

KIC 006205507

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})
006205507-01	OBS	No	3.722820	134.624391	8.2	11.379	8.3	7.0	1.57	11121	0.51	9226.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006205507-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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.

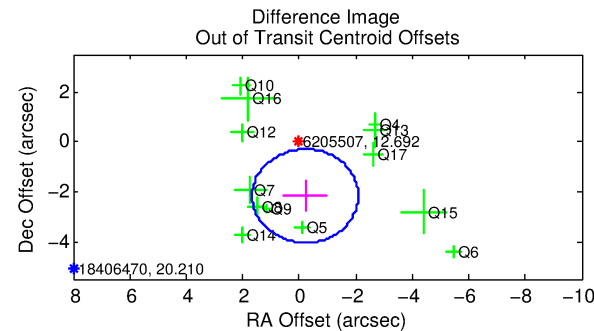
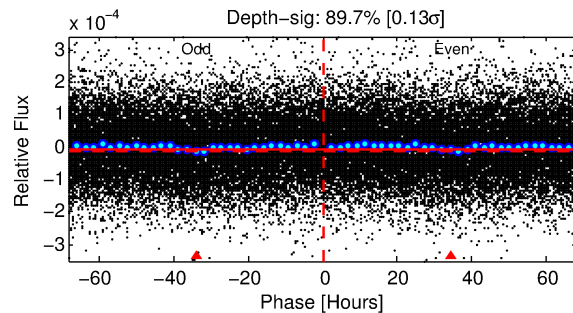
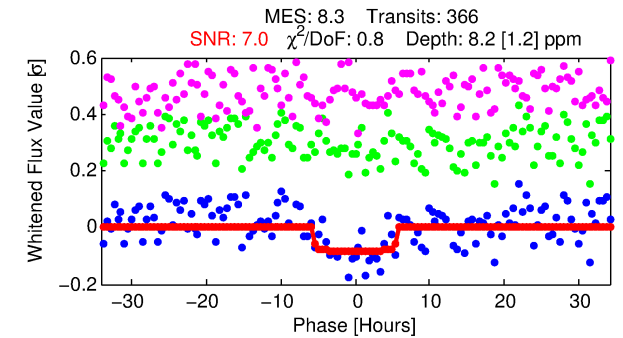
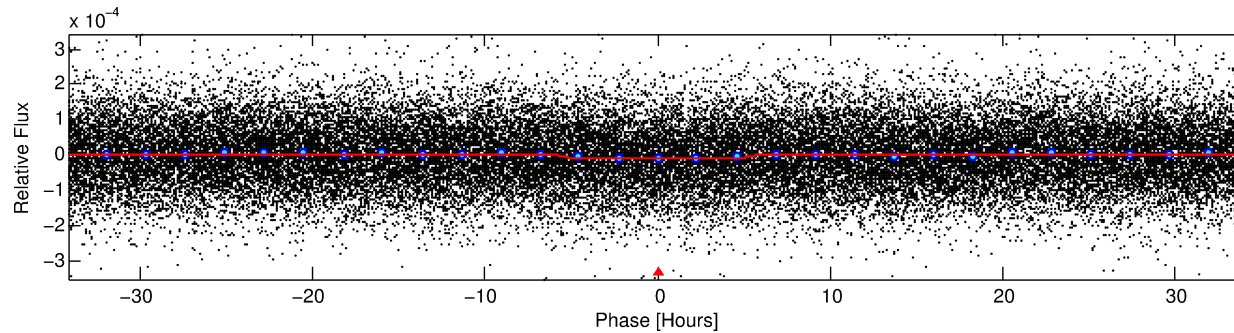
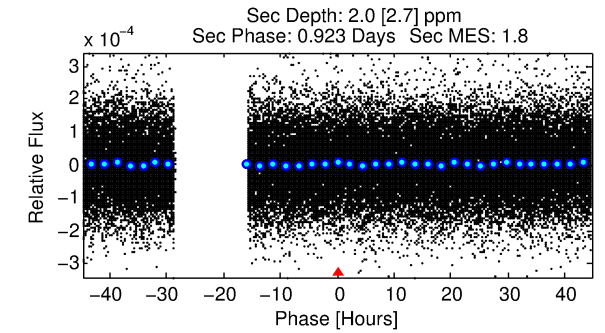
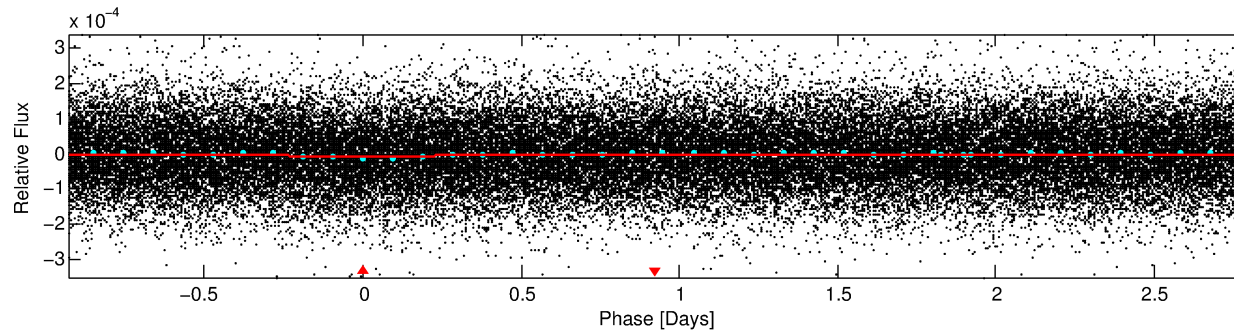
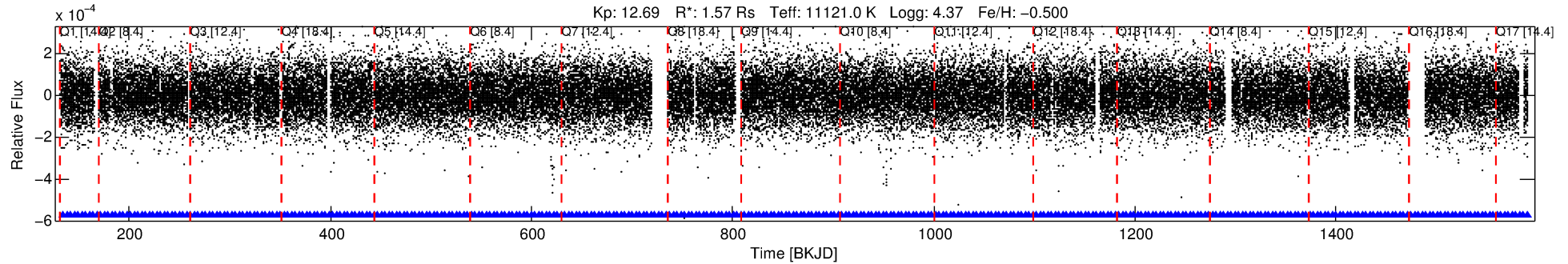
Ephemeris Match Information For 006205507-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006205507-01	6205507	006205460-pri	6205460	1:1	107.0	14	23	12.75	12.70	77850.00	Direct-PRF	0	0.18	0.03

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6205507 Candidate: 1 of 1 Period: 3.723 d



DV Fit Results:

Period = 3.72282 [0.00008] d
Epoch = 134.6244 [0.0145] BKJD
Rp/R* = 0.0030 [0.0005]
a/R* = 1.46 [1.07]
b = 0.90 [0.30]
Seff = 9226.13 [3493.54]
Teq = 2499 [237] K
Rp = 0.51 [0.18] Re
a = 0.0604 [0.0148] AU
Ag = 15.32 [21.97] [0.65σ]
Teffp = 7644 [2681] K [1.91σ]

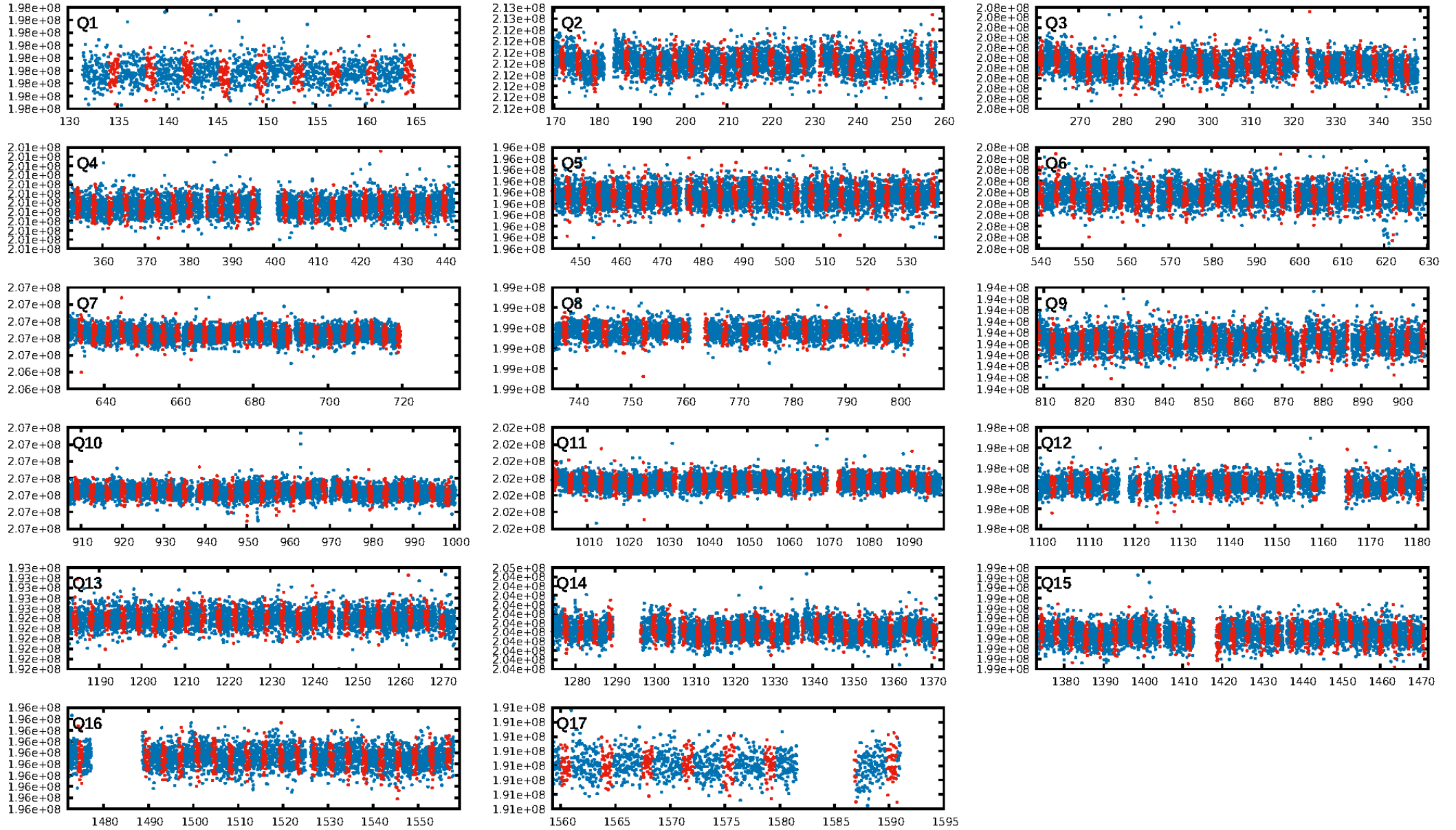
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.71e-16
RollingBand-fgt: 1.00 [350/350]
GhostDiagnostic-chr: -0.03891
Centroid-sig: 0.0%
Centroid-so: 4.267 arcsec [2.16σ]
OotOffset-rm: 2.183 arcsec [3.49σ]
KicOffset-rm: 2.080 arcsec [3.31σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.31 [4/13]
DiffImageOverlap-fno: 1.00 [17/17]

