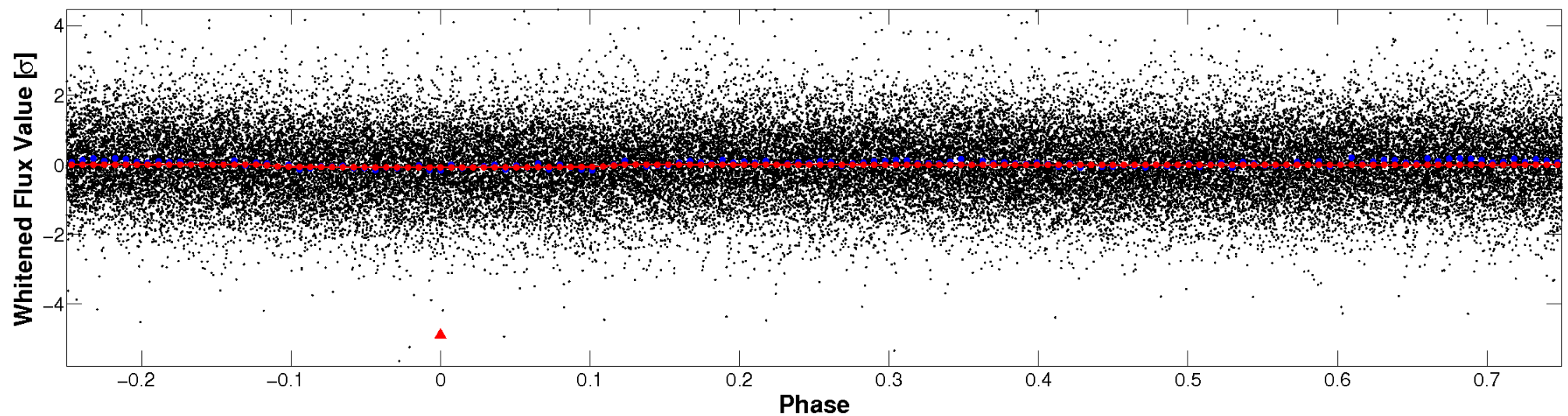


Non-Whitened Vs. Whitened Light Curve

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

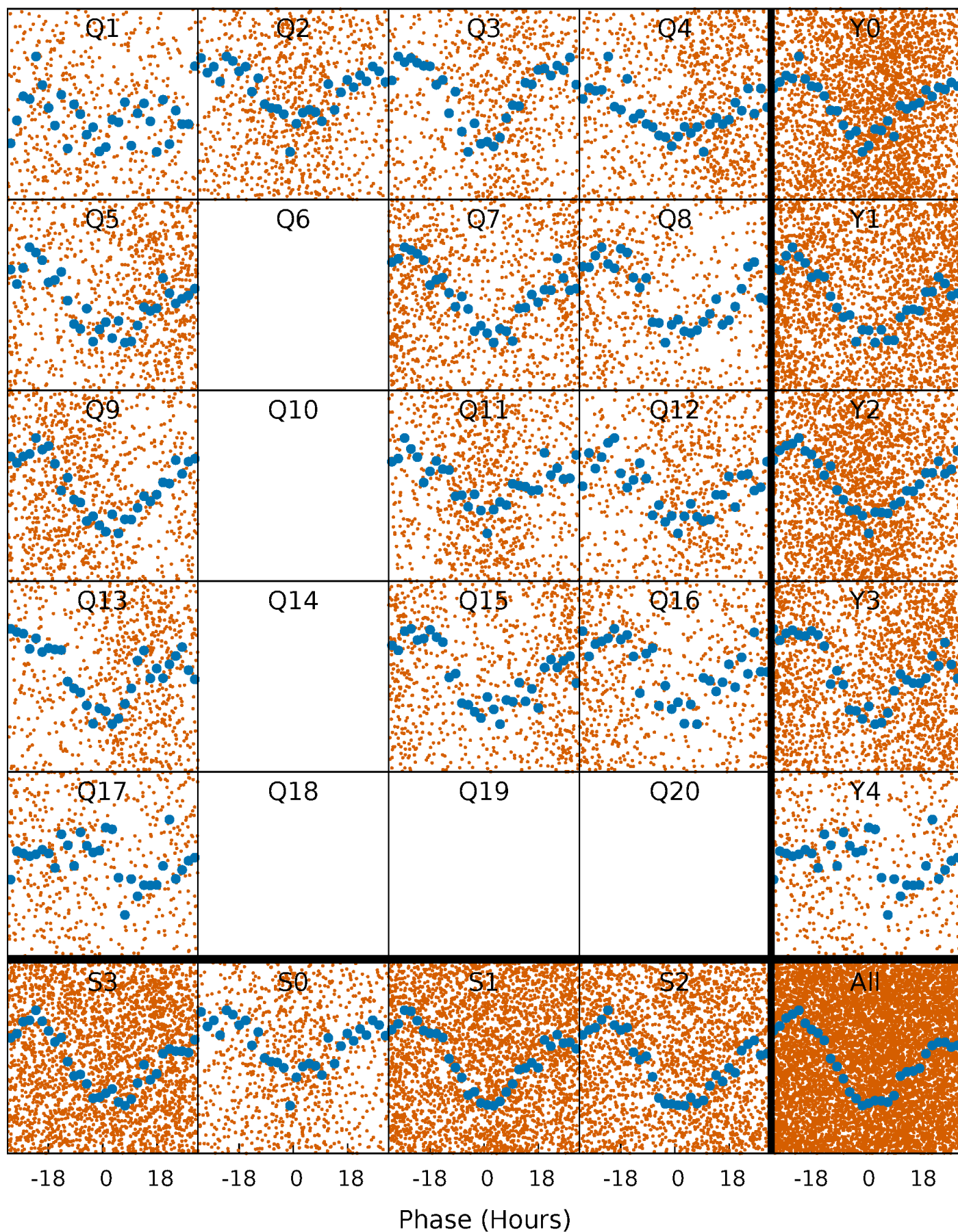


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



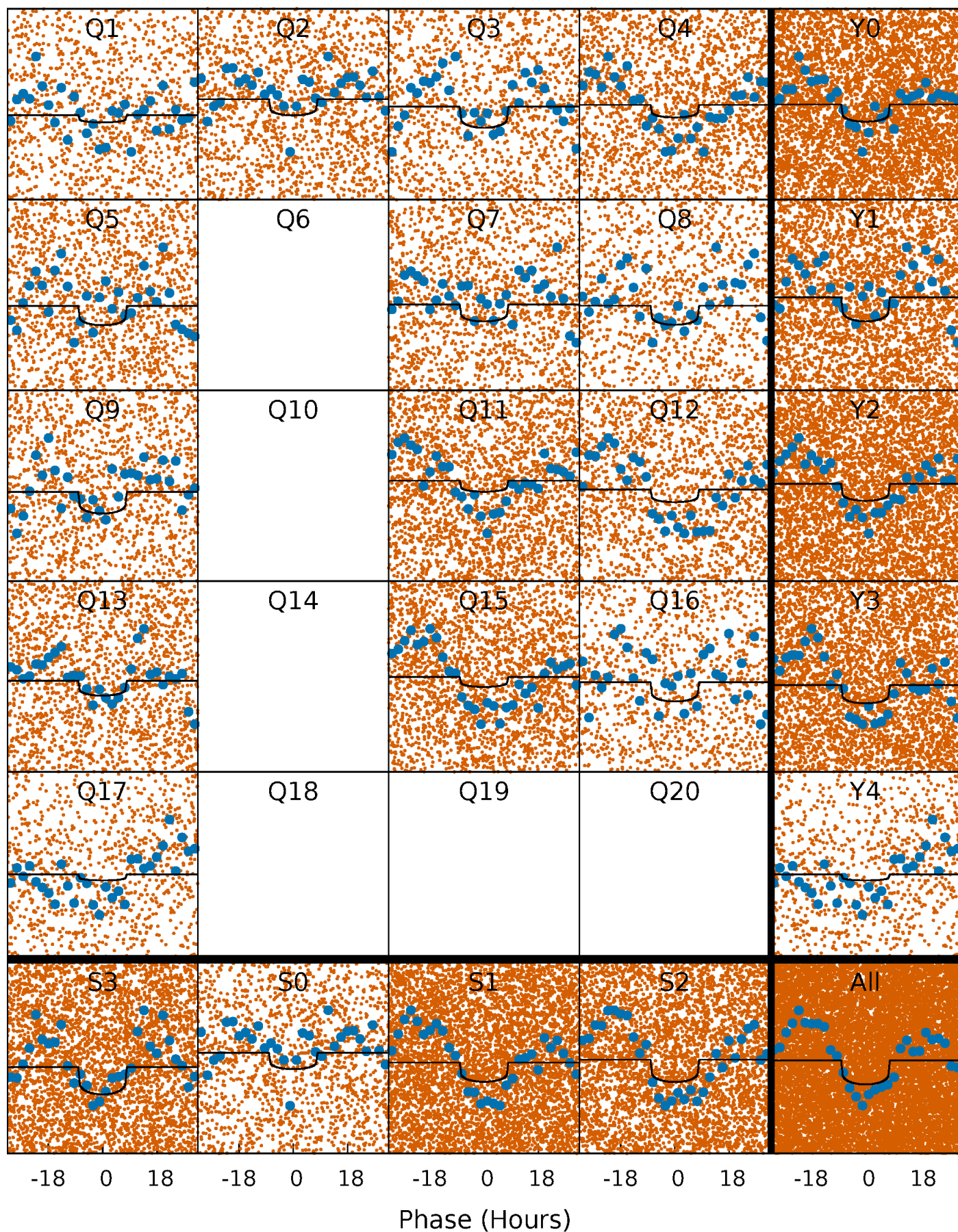
