

KIC 006620003

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})
006620003-01	OBS	1225.01	1.714266	131.604946	27814.1	2.045	1239.6	1274.7	0.54	3874	12.14	110.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006620003-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

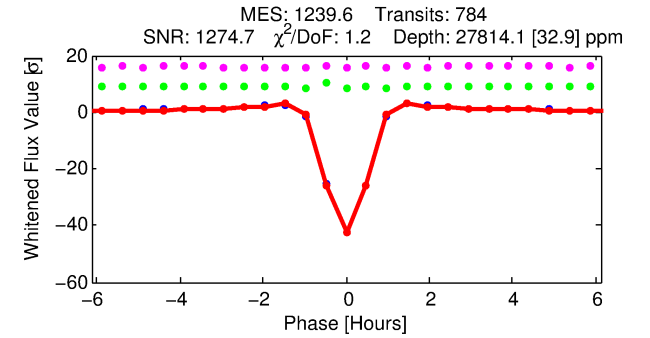
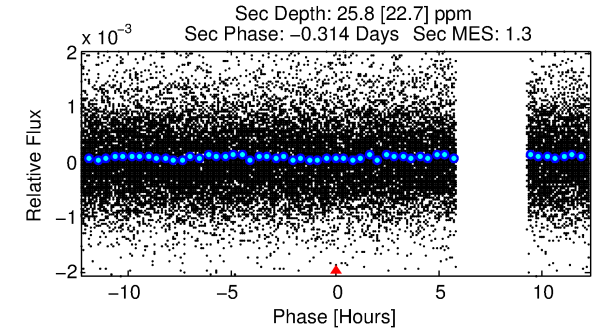
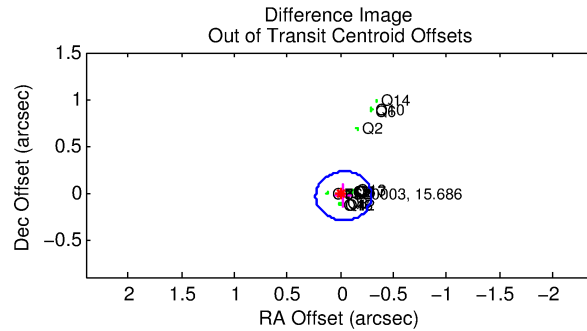
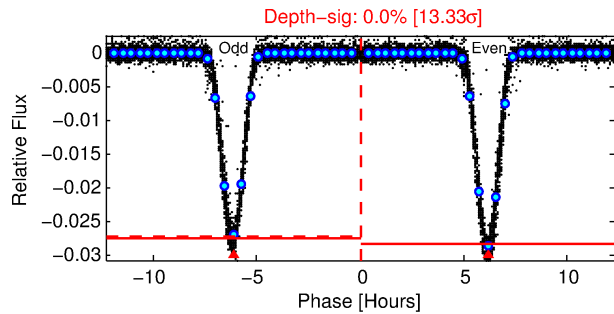
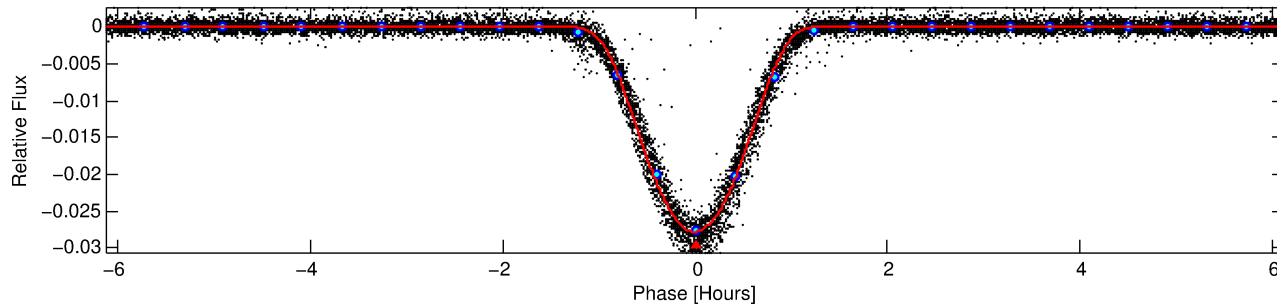
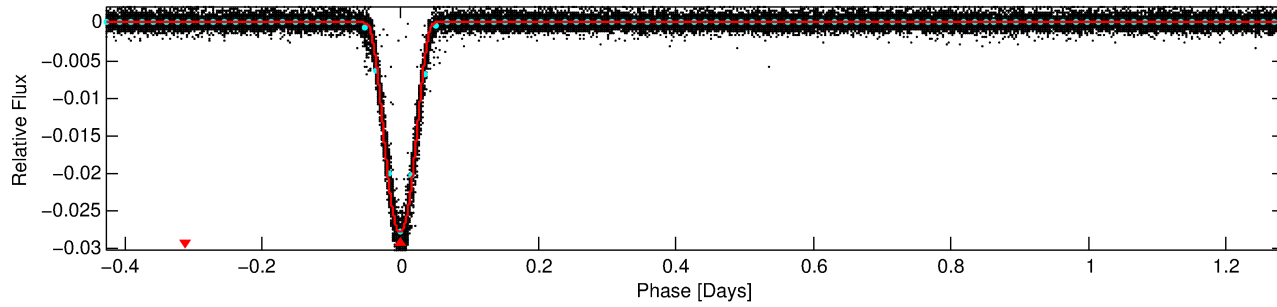
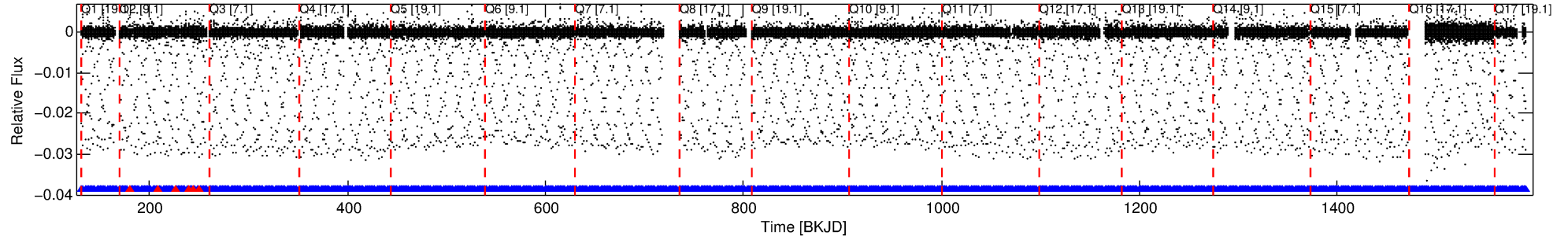
Ephemeris Match Information For 006620003-01

No Significant Match Found

DV One-Page Summary

KIC: 6620003 Candidate: 1 of 1 Period: 1.714 d
KOI: K01225.01 Corr: 0.978

Kp: 15.69 R*: 0.54 Rs Teff: 3874.0 K Logg: 4.71 Fe/H: -0.100



DV Fit Results:

Period = 1.71427 [0.00000] d
Epoch = 131.6049 [0.0000] BKJD
Rp/R* = 0.2079 [0.0044]
a/R* = 5.26 [0.02]
b = 0.90 [0.01]
Seff = 110.58 [9.09]
Teq = 827 [17] K
Rp = 12.14 [0.64] Re
a = 0.0229 [0.0009] AU
Ag = 0.05 [0.04] [-21.42σ]
Teff = 605 [133] K [-1.65σ]

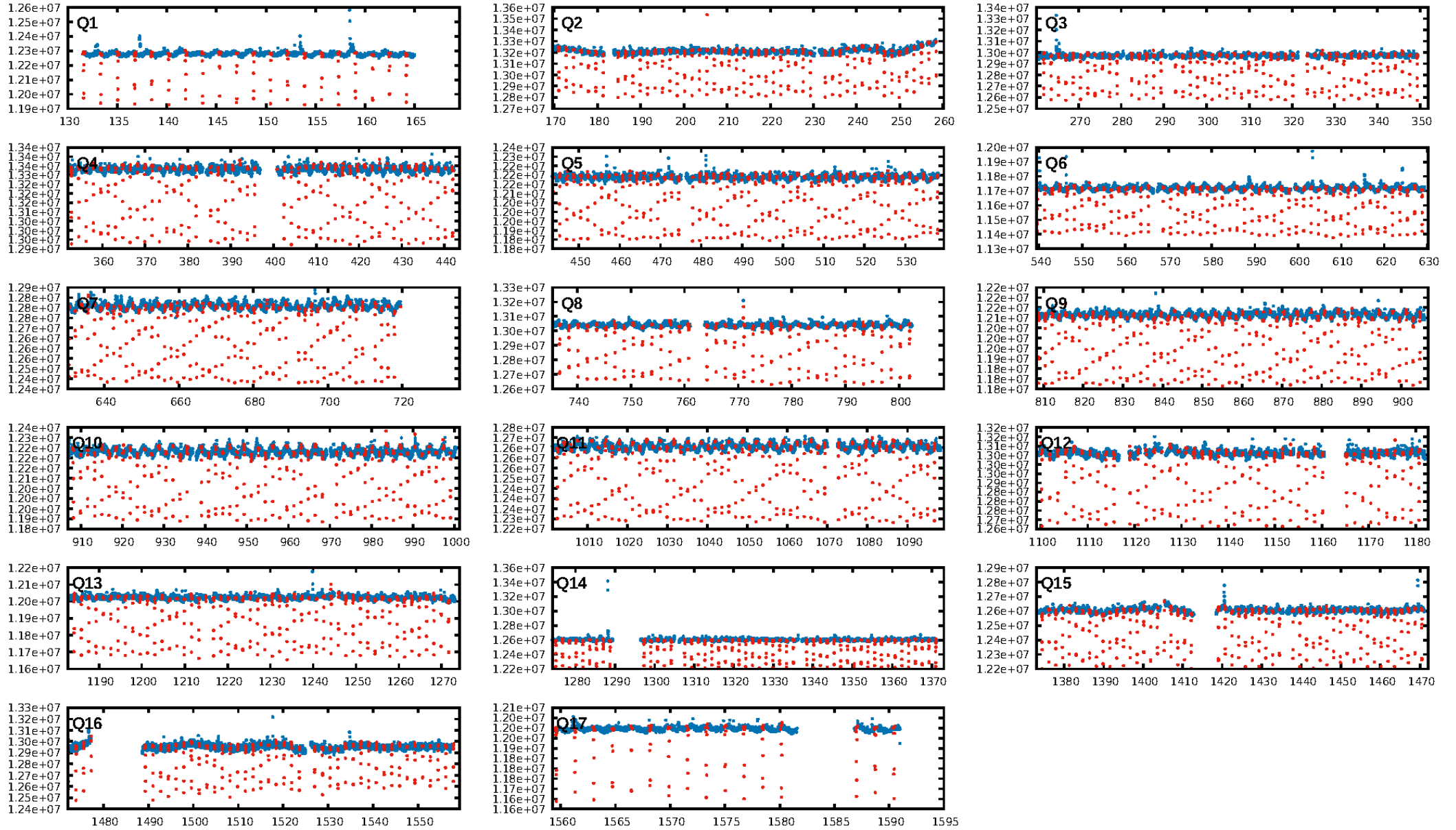
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-igt: 0.99 [742/748]
GhostDiagnostic-chr: 3.006
Centroid-sig: 0.0%
Centroid-so: 0.139 arcsec [19.02σ]
OotOffset-rm: 0.047 arcsec [0.53σ]
KicOffset-rm: 0.178 arcsec [1.84σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-figm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