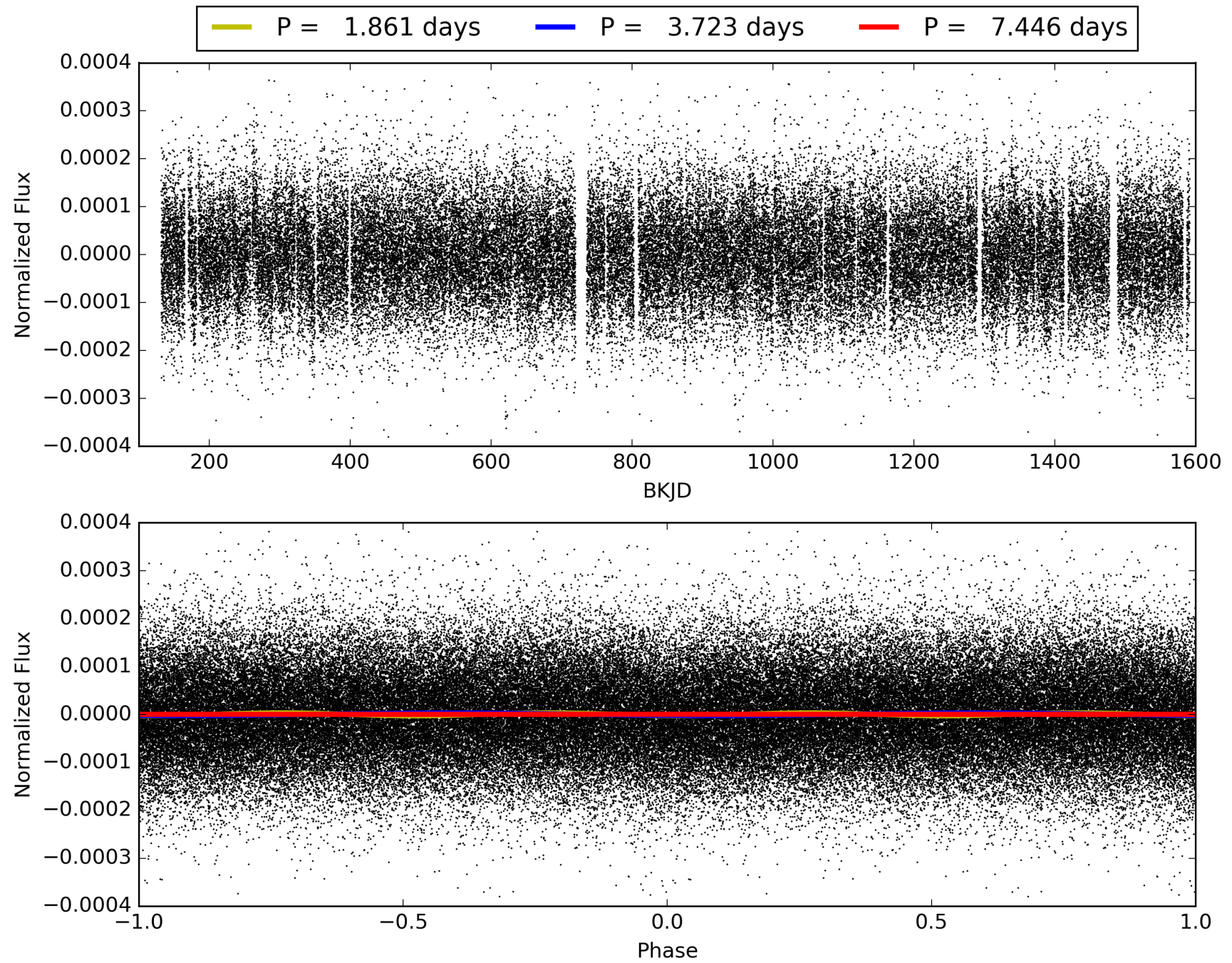
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:34:55 Z

