

KIC 005566645

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})
005566645-01	OBS	No	1.707252	131.667198	124.7	5.803	12.6	12.9	1.13	6373	1.70	2165.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005566645-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS

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

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

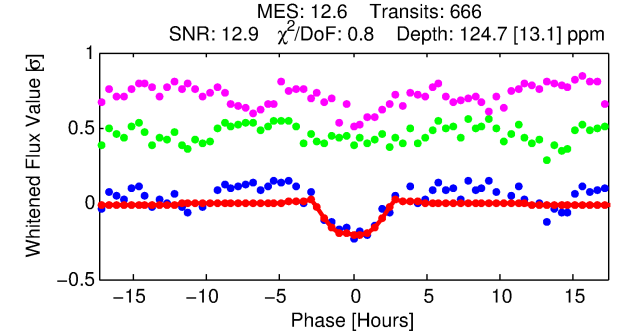
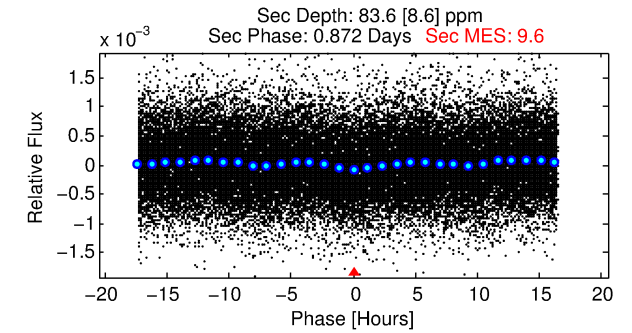
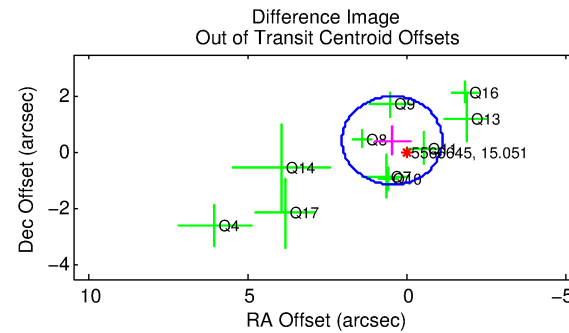
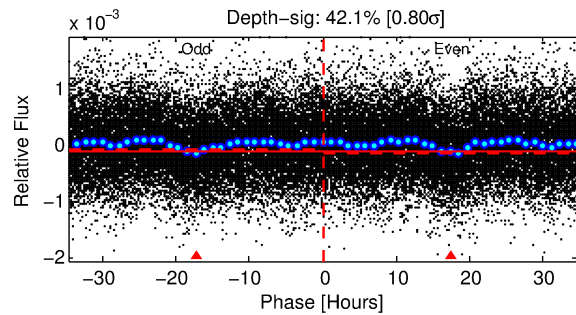
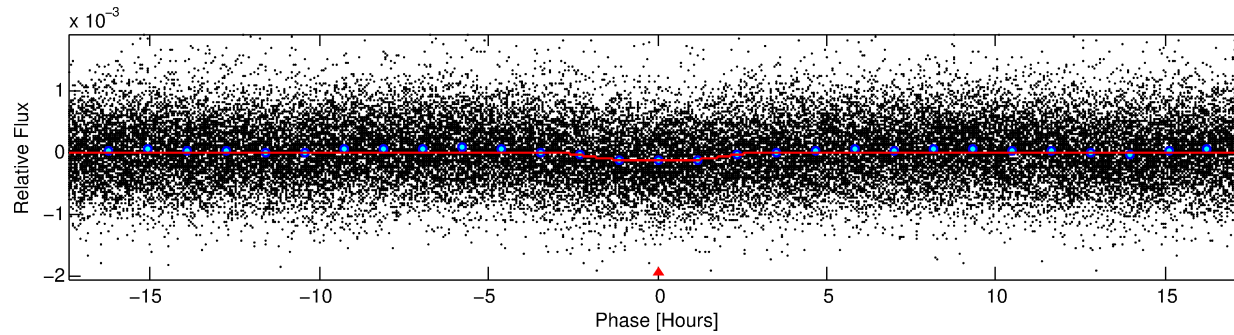
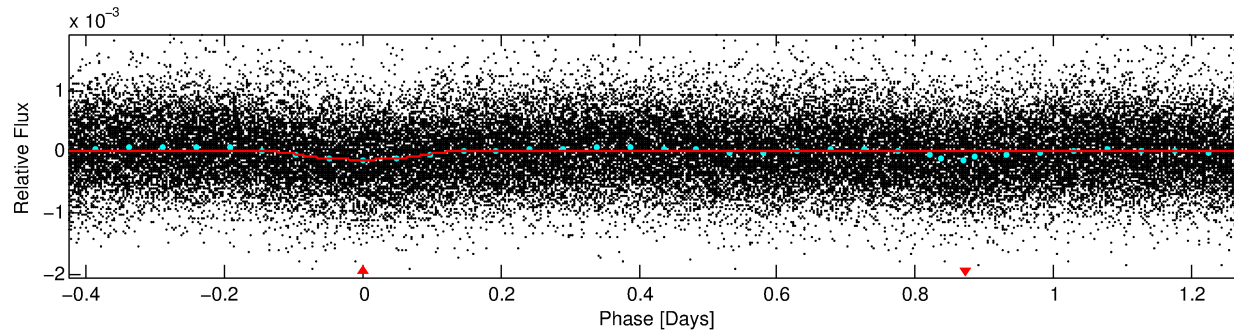
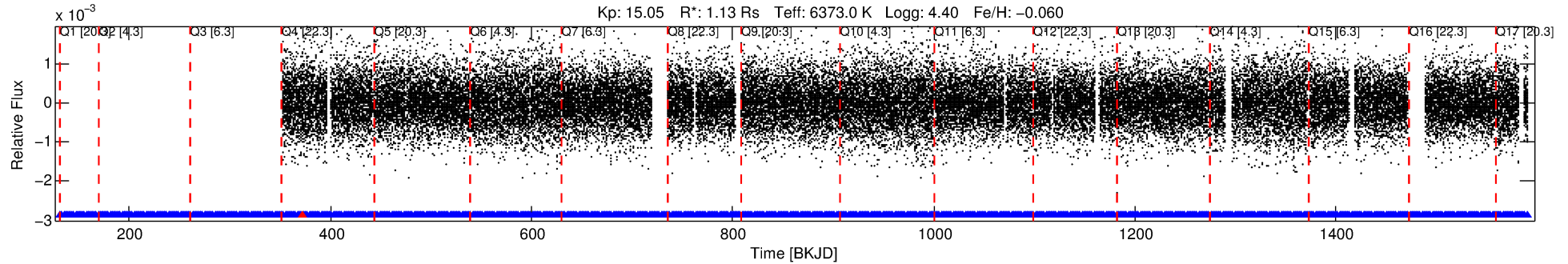
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005566645-01

No Significant Match Found

DV One-Page Summary

KIC: 5566645 Candidate: 1 of 1 Period: 1.707 d



DV Fit Results:

Period = 1.70725 [0.00002] d
Epoch = 131.6672 [0.0073] BKJD
Rp/R* = 0.0138 [0.0009]
a/R* = 1.14 [0.04]
b = 0.98 [0.01]
Seff = 2165.54 [907.84]
Teq = 1739 [182] K
Rp = 1.70 [0.57] Re
a = 0.0294 [0.0080] AU
Ag = 13.74 [5.83] [2.18 σ]
Teffp = 5178 [296] K [9.90 σ]

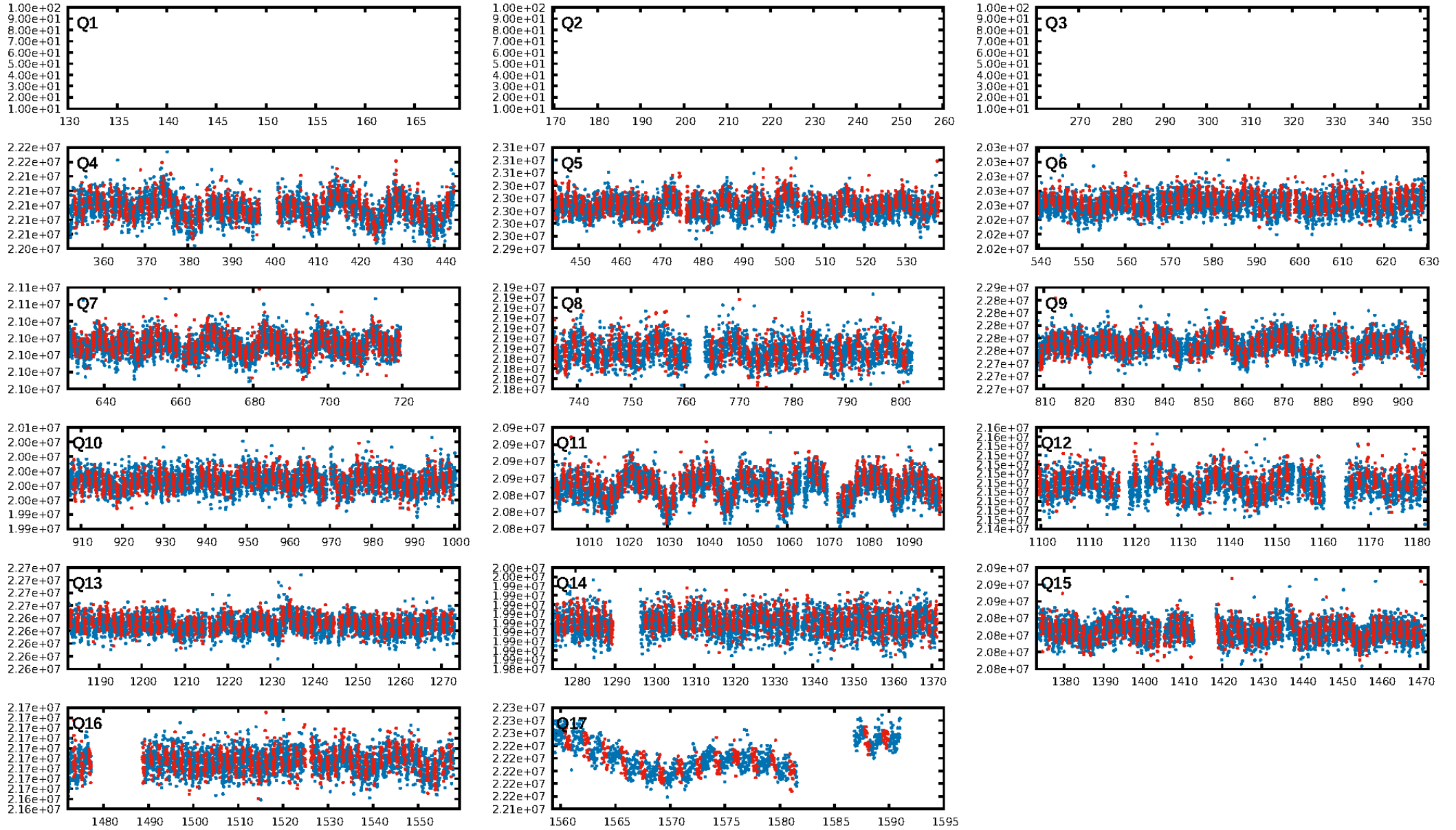
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.24e-31
RollingBand-fgt: 1.00 [650/651]
GhostDiagnostic-chr: -62.2
Centroid-sig: 0.0%
Centroid-so: 1.360 arcsec [1.82 σ]
OotOffset-rm: 0.635 arcsec [1.21 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-rm: 0.539 arcsec [0.70 σ]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [14/14]