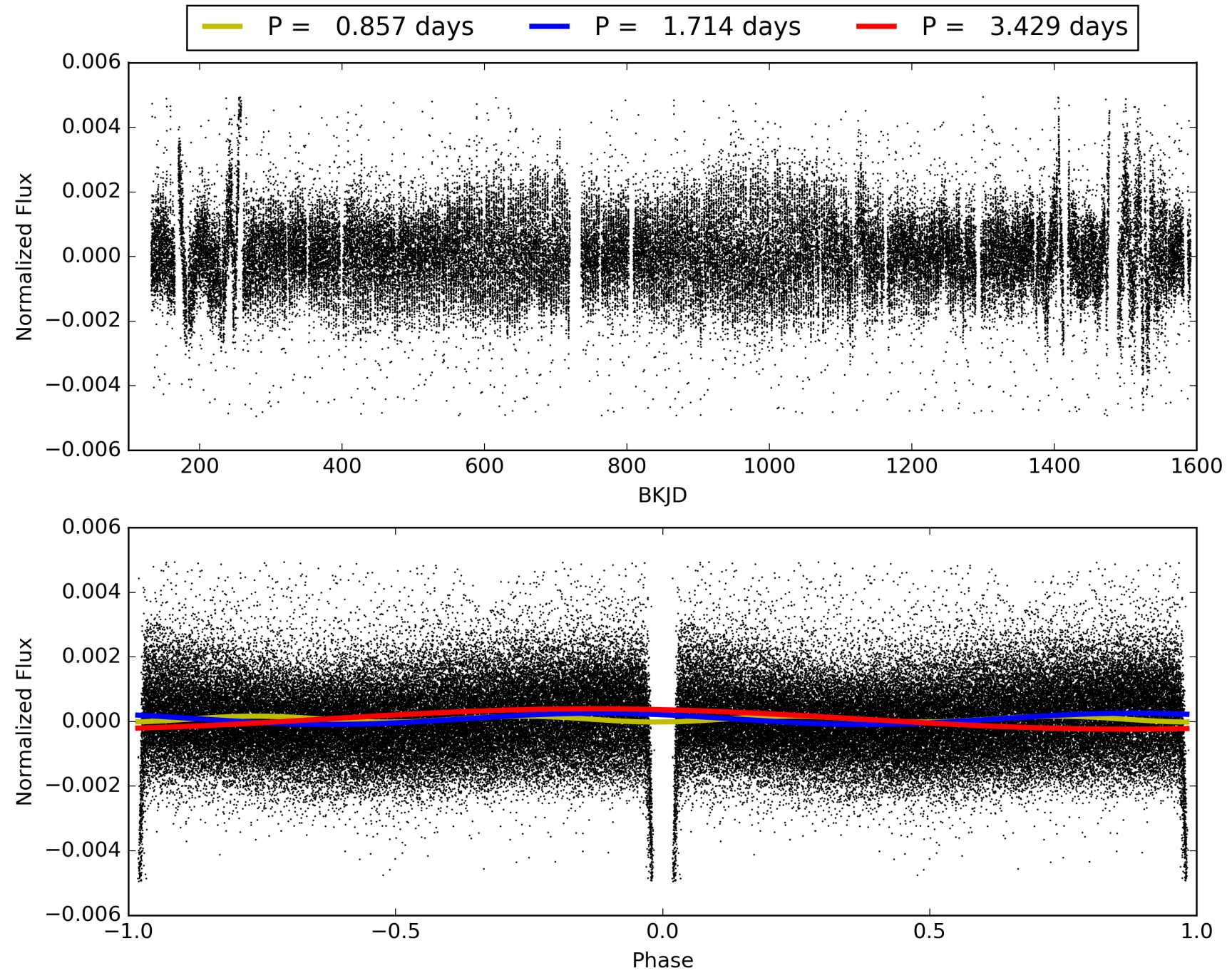
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:27:17 Z

