

KIC 010554967

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})
010554967-01	OBS	3059.01	0.536327	131.719640	258.4	0.860	12.4	15.9	0.84	5508	1.65	3595.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010554967-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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 010554967-01

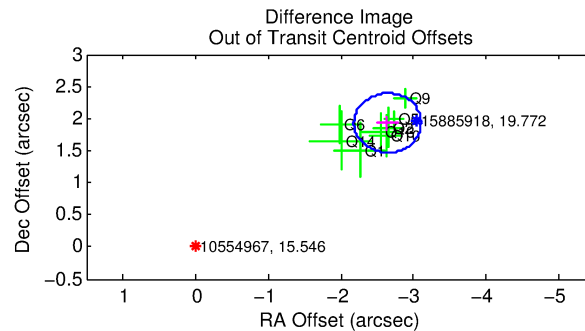
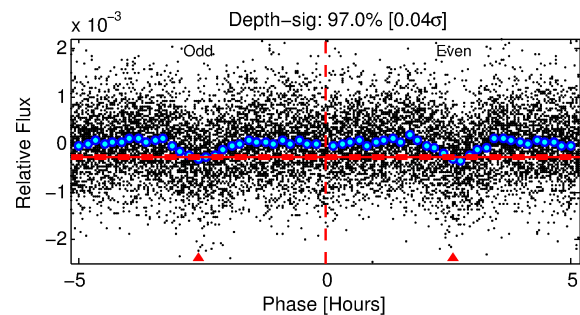
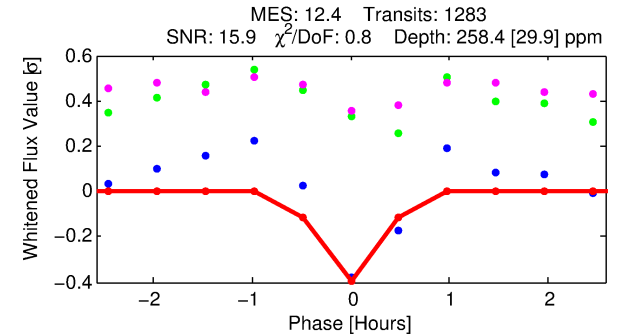
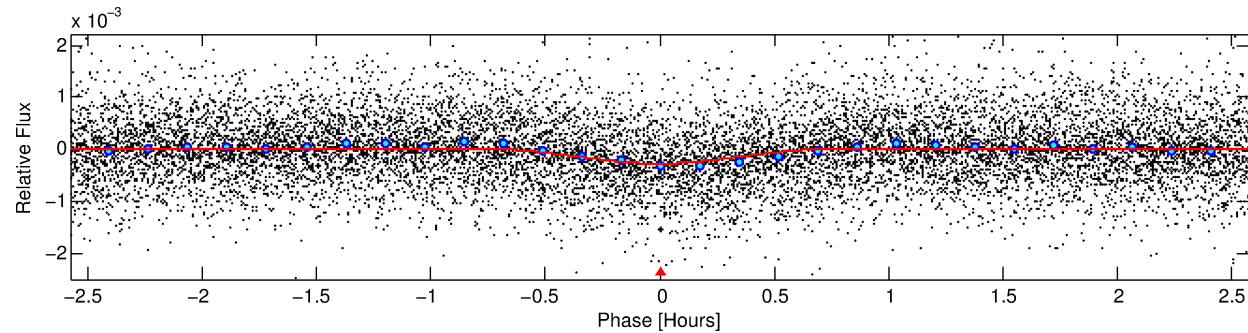
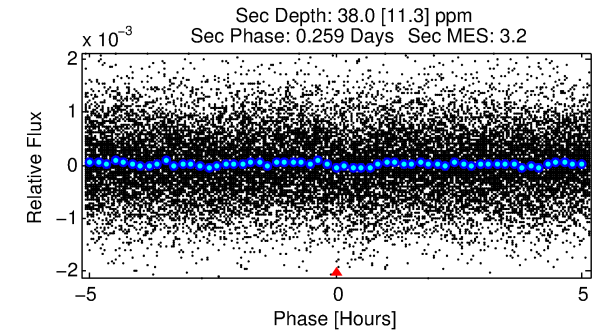
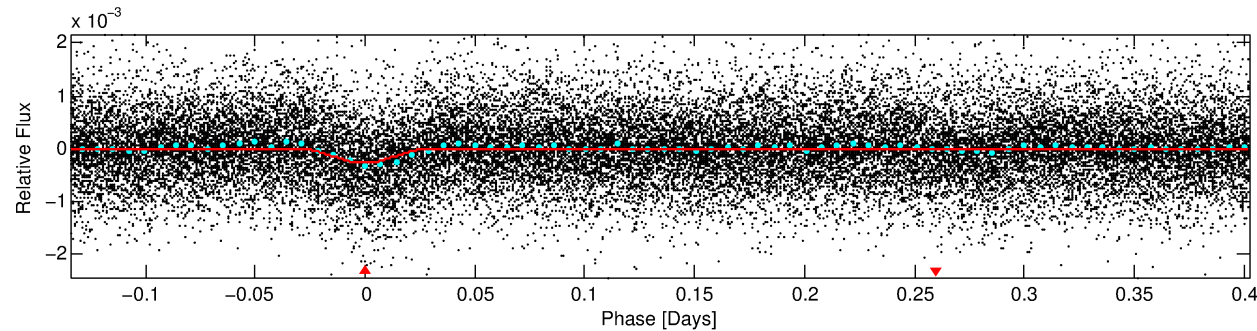
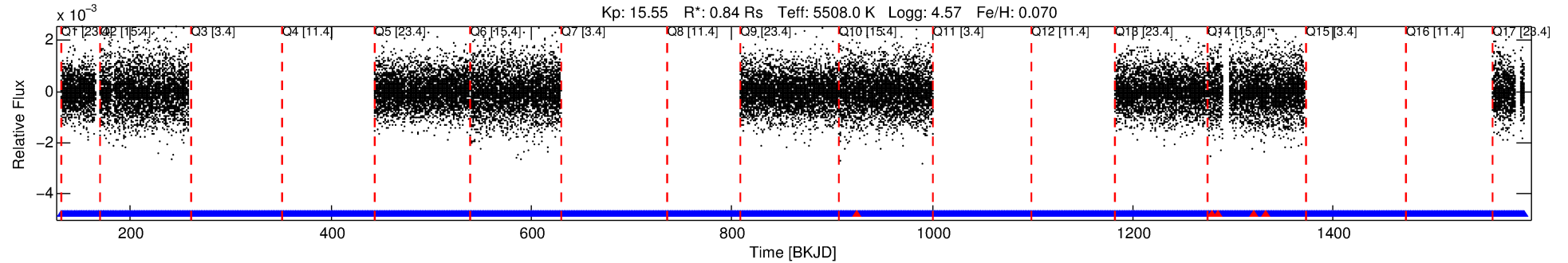
No Significant Match Found

DV One-Page Summary

KIC: 10554967 Candidate: 1 of 1 Period: 0.536 d

KOI: K03059.01 Corr: 0.787

Kp: 15.55 R*: 0.84 Rs Teff: 5508.0 K Logg: 4.57 Fe/H: 0.070



DV Fit Results:

Period = 0.53633 [0.00001] d
Epoch = 131.7196 [0.0010] BKJD
Rp/R* = 0.0180 [0.0112]
a/R* = 2.44 [5.54]
b = 0.90 [0.58]
Seff = 3595.97 [1160.36]
Teq = 1975 [159] K
Rp = 1.65 [1.10] Re
a = 0.0127 [0.0026] AU
Ag = 1.24 [1.64] [0.15σ]
Teff = 3224 [1041] K [1.19σ]

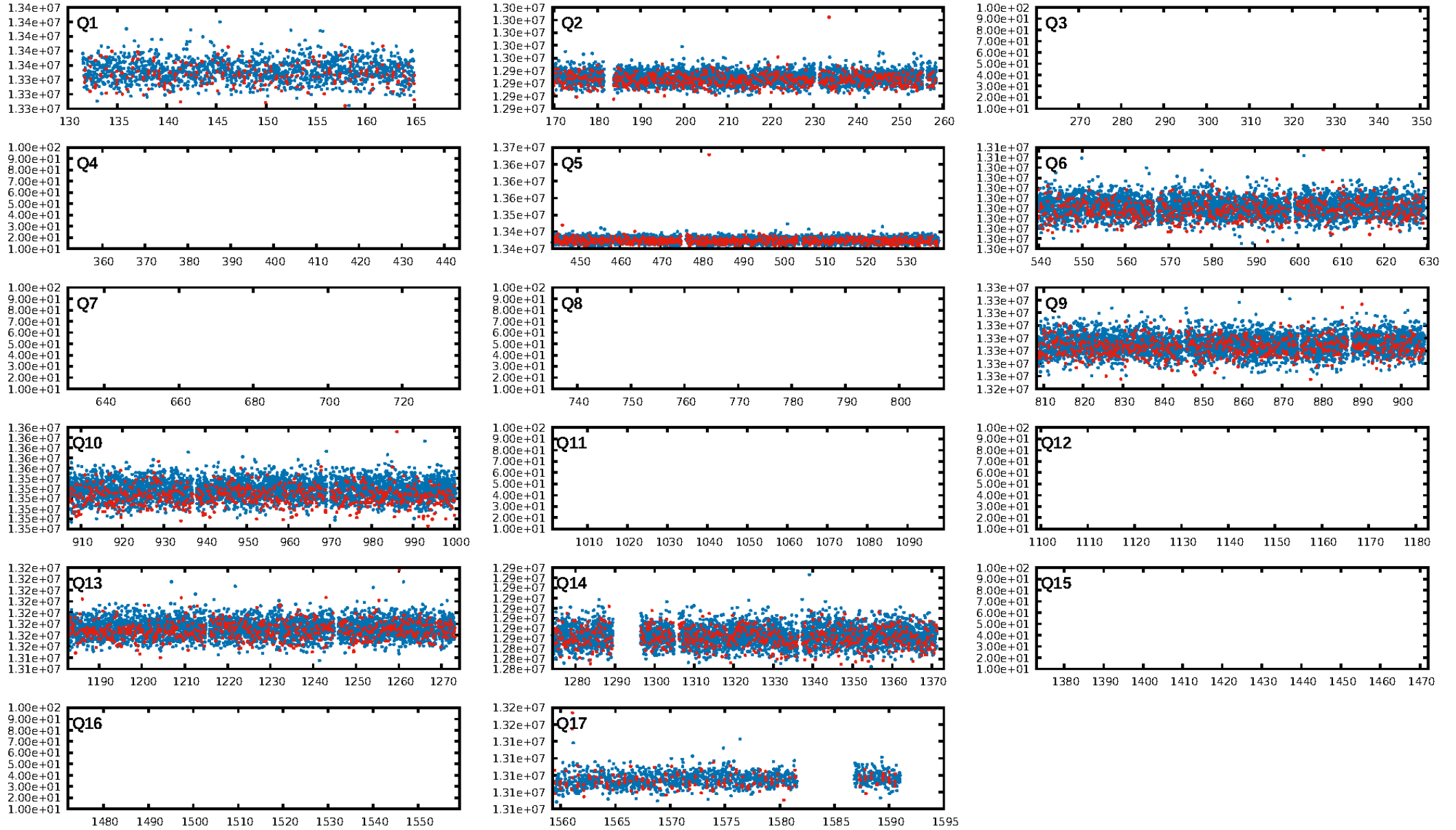
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-33
RollingBand-fgt: 1.00 [1166/1171]
GhostDiagnostic-chr: 0.8171
Centroid-sig: 0.0%
Centroid-so: 5.976 arcsec [6.22σ]
OotOffset-rm: 3.273 arcsec [21.16σ]
KicOffset-rm: 3.327 arcsec [21.07σ]
OotOffset-st: 4/0/0/4 [8]
KicOffset-st: 4/0/0/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [9/9]