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

TCE 006205507-01, PDC Light Curves

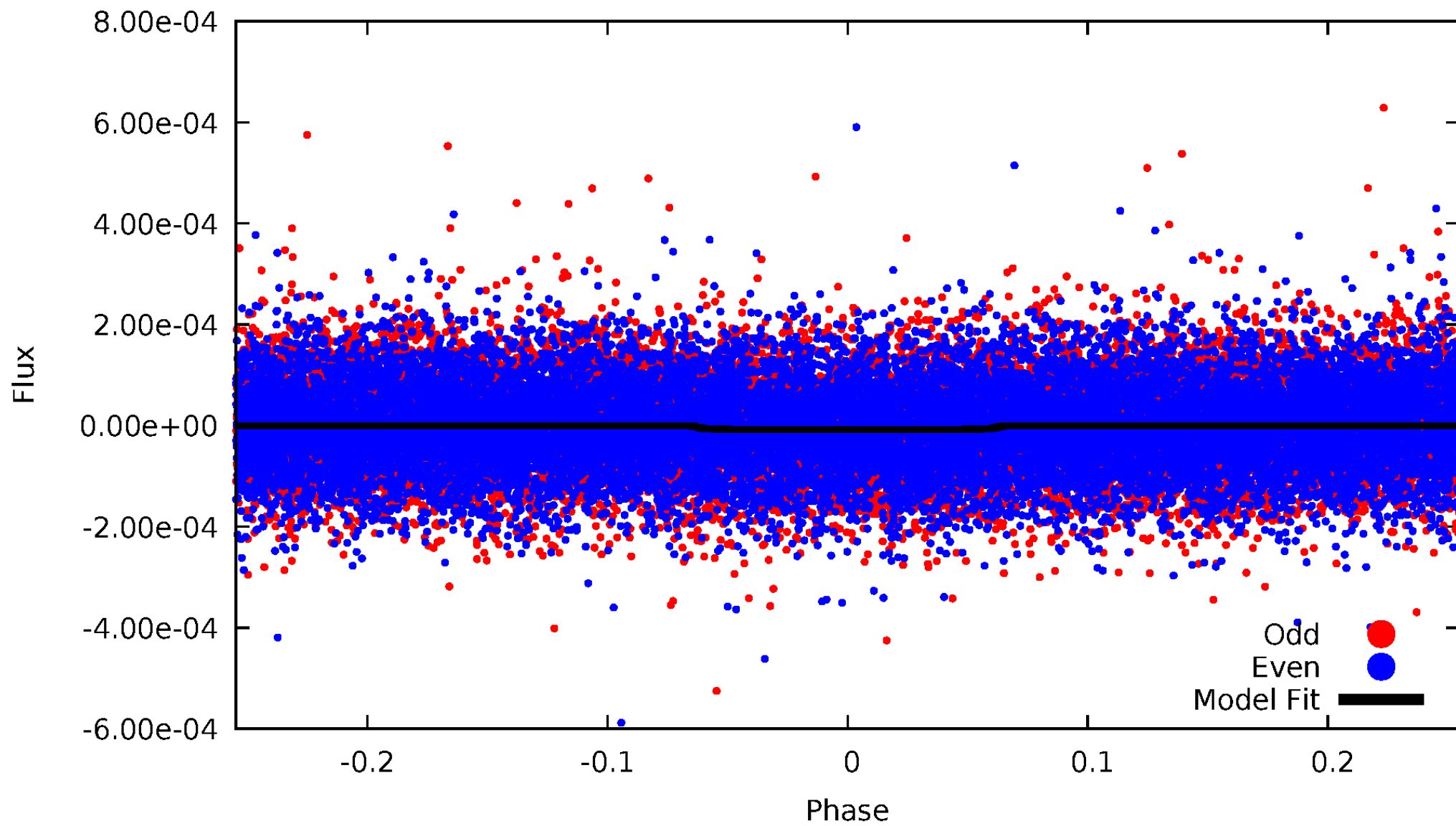


TCE 006205507-01



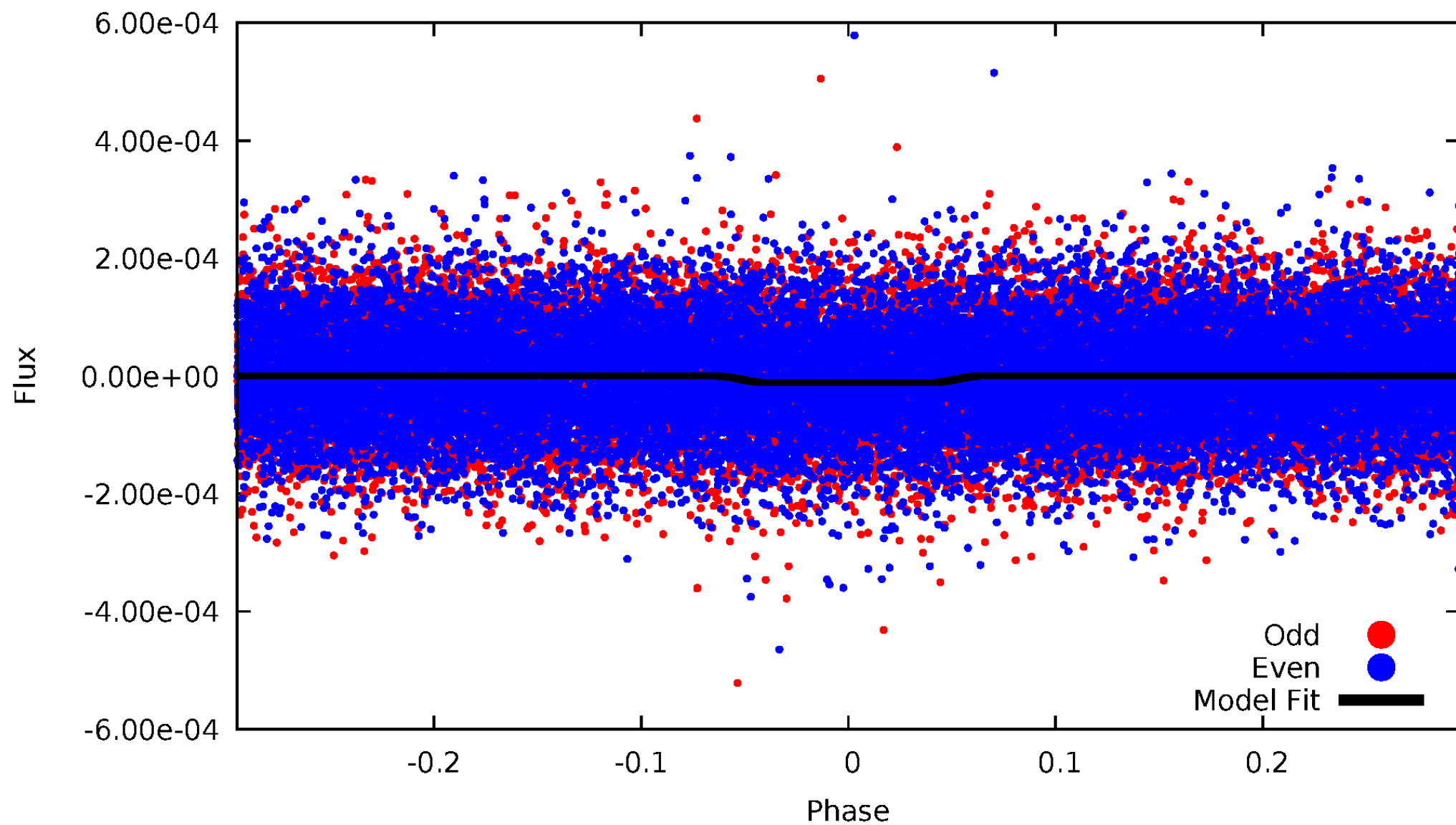
DV Odd/Even

TCE 006205507-01



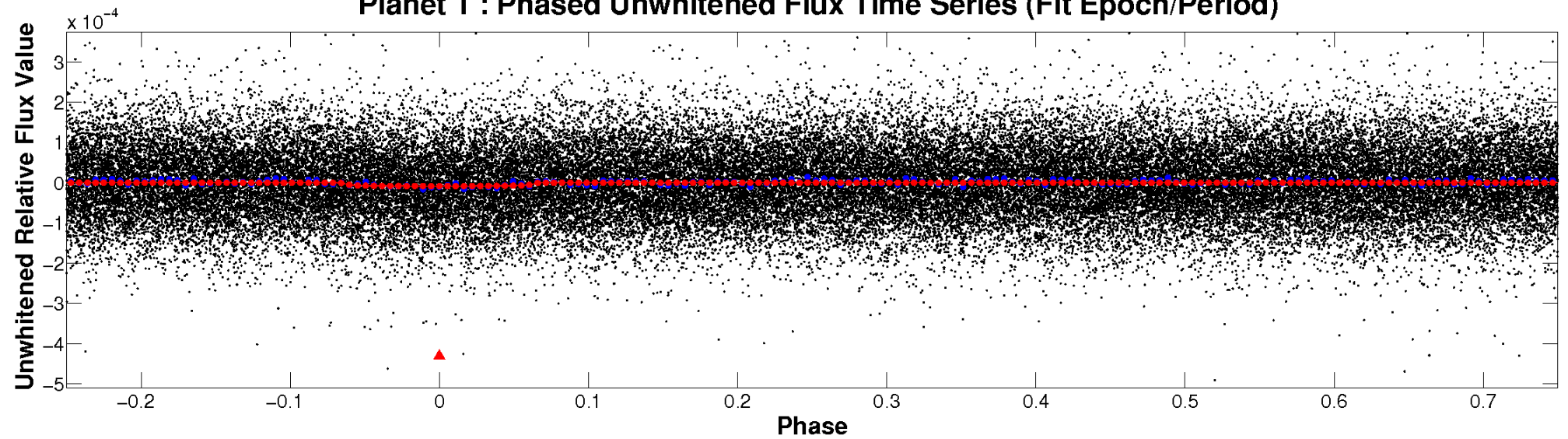
ALT Odd/Even

TCE 006205507-01

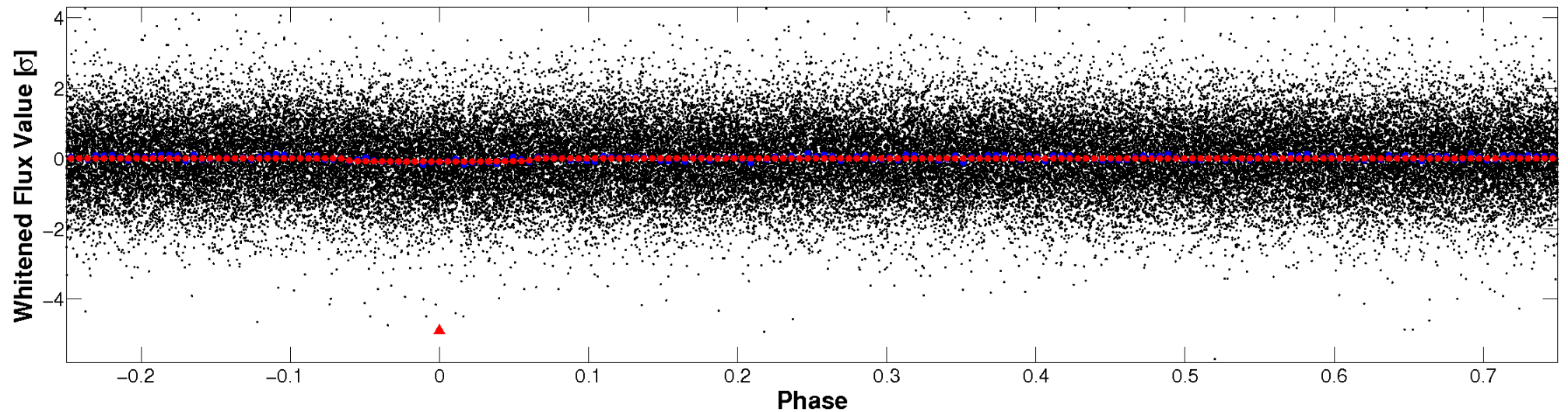


Non-Whitened Vs. Whitened Light Curve

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

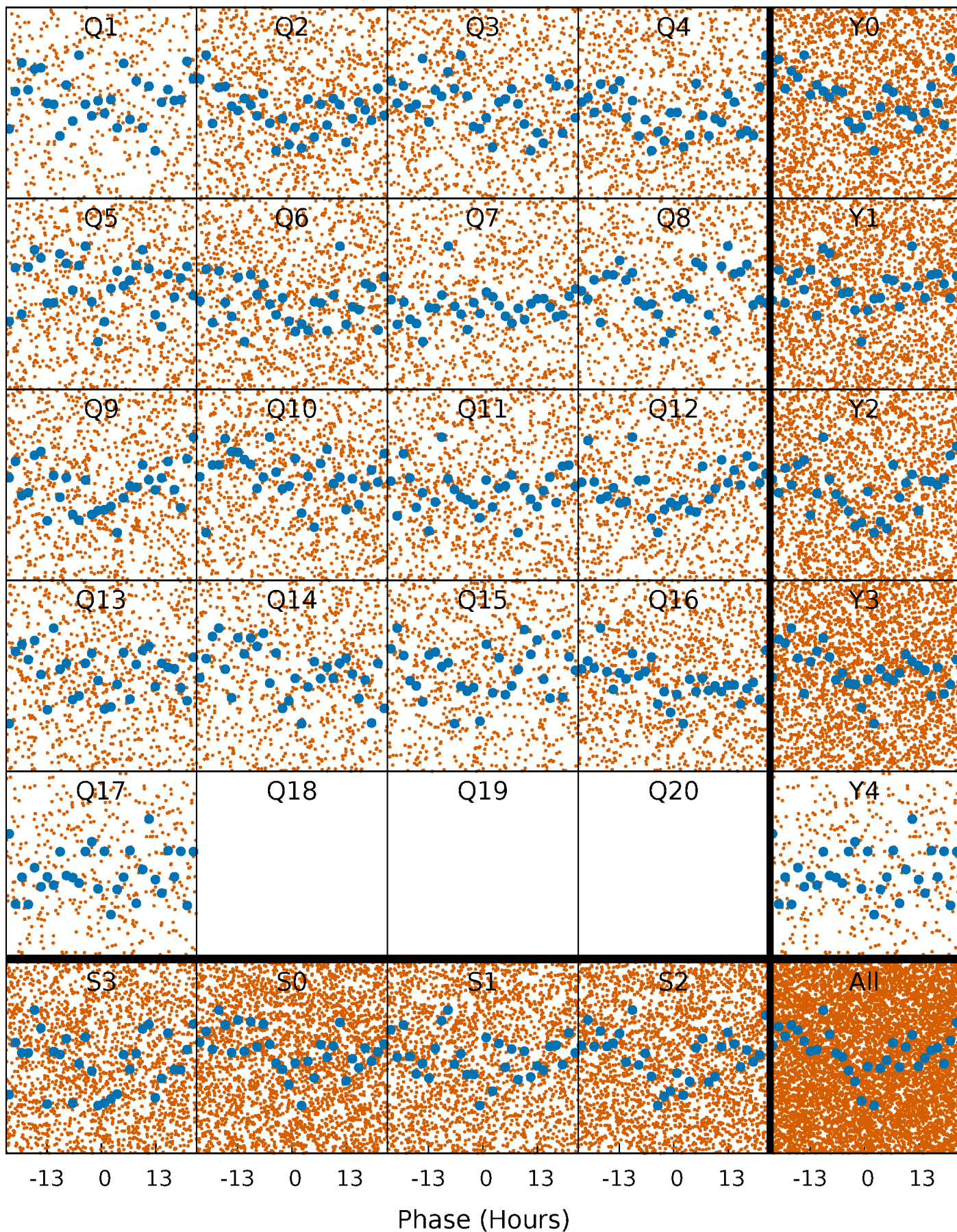