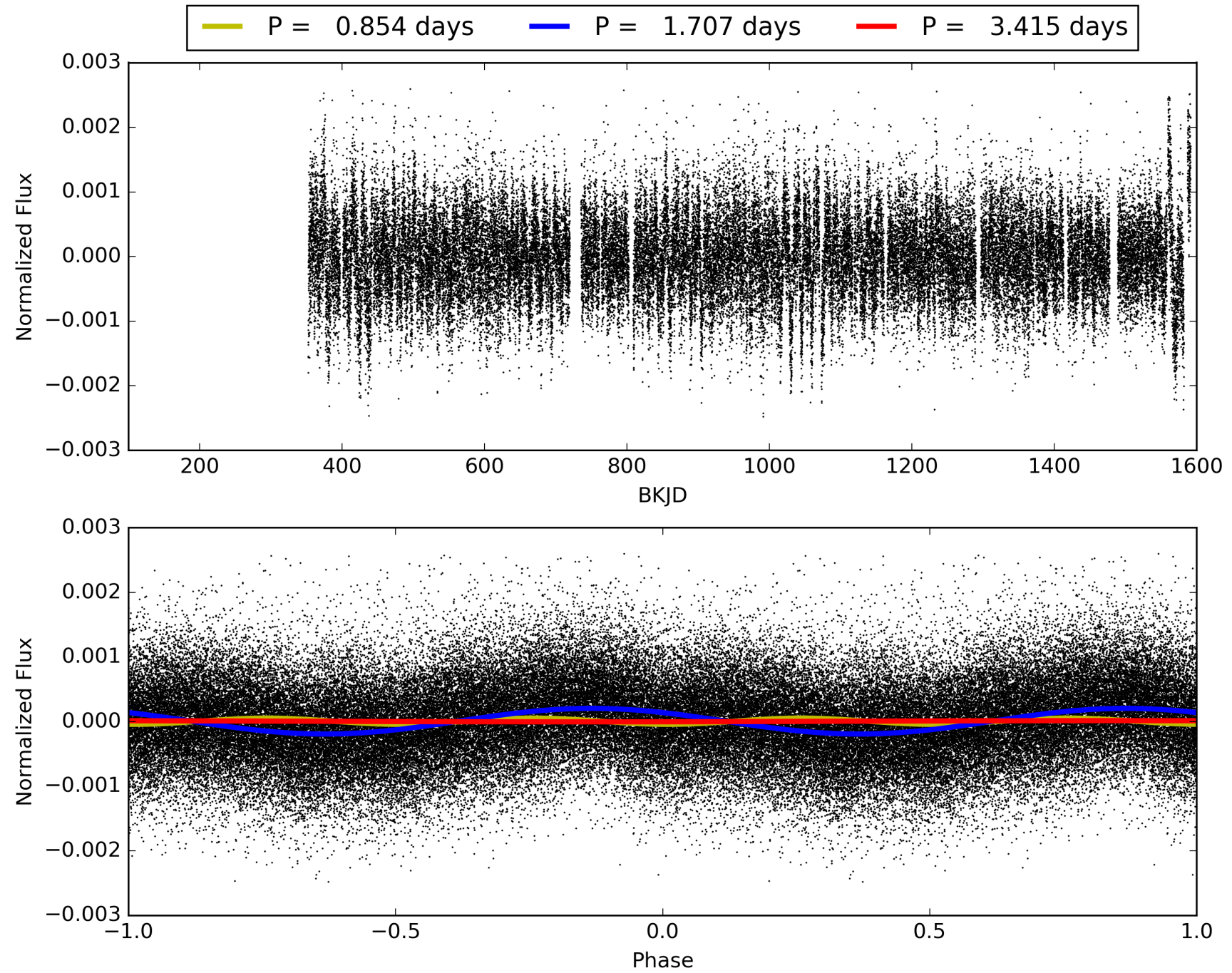
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:58:57 Z