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

TCE 006620003-01, PDC Light Curves

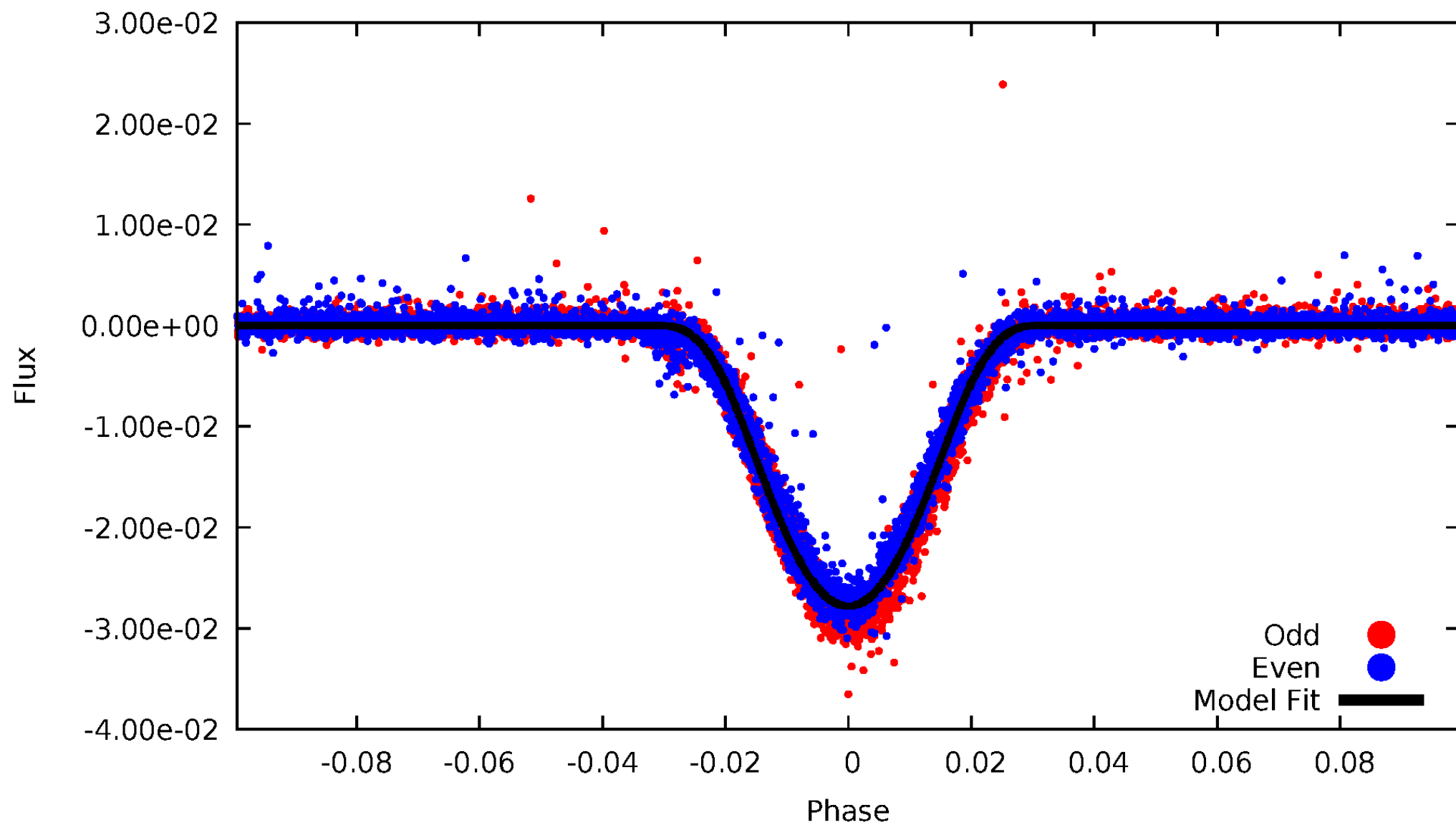


TCE 006620003-01



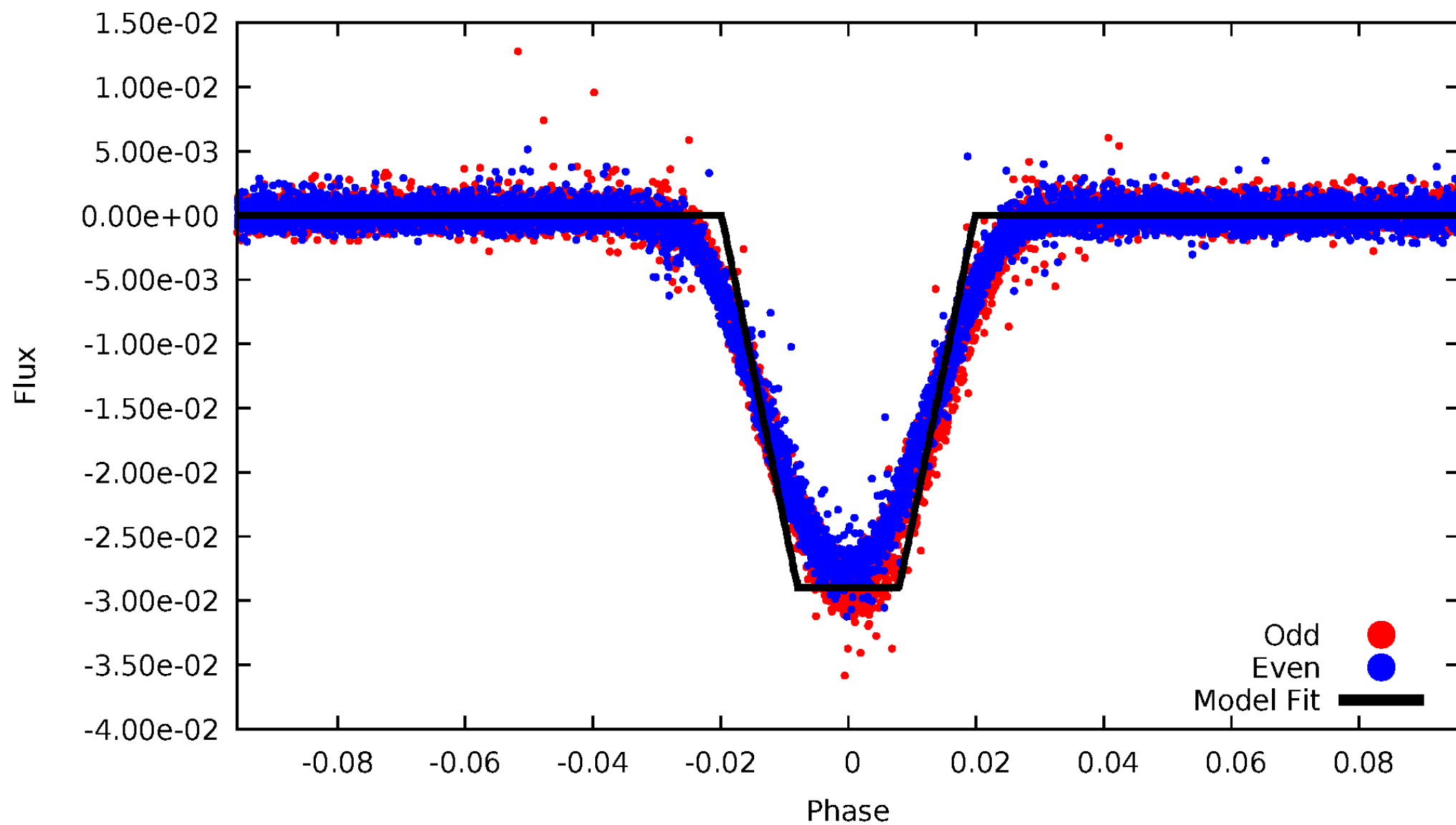
DV Odd/Even

TCE 006620003-01



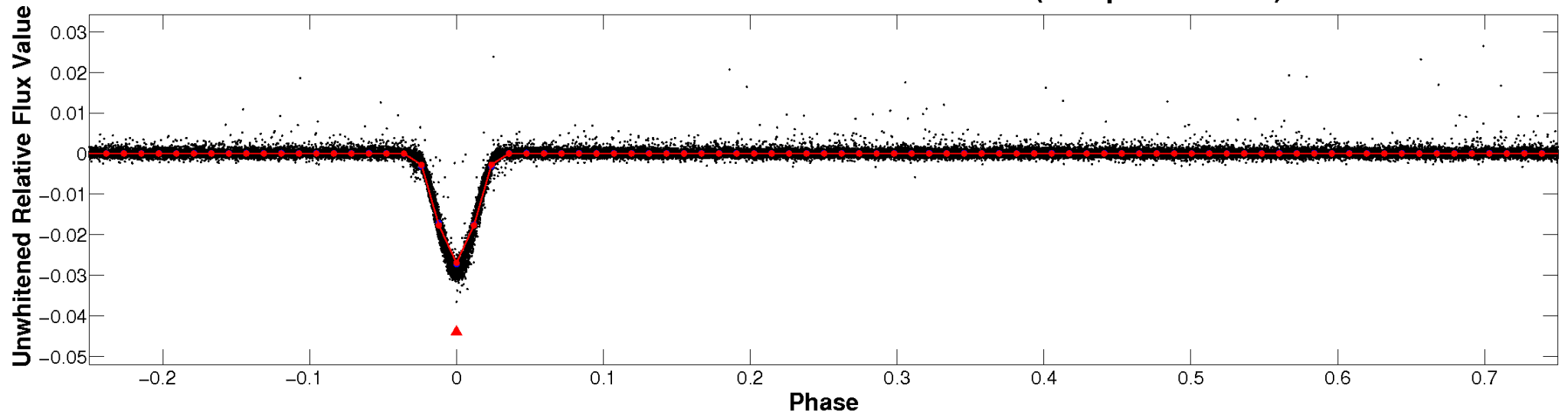
ALT Odd/Even

TCE 006620003-01

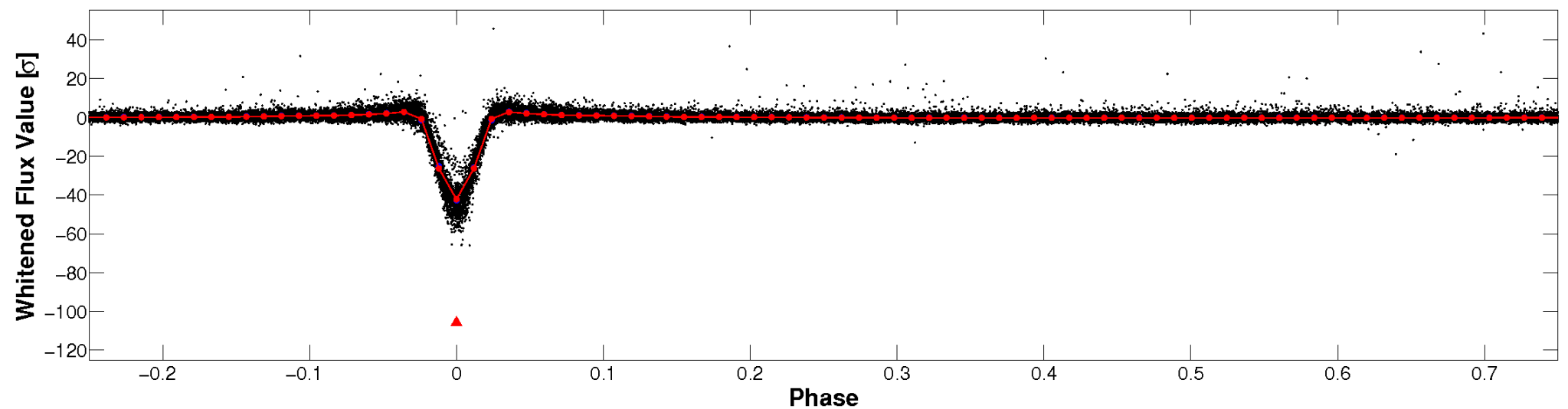


Non-Whitened Vs. Whitened Light Curve

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

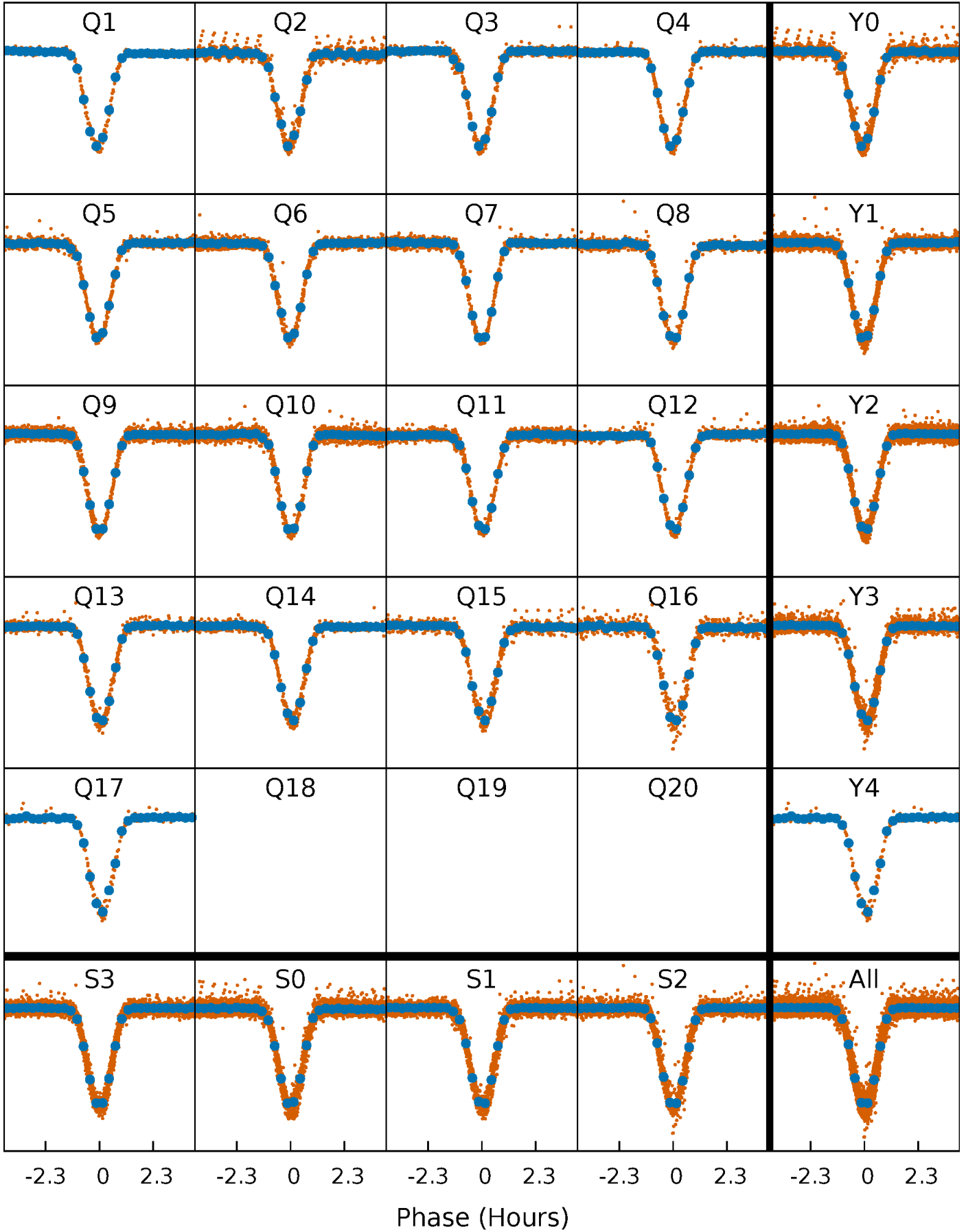


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



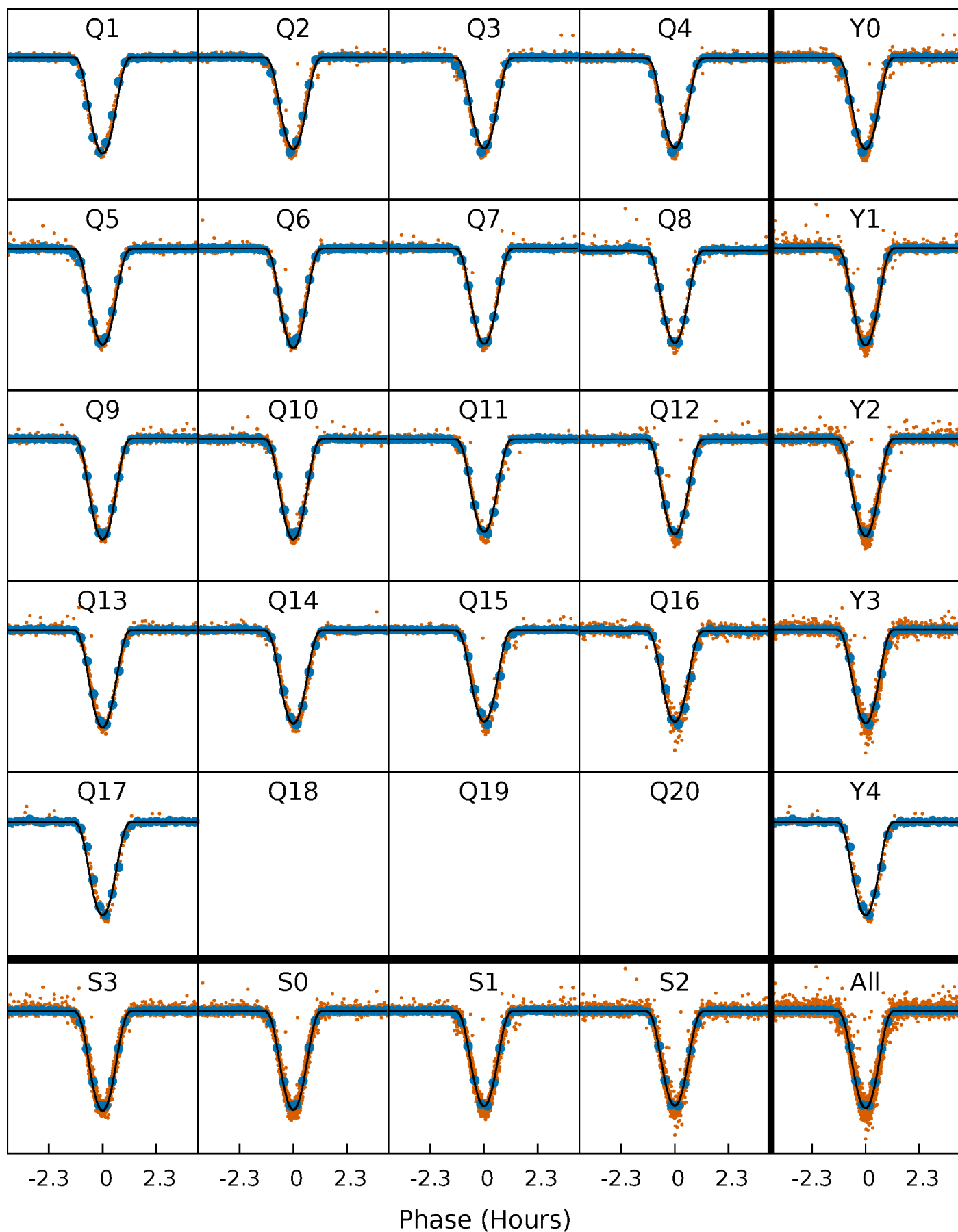
PDC Quarter-Phased Transit Curves

TCE 006620003-01 P= 1.714266 Days $T_0=131.604946$ (BKJD)