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



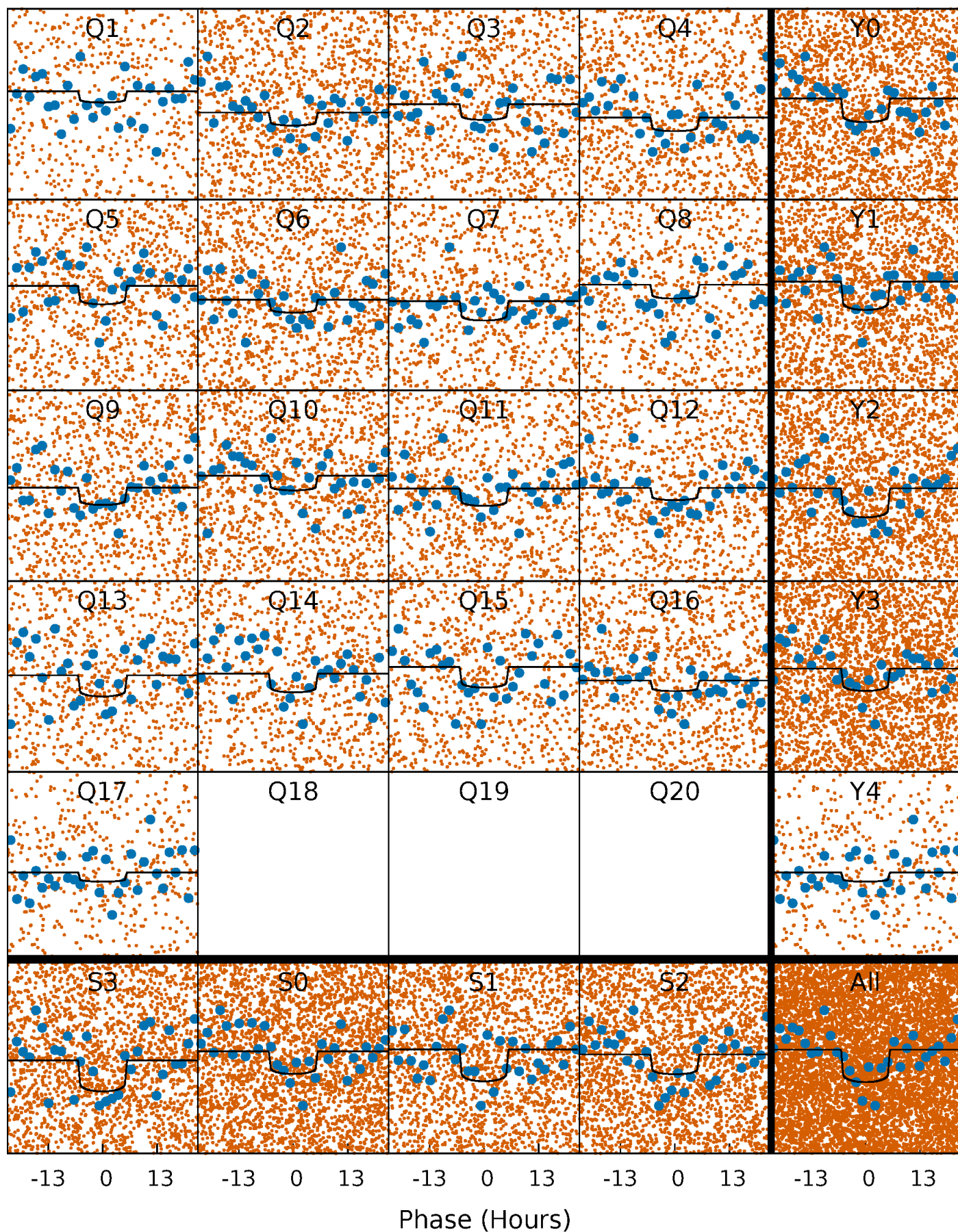
PDC Quarter-Phased Transit Curves

TCE 006205507-01 P= 3.722820 Days $T_0=134.624391$ (BKJD)



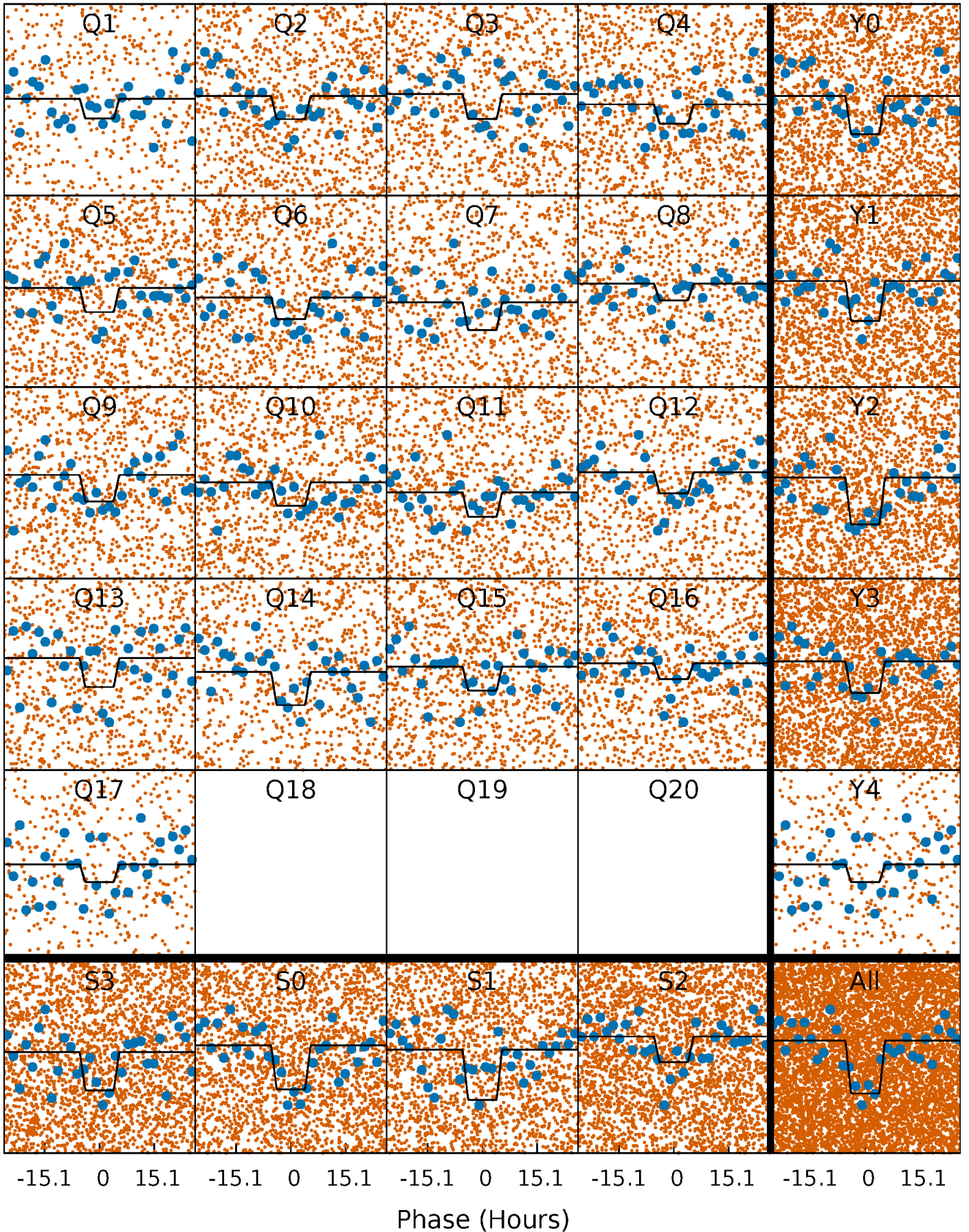
DV Quarter-Phased Transit Curves

TCE 006205507-01 P= 3.722820 Days $T_0=134.624391$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

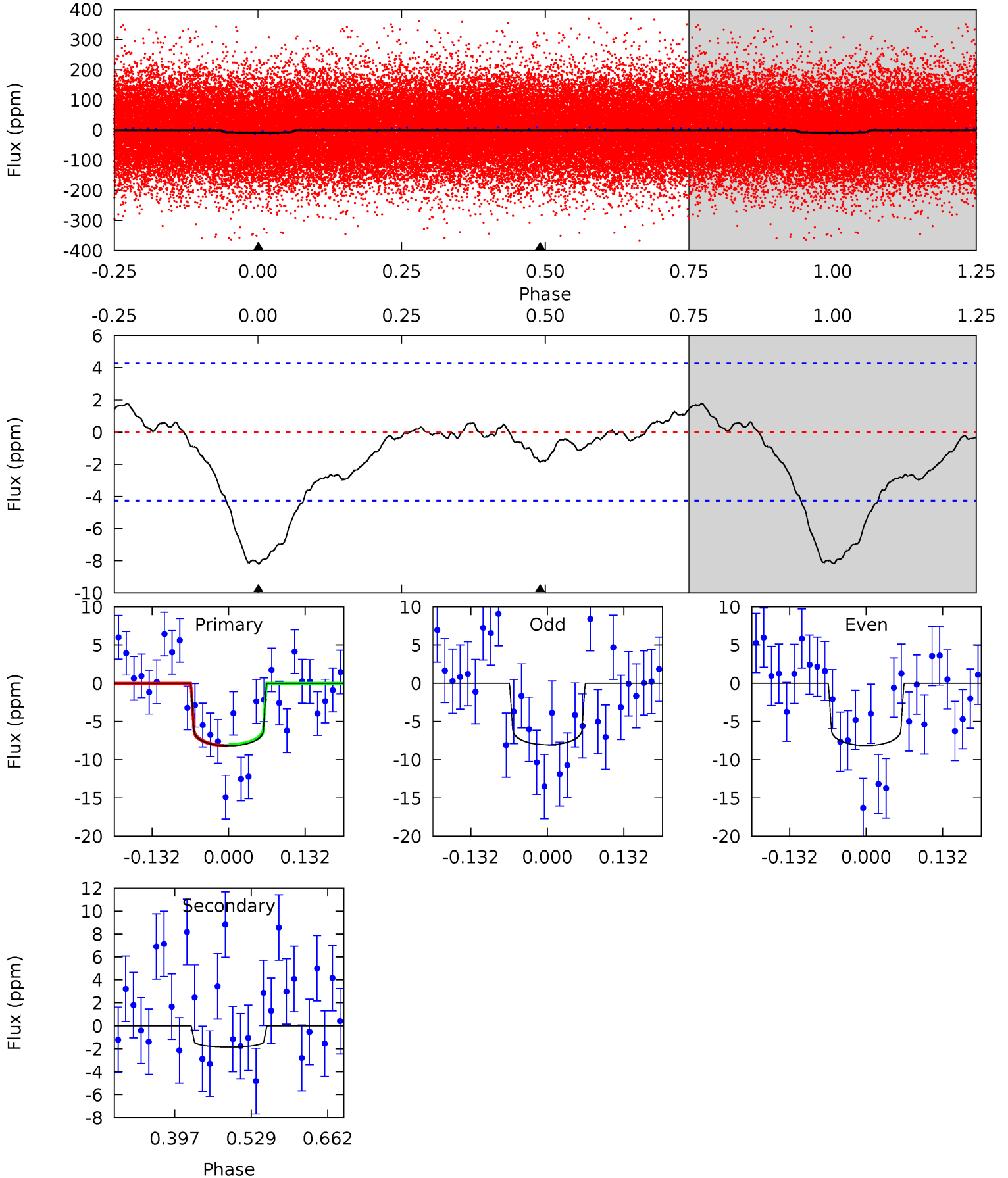
TCE 006205507-01 P= 3.722783 Days $T_0=134.629736$ (BKJD)