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

TCE 005566645-01, PDC Light Curves

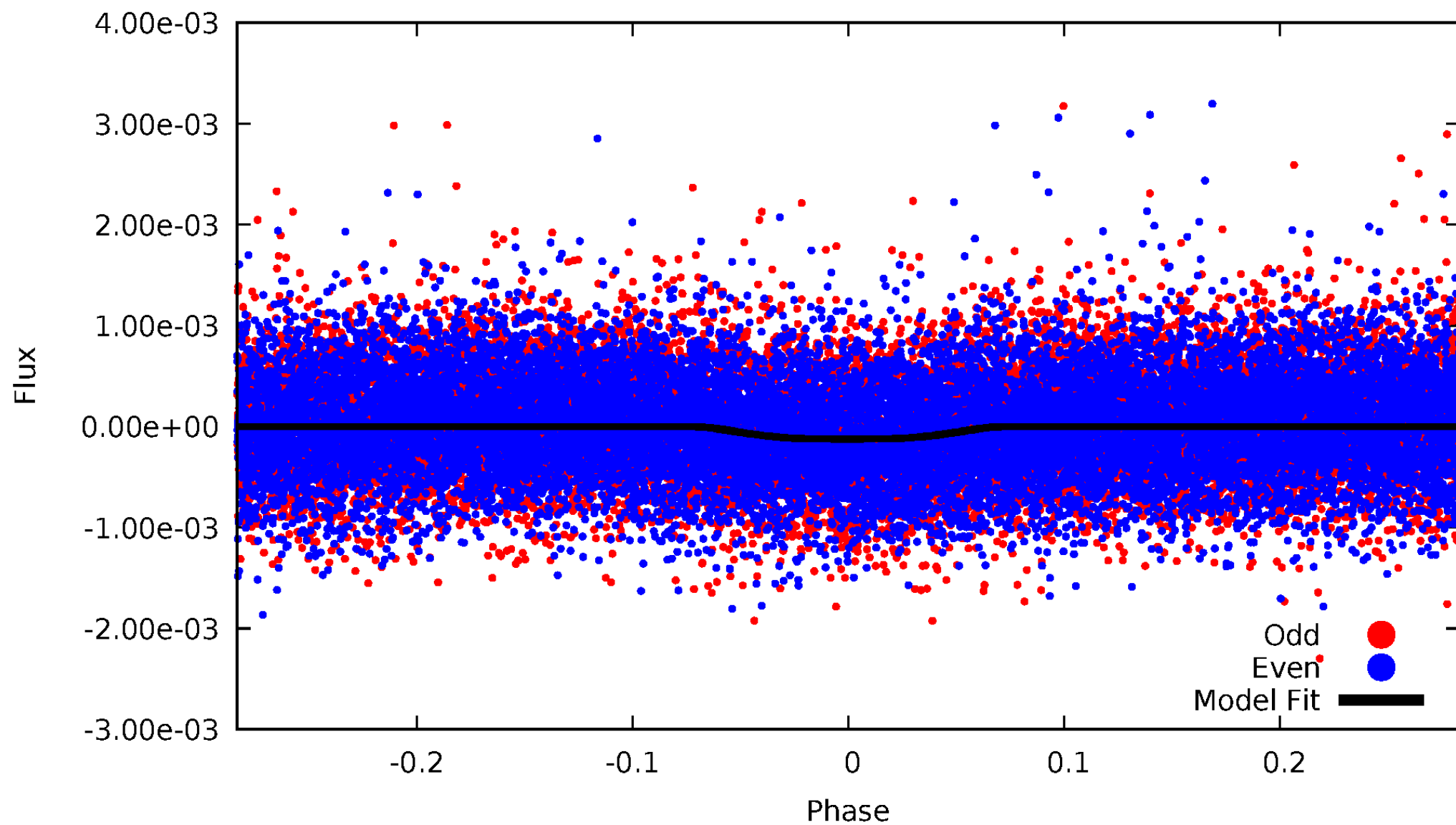


TCE 005566645-01



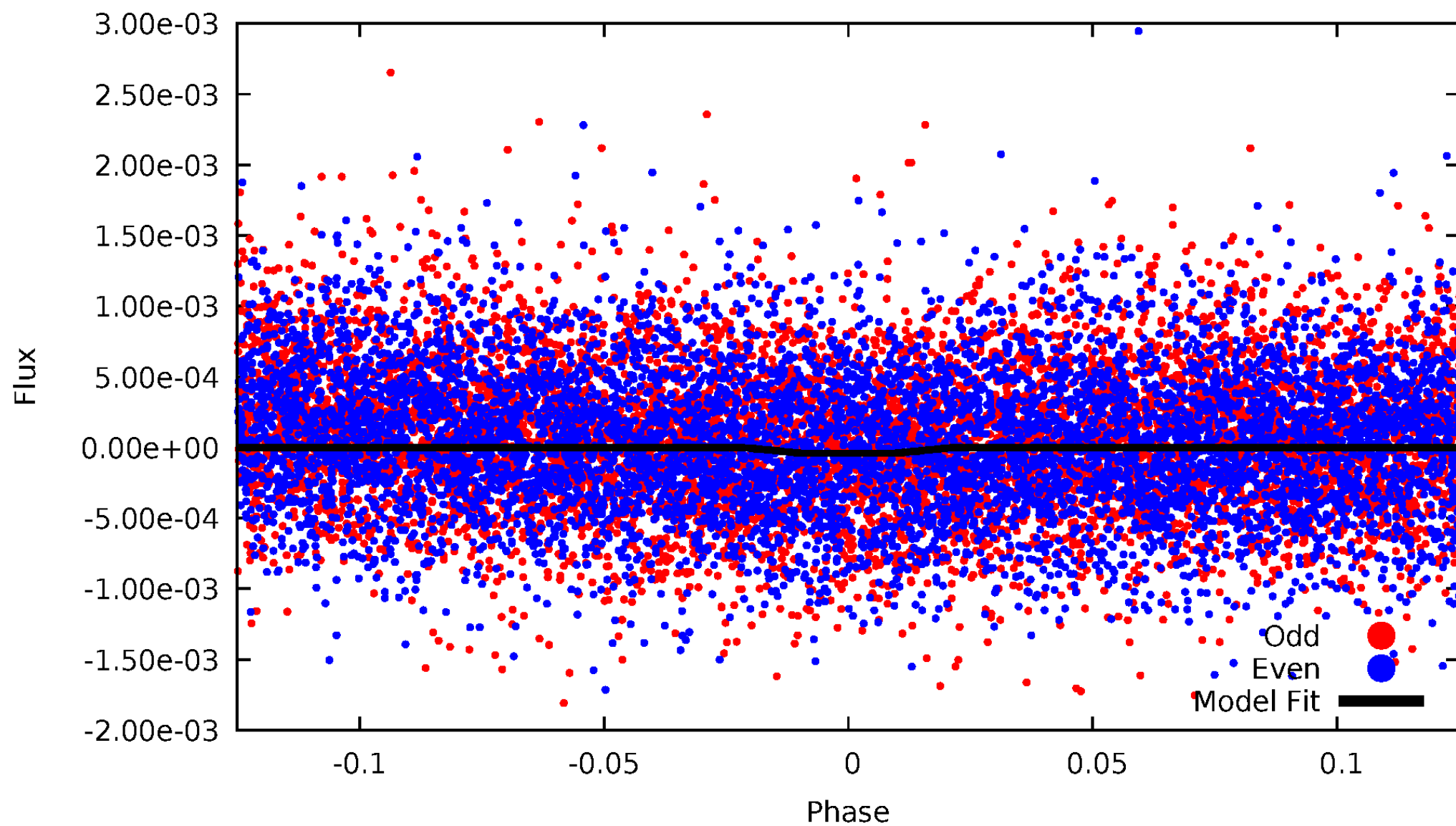
DV Odd/Even

TCE 005566645-01



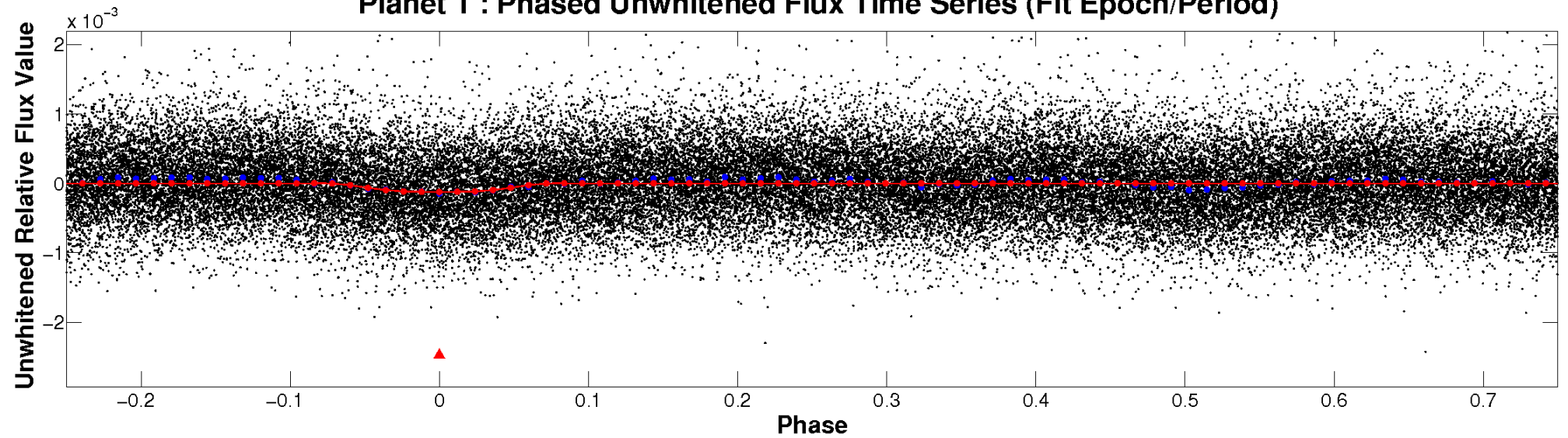
ALT Odd/Even

TCE 005566645-01

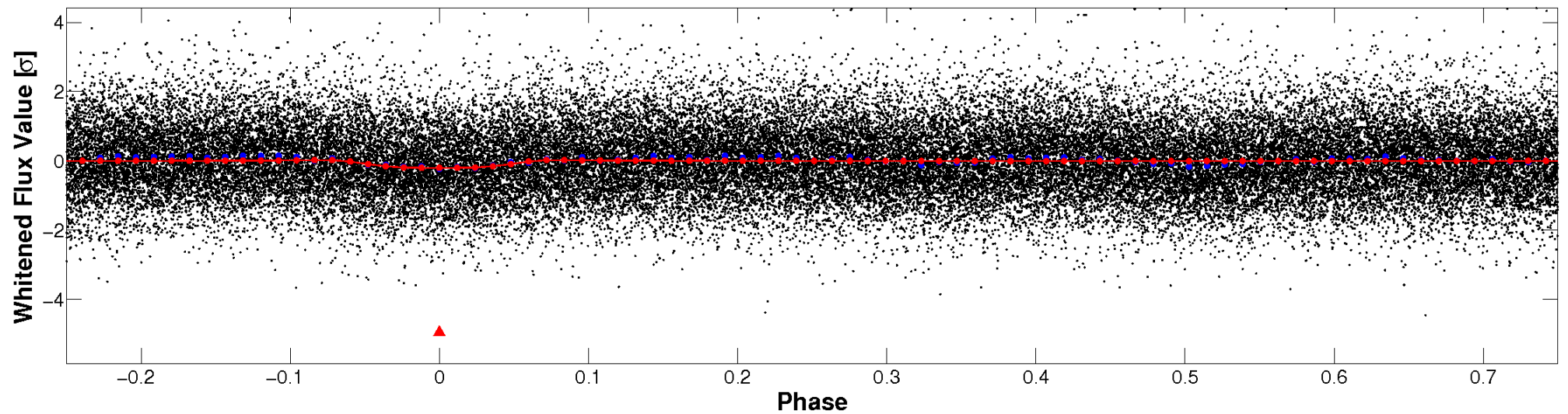


Non-Whitened Vs. Whitened Light Curve

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

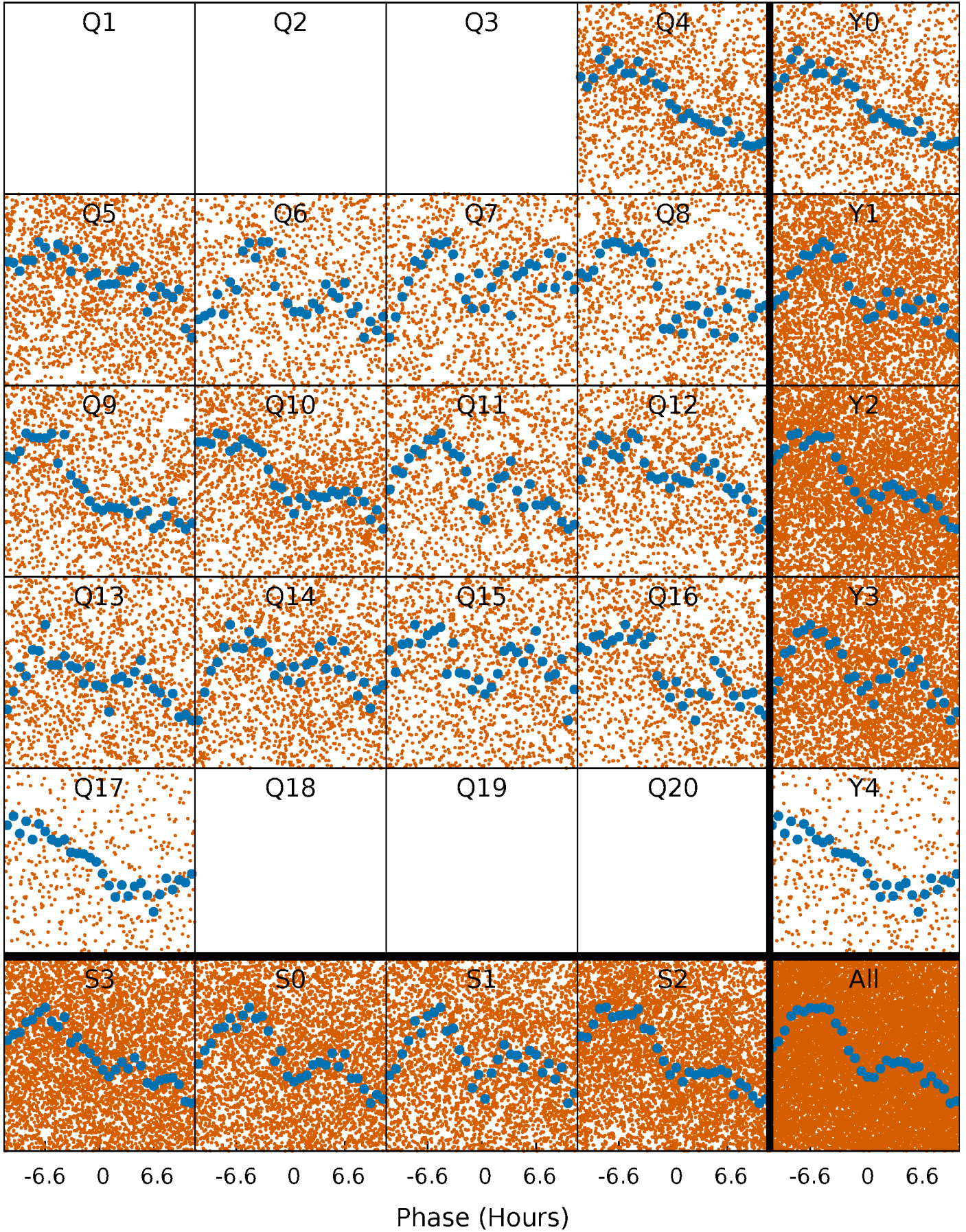