PDC Quarter-Phased Transit Curves

TCE 005376614-01 P= 2.816586 Days $T_0=133.234969$ (BKJD)



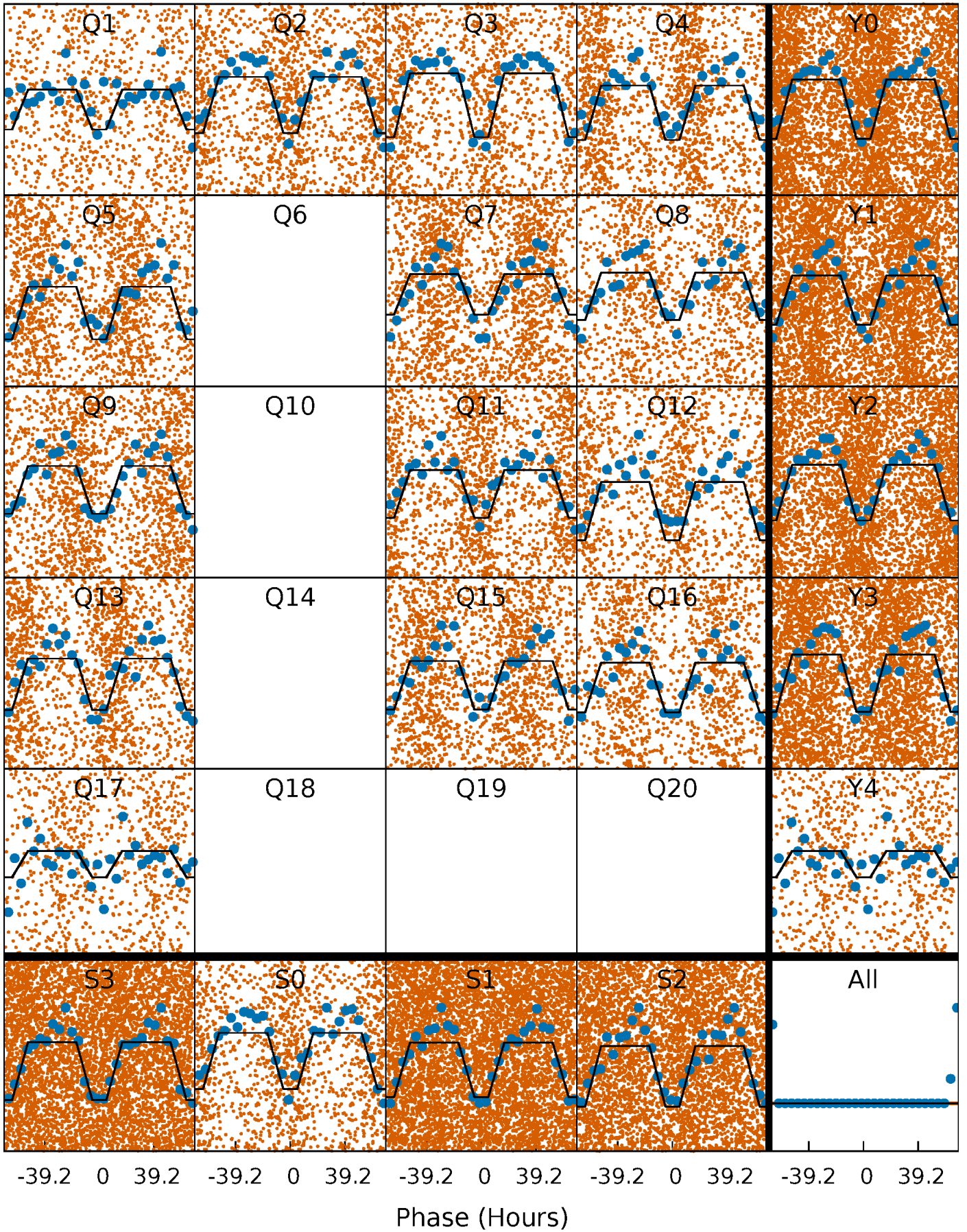
DV Quarter-Phased Transit Curves

TCE 005376614-01 P= 2.816586 Days $T_0=133.234969$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

