

KIC 006546508

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})
006546508-01	OBS	3613.01	3.053598	133.872560	47308.1	3.577	2040.3	973.4	0.71	5414	23.93	271.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006546508-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—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.

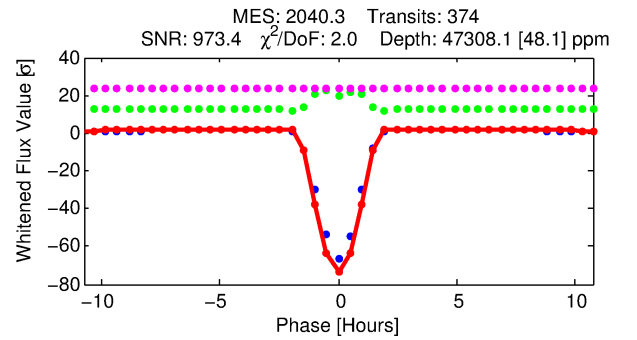
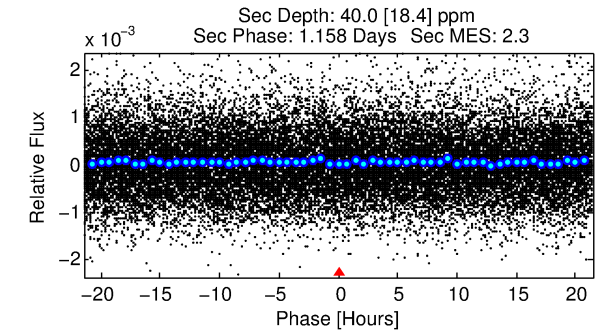
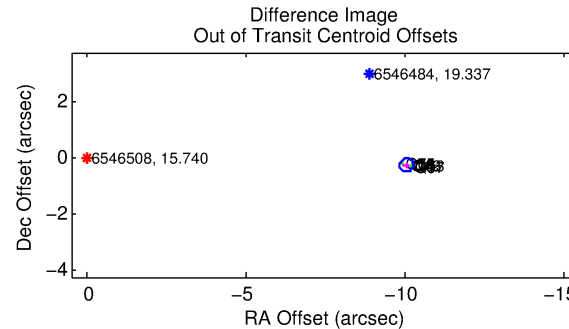
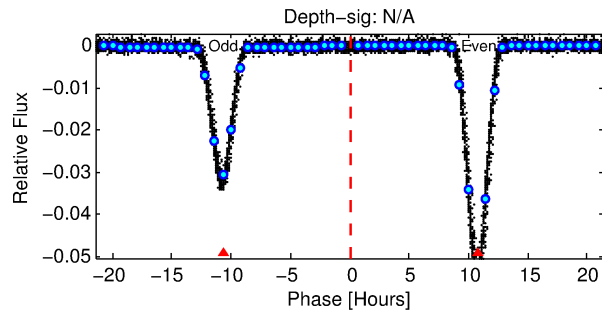
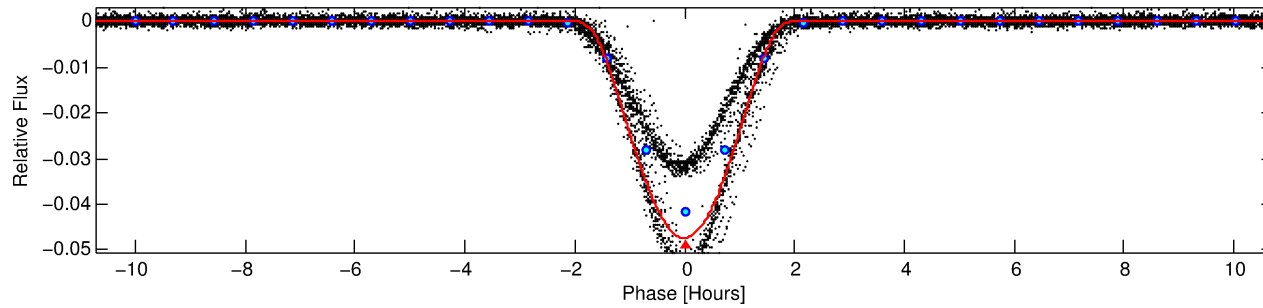
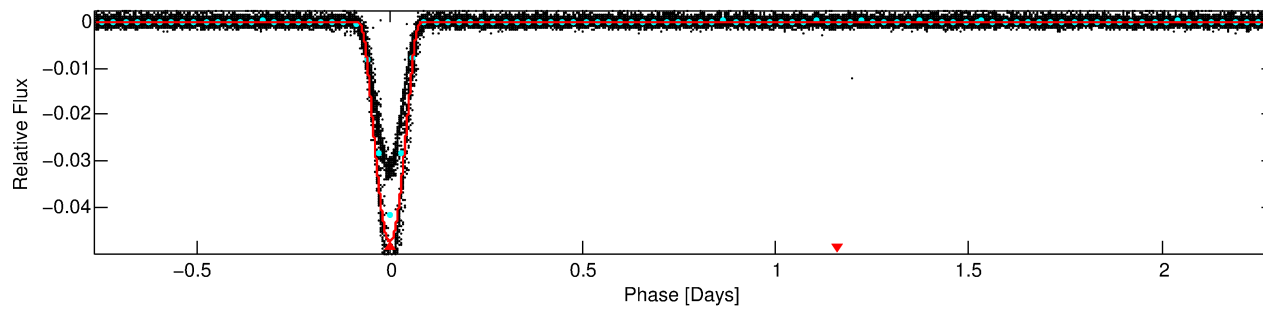
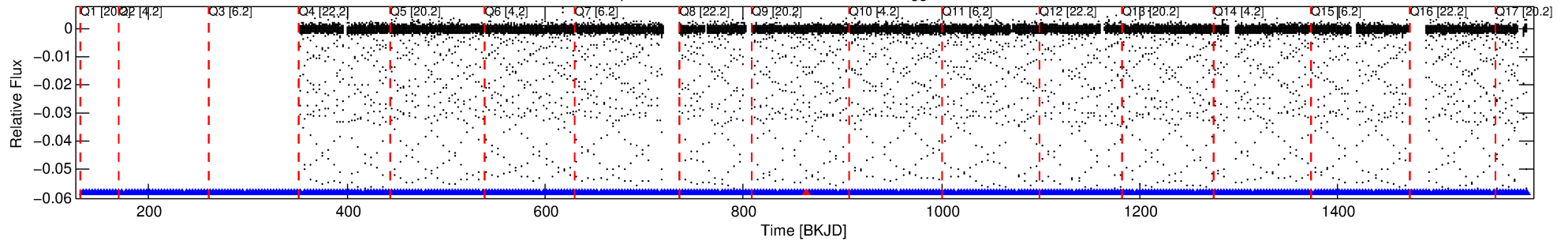
Ephemeris Match Information For 006546508-01

No Significant Match Found

DV One-Page Summary

KIC: 6546508 Candidate: 1 of 1 Period: 3.054 d
KOI: K03613.01 Corr: 0.984

Kp: 15.74 R*: 0.71 Rs Teff: 5414.0 K Logg: 4.62 Fe/H: -0.440



DV Fit Results:

Period = 3.05360 [0.00000] d
Epoch = 133.8726 [0.0001] BKJD
Rp/R* = 0.3071 [0.0135]
a/R* = 5.99 [0.01]
b = 0.94 [0.02]
Seff = 271.86 [67.88]
Teq = 1035 [65] K
Rp = 23.93 [4.25] Re
a = 0.0380 [0.0053] AU
Ag = 0.06 [0.03] [-33.47σ]
Teffp = 777 [96] K [-2.24σ]

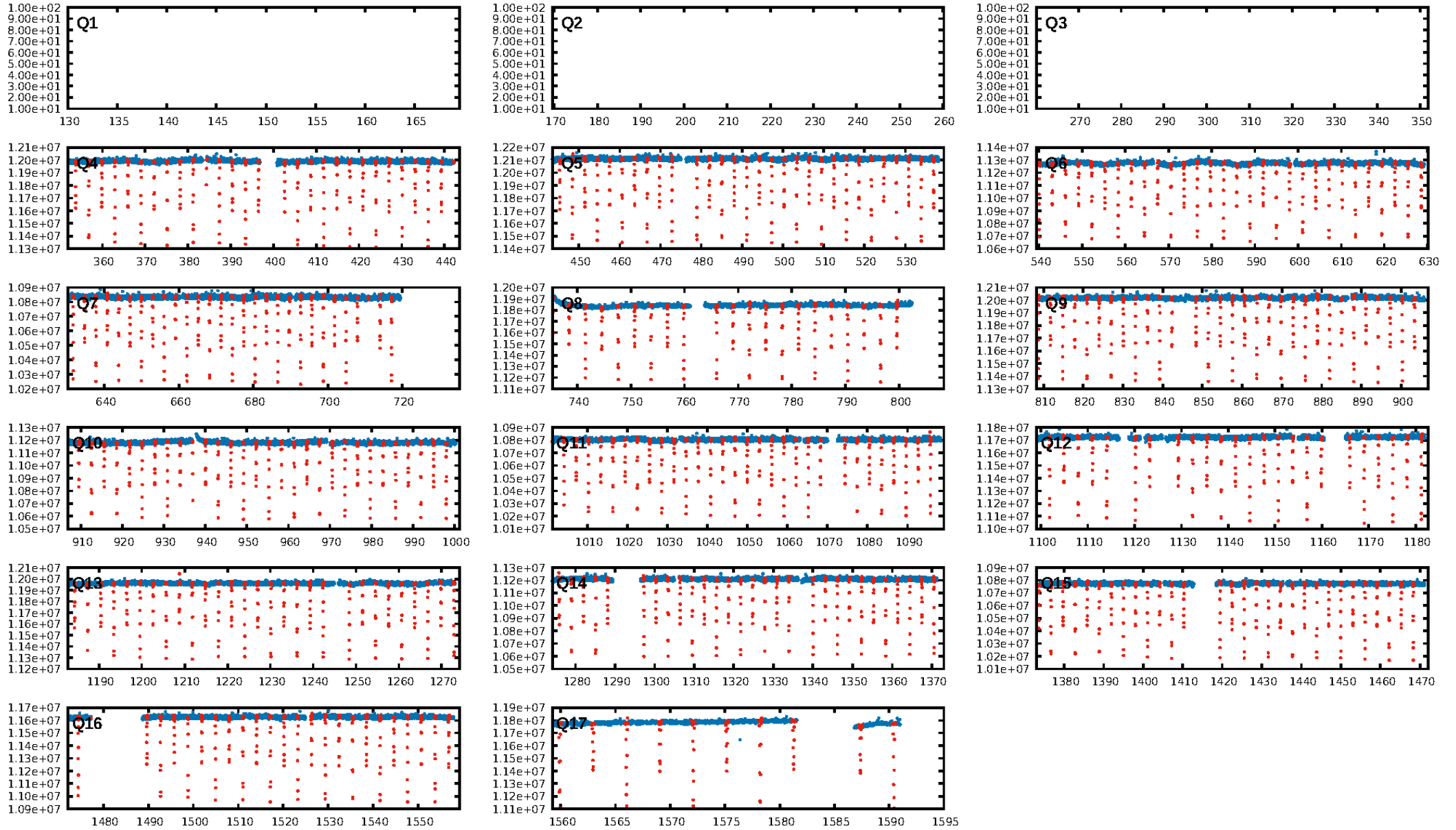
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [363/364]
GhostDiagnostic-chr: 2.942
Centroid-sig: 0.0%
Centroid-so: 1.830 arcsec [375.38σ]
OotOffset-rm: 10.039 arcsec [131.00σ]
KicOffset-rm: 0.069 arcsec [1.00σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

