

KIC 010848459

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})
010848459-01	OBS	0754.01	1.736955	132.094000	7874.8	2.341	541.9	530.4	0.79	5805	9.37	896.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010848459-01	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 010848459-01

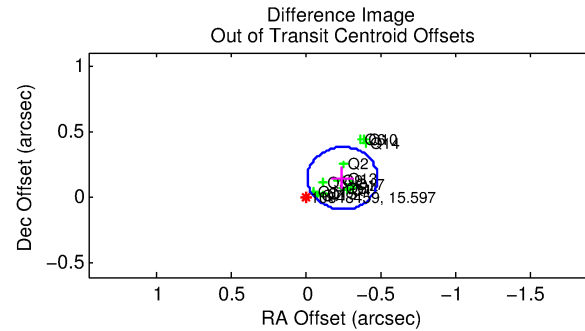
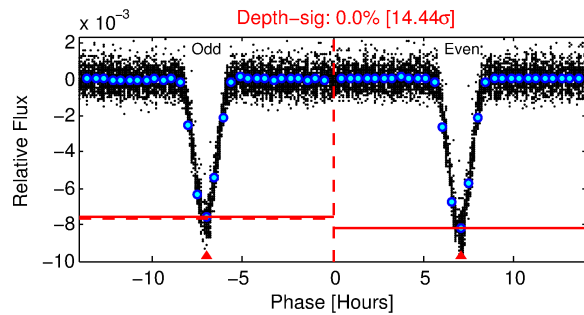
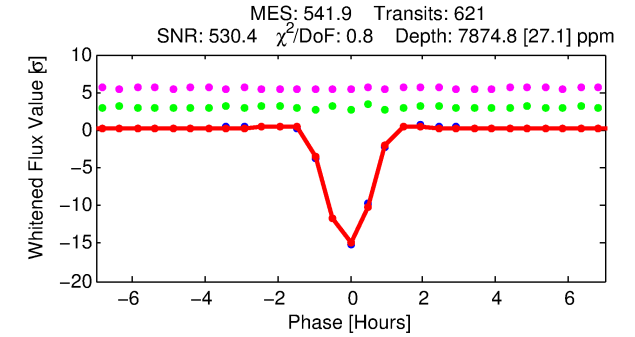
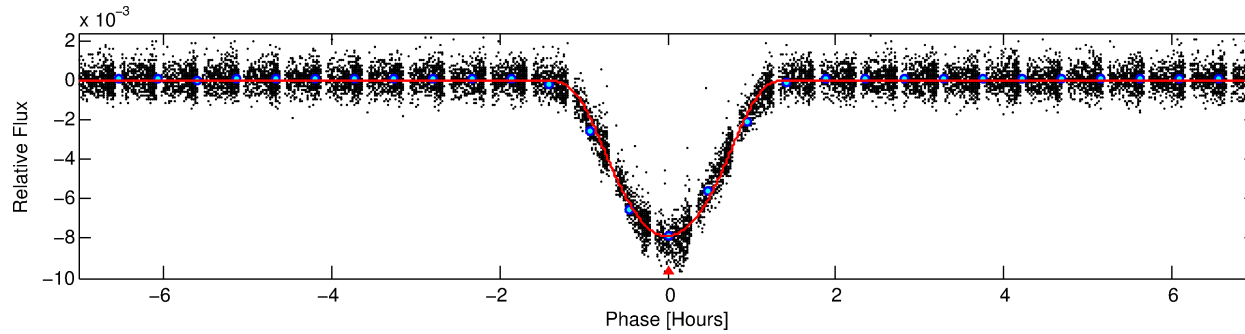
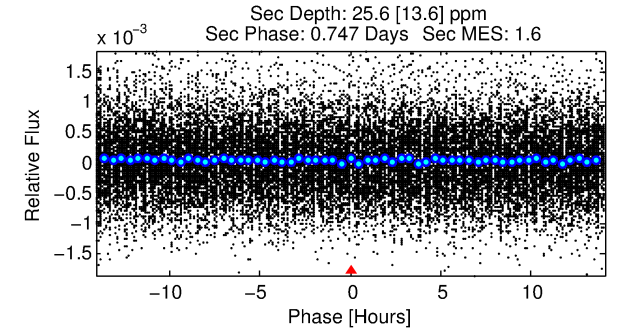
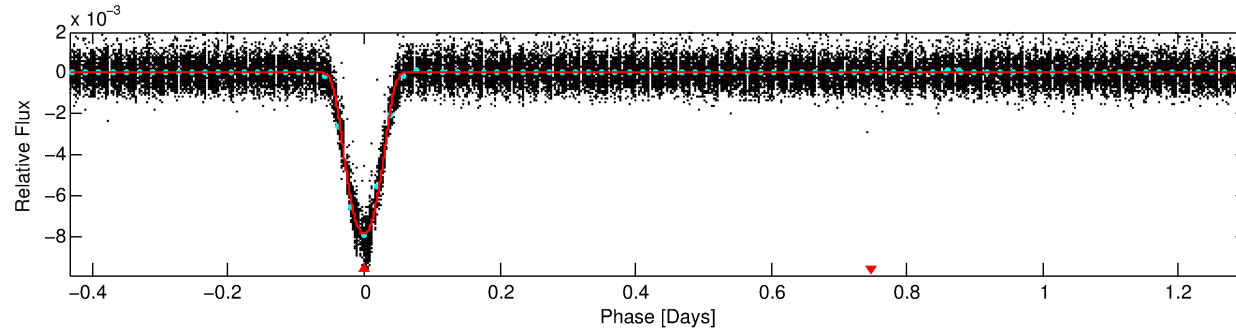
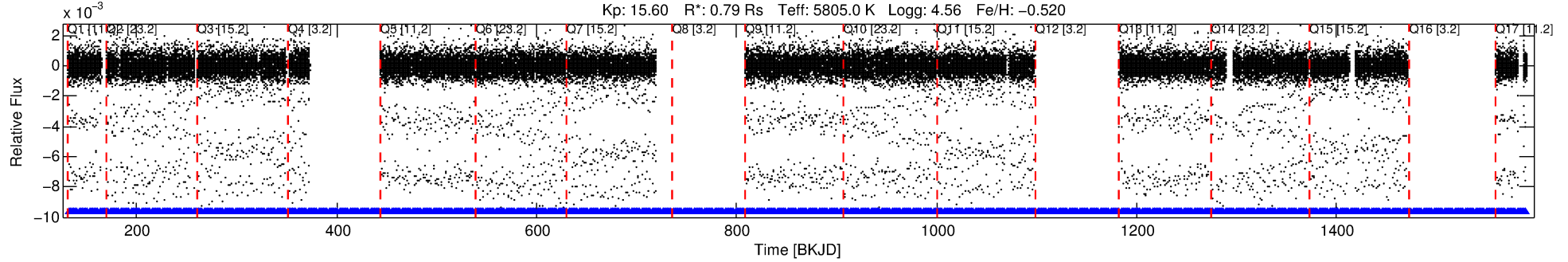
No Significant Match Found

DV One-Page Summary

KIC: 10848459 Candidate: 1 of 1 Period: 1.737 d

KOI: K00754.01 Corr: 0.985

Kp: 15.60 R*: 0.79 Rs Teff: 5805.0 K Logg: 4.56 Fe/H: -0.520



DV Fit Results:

Period = 1.73695 [0.00000] d
Epoch = 132.0940 [0.0001] BKJD
Rp/R* = 0.1085 [0.0030]
a/R* = 3.53 [0.04]
b = 0.93 [0.01]
Seff = 896.40 [296.74]
Teq = 1395 [115] K
Rp = 9.37 [2.39] Re
a = 0.0266 [0.0057] AU
Ag = 0.11 [0.07] [-12.63 sigma]
Teffp = 1253 [171] K [-0.69 sigma]

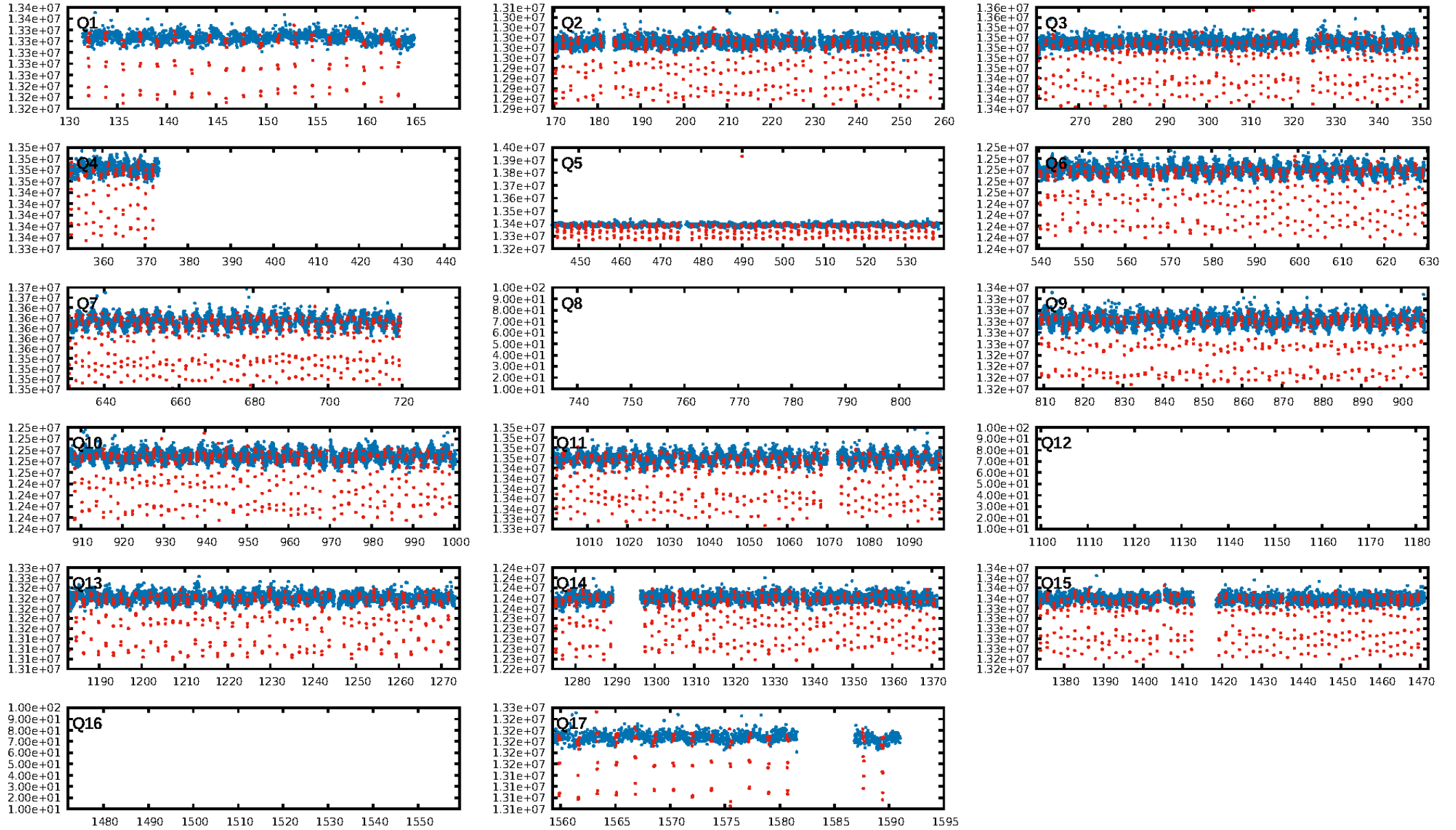
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [575/575]
GhostDiagnostic-chr: 7.565
Centroid-sig: 0.0%
Centroid-so: 0.111 arcsec [3.58 sigma]
OotOffset-rm: 0.289 arcsec [3.67 sigma]
KicOffset-rm: 0.276 arcsec [3.65 sigma]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

