

KIC 011804465

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})
011804465-01	OBS	0020.01	4.437962	135.505530	16430.2	4.692	3302.6	3244.6	1.42	5953	18.03	759.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011804465-01	OBS	PC	0.76	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

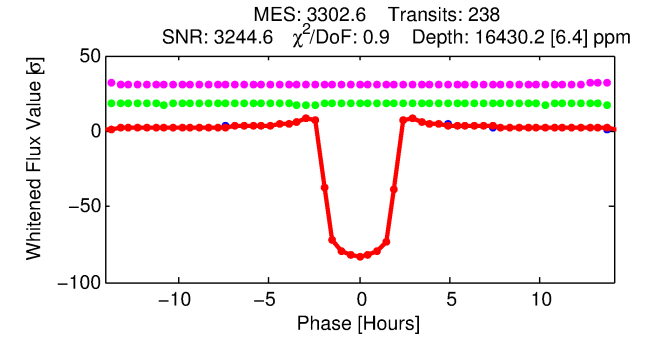
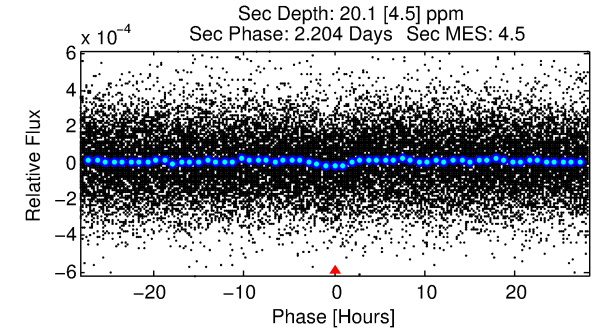
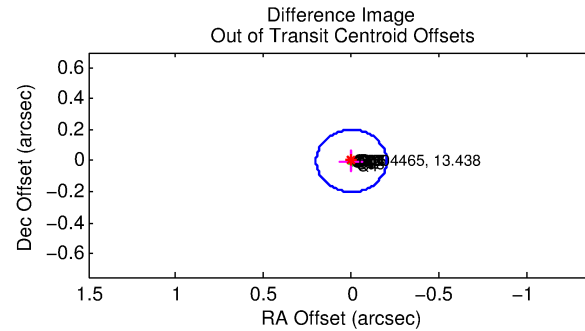
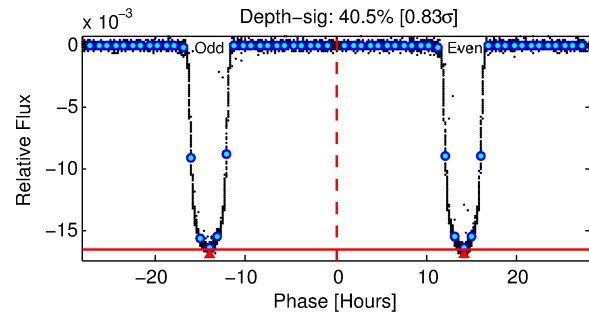
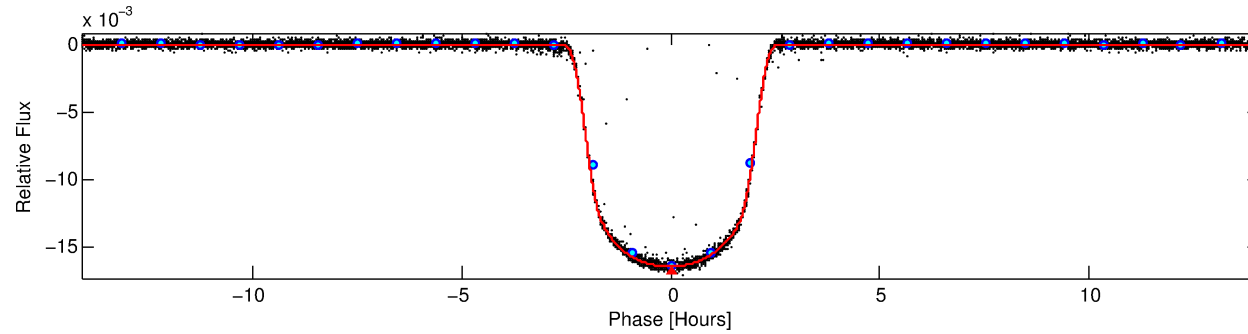
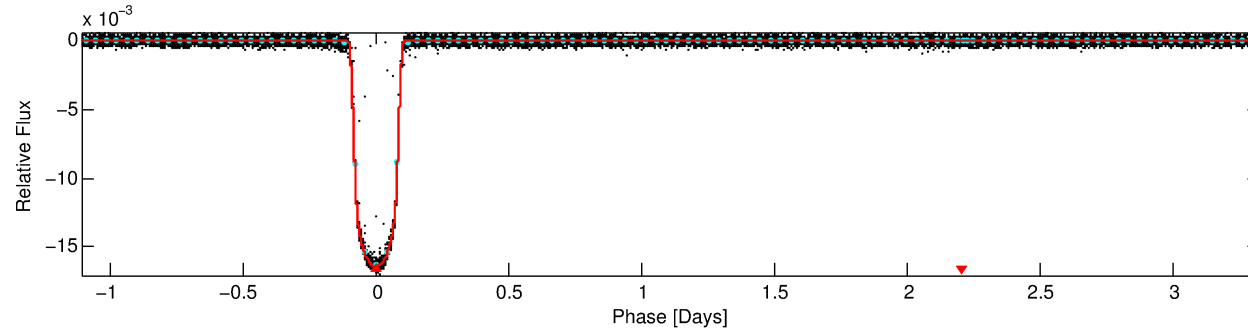
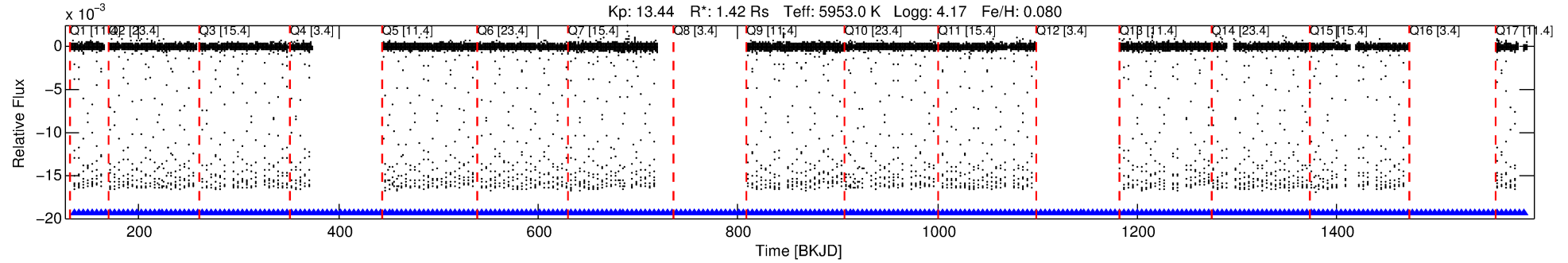
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011804465-01

No Significant Match Found

DV One-Page Summary

KIC: 11804465 Candidate: 1 of 1 Period: 4.438 d
KOI: K00020.01 Name: Kepler-12b Corr: 0.999



DV Fit Results:

Period = 4.43796 [0.00000] d
Epoch = 135.5055 [0.0000] BKJD
Rp/R* = 0.1167 [0.0001]
a/R* = 8.10 [0.03]
b = 0.00 [18.19]
Seff = 759.91 [229.77]
Teq = 1339 [101] K
Rp = 18.03 [3.57] Re
a = 0.0544 [0.0100] AU
Ag = 0.10 [0.04] [-24.28 σ]
Teffp = 1167 [70] K [-1.39 σ]

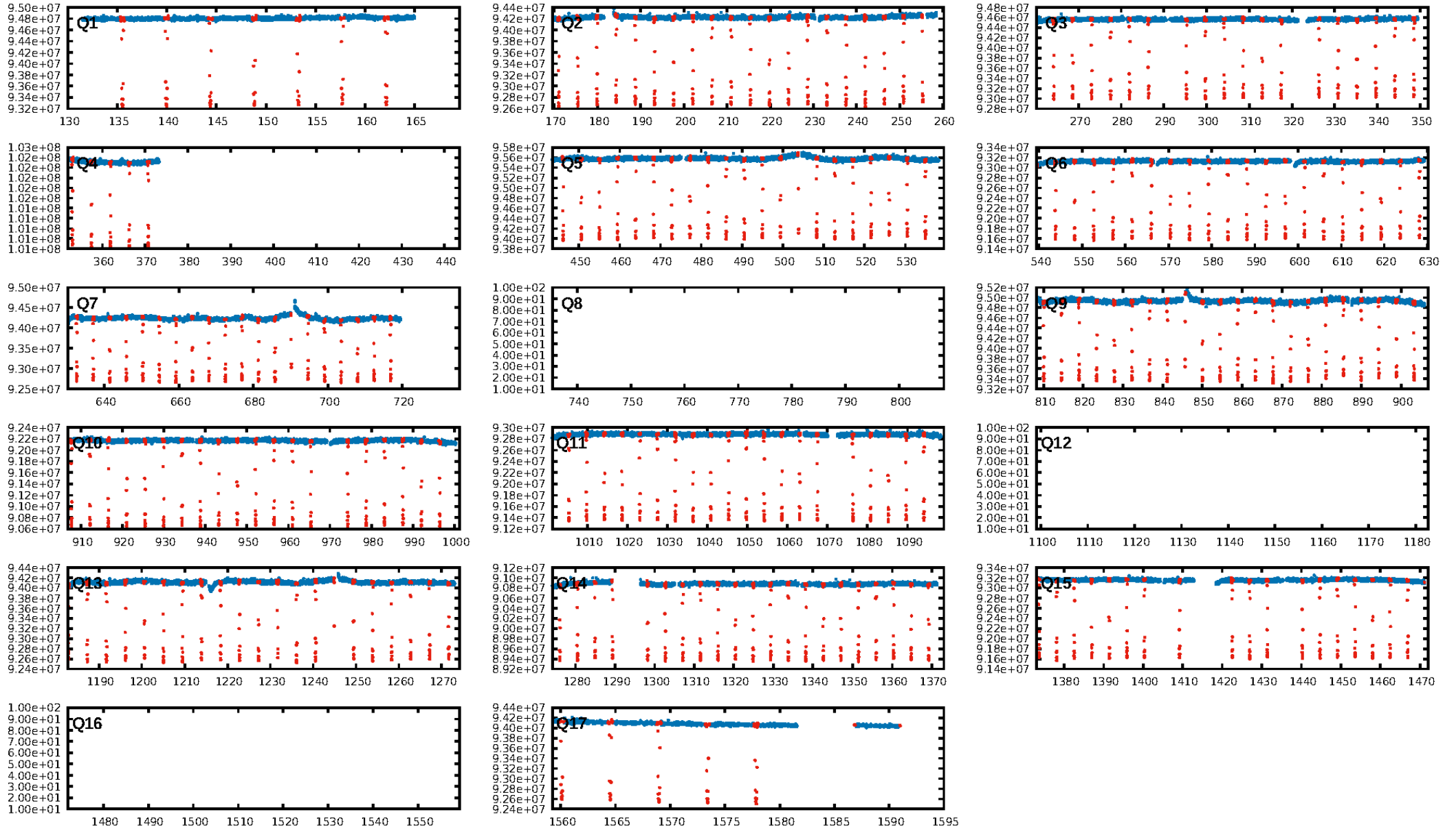
DV Diagnostic Results:

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 [221/221]
GhostDiagnostic-chr: 4.661
Centroid-sig: 1.8%
Centroid-so: 0.019 arcsec [5.37 σ]
OotOffset-rm: 0.002 arcsec [0.03 σ]
KicOffset-rm: 0.085 arcsec [1.21 σ]
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]

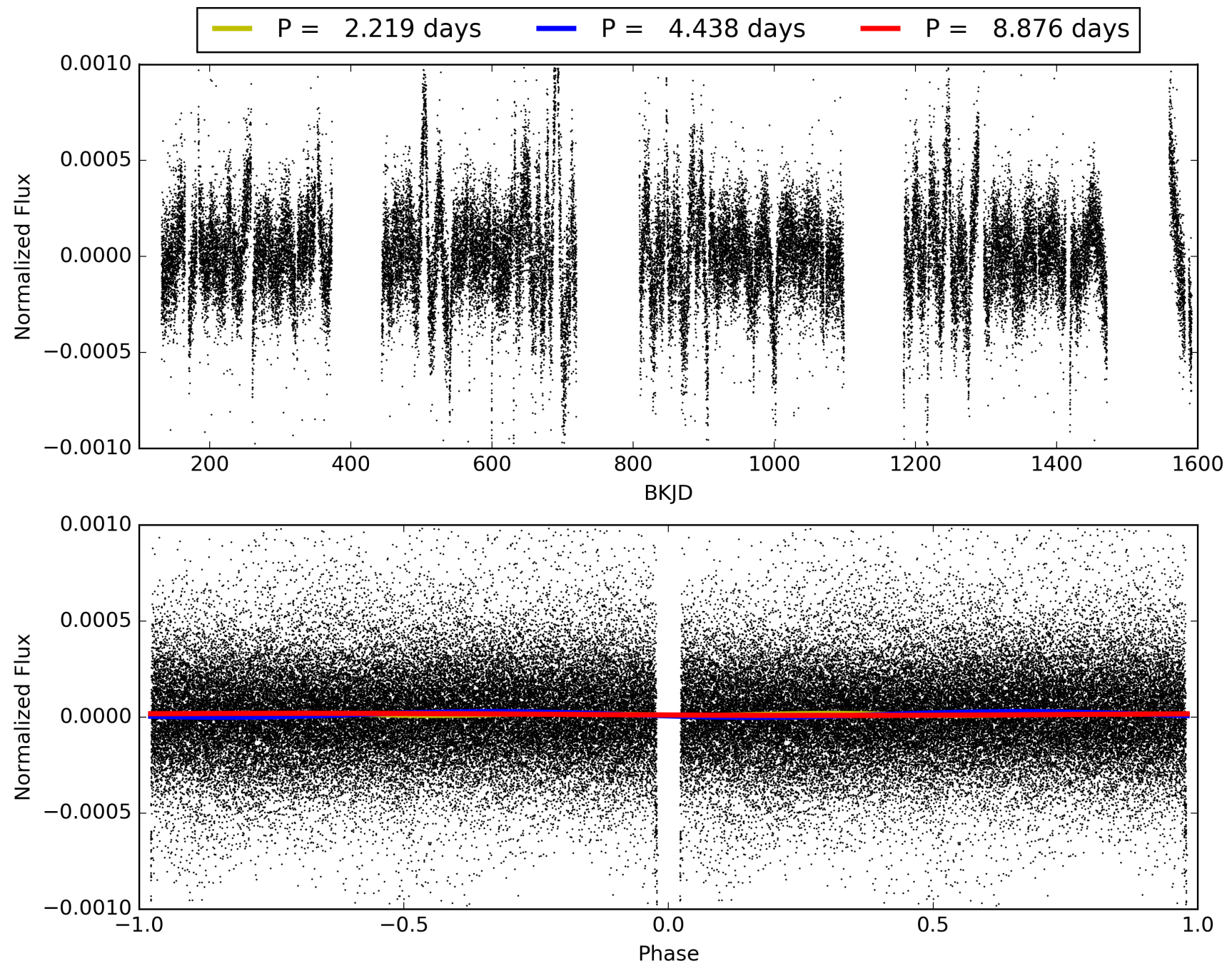
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:15:01 Z