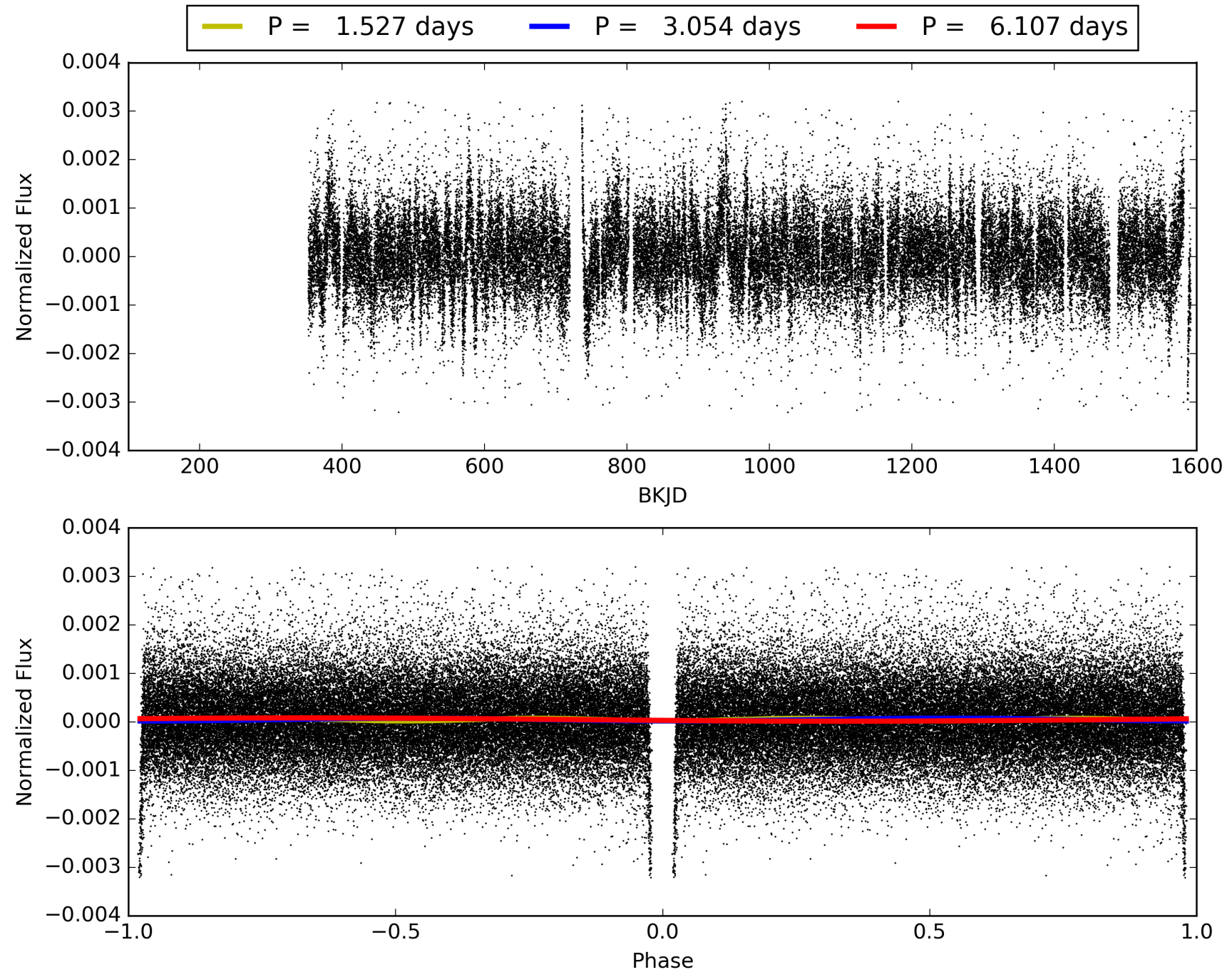
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:00:35 Z