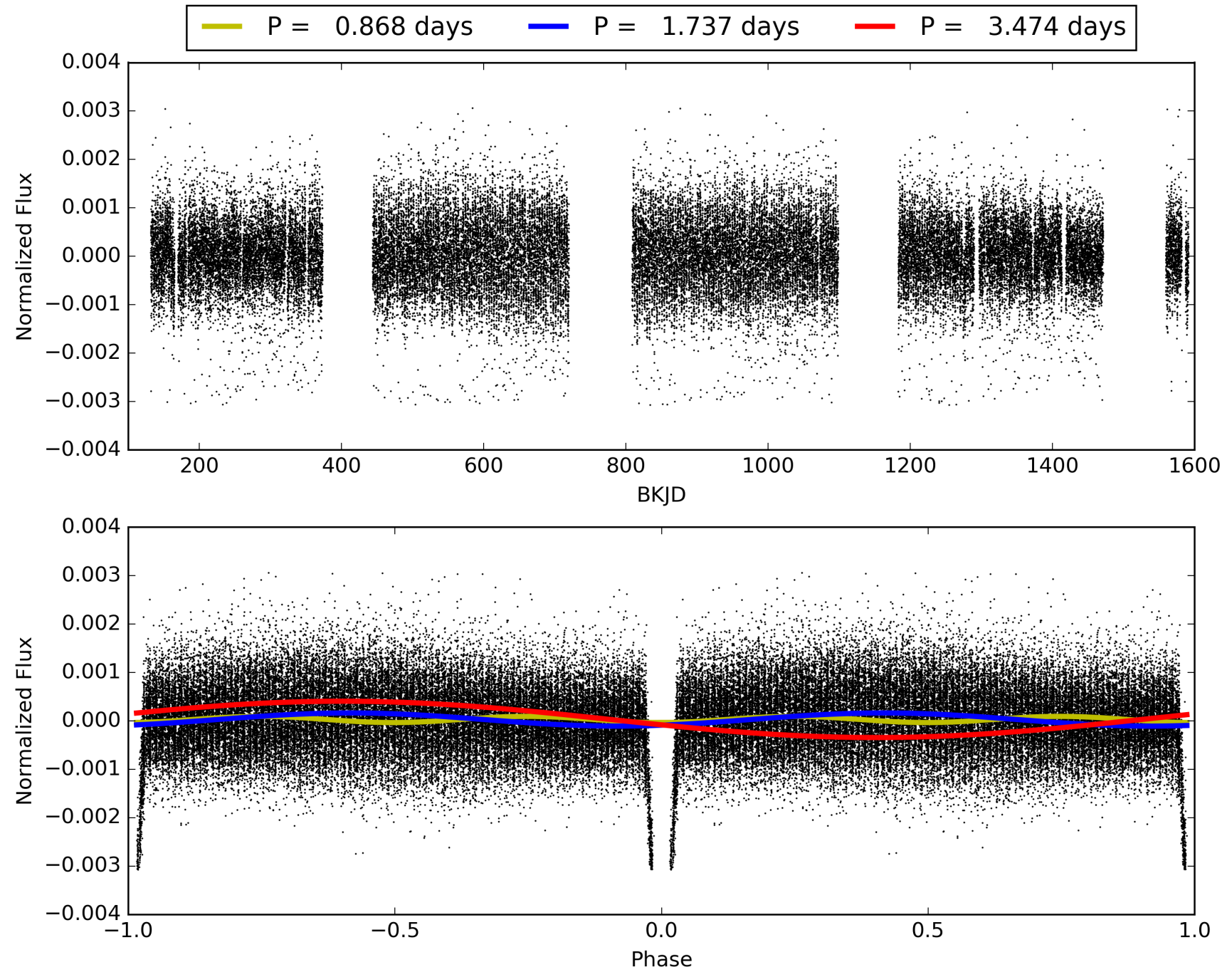
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:26:31 Z