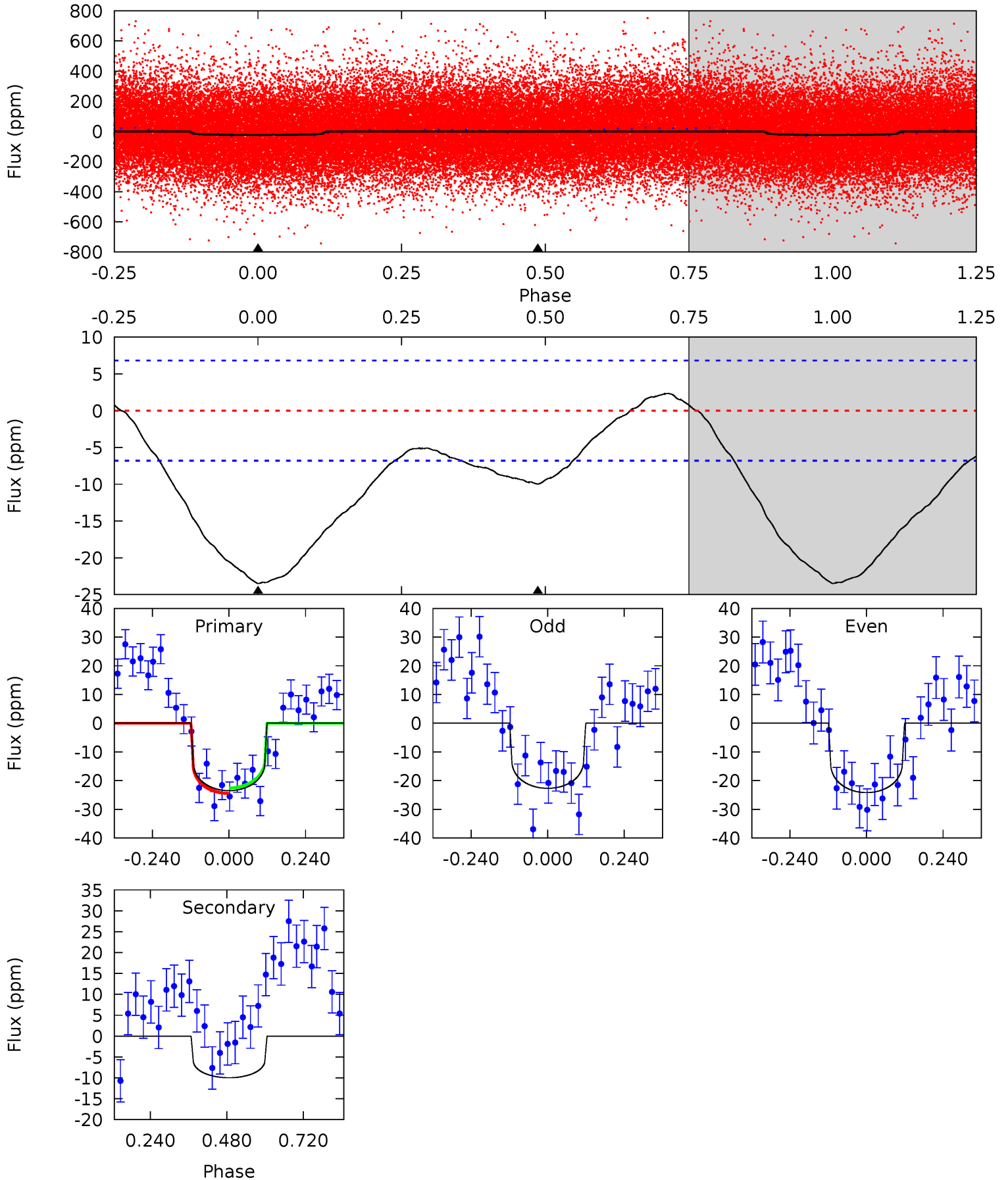
TCE 005376614-01 P= 2.816823 Days $T_0=133.287934$ (BKJD)



DV Model-Shift Uniqueness Test

005376614-01, P = 2.816586 Days, E = 130.418383 Days

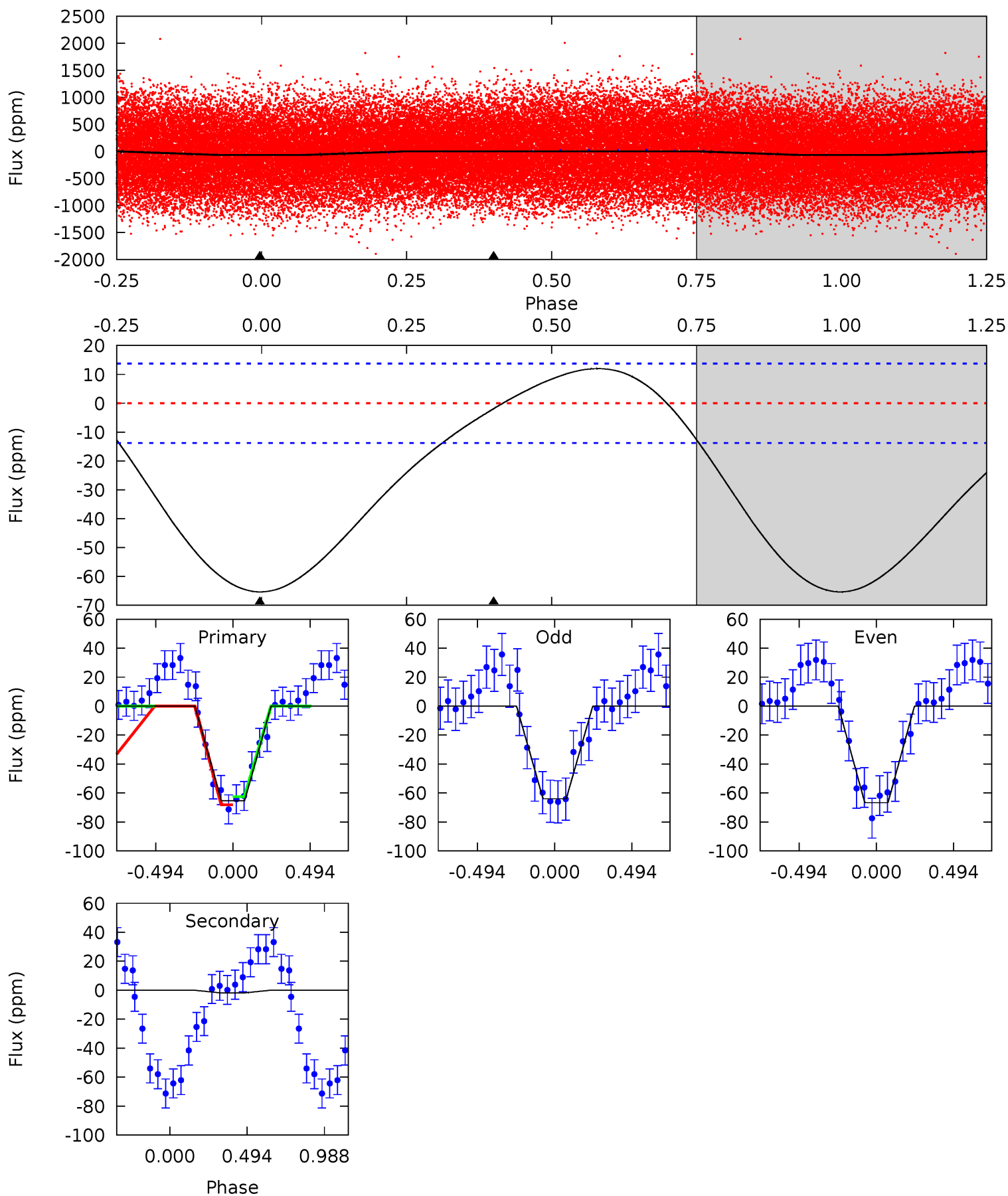
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	6.41	0	0	4.38	1.17	2.39	15.1	15.1	6.41	6.41	0.48	1.08	0.09	0.61



Alt Model-Shift Uniqueness Test

005376614-01, P = 2.816823 Days, E = 130.471111 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.1	0.58	0	0	4.22	0.68	1.89	20.1	20.1	0.58	0.58	0.41	1.09	0.15	0.92