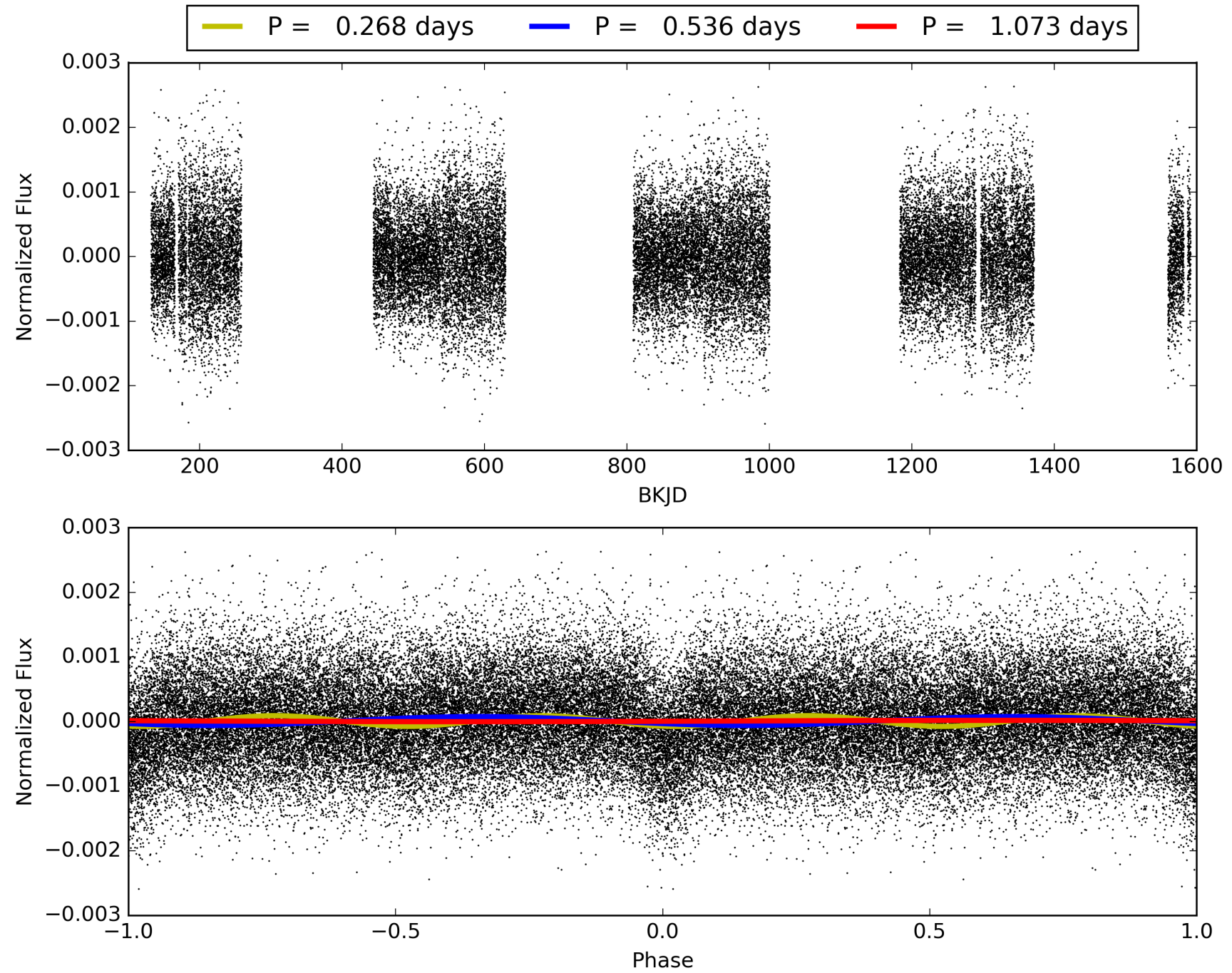
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:41:23 Z