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

TCE 010848459-01, PDC Light Curves

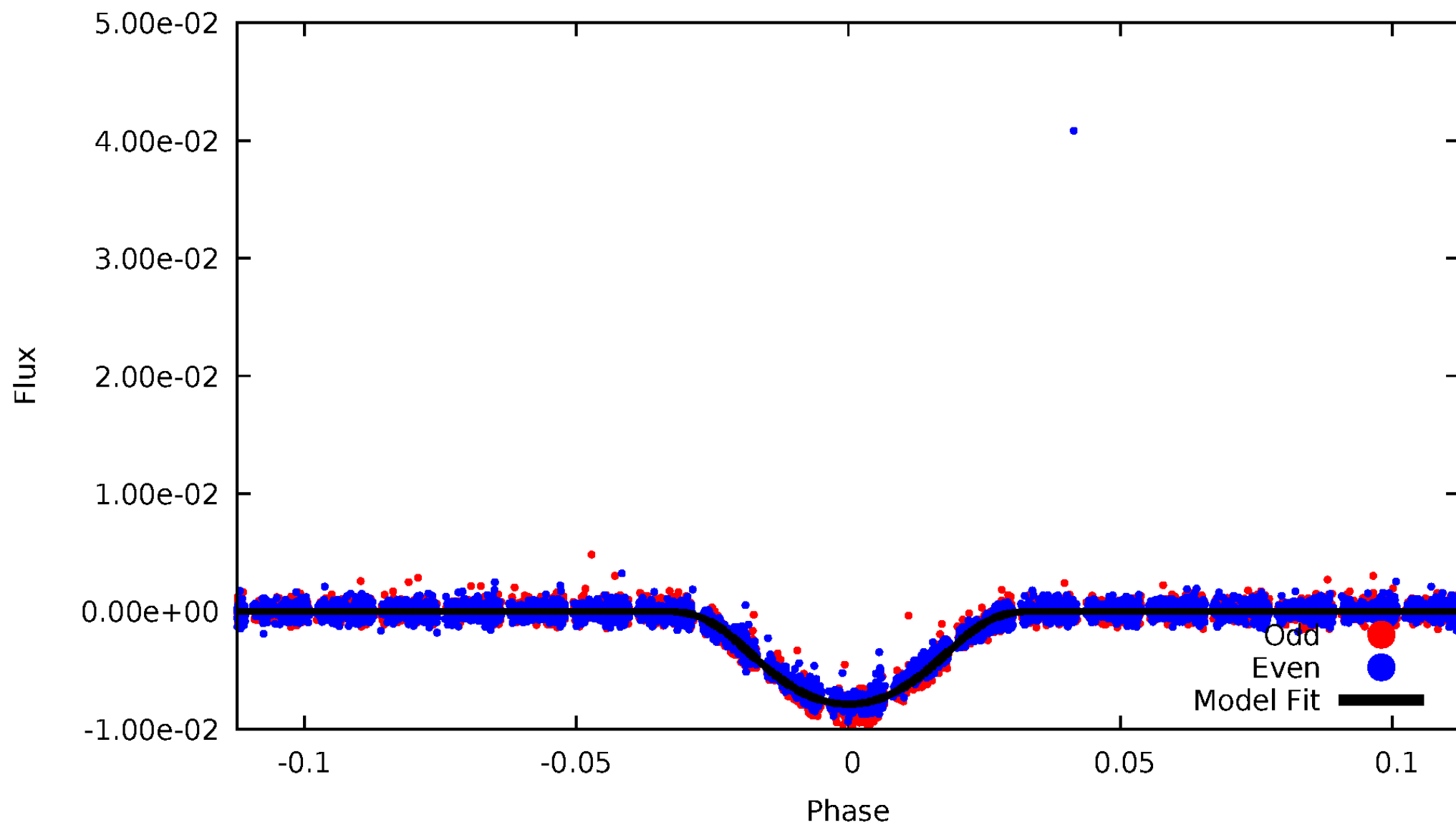


TCE 010848459-01



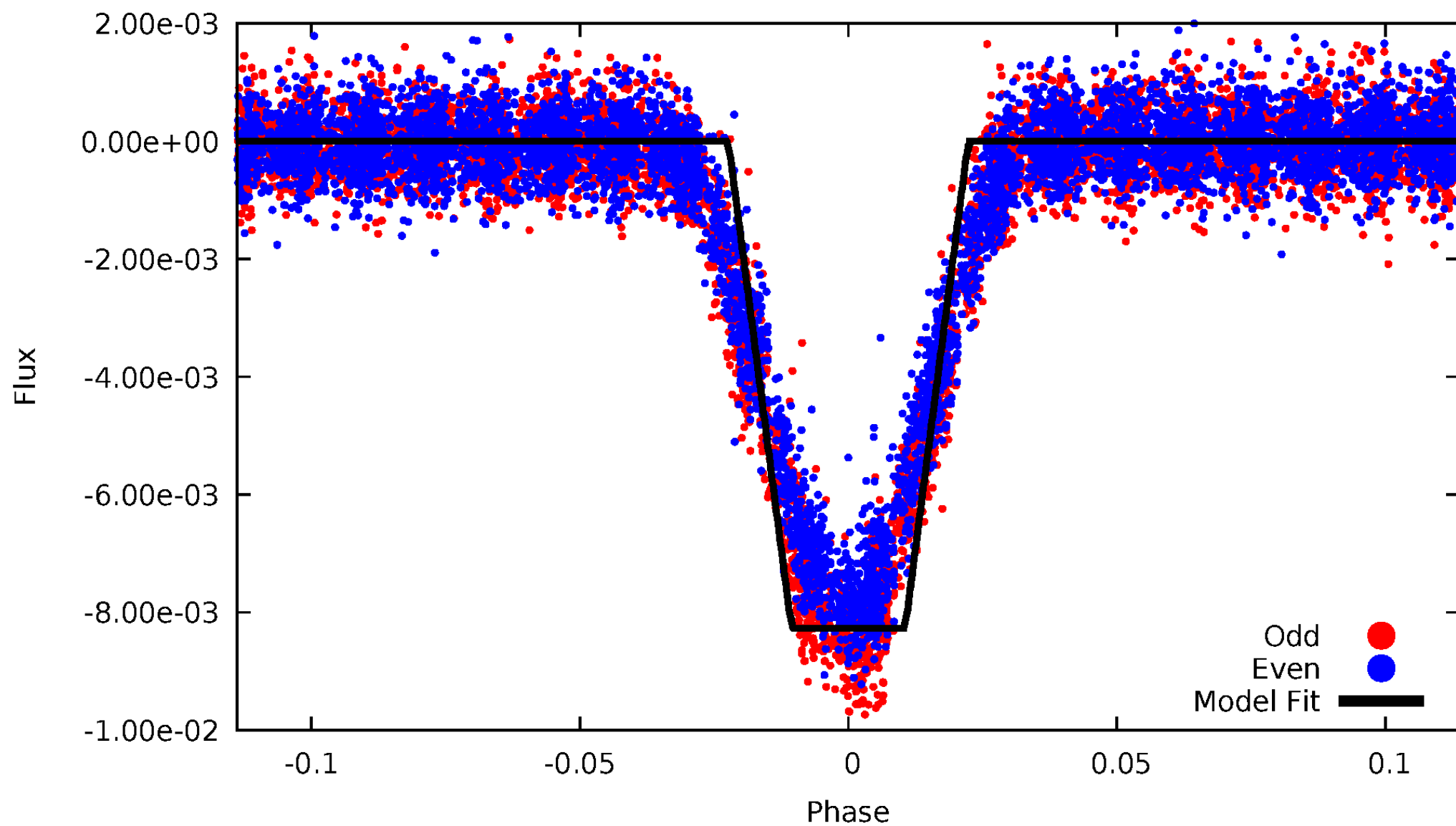
DV Odd/Even

TCE 010848459-01



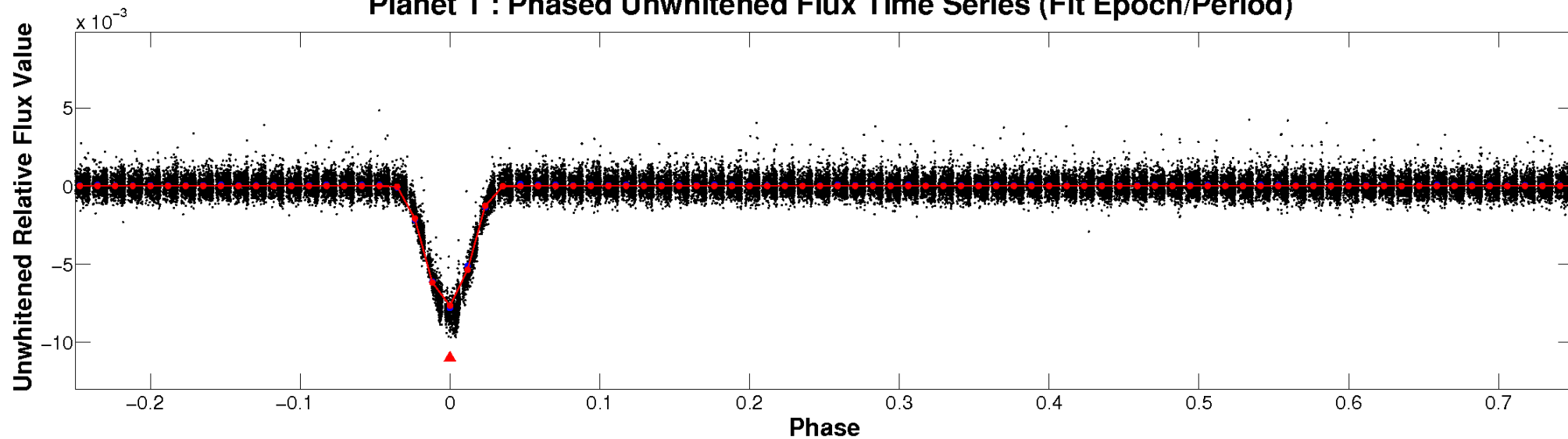
ALT Odd/Even

TCE 010848459-01

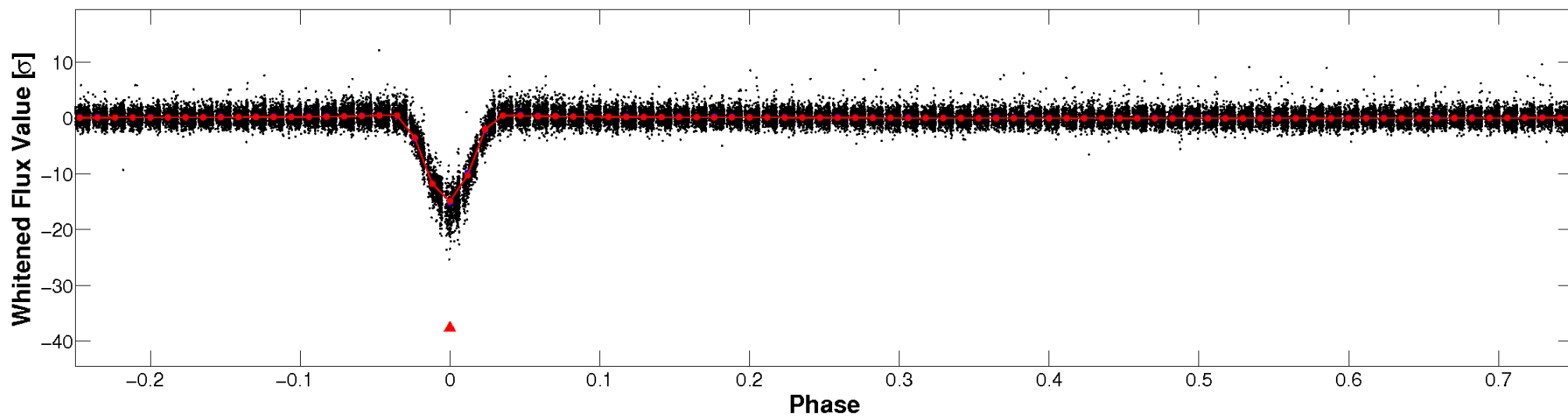


Non-Whitened Vs. Whitened Light Curve

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