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



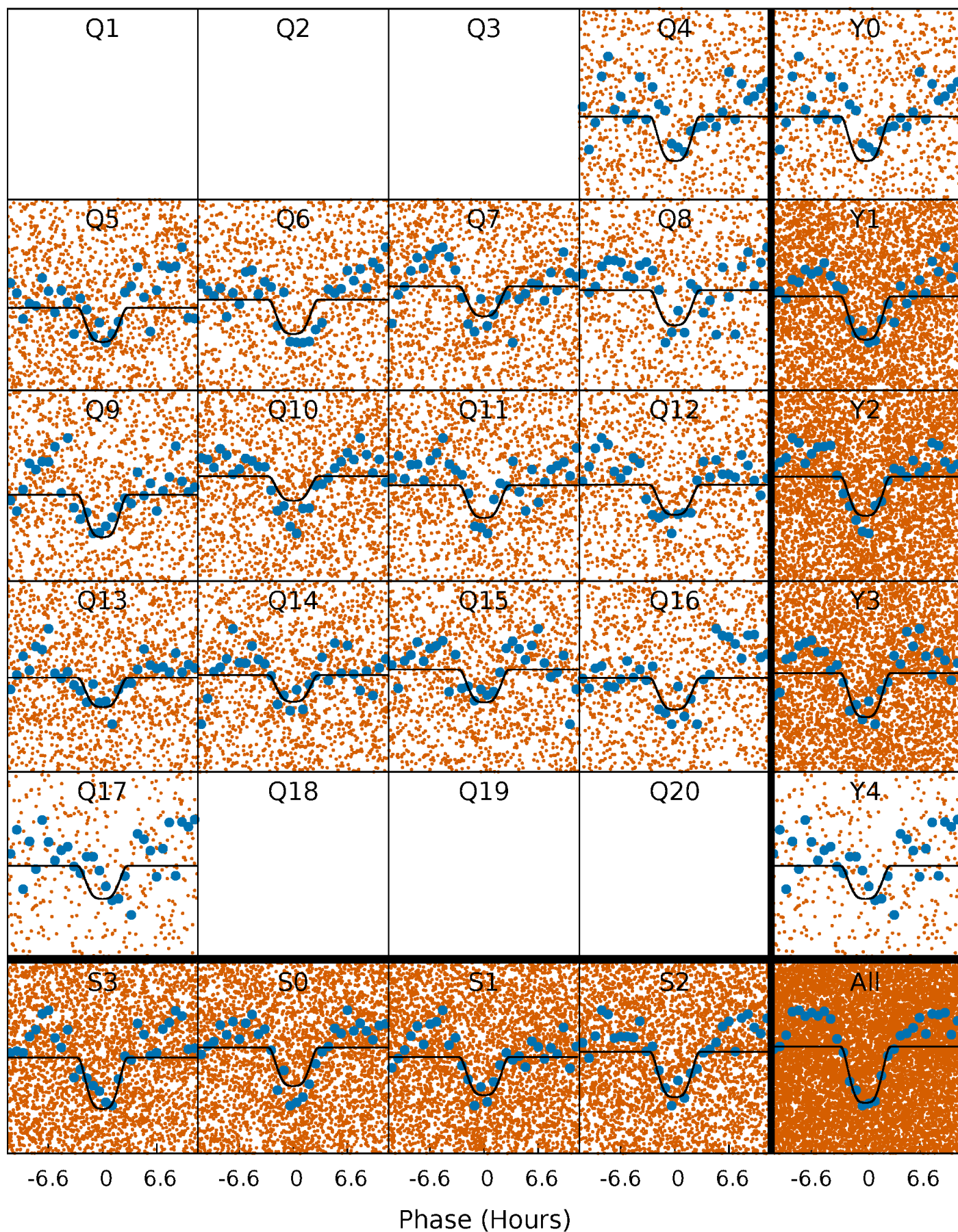
PDC Quarter-Phased Transit Curves

TCE 005566645-01 P= 1.707252 Days $T_0=131.667198$ (BKJD)



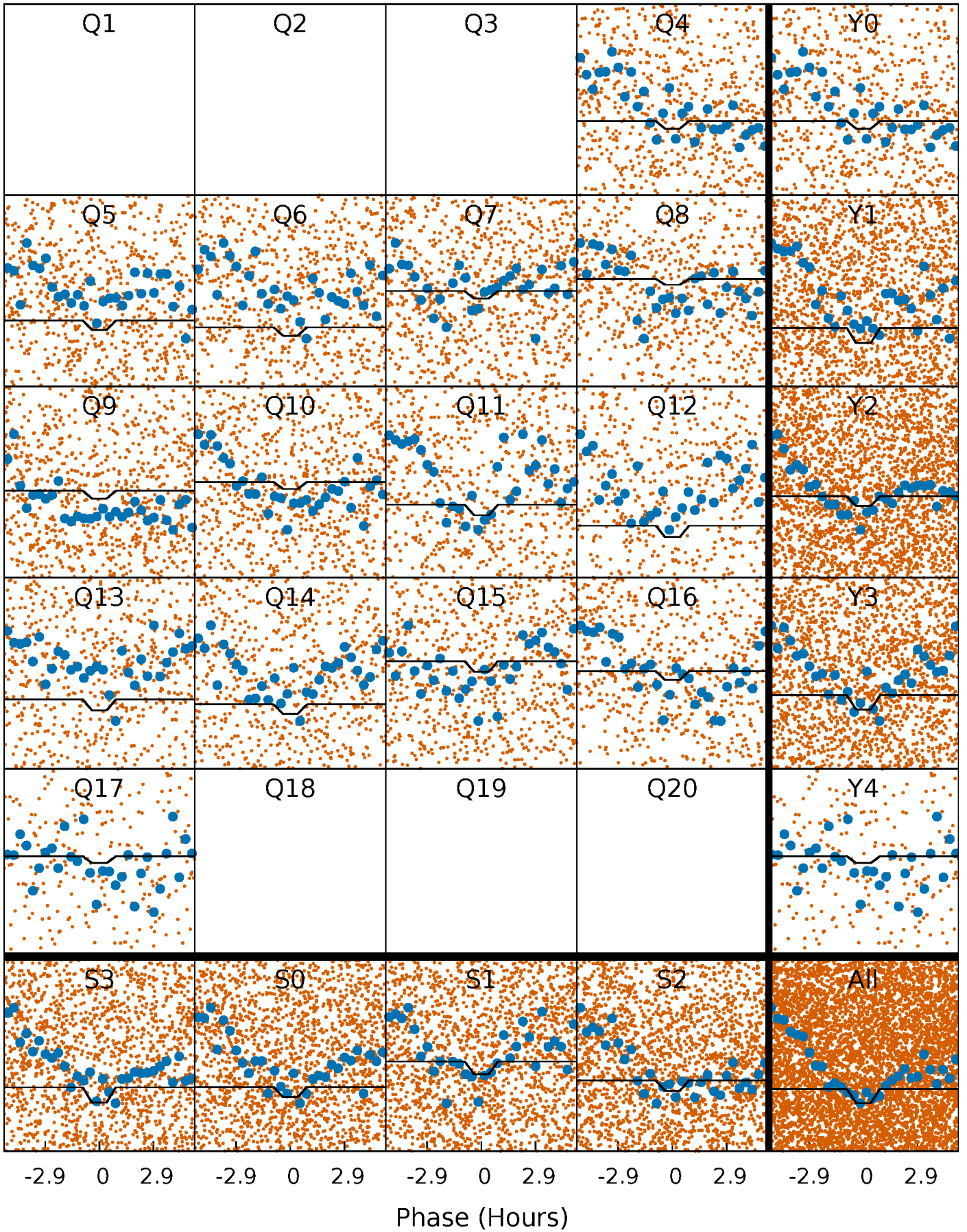
DV Quarter-Phased Transit Curves

TCE 005566645-01 P= 1.707252 Days $T_0=131.667198$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

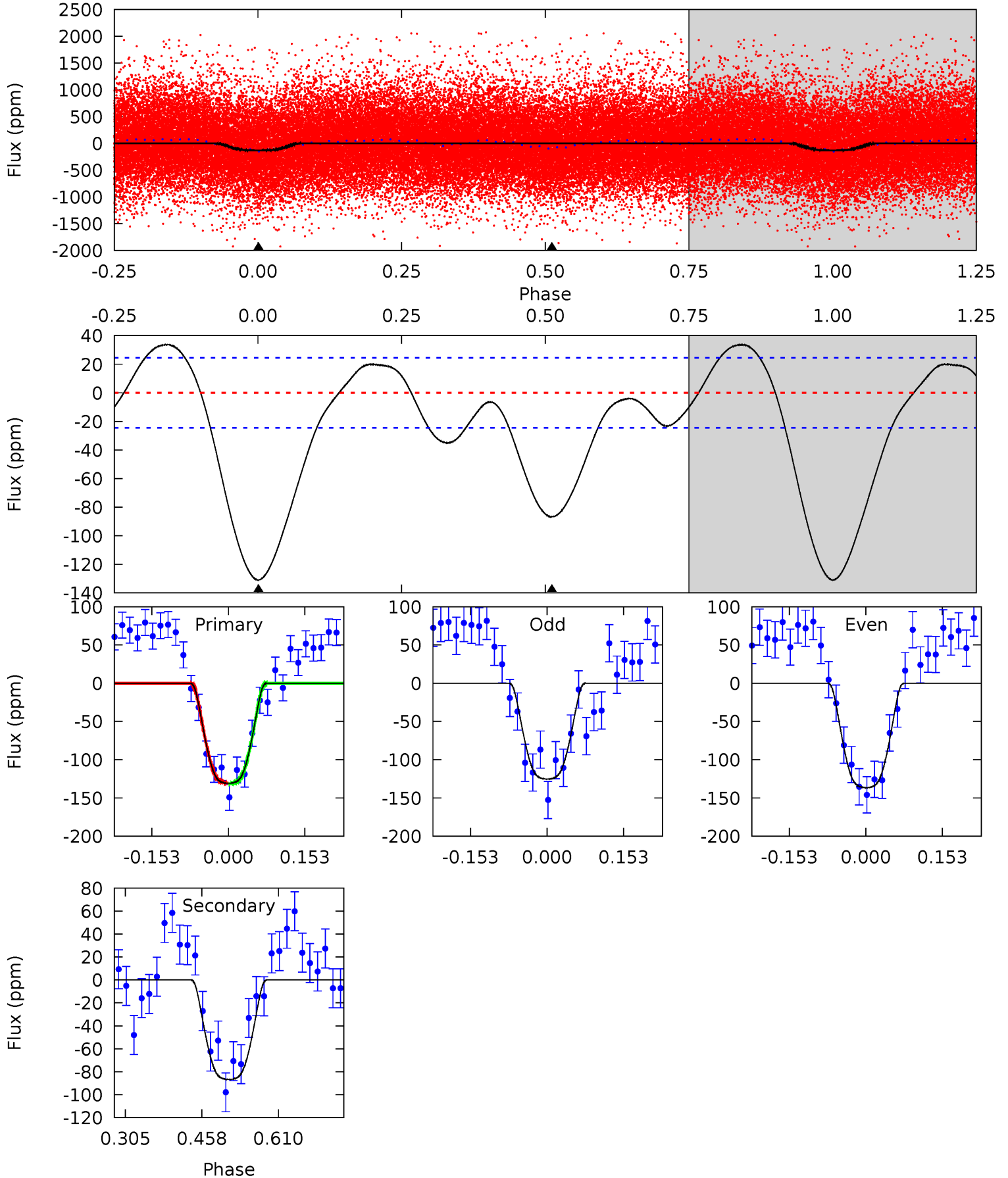
TCE 005566645-01 P= 1.707212 Days $T_0=131.712483$ (BKJD)