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

TCE 010554967-01, PDC Light Curves

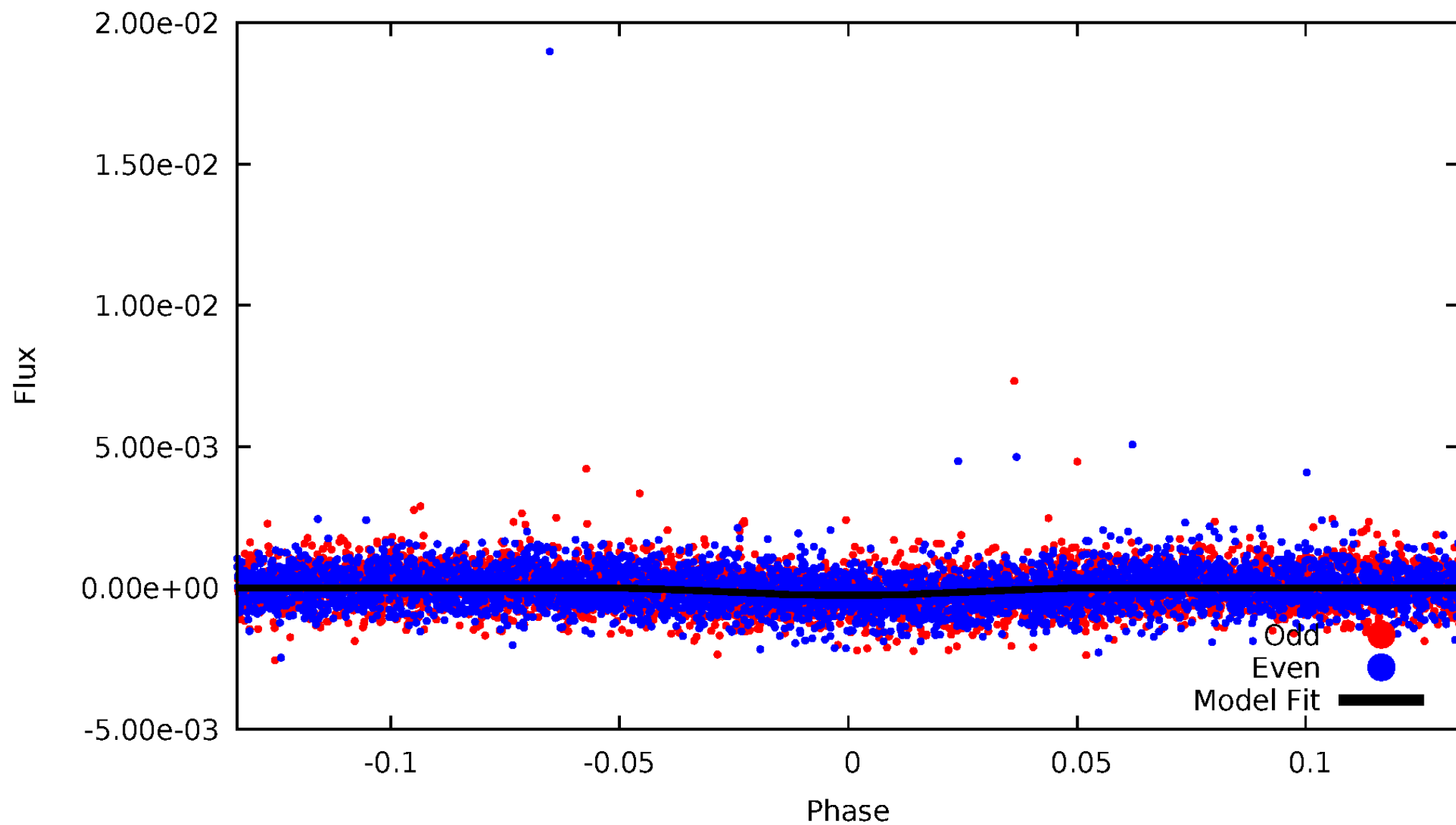


TCE 010554967-01



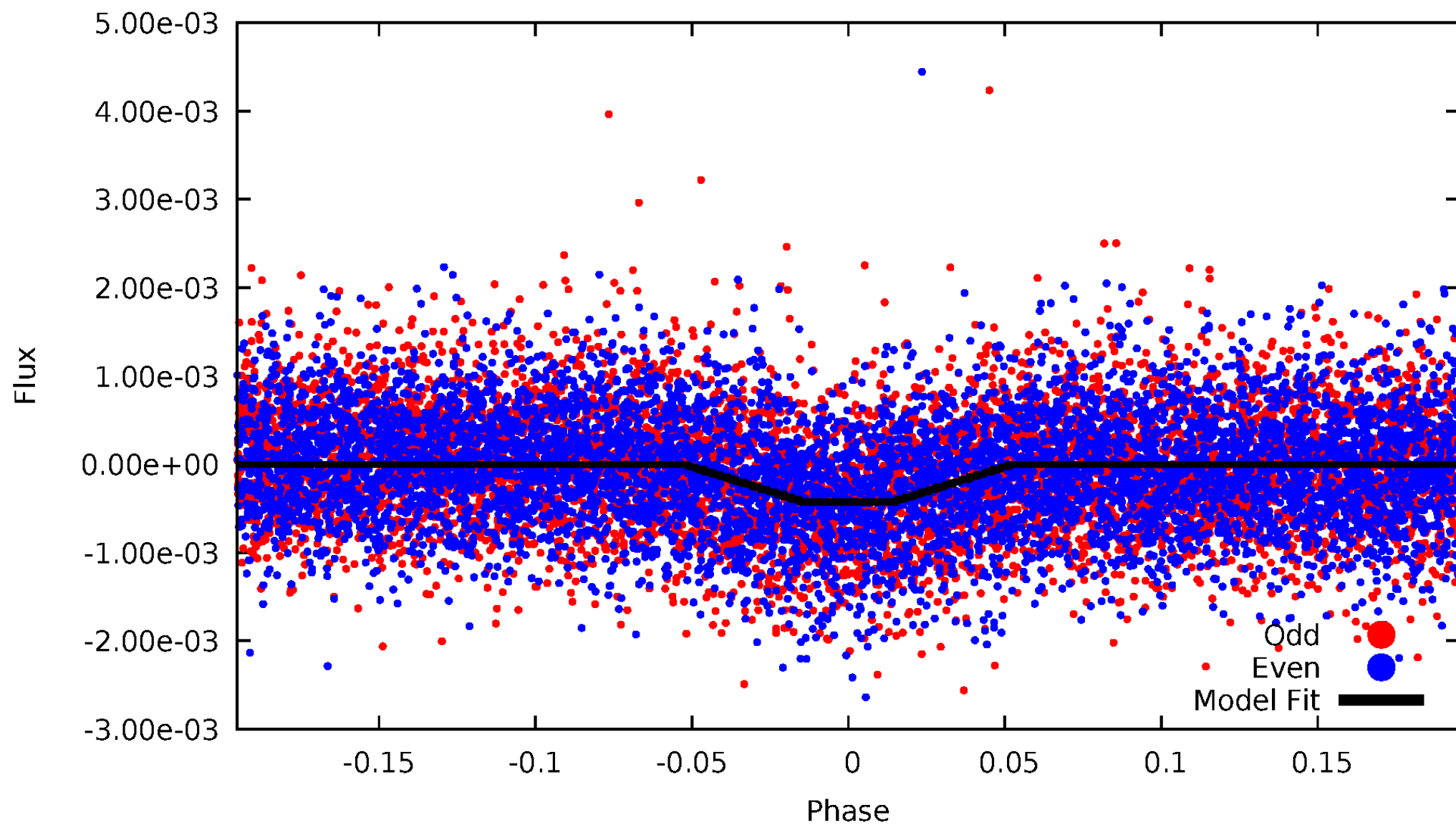
DV Odd/Even

TCE 010554967-01

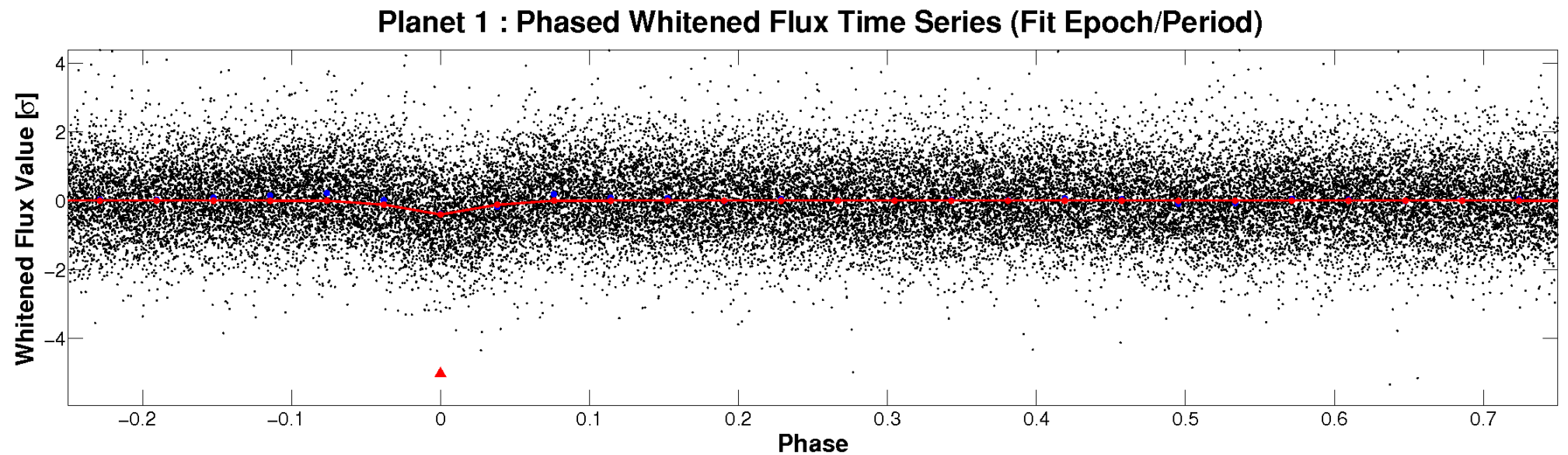
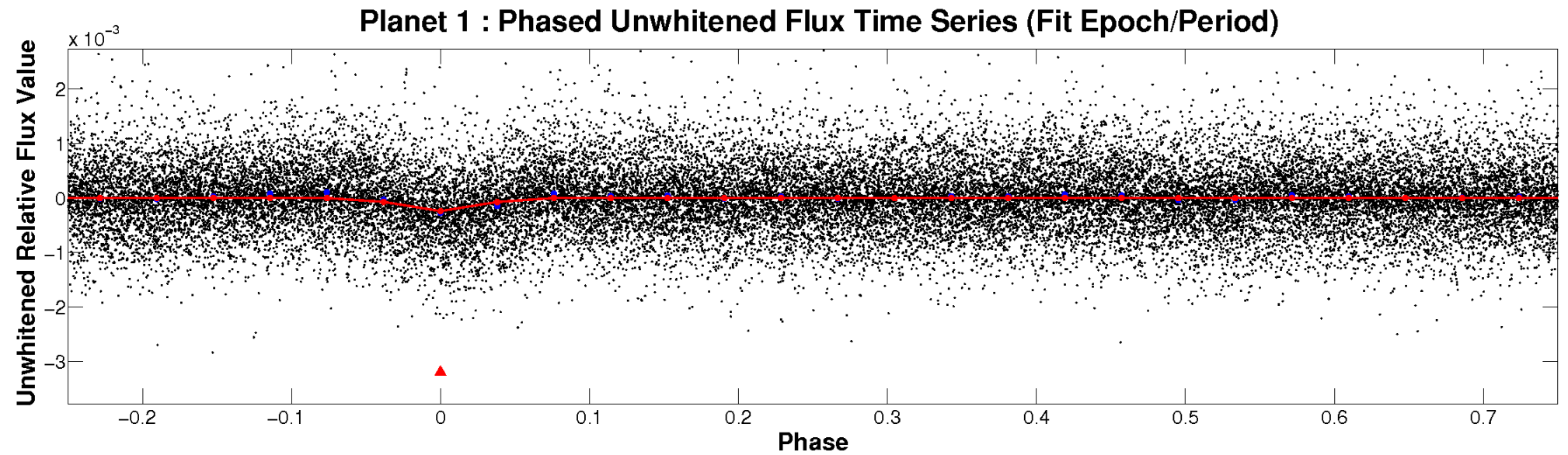