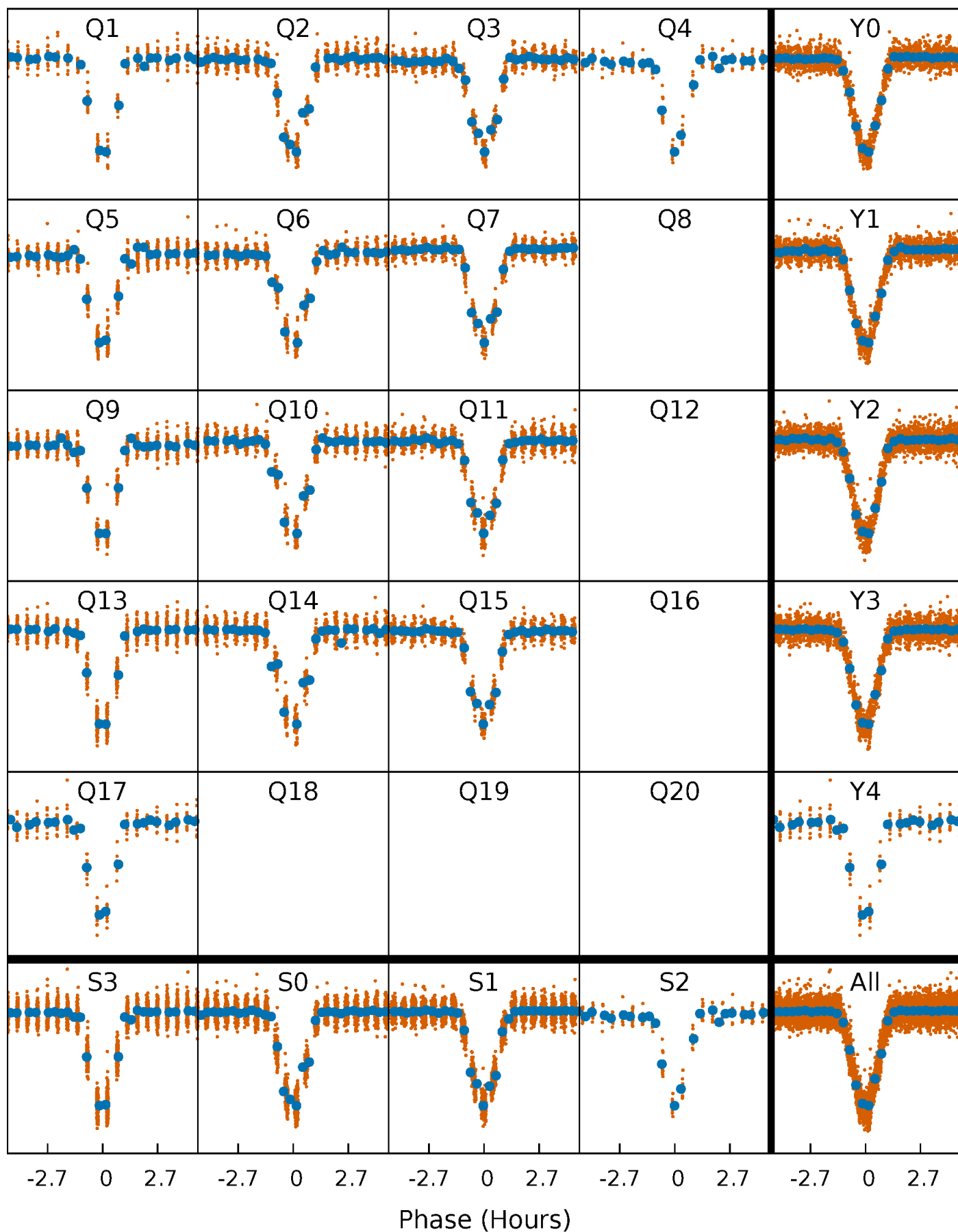


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



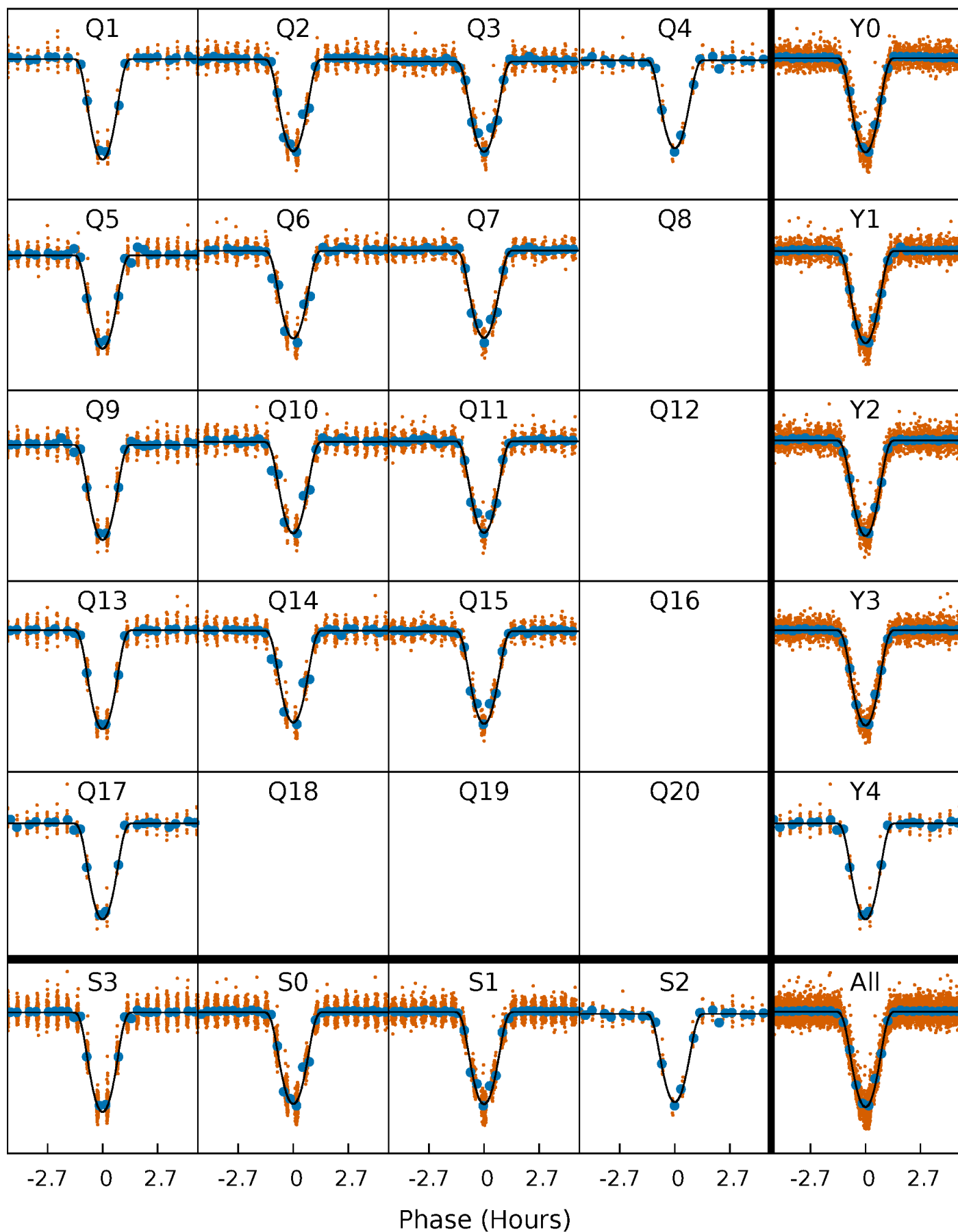
PDC Quarter-Phased Transit Curves

TCE 010848459-01 P= 1.736955 Days $T_0=132.094000$ (BKJD)



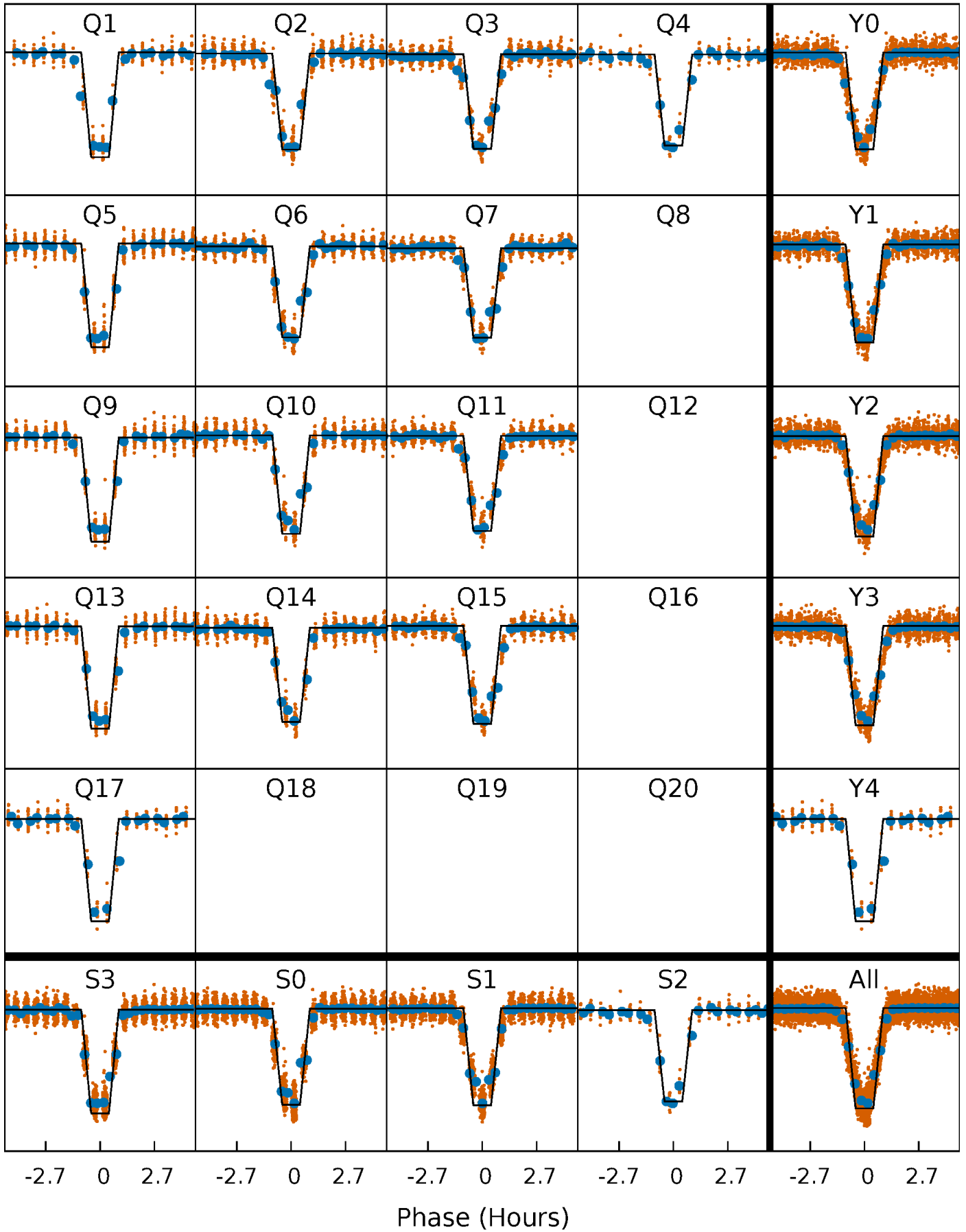
DV Quarter-Phased Transit Curves

TCE 010848459-01 P= 1.736955 Days $T_0=132.094000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