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

TCE 006546508-01, PDC Light Curves

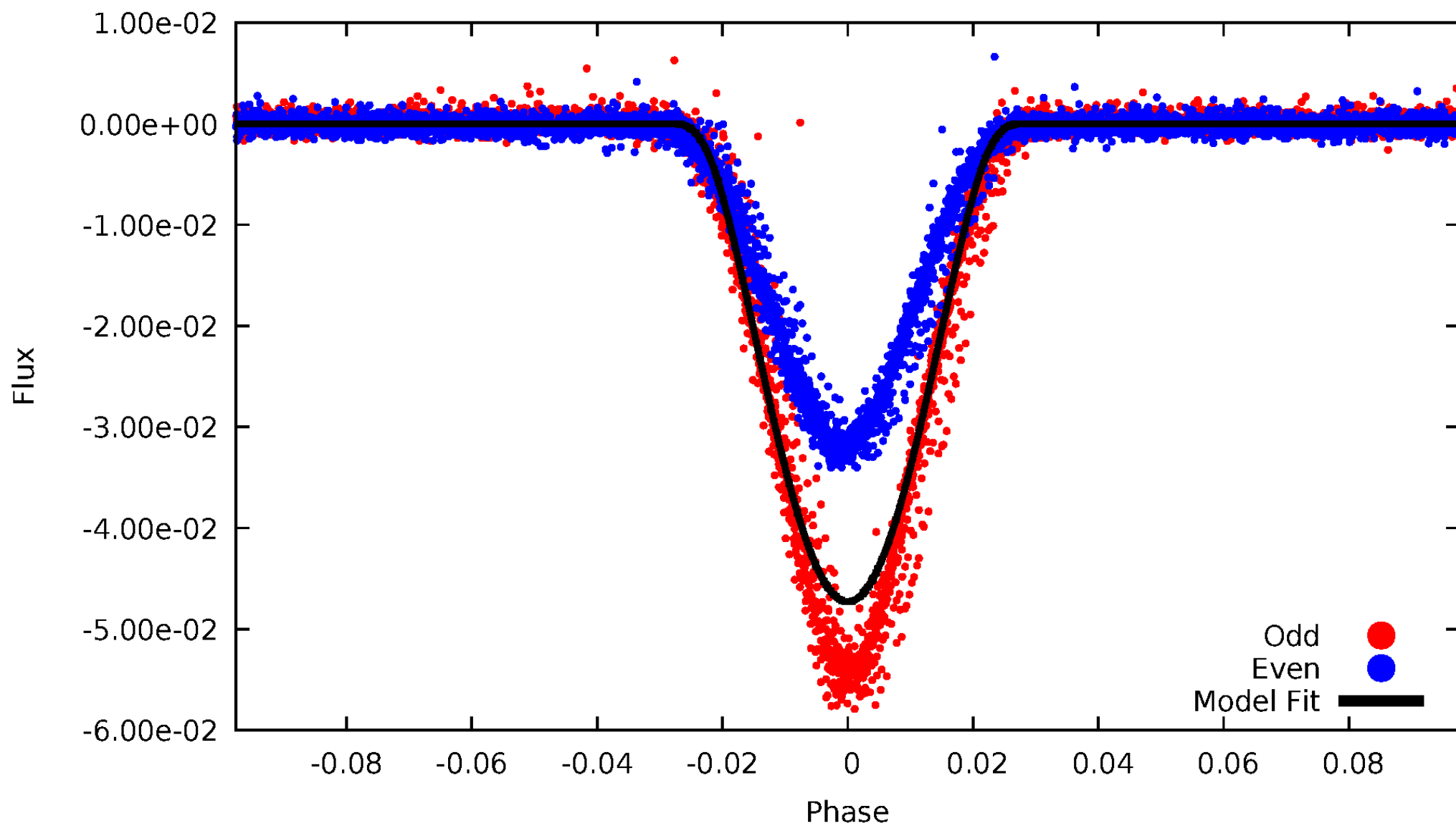


TCE 006546508-01



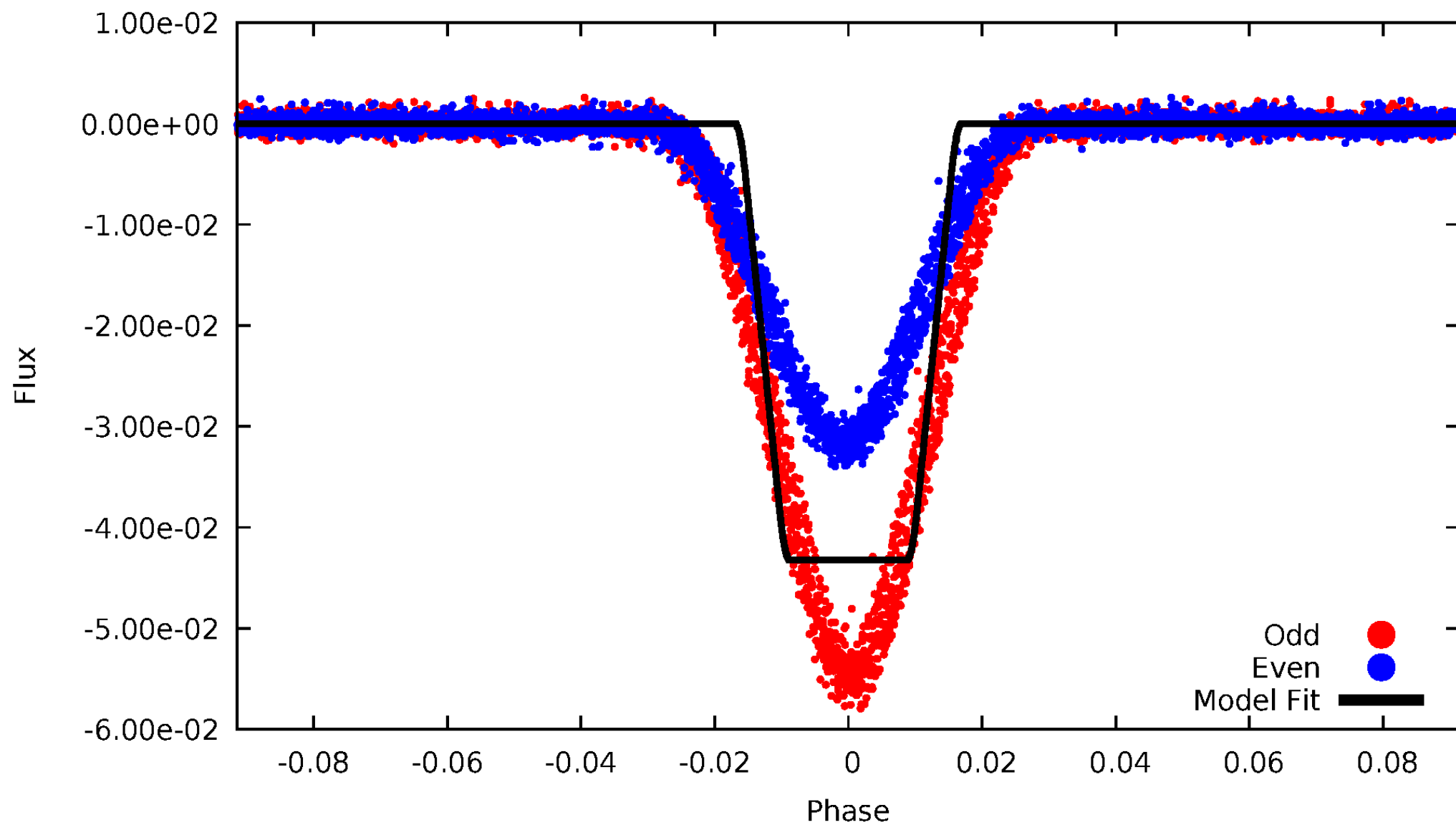
DV Odd/Even

TCE 006546508-01



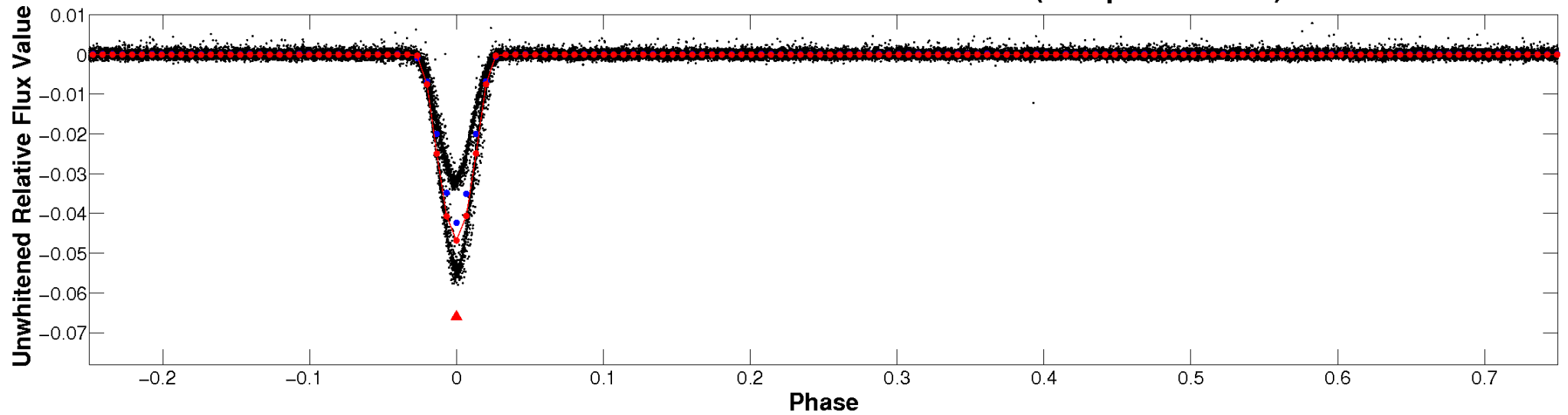
ALT Odd/Even

TCE 006546508-01

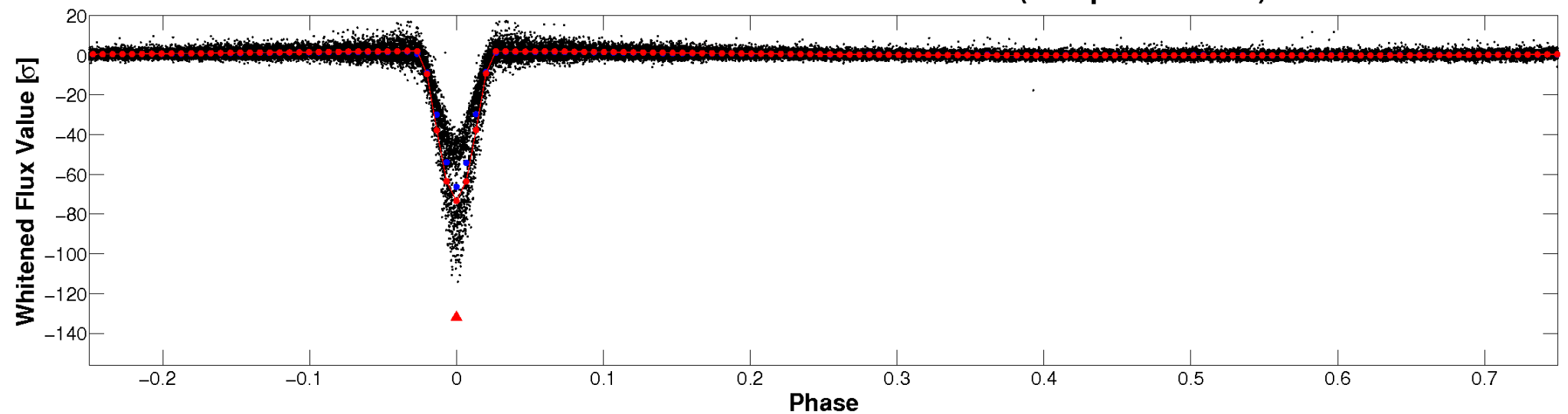


Non-Whitened Vs. Whitened Light Curve

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

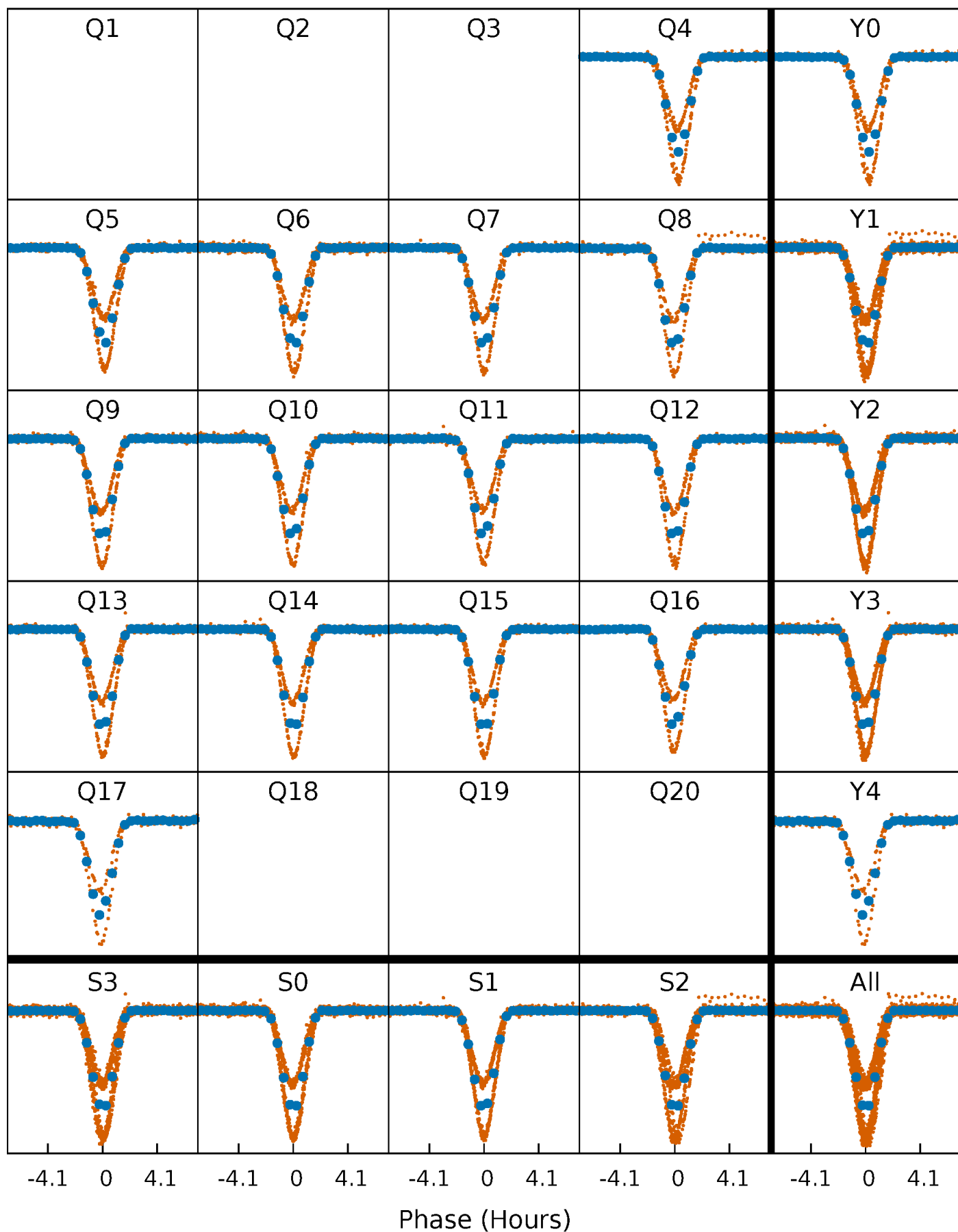


