

KIC 006543674

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})
006543674-01	OBS	5298.01	1.195522	132.300777	168991.1	3.000	25239.3	-1.0	2.26	6047	94.05	11505.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006543674-01	OBS	FP	0.00	0	1	0	1	SWEET_EB—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS—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 006543674-01

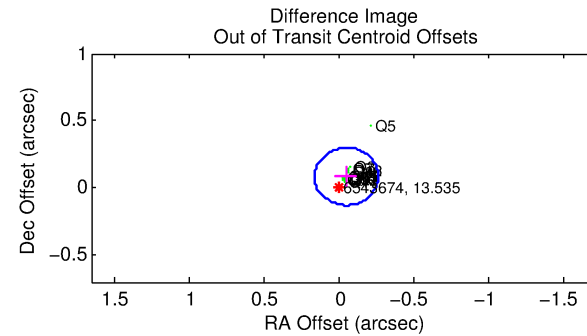
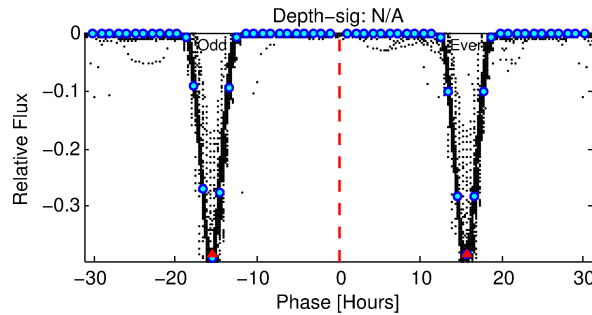
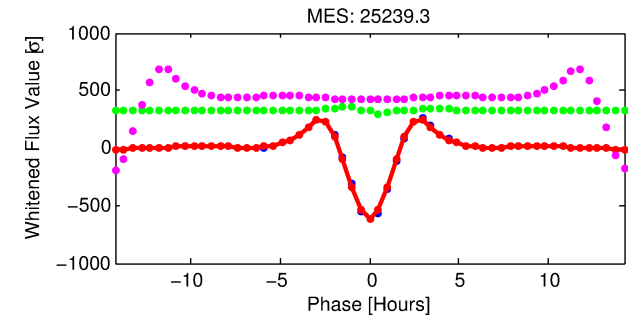
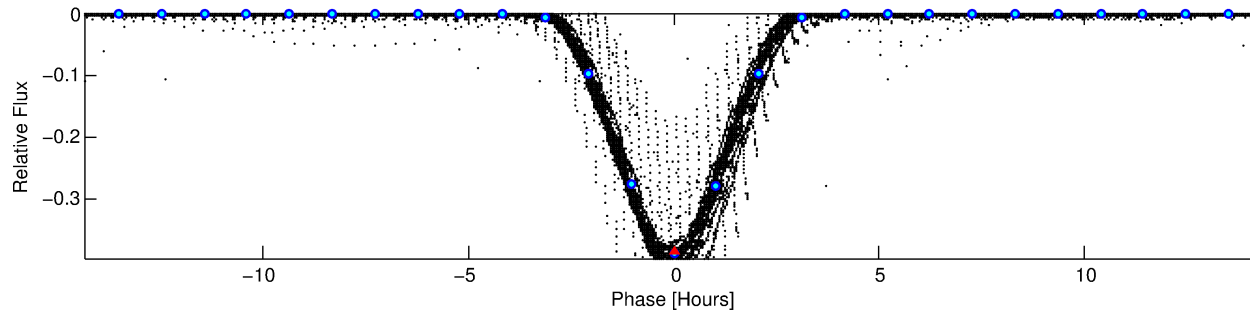
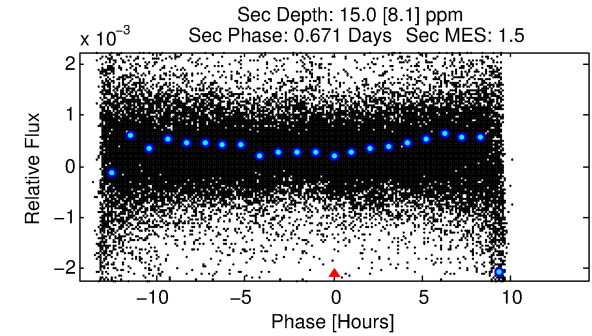
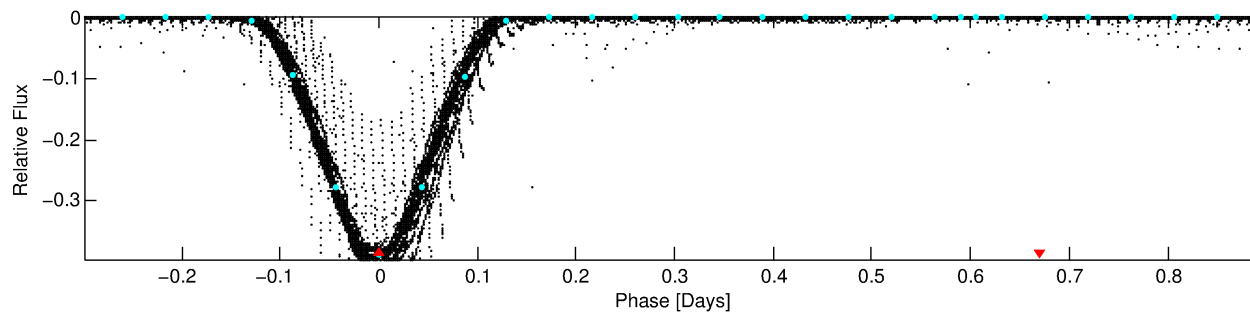
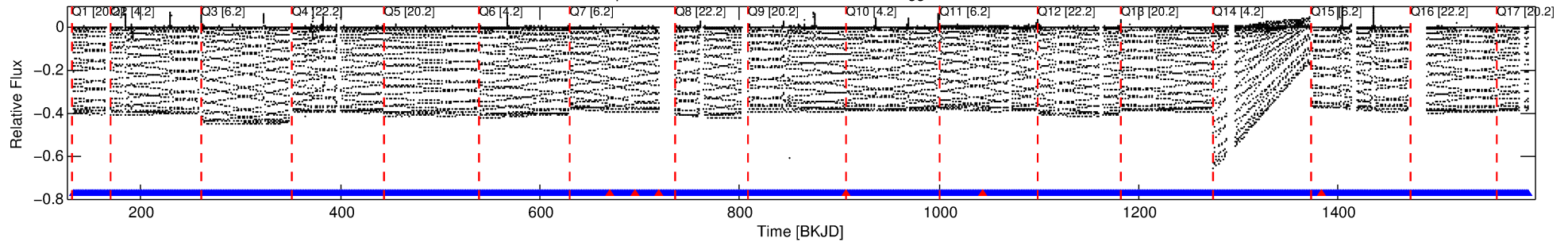
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006543674-01	6543674	6728.01	6543682	1:1	5.6	0	1	13.91	13.54	3.22	Direct-PRF	0	0.40	0.15

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: 6543674 Candidate: 1 of 1 Period: 1.196 d
KOI: K05298 Corr: No Ephemeris Match

Kp: 13.53 R*: 2.26 Rs Teff: 6047.0 K Logg: 3.79 Fe/H: -0.420



TPS TCE Results:

Period = 1.19552 d
Epoch = 132.3008 BKJD

DV fit results are unavailable

DV Diagnostic Results:

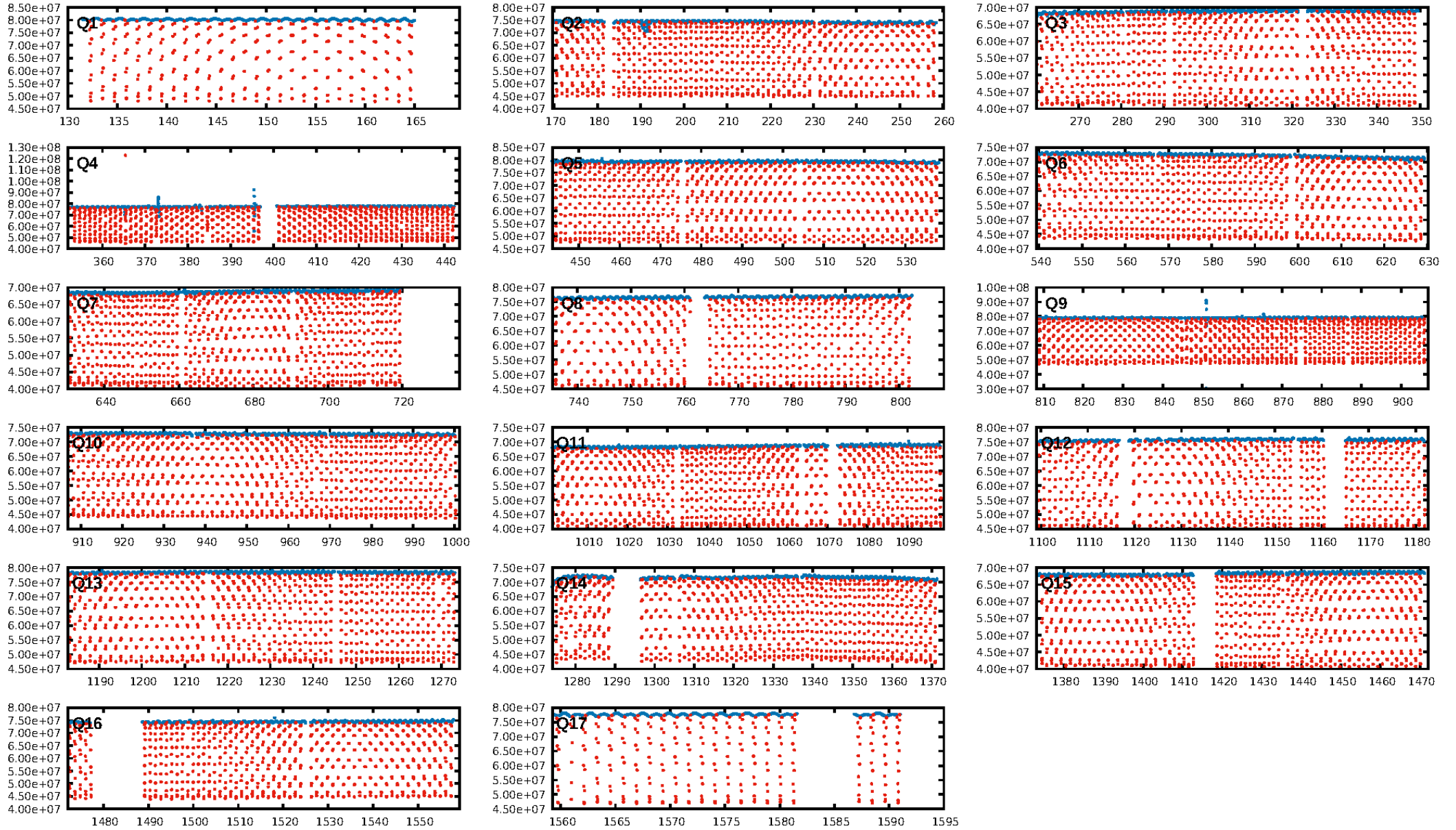
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1076/1082]
GhostDiagnostic-chr: 3.27