DV Model-Shift Uniqueness Test

005566645-01, P = 1.707252 Days, E = 131.667198 Days

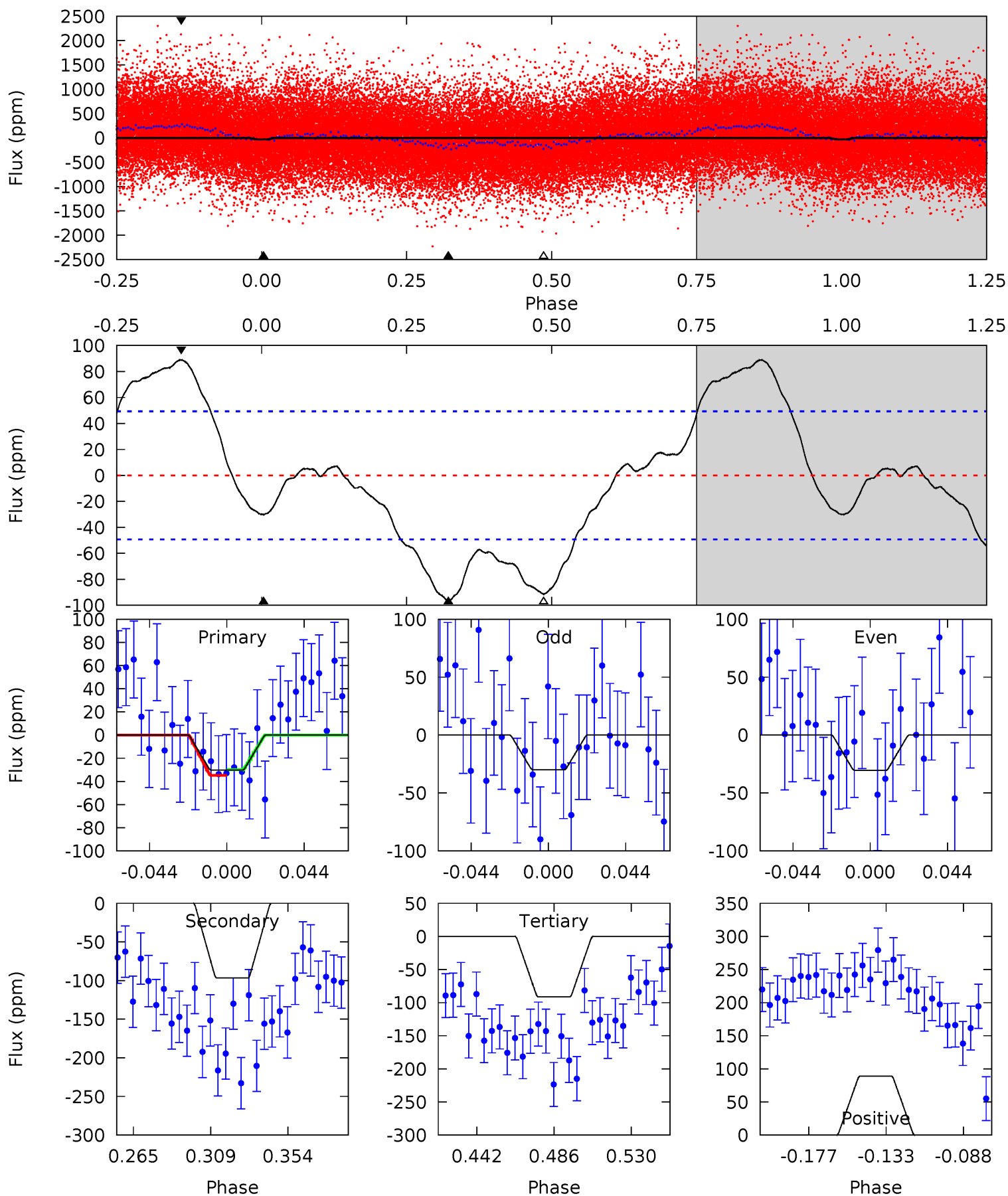
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	15.9	0	0	4.48	1.43	3.90	24.0	24.0	15.9	15.9	1.03	1.06	0.20	0.07



Alt Model-Shift Uniqueness Test

005566645-01, P = 1.707212 Days, E = 131.712483 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.90	9.27	8.78	8.55	4.73	2.01	4.91	-5.88	-5.65	0.49	0.72	0.03	4.54	0.48	0.24



Stellar Parameters For KIC 005566645

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6373^{+179}_{-246}	$4.401^{+0.070}_{-0.210}$	$-0.060^{+0.250}_{-0.300}$	$1.126^{+0.370}_{-0.148}$	$1.165^{+0.169}_{-0.169}$	$1.149^{+0.346}_{-0.633}$
	+3%/-4%	+2%/-5%	+417%/-500%	+33%/-13%	+15%/-15%	+30%/-55%
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 005566645-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-87 ± 5	$1.75^{+0.33}_{-0.20}$	2474^{+194}_{-139}	5224^{+244}_{-225}	13^{+3}_{-4}
Alt.	-96 ± 10	$0.80^{+0.17}_{-0.13}$	2472^{+183}_{-131}	8141^{+969}_{-739}	70^{+29}_{-22}

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 $A_{obs} \gg 1.0$

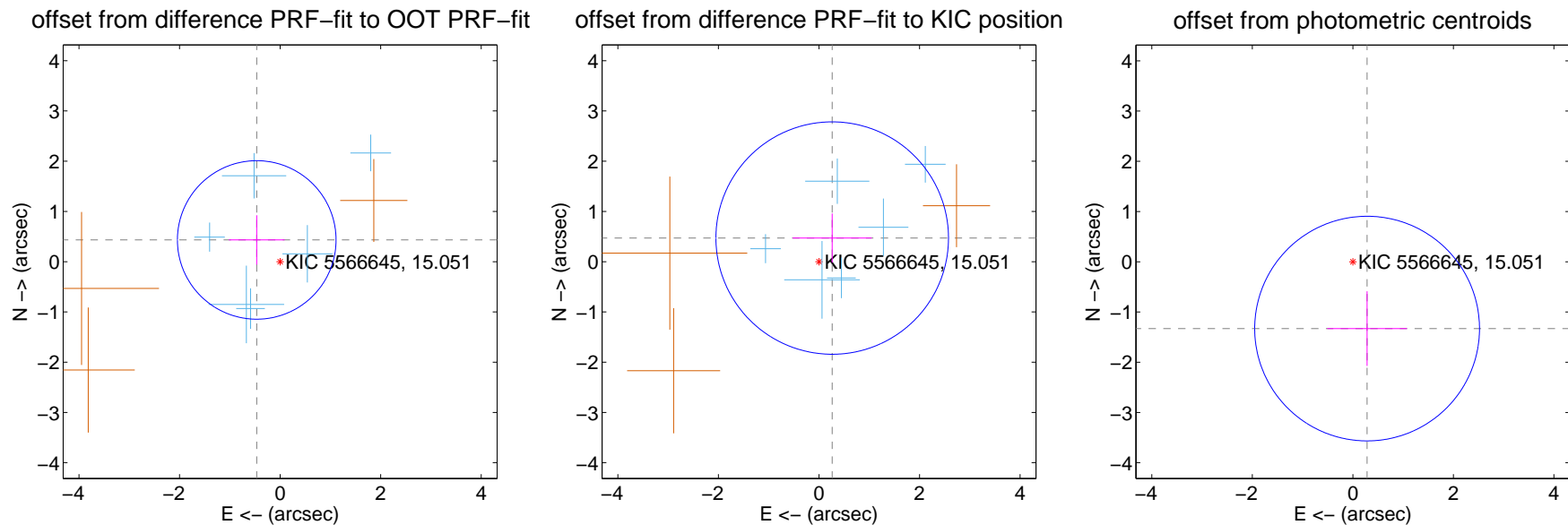
DV Centroid Data

Supplemental centroid analysis for 005566645-01. Kepler magnitude: 15.05. Transit SNR 12.91

There are 6 quarters with good PRF difference image offsets

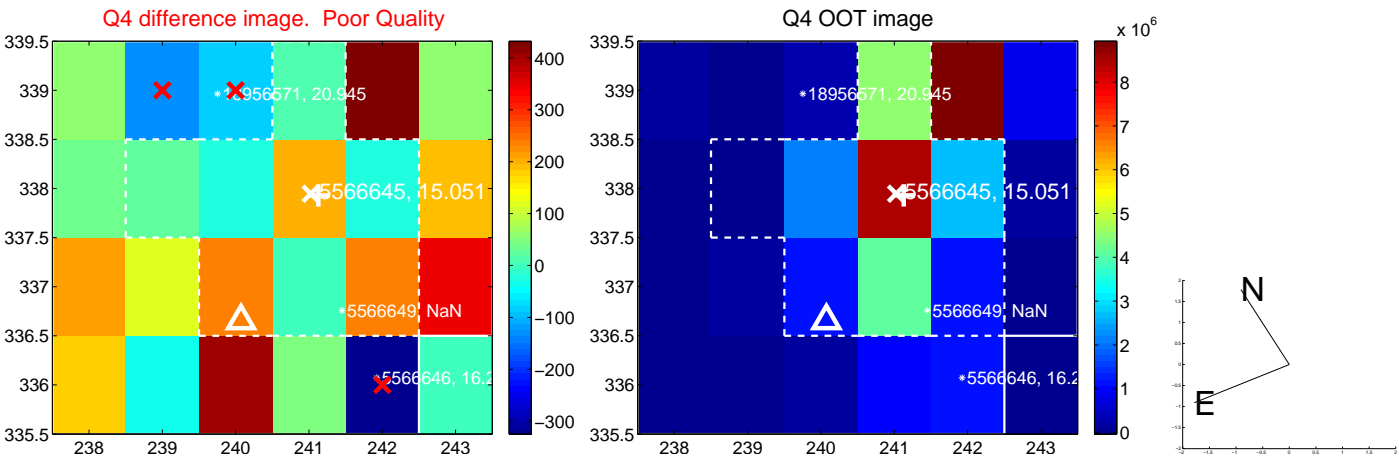
The direct PRF centroid is offset from the target star catalog position by about 0.93 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.635 ± 0.526	1.21	0.465 ± 0.554	0.433 ± 0.491
PRF-fit source offset from KIC position	0.539 ± 0.771	0.70	-0.263 ± 0.786	0.470 ± 0.488
photometric centroid source offset	1.36 ± 0.75	1.82	-0.28 ± 0.79	-1.33 ± 0.74