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

TCE 011804465-01, PDC Light Curves

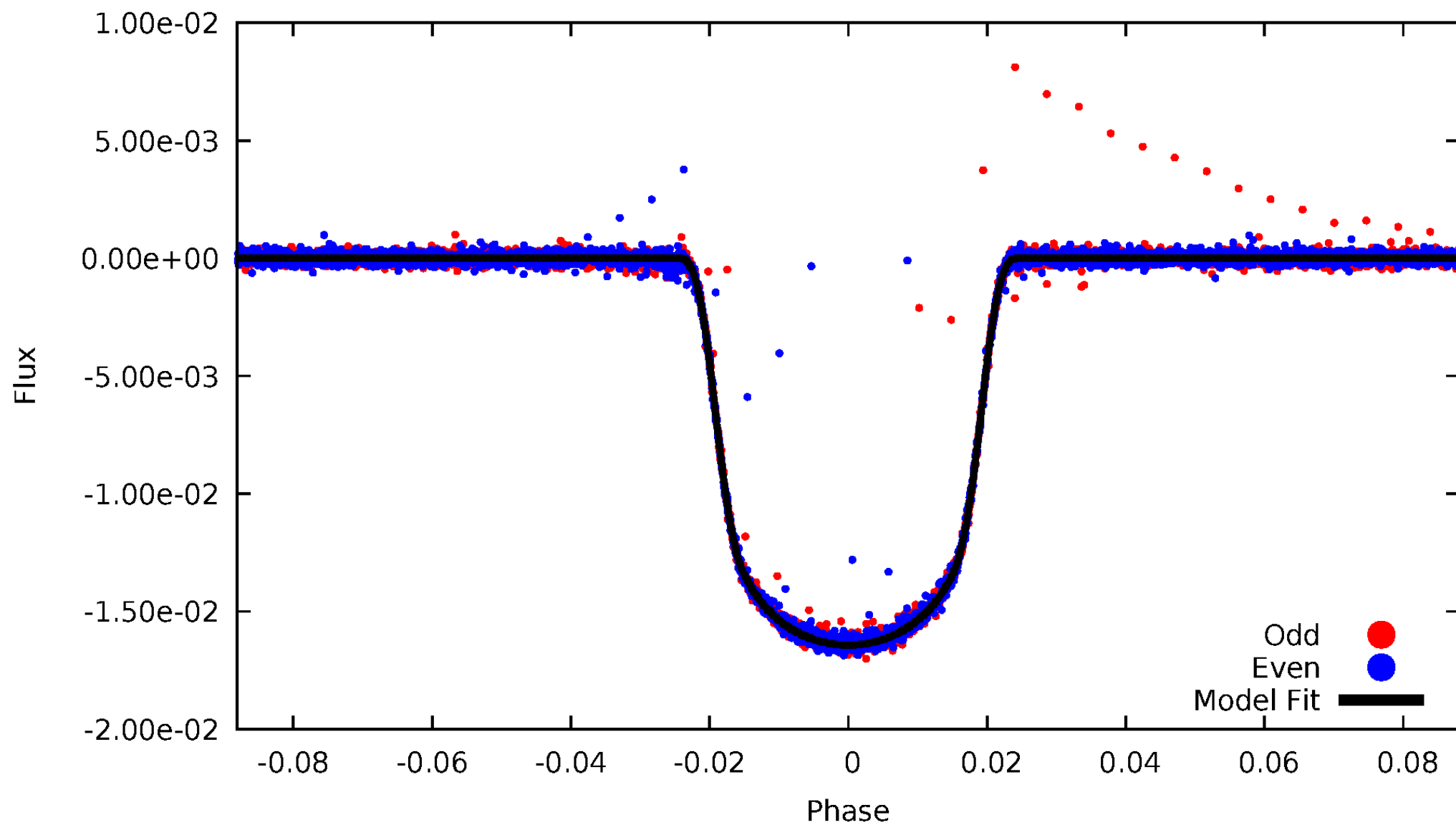


TCE 011804465-01



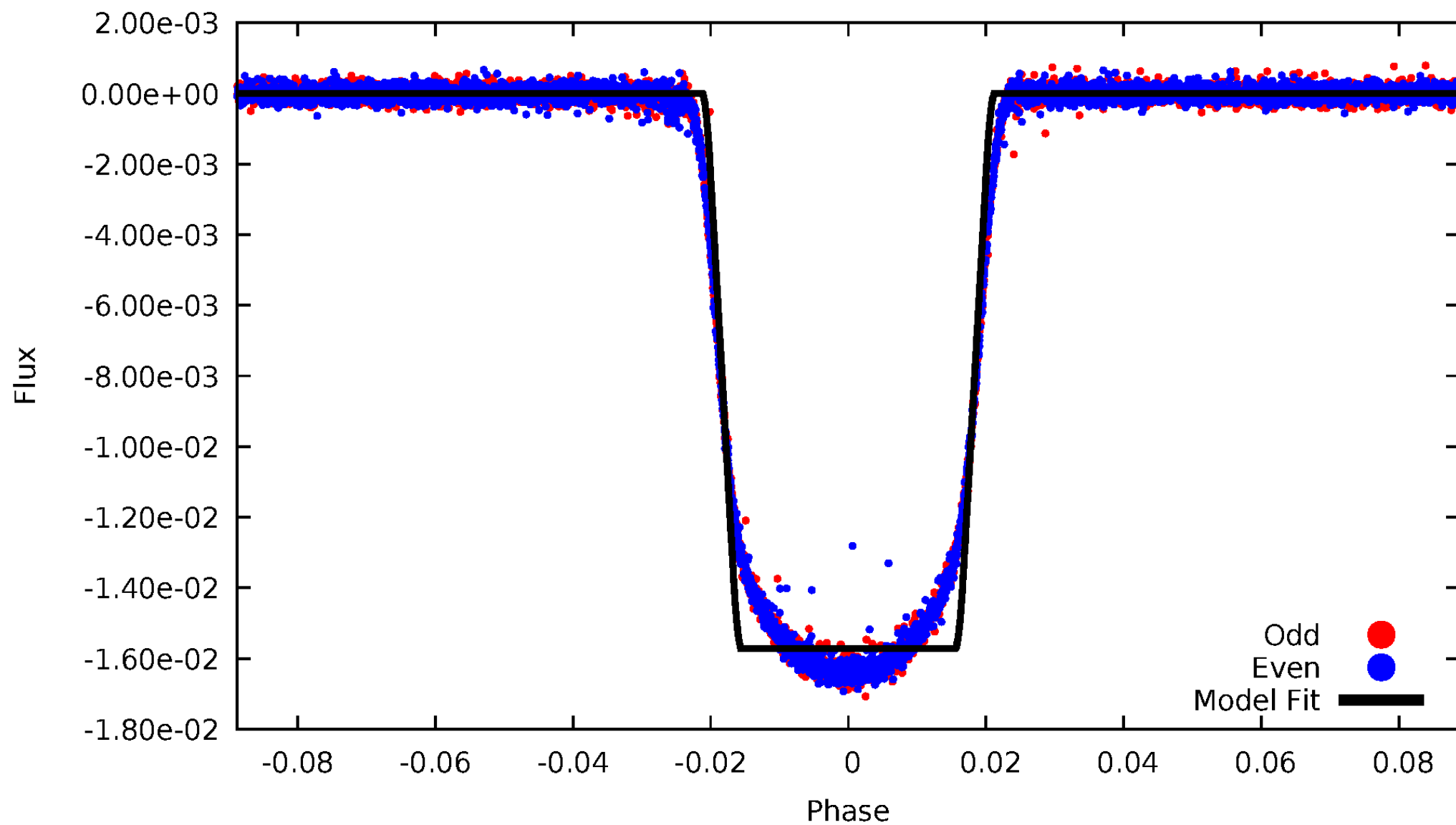
DV Odd/Even

TCE 011804465-01



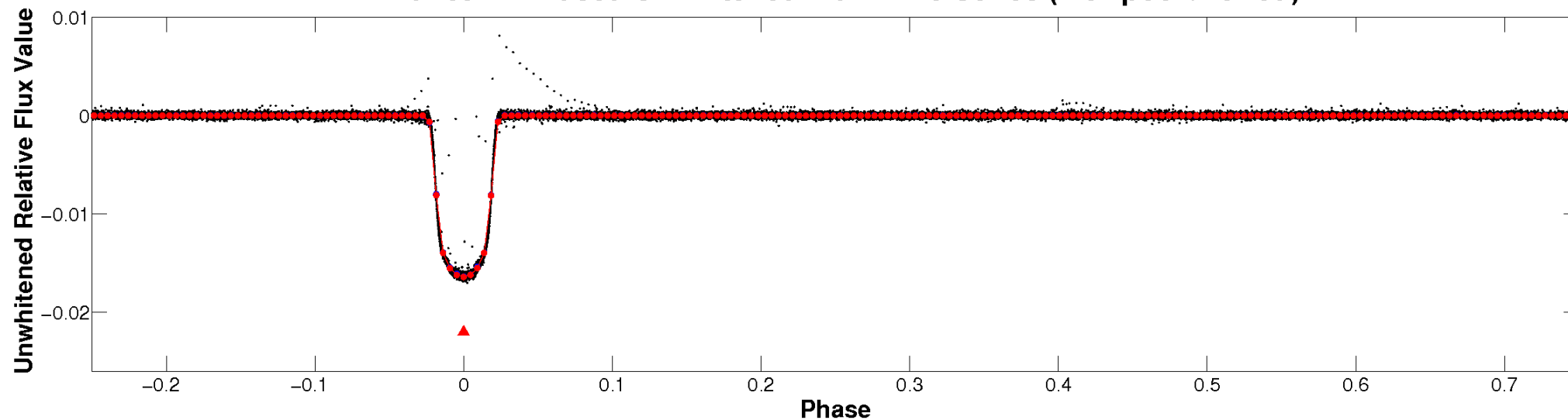
ALT Odd/Even

TCE 011804465-01

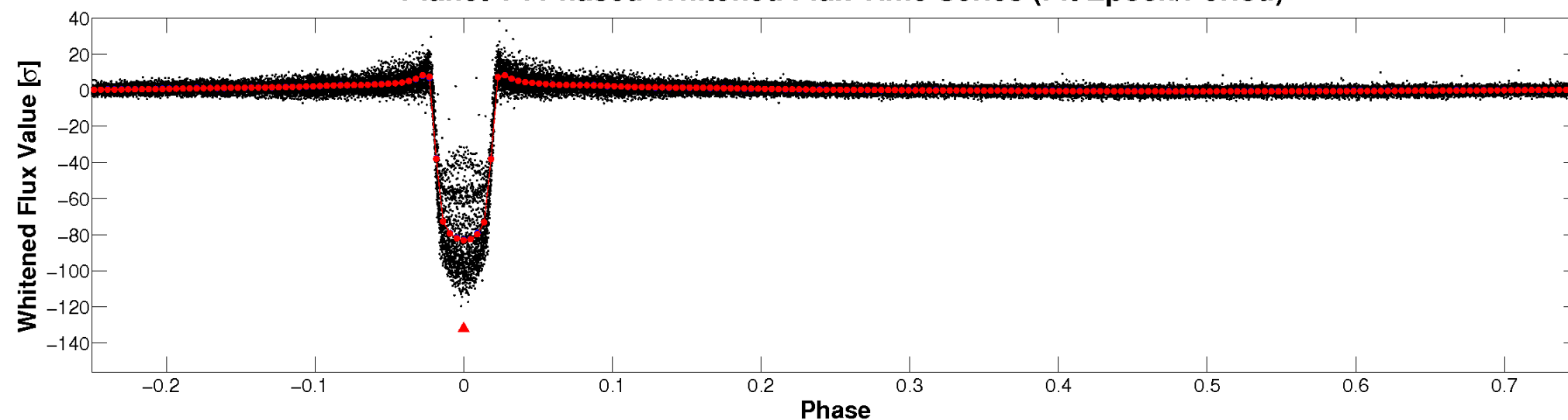


Non-Whitened Vs. Whitened Light Curve

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

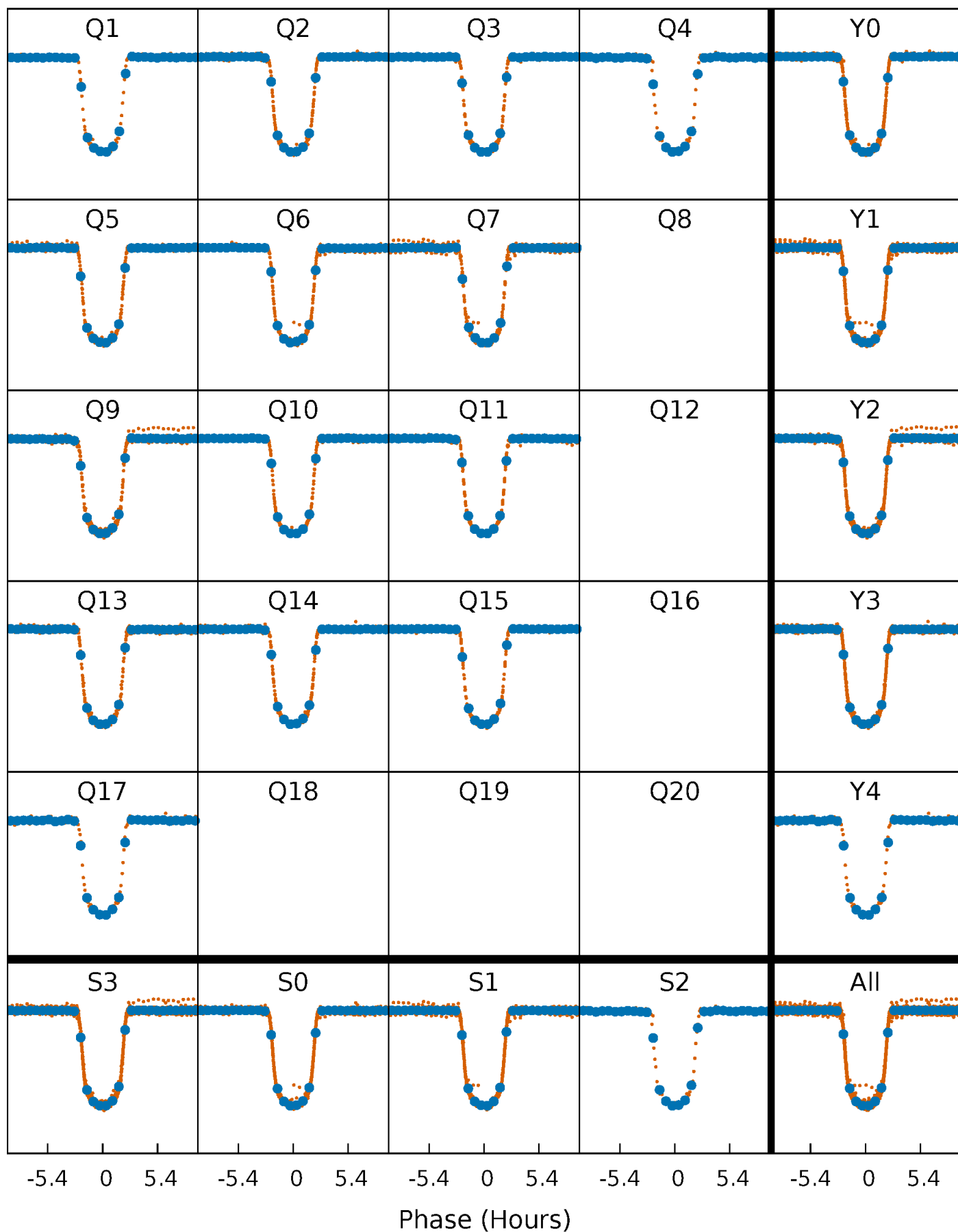