Centroid-sig: 0.0%
Centroid-so: 0.713 arcsec [2451.85σ]
OotOffset-rm: 0.100 arcsec [1.40σ]
KicOffset-rm: 0.096 arcsec [1.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

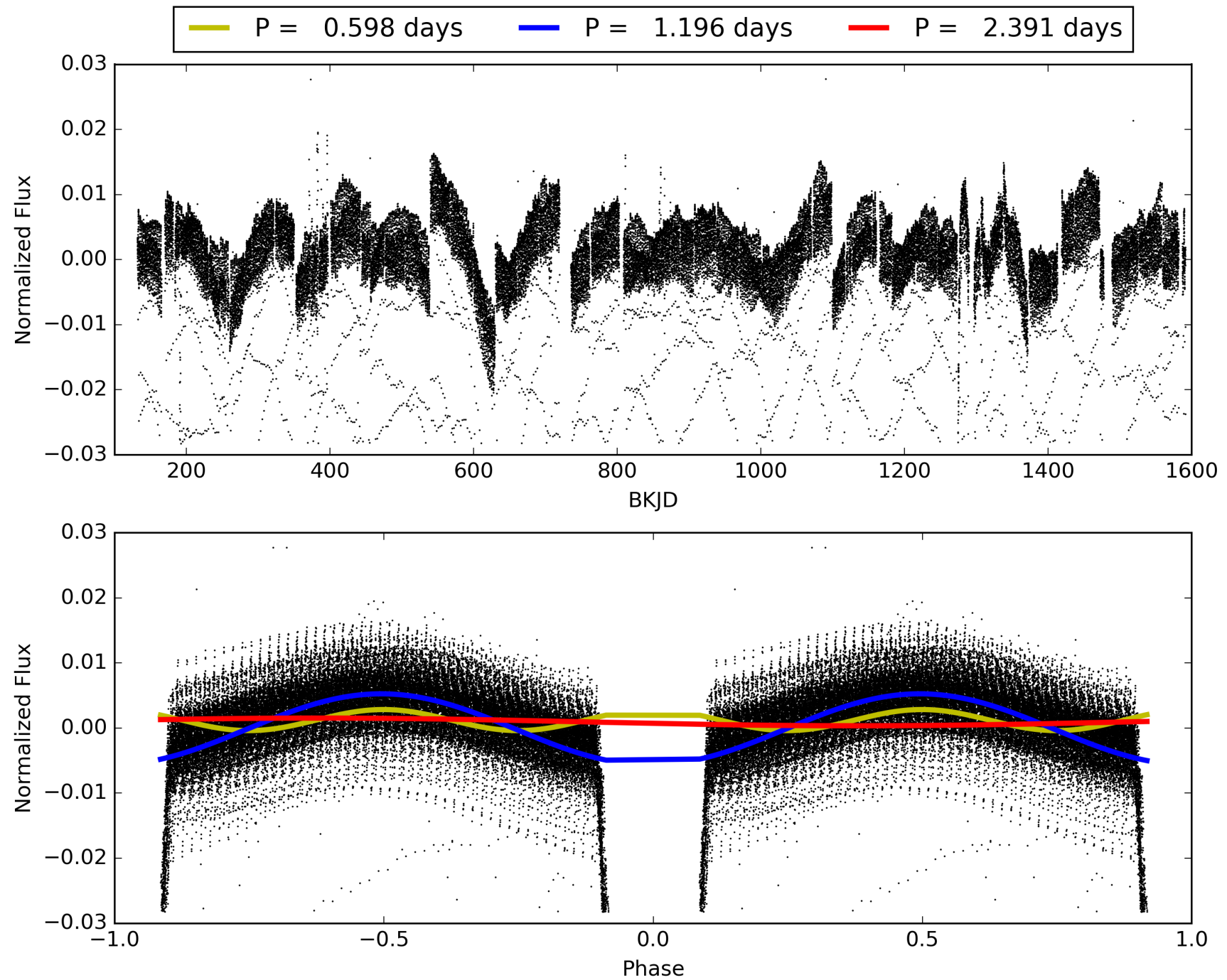
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:51:53 Z