Stellar Parameters For KIC 005376614

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7848^{+62}_{-101}	$3.801^{+0.208}_{-0.112}$	$0.210^{+0.150}_{-0.250}$	$3.089^{+0.560}_{-0.910}$	$2.201^{+0.156}_{-0.365}$	$0.105^{+0.140}_{-0.036}$
	+1%/-1%	+5%/-3%	+71%/-119%	+18%/-29%	+7%/-17%	+133%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005376614-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$1.27^{+0.73}_{-0.73}$	3742^{+171}_{-252}	6918^{+5323}_{-1538}	$8.694^{+37.970}_{-5.311}$
Alt.	-2 ± 3	$2.62^{+0.94}_{-0.78}$	3757^{+170}_{-262}	2696^{+1515}_{-6571}	$0.351^{+0.922}_{-0.611}$

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 $A_{obs} \gg 1.0$

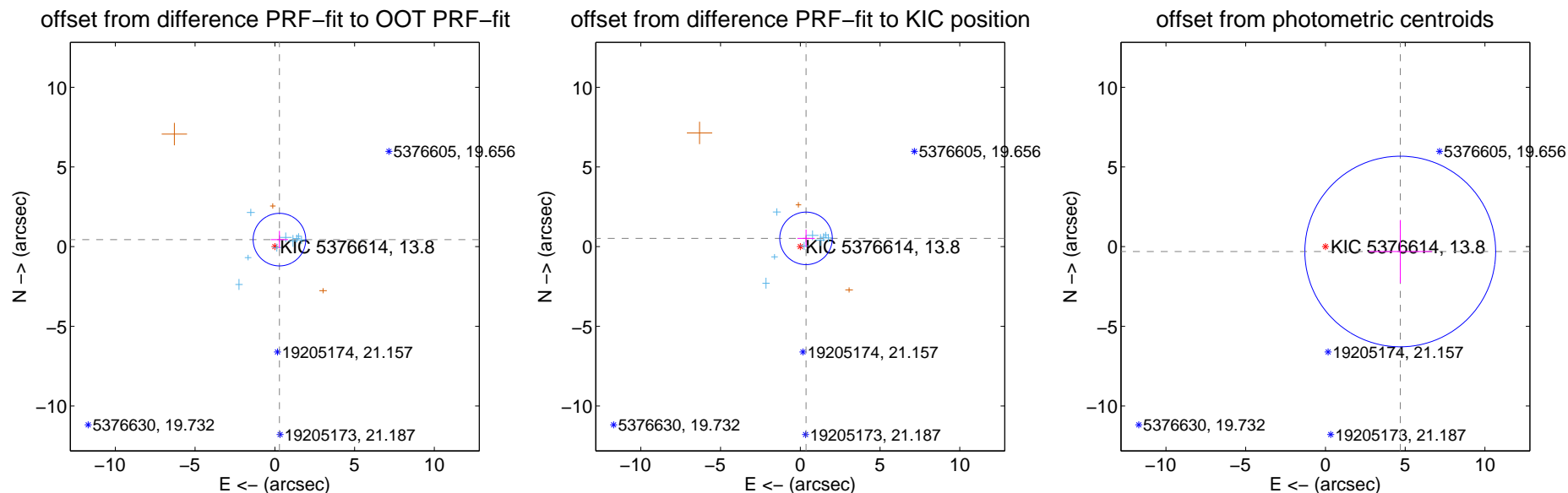
DV Centroid Data

Supplemental centroid analysis for 005376614-01. Kepler magnitude: 13.80. Transit SNR 7.28