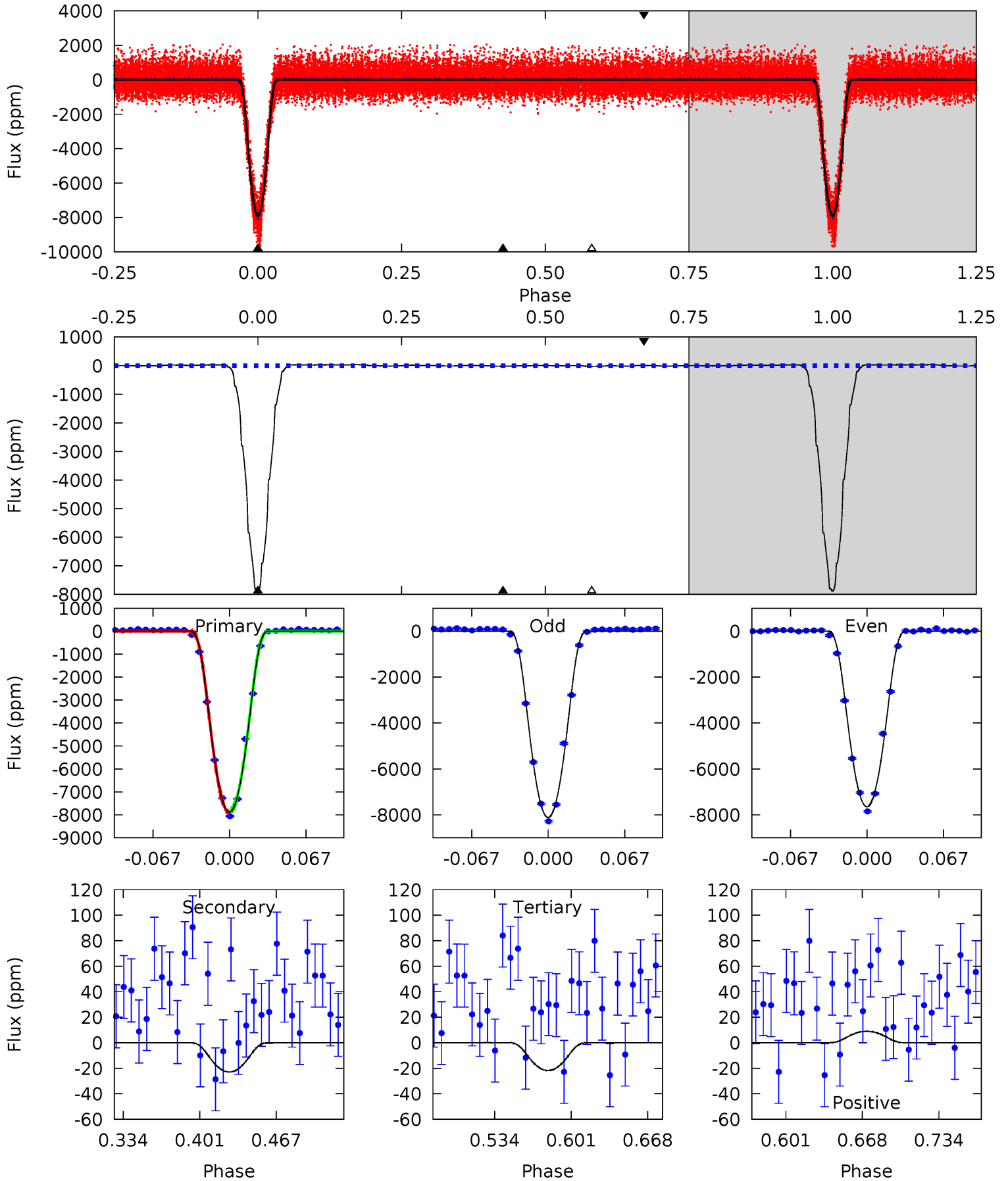
TCE 010848459-01 P= 1.736943 Days $T_0=132.098629$ (BKJD)



DV Model-Shift Uniqueness Test

010848459-01, P = 1.736955 Days, E = 130.357045 Days

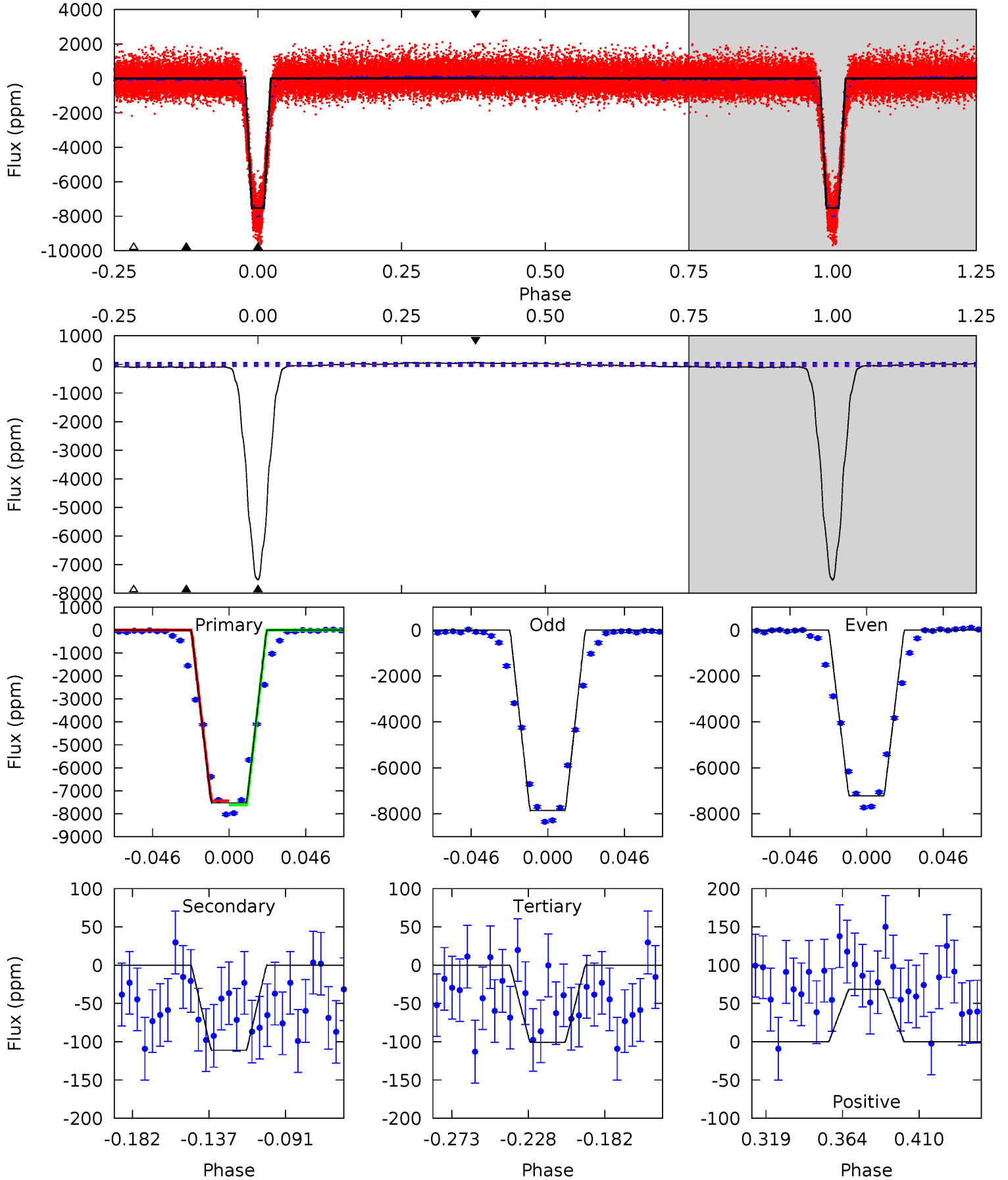
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
926.8	2.69	2.56	1.06	4.65	1.83	1.72	924.2	925.7	0.13	1.64	27.7	1.00	0.00	3.68



Alt Model-Shift Uniqueness Test

010848459-01, P = 1.736943 Days, E = 130.361686 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
702.4	10.4	9.40	6.39	4.73	2.00	4.83	693.0	696.0	0.96	3.98	29.8	1.01	0.01	8.41



Stellar Parameters For KIC 010848459

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5805^{+157}_{-174}	$4.564^{+0.053}_{-0.168}$	$-0.520^{+0.300}_{-0.300}$	$0.791^{+0.201}_{-0.067}$	$0.836^{+0.093}_{-0.077}$	$2.375^{+0.525}_{-1.068}$
	+3%/-3%	+1%/-4%	+58%/-58%	+25%/-8%	+11%/-9%	+22%/-45%
Source	PHO1	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 010848459-01 / KOI 0754.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-23 ± 9	$9.58^{+1.39}_{-0.68}$	1980^{+129}_{-93}	-2375^{+90}_{-100}	$0.093^{+0.042}_{-0.038}$
Alt.	-111 ± 11	$8.00^{+1.02}_{-0.61}$	1976^{+120}_{-76}	2534^{+79}_{-109}	$0.652^{+0.138}_{-0.131}$