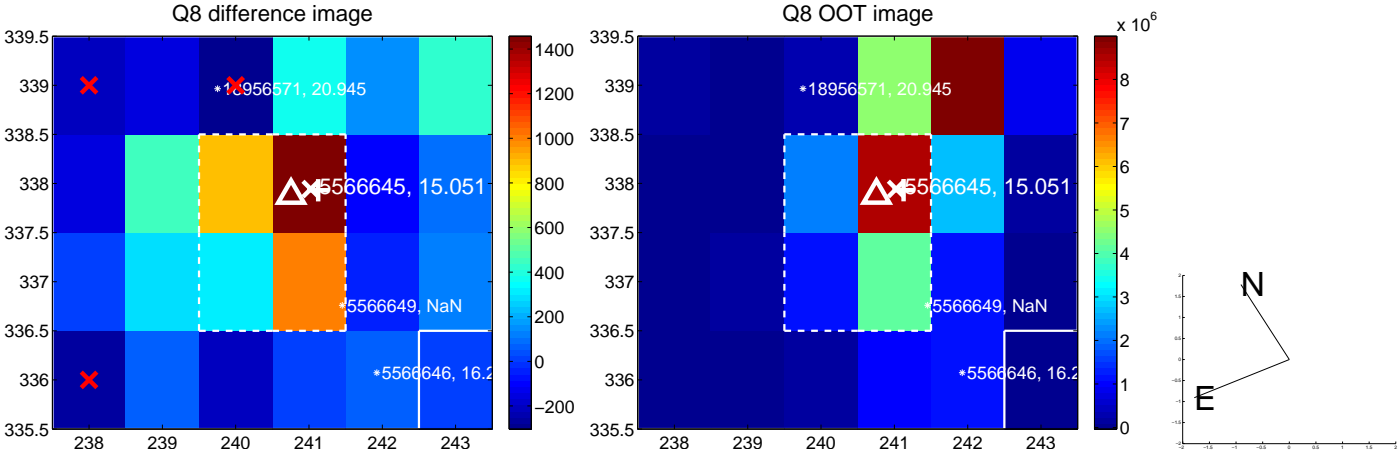
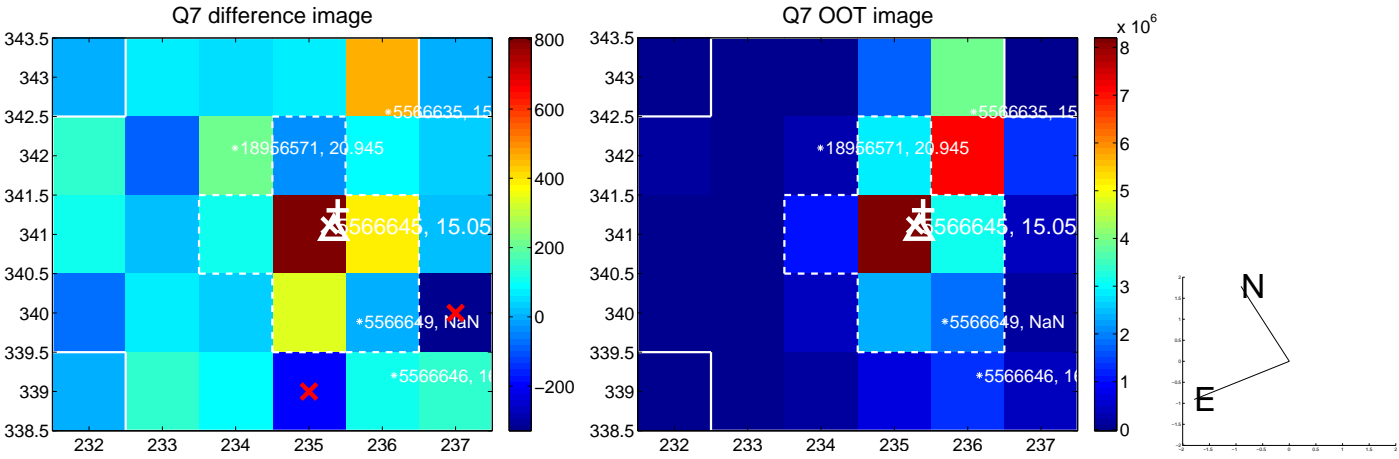
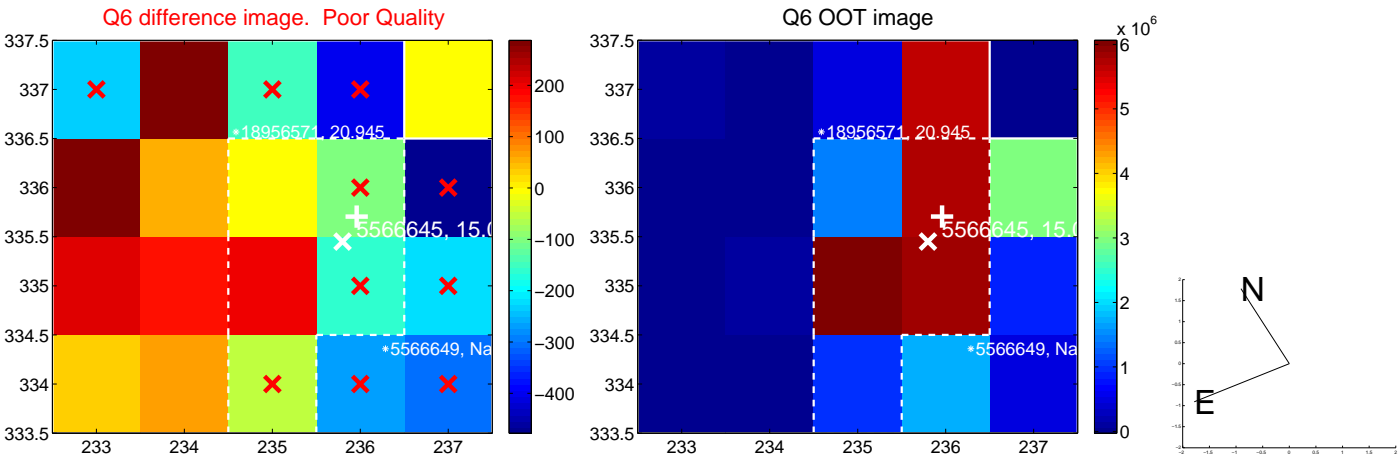
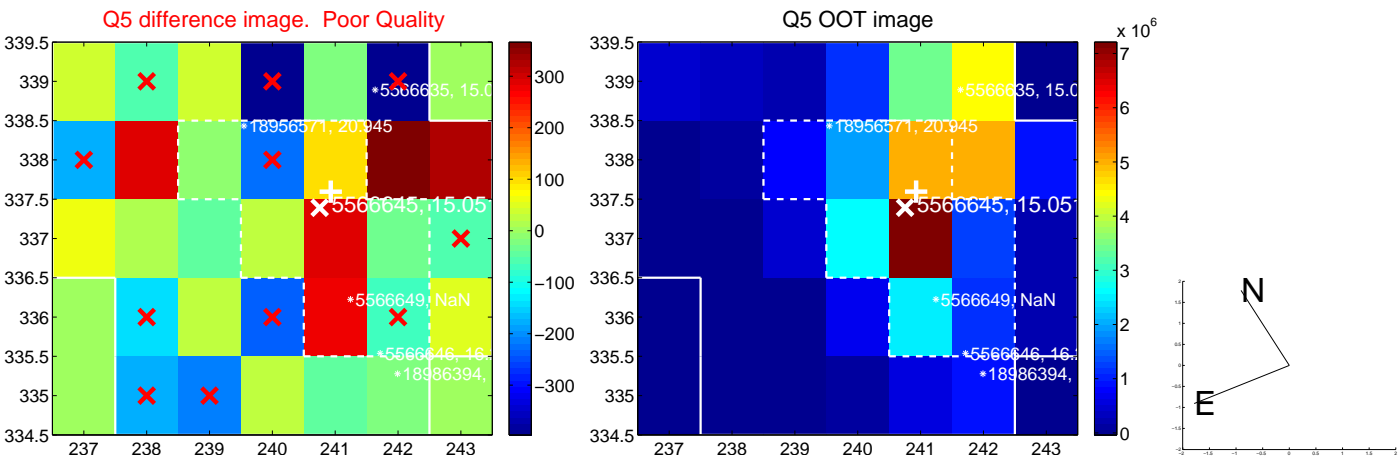