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

TCE 006543674-01, PDC Light Curves

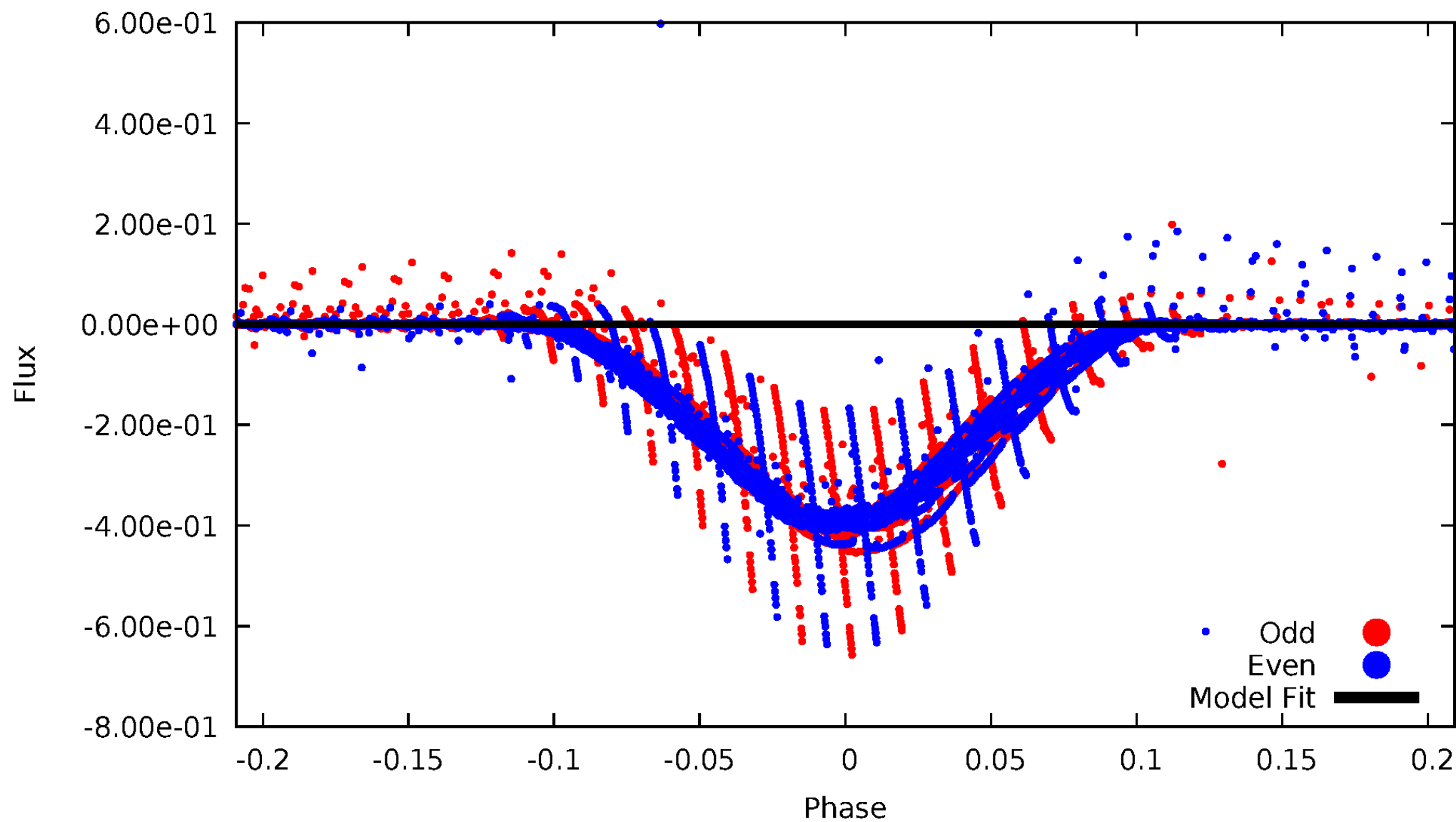


TCE 006543674-01



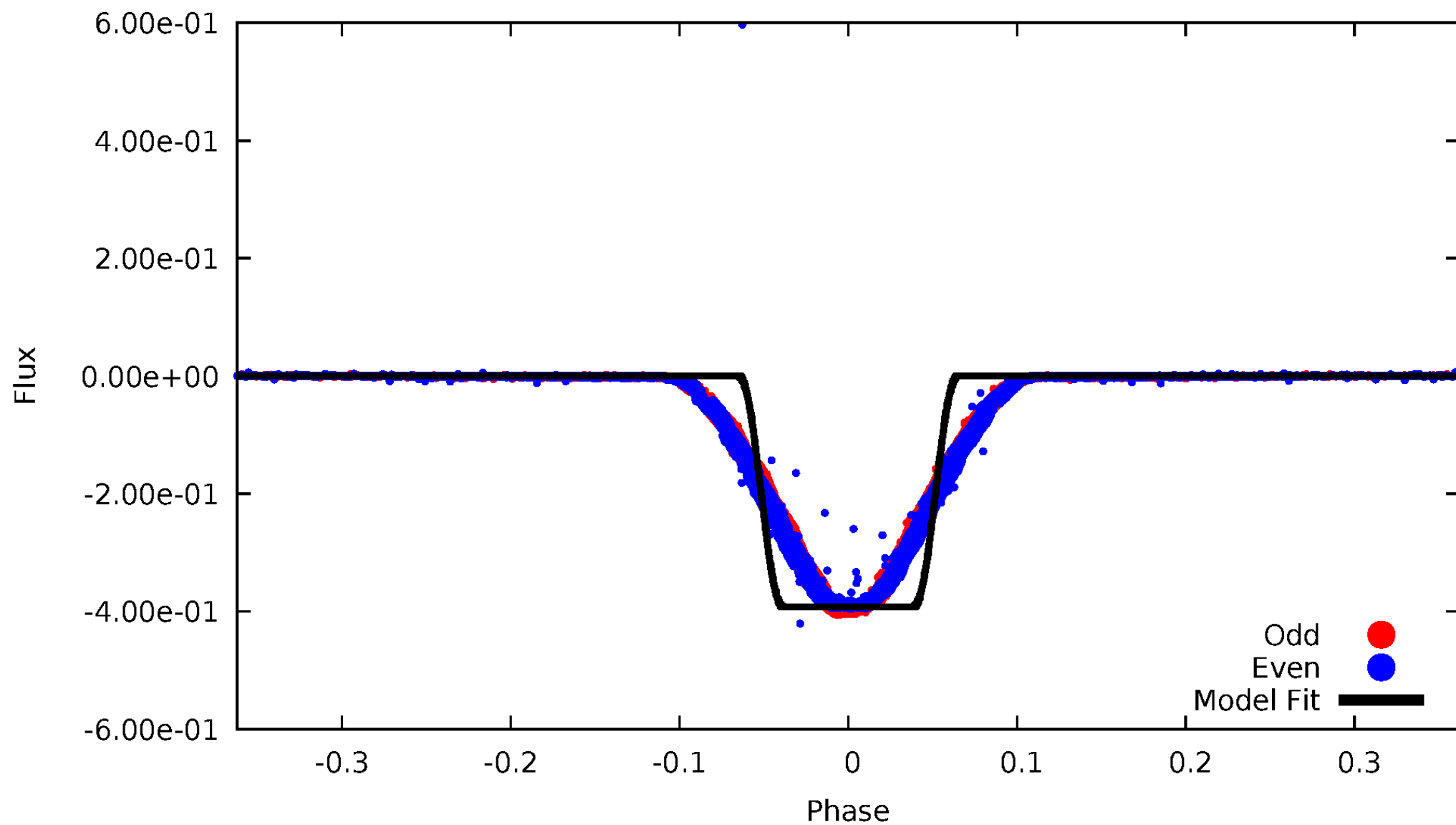
DV Odd/Even

TCE 006543674-01



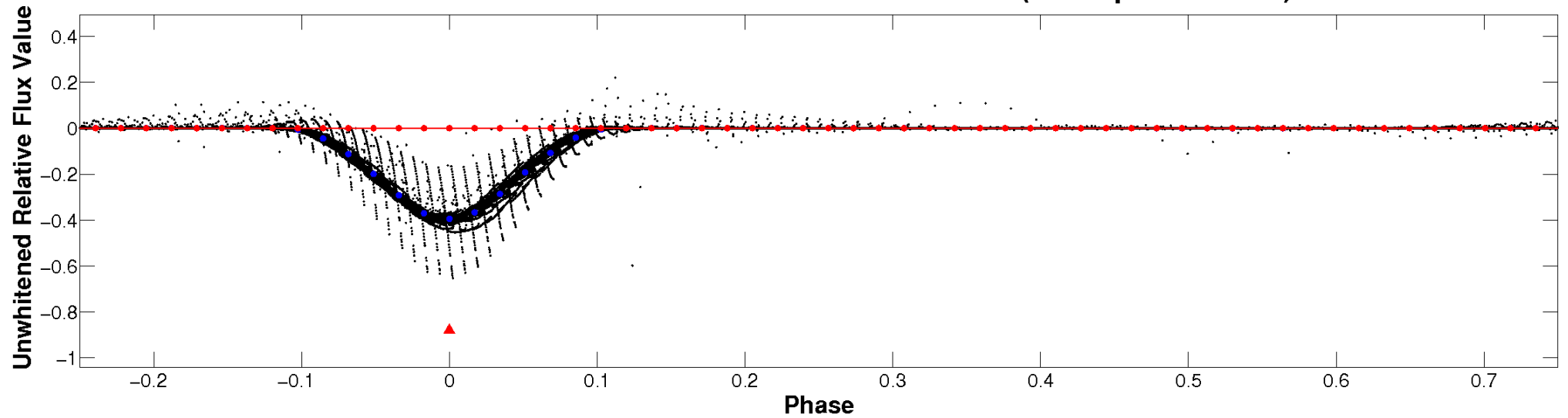
ALT Odd/Even

TCE 006543674-01

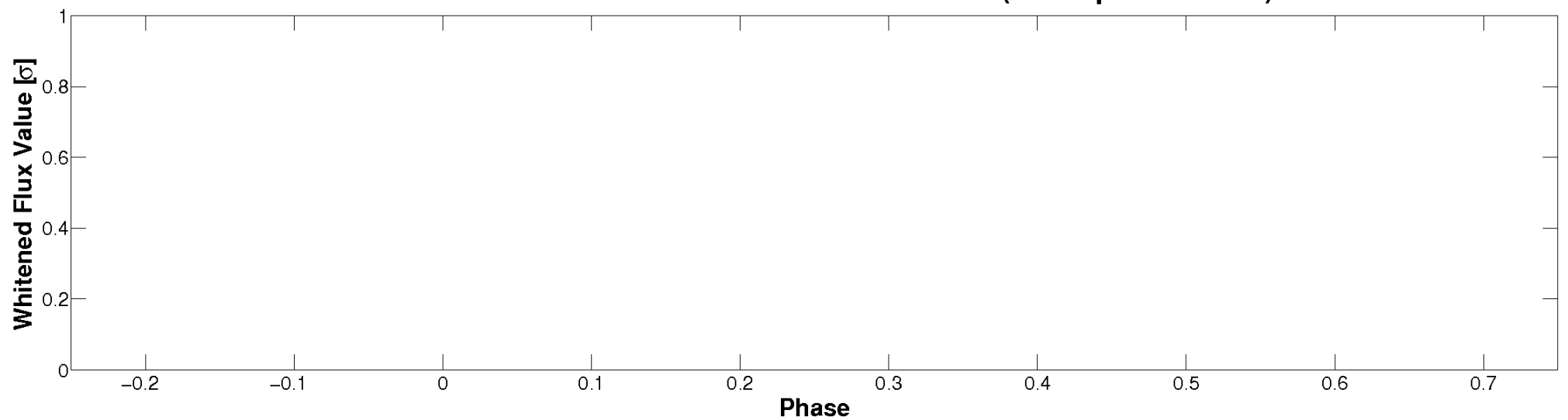


Non-Whitened Vs. Whitened Light Curve

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