There are 9 quarters with good PRF difference image offsets

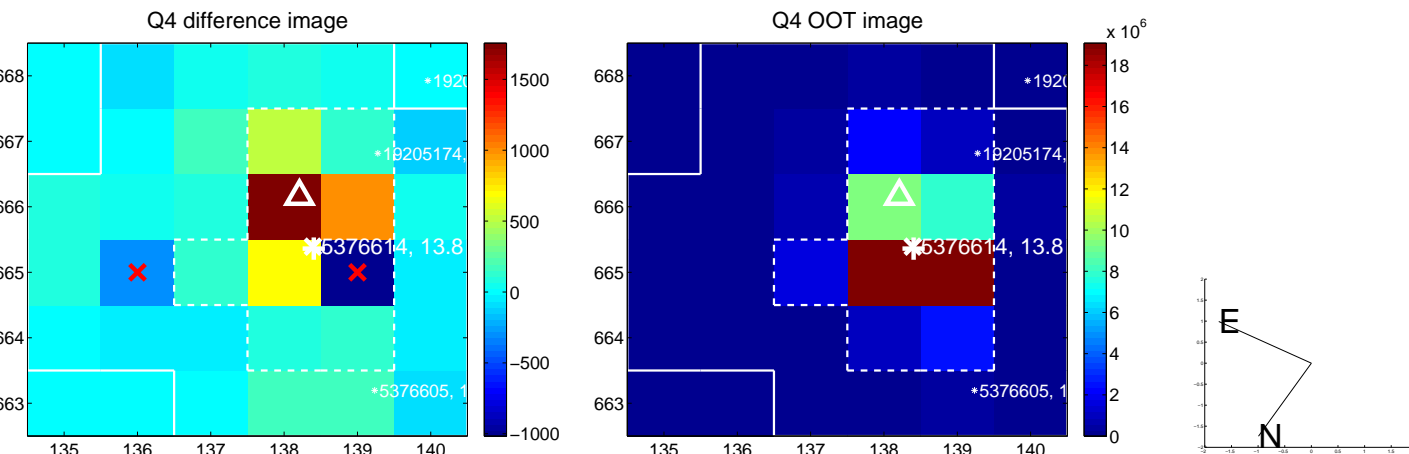
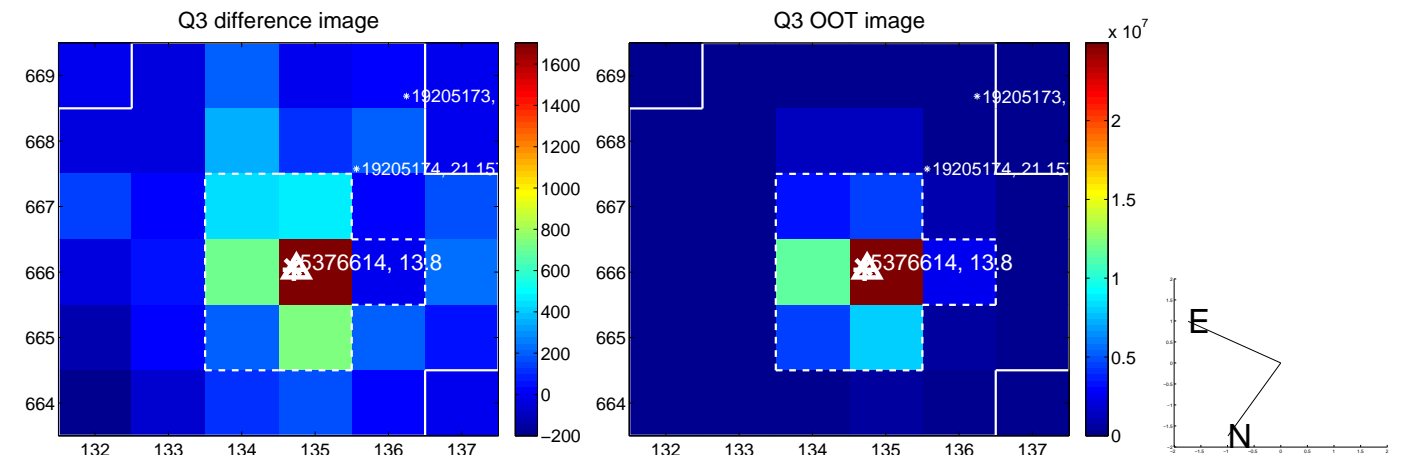
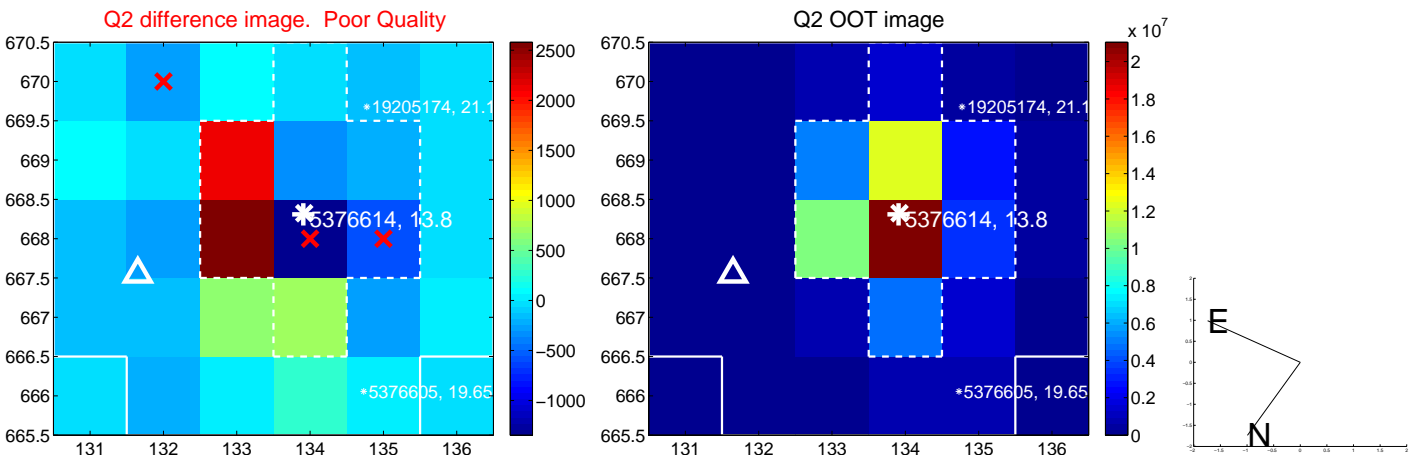
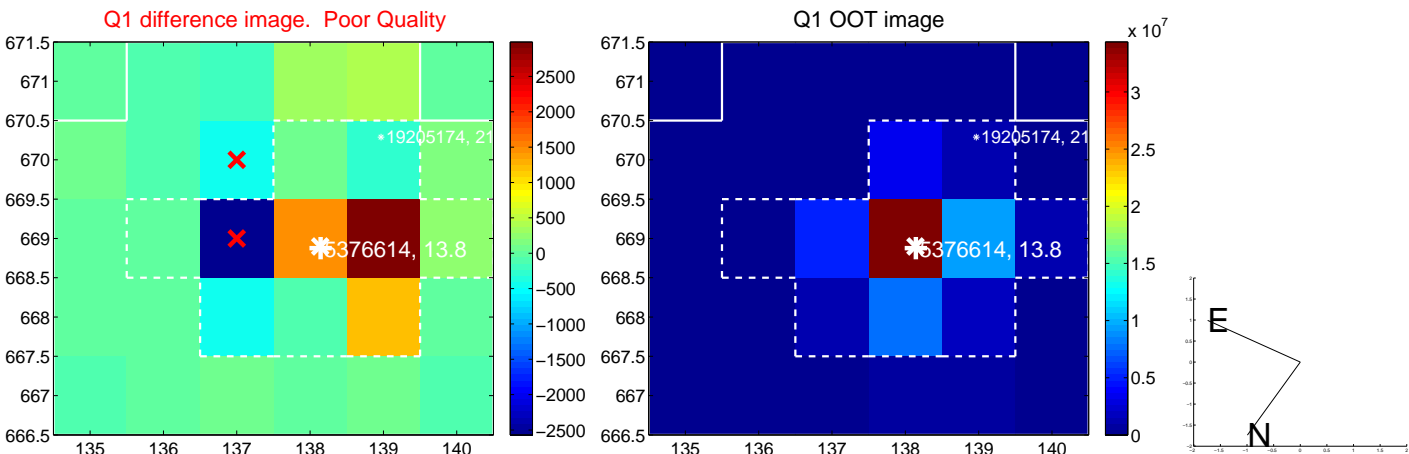
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.527 ± 0.550	0.96	-0.288 ± 0.542	0.441 ± 0.553
PRF-fit source offset from KIC position	0.633 ± 0.549	1.15	-0.360 ± 0.545	0.520 ± 0.551
photometric centroid source offset	4.70 ± 1.99	2.36	-4.69 ± 1.99	-0.30 ± 1.98