DV Model-Shift Uniqueness Test

006205507-01, P = 3.722820 Days, E = 130.901571 Days

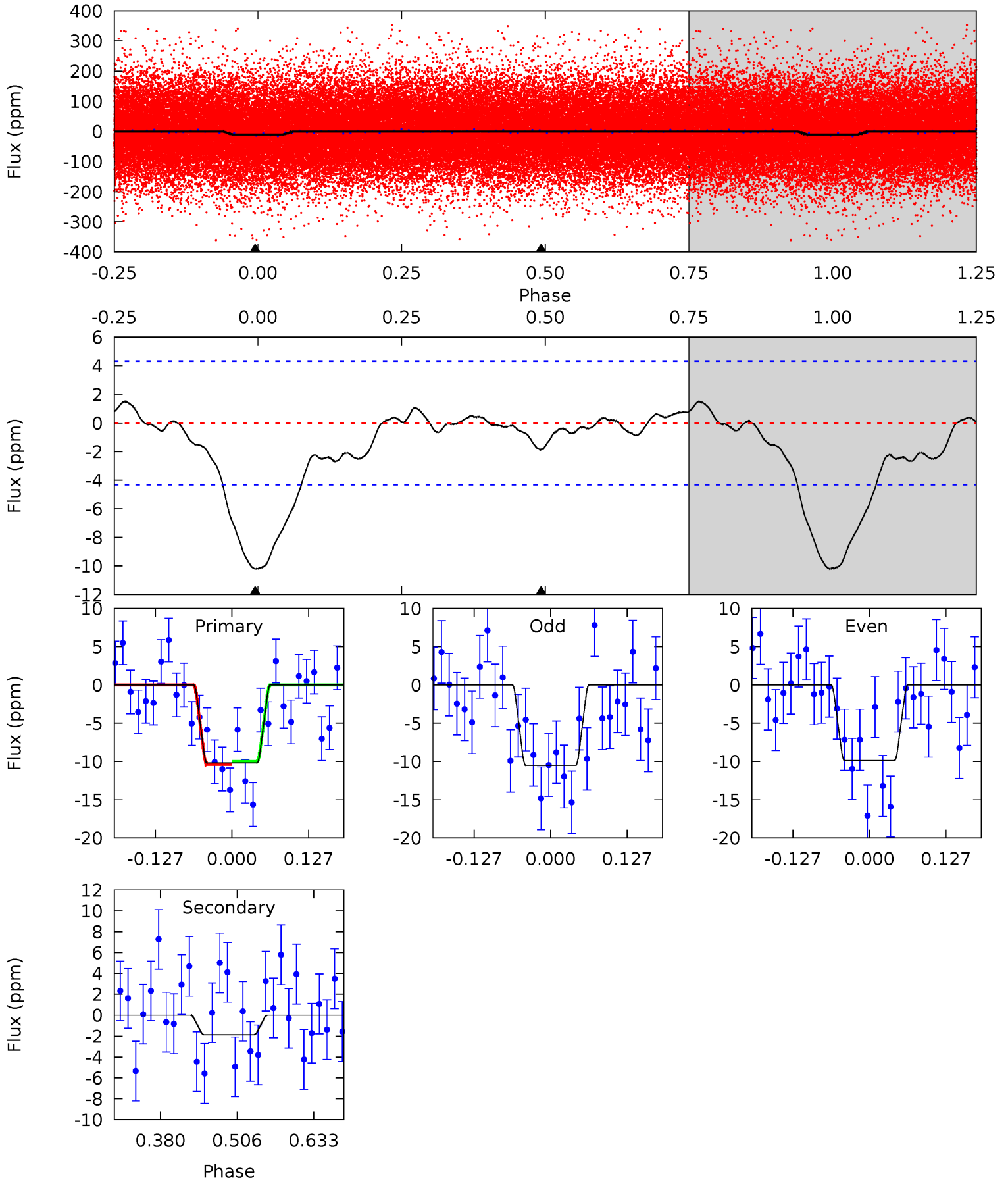
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.64	1.95	0	0	4.51	1.50	1.19	8.64	8.64	1.95	1.95	0.06	0.93	0.18	0.08



Alt Model-Shift Uniqueness Test

006205507-01, P = 3.722783 Days, E = 130.906953 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	1.95	0	0	4.52	1.53	1.11	10.7	10.7	1.95	1.95	0.34	1.02	0.13	0.23



Stellar Parameters For KIC 006205507

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11121^{+343}_{-457}	$4.374^{+0.031}_{-0.178}$	$-0.500^{+0.050}_{-0.500}$	$1.567^{+0.480}_{-0.085}$	$2.119^{+0.264}_{-0.132}$	$0.776^{+0.101}_{-0.370}$
	+3%/-4%	+1%/-4%	+10%/-100%	+31%/-5%	+12%/-6%	+13%/-48%
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 006205507-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$0.54^{+0.11}_{-0.10}$	3558^{+242}_{-168}	6637^{+1117}_{-1322}	12^{+9}_{-7}
Alt.	-2 ± 1	$0.60^{+0.11}_{-0.10}$	3551^{+245}_{-176}	6225^{+1031}_{-1049}	10^{+7}_{-6}

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

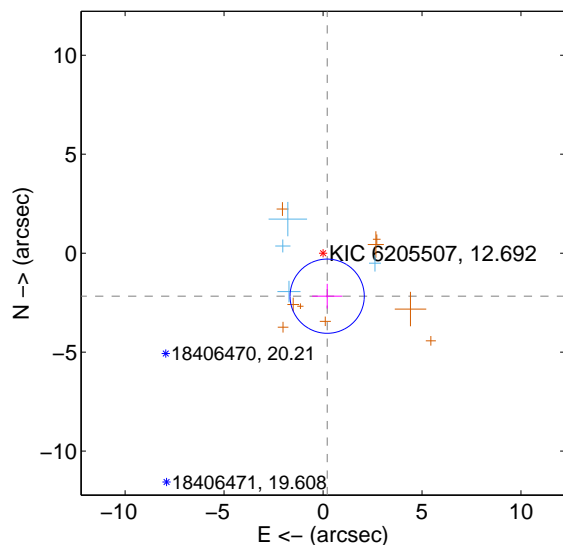
Supplemental centroid analysis for 006205507-01. Kepler magnitude: 12.69. Transit SNR 7.05

There are 4 quarters with good PRF difference image offsets

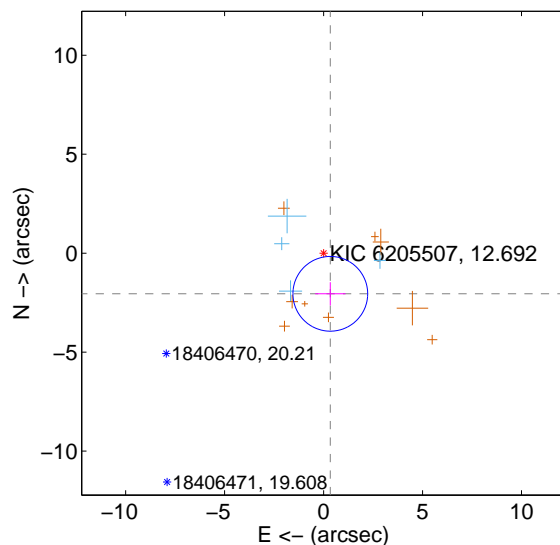
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.183 ± 0.625	3.49	-0.208 ± 0.762	-2.173 ± 0.623
PRF-fit source offset from KIC position	2.080 ± 0.629	3.31	-0.340 ± 0.767	-2.052 ± 0.587
photometric centroid source offset	4.27 ± 1.97	2.16	1.68 ± 1.85	-3.92 ± 1.99

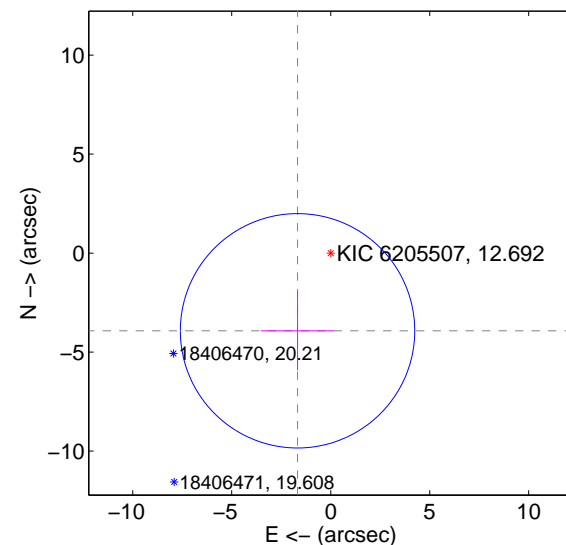
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