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



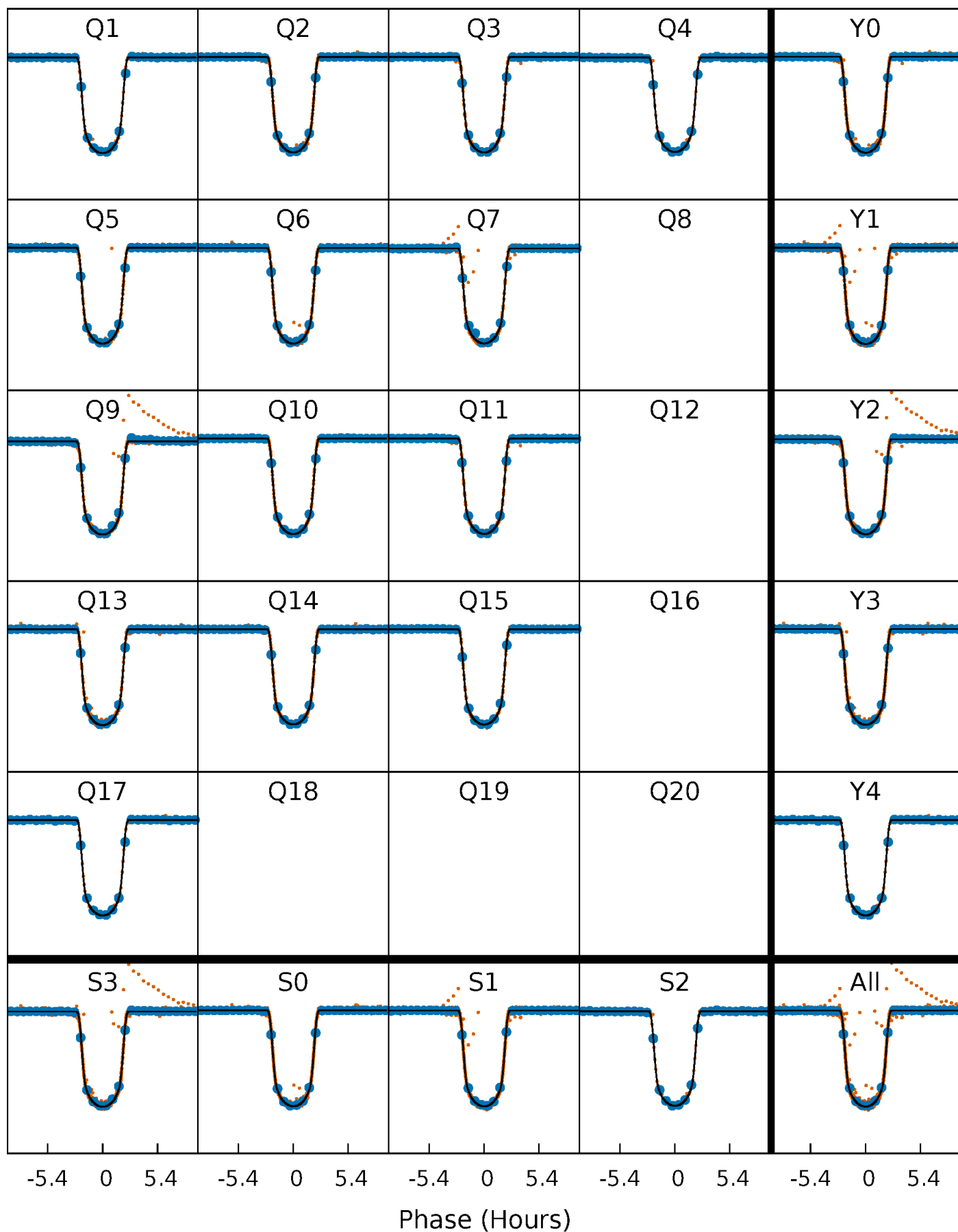
PDC Quarter-Phased Transit Curves

TCE 011804465-01 P= 4.437962 Days $T_0=135.505530$ (BKJD)



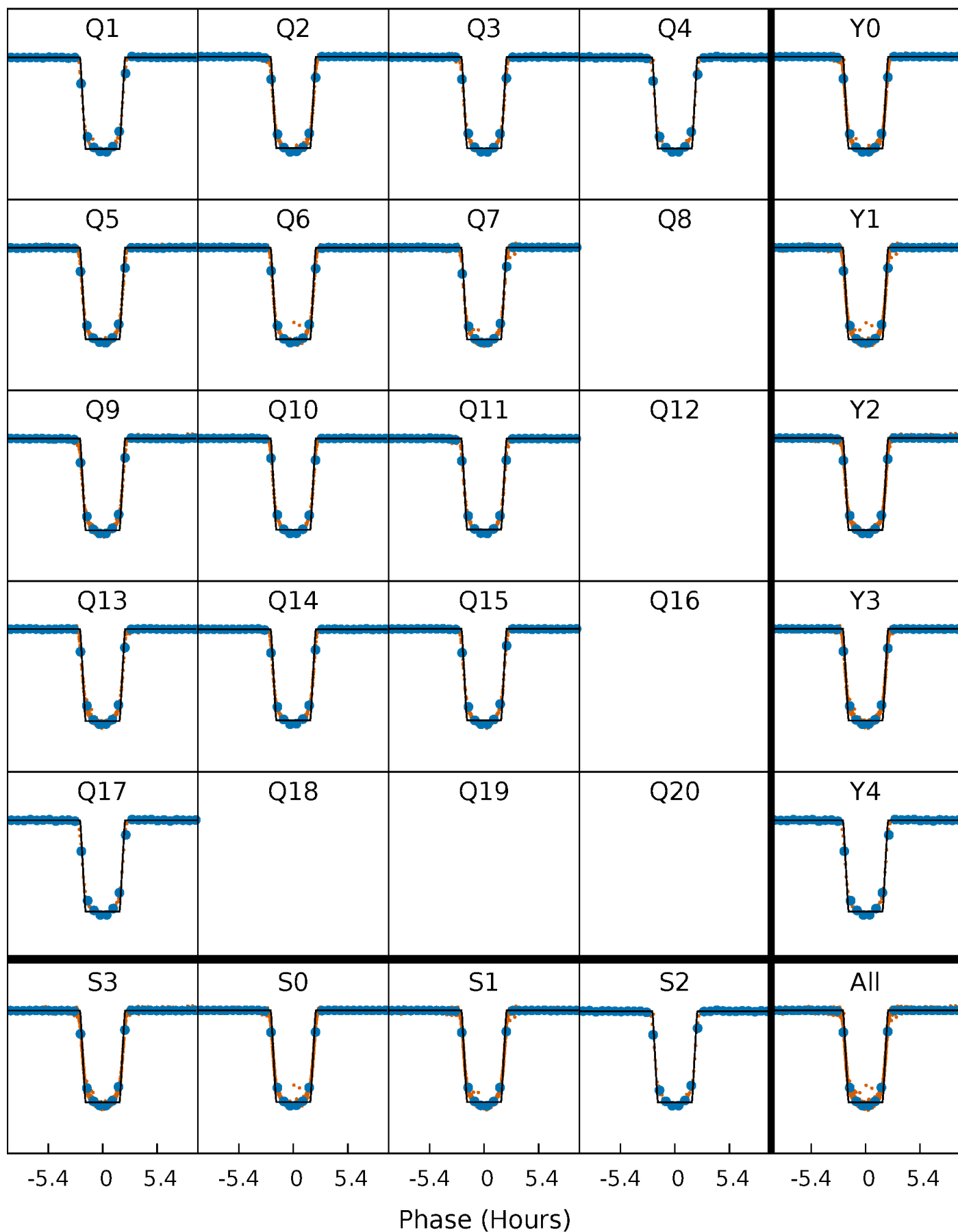
DV Quarter-Phased Transit Curves

TCE 011804465-01 P= 4.437962 Days $T_0=135.505530$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

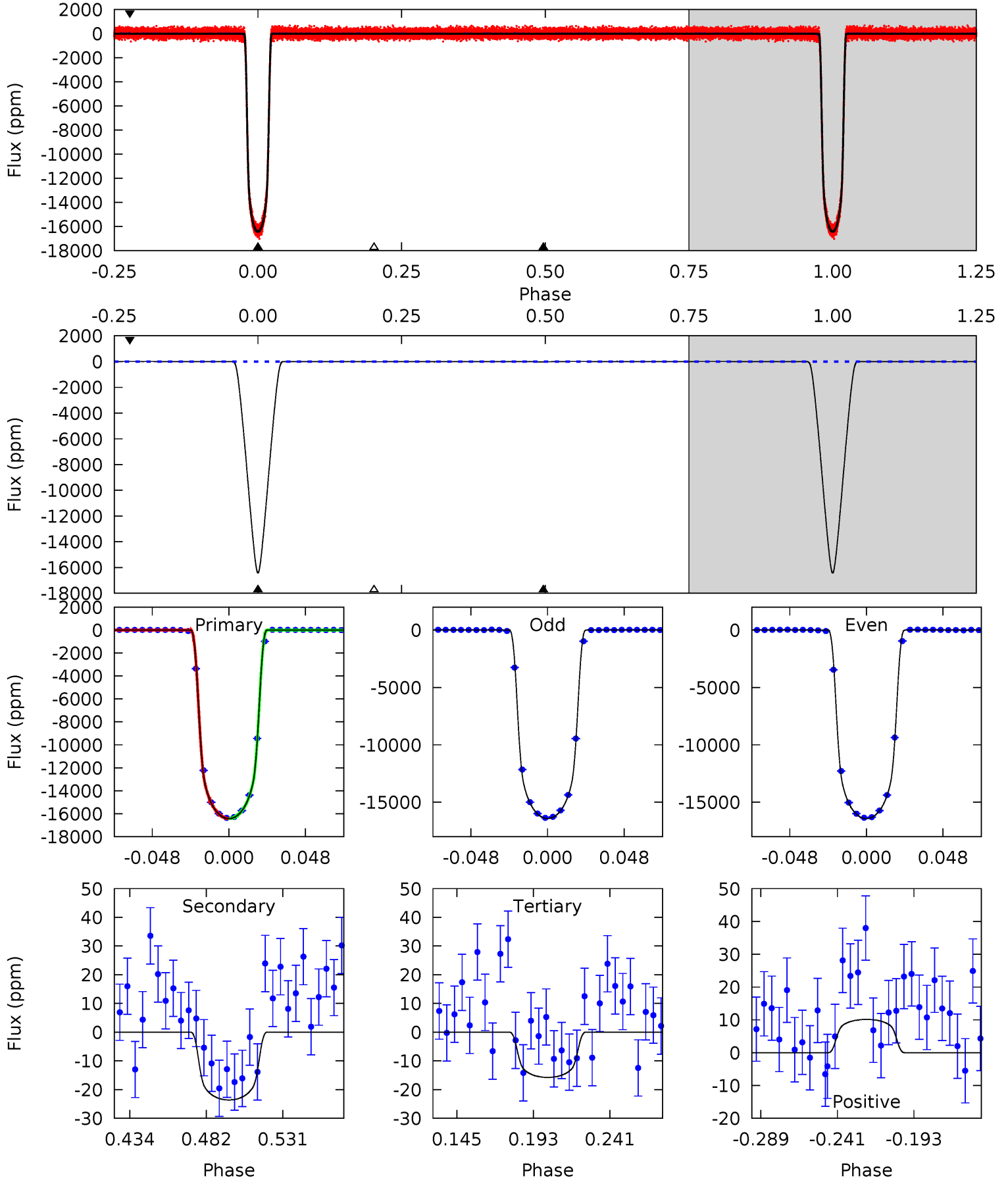
TCE 011804465-01 P= 4.437965 Days $T_0=135.505181$ (BKJD)