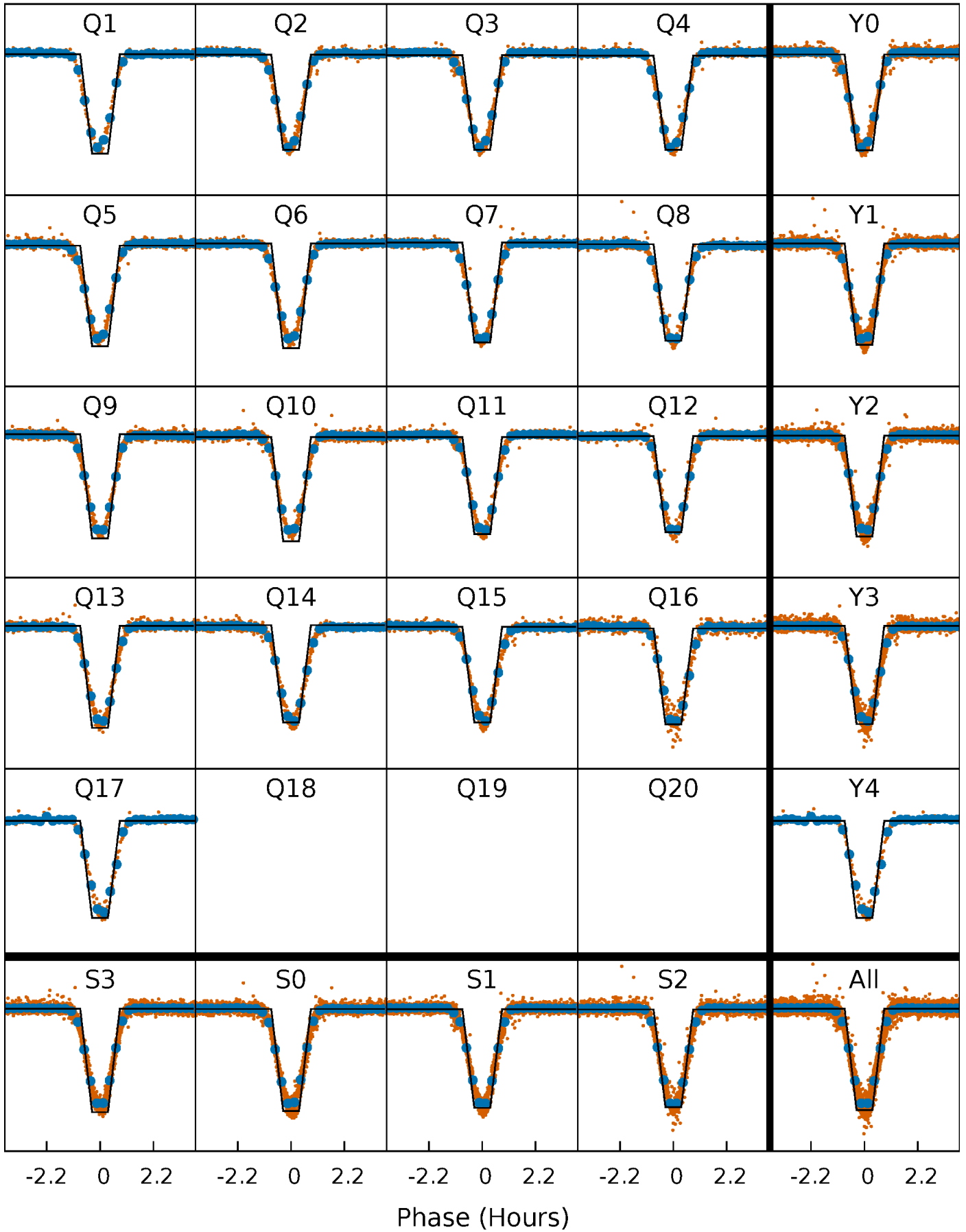
DV Quarter-Phased Transit Curves

TCE 006620003-01 P= 1.714266 Days $T_0=131.604946$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

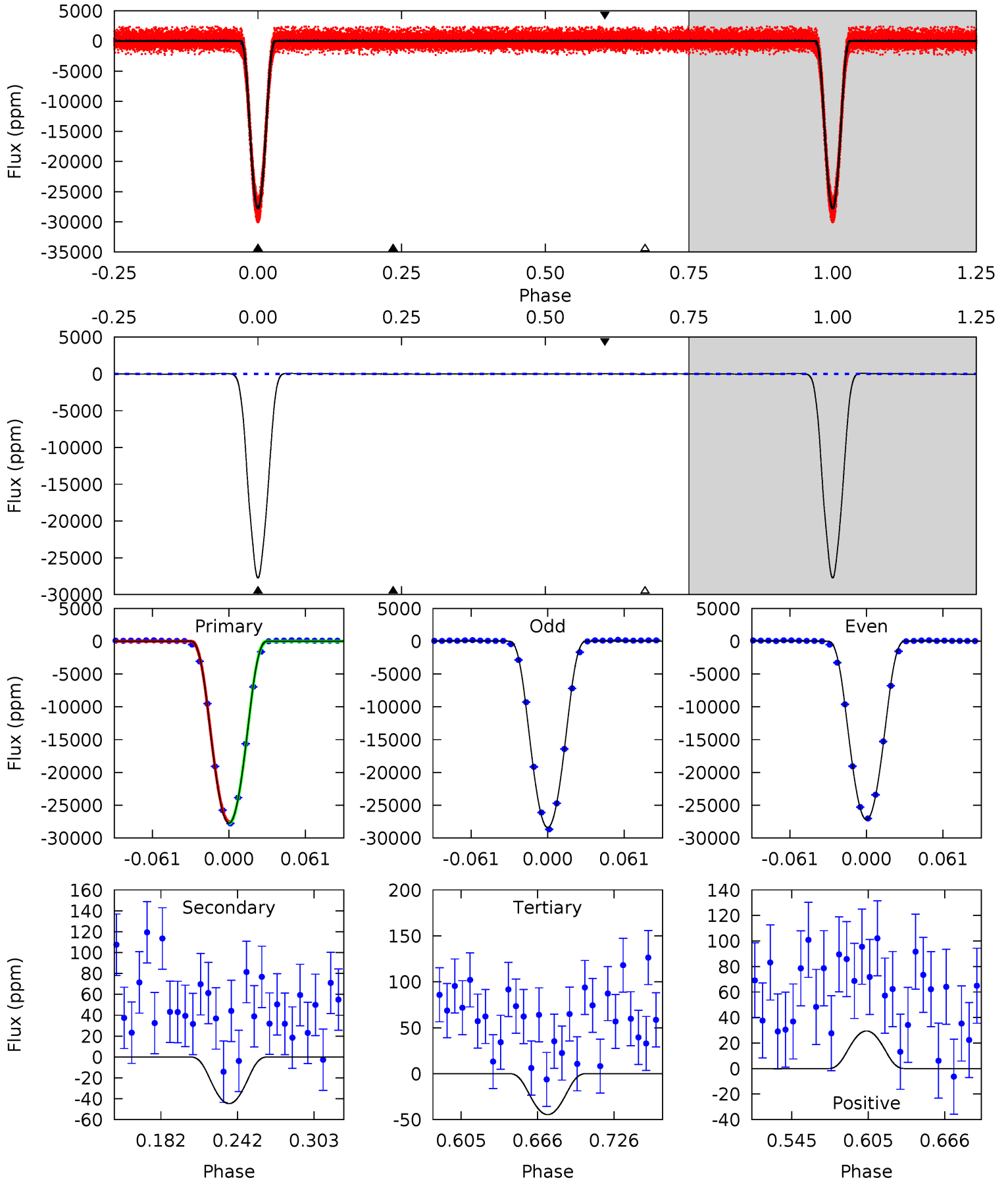
TCE 006620003-01 P= 1.714268 Days $T_0=131.604277$ (BKJD)



DV Model-Shift Uniqueness Test

006620003-01, P = 1.714266 Days, E = 129.890680 Days

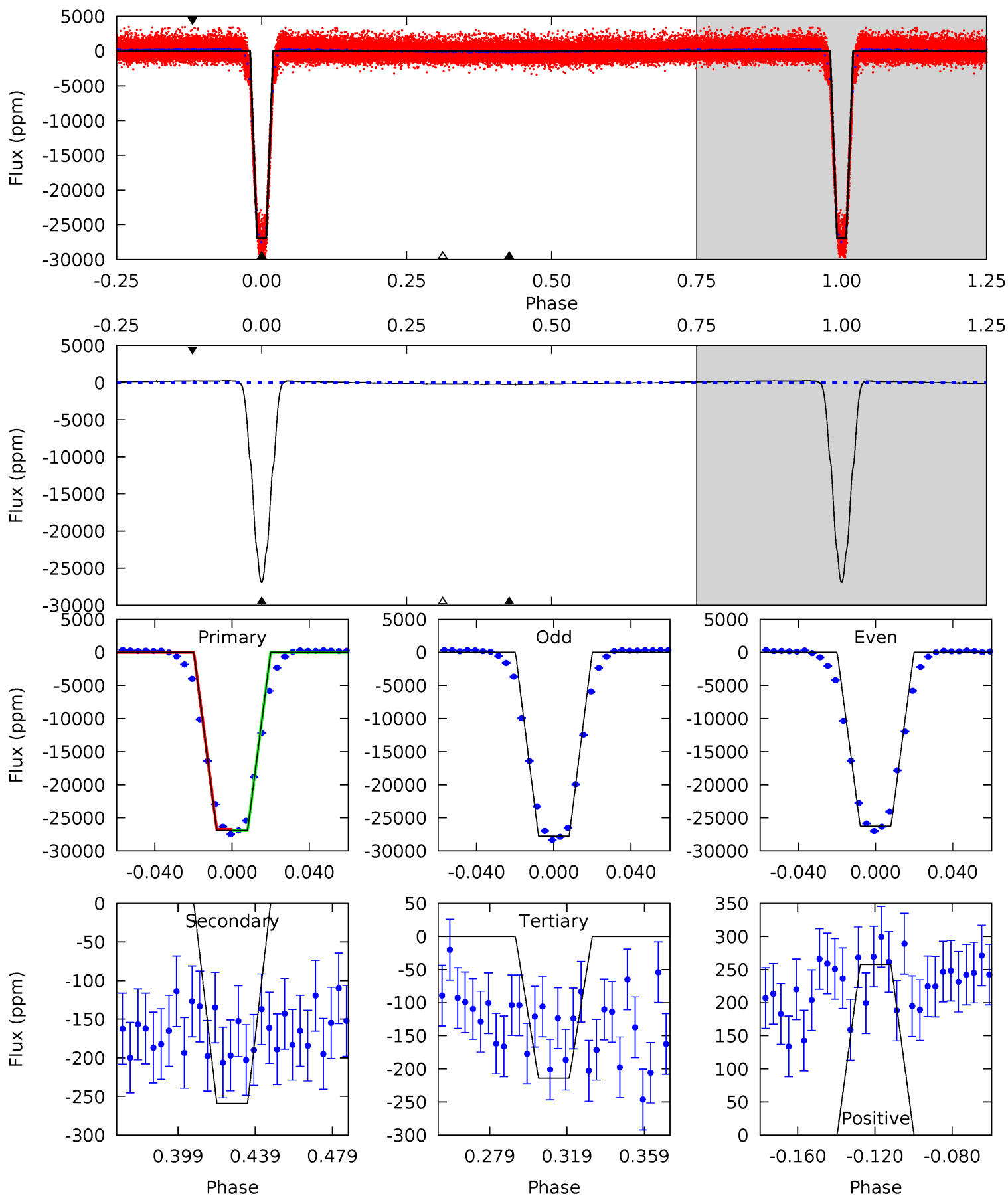
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2678	4.32	4.30	2.85	4.67	1.88	2.05	2674	2675	0.01	1.47	58.0	1.00	0.00	0