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

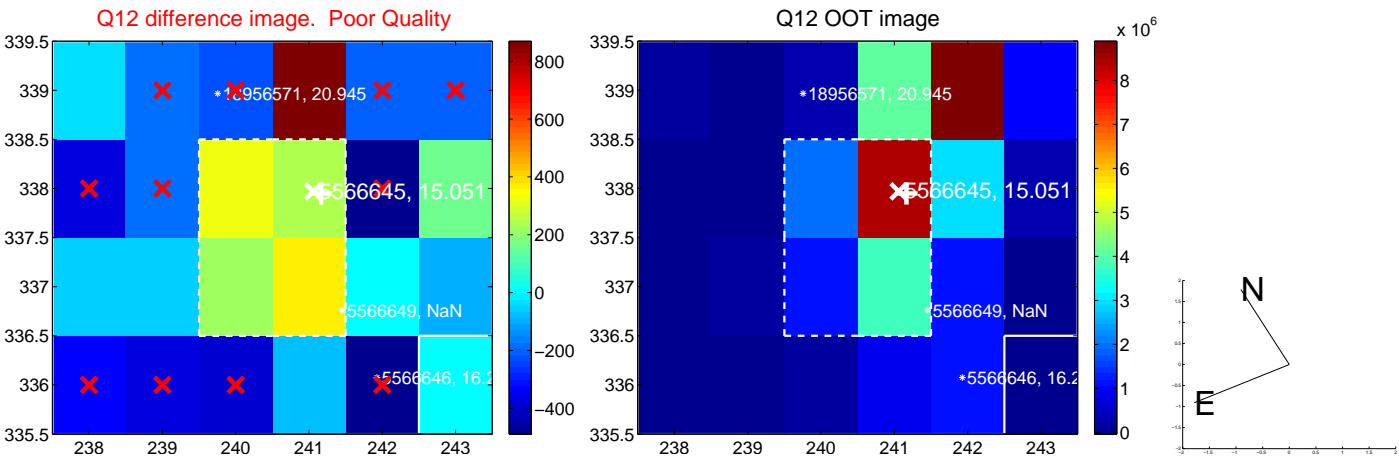
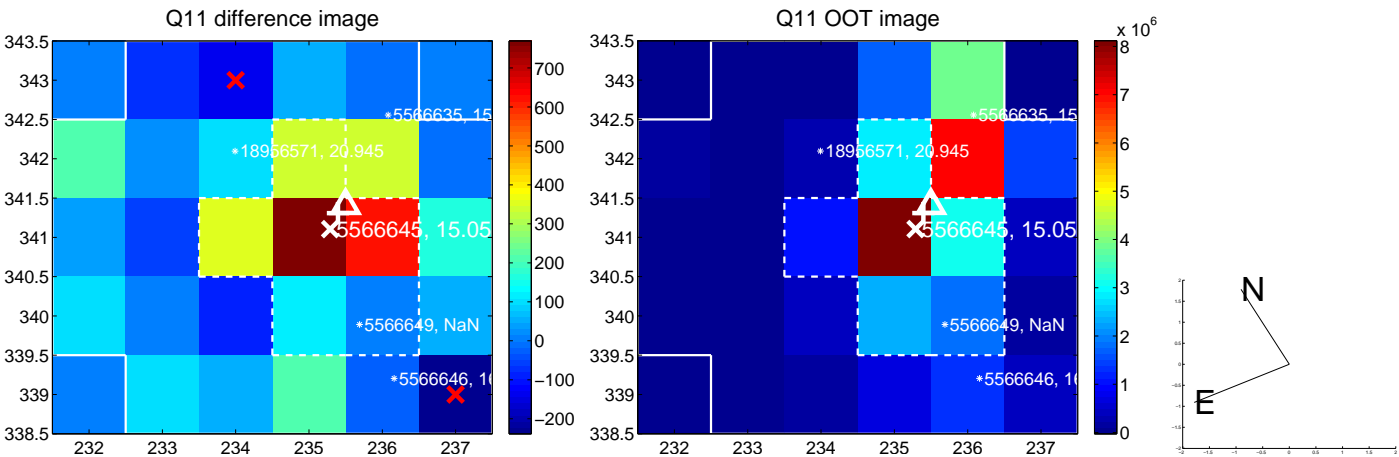
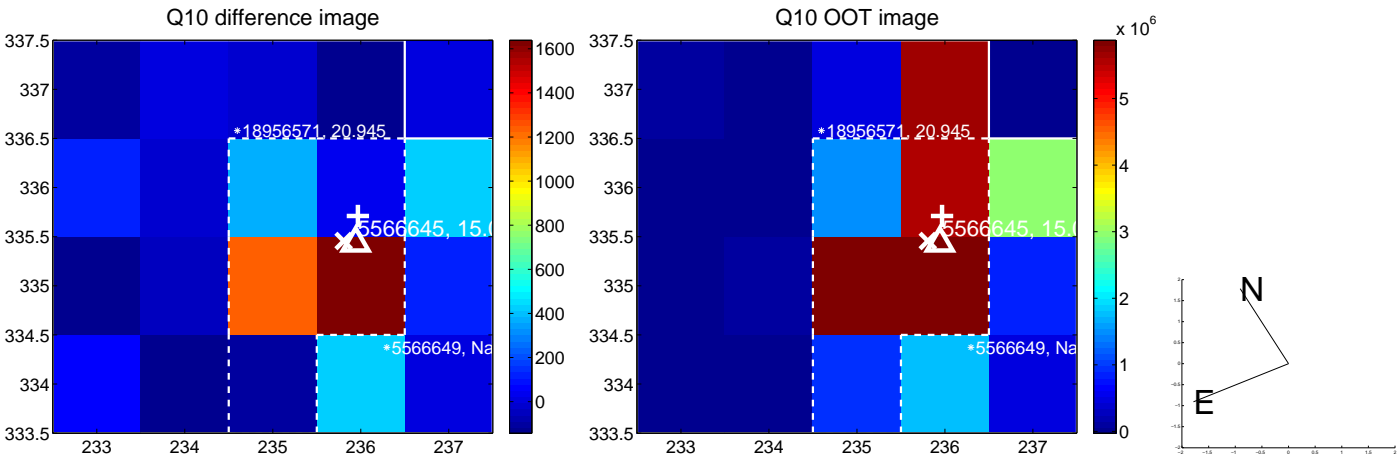
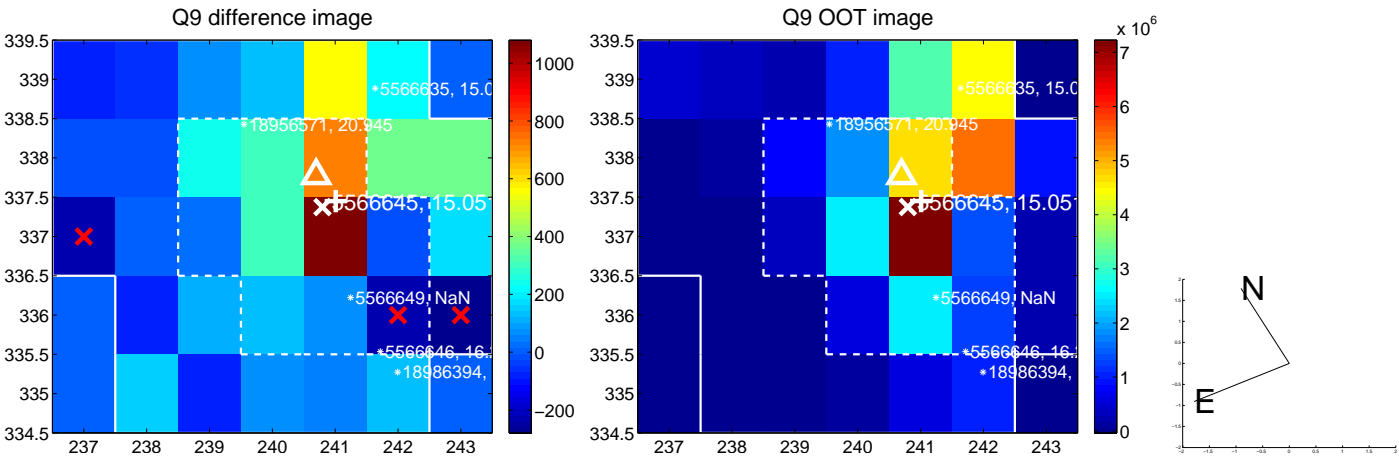
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