DV Model-Shift Uniqueness Test

011804465-01, P = 4.437962 Days, E = 131.067568 Days

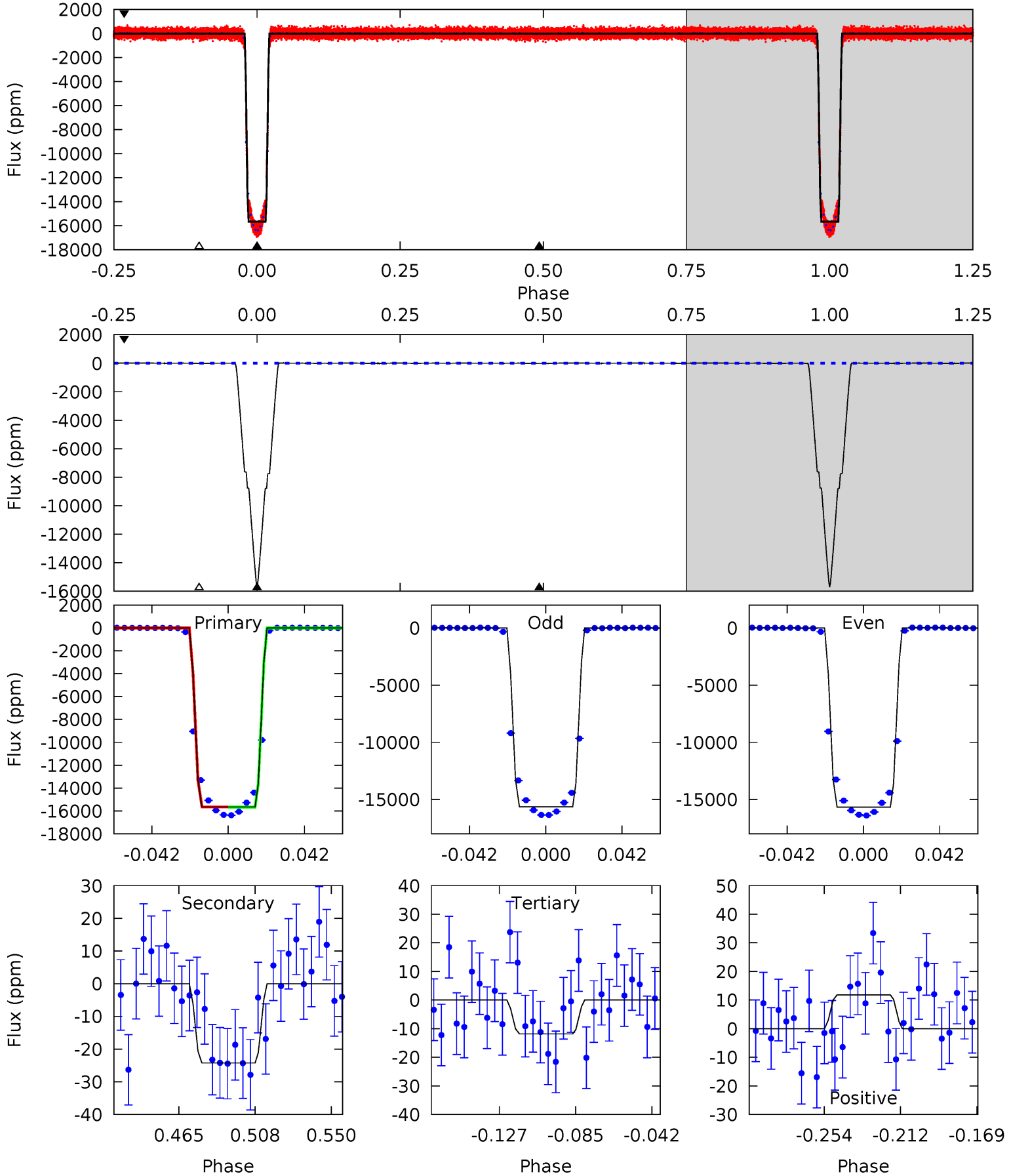
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4913	7.07	4.72	3.03	4.72	1.98	1.46	4908	4910	2.35	4.04	2.21	0.99	0.00	0.10



Alt Model-Shift Uniqueness Test

011804465-01, P = 4.437965 Days, E = 131.067216 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3904	6.05	2.95	2.95	4.74	2.03	1.07	3901	3901	3.10	3.10	3.06	1.00	0.00	1.33



Stellar Parameters For KIC 011804465

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5953^{+105}_{-129}	$4.175^{+0.168}_{-0.112}$	$0.080^{+0.150}_{-0.150}$	$1.415^{+0.229}_{-0.280}$	$1.093^{+0.109}_{-0.089}$	$0.543^{+0.451}_{-0.182}$
	+2%/-2%	+4%/-3%	+188%/-188%	+16%/-20%	+10%/-8%	+83%/-33%
Source	SPE26	SPE26	SPE26	DSEP		

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

Secondary Eclipse Parameters for KIC 011804465-01 / KOI 0020.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 3	$18.00^{+1.65}_{-2.02}$	1857^{+91}_{-105}	-2271^{+107}_{-78}	$0.121^{+0.032}_{-0.025}$
Alt.	-24 ± 4	$19.28^{+1.85}_{-2.16}$	1861^{+91}_{-101}	-2288^{+101}_{-78}	$0.108^{+0.035}_{-0.024}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

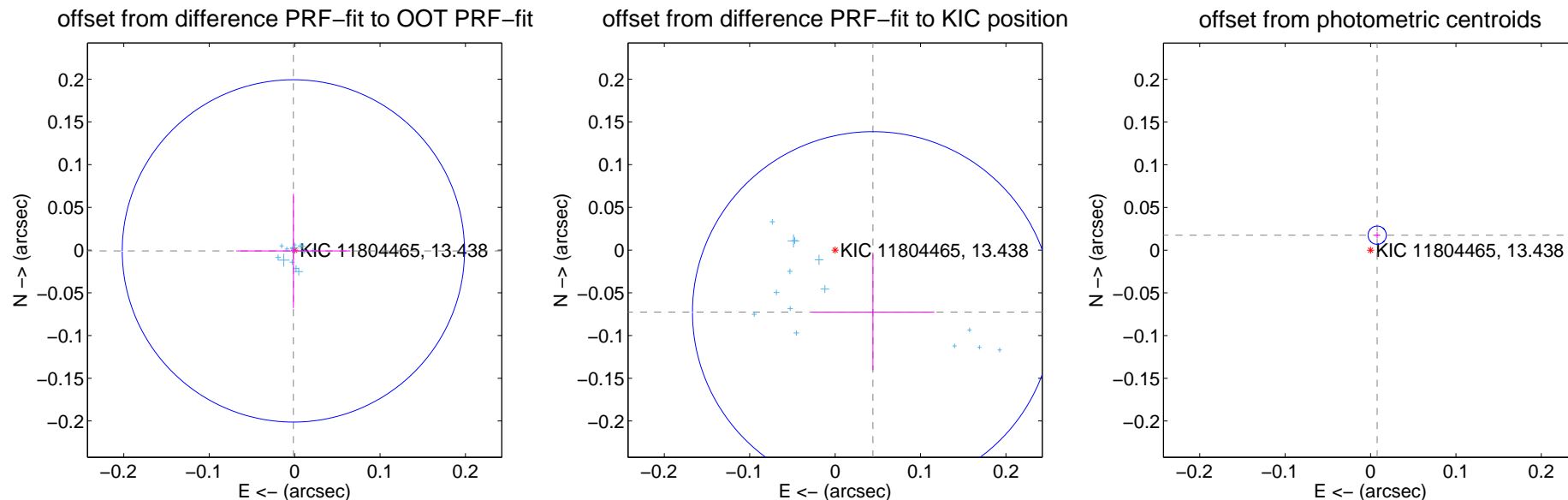
DV Centroid Data

Supplemental centroid analysis for 011804465-01. Kepler magnitude: 13.44. Transit SNR 3244.61