Alt Model-Shift Uniqueness Test

006620003-01, P = 1.714268 Days, E = 129.890009 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1524	14.7	12.1	14.6	4.75	2.05	9.16	1512	1509	2.53	0.07	42.5	1.00	0.01	4.65



Stellar Parameters For KIC 006620003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3874^{+52}_{-58}	$4.715^{+0.030}_{-0.015}$	$-0.100^{+0.100}_{-0.100}$	$0.535^{+0.021}_{-0.026}$	$0.541^{+0.024}_{-0.022}$	$4.992^{+0.633}_{-0.353}$
	+1%/-1%	+1%/-0%	+100%/-100%	+4%/-5%	+4%/-4%	+13%/-7%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 006620003-01 / KOI 1225.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-45 ± 10	$12.10^{+0.35}_{-0.40}$	1151^{+19}_{-18}	-1819^{+23}_{-24}	$0.088^{+0.022}_{-0.021}$
Alt.	-259 ± 18	$9.89^{+0.36}_{-0.34}$	1152^{+18}_{-21}	1966^{+33}_{-34}	$0.767^{+0.077}_{-0.071}$

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 $A_{obs} \gg 1.0$

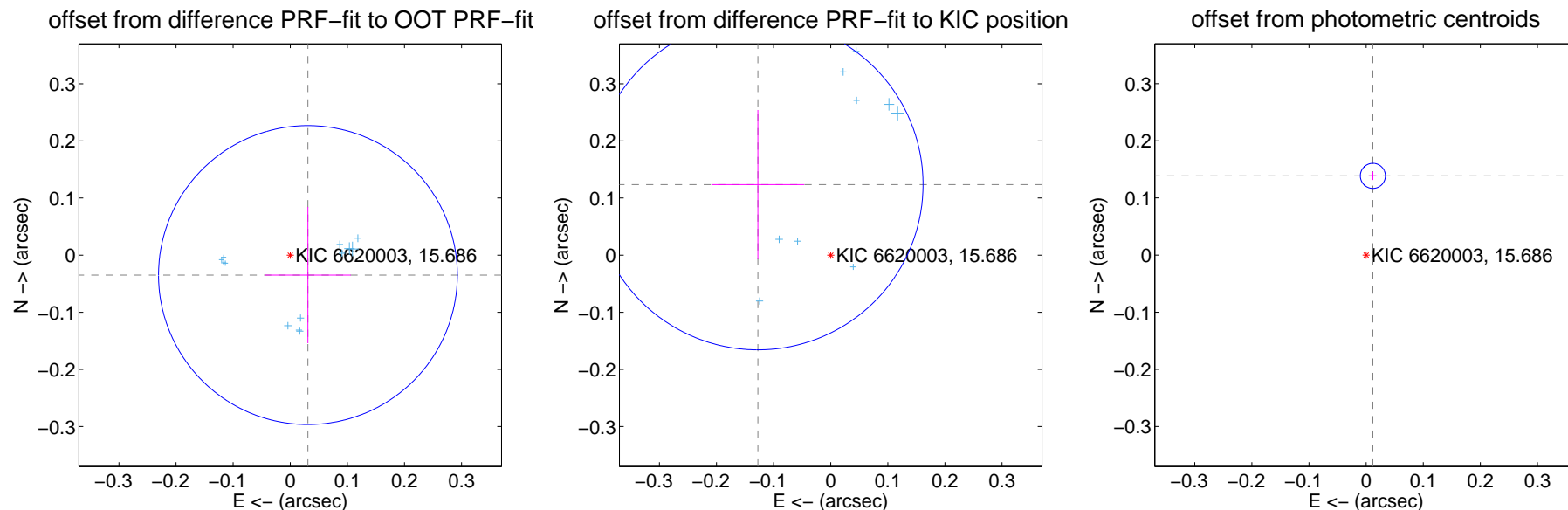
DV Centroid Data

Supplemental centroid analysis for 006620003-01. Kepler magnitude: 15.69. Transit SNR 1274.75

There are 17 quarters with good PRF difference image offsets

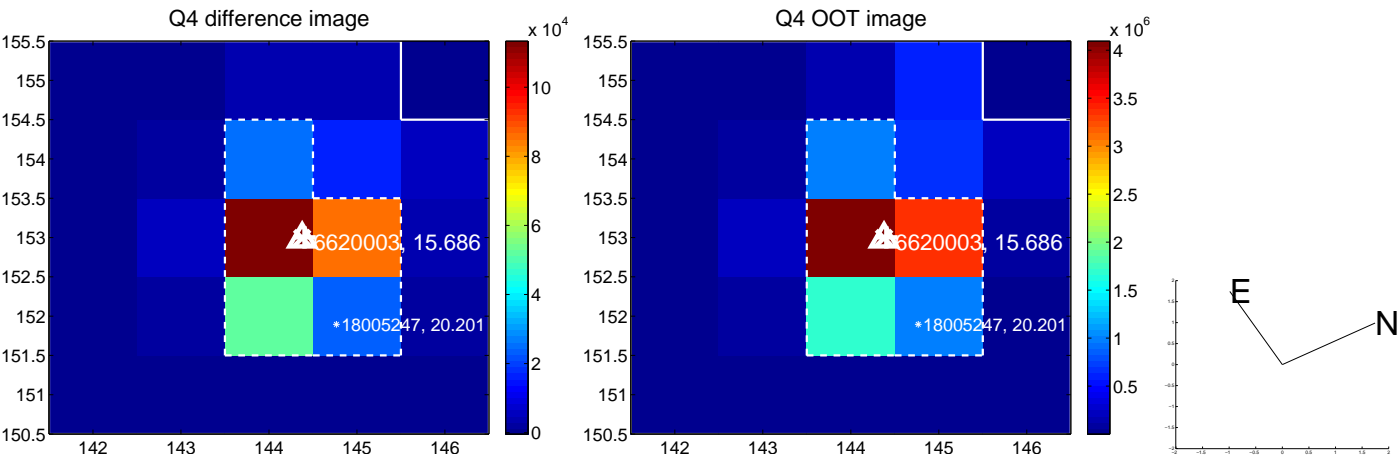
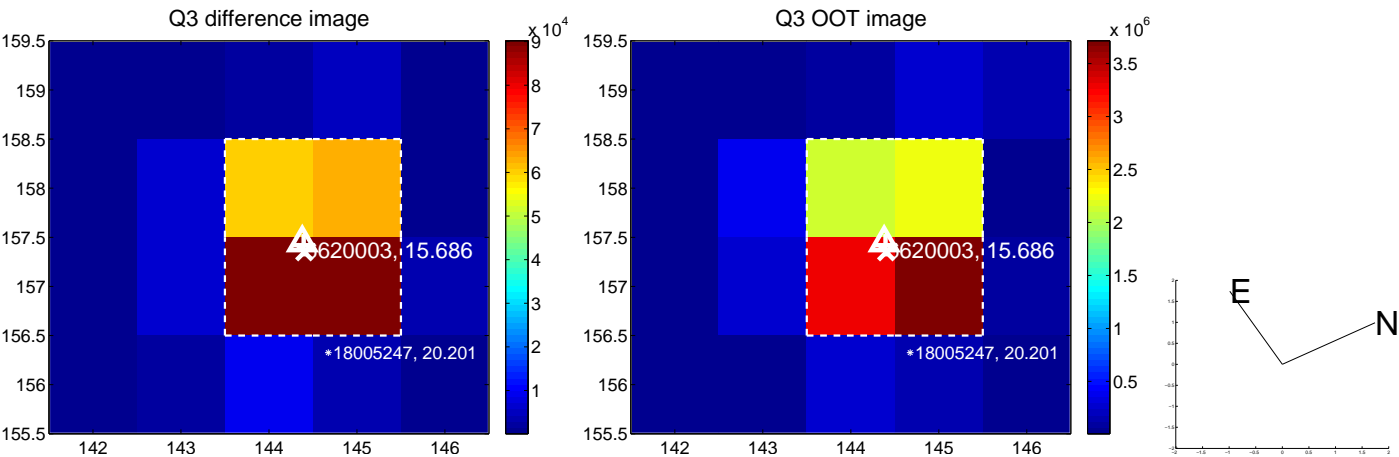
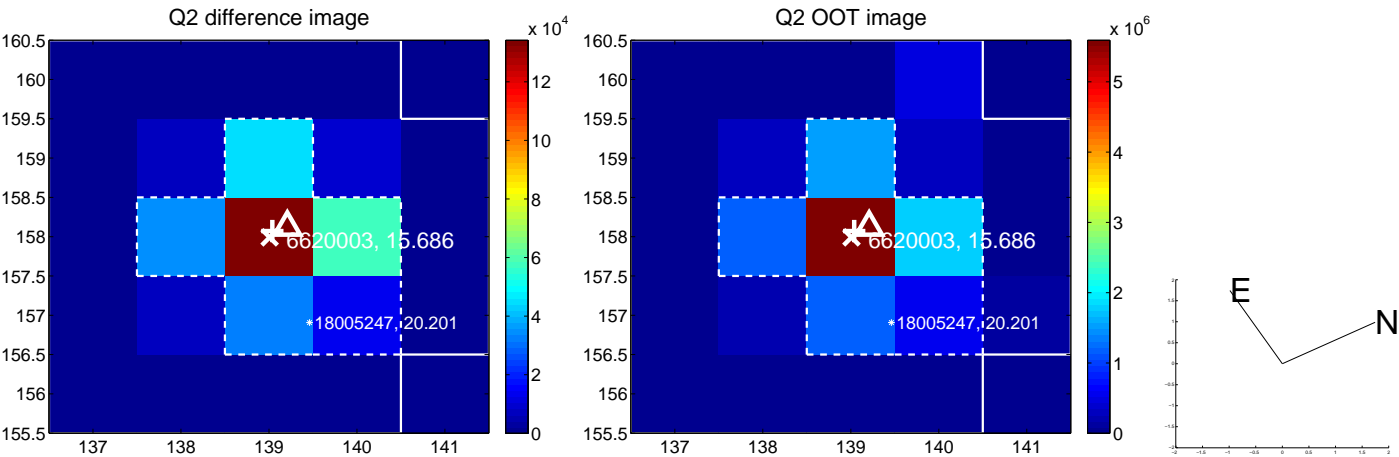
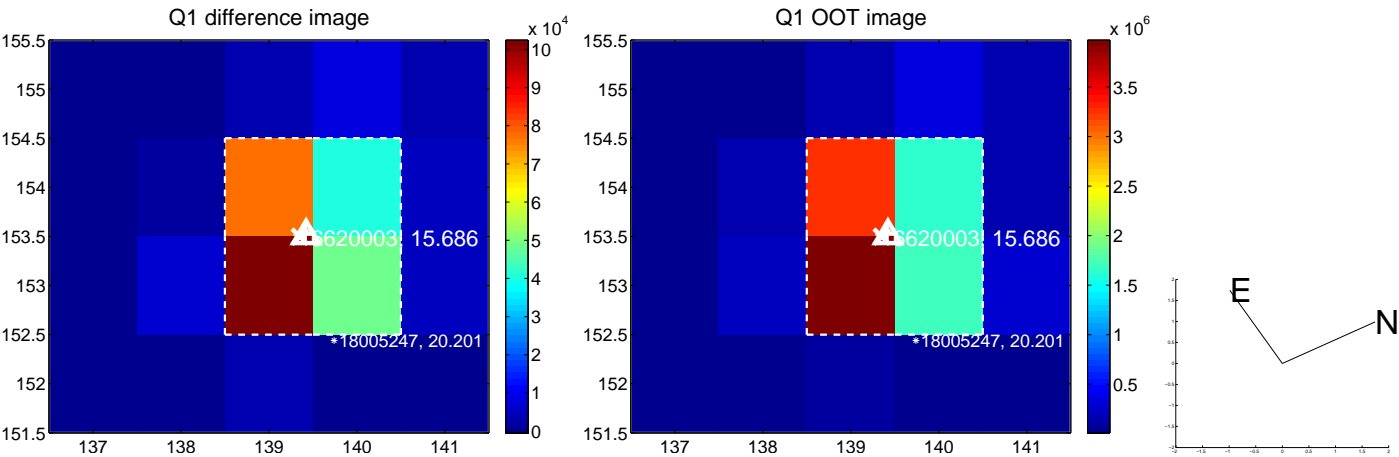
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.087	0.53	-0.031 ± 0.075	-0.035 ± 0.119
PRF-fit source offset from KIC position	0.178 ± 0.096	1.84	0.128 ± 0.081	0.124 ± 0.131
photometric centroid source offset	0.14 ± 0.01	19.02	-0.01 ± 0.01	0.14 ± 0.01