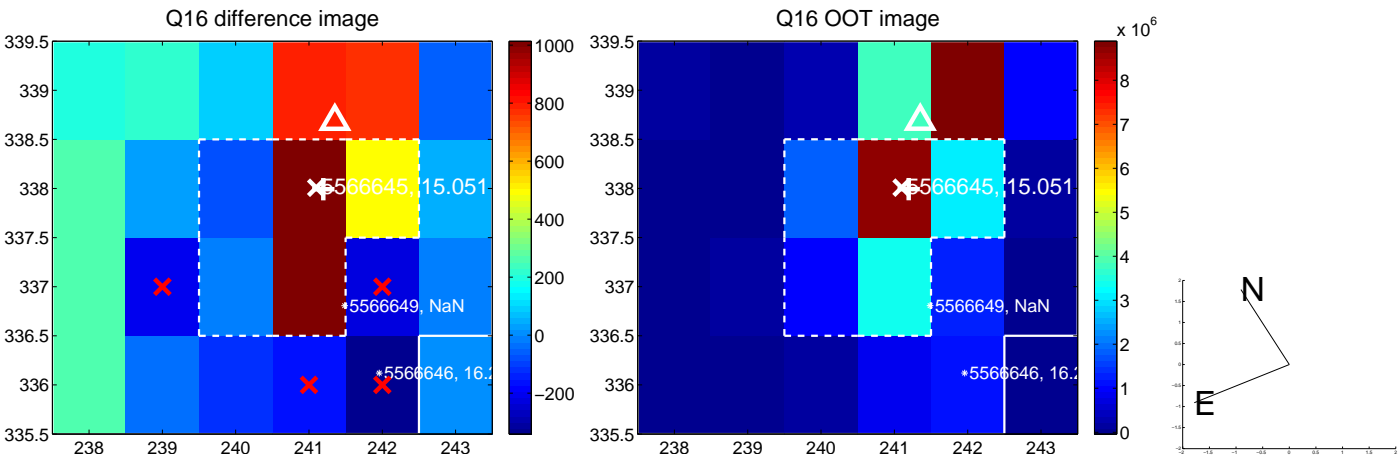
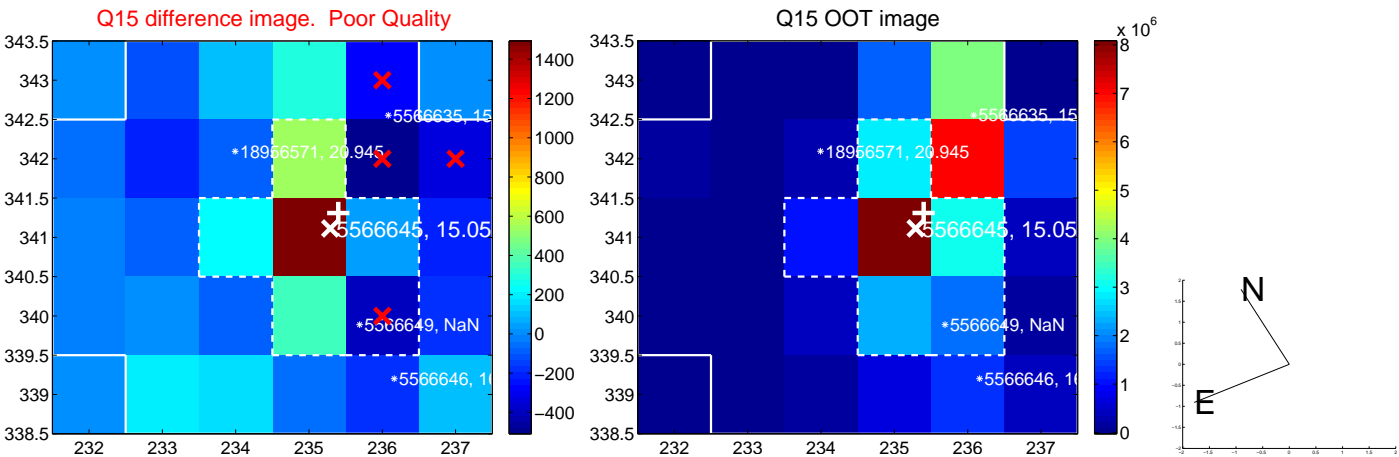
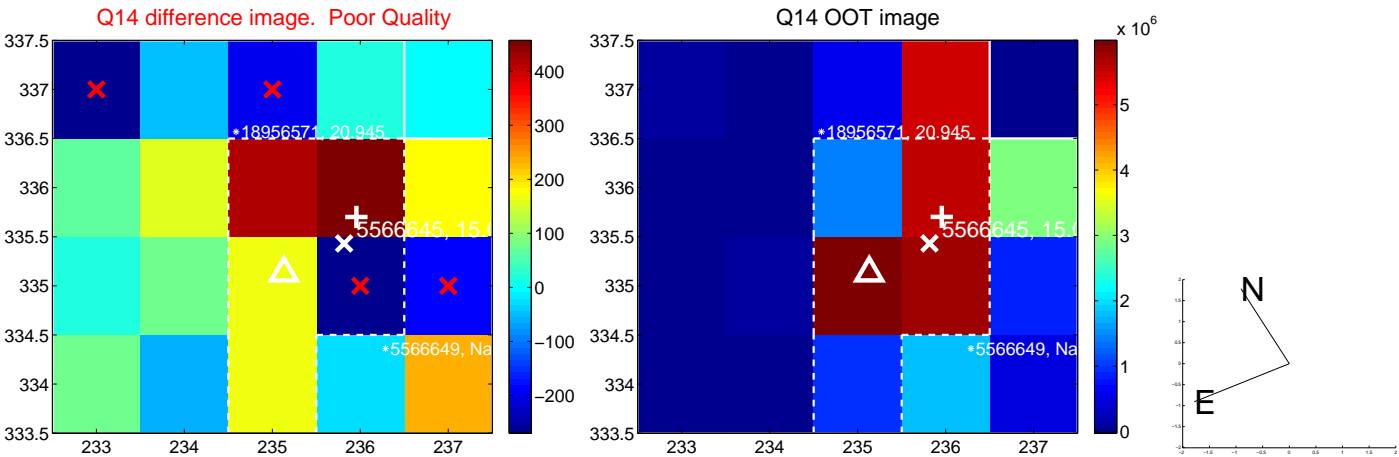
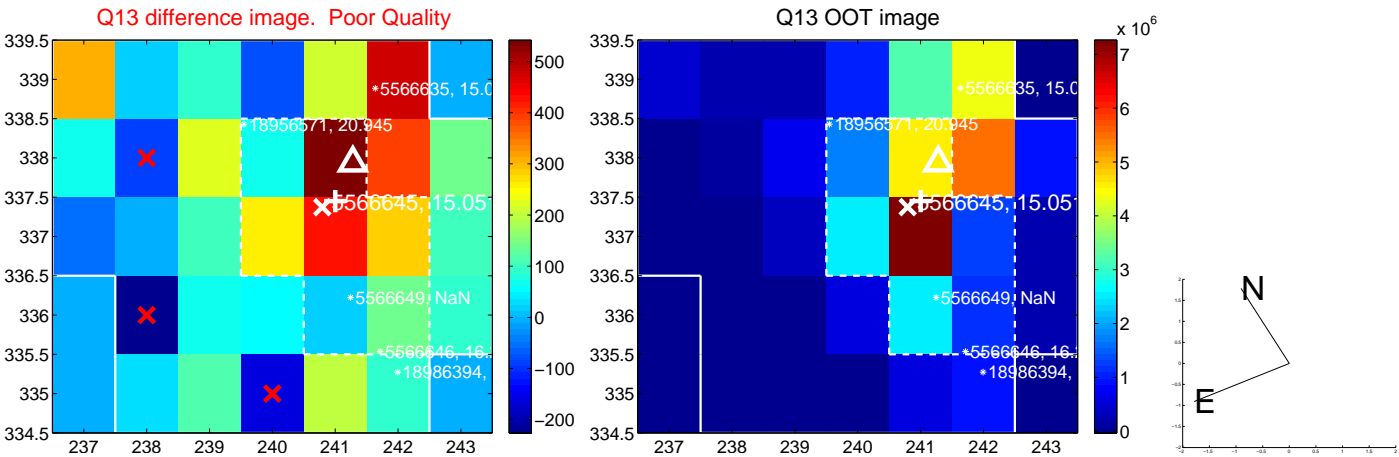
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



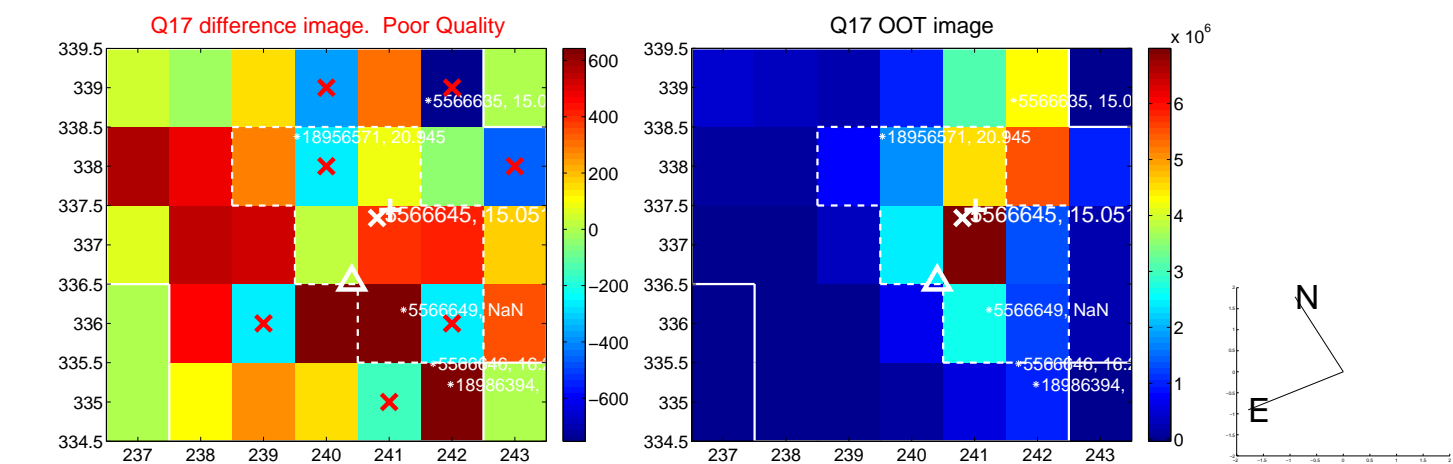
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



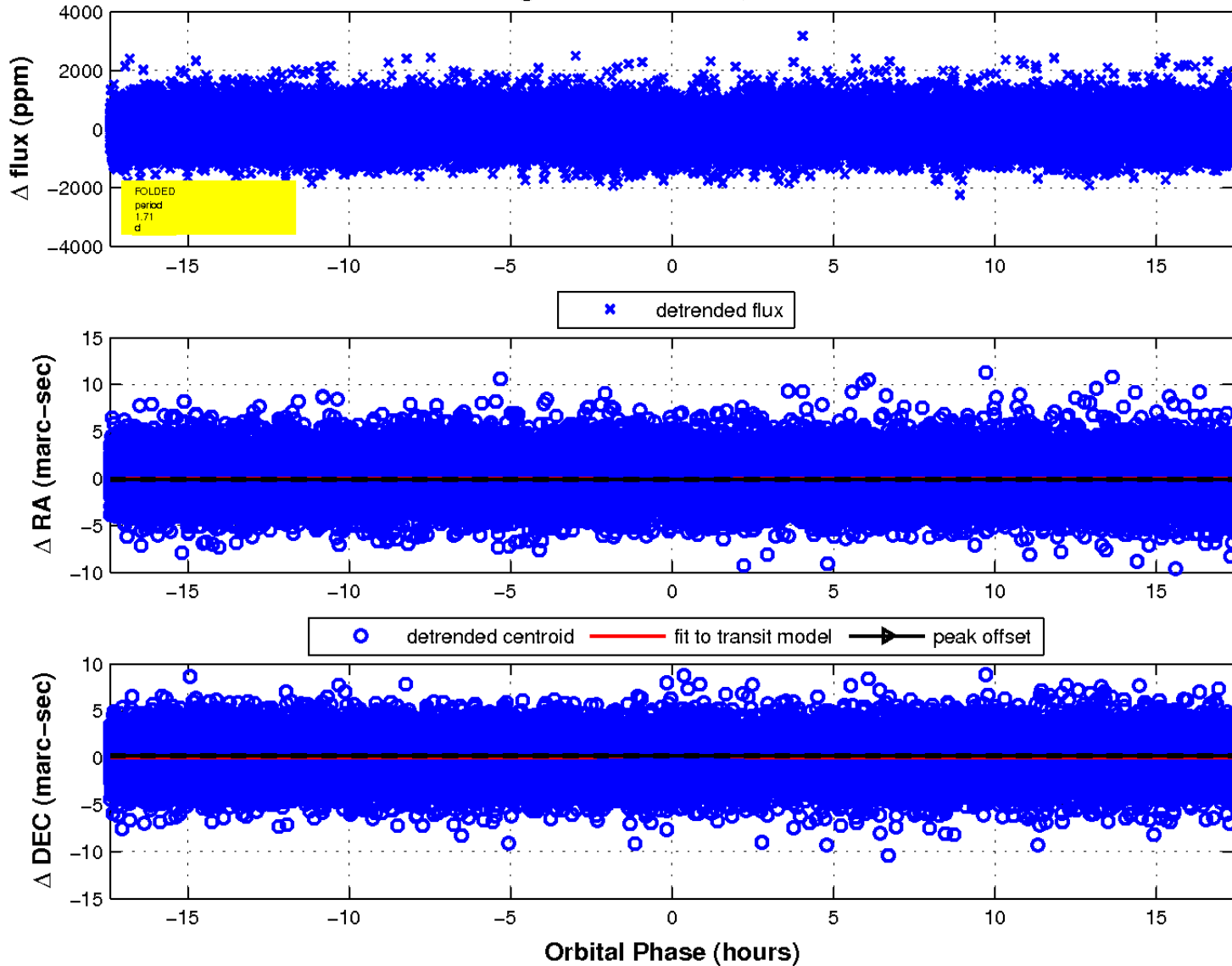
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