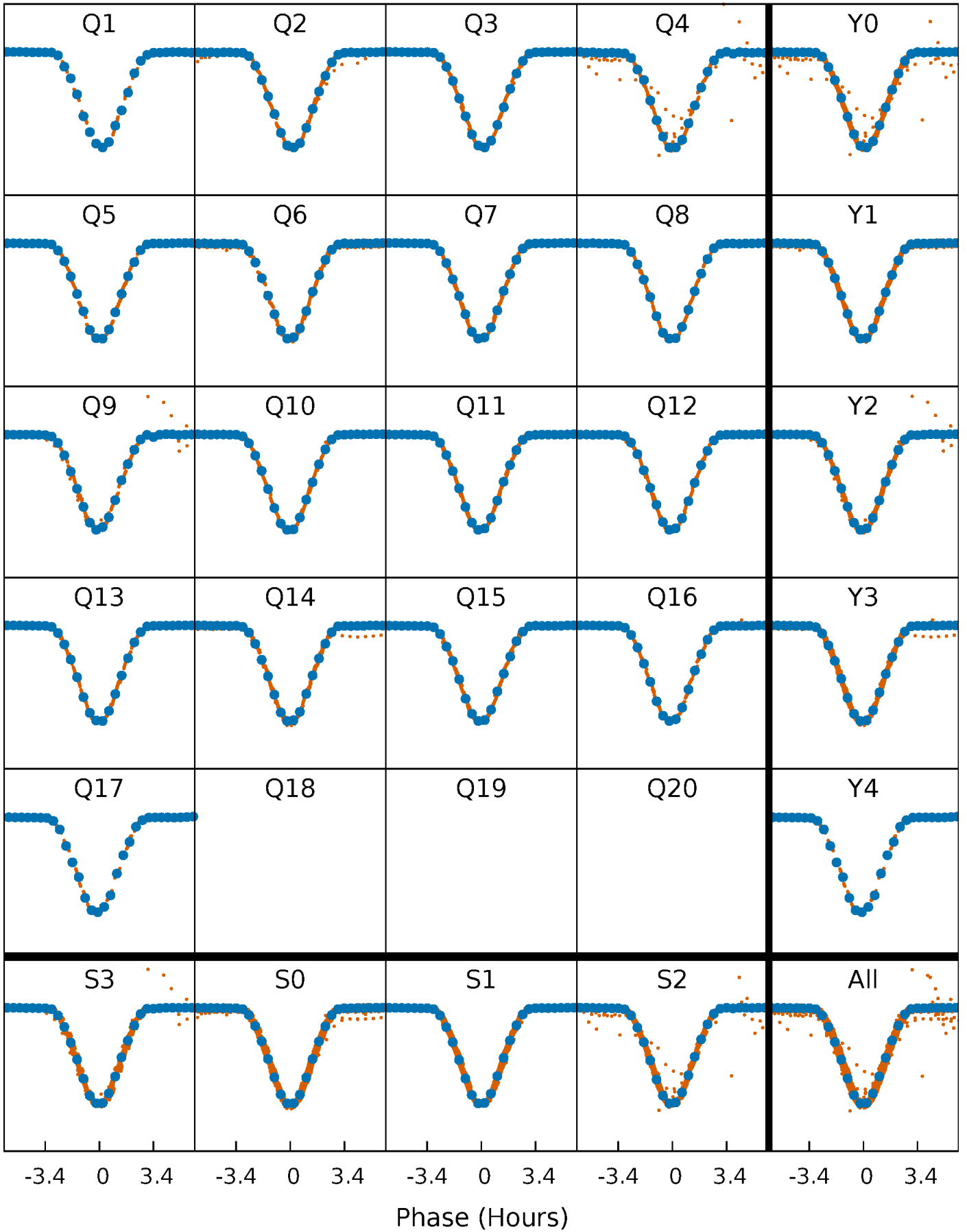


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



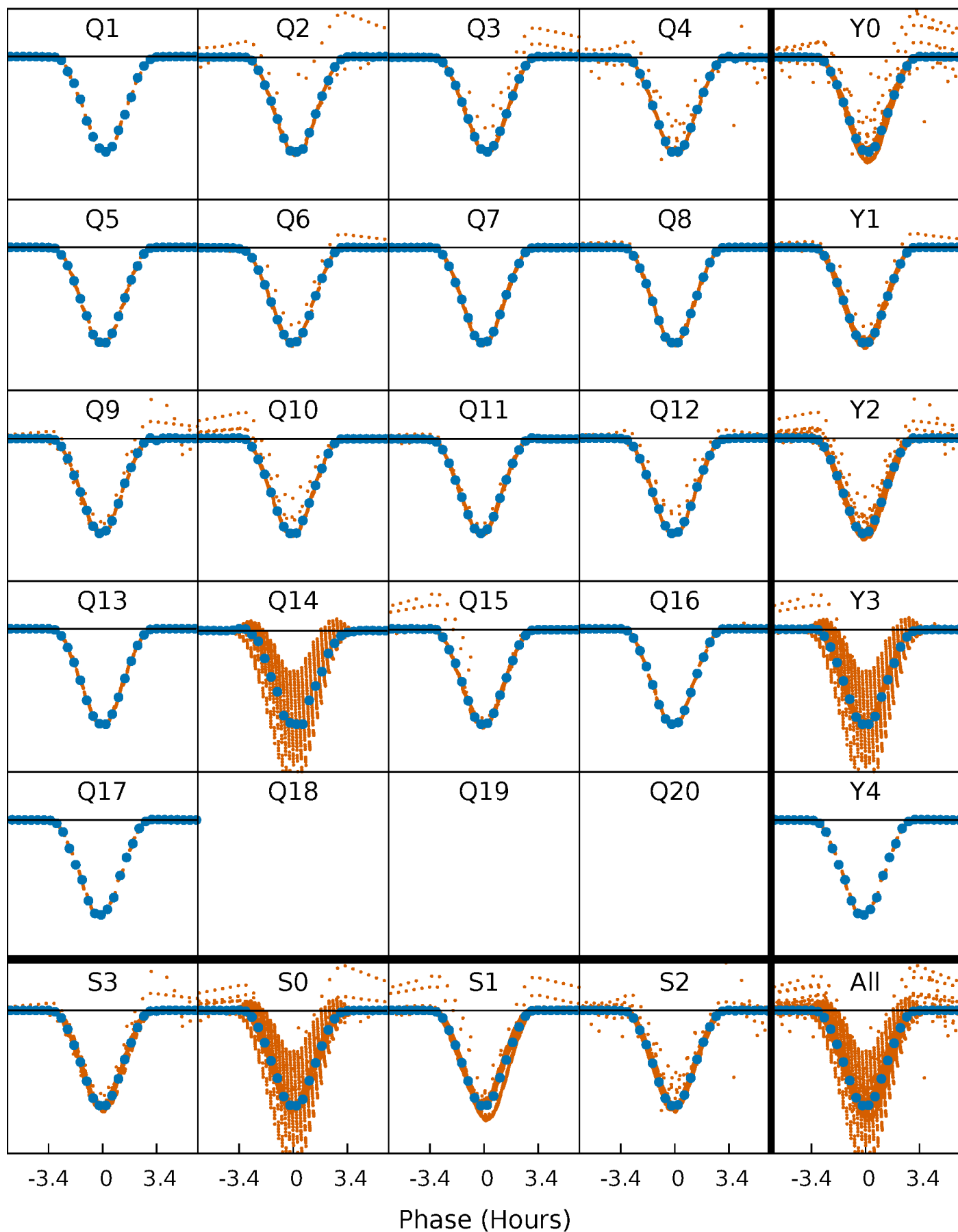
PDC Quarter-Phased Transit Curves

TCE 006543674-01 P= 1.195522 Days $T_0=132.300777$ (BKJD)



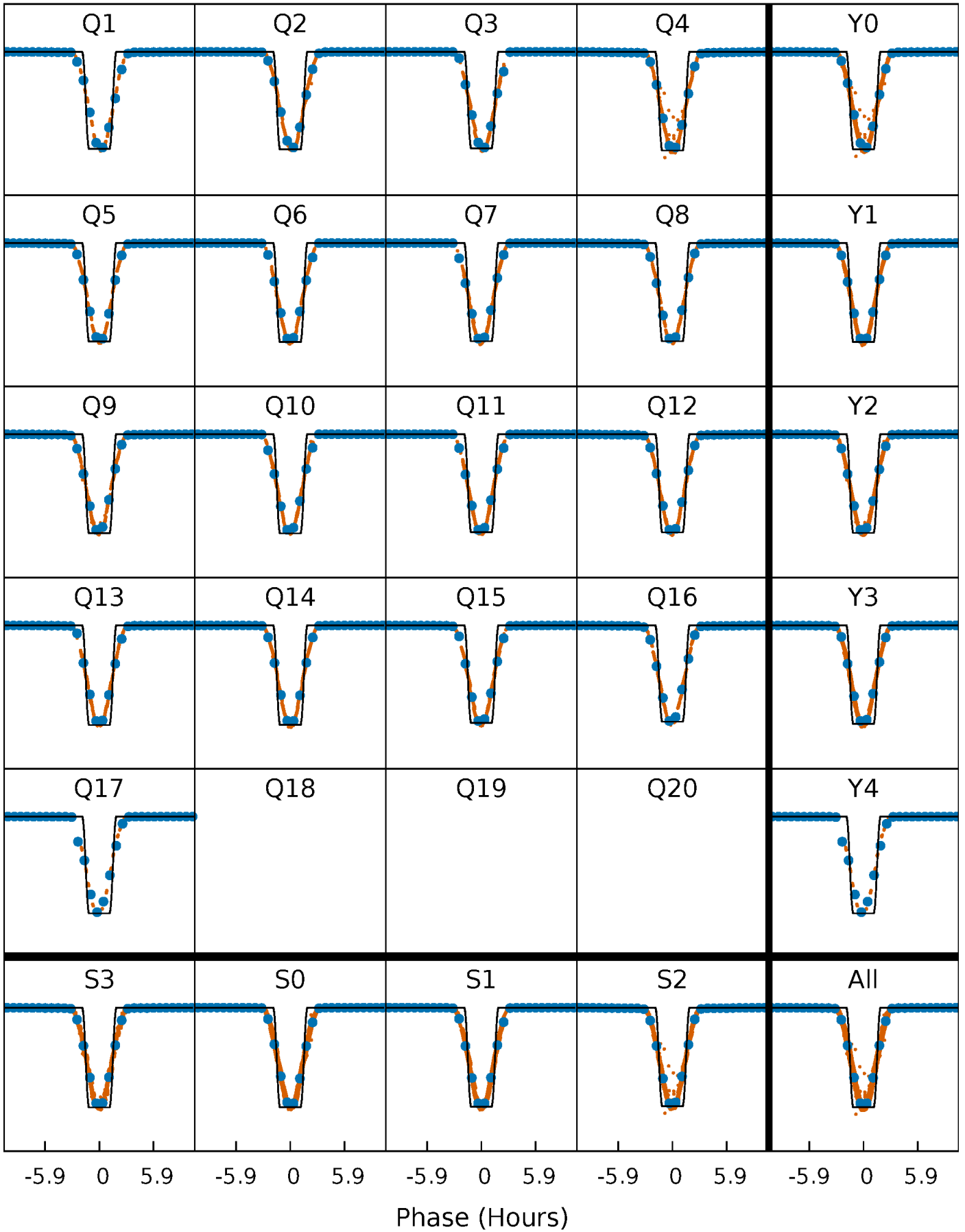
DV Quarter-Phased Transit Curves

TCE 006543674-01 P= 1.195522 Days $T_0=132.300777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