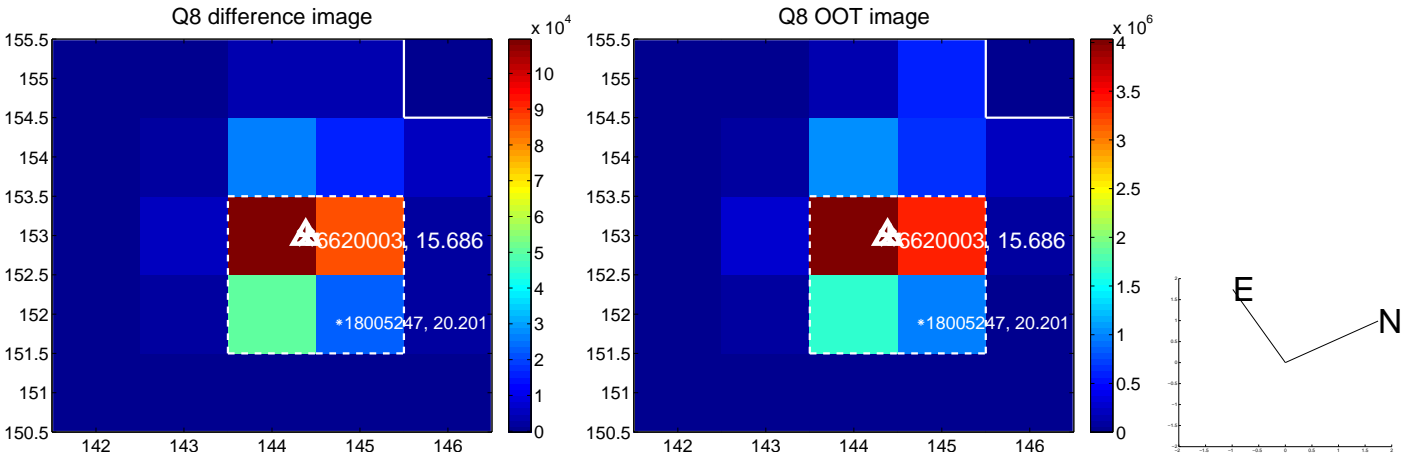
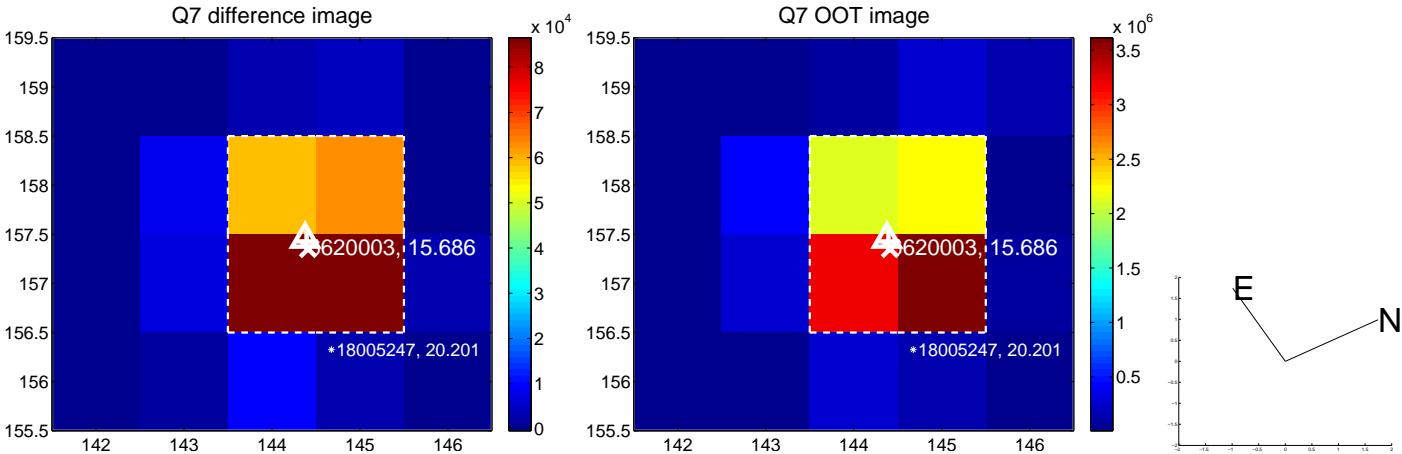
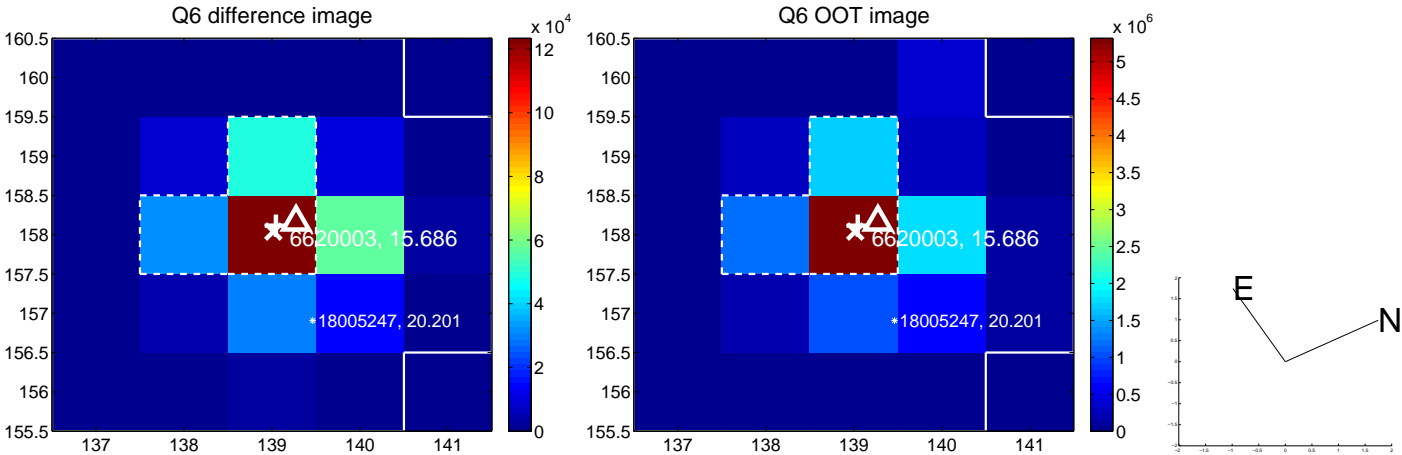
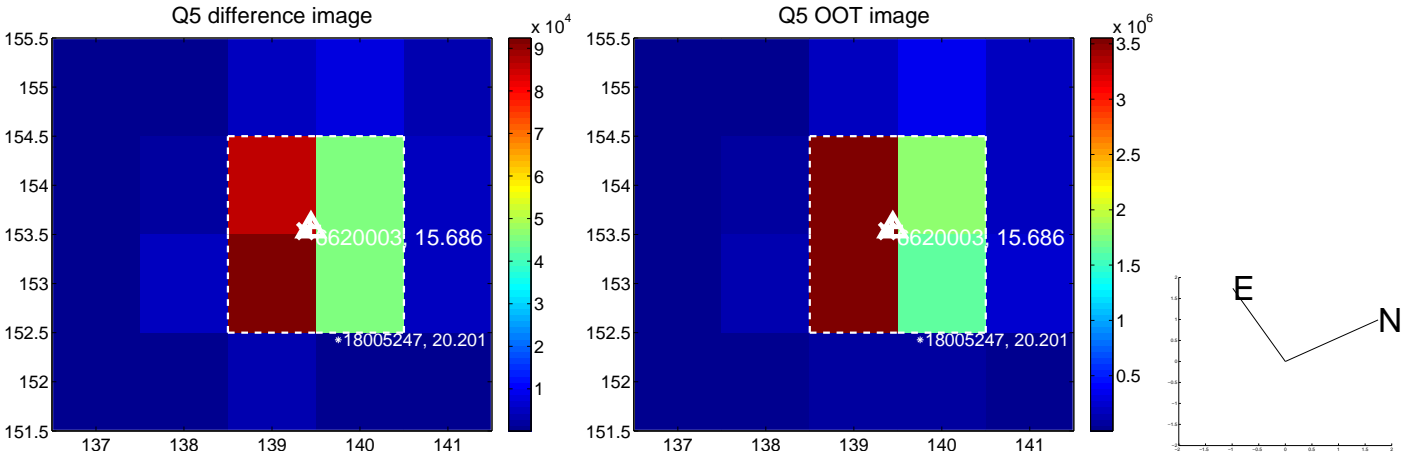