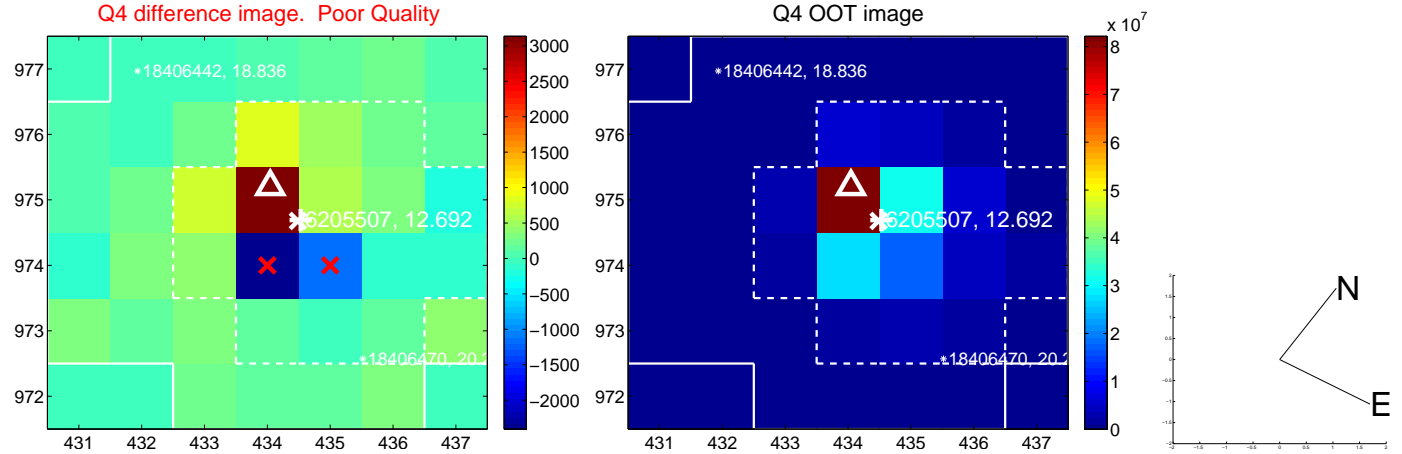
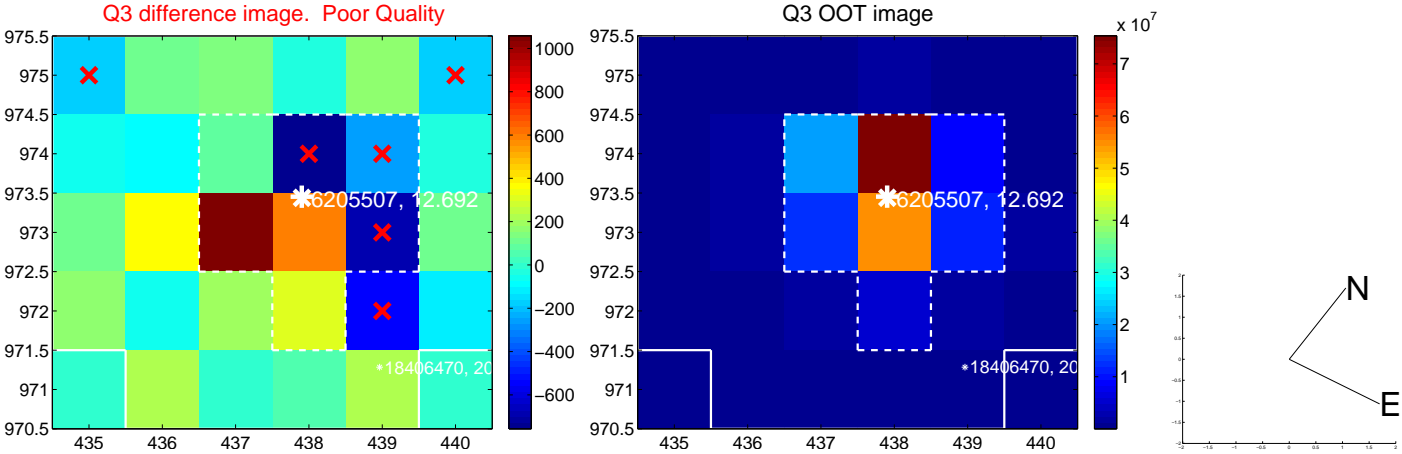
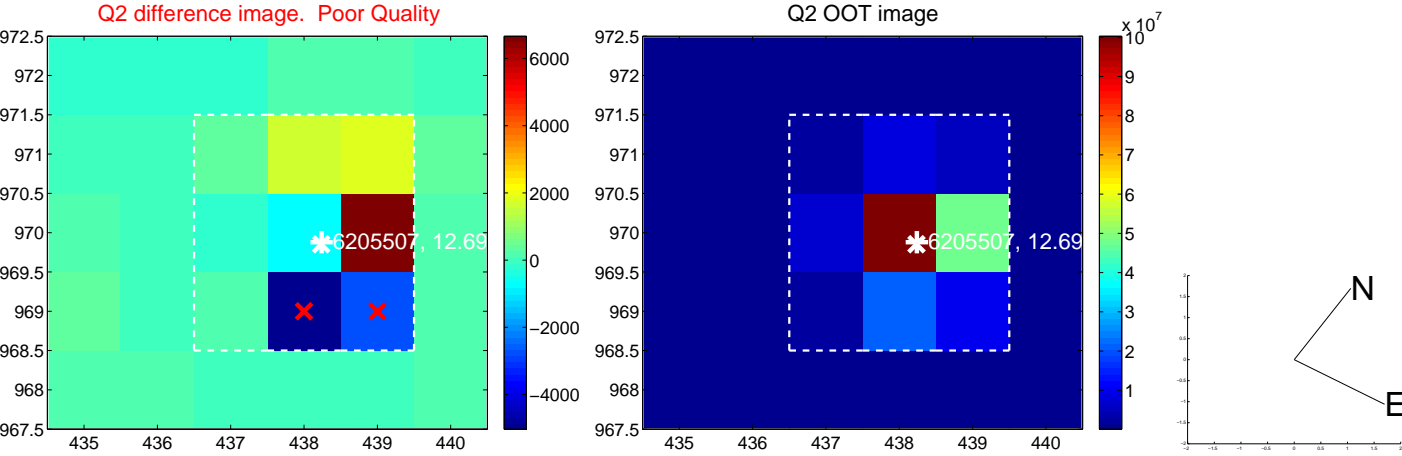
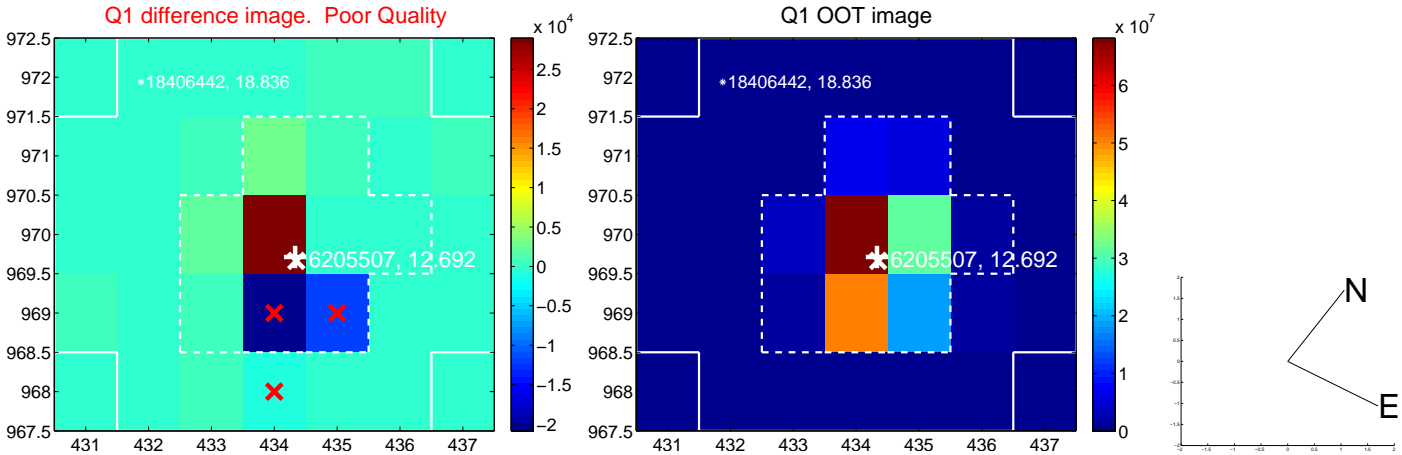