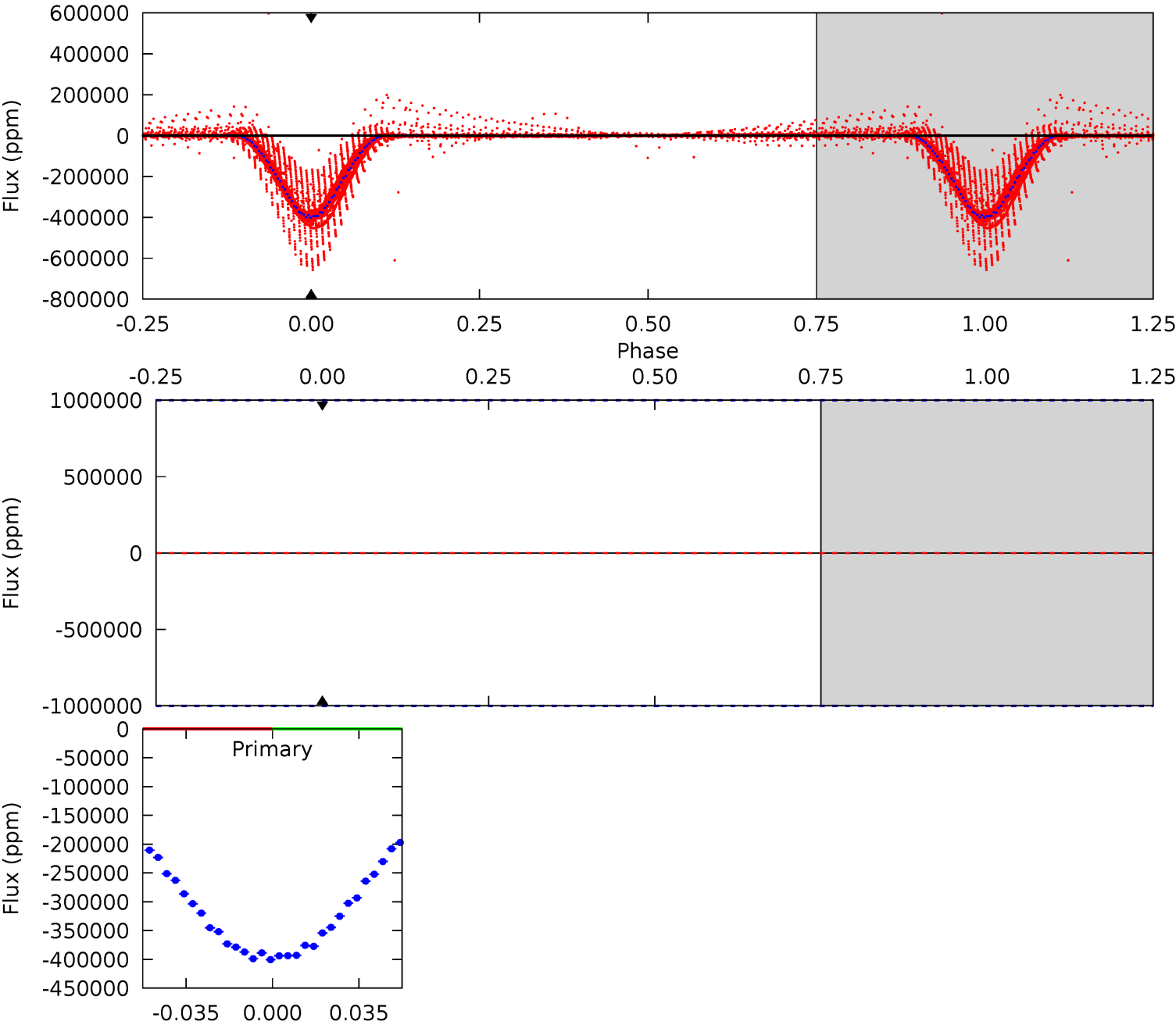
TCE 006543674-01 P= 1.195522 Days $T_0=132.299884$ (BKJD)



DV Model-Shift Uniqueness Test

006543674-01, P = 1.195522 Days, E = 131.105255 Days

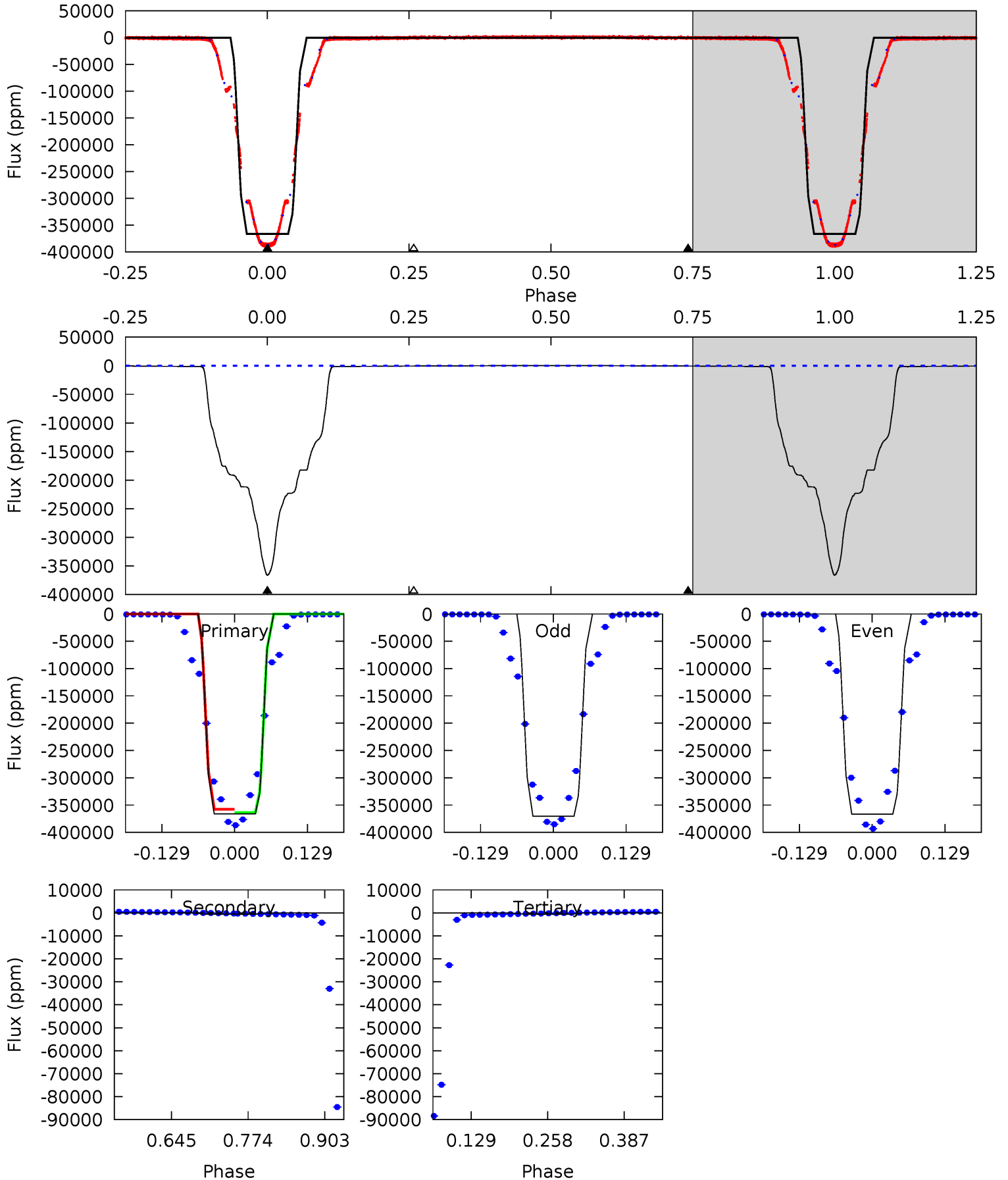
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006543674-01, P = 1.195522 Days, E = 131.104362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19427	29.2	27.5	0	4.51	1.52	24.7	19400	19427	1.69	29.2	104.0	1.00	0.00	0



Stellar Parameters For KIC 006543674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6047^{+211}_{-211}	$3.789^{+0.584}_{-0.146}$	$-0.420^{+0.300}_{-0.300}$	$2.264^{+0.534}_{-1.246}$	$1.150^{+0.160}_{-0.275}$	$0.140^{+1.064}_{-0.060}$
	+3%/-3%	+15%/-4%	+71%/-71%	+24%/-55%	+14%/-24%	+763%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006543674-01 / KOI 5298.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$83.30^{+33.85}_{-28.02}$	3601^{+316}_{-538}	-3235^{+8924}_{-2403}	$0.087^{+5.018}_{-4.360}$
Alt.	-550 ± 19	$140.54^{+39.19}_{-41.62}$	3569^{+329}_{-499}	-3418^{+305}_{-201}	$0.008^{+0.008}_{-0.003}$