There are 14 quarters with good PRF difference image offsets

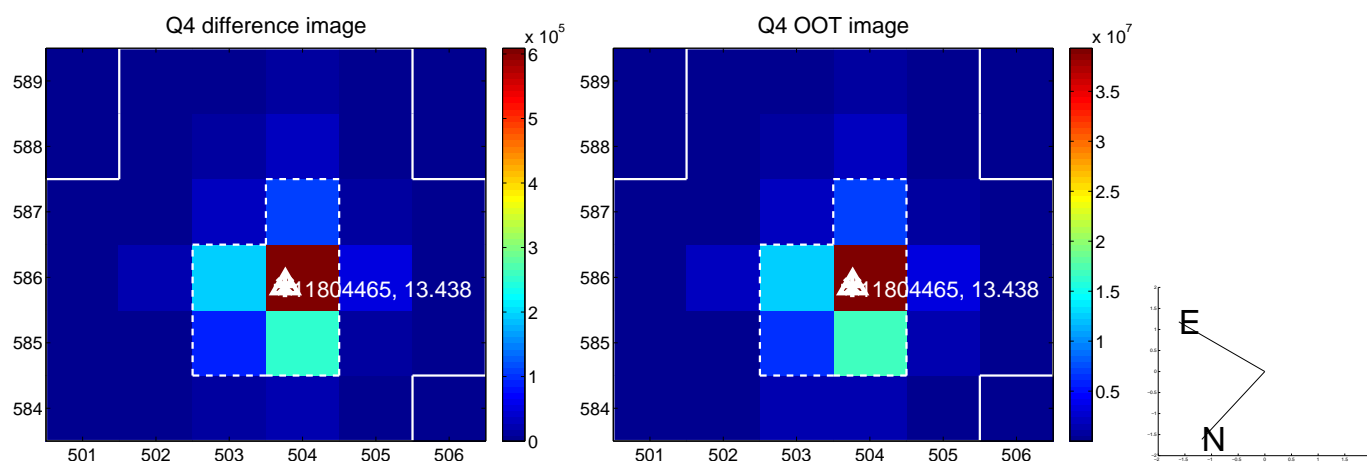
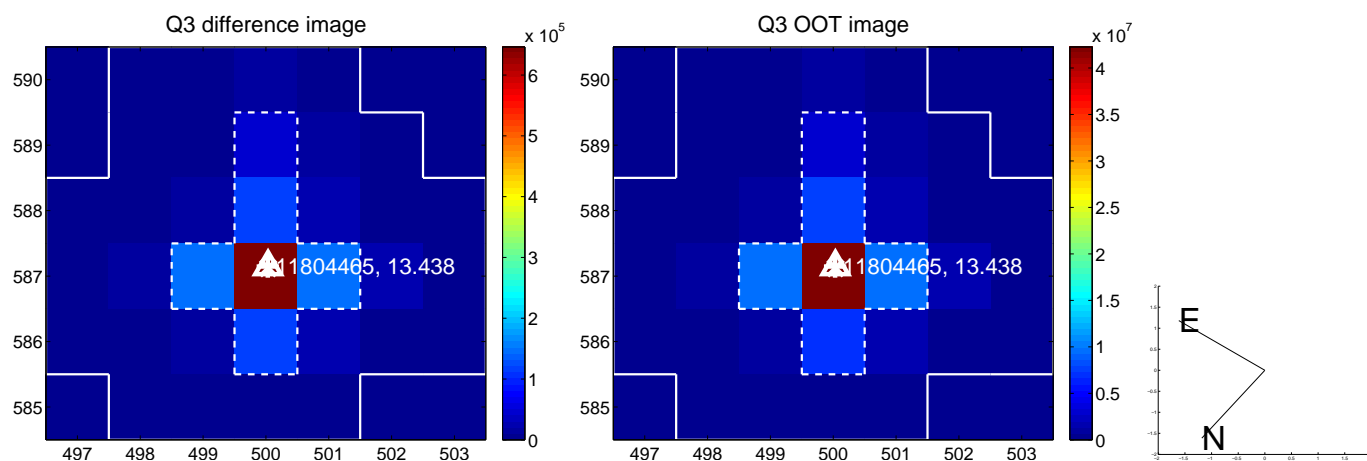
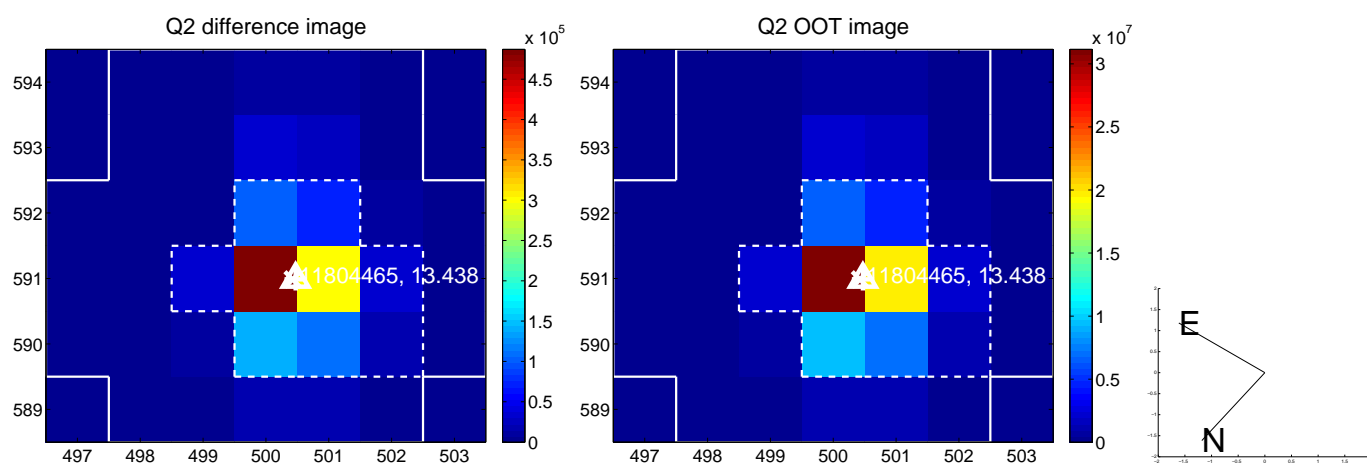
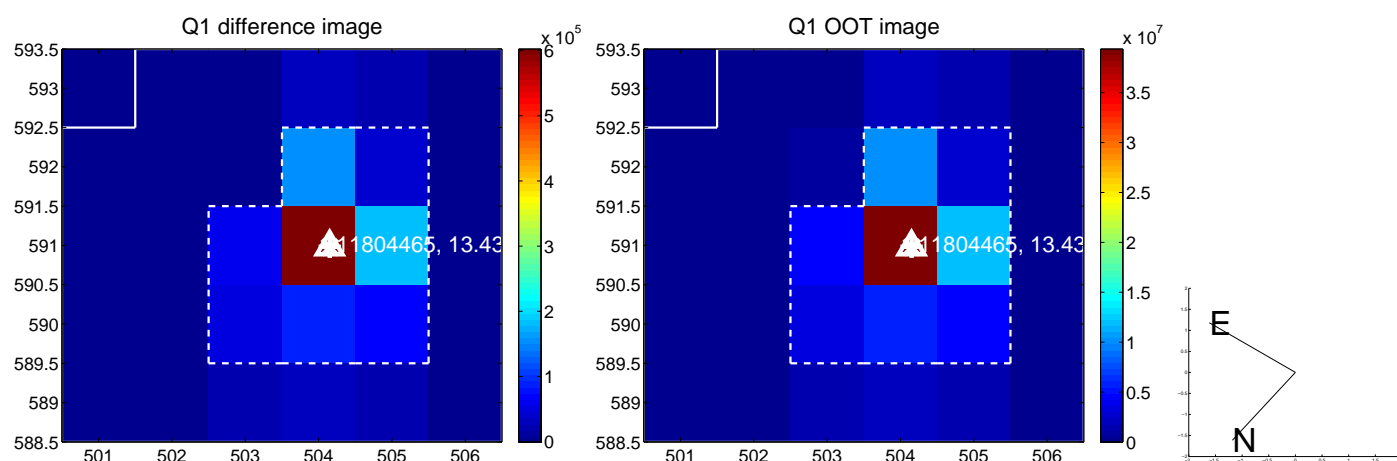
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.067	0.03	0.001 ± 0.067	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.085 ± 0.070	1.21	-0.044 ± 0.072	-0.073 ± 0.068
photometric centroid source offset	0.02 ± 0.00	5.37	-0.01 ± 0.00	0.02 ± 0.00

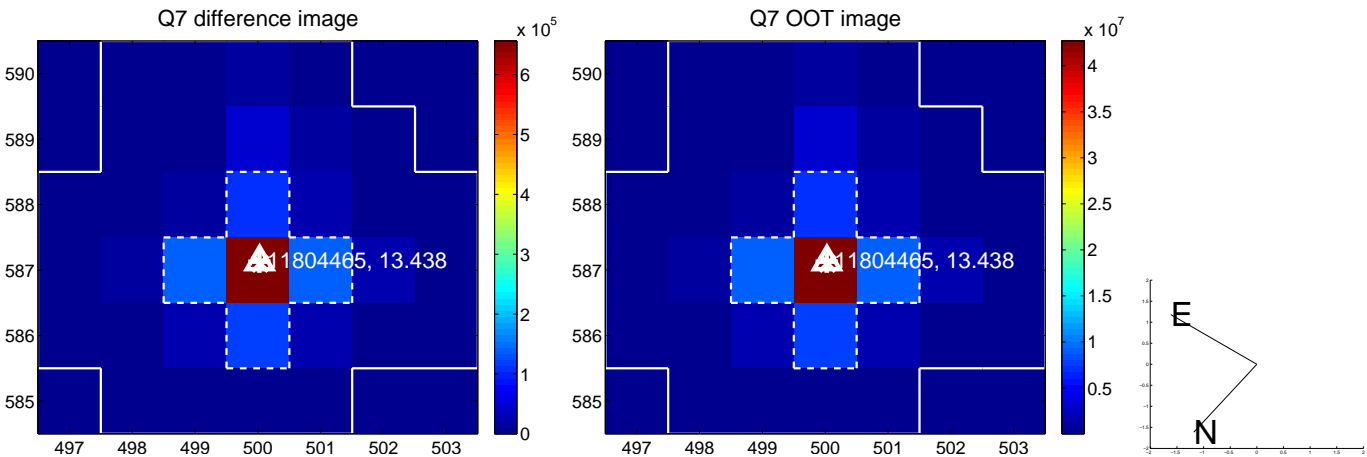
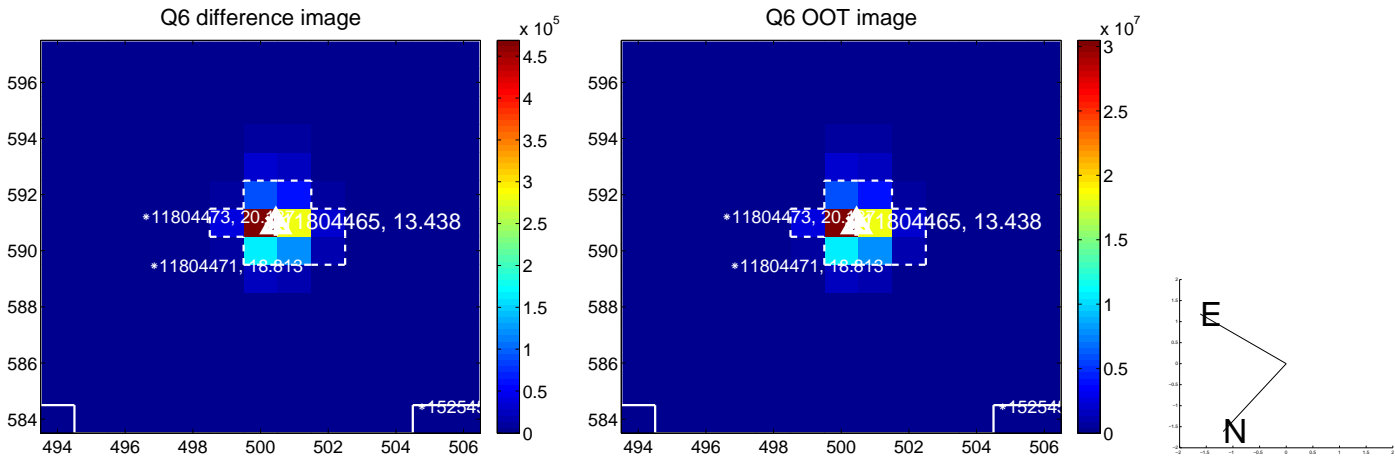
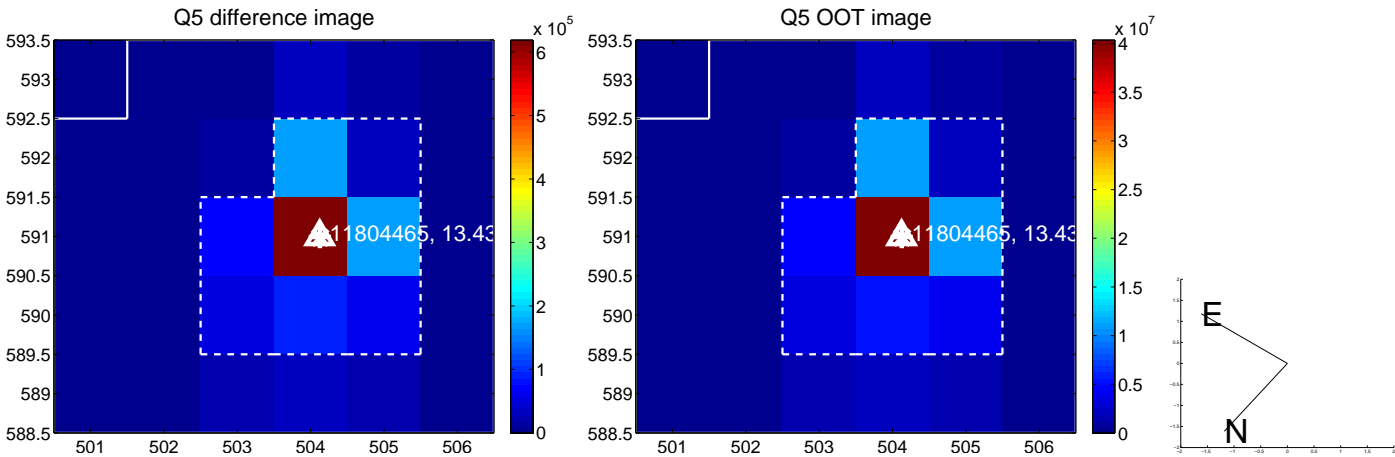