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



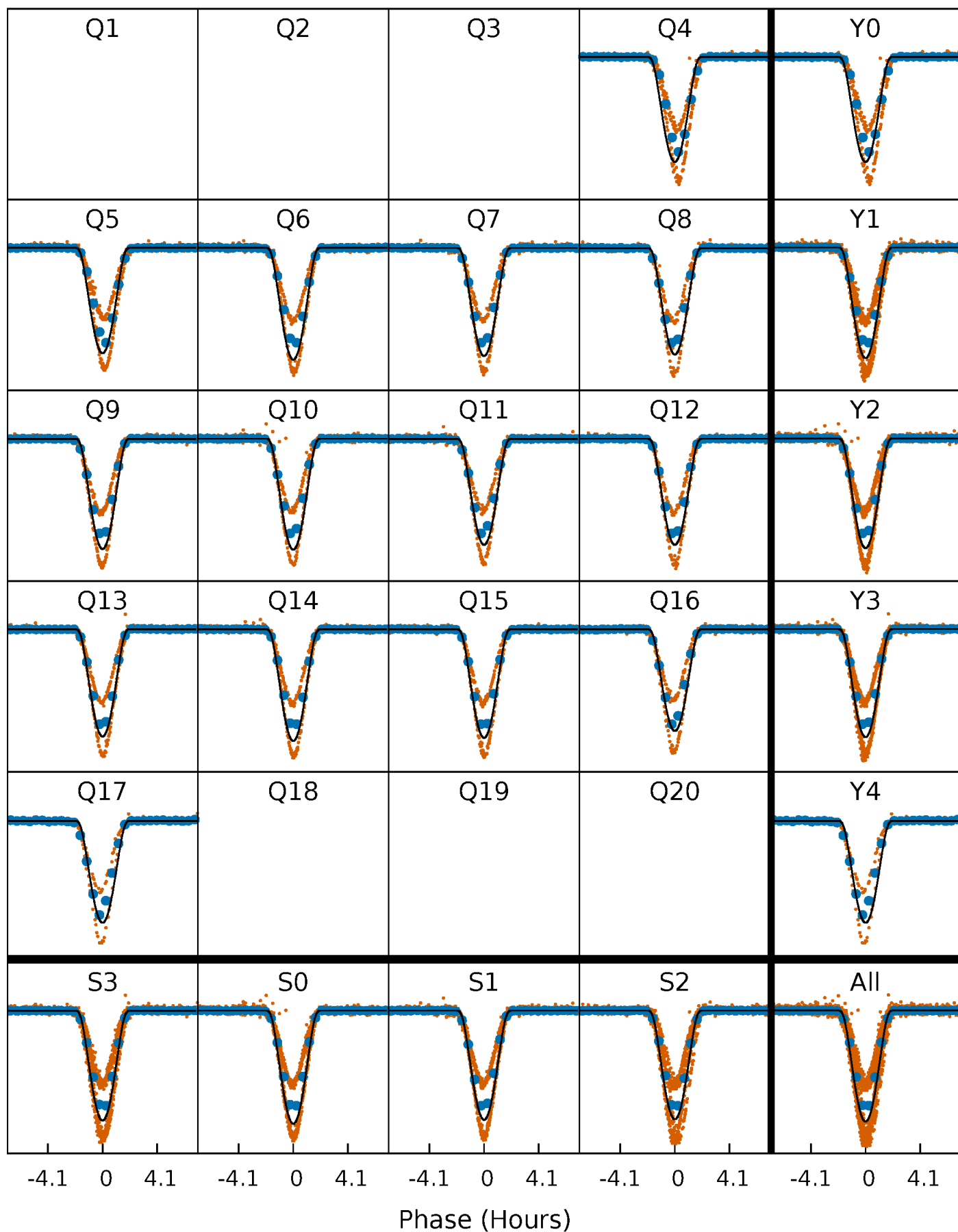
PDC Quarter-Phased Transit Curves

TCE 006546508-01 P= 3.053598 Days $T_0=133.872560$ (BKJD)



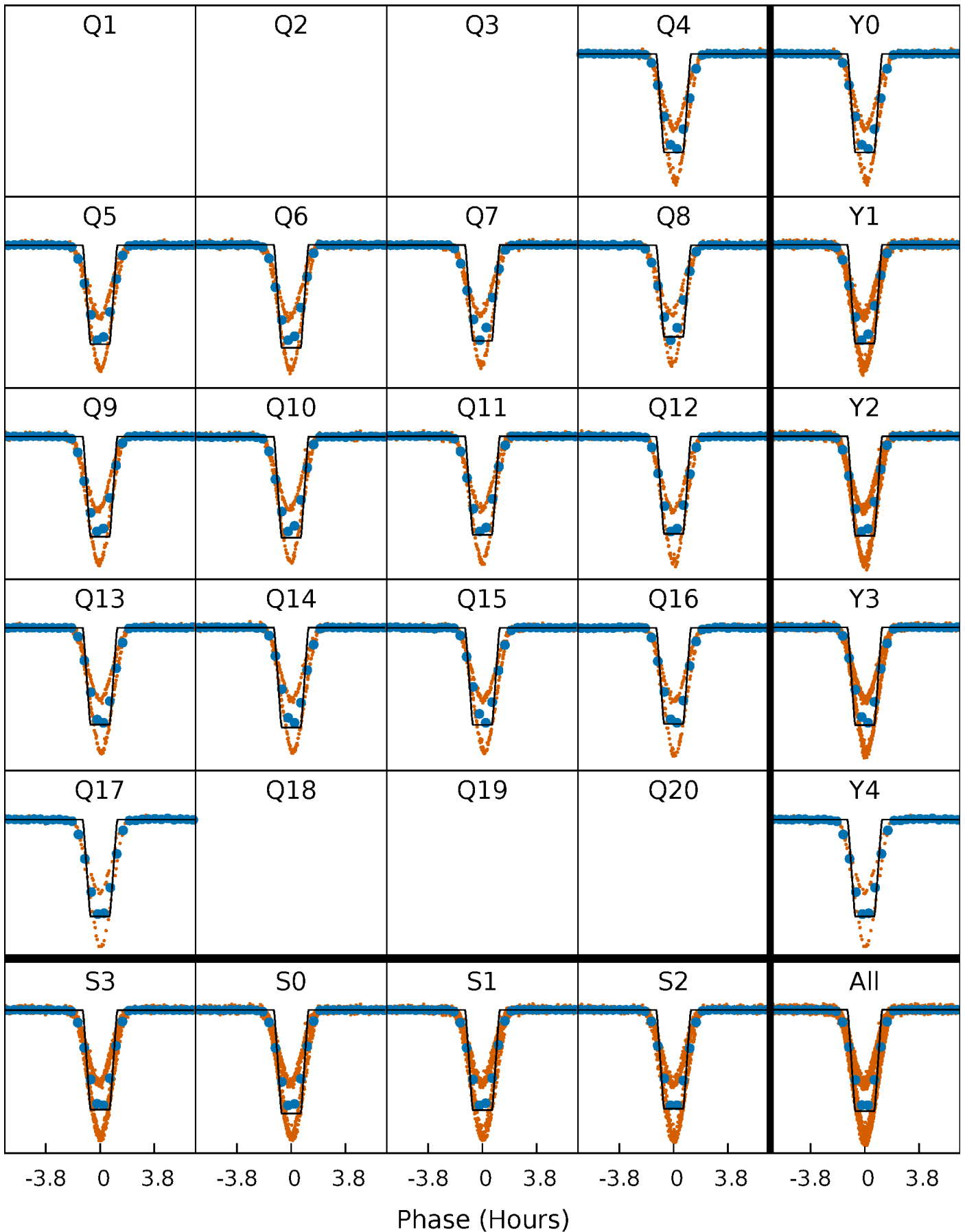
DV Quarter-Phased Transit Curves

TCE 006546508-01 P= 3.053598 Days $T_0=133.872560$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

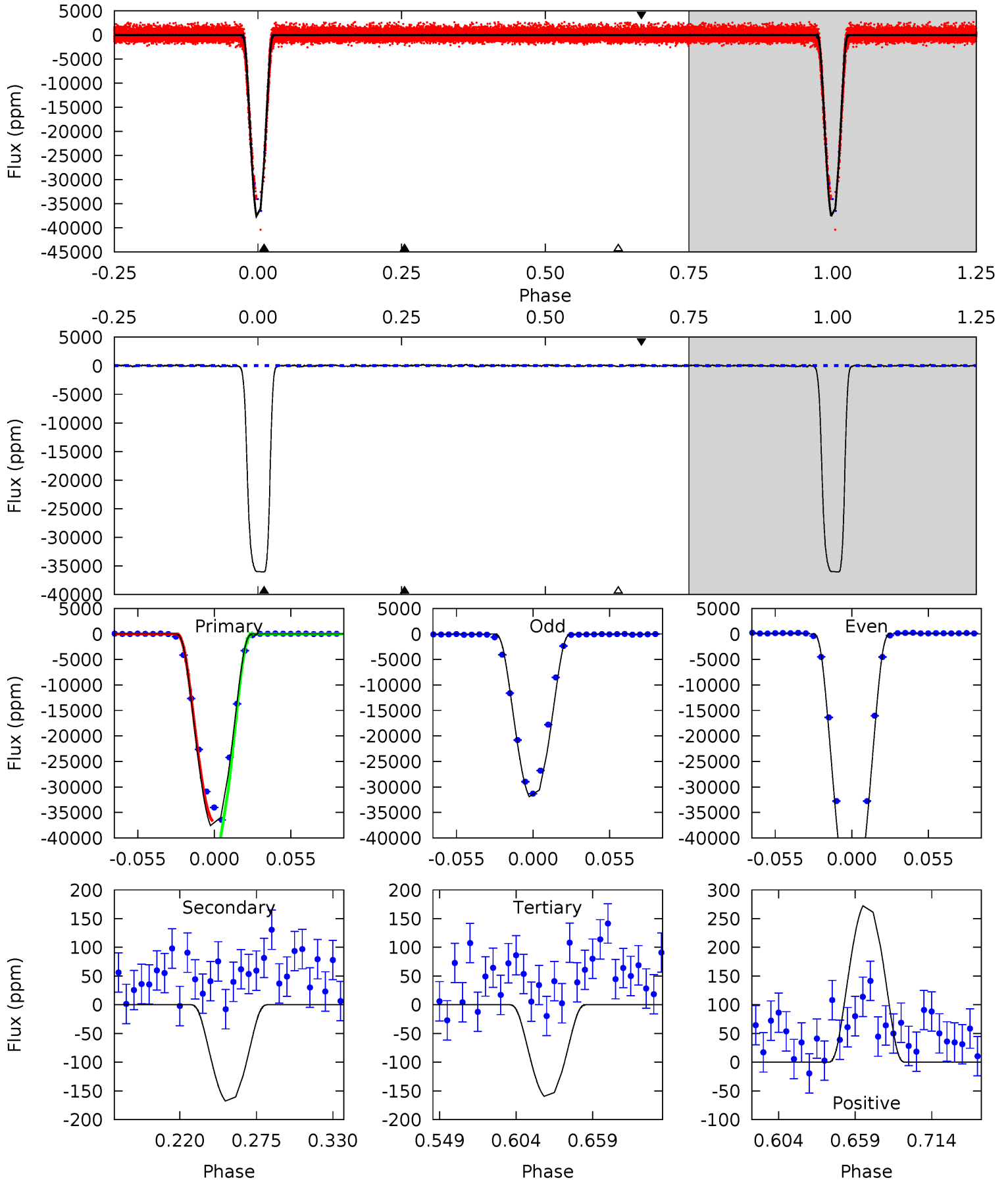
TCE 006546508-01 P= 3.053563 Days $T_0=133.881927$ (BKJD)