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 $A_{obs} \gg 1.0$

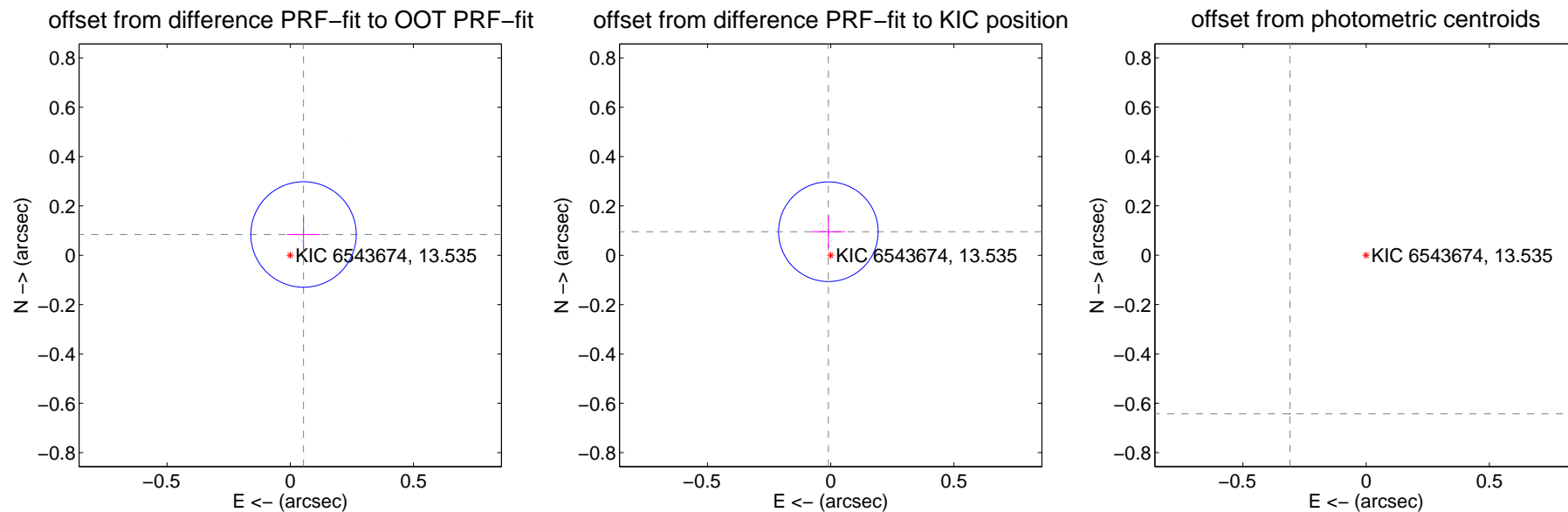
DV Centroid Data

Supplemental centroid analysis for 006543674-01. Kepler magnitude: 13.54. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

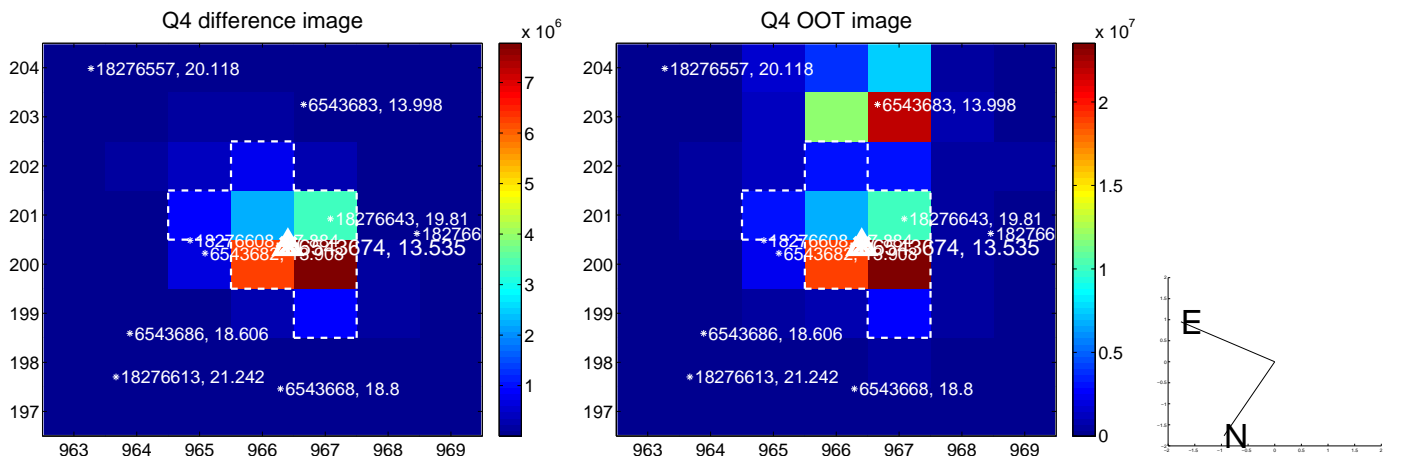
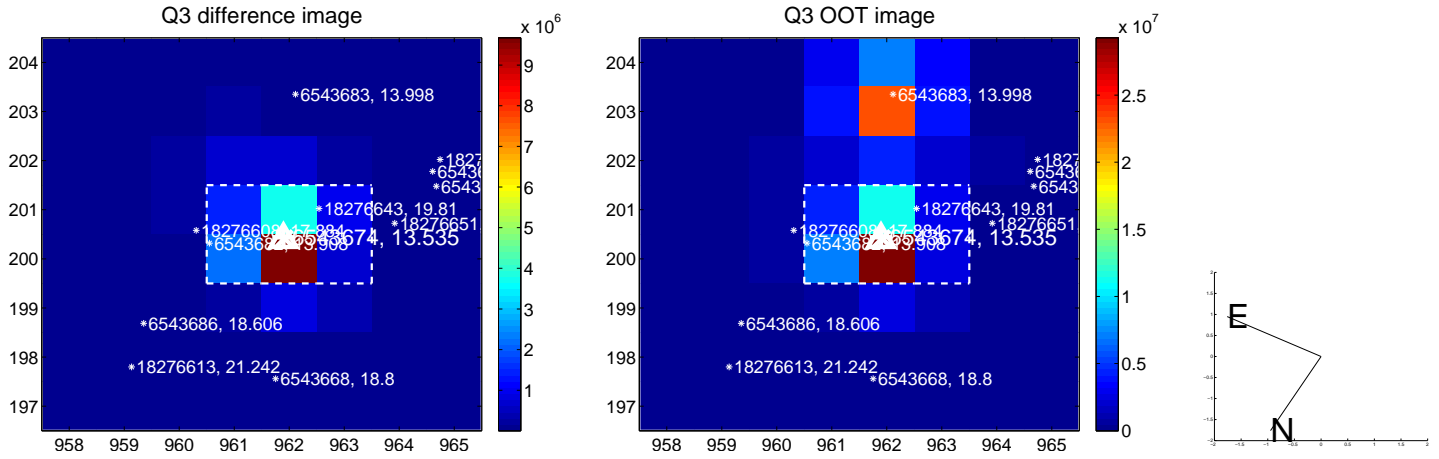
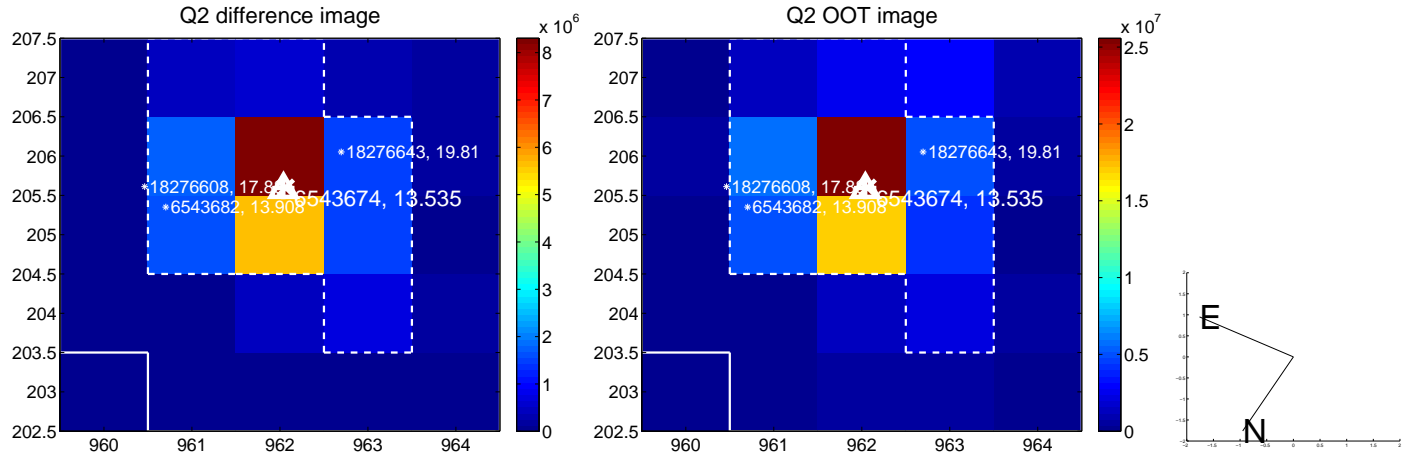
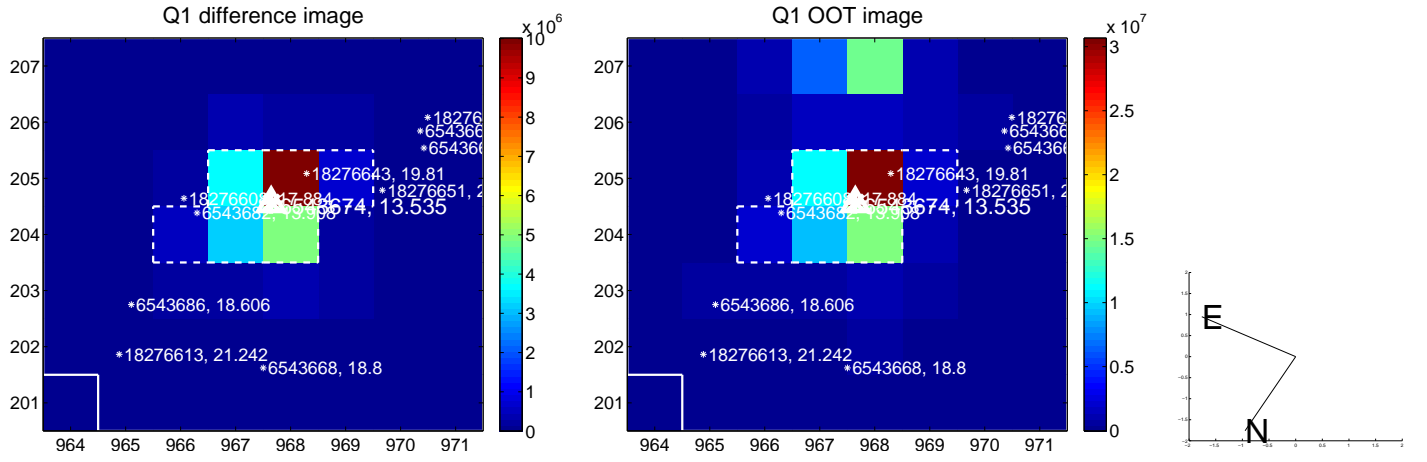
The direct PRF centroid is offset from the target star catalog position by about 0.00 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.100 ± 0.071	1.40	-0.054 ± 0.067	0.084 ± 0.071
PRF-fit source offset from KIC position	0.096 ± 0.067	1.43	0.009 ± 0.067	0.096 ± 0.067
photometric centroid source offset	0.71 ± 0.00	2451.85	0.31 ± 0.00	-0.64 ± 0.00