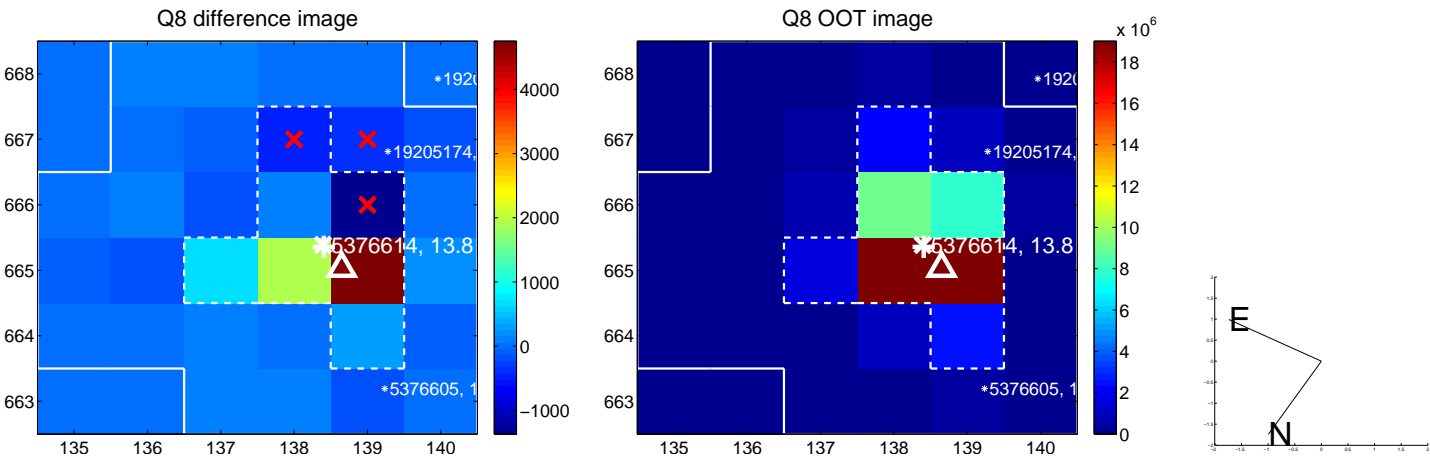
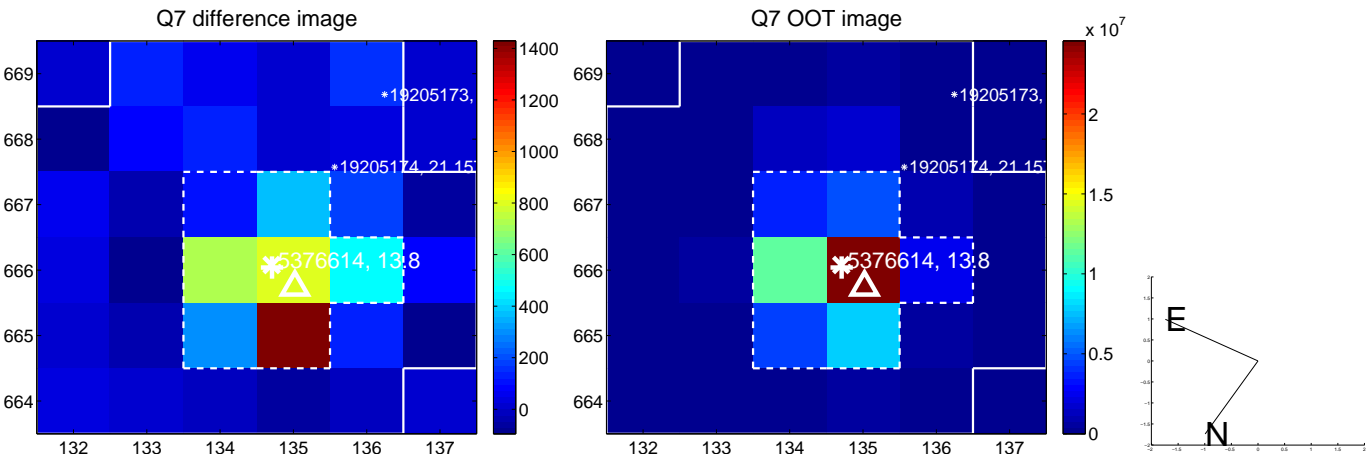
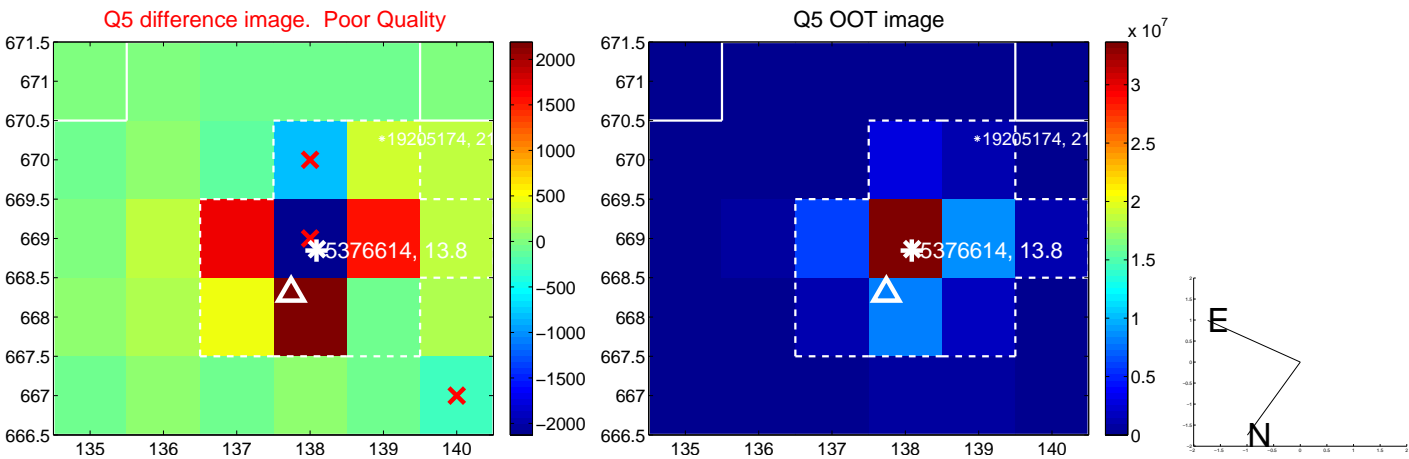


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

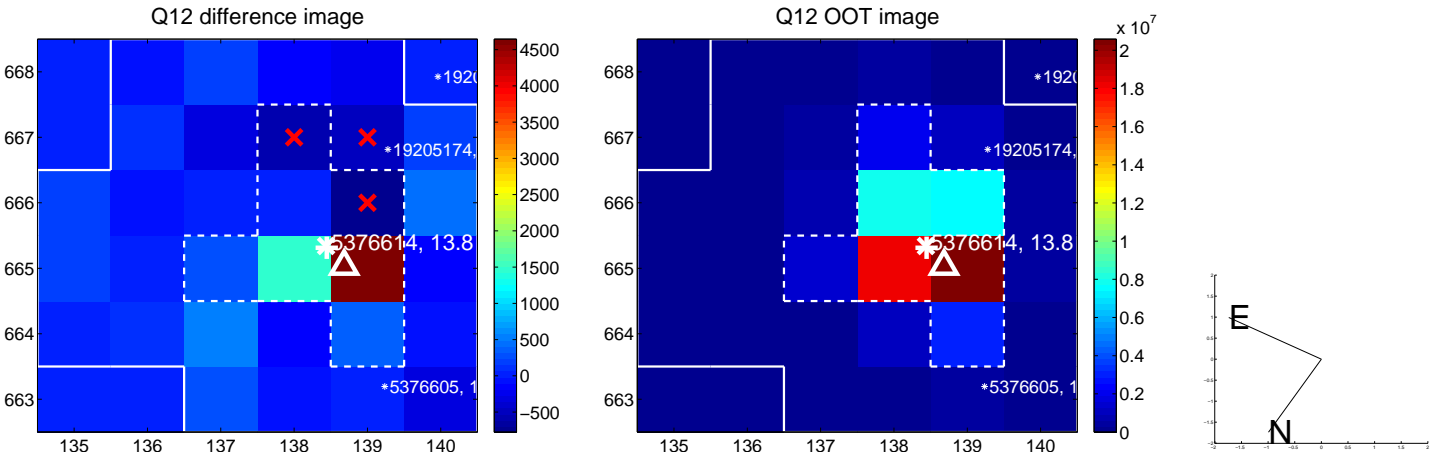
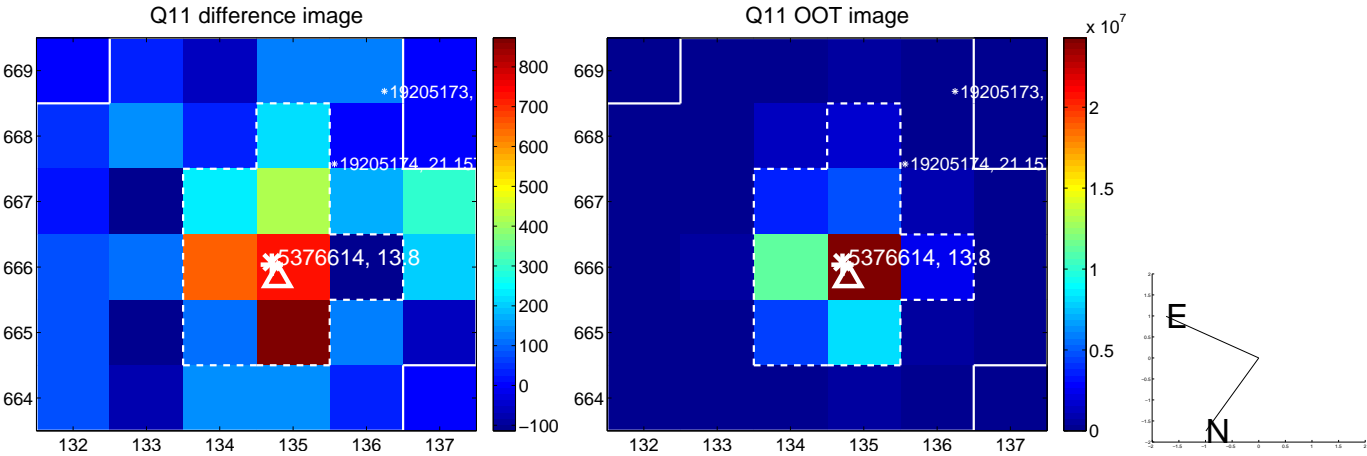
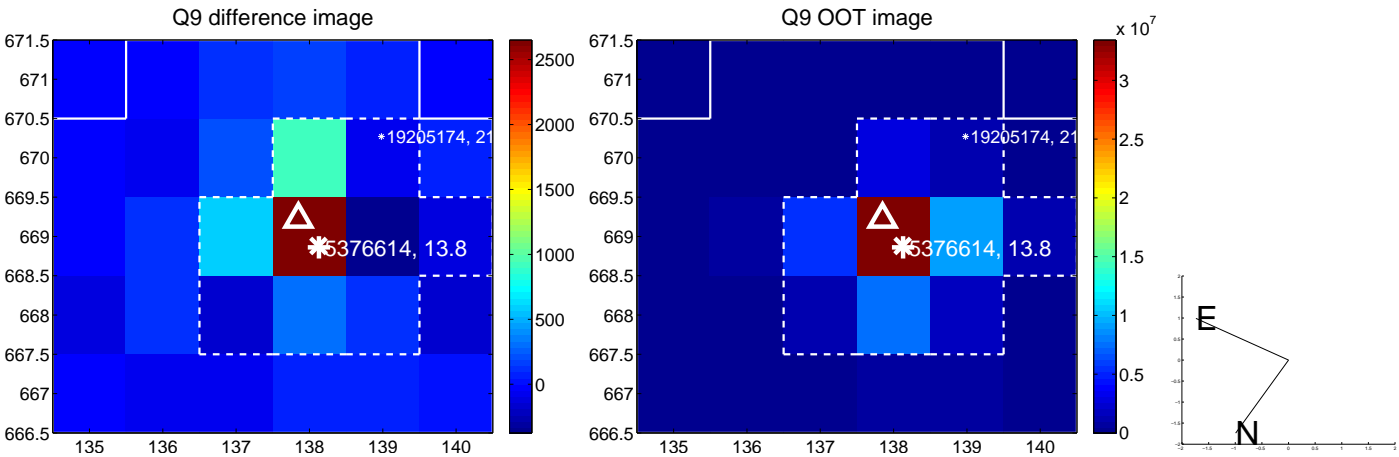
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