offset from photometric centroids

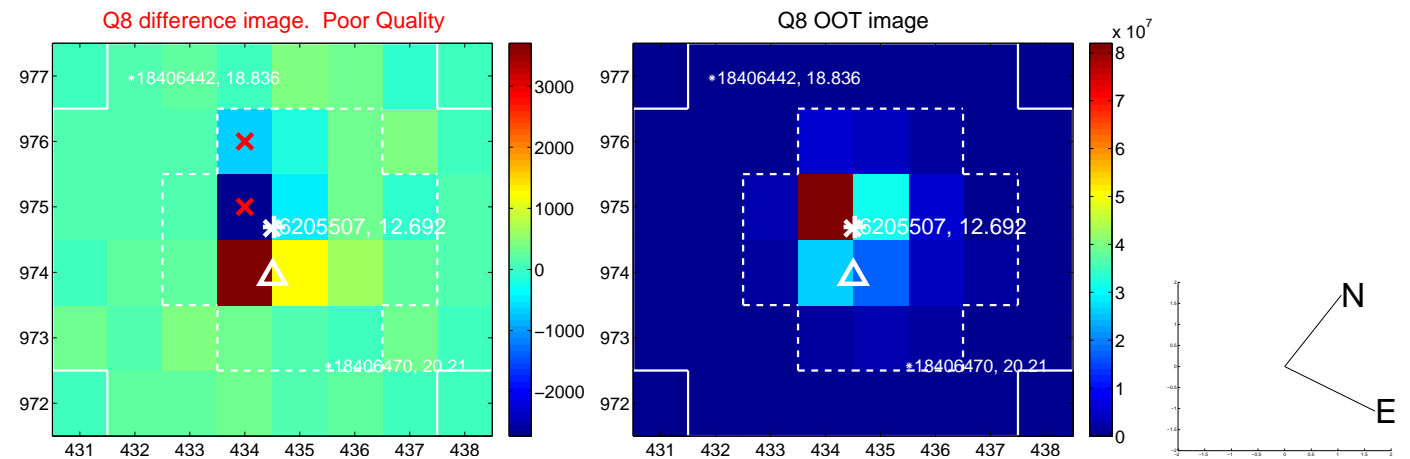
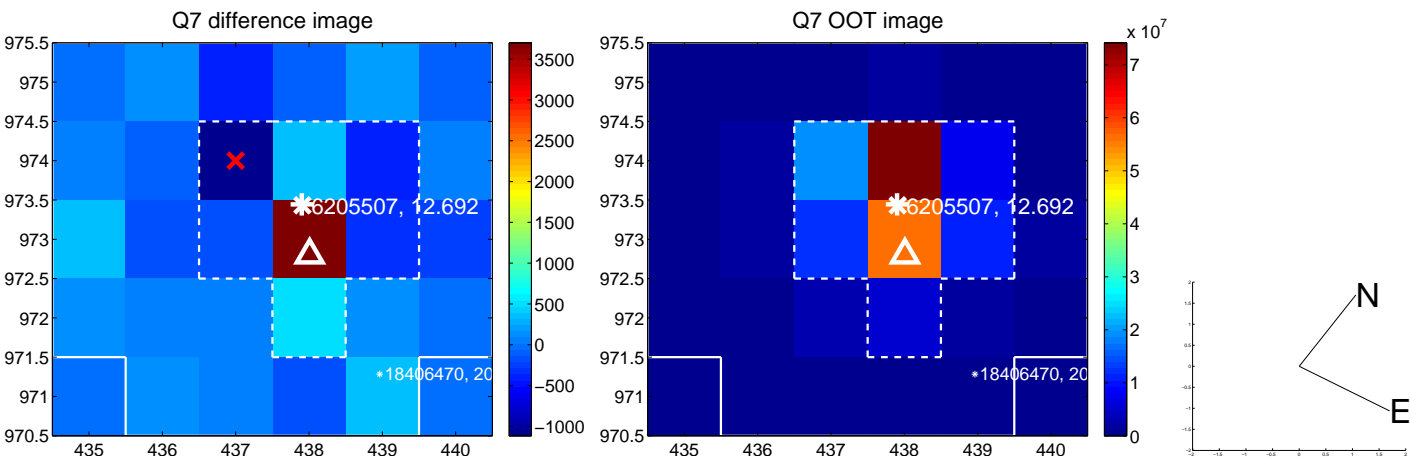
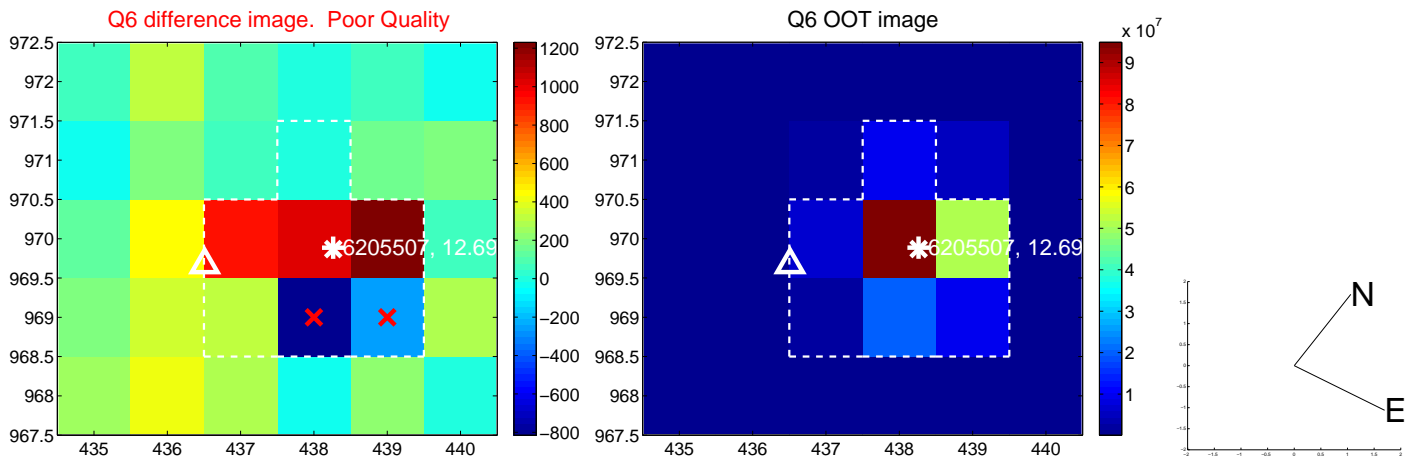
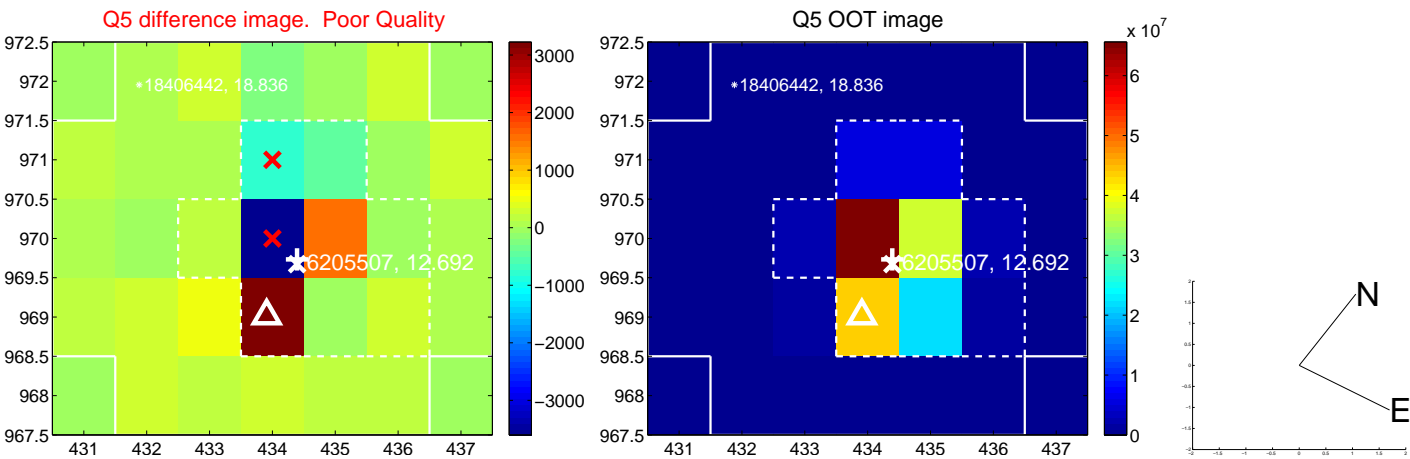