ALT Odd/Even

TCE 010554967-01

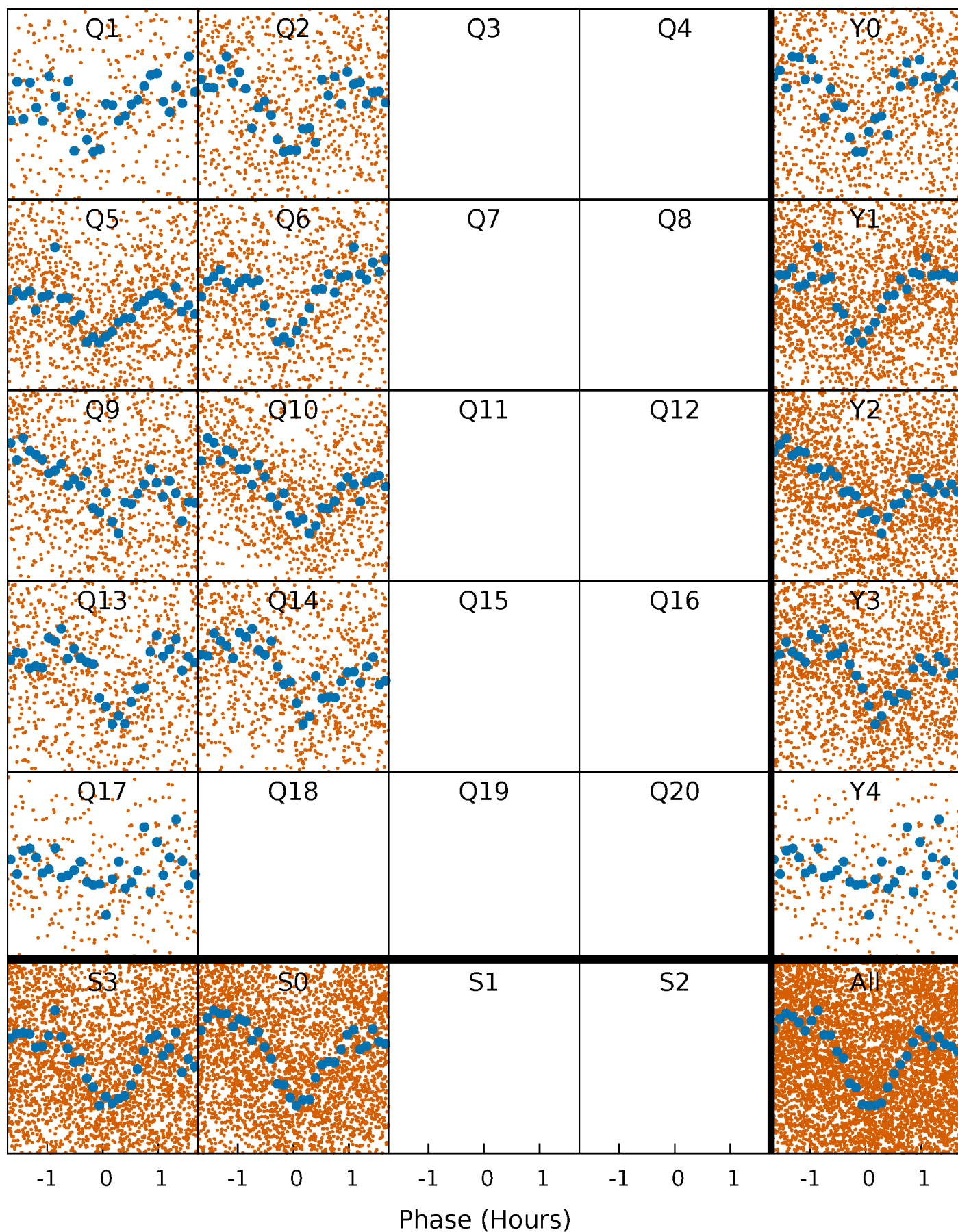


Non-Whitened Vs. Whitened Light Curve



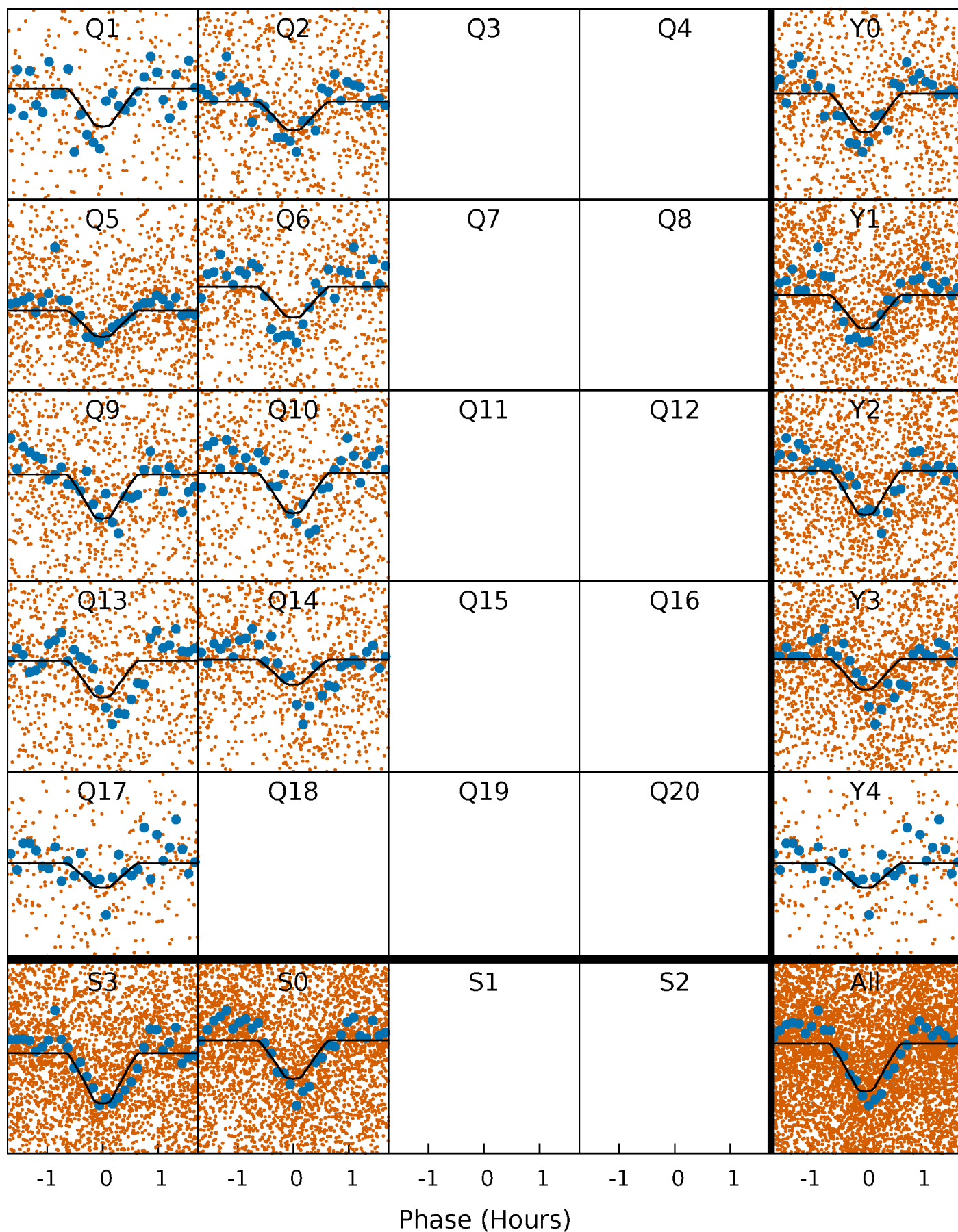
PDC Quarter-Phased Transit Curves

TCE 010554967-01 P= 0.536327 Days $T_0=131.719640$ (BKJD)



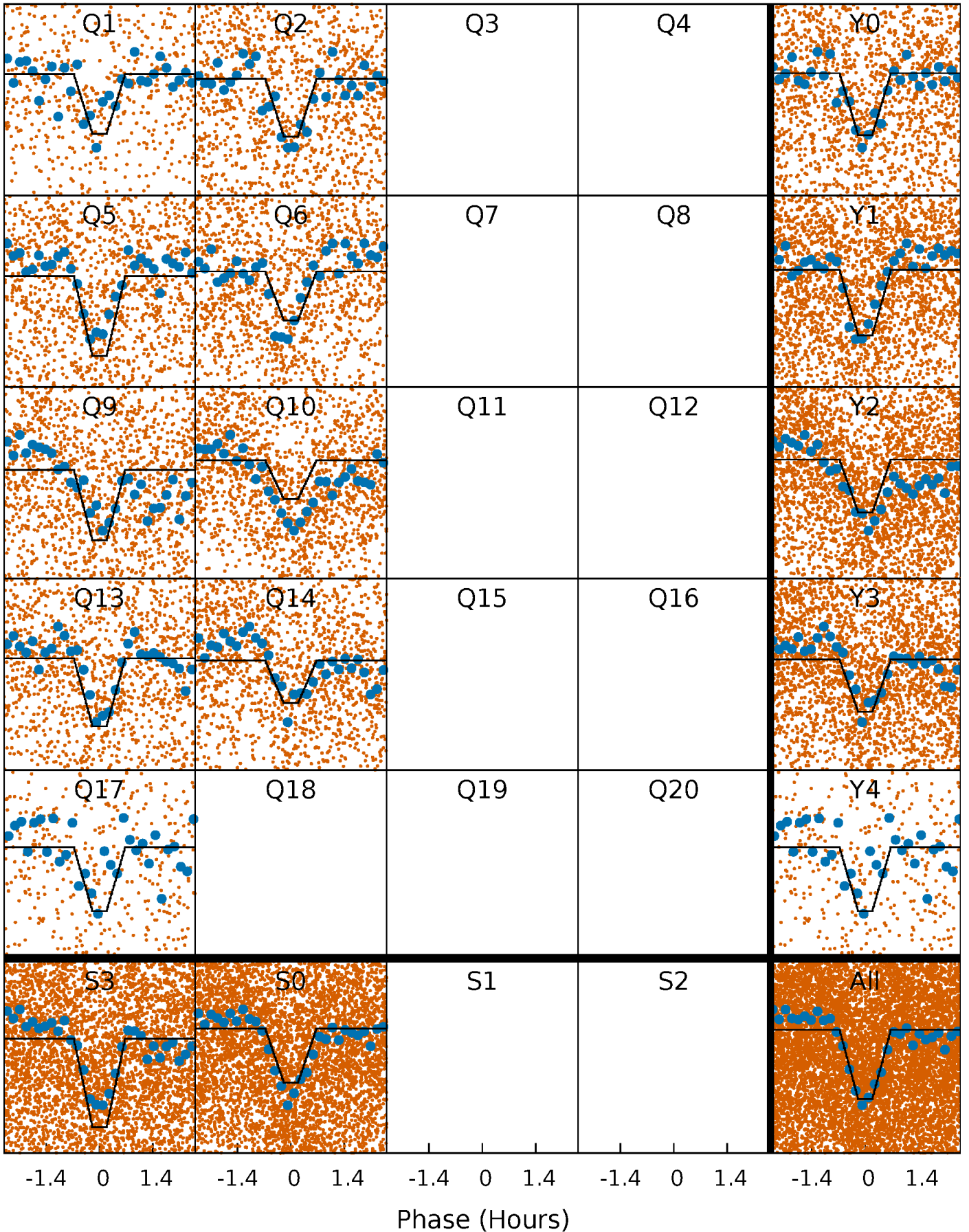
DV Quarter-Phased Transit Curves

TCE 010554967-01 P= 0.536327 Days $T_0=131.719640$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

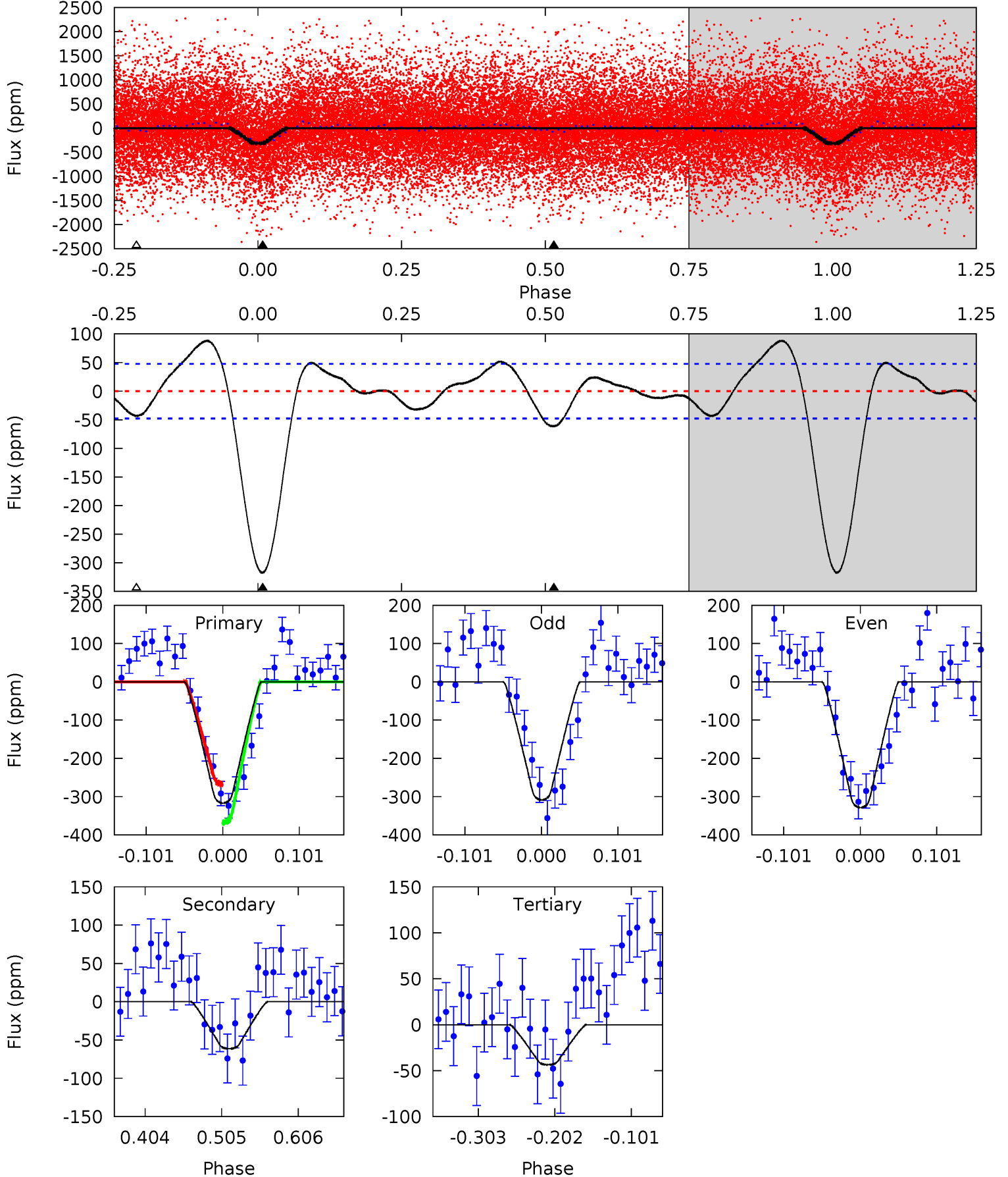
TCE 010554967-01 P= 0.536333 Days $T_0=131.716747$ (BKJD)