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

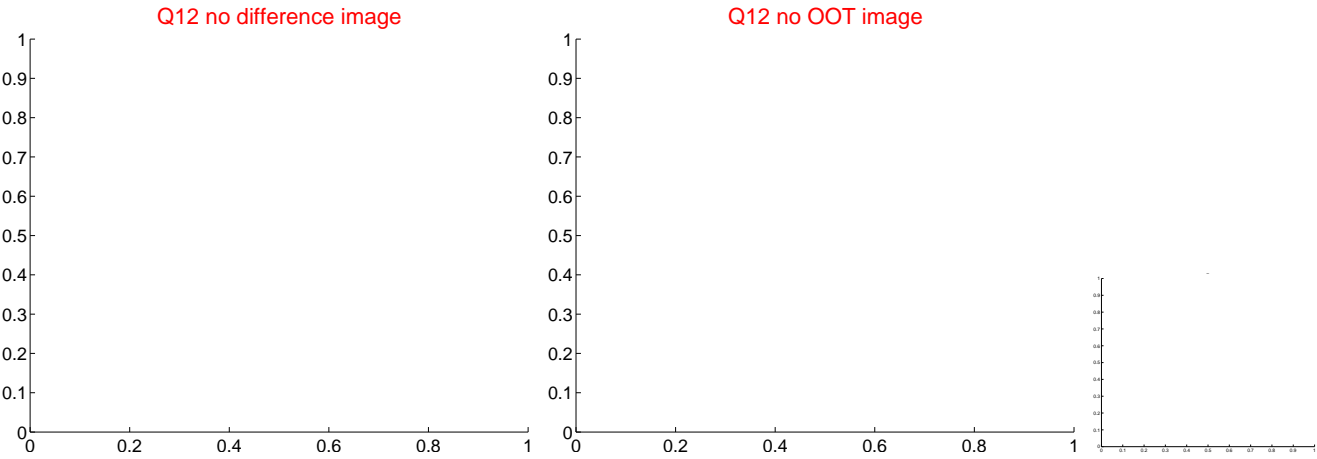
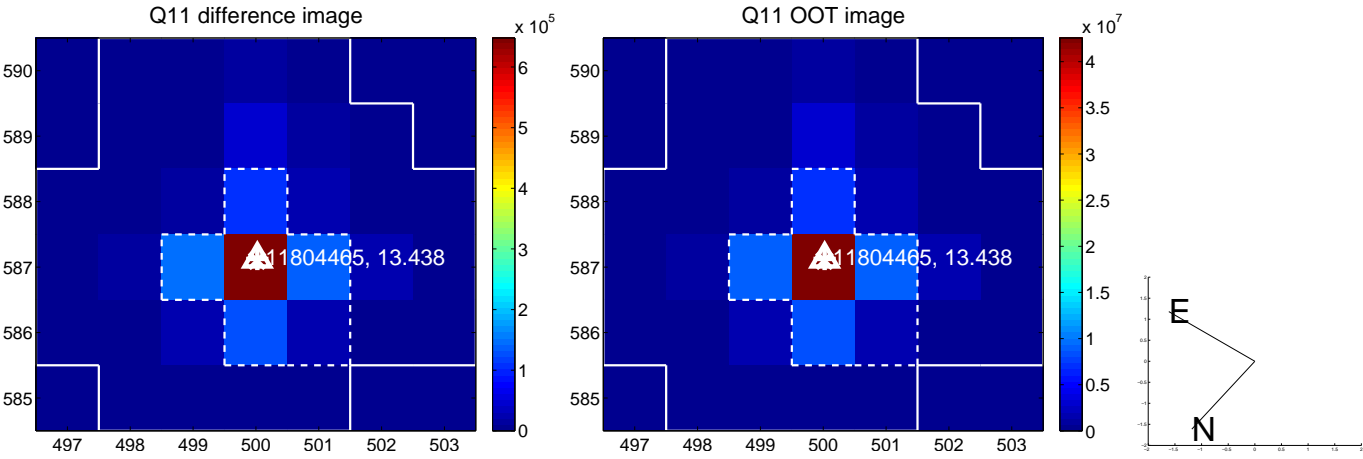
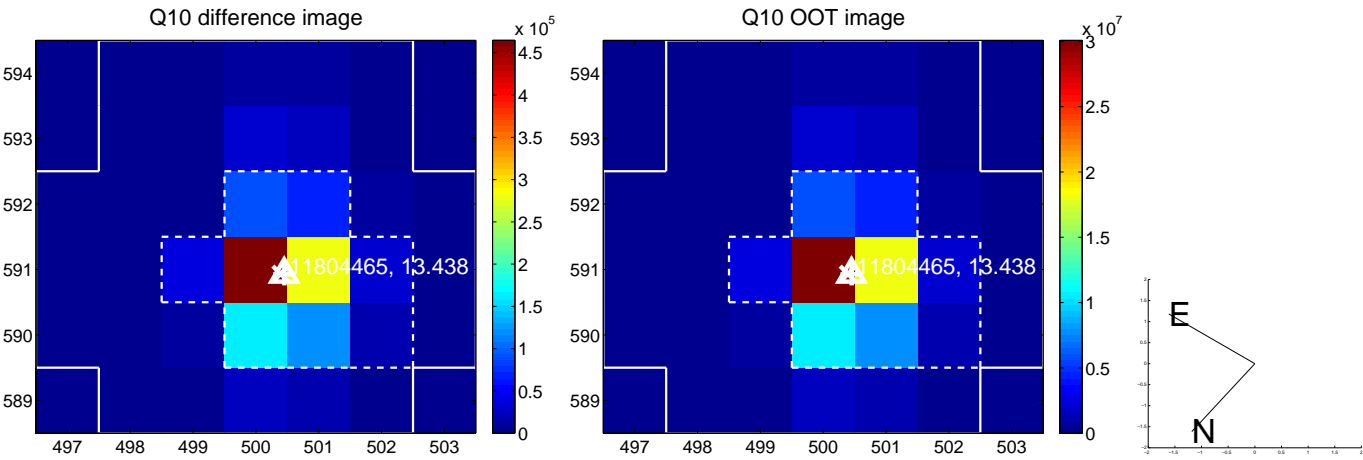
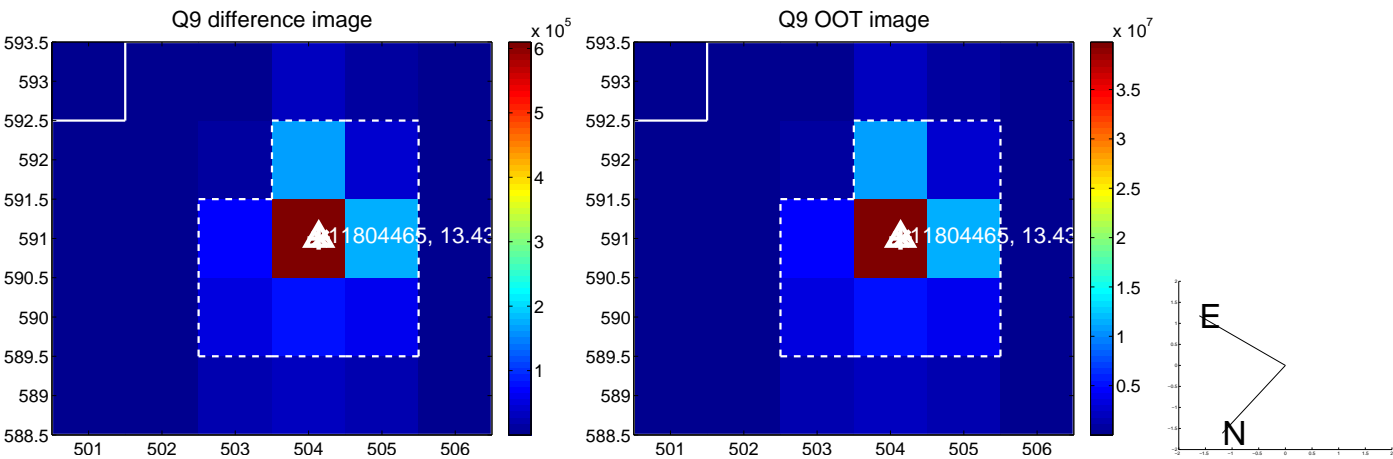
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