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

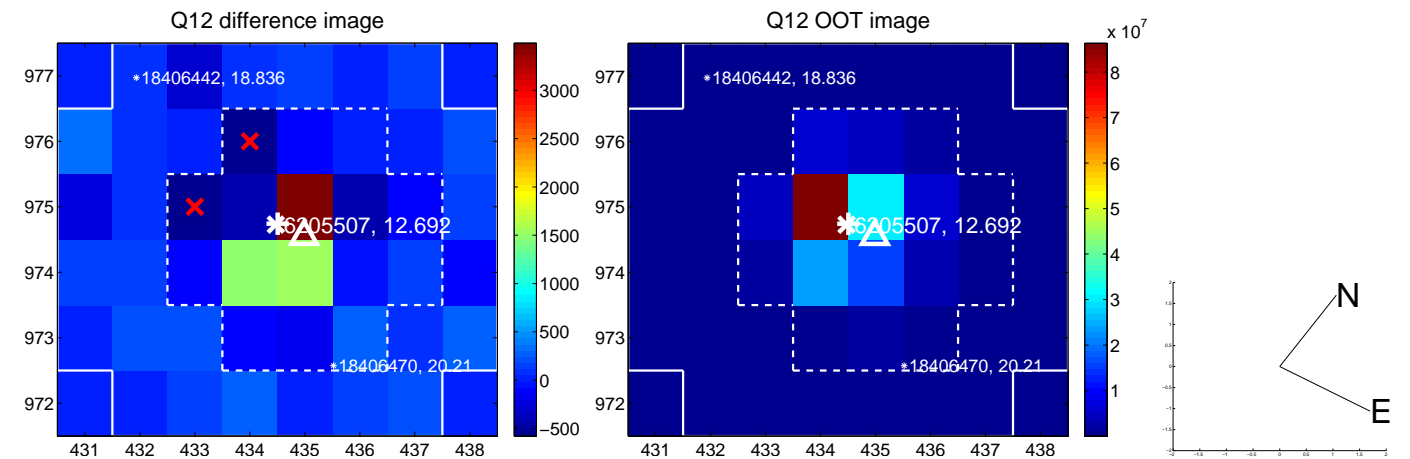
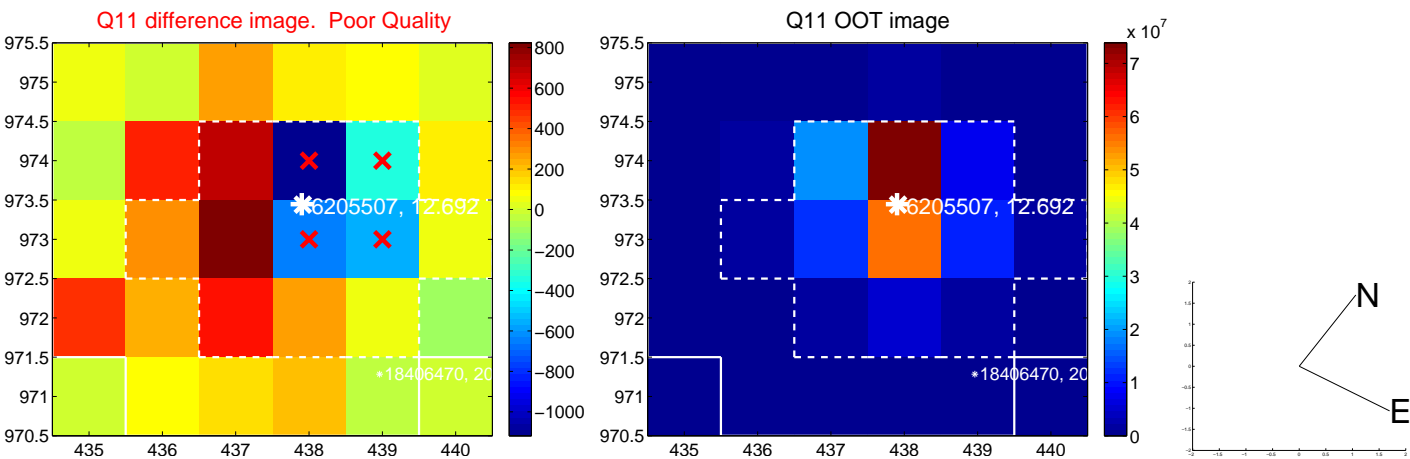
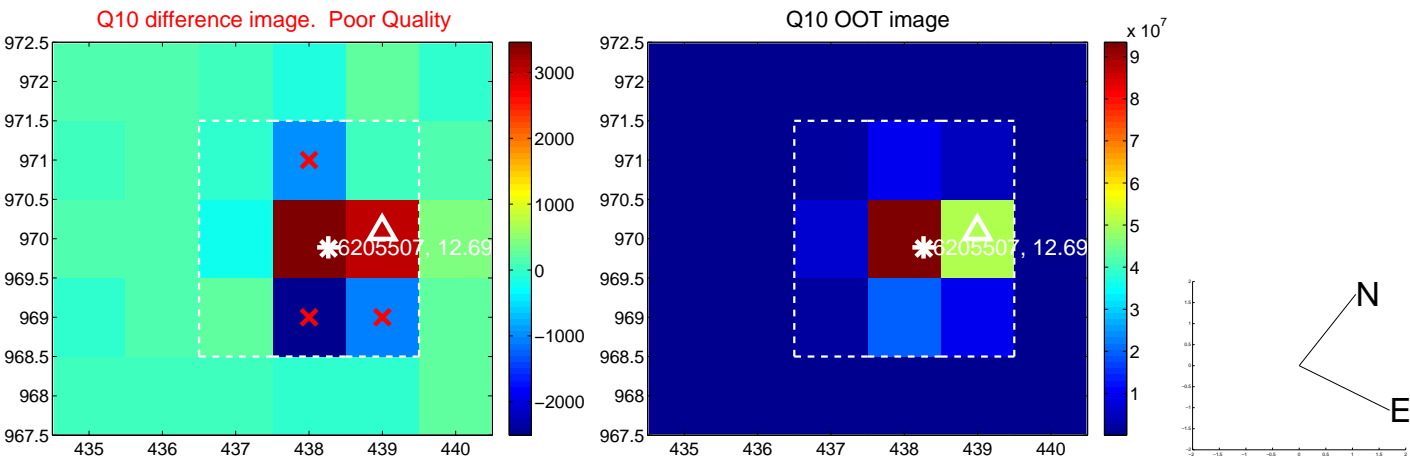
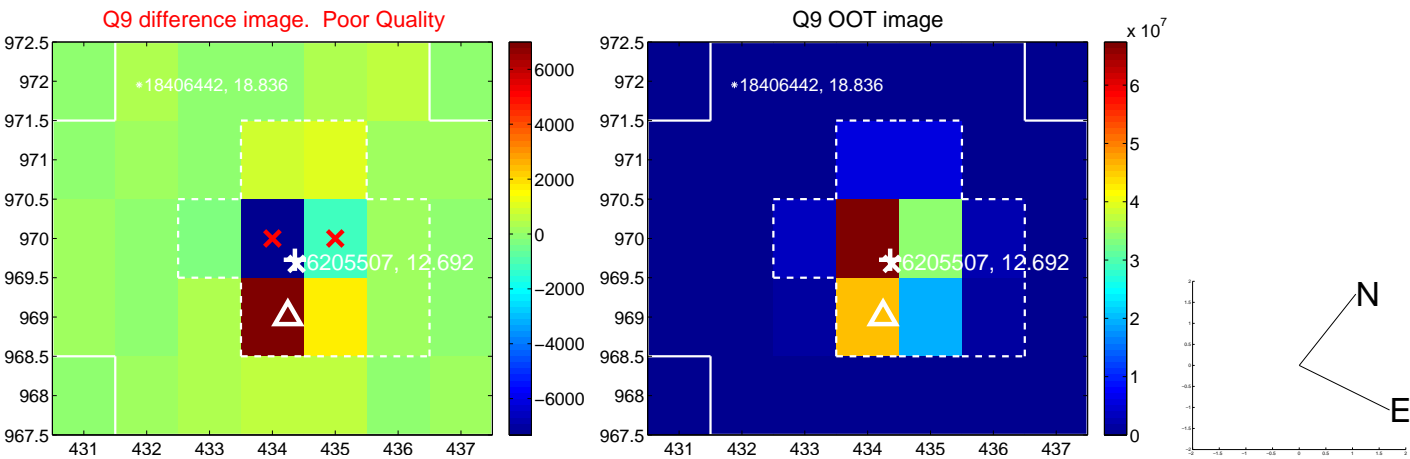
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



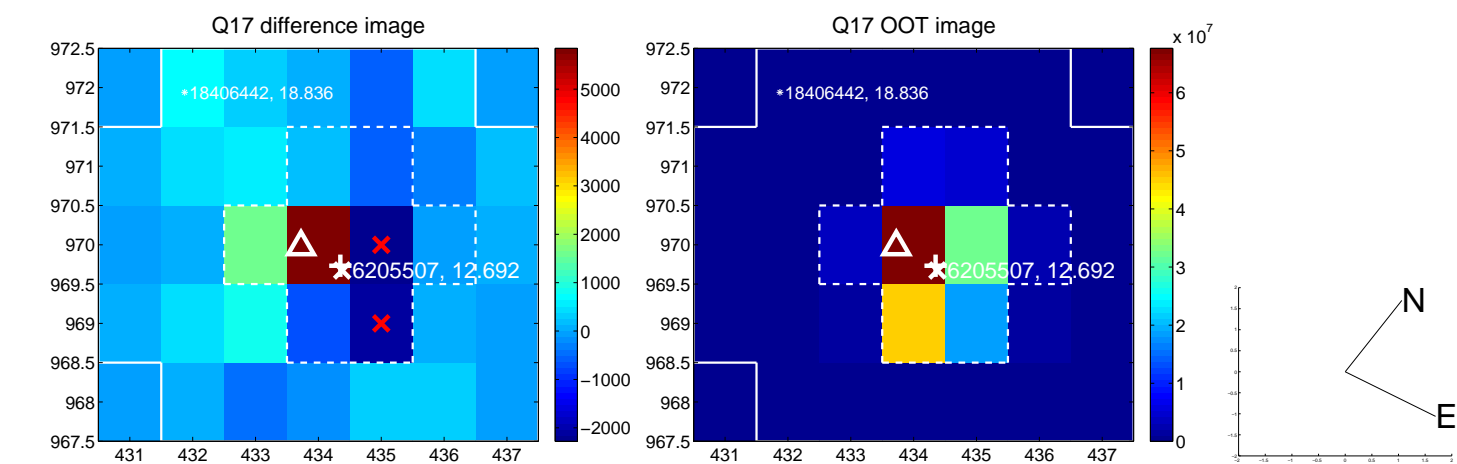
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



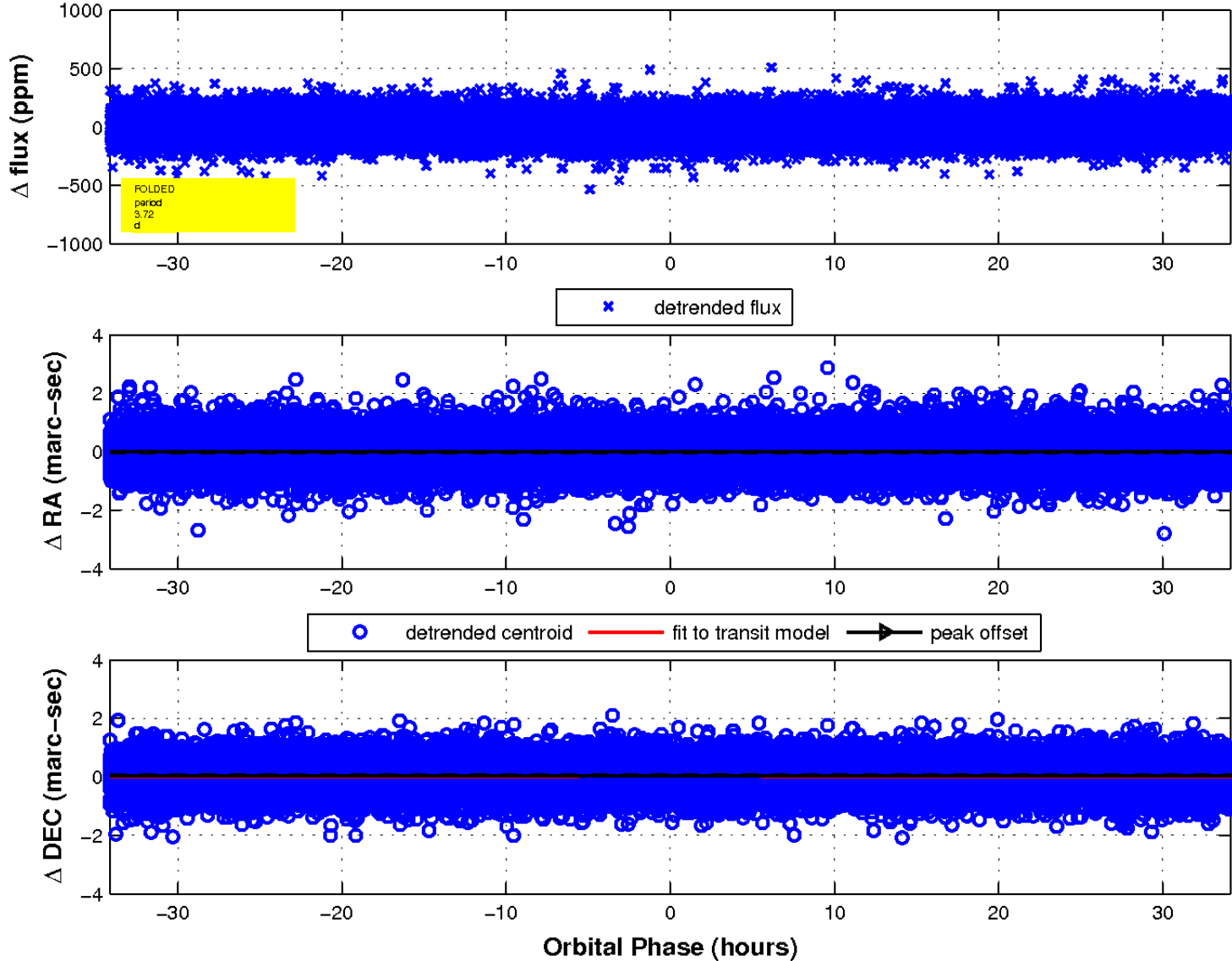
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