DV Model-Shift Uniqueness Test

010554967-01, P = 0.536327 Days, E = 131.183313 Days

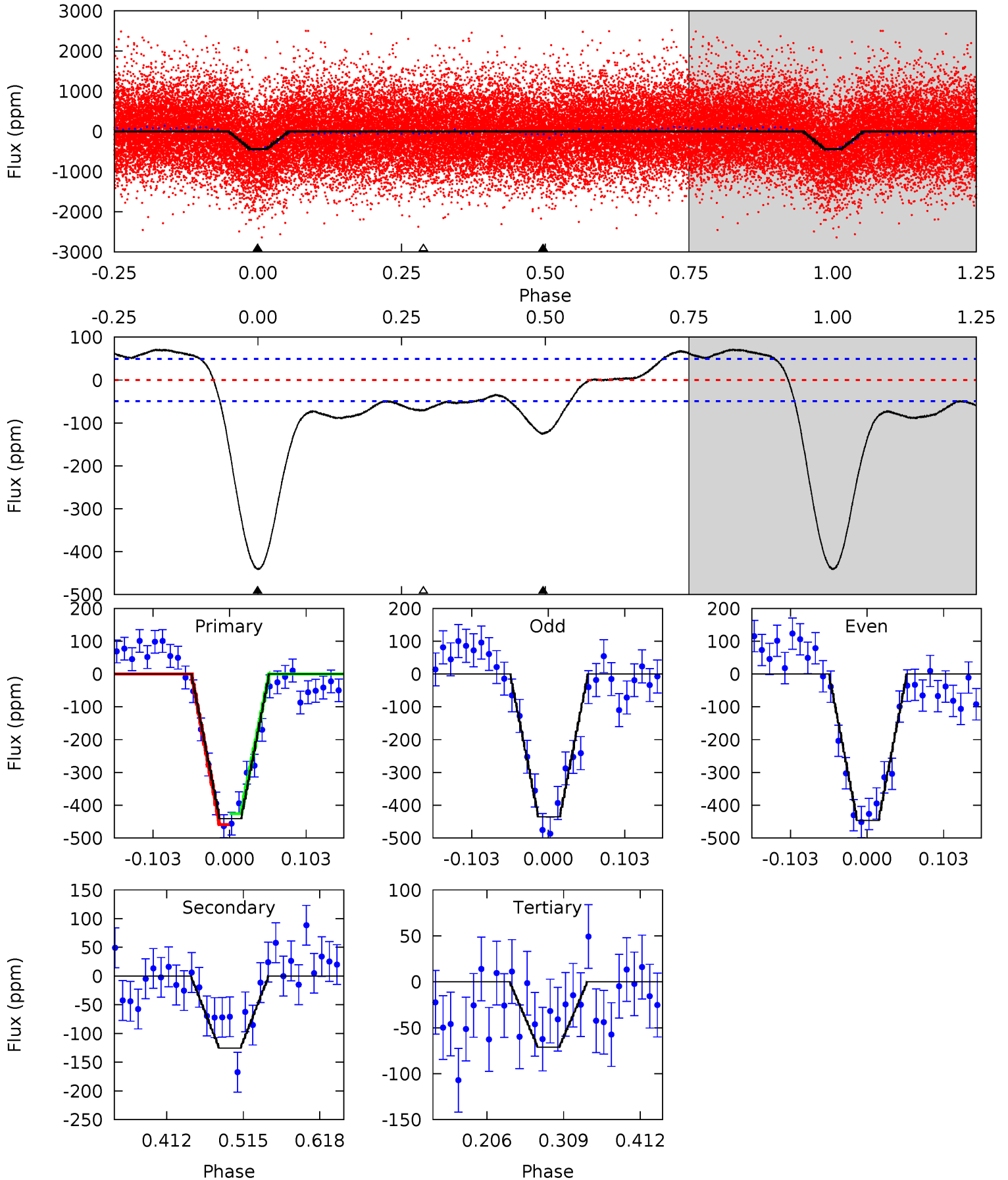
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	5.88	4.18	0	4.56	1.64	2.63	26.2	30.4	1.70	5.88	0.96	0.95	0.22	4.83



Alt Model-Shift Uniqueness Test

010554967-01, P = 0.536333 Days, E = 131.180414 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.9	11.6	6.60	0	4.56	1.63	5.39	34.3	40.9	5.04	11.6	0.49	1.04	0.14	1.55



Stellar Parameters For KIC 010554967

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5508^{+180}_{-180}	$4.569^{+0.029}_{-0.162}$	$0.070^{+0.250}_{-0.300}$	$0.840^{+0.200}_{-0.067}$	$0.955^{+0.073}_{-0.119}$	$2.266^{+0.363}_{-1.018}$
	+3%/-3%	+1%/-4%	+357%/-429%	+24%/-8%	+8%/-12%	+16%/-45%
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 010554967-01 / KOI 3059.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-61 ± 10	$1.74^{+1.08}_{-0.89}$	2820^{+166}_{-136}	3785^{+1372}_{-711}	$1.761^{+5.904}_{-1.086}$
Alt.	-126 ± 11	$2.01^{+1.10}_{-0.94}$	2817^{+164}_{-115}	4136^{+1291}_{-631}	$2.701^{+6.923}_{-1.581}$

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

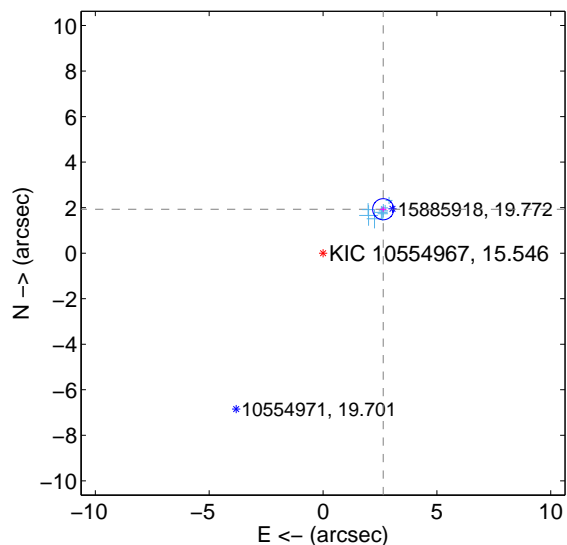
Supplemental centroid analysis for 010554967-01. Kepler magnitude: 15.55. Transit SNR 15.88

There are 8 quarters with good PRF difference image offsets

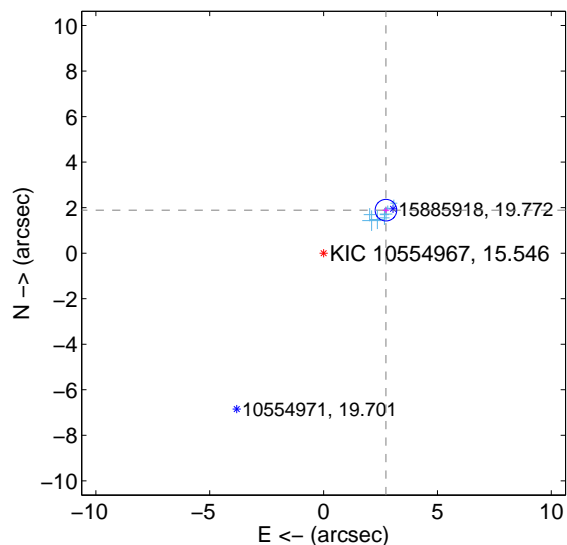
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.273 ± 0.155	21.16	-2.643 ± 0.143	1.930 ± 0.105
PRF-fit source offset from KIC position	3.327 ± 0.158	21.07	-2.739 ± 0.144	1.889 ± 0.110
photometric centroid source offset	5.98 ± 0.96	6.22	-5.20 ± 0.93	2.94 ± 1.05

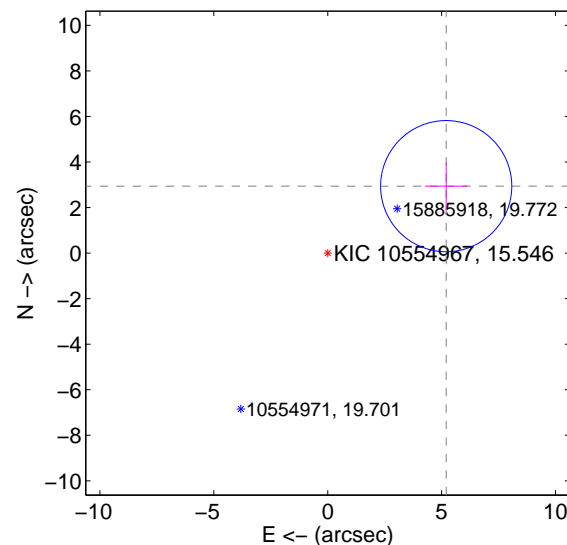
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