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 $A_{obs} \gg 1.0$

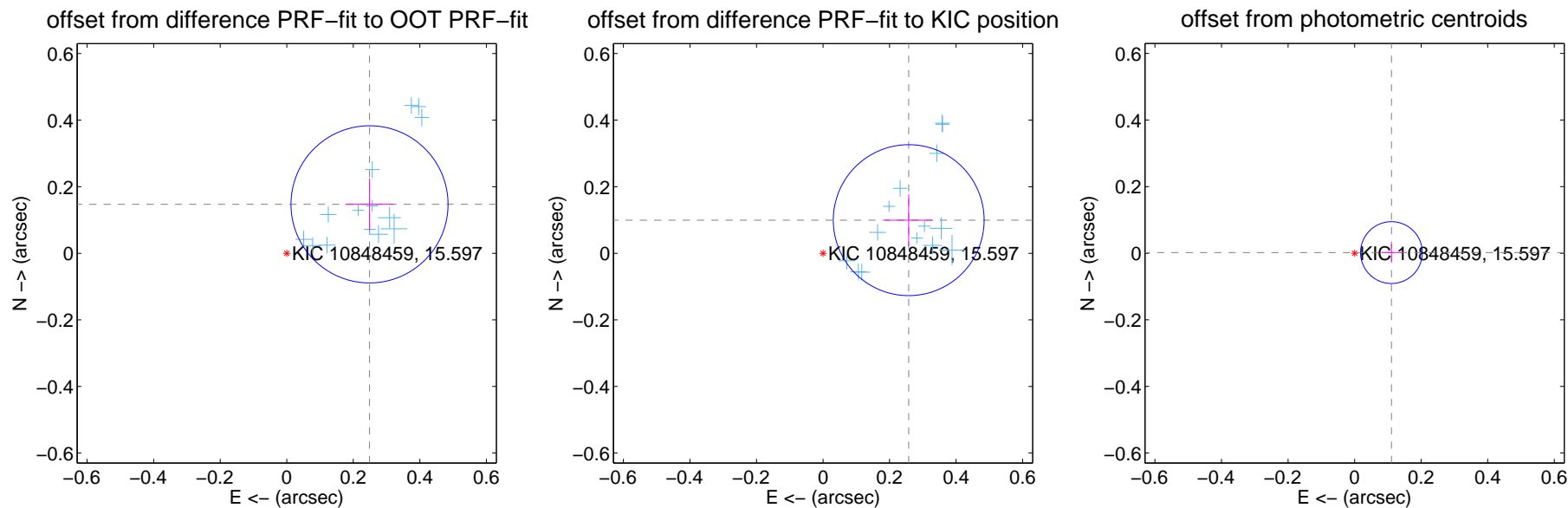
DV Centroid Data

Supplemental centroid analysis for 010848459-01. Kepler magnitude: 15.60. Transit SNR 530.37

There are 14 quarters with good PRF difference image offsets

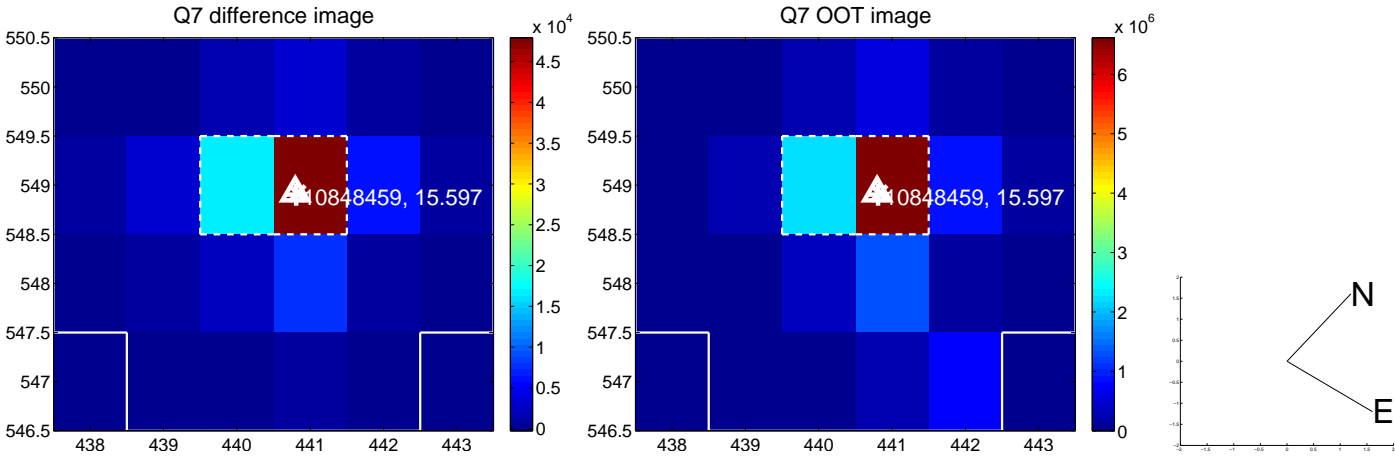
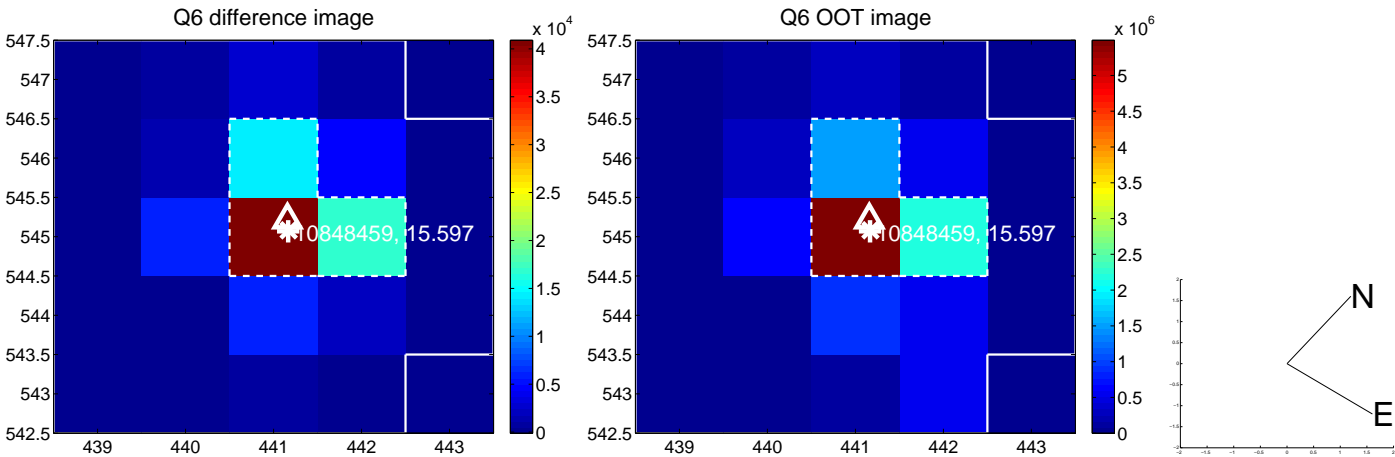
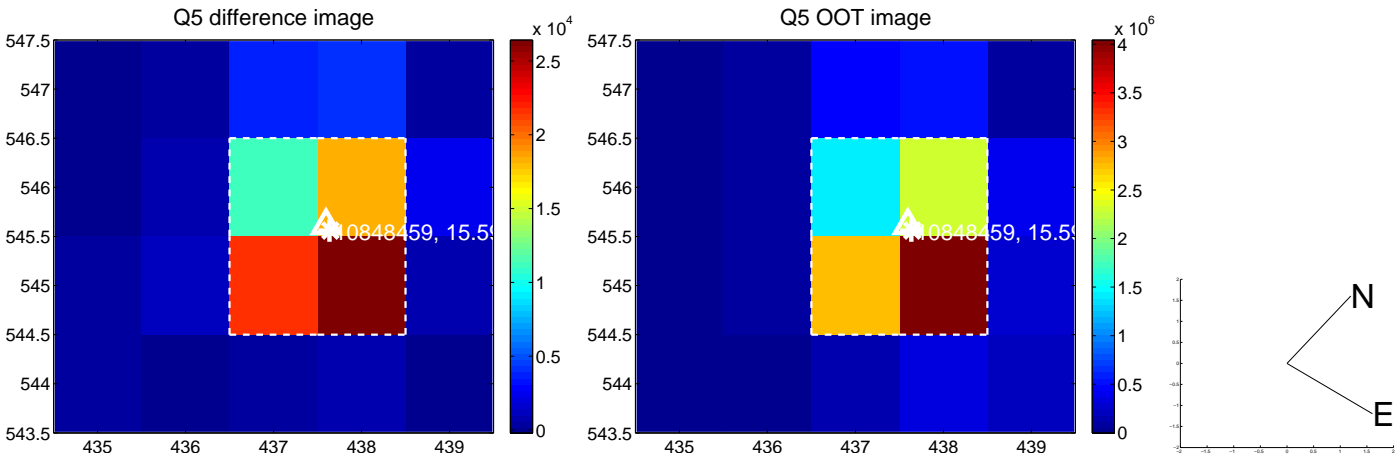
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.289 ± 0.079	3.67	-0.249 ± 0.072	0.147 ± 0.078
PRF-fit source offset from KIC position	0.276 ± 0.076	3.65	-0.257 ± 0.072	0.099 ± 0.077
photometric centroid source offset	0.11 ± 0.03	3.58	-0.11 ± 0.03	0.00 ± 0.03