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

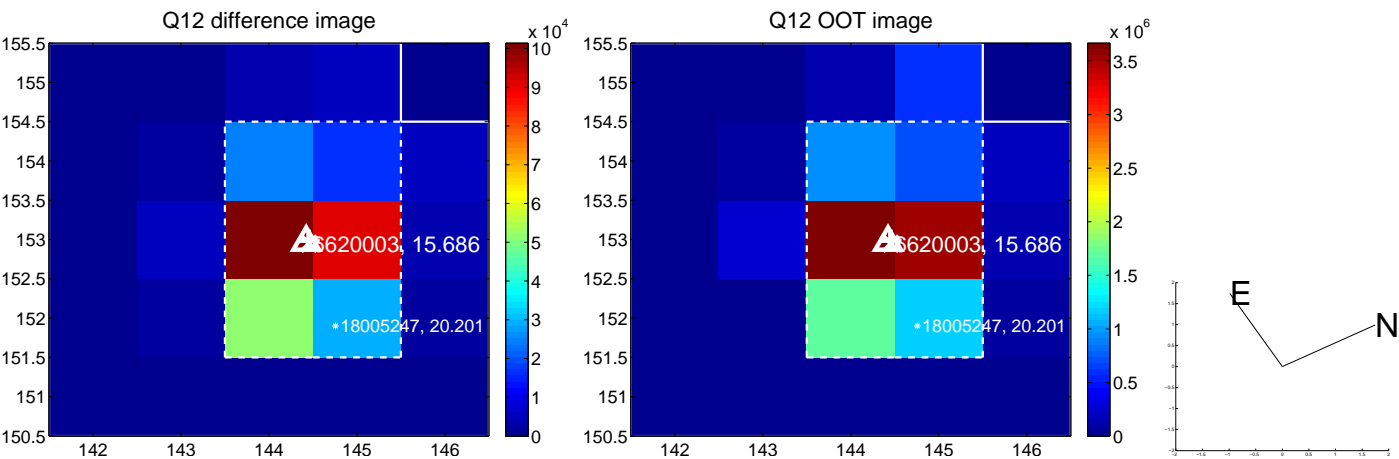
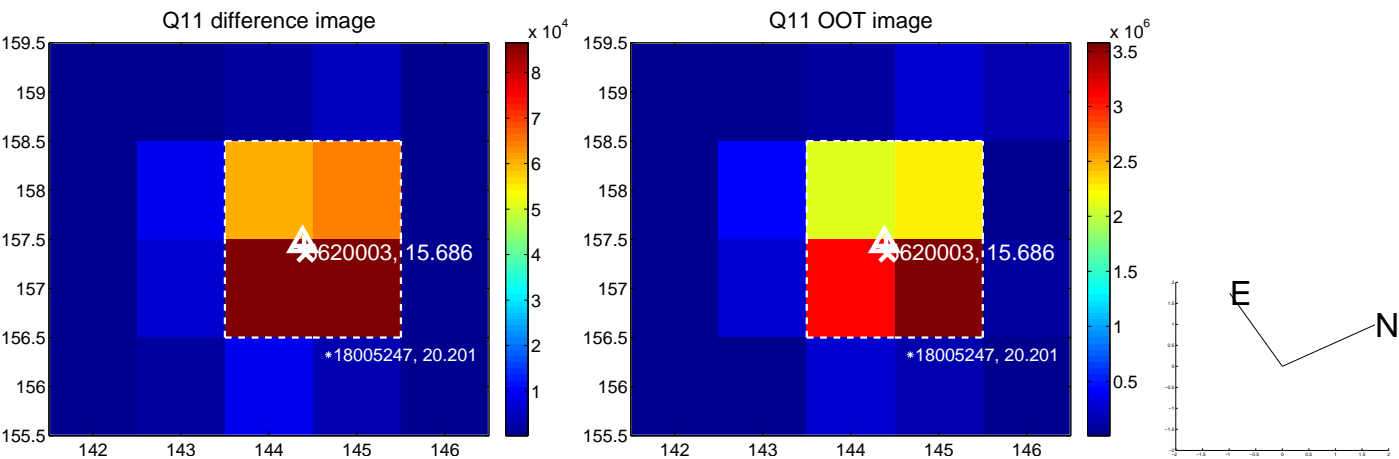
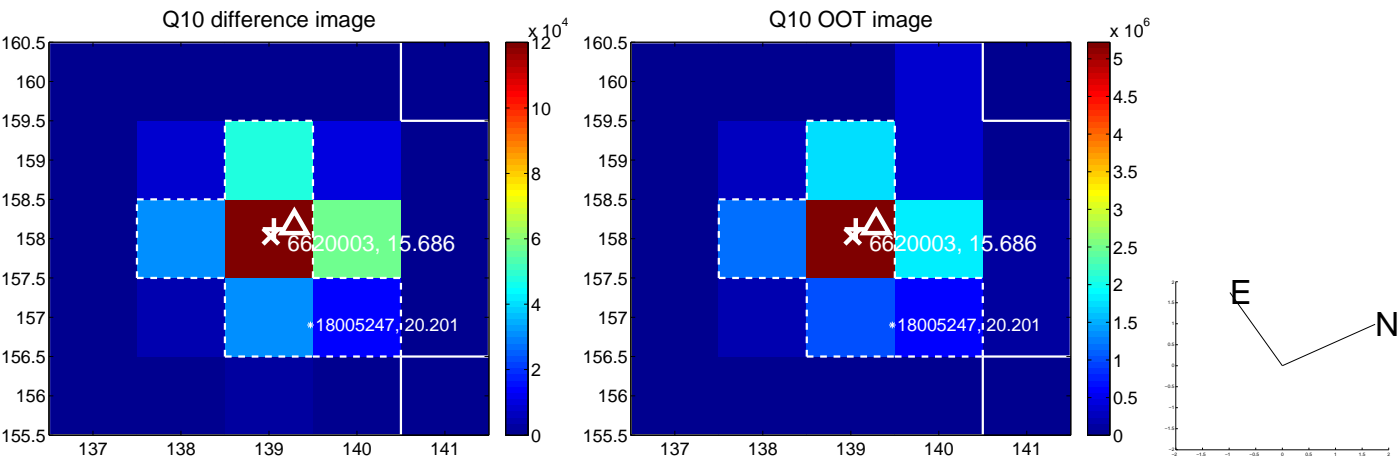
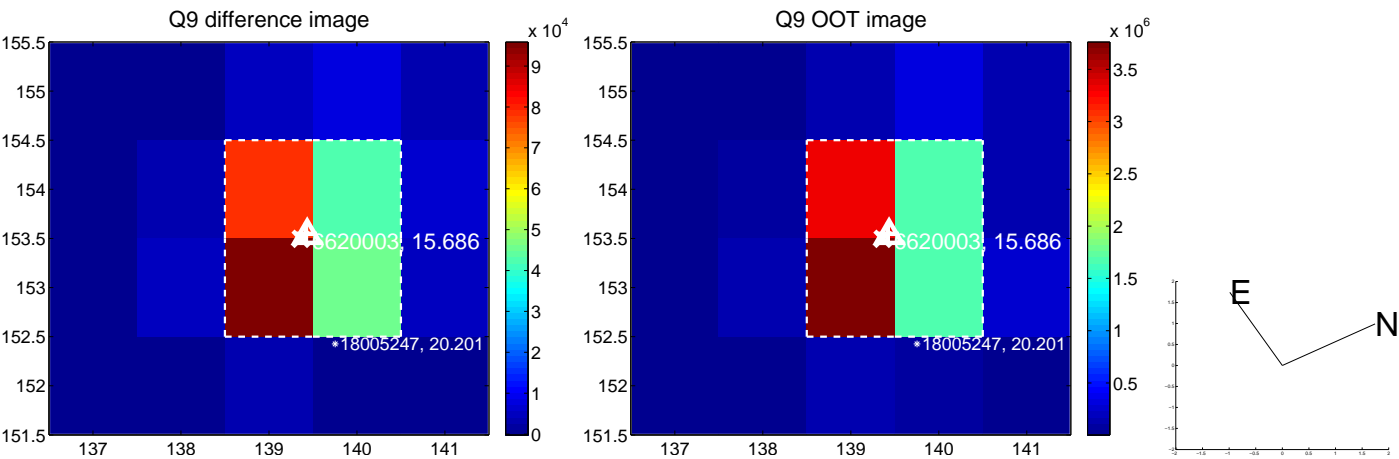
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