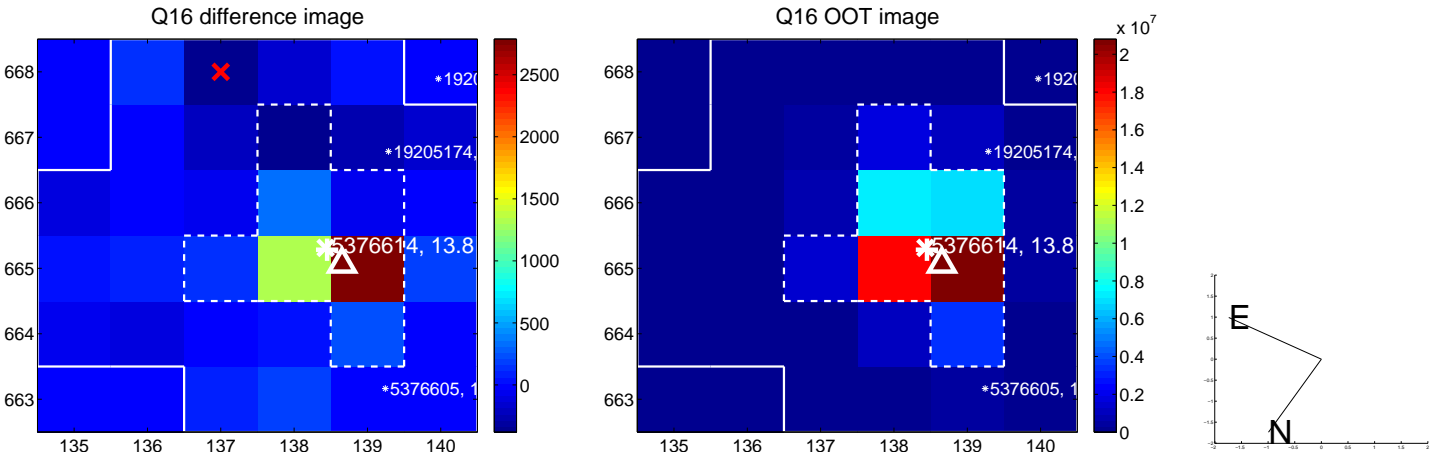
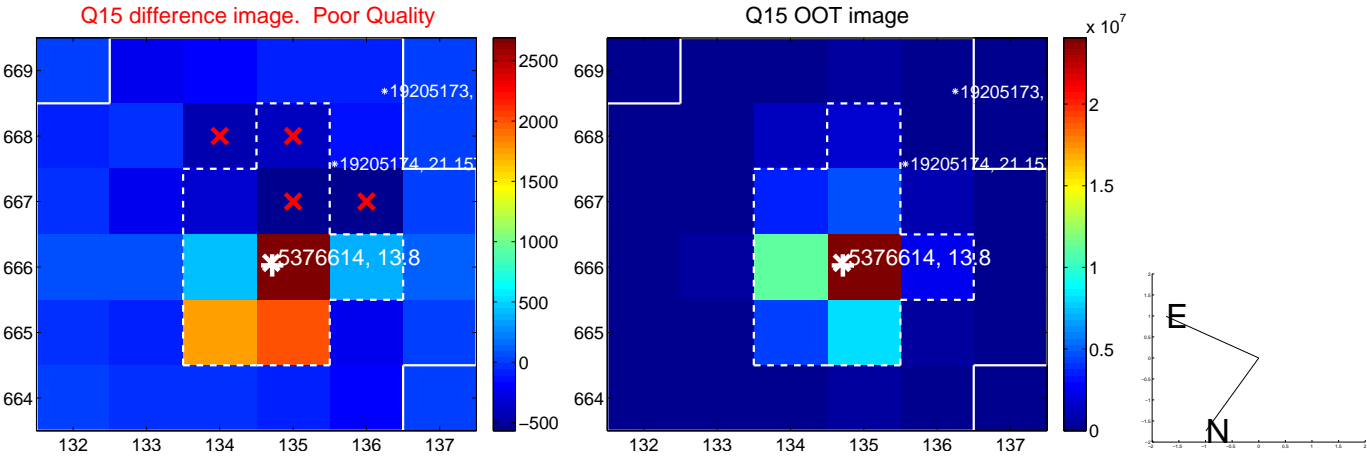
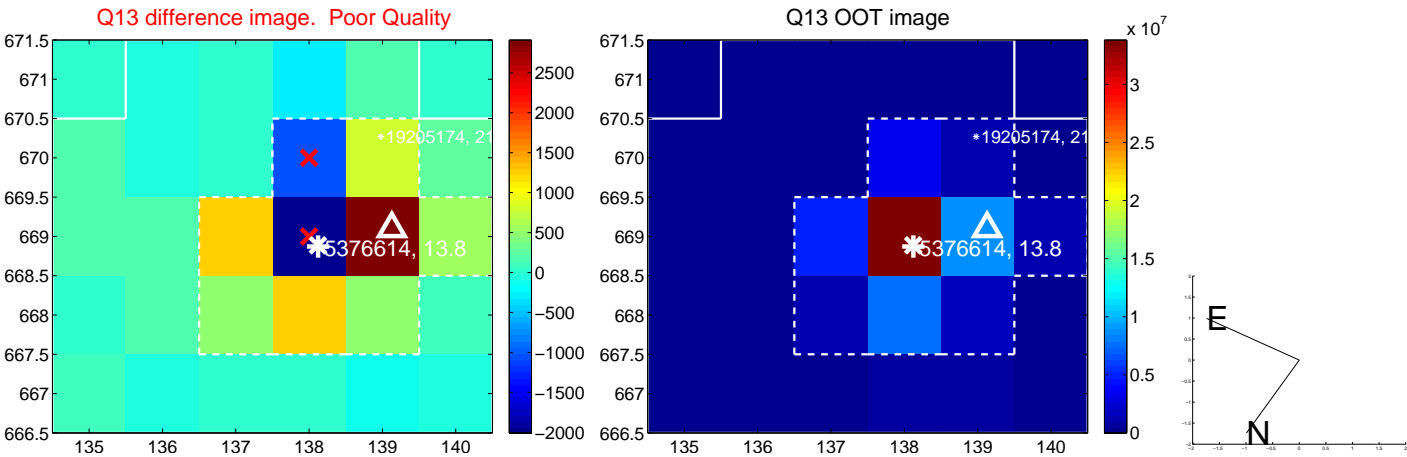
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