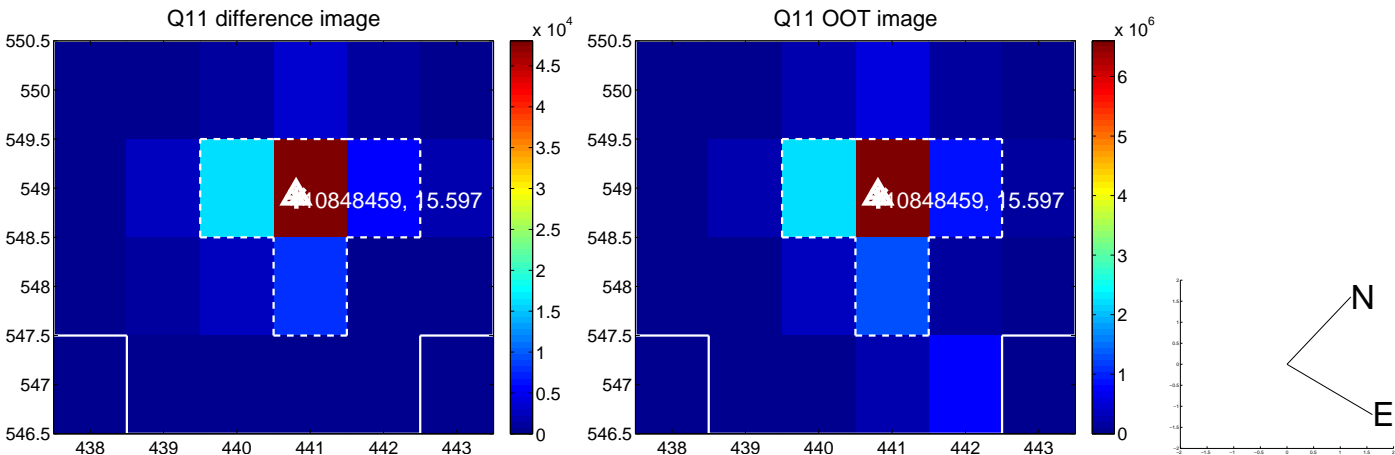
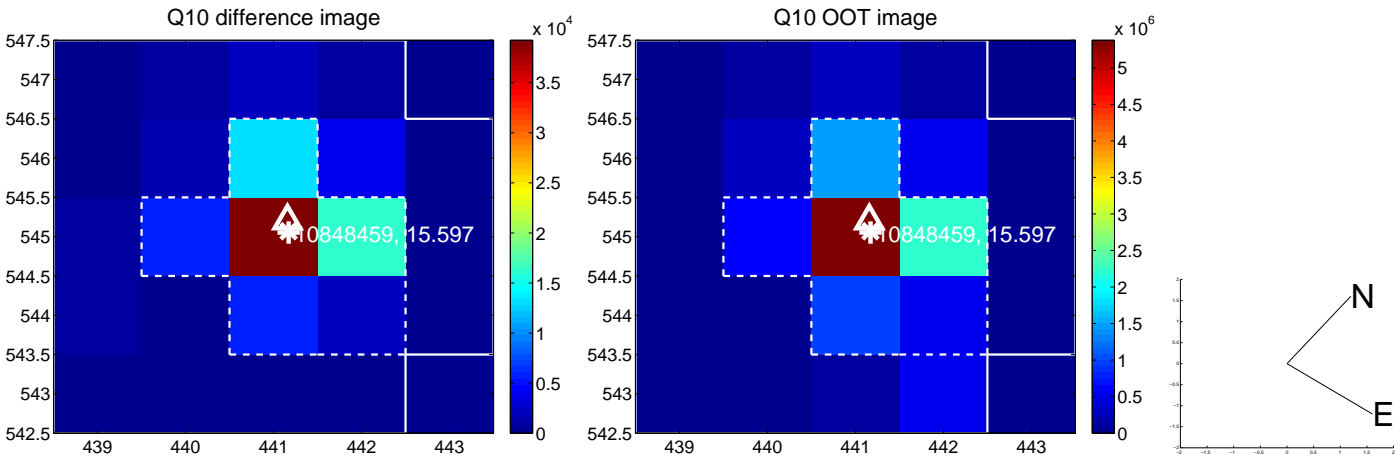
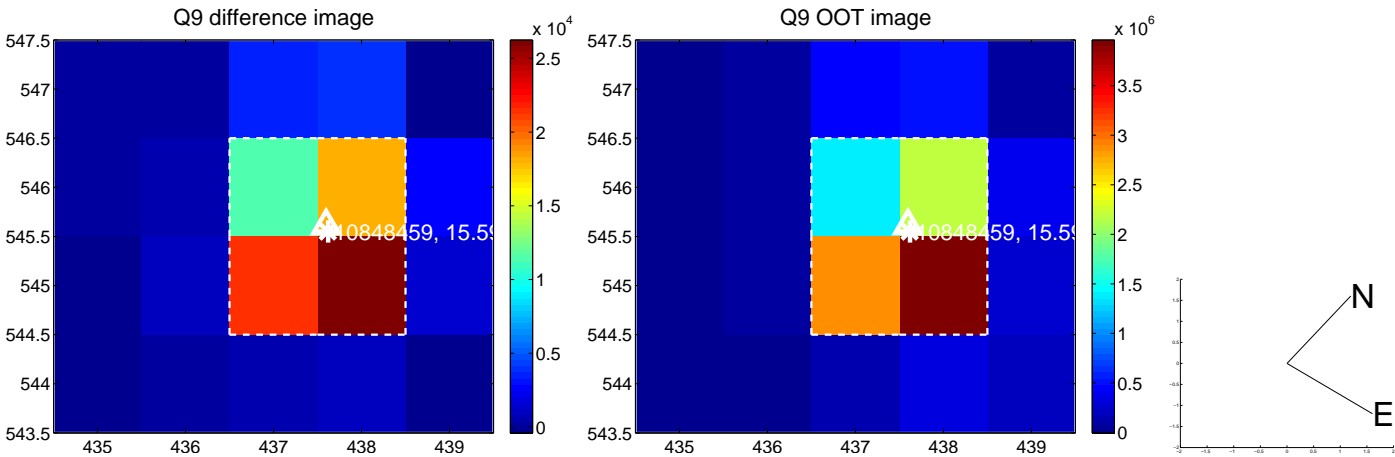


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

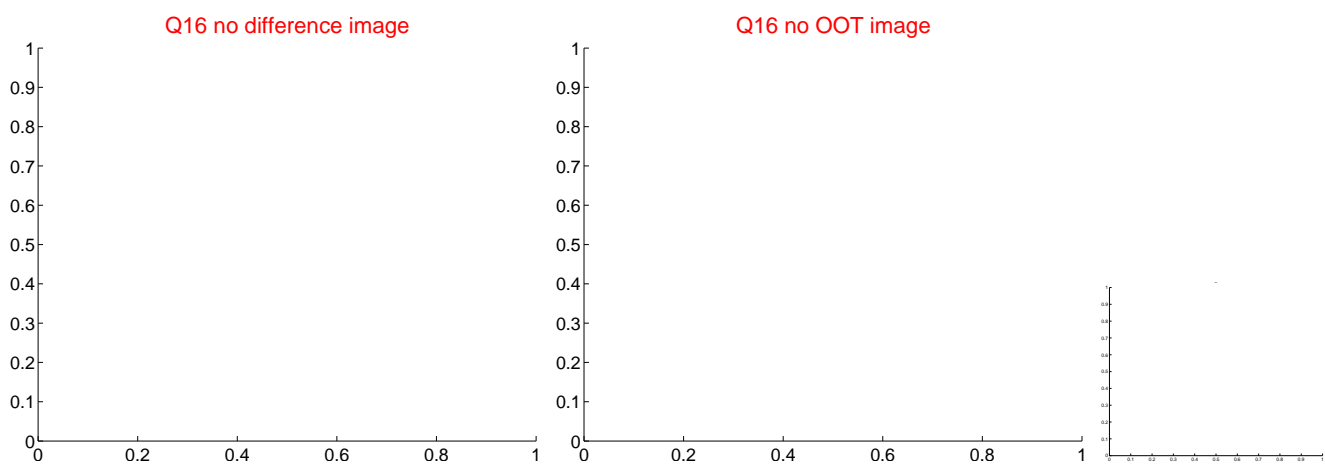
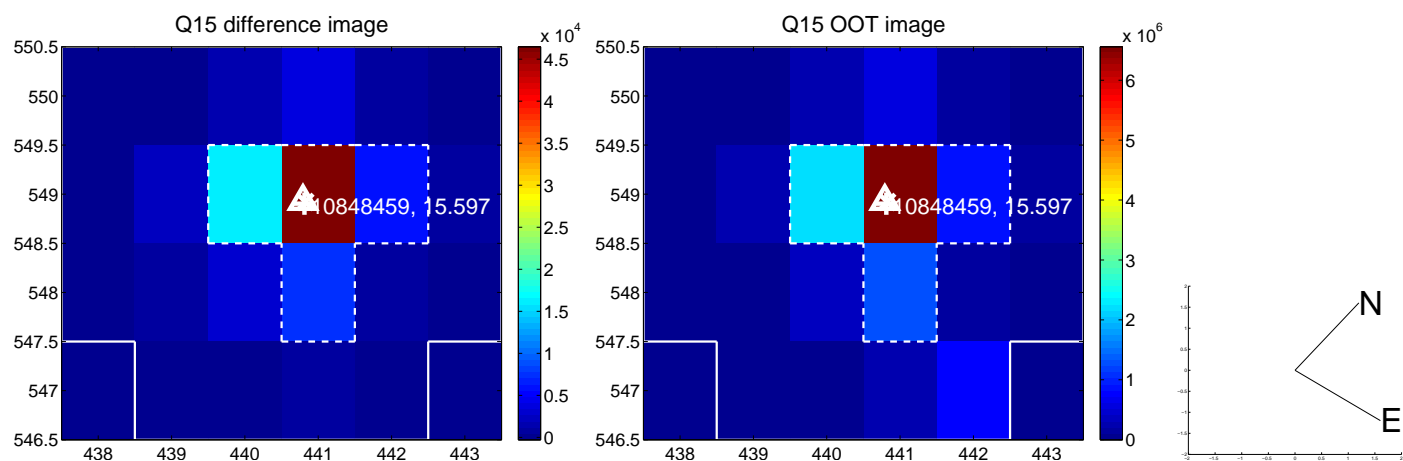
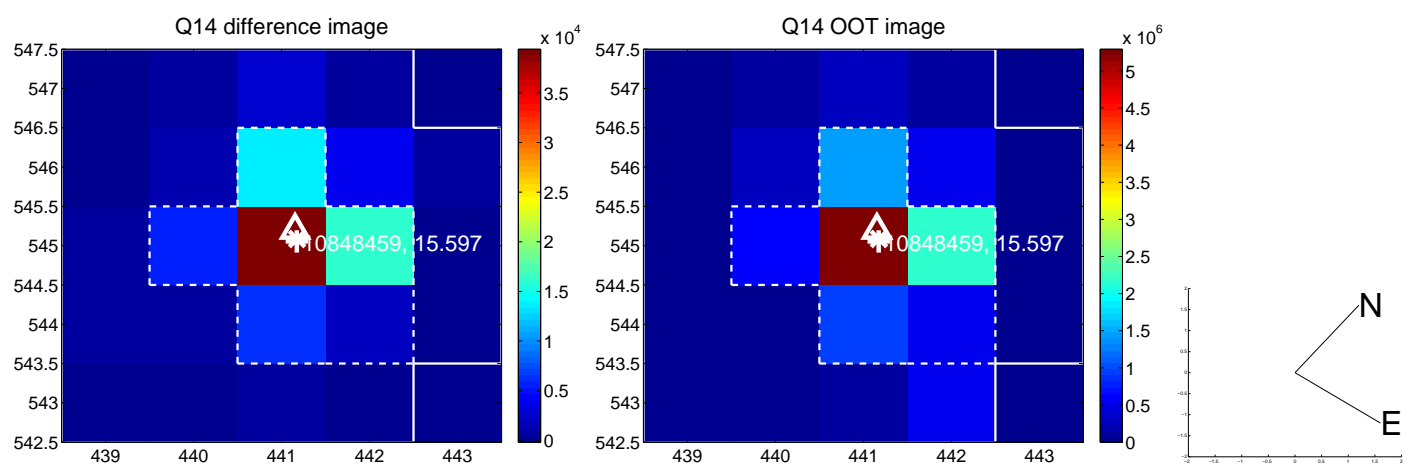
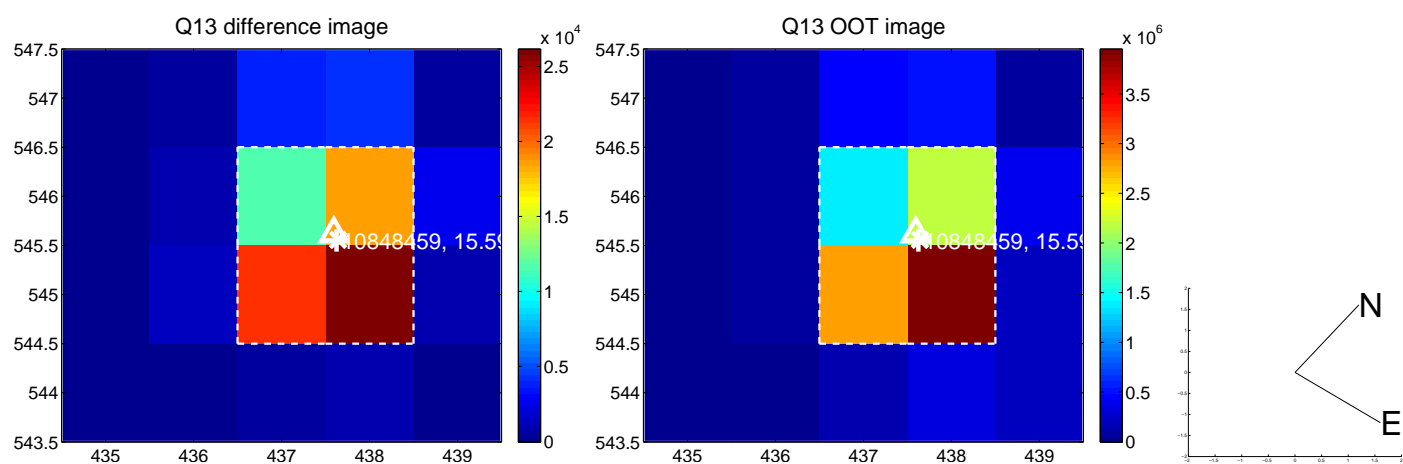
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