DV Model-Shift Uniqueness Test

006546508-01, P = 3.053598 Days, E = 133.872560 Days

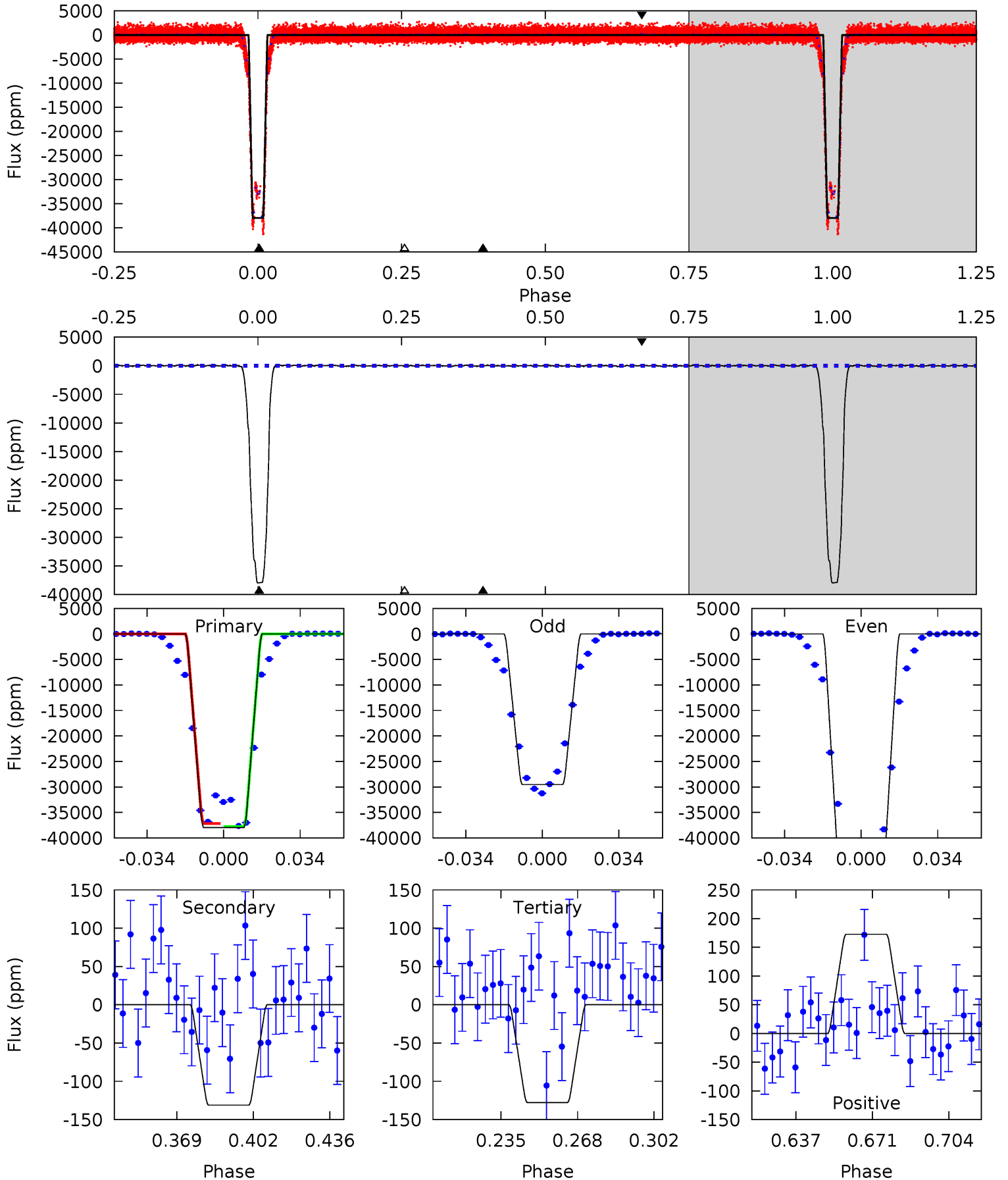
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1954	8.72	8.29	14.2	4.69	1.92	3.57	1946	1940	0.43	-5.45	831.2	1.25	0.01	0



Alt Model-Shift Uniqueness Test

006546508-01, P = 3.053563 Days, E = 133.881927 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1066	3.68	3.58	4.85	4.79	2.13	1.30	1062	1061	0.10	-1.17	482.1	1.05	0.00	0



Stellar Parameters For KIC 006546508

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5414^{+206}_{-187}	$4.625^{+0.035}_{-0.105}$	$-0.440^{+0.300}_{-0.300}$	$0.714^{+0.123}_{-0.057}$	$0.792^{+0.084}_{-0.084}$	$3.064^{+0.477}_{-1.022}$
	+4%/-3%	+1%/-2%	+68%/-68%	+17%/-8%	+11%/-11%	+16%/-33%
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 006546508-01 / KOI 3613.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-161 ± 18	$24.41^{+2.05}_{-1.74}$	1464^{+73}_{-58}	-1894^{+114}_{-92}	$0.213^{+0.039}_{-0.039}$
Alt.	-131 ± 36	$16.52^{+1.90}_{-1.40}$	1468^{+72}_{-64}	1899^{+178}_{-3680}	$0.382^{+0.131}_{-0.121}$

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 $A_{obs} \gg 1.0$

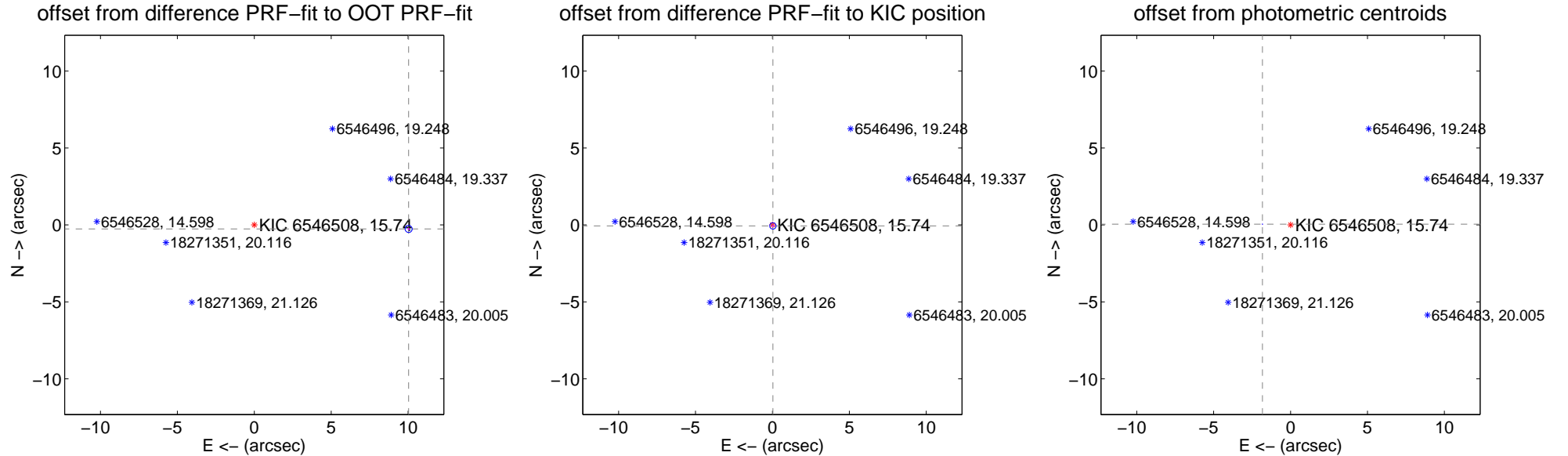
DV Centroid Data

Supplemental centroid analysis for 006546508-01. Kepler magnitude: 15.74. Transit SNR 973.44

There are 14 quarters with good PRF difference image offsets

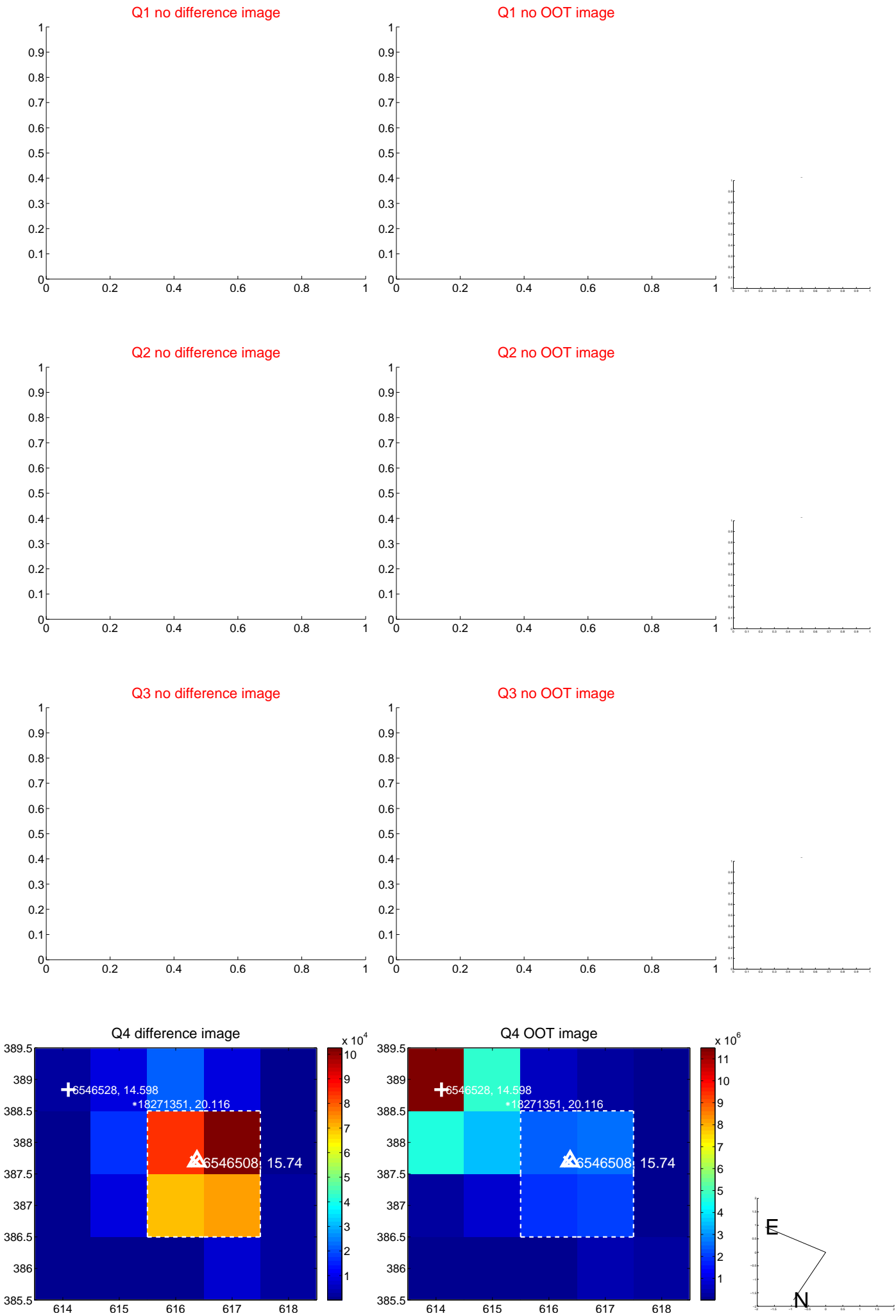
The OOT PRF centroid is offset from the target star catalog position by about 10.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.039 ± 0.077	131.00	-10.035 ± 0.077	-0.261 ± 0.068
PRF-fit source offset from KIC position	0.069 ± 0.070	1.00	-0.030 ± 0.069	-0.062 ± 0.069
photometric centroid source offset	1.83 ± 0.00	375.38	1.83 ± 0.00	0.05 ± 0.00