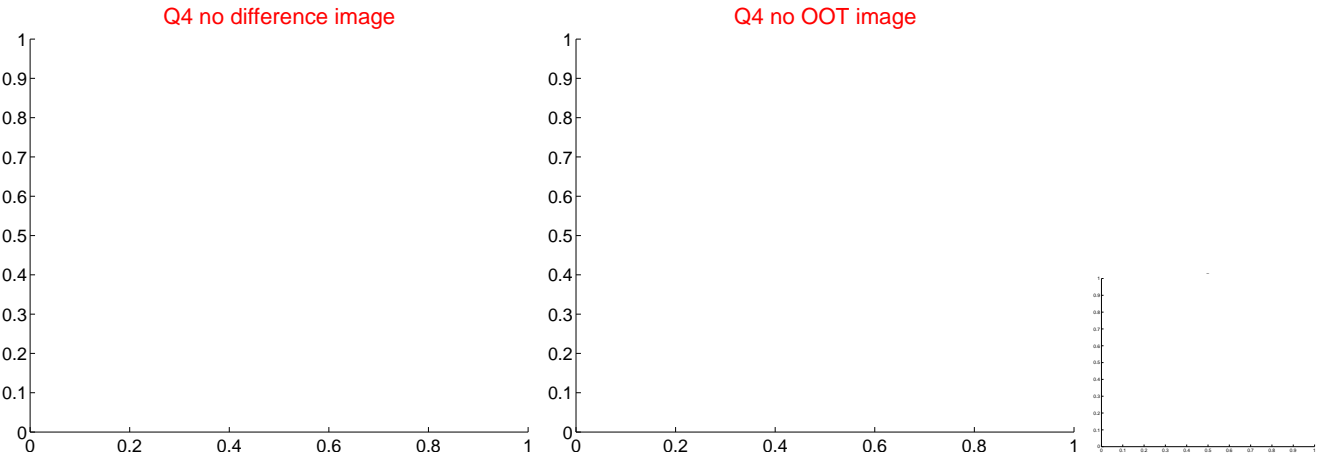
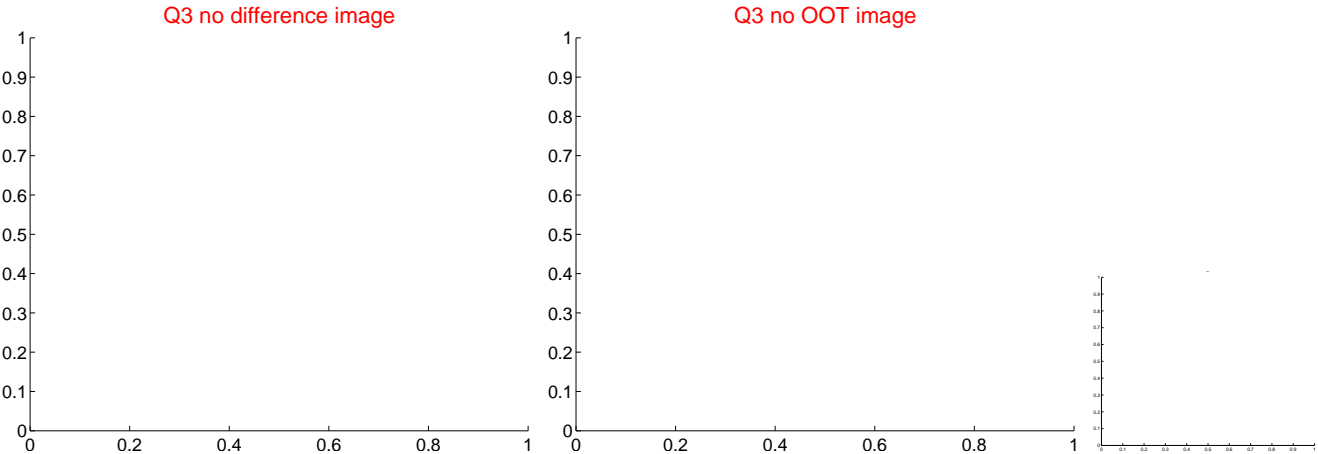
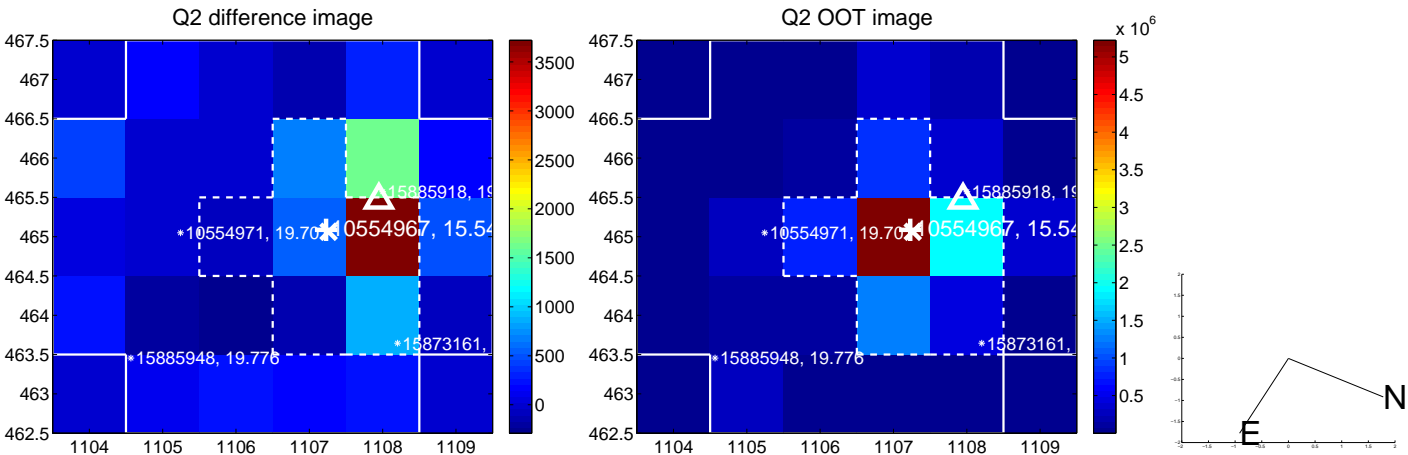
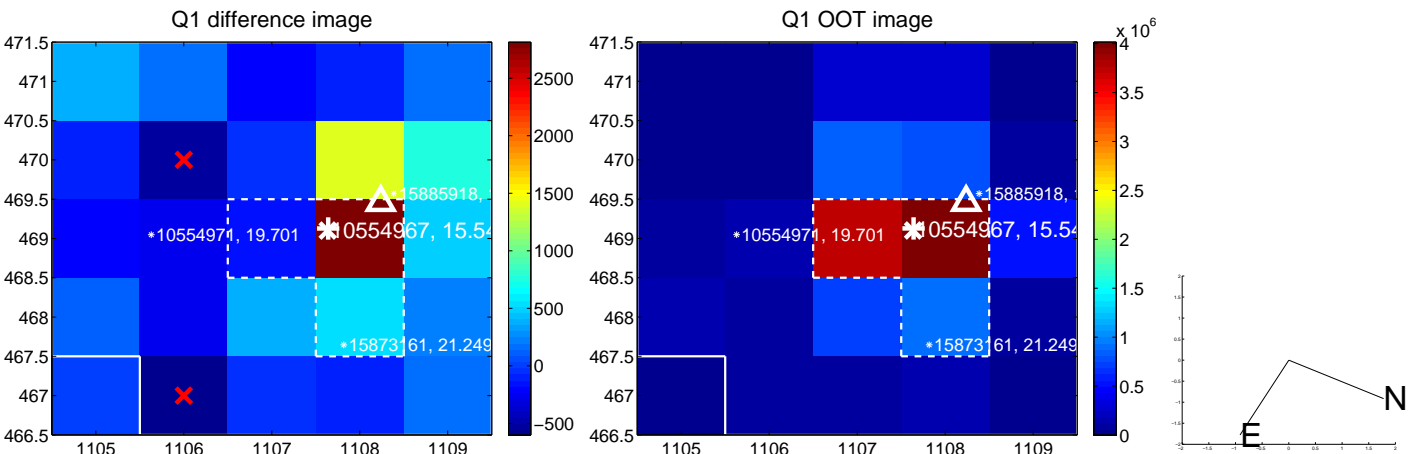


offset from photometric centroids

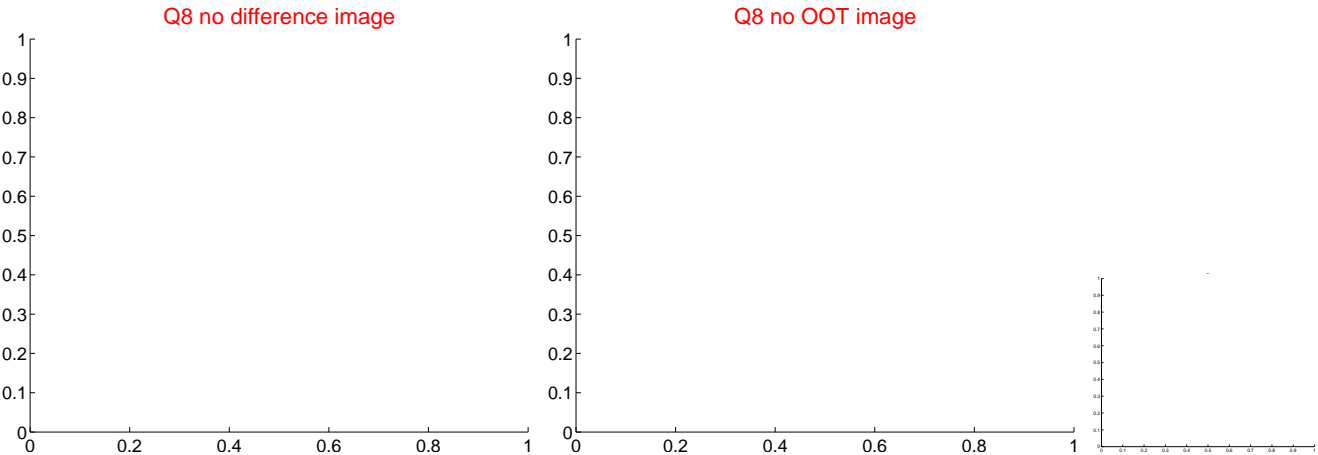
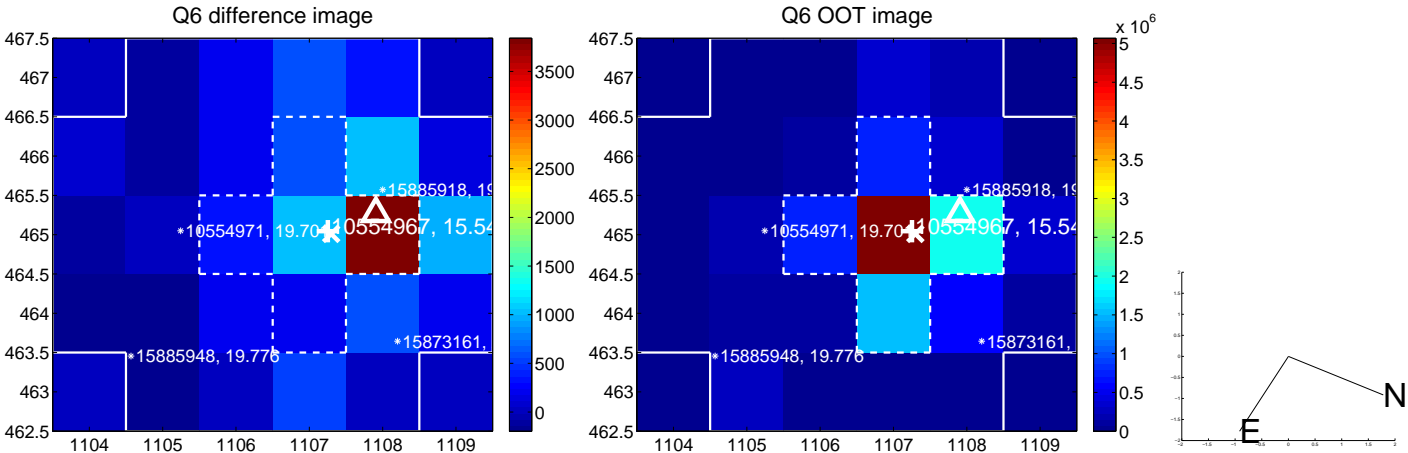
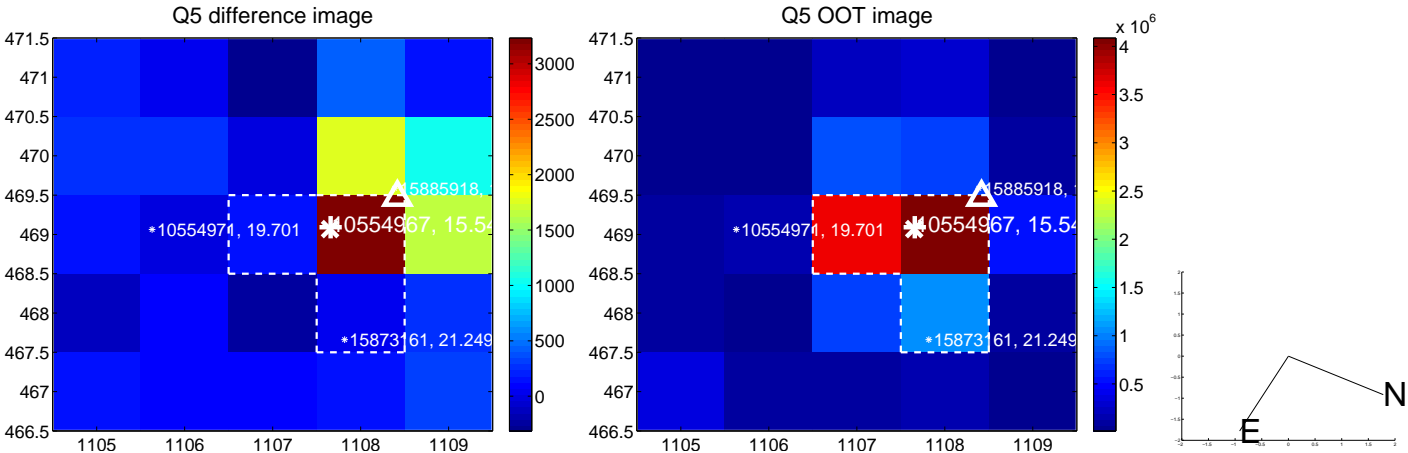