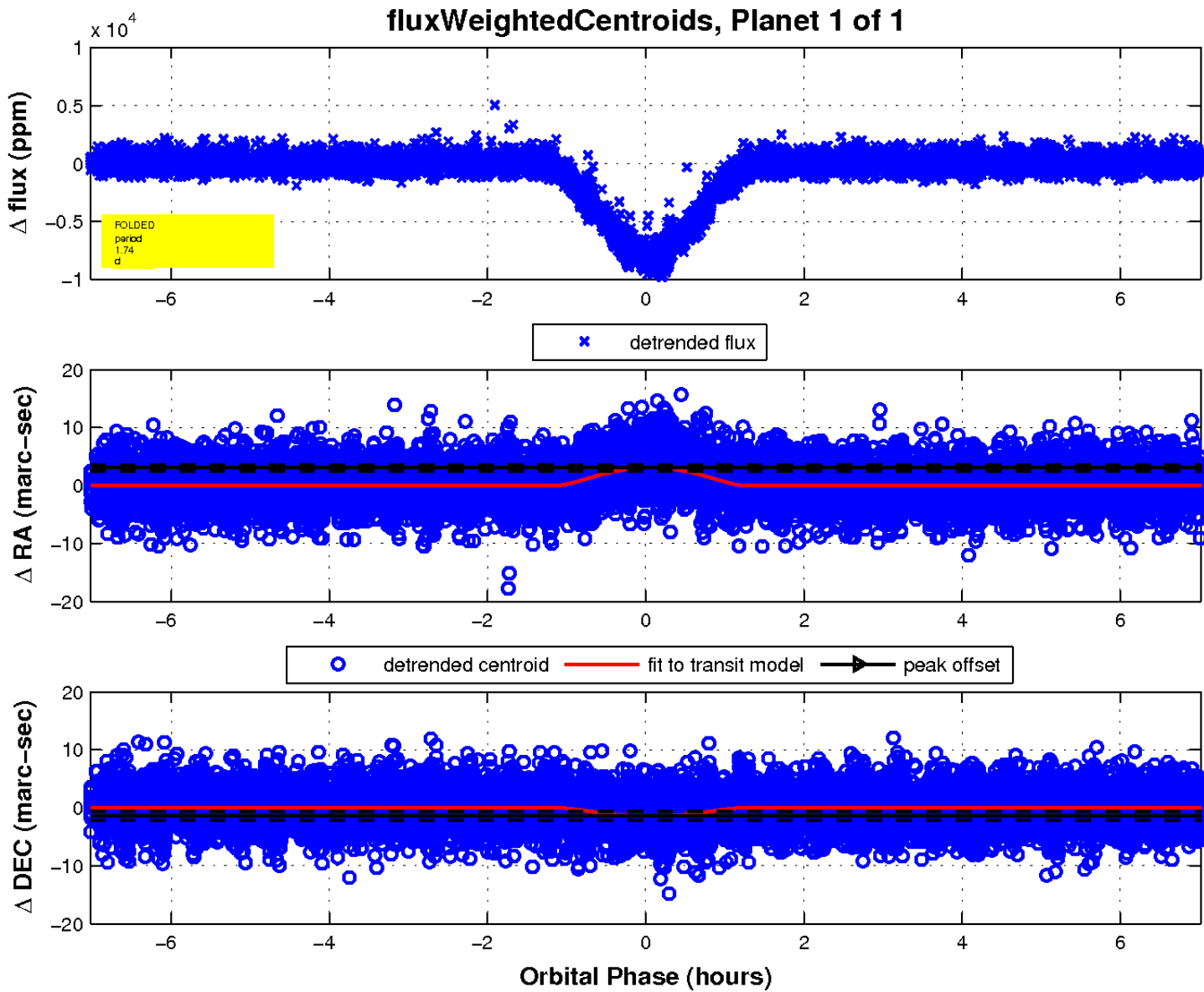
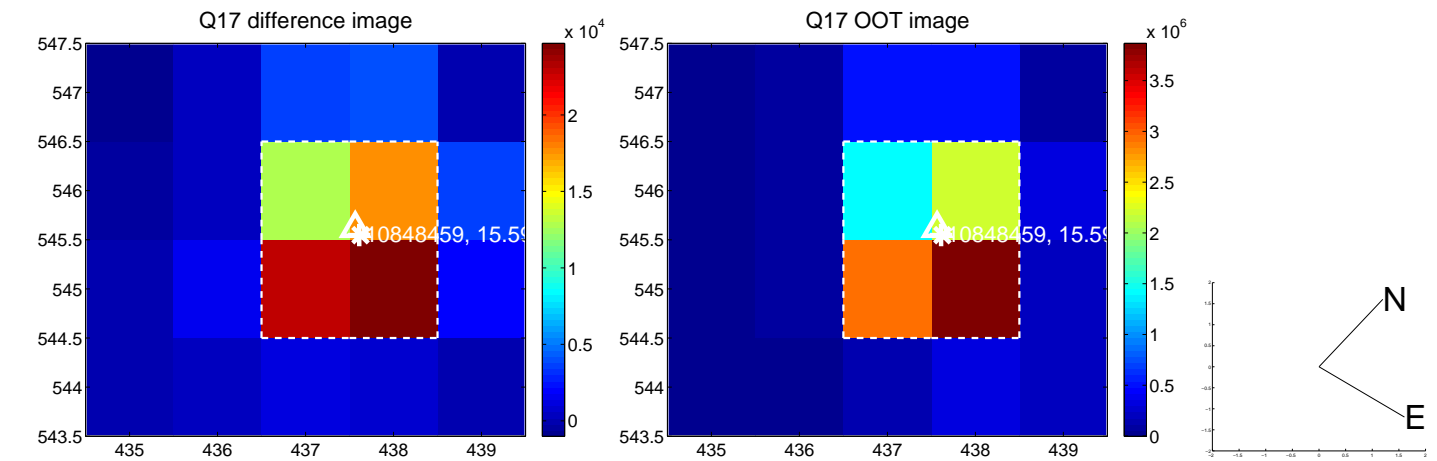
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