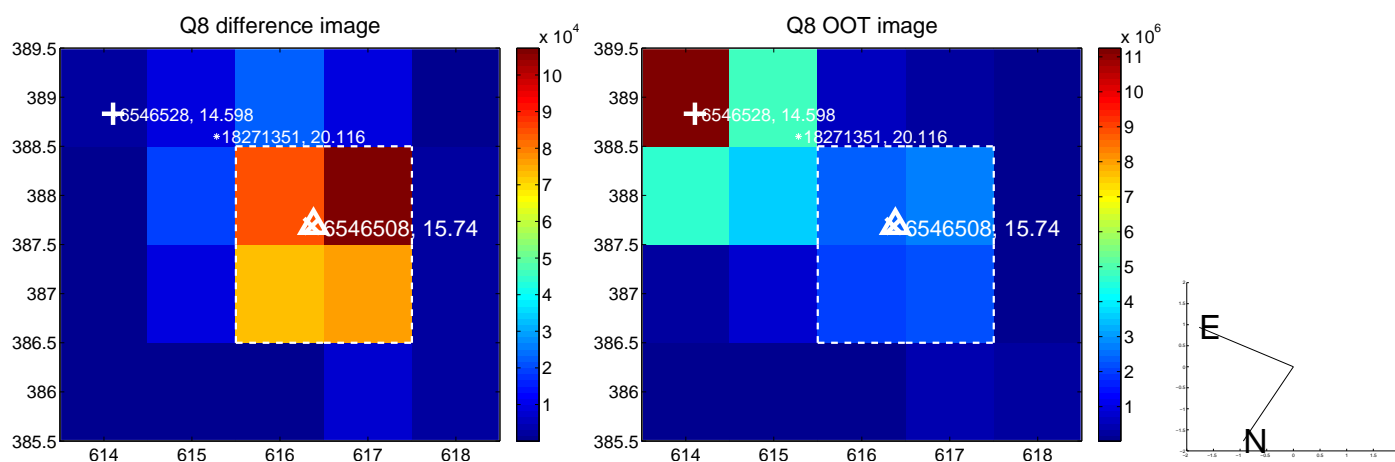
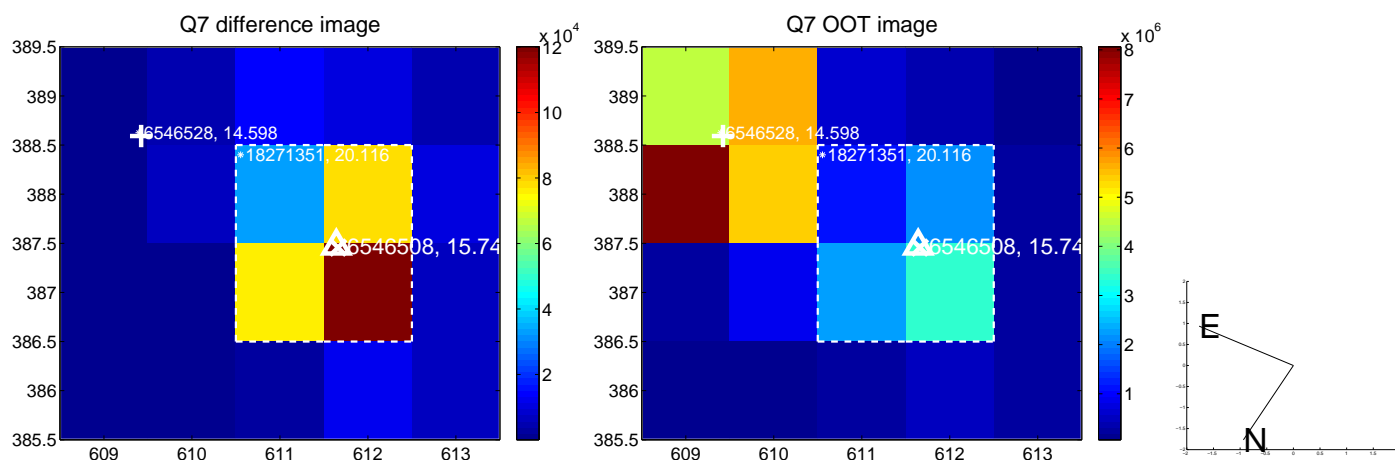
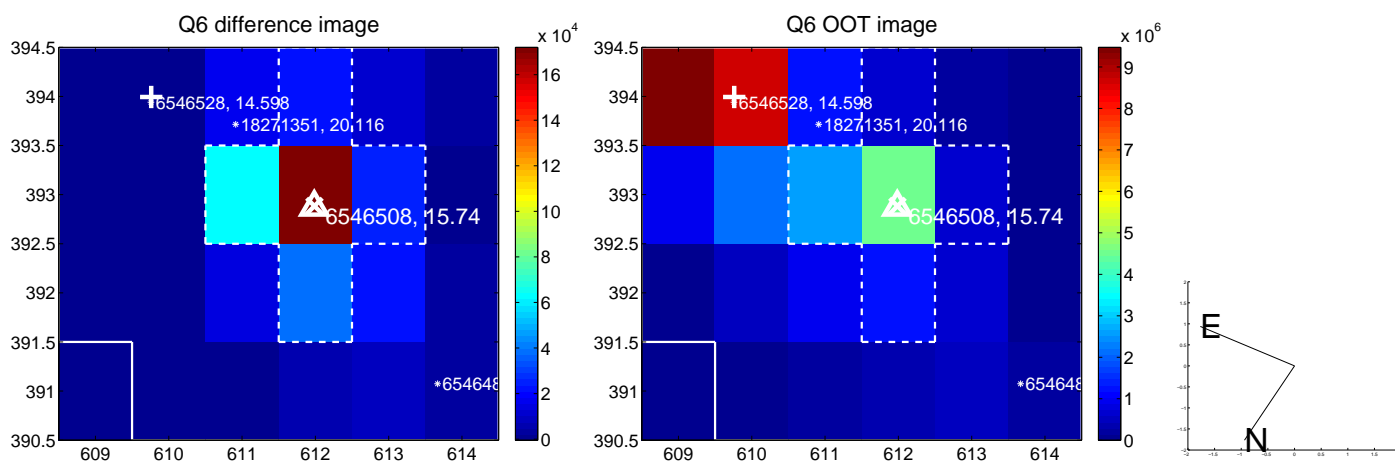
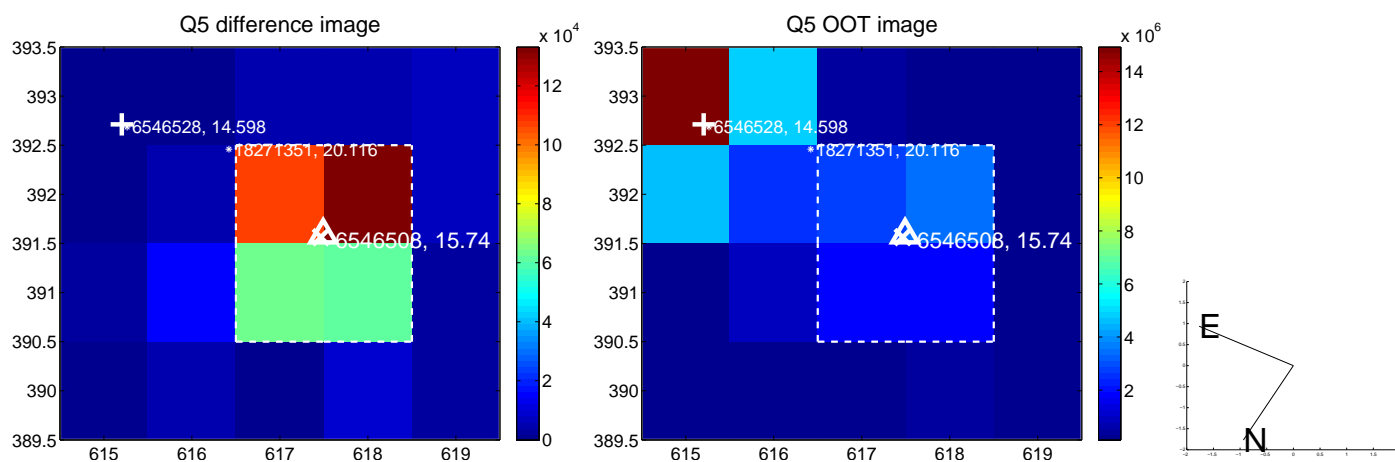