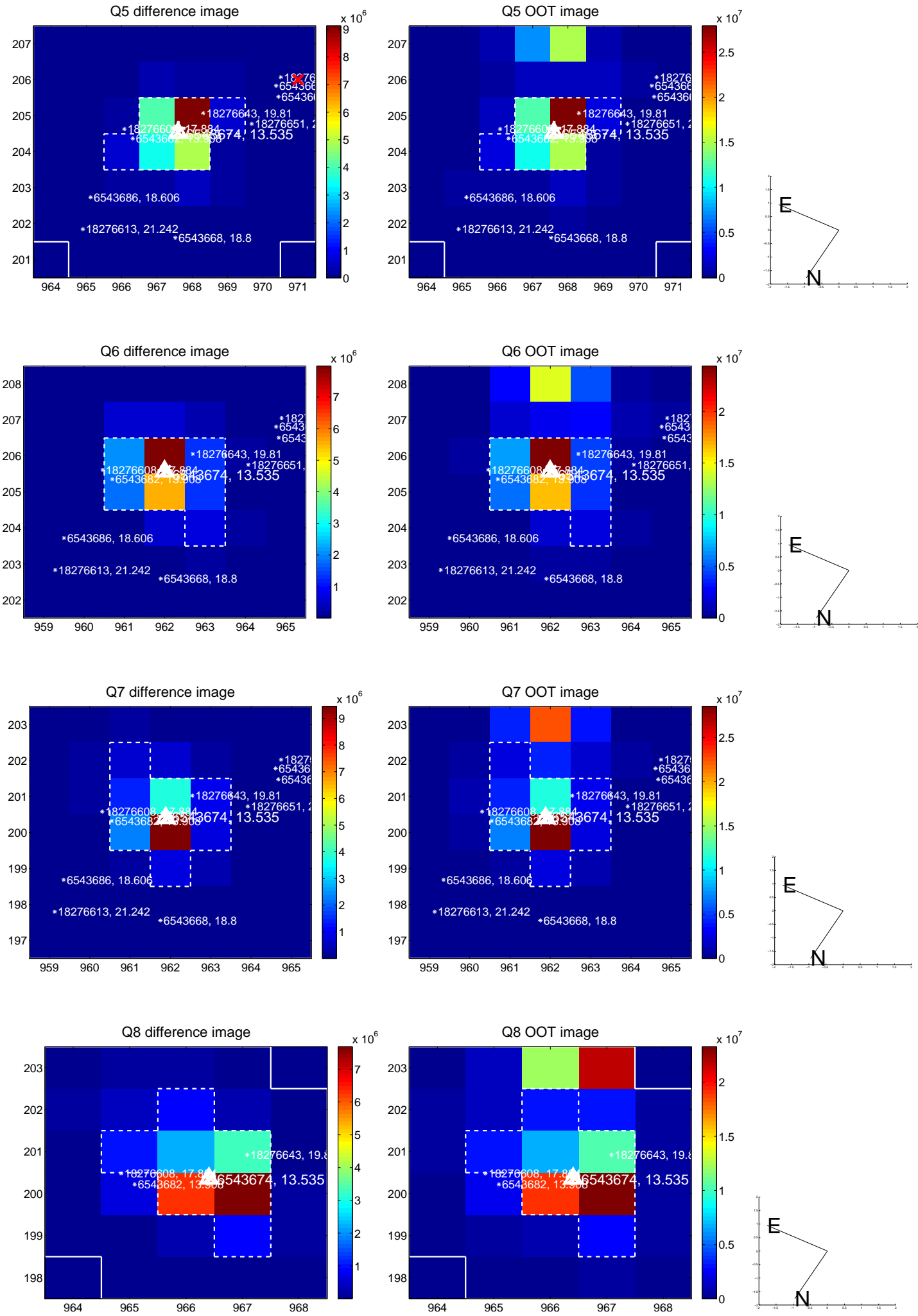


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

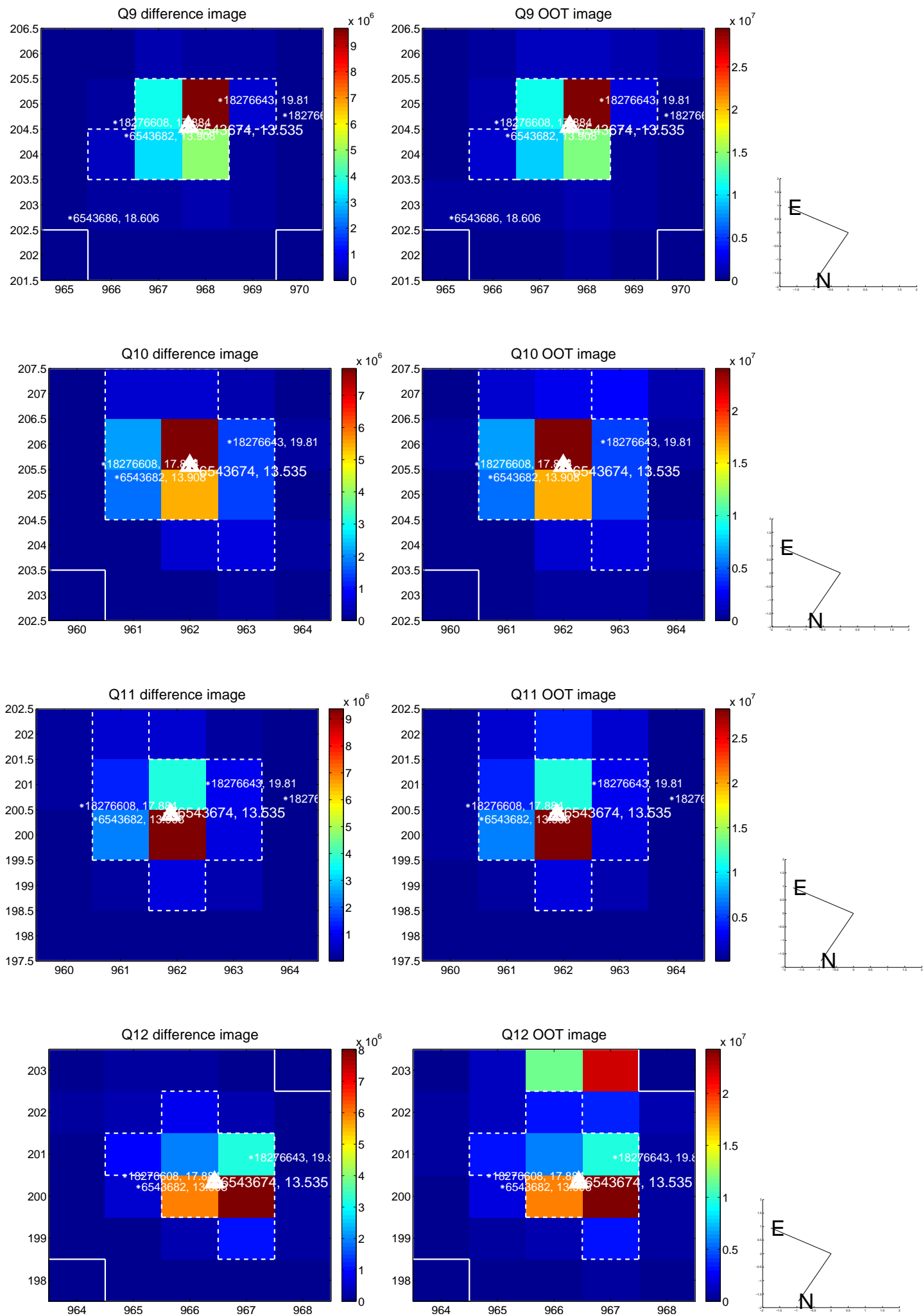
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