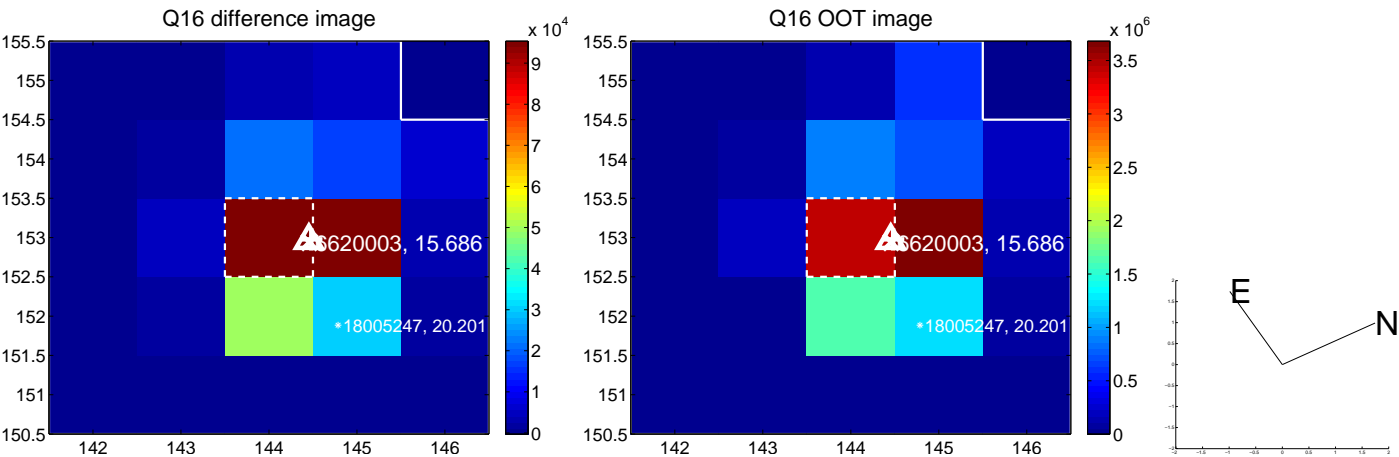
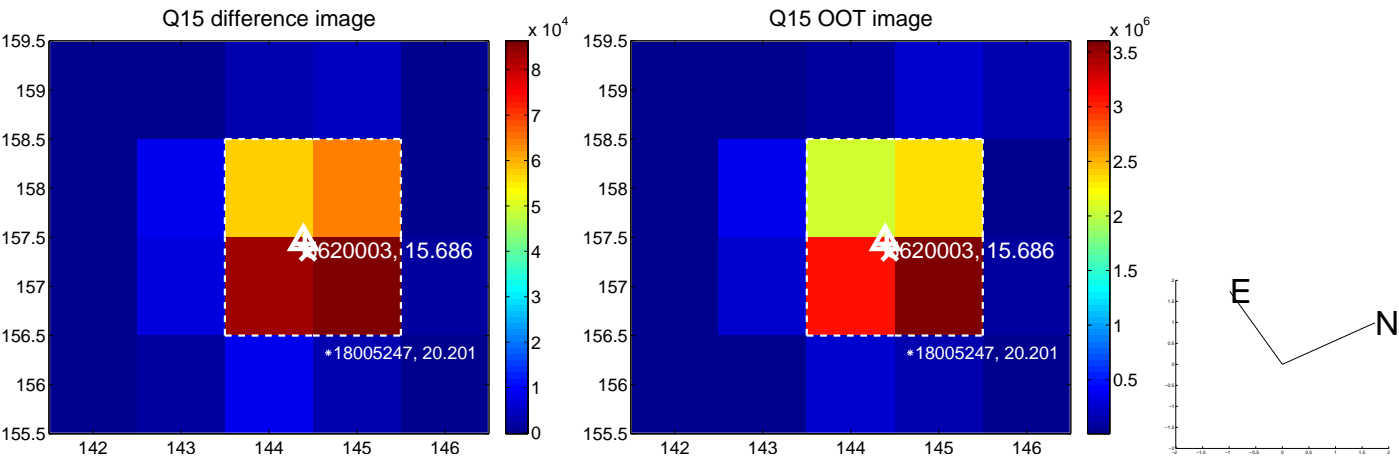
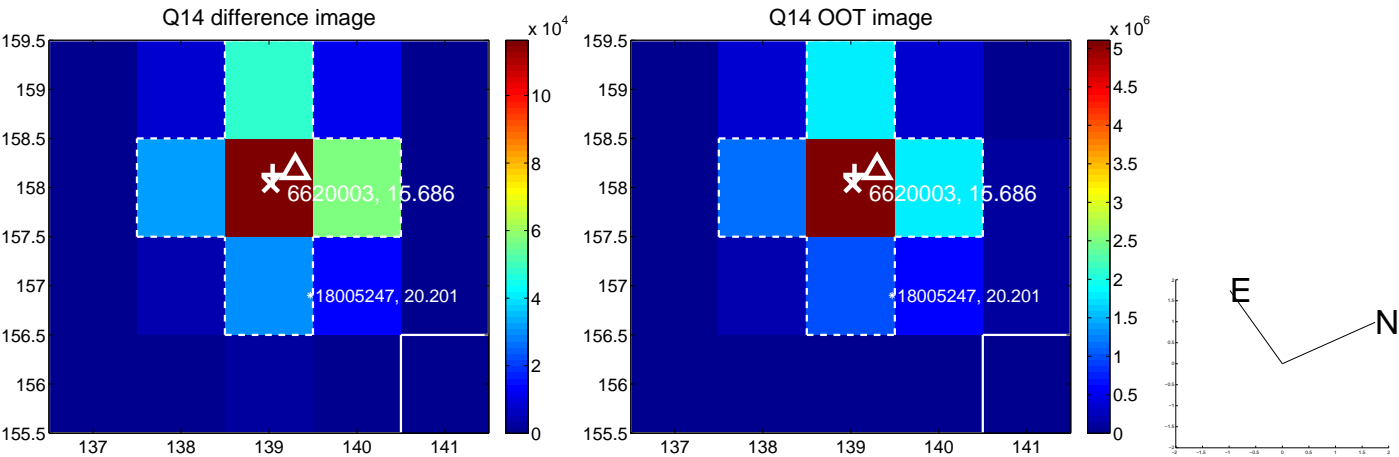
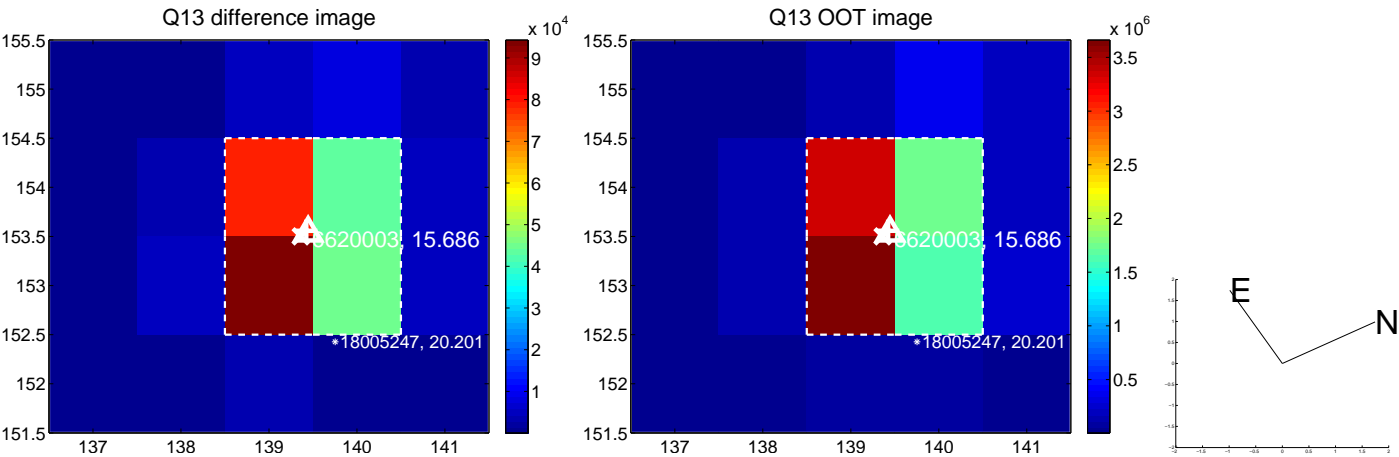
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



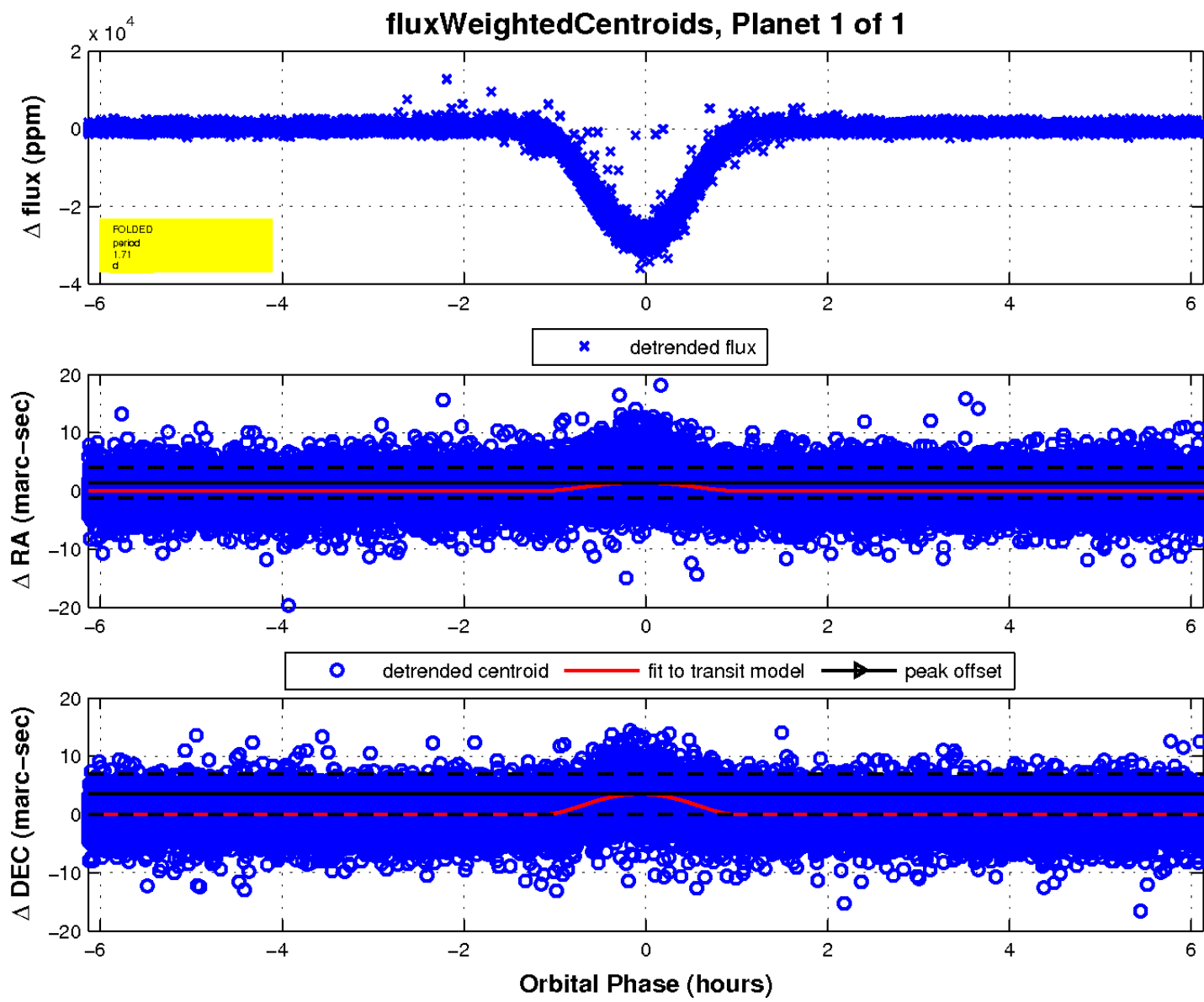
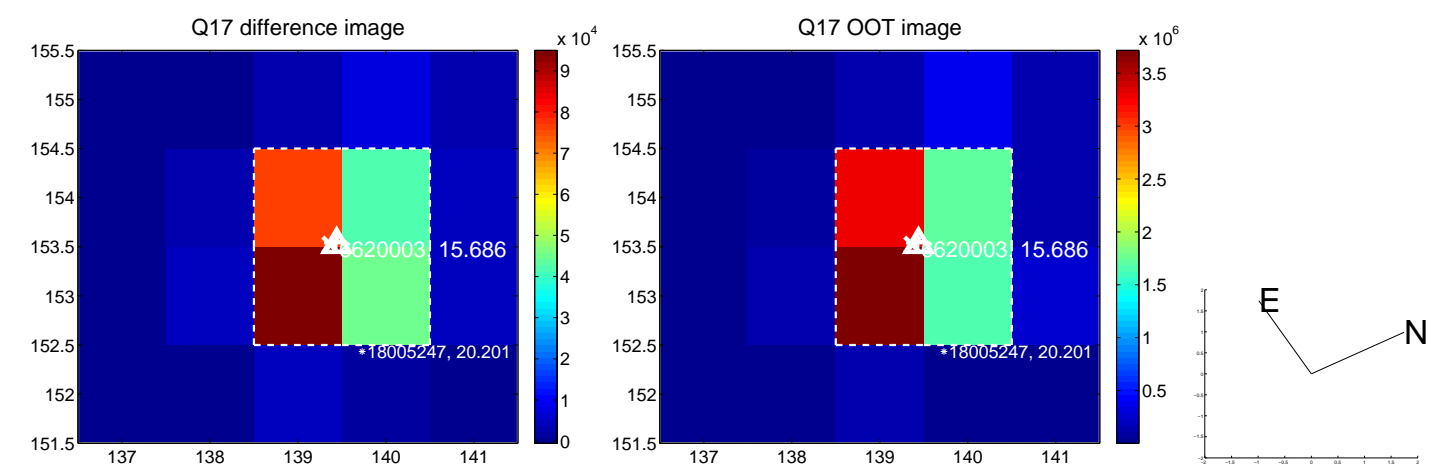
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