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

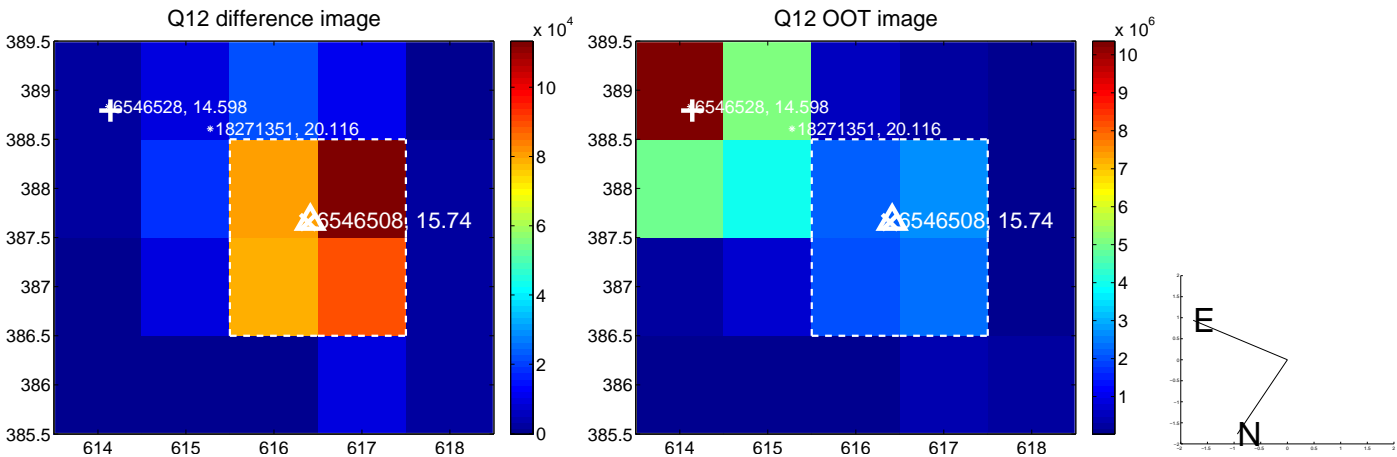
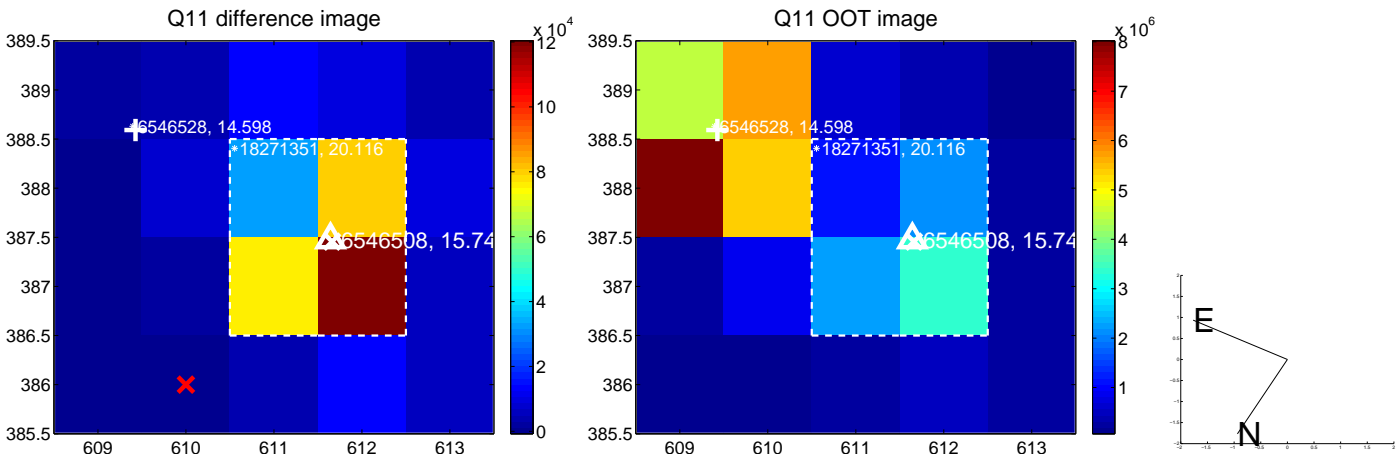
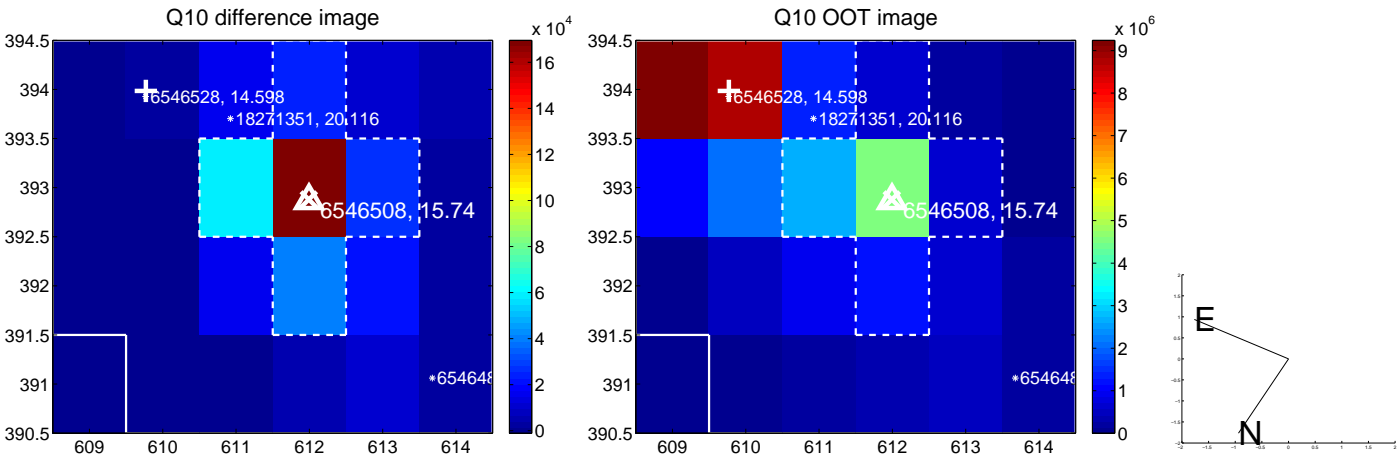
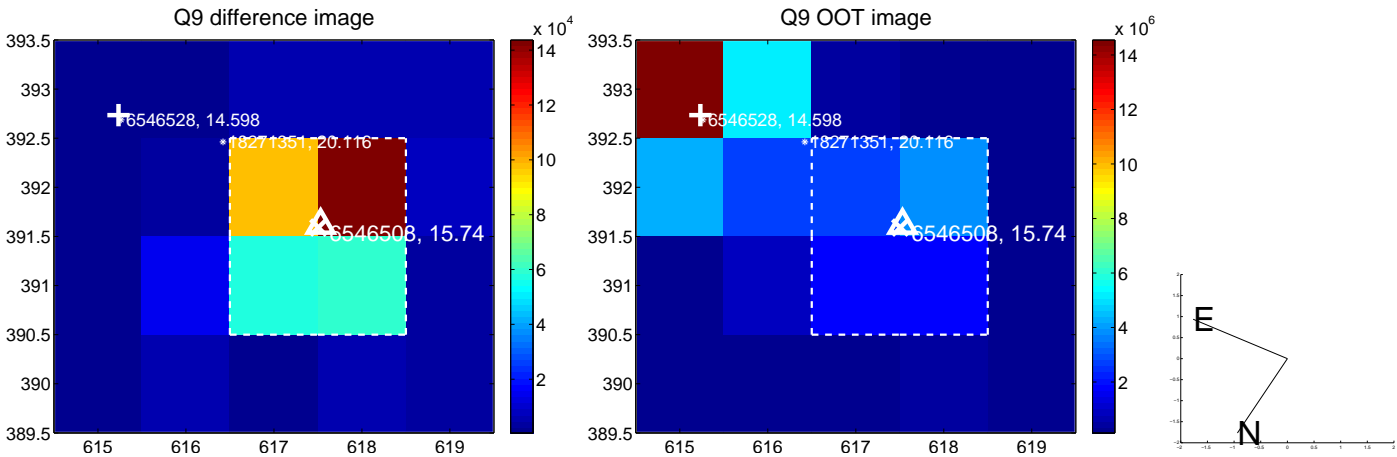
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