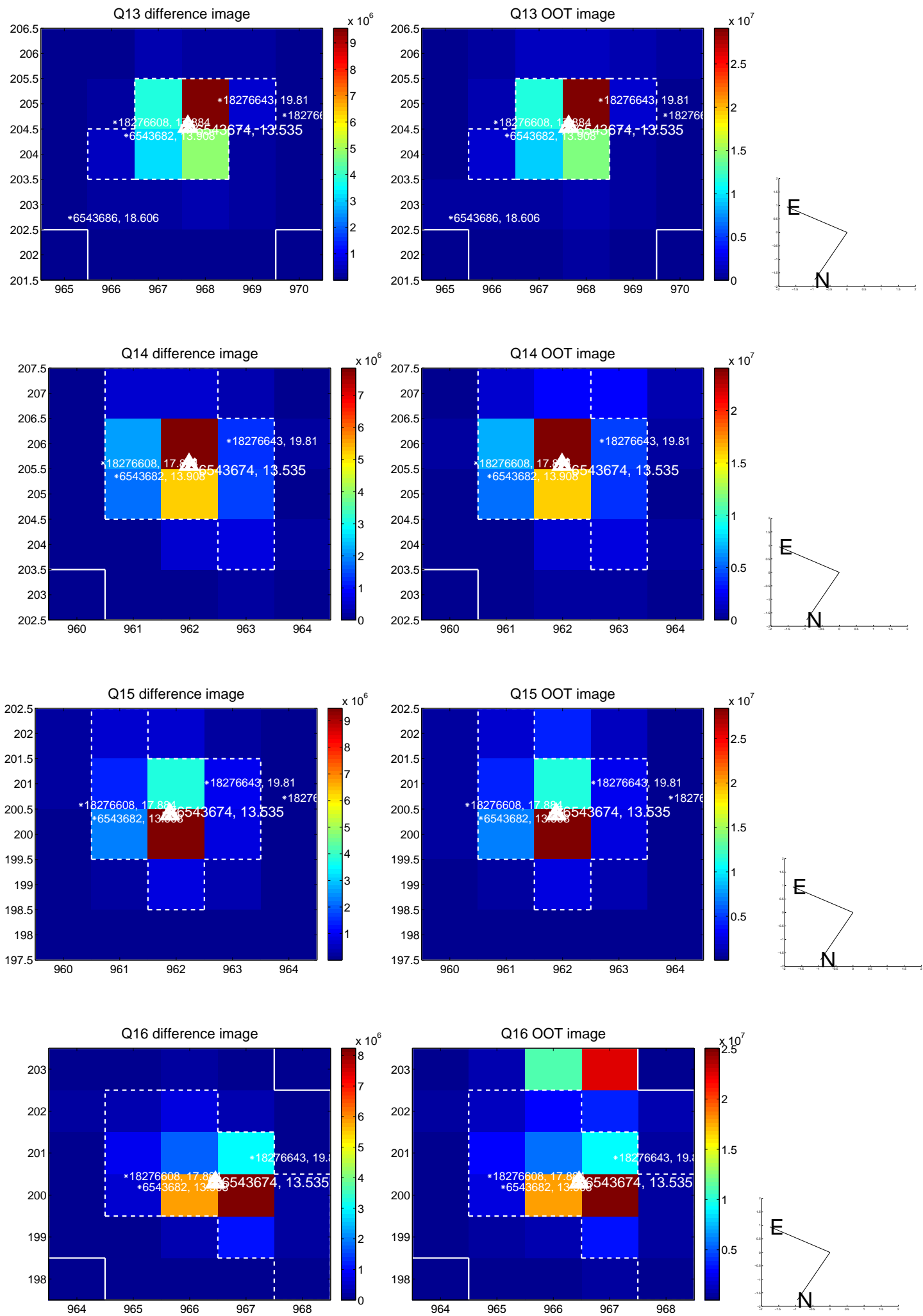
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



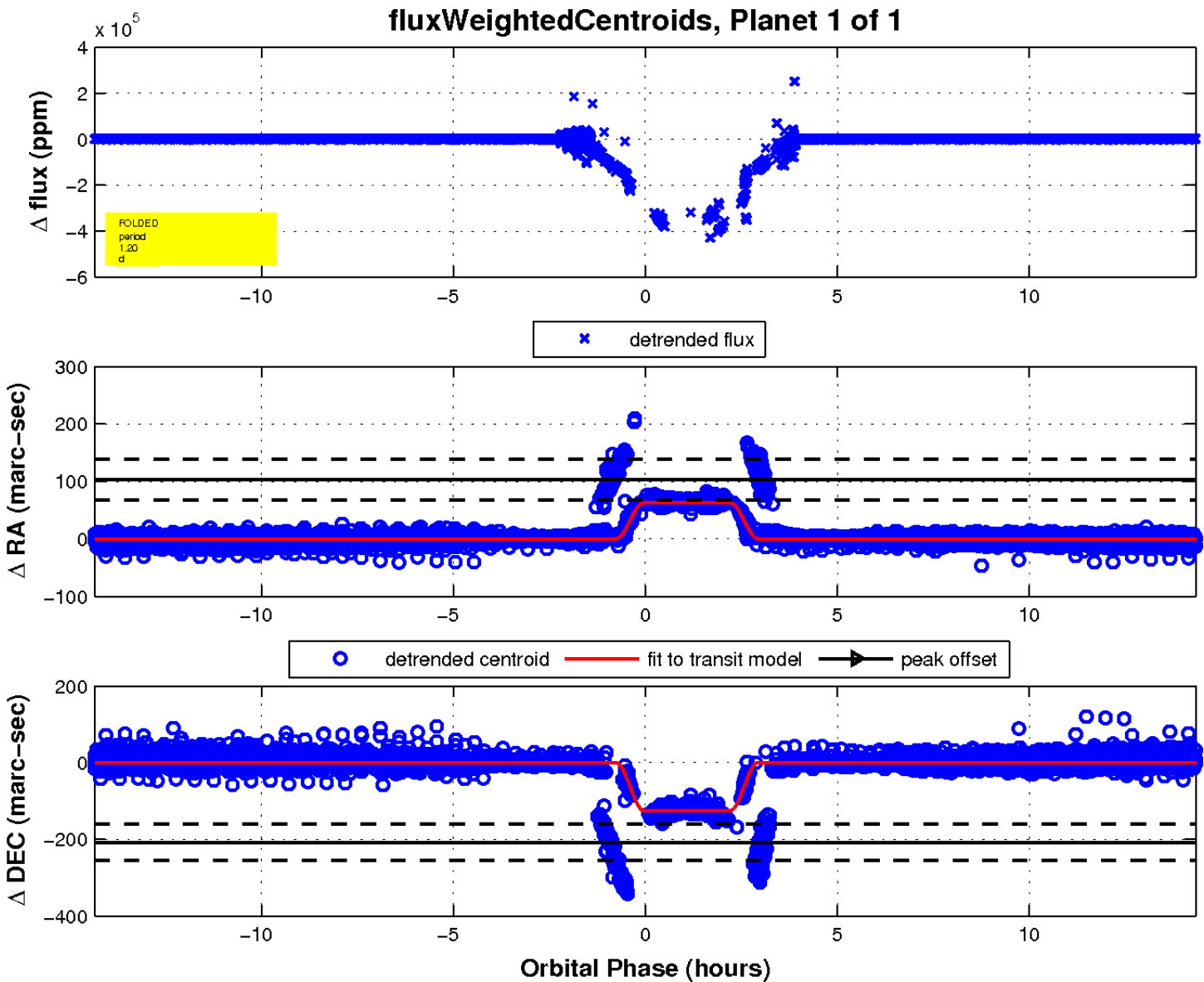
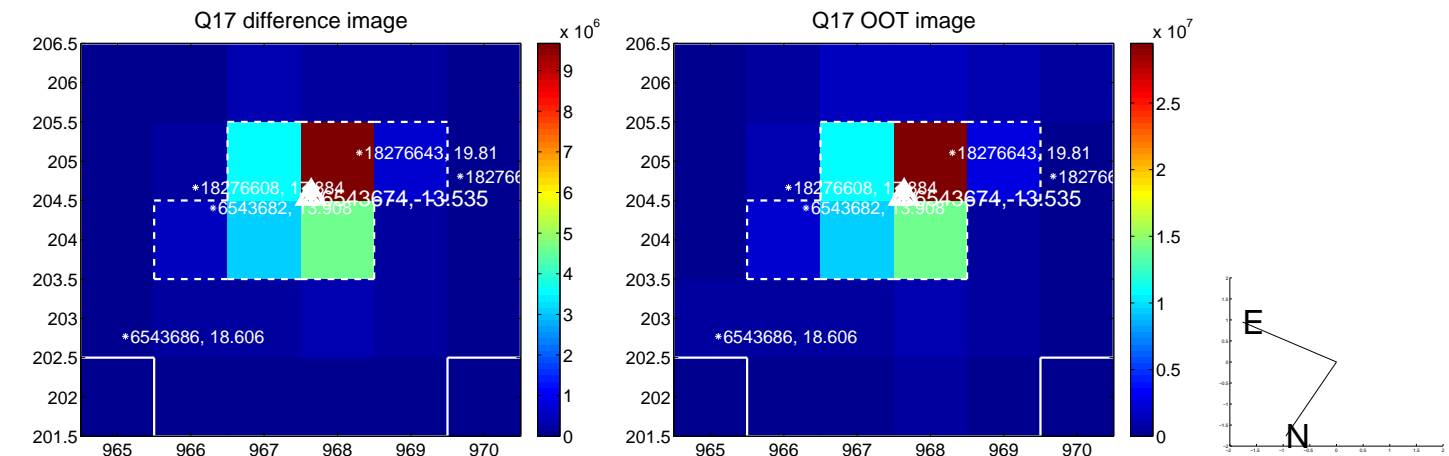
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