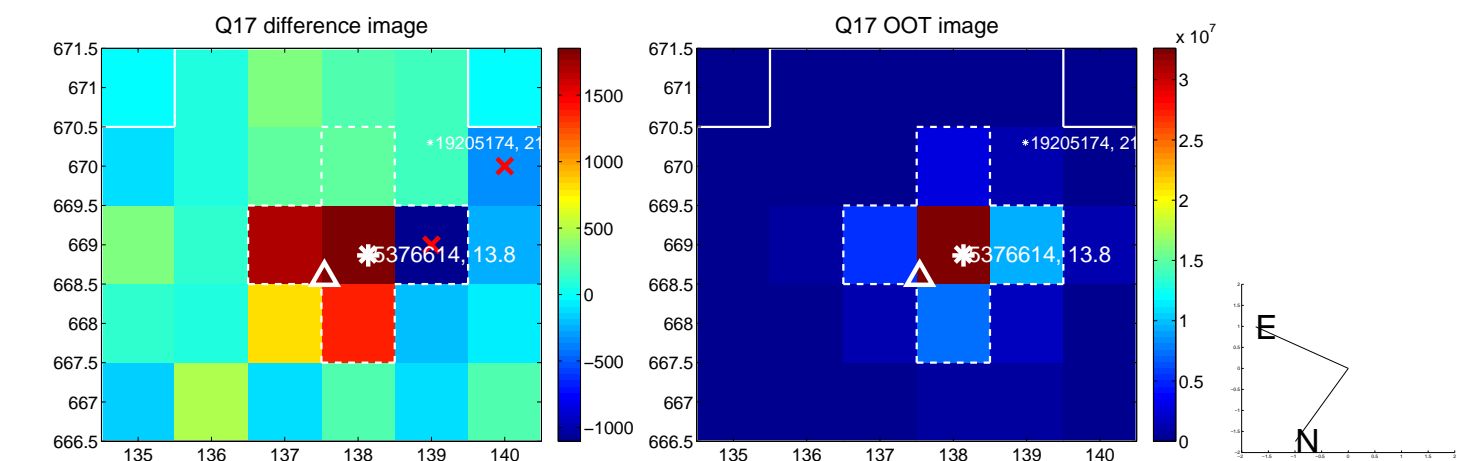
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



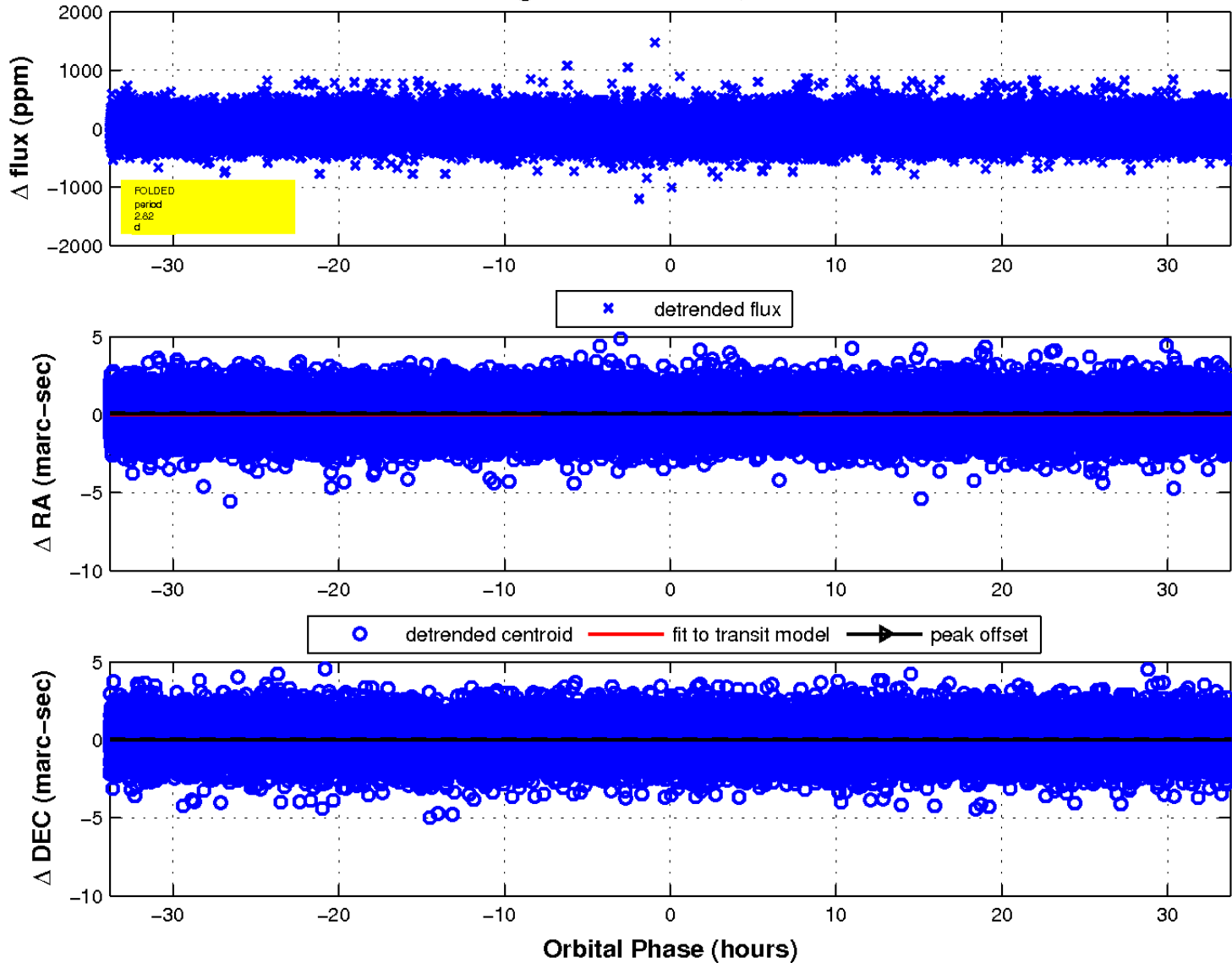
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