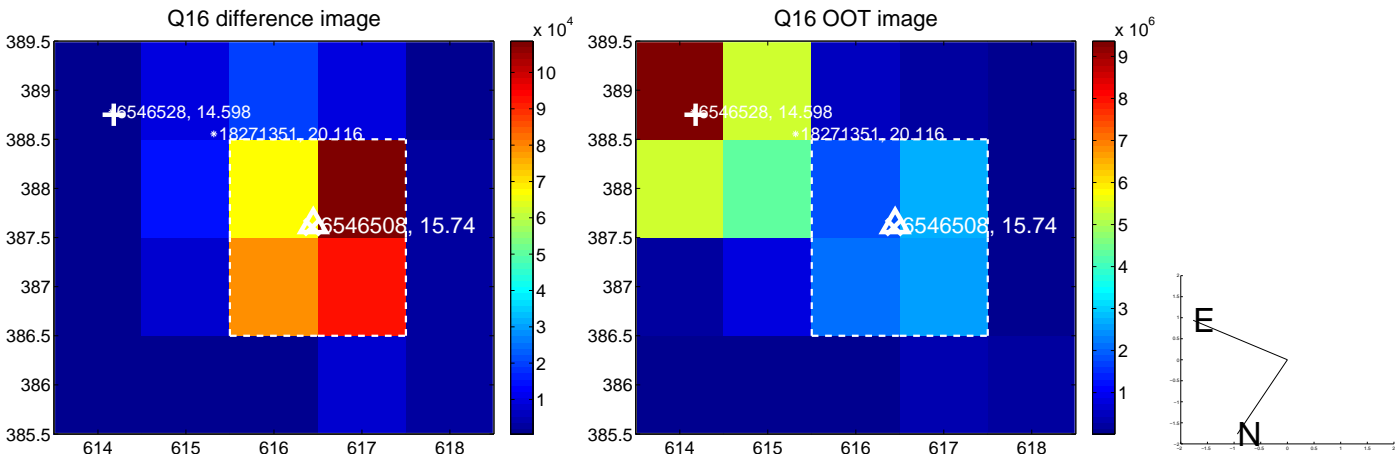
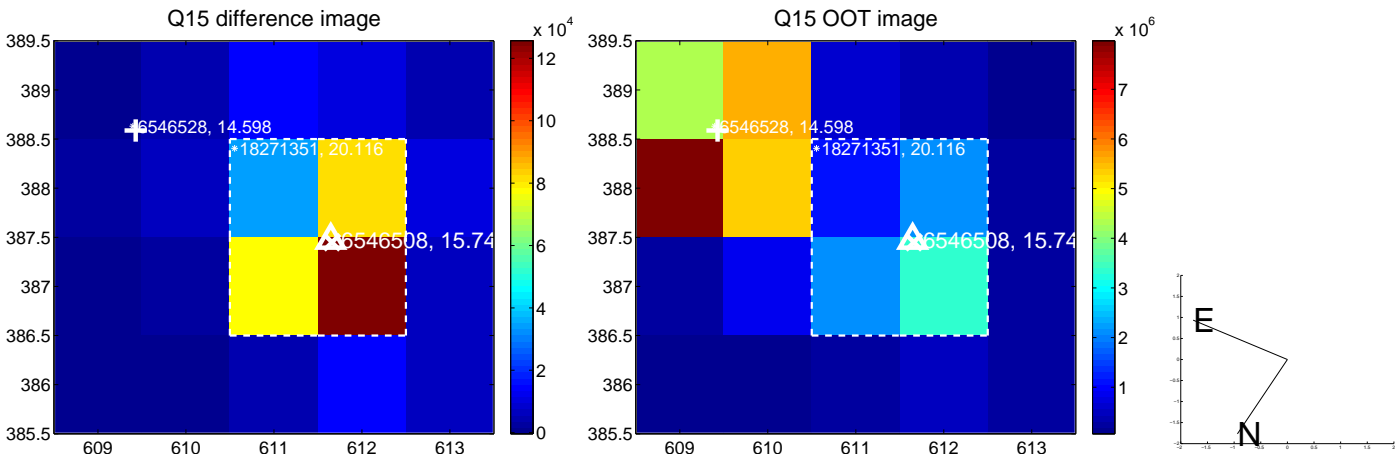
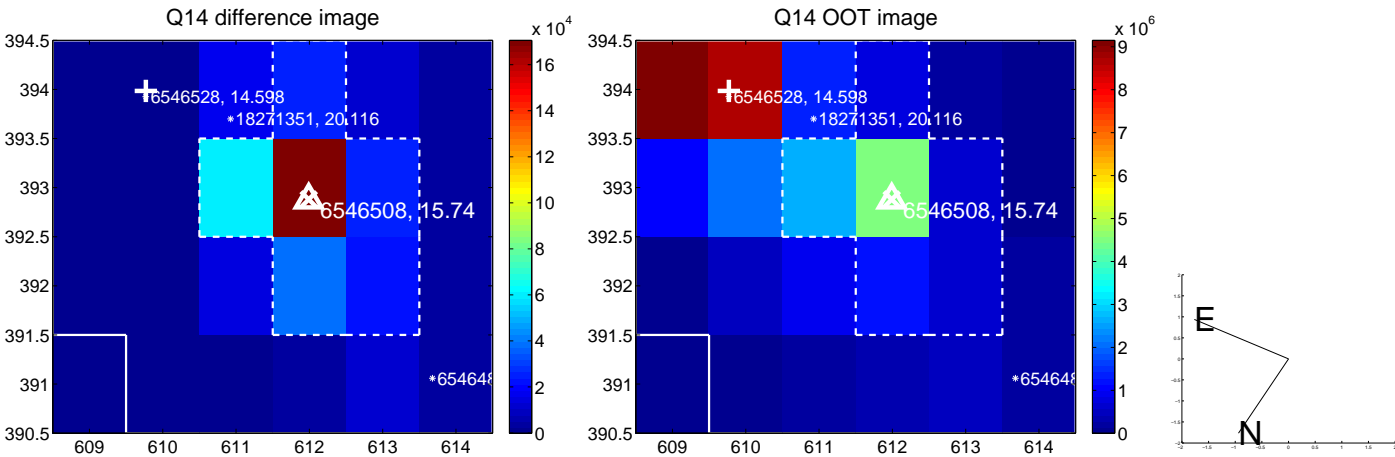
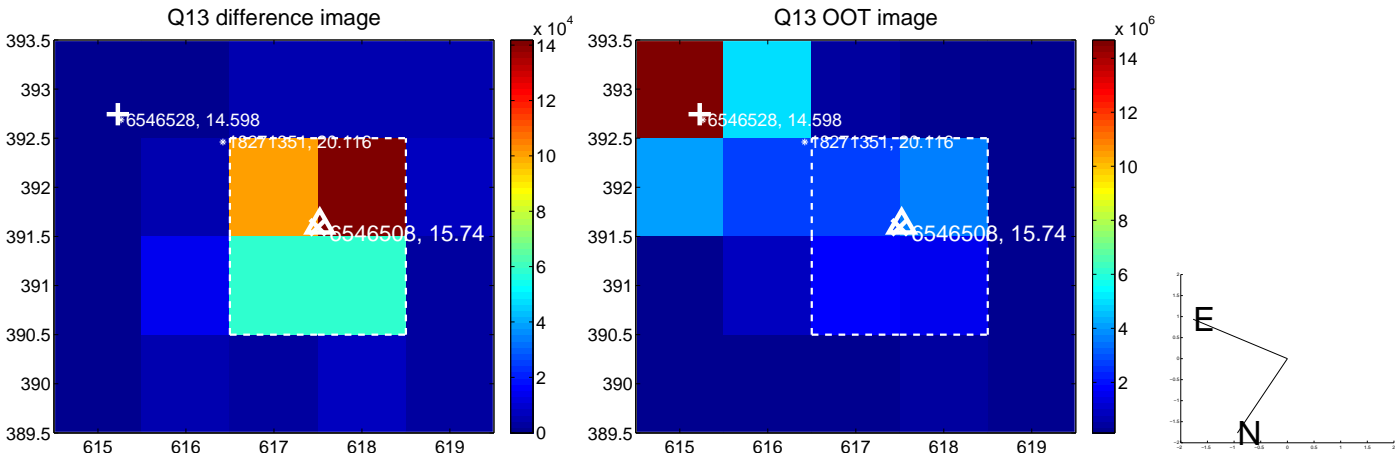
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



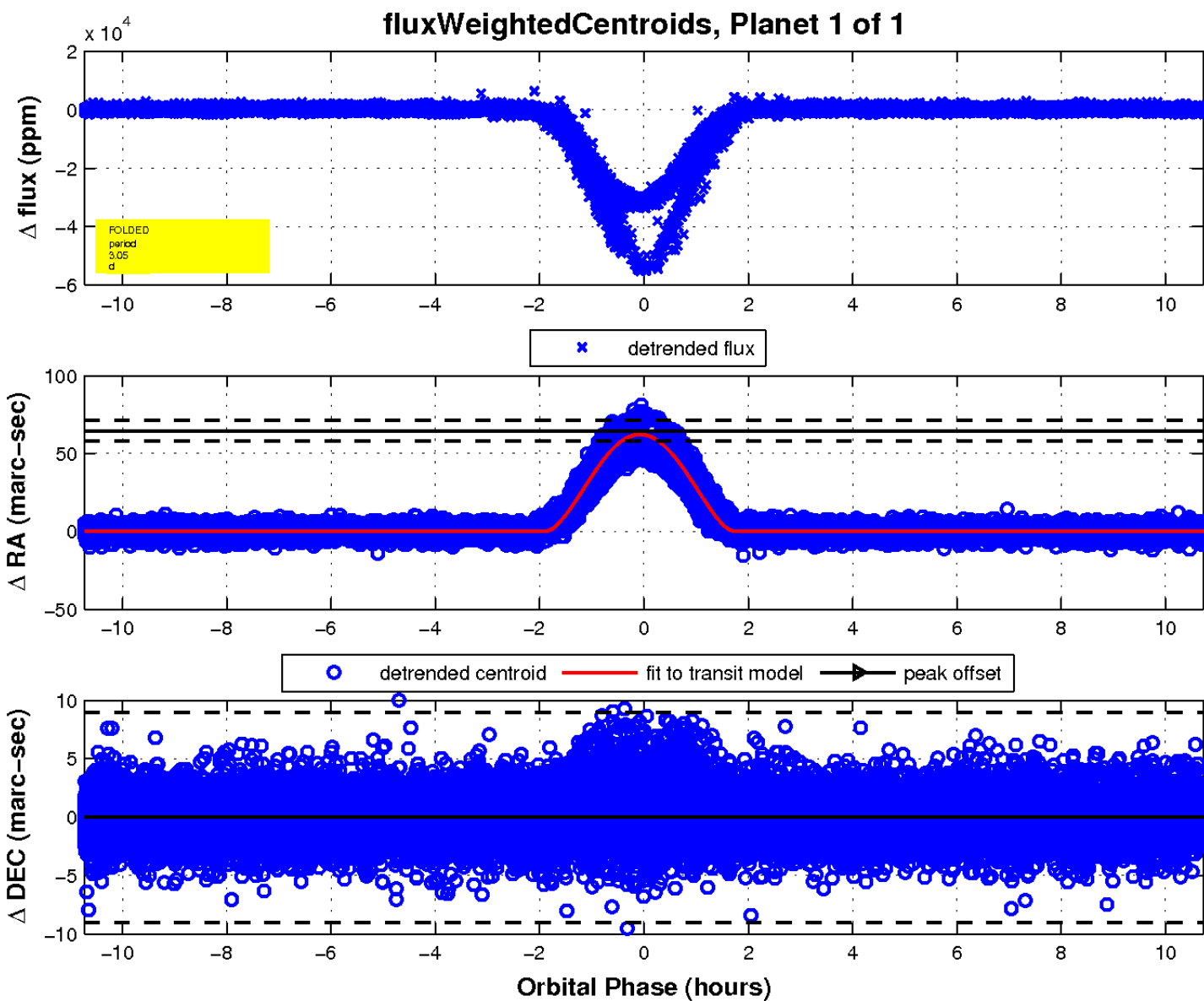
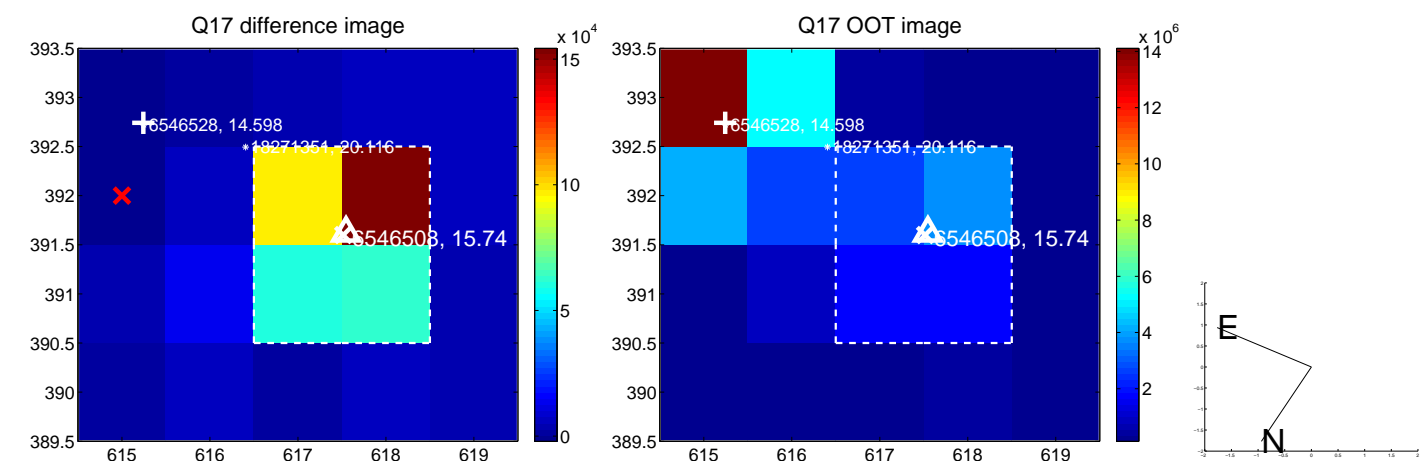
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UKIRT Image

Declination