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

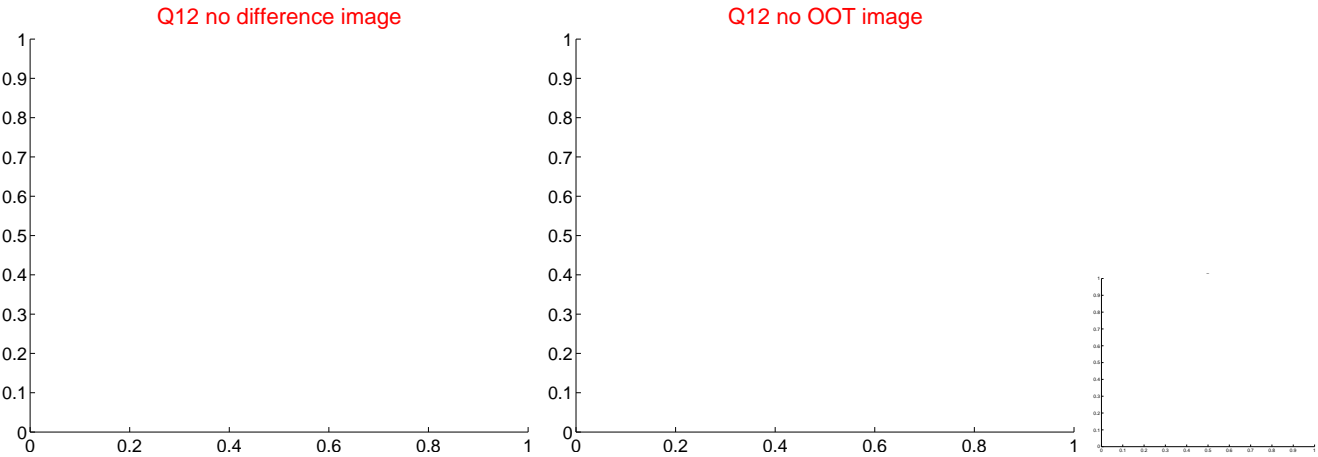
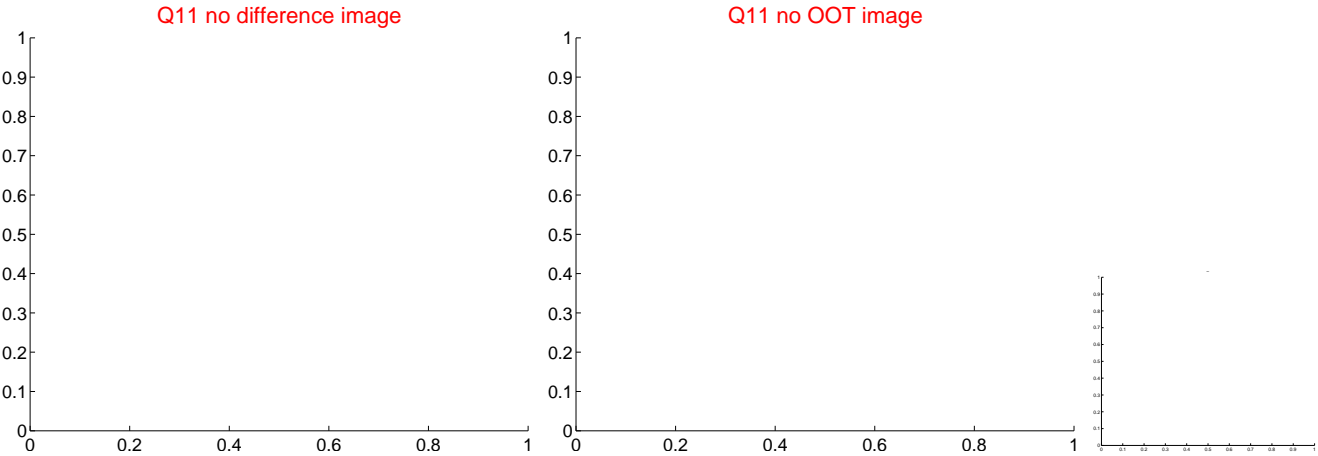
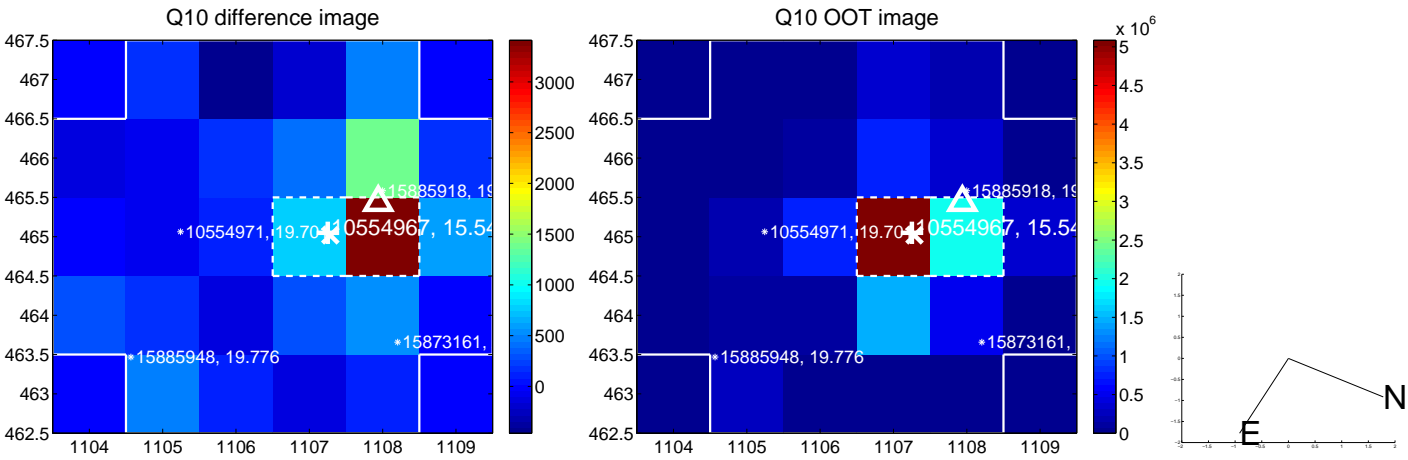
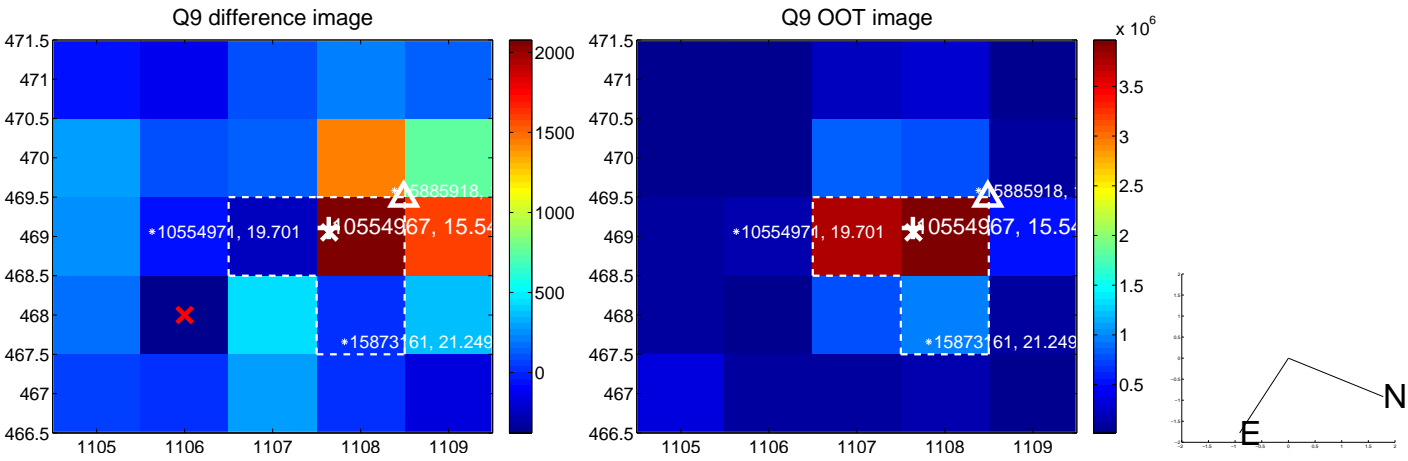
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