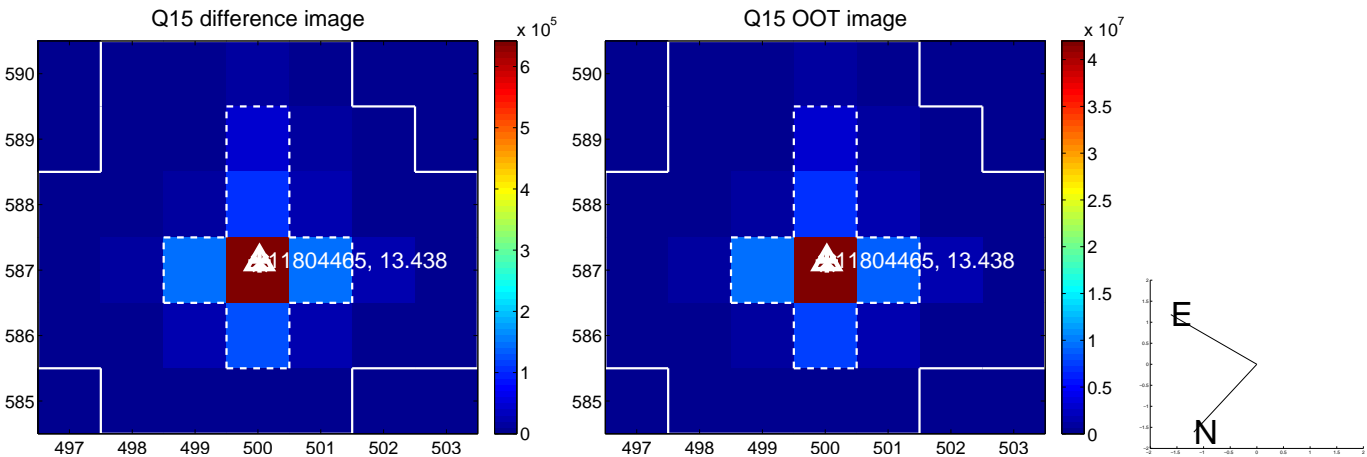
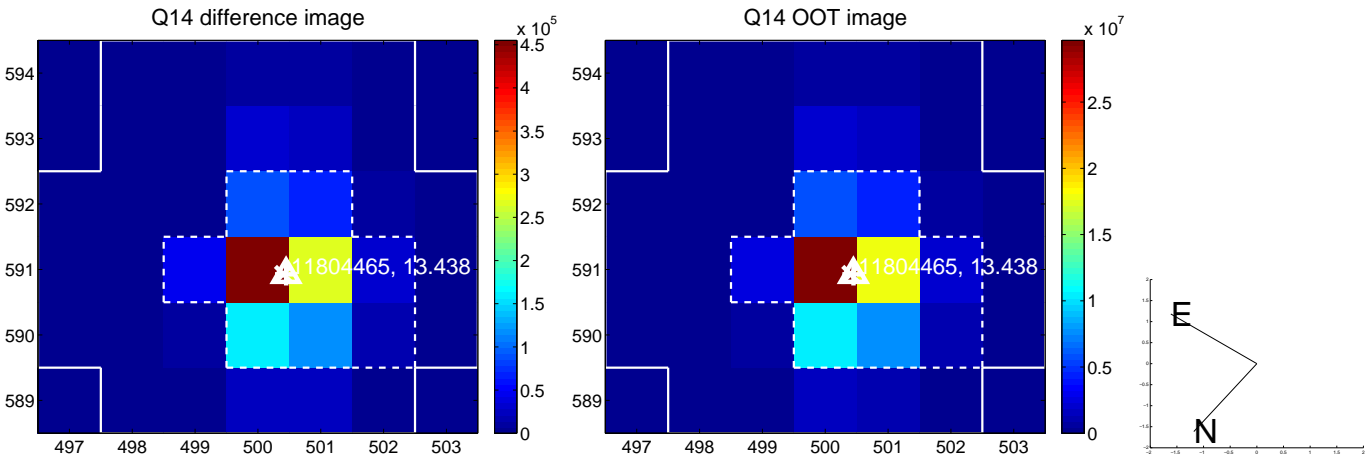
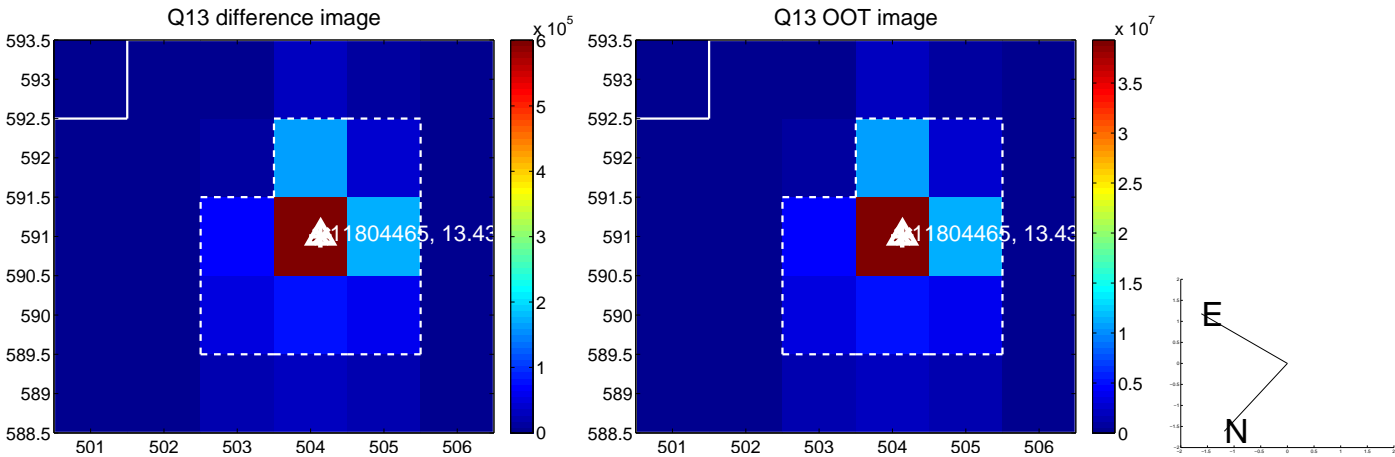
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



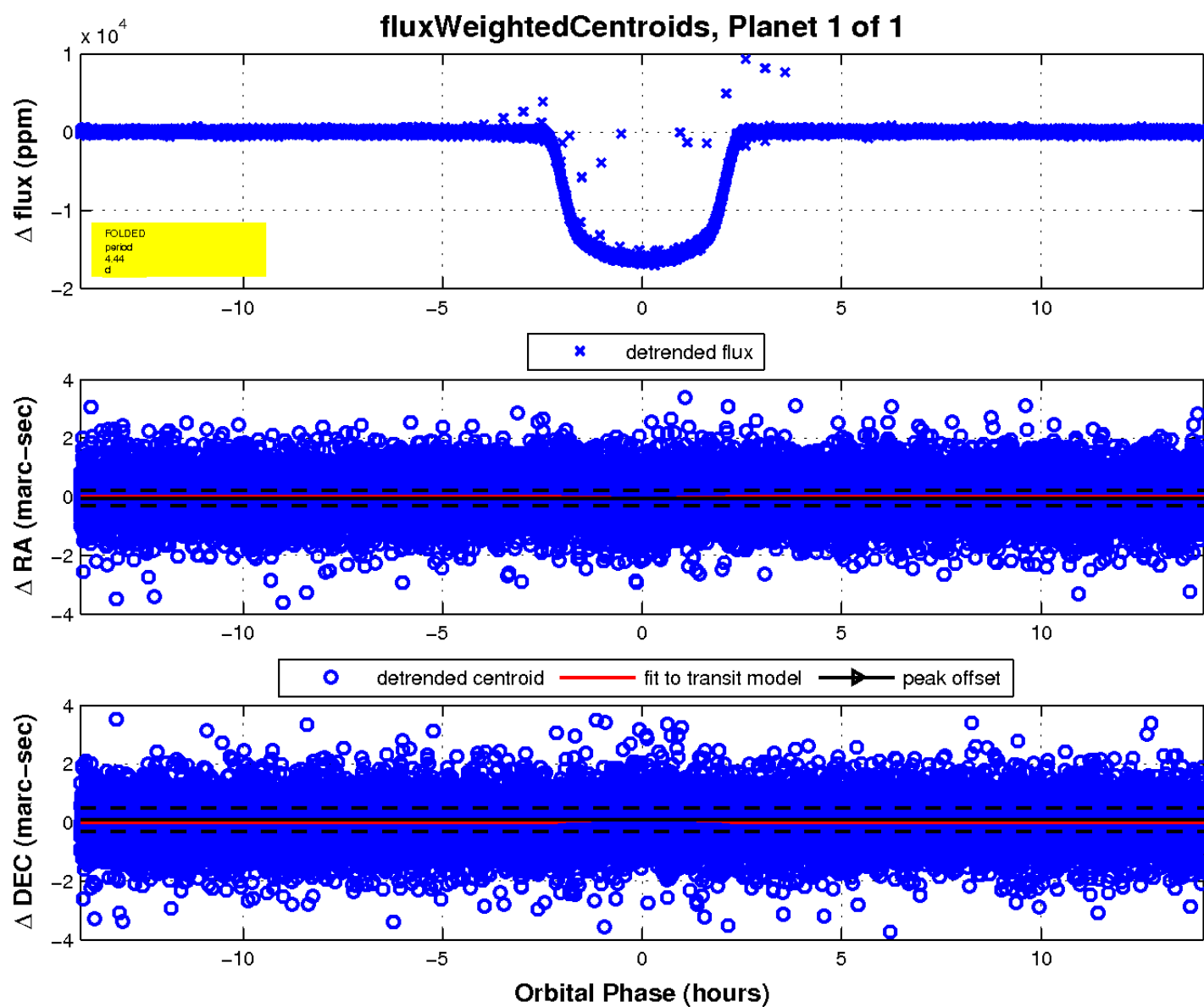
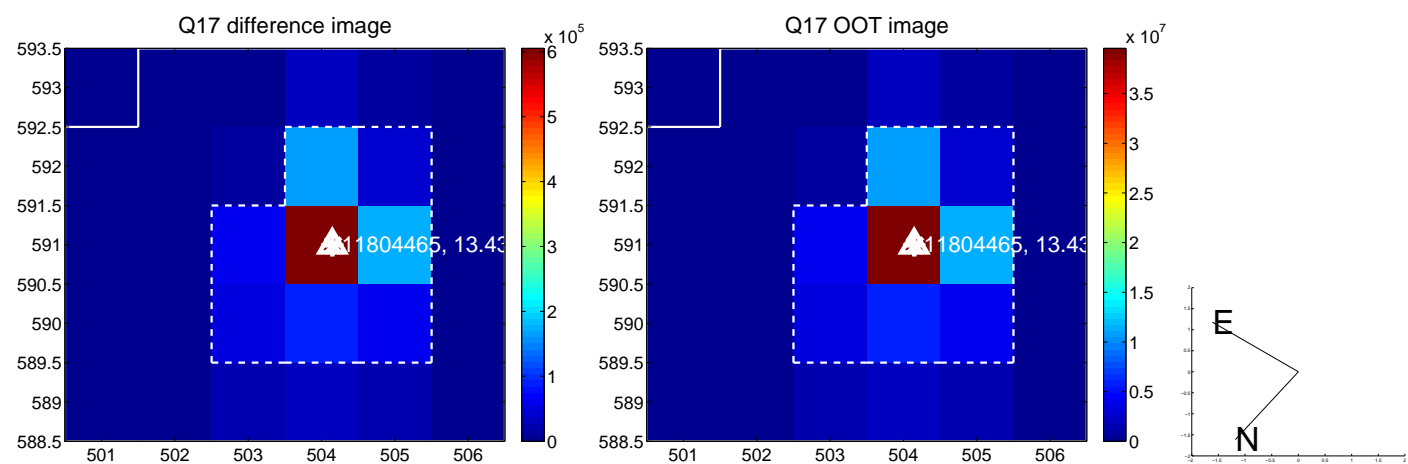
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