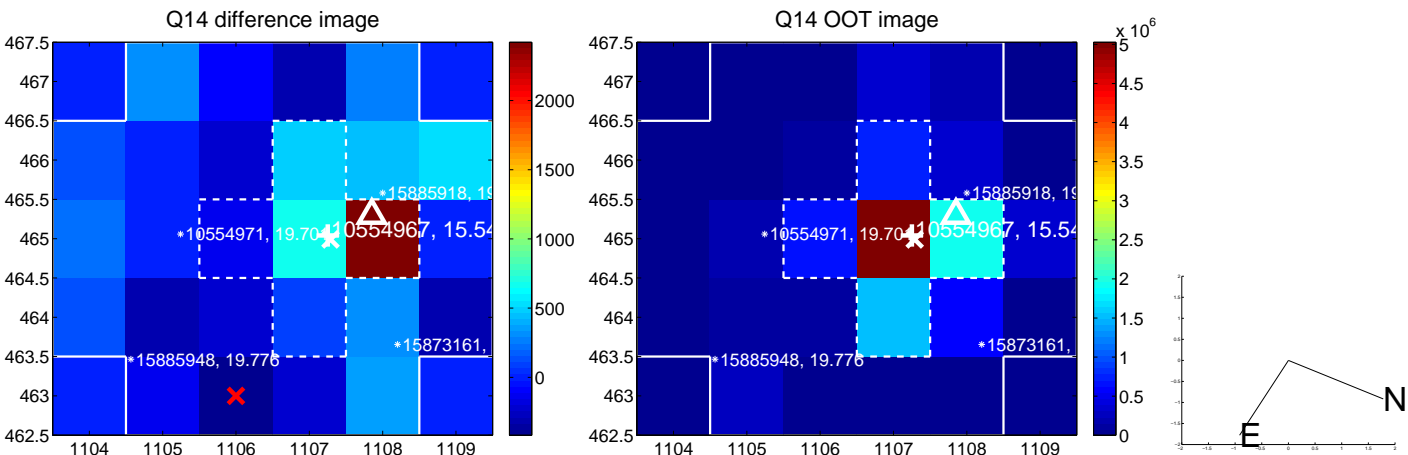
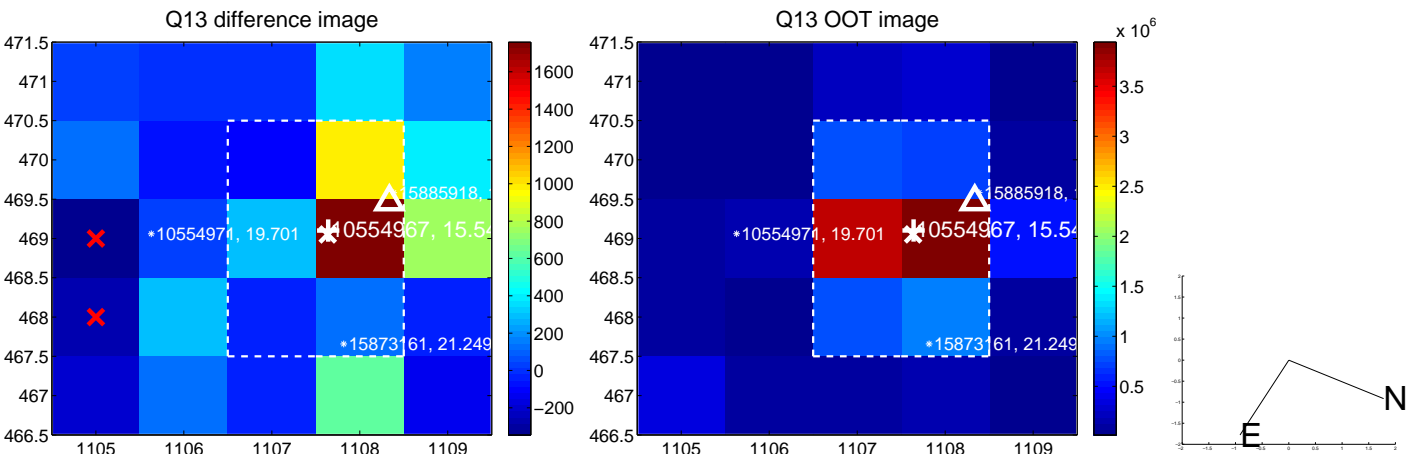
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



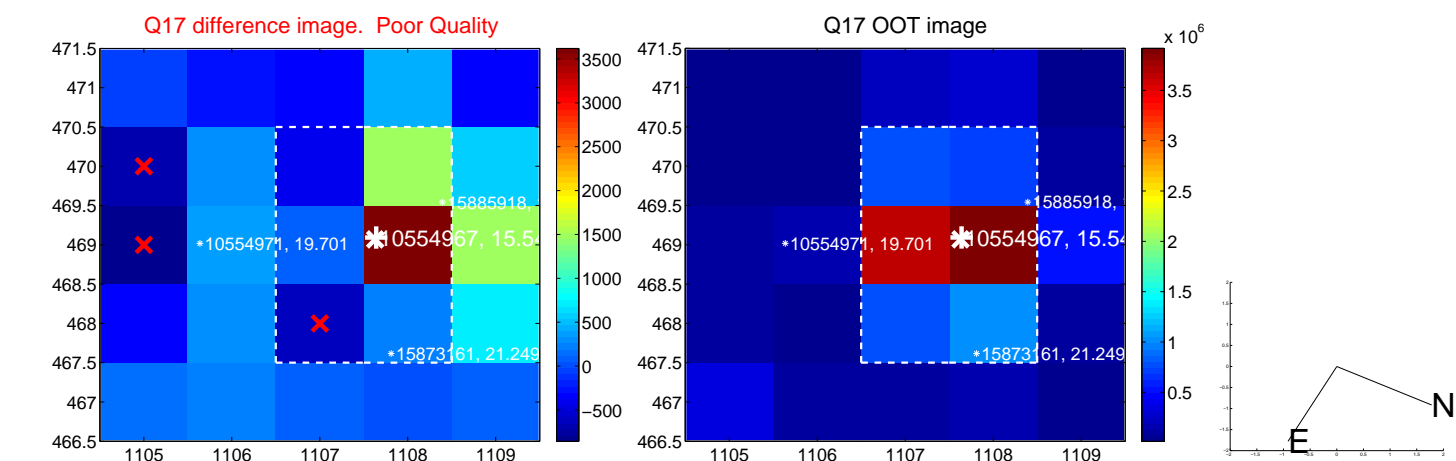
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



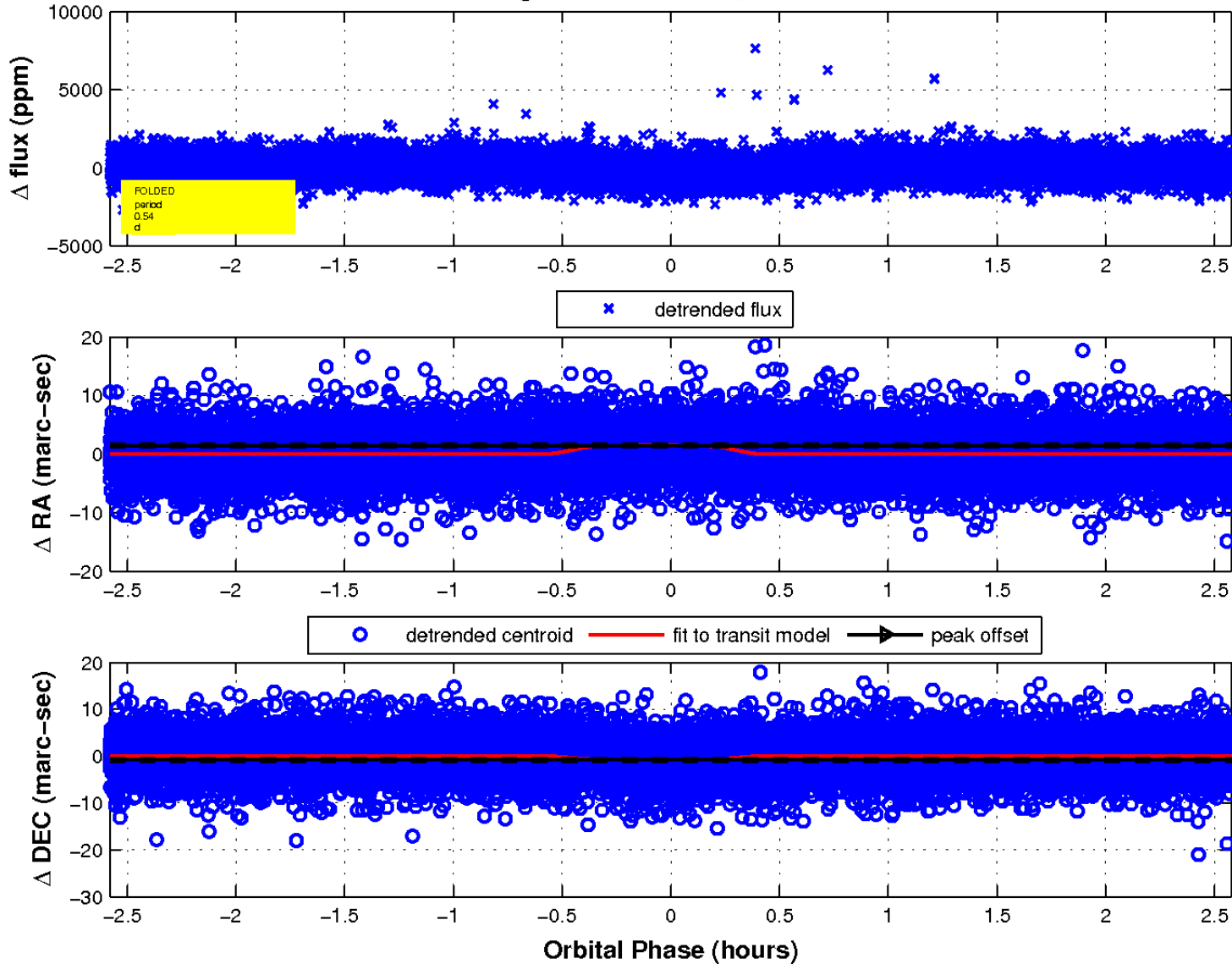
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

